MAP-MAKING AS A WALKING-BASED SPATIAL PRACTICE IN ARCHITECTURE

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ABSTRACT

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The assumption of this study is that the perception of space is dependent on the particularities of a specific location altering with time-variables and subjective experience. With the epistemological paradigm shift by the twentieth century, the concept of space as a homogeneous three-dimensional quantity which can be divided into repetitive units has been challenged by the heterogeneous conception of space-time generated by the bodies in movement. Considering the temporal and experiential aspects of space, it is claimed that the conventional modes of architectural representation need to be multiplied in terms of seeing and depicting the field. Defining map as a tool emerges in-situ to describe the field as exposed to map-makers' mode of questioning, this study proposes the walking-based practices of map-making as an investigation and representation tool of the distinct spatial experiences. The study focuses on in-situ maps as representations of the perceptive and sensory experience of the field. The ways map-making becomes a critical tool of spatial representation when embodied in walking acts are unpacked throughout the study. It is the claim of this thesis that through the investigation of walking-based practices of map-making in terms of -making acts and map-use, a generative toolset of in-situ map-making can be obtained. This thesis has 3 outcomes: a framework to identify the map-making acts and map-features, a generative toolset enriched by decomposing in-situ

maps serving varying interests, personal in-situ maps produced using the toolset and decomposition of these maps. The toolset proposed in this thesis is neither a finished end-product nor prescriptive/proscriptive as the scientific definition of map-making; instead, it can be enriched through new map-makings and map-readings. The provided modes and acts of representing the presence can be multiplied, adopted, deconstructed, and reconstructed in a unique way for different contexts.

Keywords: Map, Map-making, Walking Practice, Spatial Experience, Spatial Representation

ÖZ

MİMARİDE MEKAN KURUCU BİR PRATİK OLARAK YÜRÜYÜŞ ODAKLI HARİTA ÜRETİMİ

Özcivanoğlu, Sonat
Yüksek Lisans, Mimarlık
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20. yüzyılın başında mekan ve zamanı, nokta ve an açısından ölçülebilir kılan geleneksel anlayışta gerçekleşen kırılma ile birlite, homojen üç boyutlu bir bütün olarak kabul edilen mekan kavramı , hareket halindeki vücut üzerinden tanımlanan, heterojen yapıda mekan-zaman kavramı ile yerinden edilmiştir. Bu çalışmada da mekan algısı, yer ve zaman değişkenlerine bağlı kişisel bir deneyim olarak kabul edilmektedir. Bu bağlamda, mekan-zaman algısının geçici, algısal ve deneyimsel yönleri göz önünde bulundurularak, mimari temsilin konvansiyonel üretim şekillerinin görme ve temsil biçimleri açısından çeşitlenmesi gerektiği ileri sürülmektedir. Bu çeşitliliği sağlamak üzere, yürüyüş odaklı harita üretim pratiklerinin mekânsal deneyimlerin araştırma ve temsil aracı olarak kullanılması önerilmektedir. Haritayı kullanıldığı yere özgün olarak gelişen bir temsil aracı olarak tanımlayan çalışma, harita-üretim pratiğinin yürüyüş aktivitesi ile birleştiğinde nasıl bir araca dönüştüğüne odaklanır. Bu tez, çeşitli yürüyüş odaklı haritalama pratiği örneklerinin haritalama eylemleri ve harita kullanımı açısından ayrıştırılmasıyla, yerinde harita üretimine dair araçların elde edileceğini öne sürer. Bu çalışmanın üç çıktısından bahsedilebilir: haritalama eylemlerini ve harita öğelerini tanımlaynan bir çerçevenin oluşumu, harita üretimi araçlarını içeren bir set ve tez kapsamında yürütülen "yerinde haritalama" çalıştayında önerilen set ile üretilmiş kişisel haritalar.

Bu çalışmada elde edilen “yerinde haritalama” araçları, tamamlanmış bir son ürün ya da kural koyucu bir set olmayıp, başka haritalama ve harita-okuma pratikleri ile zenginleştirilmeye açıktır. Bu çalışmada sağlanan özgün mekânsal deneyimlerin temsiline dair yöntem ve araçlar her farklı yer için değiştirilebilir, çoğaltılabilir, parçalanıp tekrar bir araya getirilebilir.

Anahtar Kelimeler: Harita, Harita Üretimi, Yürüyüş Pratiği, Mekansal Temsil, Mekansal Deneyim

To my family,

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ABBREVIATIONS

LI: Letterist Internationale

OS: Ordinance Survey

SI: Situationist Internationale

A personal Note About The Study

The inspiration for this study comes from a personal mapping of observations and experiences in urban and nature contexts. The narrative map, "Urban Walking vs. Nature Walking," was prepared within the scope of the lecture Aesthetics and Criticism II: City and Nature given by Jale N. Erzen[1]. The study was about the comparison between the observer's object of perception in the daily- urban context and nature by considering 'walking' as a tool of observation. The study is in the format of stripes of collages narrating the spatial experiences. The change in spatial experience is represented by framing, selecting, isolating, re-placing, separating, describing.

This study made me aware of the potential of 'walking' as a practice of observation and 'collage' as a tool of representation of spatial experience. Together they enable one to draw out the patterns between objects, people, events and places. Spatial experiences thus turn into personal maps.

[1] *See: Appendix A.*

CHAPTER 1

INTRODUCTION

1.1. Glossary

cartography

practices, processes, and discipline of representing a region of the earth with the effort of reaching the highest precision

critical cartography

refers both to the new mapping practices and theoretical critique of the academic map-making in terms of power-knowledge relations and the claim of objectivity

in-situ map-making

map-making practice based on the performance of the mapped field

itinerary

Performative indicators of the places

map(noun)

1. a critical tool emerges in-situ to describe the field as exposed to map-makers' mode of questioning

2. the product of the map-making act, the representation of the perceptive and sensory experience of the field

3. a stretch from the field, as claimed by Pickles[2].

[2] John Pickles, 2004: 61

map-making (verb)

the traditional, prescriptive and proscriptive practices of employing certain representational techniques to graphically represent information in spatial relation[3].

mapping (verb)

1. Abstract representations to indicate the degree of relevance and proximity among various data
2. In the critical discourse, the mapping act suggests more than the representation of the field; it refers to performance and (re)production of the space[4].

Performance

The action or process of carrying out or accomplishing an action, task, or function

Performativity

an approach to the construction of identities through performances and practices

(in performative approach mappings not only take place in time and space but also constitutes both)

representation (noun)

a figure, image, rendering of intangible relations that substitutes the object of representation

[3] the emergence of map-making is related with the national states and capitalism, as argued by Wood in "The Power of Maps". See:

-Denis Wood.

[4] Pickles differentiates the mapping from map-making as being practice of the spatial thought. See: John Pickles, 2004: xi

tool

a device or implement used to carry out a particular function, thing becomes a tool in practice/process when embodied in a particular activity.

Walking-based map-making (noun)

A spatial practice and critical mode of map-making

1.2. Aim and Scope of the Thesis

This study proposes walking-based practices of map-making as a means of strengthening the relationship that architecture has with the context. Although maps already serve the architectural design process as a document to obtain quantitative data such as land boundaries, map-making as a critical mapping practice is less often included in the architectural design[5]. The already conventionalized methods of architectural representation, the orthographic set and the perspectival view, operate well within the homogeneous conception of space. However, considering the temporal and experiential aspects of space, the thesis supports that the conventional modes of architectural representation need to be enriched. Accepting that map is not merely a description of the place, but capable of (re)production of space for each use and

[5] There is a recent interest in the mapping practice. Starting from 1980, the cartography entered into a self-critical process and questioned the methods, institutions, and the claim of objectivity in map-making practices. The growing interest in the "mapping practice itself" rather than the "map as a product" is quite recent. The reflections of this interest in the architectural design education in Turkey can be found in the increase in courses on creative/alternative/performative mappings in architecture departments of universities, efforts to include map-making processes in architectural design studios and in the related works of:
- Ela Alanyalı Aral. "Mapping – A Tool for Visualising 'Lived Space' in Architecture," Architecture, ed. by. Z. Onur, E.Tarasti, İ. Sığırcı and P. Yörükoğlu, Vol.399, 2018
-Aslıhan Şenel. "Mapping in Architectural Education: A Creative Critique to Traditional Masculine Architectural Production," Dosya, ed. by Ela Alanyalı Aral, Vol.42, 2019:5-18
-Deniz Altay Balkan. "To Turn the Map on its Head," Dosya, ed. by Ela Alanyalı Aral, Vol.42, 2019:25-38

interpretation, map-making practice is offered as a tool of investigation and representation of the distinct spatial experiences. In this thesis, walking-based map-making is differentiated from the academic, institutionalized map-making practice in terms of performativity[6]. Map-making act turns into a spatial practice when it is embodied in the walking act.

One of the aims of this study is exploring the ways walking-based map-making practice is used as a representational tool of perceptive and sensory aspects of space. To this end, the study provides a critical reading of the in-situ map examples and a generative toolset of map-making. The critical reading is performed on two-level: in the second chapter notions of experiential map-making practices are identified and discussed in relation to the conception of space and the positionality of the observer. In the third chapter, the study focuses on three of the mentioned in-situ map-making practices in terms of their representational aspects. Through the decomposition of these maps into map-making acts and map-features, a toolset of experiential map-making is developed as one of the outcomes of the study.

1.2.1. Representing Spatial Practice

> "Space seems to be either tamer or more inoffensive than time; we're forever meeting people who have watches, very seldom people who have compasses. We always need to know what time it is (…), but we never ask ourselves where we are. We think we know: we are at home, at our office, in the Metro, in the street.
>
> That, of course, obvious- but then what isn't obvious?"[7]
>
> (George Perec)

George Perec points out to the illusion that space seems to be more tamed than time. The separation of space from time can also be considered as an illusion: these two are

[6] In reference to Judith Butler's concept of performativity, walking-based map-making practice offers a performance of place through which the mapped place and map-maker redefine each other. Thus, the map as a product of the map-making practice moves beyond a precise representation.
[7] Georges Perec. "Spaces," Species of Spaces and Other Pieces, London: Penguin Books, 1997,85

perceived together. A spatial experience takes time, and the duration affects the experience. Based on the assumption that "there are as many spaces as there are distinct spatial experiences"[8], the qualities and characteristics of a space are considered as temporal and subjective[9] in this study. That is to say, the concept of space is dependent on the particularities of a specific location altering with time-variables and subjective experience. The subjectivity of the experience lies in the bodily connection with the field. Modes of seeing, hearing, and walking connects the body with the field. More than a mode of experience, Bernard Tschumi considers the movement as the generator of space. In "Architecture and Disjunction", Tschumi states:

> "…bodies not only move in but generate spaces produced by and through their movements."[10]

Accordingly, it can be suggested that the bodily movement acts as a catalyst to turn "place" into "space"[11].

Changes in conception of space from a measurable entity to an experiential concept urged architectural design to consider the concept of space as *situational*. Spatial experience is dependent on a set of circumstances which is ever-changing and requires to be redefined for each different context. Assuming that the concept of space is

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[8] Maurice Merleau-Ponty. Phenomenology of Perception, Paris: Gallimard Tel, 1976: 234-344

[9]In this study, the subjectivity refers to the bodily perception of space. The assumption of subjective experientiality as a feature of space is based on the phenomenological conception of space. The concepts drawn from phenomenological thinking such as context-dependency and experientiality has been embedded in the architectural discourse. In the study, site-specify and context-dependency are valued as key features of architectural design.

[10] Bernard Tschumi. "Architecture and Limits," Architecture and Disjunction, Cambridge:MIT Press, 1996:111)

[11] In 1984, Michel de Certeau made a distinction of space (espace) / place (lieu) based on the bodily experience. In his definitions, place refers to "instantaneous configuration of position(s)" while space has more dynamic contents such as flows, vectors, and time. So, space is defined over operations applied to place, and it is rooted in a physical reality yet in the flux. See:
-Michel de Certeau. "The Practice of Everyday Life," Berkeley, Los Angeles: University of California Press: 1984, 117-118

dependent on distinct spatial experiences, the study is offering a use of "multiple representations of seeing and depicting" the temporal conditions of a field[12]. Such need for the multiplicity in tools of architectural representation can be traced to the inherent limitations and potentials of the conventional tools of architectural representation. The orthographic set and perspective view, already conventionalized tools of architecture[13], had been shaped within the Renaissance models of vision and observer. Thus, the representation of objects in the orthographic set and perspective drawing are based on the assumption that space is composed of equal and repetitive parts. In that manner, these conventional representation techniques of architecture can be evaluated as failing to fully capture the experientiality of the space by eliminating the observer. On the other hand, the "projective potential"[14] of the orthographic set makes it a convention of architectural drawing to serve as a directive document. An orthographic drawing set can serve as a tool of construction for the represented object that does not exist. The two mode of spatial representation, perspective and orthographic set operates well within the definitions of space as a homogeneous entity. However, design practices that deal with space-time requires a flexible set of representations that are uniquely assembled for each context. Pointing to a similar call for the representing the experientiality of space, Mohsen Mostafavi asks:

[12] In the study, field is used to refer to the ground and the context that is turned into spatial experience through the bodily existence and movement within it.

[13] Robin Evans refers to the orthographic set and the perspective as the essentials of contemporary architectural drawing and claims that axonometric projection and sketch have been incorporated into the conventionalized set of architectural drawings.

[14]Robin Evans claims that by "recording" what is not present yet, the drawings of the orthographic set projects the object of representation. See:
-Robin Evans. "Architectural Projection," Architecture and Its Image : Four Centuries of Architectural Representation, Eve Blau; Edward Kaufman; Robin Evans; Centre Canadien d'architecture.; et al. Montreal: Centre Canadien d'Architecture/Canadian Centre for Architecture ; Cambridge, Mass.: Distributed by the MIT Press, 1989: 19-35.

> "What are the tools, conventions, and scales that can be employed in order to tell the story, describe the characteristics of a particular territory, including the narrative dynamic change and transformation?"[15]

Marc Treib states that "there is no spatial representation of space free of spatial conception."[16] The interdependency between the conception of space as "three-dimensional quantity"[17] and representation of it based on homogeneous units supports the statement of Treib. The space represented in the orthographic mode of drawing can be "measured, divided, sub-divided and multiplied."[18] Treating space as a homogeneous entity, the conventional representational modes conceals the subjective nuances of spatial experiences. The representation of the space as an experiential concept, on the other hand, should reveal the ever-changing temporal and perceptual characteristics of space. This can be achieved through the representation of the experiential aspects of the field on the representation.

1.2.2. Map as a Tool Emerging In-Situ

> "You really have to see men from above (…) On a seventh floor balcony: that's where I should have spent my whole life (…) Sometimes I had to go down into the street. To the office, for example. I stifled. It's much harder to consider people as ants when you are on the same plane as they are."[19]
>
> (Jean-Paul Sartre)

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[15] In the foreword of the book Cartographic Grounds: Projecting the Landscape Imaginary, Mohsen Mostafavi offers adoption of *cartographic imagination*, "a specific mode of description of topography", to architectural representation to enrich the "repertoire of a designer". He explains cartographic imagination as "a study of the importance of multiple representations of seeing and depicting the various realities depending on the relevance of the occasion". See:
Jill Desimini & Charles Waldhein. "The Cartographic Imagination," Cartographic Grounds: Projecting the Landscape Imaginary, New York : Princeton Architectural Press,2016

[16] Marc Treib. "Mapping Experience," Design Quarterly, Vol.115, 1980:5

[17] Ibid.

[18] Ibid.

[19] Jean-Paul Sartre. "Herostratos," Intimacy and Other Stories, trans. By Lloyd Alexander, London & New York: 1939:113-14

A map can be evaluated from many perspectives; as an archeological finding, a scientific document, a research tool, or an object of art[20]. A map also functions in various ways; "as archive for geo-referenced data, as picture of the spatial order of the world, as tool for investigating spatial relations, and as an object of aesthetic and historical interest."[21] It is hard to make an inclusive definition of a map considering various theories of cartography. Although the scientific approach seeks for an absolute, abstract and geometric truth about the projected part of the earth, there are certain other kinds of maps that pursue neither truth nor even the existing geographies on earth- but rather the imagined ones. The term map has numerous meanings, and the borders between them are blurred. As precise and complete expressions of geographical features, maps can also be claimed to exhibit only specific characteristics of that field selectively. Pickles points out to the peculiarity of the productive and fictional character of maps for a practice with truth claims about its "ability to represent accurately and faithfully that which is real."[22] A map is paradoxically both more and less than itself at the same time. As a physical object, it is merely the sum of the lines on a paper, yet it also indicates a multi-dimensionality for each reading.

The scientific approaches propose rigid and prescriptive descriptions of the term map and the practice of map-making. In this study, the scope of the term "map" is broadened to avoid being reductive. Various types of maps do not range from objective to subjective. Both the experiential and measurable concepts of spaces are represented in the maps with varying degrees. Thereby, it is a challenging task to design the borders, definition, and categories of maps. As Wood states, attempted

[20] Gerald R. Crone. Maps and Their Makers: An Introduction to the history of Cartography, London: Hutchinson Uni. Library, 1953, ix

[21] John Pickles. A History of Spaces: Cartographic reason, mapping and the geo-coded World, Abingdon:Routledge, 2004.

[22] Ibid., 93.

taxonomies of maps end up with taxonomies not of maps, but of the ways map-makers see the world.[23]

As products depending on modes of seeing, maps emerge through context-embedded practices. The context refers to both the field and the heterogeneous system of "discursive, social, technological, and institutional relations"[24]. The map-making act can be varied within the framework of the opportunities provided by the context. Nowadays, the facilities and technologies are diversified so as to provide the mapper with "access to images of anyplace of the globe"[25] which is a "patchwork of archived aerial and satellite images of varying origins, sources, motivations, and resolutions." [26] Such images obtained from a distance is totalizing and presents the whole, nevertheless limited in terms of spatial experience of the field. The plan view of a field may seem to reveal the *"*knowledge of an order of places"[27]; yet, it is based on a non-existing totalizing point of view and the (urban) geography is remade at each instant. The threat in favoring totalizing views is the denial of the positionality of the mapper and subjective quality of perception in the sake of a "coherent, logical view of the city."[28] Franceso Careri claims that static location of observer loss its value with the modernization process:

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[23] Denis Wood, "One Map Use, Many Ways of Living," The Power of Maps, London: Routledge, 1993,16

[24] Jonathan Crary. "Modernity and the Problem of the Observer,"*Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, Massachusetts: MIT Press, 1992, 6

[25] Laura Kurgan. "Mapping Considered as a Problem of Theory and Practice," Close Up At A Distance: mapping, technology, and politics, New York:Zen Books, 2013:12

[26]Ibid,20.
Use of Google Maps can also be given as an example of the facilities and technologies of mapping adapted to everyday life. The user of the application not necessarily read the map but instead positioned in it as a mobile point. Positioning the user and providing her/his with a path minimizes the acts of identifying and relating.

[27]Michel de Certeau, 1984:119

[28]Thomas McDonough. "Situationist Space," October, Vol.67, 1994, 69

> "The futurist city was crossed by flows of energy and eddies of the human masses, a city that had lost any possibility of static vision, set in motion by the speeding vehicles, the lights and noises, the multiplication of perspective vantage points and the continuous metamorphosis of space."[29]

Steven Holl refuses the totalistic representation of a built environment:

> "A city is never seen as a totality, but as an aggregate of experiences, animated by use, by overlapping perspectives, changing light, sounds and smells. Similarly, a single work of architecture is rarely experienced in its totality (except in graphic or model form) but as a series of partial views and synthesized experiences."[30]

Map-making not necessarily requires a position of the observer detached from the field. A field can be comprehended by walking through the field as well as viewing it from a fixed location. With the developments of information, imaging and mapping technologies, experience of the field through bodily movement in map-making process is evaded. Thus, itineraries, descriptions of the experience of space in terms of operations, are disappeared from the maps- as de Certeau claimed in the *Practice of Everyday Life*[31]. An itinerary is composed of name of places, routes, mediums of mobility and performative indicators of the places (…then you turn to the left, there is a …). Itineraries spatialize the locations/field by "discursive series of operations"[32]. De Certeau compares the itineraries and maps as the two opposite poles of experiencing the space; the former is considered as a part of the everyday practices while the latter is considered as a part of the scientific discourse of map-making. De

[29] Franceso Careri. "Anti-Walk," Walkscapes: Walking as an Aesthetic Practice," Barcelona: Editorial Gustavo Gili,2002:68-118

[30] Steven Holl, Juhani Pallasmaa, and Alberto Perez-Gomez. Questions of Perception: Phenomenology of Architecture, San Fransico: William Stout Publishers, 2006, 130

[31] Michel de Certueau, 1984: 120

[32] Ibid.

Certeau marks the birth of modern scientific discourse as the turning point when map-making "slowly disengaged itself from the itineraries that were the condition of its possibility."[33] In this study, the "erasure of the itineraries"[34] from the maps is problematized. Thus, as an alternative to the scientific notion of map-making that prioritizes precision and efficiency, experience based map-making is proposed to represent spatiality. A large and growing body of literature has investigated the alternatives to universalist cartography, which will be mentioned as "Critical Cartographies" in the literary review. In this study, the map-making activity is defined by referring to John Pickles as the "transfer of information from one form of presentation into a re-presentation of that information"[35]. By this way, map-making is offered as a mode of spatial representation that acts as a tool to describe the world as exposed to map-makers' mode of questioning. The tool is defined by Star and Ruhleder as

> "(a) tool is not just a thing with pre-given attributes frozen in time- but a thing, becomes a *tool in practice*, for someone, when connected to some particular activity…The tool emerges in situ"[36]

Referring to them, Kitchin and Dodge defines the map as a tool emerging in-situ "through a set of iterative and citational practices"[37]. The map-making activity as defined by Pickles and Kitchin& Dodge focuses on the process of map-making and offers it as a practice, not as a completed representation. Thereby, representation of the field goes beyond the simple depiction and explanation of the world; instead, it becomes the tool of an interplay between the world and map-maker. In this study,

[33] Ibid.

[34] Ibid.

[35] John Pickles,2004:

[36] Star and Ruhleder, as referred by Rob Kitchin and Martin Dodge in "Rethinking Maps". See:
- Rob Kitchin & Martin Dodge. "Rethinking Maps", Progress in Human Geography 31(3), 2007:337

[37] Kitchin& Dodge, 2007:337

Kitchin and Dodge's description of map-making as a tool emerging in-situ is borrowed as *in-situ map-making* to define the representation of the bodily presence in the field. Map-makers' presence in the field often accompanied with walking. As Tschumi pointed out, movements of the bodies/map-makers are the generators of space. The field, thus turns into representations of distinct spatial experiences.

1.3. Literary Review

1.3.1. Theories of Map-Making

Once the documented narrations of the known part of the earth, maps evolved through the Enlightenment by slowly distancing themselves from the lived experiences with the development of cartography as a science and defining its experimental method as objective[38]. However, with the epistemological paradigm shift[39] by the twentieth century, approaches to map-making as a neutral scientific activity have been challenged with the idea of mapping as a subjective practice.[40] It is claimed that maps are not neutral or passive devices of spatial measurement and description[41]. They are rather considered as subjective representations dependent on the observer/ mapper.

The shift between subjective and objective conceptions of maps takes place with changes in practices, institutions, and discourses of cartography, locating the issue

[38] Peta Mitchell. "Text-Map-Metaphor," Cartographic Strategies of Postmodernity: The Figure of the Map in the Contemporary Theory and Fiction, New York: Routledge

[39] Weber explains this shift as "…the traditional conception that holds space and time to be measurable in terms of the point and the instant is irrevocably shaken by contemporary science." see:
-S. Weber." Institution and Interpretation," Theory and History of Literature,Vol. 31, Palo Alto:Stanford University Press, 1987.

[40] Peta Mitchell, 2008:

[41] See:
-John K. Wright." Map Makers Are Human: Comments On the Subjectivity in Maps," The Geographical Review, Vol.(4), 1942: 1
-Denis Wood, 1993
-John Pickles, 1984

within historical, social, and political contexts. The changing nature of mapping practices has been handled by varying approaches; on one side mapping as a scientific practice and on the other side critique of the map and the mapping process[42]. While the former focuses on increasing the precision and systematic rigor in the representation of a given field, the latter questions the rationale and principles of cartography. Cartography as a scientific practice theorizes *how best to represent spatial data*[43]. Map, as a tool of the science of geography, is expected to be a precise graphic representation to enable a reader to orient himself/herself to certain characteristics of areas. To fulfill those expectations, cartography as a "scientific pursuit"[44] attributes certain characteristics to maps, such as the necessity of having at least one set of coordinates with scale, or sufficient sets of coordinates to make possible the calculation of scale[45]. Thus, standardized knowledge implies that the absence of scale, orientation, and coordinates damages the maps' acceptability as a scientific document. In pursuit of increased effectiveness in navigation and accuracy, scientific map design principles have been shaped around the geometrical problems and mathematical accuracy of expressions. It can be claimed that, in the scientific notion of a map, the theory is both prescriptive and proscriptive.

In terms of the critical point of view, on the other hand, universalism seems to ignore the diverse set of practices of map-making. It operates within a narrowly defined set of practices that are simply a subset of all potential mappings. Critical theory of cartography refuses the notion of maps as neutral, objective descriptions of the earth by showing the decision-making processes included in map-making. It can be said that there is a division between the critical cartography and scientific notion of mapping in

[42]Chris Perkins provides progress reports on cartography, second of which is about "theoretical battlegrounds" of mapping theory. See:
-Chris Perkins."Cartography: mapping theory," Progress in Human Geography, Vol 27 (3), 2003:341

[43] Kitchin & Dodge, 2007:1

[44] Ibid.

[45] Eugene Van Cleef. "What is a Map?" Science, New Series, Vol.108,1948:52121

terms of approaches to technological transitions and concerns about visualization. Both of them attempt to provide new agendas for how the content is visualized. However, while technological developments increased the interest in a scientific theory of how mapping and visualizations work, critical cartography offers an explicit reading of transition in spatial theories. In the mid of the '90s, scientific approaches to map as a "tool for communicating spatial information" referred to the empirical studies to understand cognitive processes of representing spatial information[46]. On the other hand, instead of apolitical questioning of how maps work as visualizations, the literature on critical mapping offers visualizations as practices dependent on the context. Relatedly, the academic literature on critical cartographies has revealed the emergence of several themes such as social cartography[47], map as a cultural expression[48], counter mapping[49], and persuasive cartography[50]. There are several works on the emerging critical literature on the nature of maps and their use in the contemporary world. Among them, "A History of Spaces: cartographic reason, mapping and the geo-coded world"[51] by John Pickles is used as a reference source in the study for the reading of mapping theory. The book reviews the concepts of space

[46] Notion of cartography as representation had been increasingly being articulated in terms of communication science. See:
-T. Slocum, C. Blok, B. Jiang, A. Koussoulakuou, D. Montello, S. Fuhrmann, N. Hedley. "Cognitive and usability issues in geo-visualization," Cartography, and Geographic Information Science, Vol. 28(1),2001:61-75
-A. MacEachren. "Cartography, GIS and the World Wide Web," Progress in Human Geography, Vol.22:1998,575-85

[47]For further readings on the approaches to mappings as a social construct works of the Brian Harley can be seen. Denis Wood also claims that map-making is a social practice in relation to the power of any kind, including the power of the medium itself.
-Denis Wood, 1993:
-J. Brian Harley. "Maps, knowledge and power", The Iconography of Landscape, ed. by D. Cosgrove and S. Daniels, Cambridge: Cambridge University Press,1988: 277-305

[48]See: B.N. Aziz. "Maps and the Mind," Human Nature, Vol.8, 1978

[49] Chris Perkins, 2003

[50] Map is claimed as a propaganda tool by Tyner. See:
-Judith A. Tyner. "Persuasive Cartography," Journal of Geography,July-August,1982:140-4

[51] John Pickles, 2004

in relation to the modes of seeing through traditions of representation. To do this, it provides a variety of map-making practices from the 16th century to the present and includes a wide range of map theoreticians' work.

Critical theory also questions the "aura of scientific truth"[52] of institutionalized mapping activities and use of computerized information technologies, such as GIS systems. In accordance, instrumental logics of Universalist cartography are adopted to map everyday struggles and social issues with local access to global mapping technologies.[53] Pickles claims that these counter mappings of institutionalized cartography can be considered as a response to the "rapid expansion of information, imaging and mapping technologies."[54]

Much of the literature since the early 1990s focuses on the process of map-making instead of the map as an end-product. This approach theorizes the act mapping as performative[55]. A considerable amount of literature has been published on artists' use of mapping as a practice and map as the medium of their works. The interest in the mapping process can be seen in relation to the designers' use of map-making as a tool. James Corner offers map-making as a design tool and discusses the various characteristic of map-making by architects, landscape designers, and land-artists[56].

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[52] The term is borrowed from Yiğit Acar. See:
-Yiğit Acar. "Atlas of Urban Design: Textual Analysis and Mapping of Production of Knowledge in Turkish Context," Ph.D., METU,2017

[53]There are several examples of counter mapping activities starting with the '90s. Giro di Roma, Walk About Rome, is a critical mode of walking and mapping the Rome's periphery organized by an Italy-based collective in 1995. Geographical Expedition established by Bill Bunge in Detroit and Toronto can be given as another examples of counter mappings. See:
-Danielle Wiley. A Walk About Rome:Tactics for Mapping the Urban Periphery, Architectural Theory Review, Vol.15(1),2010:9-29
-Bill Bunge. "Detroit Humanly Viewed: The American Urban Present," Human Geography in a Shrinking World, ed. by R.A. Abler, D. Janelle, A. Phillbrick,MA: Duxbury Press:149-81

[54] John Pickles, 2004: 183

[55] R. Gough. "Editorial: mapping theme issue", Performance Research, Vol.6(3), 2001

[56] James Corner. "Agency of Mapping," Mappings, ed. by Denis Cosgrove, London: Reaktion Books, 1998

Similarly, Edward S. Casey provides a discussion of parallels between the land-art and cartography in which experience of the nature or built environment is shared[57]. In the "Mappings"[58], Denis Cosgrove refers to texts on art and cartography with a wide scope of critical texts varying in contexts and times.

There is a large number of published work on the deconstruction of "map-making" in terms of practices, institutions, discourses and ways of seeing affecting the map-making. There are also studies that aim to define map-making processes and constituents of a map. In the "Power of Maps," Denis Wood offers the decomposition of maps into interdependent sign systems. Referring to Roland Barthes, Umberto Eco and Ferdinand de Saussure[59], Wood claims that the sign systems' relation to each other holds the meaning and maintains a dialogue with the map-reader. In those terms, Wood defines the completed map as an extra-signification. A sign is composed of content (signified) and expression (signifiers), and a code to bind them. Codes create a sign by assigning signifiers to the signified. Based on this assumption, Wood offers ten interdependent cartographic codes. He claims that five of these codes exist in all maps: iconic, linguistic, tectonic, temporal, and presentational codes. The other five, on the other hand, distort the meaning of the map in relation to the linguistic code. These are thematic, topic, historical, rhetorical, and utilitarian codes. James Corner provides another decomposition of the concept of map in terms of the operations of map-making. Corner schematizes the map-making procedures as the construction of the map surface analogous to the mapped field, determining the extracts (the features of the field to be included in the map), and plotting them. Similar to the Wood's

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[57] Edward S. Casey. "Mapping the Earth in Works of Art", Earth-Mapping: Artists Reshaping Landscape, Minneapolis: University of Minnesota Press, 2005:269

[58] Denis Cosgrove. Mappings, London: Reaktion Books, 1998

[59] In the "The Interest Is Embodied in the Map in Signs and Myths," Denis Wood discuss how cartographic codes work through a close reading of the *Official State Highway Map of North Carolina. See:*
- Denis Wood, 1993:108-142

interdependent systems of signs, Corner claims that these three procedures are handled simultaneously by map-maker.

Considering the mentioned discussions on the theorization of maps, the duality of scientific and critical map-making seems to continue in the literature on map theory, although the boundaries between two notions of mapping are not clear.

1.3.2. Reintroduction of Site-Specify to Architecture

"Phenomenological turn" in architecture in the 1970s was a key react to the universalizing aim and the claim of rootlessness of modernity, demanding a shift in the definition and representation of the concept of 'space' from a homogeneous entity surrounding a bodiless mind to the heterogeneous concept of space in contact with the observers' bodily existence and location.[60] In the 1980s, modernity have already been challenged the site-specify of architectural practice. Considering it as a crisis in the design professions, a critique of modern architecture with an urge for space-based design developed by Environmental Phenomenology and Critical Regionalism[61]. In that manner, the context-dependency and identity were the main concepts re-introduced to architectural practice in opposition to the non-place[62] qualities of modernity. These concepts brought an interest in the physical characteristics in terms

[60] Merleau-Ponty states that in the fields of geometry and psychology the idea of a uniform and homogeneous space around a bodiless mind had been replaced by the heterogeneous concept of space. See:
Maurice Merleau-Ponty. "Discovering the Perceived World: Space," Causeries 1948, Paris: Editons du Seuil,2002:26

[61] Critical regionalism is defined as an attitude which is critical to both universalizing intentions of modernism and nostalgic repetitions of local traditions by Douglas S. Kelbaugh. See:
-Douglas S. Kelbaugh. "Critical Regionalism: An Architecture of Place", Repairing the American Metropolis: Common Place Revisited. Seattle & London: University of Washington Press, 2002
Critcal Regionalism had become a part of the architectural theory in the 1980s and Kenneth Frampton provided further popularity to it in a series of articles. See:
-Kenneth Frampton."Critical Regionalism", Anti-Aesthetic, edited by Hol Foster, Port Townsend, WA: Bay Press, 1983

[62] See:
-Marc Auge. Non-Places: Introduction to an Antropology of Supermodernity, London&New York:Verso, 1995

of sensory experience such as materiality, texture, light conditions, scale-perception… The interest in the experiential qualities of the field to achieve site-specify was interwoven with considerable amount of literature published on theories of space since the late 1960s. One of the sources from which inspiration drawn for critique of modernist homogeneity was the phenomenological conception of space as a heterogeneous entity in contact with the observers' bodily existence and location[63].

The changes in conception of space can be related with the simultaneous reconstruction of the production practices and representation of space as Jonathan Crary states:

> "Vision and its effects are always inseparable from the possibilities of an observing subject who is both the historical product and the site of certain practices, techniques, institutions, and procedures of subjectification[64]."

Based on the interdependence between the perception of space and the models of observer, it can be claimed that the introduction of new concepts of space had resulted in changes in the representation techniques of it. In this study, the introduction of new representation techniques to architectural design throughout the 20th and 21st centuries are accepted as interweaving with changes in the conception of space and production of spatial knowledge.

1.3.3. Walking as a Critical Activity

Walking can be considered as one of the foremost acts of human being, nevertheless, with the expansion of technologies on mobility the act of walking turned into a realm

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[63] Merleau-Ponty states that in the fields of geometry and psychology the idea of uniform and homogeneous space around a bodiless mind had been replaced by heterogeneous concept of space. See:
Maurice Merleau-Ponty,2002:26

[64] Jonathan Crary. "Modernity and the Problem of Observer," Techniques of the Observer: On Vision and Modernity in Nineteenth Century, Massachusetts: MIT Press, 1992,5

of choice in the last two centuries[65]. Walking with intent is a relatively recent phenomenon. One of the outcomes of the modernization process was the increase in flows of energy and motion of pedestrian masses, speeding vehicles, lights and noises. With the changes in urban form, act of walking differentiated into types such as "recreational walking", "romantic country walking", "hiking" and "urban pedestrianism". A similar difference can also be observed on the practitioners of act of walking. Cities fostered new types of walkers, such as pedestrians, window shoppers, marching groups, drifters. Relatedly, more than a medium of mobility, walking has become increasingly a matter of health, recreation, an assertion of style and even "a vehicle to make a political statement"[66]. Considering the changes in everyday life, the motion had become one of the investigation areas of the avant-gardes. The Futurists in Italy were fascinated by the concepts of speed and progression. Nevertheless, Futurists' interpretation of speed in daily life and events was limited to the representation of the motion in paintings and sculptures. Starting with the Dadaist excursions in 1921, walking act turned into a critical practice of the urban field. In this section, critical walking acts that had been initiated by the avant-gardes as the critic of modern city life will be investigated. The changes in the communication and representation tools of these walking activities are also discussed.

The consideration of the aesthetic and critical virtues of the walking activity can be dated to the concept of "flâneur". The word comes from the French verb flânerie, which means to stroll, to loaf around. A flâneur is an urban walker, moving with the everyday crowd of the city without being one of it. Baudelaire describe his contemporary flâneur as wealthy, educated city dwellers who walked through Paris in search of a particular experience of the city.[67] Flâneur is attracted to the city's densest

[65] Joseph Amato. "Conclusion: Choose Your Steps—Reflections on the Transformation of Walking from Necessity to Choice." On Foot: A History of Walking, New York: NYU Press, 2004: 255-78.

[66] Ibid.

[67] Charles Baudelaire. The Painter of Modern Life and Other Essays. London: Phaidon Print, 1995.

parts, searches the essence of modernity in the objects of everyday-life and through the arcades, bazaars.[68] In the "Arcades Project", Walter Benjamin refers to flânerie as a specialist of losing himself in the city:

> "Landscape, this is what the city becomes for the flâneur. …
>
> (The city) opens to him like a landscape and encloses him like a room"

The flânerie is an observer of the landscape without an intervention. Thus, his critical mode is limited to "disinterested curiosity"[69].

Dadaists can be considered as the first group to set walking as a collective activity. The appointment on 14 April 1921 in a church in Paris was the first attempt of moving the artists from the interior of galleries to the open air. It was intended that the first excursion will be the opening of the "Grand Saison Dada", a season of public operations. The meeting was made public by flyers and press releases and to record the artists existence in the field, photography was used (Figure 1.1).

Figure 1.1 (left) photo documenting the first Dada Excursion in the garden of the church (right) Flyer of the first Dada Excursion in 1921

Source: Franceso Careri. "Anti-Walk," Walkscapes: Walking as an Aesthetic Practice," Barcelona: Editorial Gustavo Gili,2002:68-101

[68] It seems like "he" also has a determined gender as referred in the literatüre on flânerie. See:
-Walter Benjamin. The Arcades Project, (English version) Cambridge: Belknop Press, 1999
-

[69] Danielle Wıley. 2010: 1

During the event flyers and gifts were given to the passers-by and randomly chosen texts from the Larousse dictionary were read (Figure 1.2)

Figure 1.2 Flyer distributed to passers-by in the first Dadaist Excursion, 1921

Source: Franceso Careri. "Anti-Walk," Walkscapes: Walking as an Aesthetic Practice," Barcelona: Editorial Gustavo Gili,2002:68-101

Following the first Excursion, in May 1924 Dada set another walking session. This time, without a pre-determined aim, the destination was selected randomly on a map; it was a small town at the outer skirts of Paris. As oppose to the first Dadaist Excursion in the city, the second walking activity took place in a natural territory. The walking act performed by "deambulation quartet"[70] can be marked as a transition from Dadaist urban operations to Surreallism. Breton explains the trip as:

> "We agreed to proceed by chance, on foot, continuing to converse, not allowing ourselves deliberate detours unless they were necessary for eating and sleeping.(…) The absence of any purpose soon detached us from reality, causing more and more ghosts, increasingly disquieting, to be raised by our steps."

[70] Andre Breton, Louis Aragon, Max Morise, Roger Vitrac

Turning back to Paris, Andre Breton wrote the first Surrealist manifesto. In the text Breton gives the first definition of Surrealism:

> "The pure psychic automatism with which one aims at expressing, whether verbally or in writing, or in any other way, the real functioning of thought."[71]

The walking act in the rural had been turned into an automatic writing performed by foot, with the absence of a destination. Breton refers to Surrealist Deambulation as "exploration between waking life and dream life"[72]. Thus, walking becomes a means of investigating the "unconscious parts of the city"[73] that are unplanned and unexpressed in traditional representations.

Following the introduction of walking as a critical activity by flâneur, Dadaist and Surrealists developed walking into a level of aesthetic operation and investigation tool of the borders between dreams and reality of the urban field. In these practices, the act of walking was accompanied with text works, flyers, posters and photographs. In the mid of 1950's surrealistic writings on unconscious city had already became a wide-spread literature. The texts about the walking were followed by Lettrist texts which are the "manuals of using city."[74] Meanwhile, the act of drift (derive) took the place of the Dadaist visits and Surrealist deambulations, a new means of critical walking activity in the urban field. In the years preceding the formation of Situationiste Internationale (SI), drift was introduced by Lettrists, as a collective act, and "the

[71] Andre Breton as cited in Franceso Careri, Walkscapes, 2002:79

[72] Cited in:
Mirella Bandini. "Surrealist References in the Notions of Derive and Psychogeography of the Situationist Urban Environment," Situationists: Art, Politics, Urbanism, ed. by Libero Andreotti & Xavier Costa, Barcelona: Museu d'Art Contemporani,1996

[73] Franceso Careri, 2002: 81

[74] Franceso Careri, 2002: 95

realization of an alternative way of inhabiting the city"[75]. In the publishing of SI in 1958, dérive was defined as:

> "A mode of experimental behavior linked to the conditions of urban society: a technique of transient passage through varied ambiances. Also used to designate a specific period of continuous 'dériving'."[76]

In the mid 1950's, the given importance to the concepts of unconsciousness and dreams by Surrealists and Dadaists was harshly criticized by Lettrist Internationale[77](LI) for the sake of exploring the "revolutionary energies and transformative potential" of the urban field. The drifts were practiced in different groups of two-three to cross-check the impressions of the urban field on individuals.

In addition to the development of walking act to a collective means of inhabiting the city, the theory of drift brought a new conception of cartography, whose inspiration can be found in Breton's writings on maps[78]. In 1954, Lettrists opened an exhibition named as "Metagraphies Influentilles"[79]. Among the works, Gilles Ivain's metagraphie was a map of Paris on which fragments from other maps are placed (Figure 1.4). Similar to the earlier surrealist collage-map, "Search for a Native Land" produced by Marcel Marien, Ivain's metagraphie was based on disorientation.

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[75] Thomas McDonough. "Delirious Paris: Mapping as a Paranoic-Critical Activity," Grey Room, Vol.19,2005:8

[76] In Internationale Situationniste, 1958. For English version see:
-Situationists: Art, Politics, Urbanism, ed. by Libero Andreotti & Xavier Costa, Barcelona: museu d'Art Contemporani Press,1996

[77] Lettrist Internationale (LI) was the first breakaway from the Letterists. The breakaway leaded by Guy Debord and the group shifted their focus from poetry to acts in urbanenvironment. LI joined in the Situationist Internationale (SI) in 1957.

[78] Breton mentioned the possibility of maps in which places liked will be shown in white, ones tried to be avoid are black and zones in which the sensations of attraction and repulsion alternate will be grey. See:
-Andre Breton. "Pont Neuf," La Cle des Chanps, Paris, 1953

[79] *Metagraphics* is the name given by Lettrists to their mixed-media works composed of texts and visuals

Figure 1.3 Metagraphie, from the exhibiton "66 Metagraphies Influentilles", Ivan Chetcheglov, 1952

Source: Franceso Careri. "Anti-Walk," Walkscapes: Walking as an Aesthetic Practice," Barcelona: Editorial Gustavo Gili,2002:68-101

Figure 1.4"Search for a Native Land", collage-map produced by Marcel Marien, 1939

Source: https://www.imj.org.il/en/collections/224990

In the following three years, Guy Debord and Asger Jorn had still been working on metagraphies which were published in the books *Memories* and *Fin de Copenhague.* These collage works of Debord and Jorn were composed of pieces of maps, cartoons, photographs, and texts. Thomas McDonough claims that these fragmented maps of Paris overlapped with the color splashes can be seen as records of the early drifts.

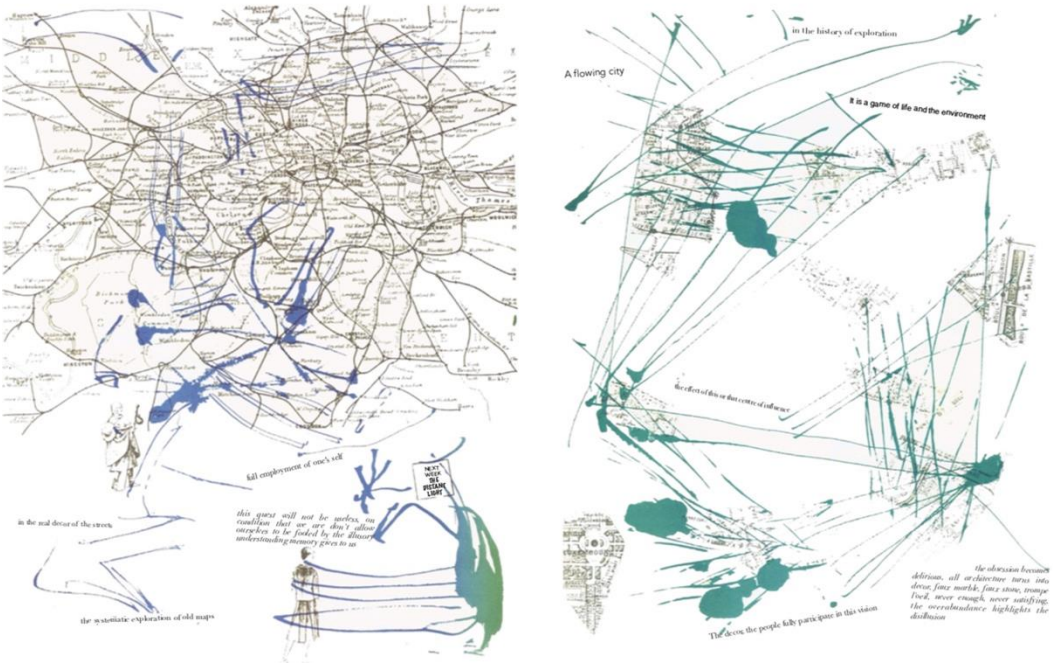

Figure 1.5 two pages from the book Memories, prepared by Guy Debord and Asger jorn

Source: https://www.imj.org.il/en/collections/224990

In the 1955, Guy Debord introduced a "renovated cartography" in the "Introduction to a Critique of Urban Geography"[80]. The idea behind the situationist cartography was to make maps of variations in perception walking through the city. While the documentation of the earlier deambulations and visits focused on the practioners' existence in the field, events took place and the iterative operations of walking were not displayed other than the description in texts. On the contrary, the use of map-

[80] Guy-Ernest Debord. Introduction to a Critique of Urban Geography, ed. and trans.by Ken Knabb, Berkeley, California:Bureau of Public Streets, 1981:5-8

making activity by LI and SI reveals the changes in directions and speed of walking as a reflection of the changes in the characteristics of the built environment. SI uses map-making practice combined with the walking act as a tool of investigation of the "psychological climates"[81] of the city. Psychogeography, a pseudo-scientific word that situationists came up with, is used to describe the study of effects of a geographical environment on the emotions and behavior of individuals. Guy Debord provided the first psycho-geographical map, "Guide Psychogeographie de Paris" in 1957. It was followed by "The Naked City" in the same year. These psychogeographical map-making practices were connected with the act of walking and the produced maps reveals the perceptive features of walking act, as the itineraries do. In the maps, the forces affecting the directionality and speed of walking are shown with changes in placement of the fragments and variety of thickness and size of the arrows binding them. As examples of in-situ map-makings, the situationist map-making will be discussed in detail in the chapter 2.3.1.

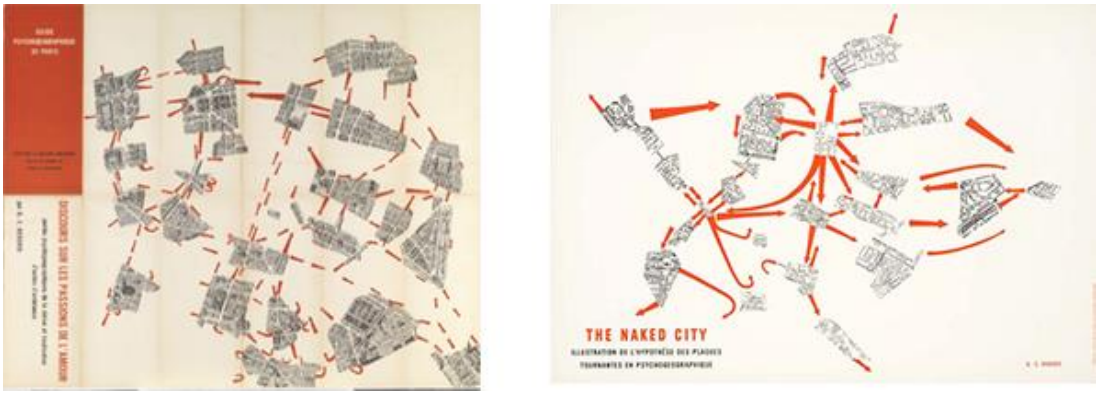

Figure 1.6 (left) "Guide Psychogeographique de Paris", first psychogeographic map produced by Guy Debord, 1957 (right) "The Naked City", psycho-geographic map produced by Guy E. Debord, 1957

Toward the end of the 19th century, Michel de Certeau introduced the "Wandersmanner" to the existing literature on walkers of the city. De Certeau mentions the walkers as the ordinary practitioners of the city who continuously write

[81] Ibid.,7.

the spatial stories that they are unable to read. The admiration of the aerial photographs and totalizing point of views are questioned by de Certeau in *the Practice of Everyday Life*[82]. Walking and seeing are mentioned as two modern practices of everyday living in de Certeau's writings; the former is accepted as a spatial practice, a catalyst of transformation from the place to space while the latter requires a detached position.

In the end of the 19th century, walking activity had still been used by artists as a link between the field and the body. Richard Long, a land-artists working with multiple mediums adopts the act of walking as a means of drawing on the field. Long's works takes the walking on focus but extends through photography, text-works, books, indoor and outdoor sculptures, and map-works. Richard Long's works can be considered as mixed-media works, in which the maps used as a tool of representing the performance that takes place without an audience. He simply divides his works as "foot-works and hand-works"; the former refers to the walking action in the field while the latter refers to the sculptures he produces from the pieces he extracted from the field, such as stones, mud, clay, dust, and branches[83]. In his foot-works, Long walks through uninhabited lands by following iterative recipes. His use of maps varies for each project; in some of them map reveals the pre-decided boundaries of the walked

[82] Michel de Certeau, 1984: 92-93

[83] Richard Long interviewed by Nick Stewart. "Richard Long: Lines of Thought a Conversation with Nick Stewart," Circa, Vol.19, 1984:8-13

field while in others the records of the route he walked (Figure 1.7). Thus, his map-making is selective in terms of the representing the processes of map-making.

Figure 1.7 Two different use of maps by Richard Long, (left) Map-work of the project "Concentric Days",1996 (right) Map-work of the project "Cerne Abbas", 1975

Source: (right) https://www.tate.org.uk/art/artworks/long-a-hundred-mile-walk-t01720

(left) https://www.tate.org.uk/art/artworks/long-cerne-abbas-walk-t02066

From the very early times, maps were traveling companions of humankind. Walkings had been planned in reference to maps or recorded on them. They were also used as investigation tools and map-making activity has been going hand in hand with the critical walking activities.

1.4. Methodology

In the thesis space is defined as a situational concept, representation of which requires a multiplicity in the modes and operations of depicting the bodily presence in the field. Based on the assumption that map is a tool emerges in-situ to describe the field as exposed to map-makers' mode of questioning, map-making practice is proposed as an investigation and representation tool of the distinct spatial experiences. One of the aims of this study is to obtain a generative toolset of map-making practice. The explored toolset is not proscriptive but flexible to be re-shaped for each field and map-maker. The study focuses on how map-making becomes a tool of representation when

connected with walking activity. To understand the iterative and citational acts of representing the experienced field, a critical reading of in-situ maps is presented in the study. This study extracts in-situ map-making acts from early maps, medieval maps of sailors', avant-garde map-making practices, land artists' works, post-modern novels and personal maps produced within the workshop *Invisible Boundaries*[84]. Although these maps are produced with varying interests and in different periods, they both reveal the experiential, temporal, and perceptual features of the field.

1.4.1. Grounded Theory

The construction of the theoretical framework and focus of the study is developed through a set of procedures. In this respect, the methodology of the study is based on the Grounded Theory[85], the discovery of the basis for investigation from data. Instead of starting with an initial hypothesis, grounded theory offers a set of procedures for generating a framework[86]. The process starts with reading the data and/or literature on topic. The process of reading involves discovering and registering variables, categories, concepts, properties. Then, the repeated concepts and features are tried to be identified and coded. With the increase in data, codes can be separated into concepts or can be grouped into categories. A new theory or a framework for investigation can be drawn from categories. A theory can serve for several purposes; it can be both a tool and an end-product. In this study, it is aimed to obtain a tool for the conceptualization of representation techniques of maps through readings.

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[84] The workshop *Invisible Boundaries* is conducted with Dicle Kumaraslan in 2018. The workshop and the following exhibition took place as a part of the event "Unknown Ulus" organized by the Chamber of City Planners -Ankara Department. Following the workshops, the exhibition of the outcomes of the workshops took place in Ankara ÇSM. The workshop "Invisible Boundaries" took place on 8th-9th of December, 2018. The details can be seen on:
-http://www.arkitera.com/etkinlik/5310/bilinmeyen-ulus

[85] Grounded Theory is a systematic methodology developed and established in 1967 by sociologists Barny Glasser and Anselm Straus B. Glasser & A.L. Strauss. The Discovery of Grounded Theory: Strategies for Qualitative Research, New York: Aldine, 1967:1

[86] G. Thomas & D. James. "Reinventing Grounded Theory: Some Questions about Theory, Ground, and Discovery," British Educational Research Journal, Vol.32, 2006:768

1.4.2. Critical Map-Reading

> "(Mapping) is a question of the architecture of the picture plane, what's in the center and what's at the edge, what's in fluorescent pink and what's in the blue of Williamsburg, whether the paper crackles with (apparent) age or sluffs of repeated foldings like a rubber sheet, whether the map image predominates or the text takes over[87]."
>
> Denis Wood

This study provides a critical reading of design-decisions of in-situ map examples of various interests. Since the study searches for map-making practices flexible enough to be redefined for each map-maker / ground /intention, the domain of the study consists of the critiques and alternatives of the prescriptive/proscriptive map-making practices. Readings of literature on map-makings (based on experience) revealed the interdependency between conceptions of space and the mode of representations of space. While the universalist notion of maps coexists with measurable conception of space, maps based on the performative processes depends on the experiential and temporal features of space. Thereby, the domain of the study emerged as maps produced within a heterogeneous perception of space as an alternative to standardized, universalist map-making practices.

The critical reading of in-situ maps is based on the assumption that maps are objects embedded in a context and "its action is not limited to the structural aspects of presentation[88]." Thus, the focused in-situ maps are provided with modes of seeing they are embedded. On the other hand, Pickles claims that "although the map is an embedded figure", it is simultaneously "an object that has a structural autonomy", and thus it requires a distinct analysis. Based on the assumption that maps have a structural autonomy, the study also provides a decomposition of the maps in terms of operational structure and temporal codes. The conceptual tools of the analysis are obtained from

[87] Denis Wood, 1993: 112
[88] Denis Wood, 1993:132

Corner and Wood's decomposition into systems that shaped by their relation to other systems.

There are *map-making acts* and *map features* emerged through processes of reading the examples of walking-based maps in this thesis. The outcomes of the decomposition of maps are offered as a generative toolset of the map-making in the thesis. The obtained toolset was introduced to the participants of an in-situ map-making workshop conducted within the scope of this study. The map-makers of the workshop "Invisible Boundaries" adopted and contributed to the generative toolset. In the study, the personal maps produced by the participants of the workshop are also decomposed to investigate how they refer to the generative toolset (Figure 1.8)

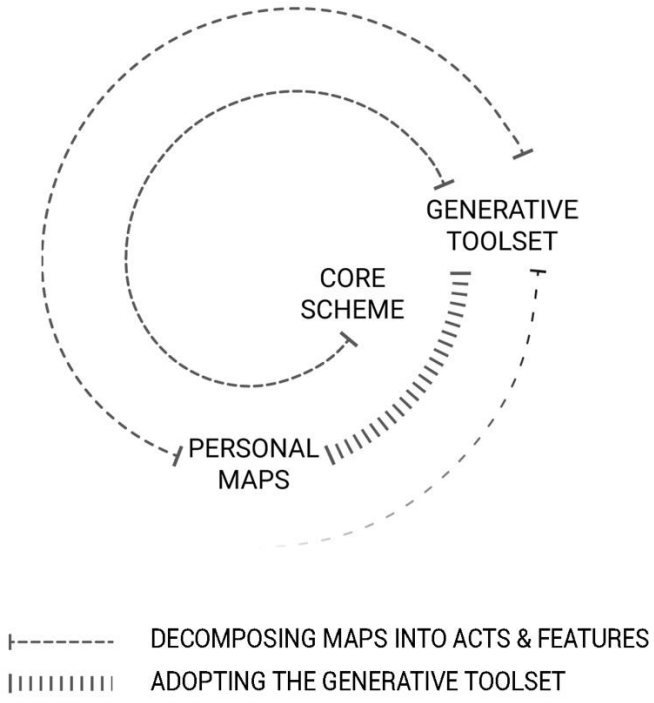

Figure 1.8 The diagram of the construction, usage and development of the Generative Toolset (prepared by the author)

1.4.3. Workshop: Maps of *Invisible Boundaries*

In the scope of the study, an in-situ map-making workshop is conducted in 2019 by the author of the study. With the aim of investigating the sudden changes of perceptive and sensory experience in the field, nine participants of the workshop produce personal maps of the five-hour walking in Ulus neighborhood, Ankara.

The workshop process is composed of a walking session following the introduction of the map-making acts / generative toolset and a desk-work session in which individual maps were prepared. Participants were mobile observers recording the changes in the appearance and experience of the field. To enable the participants to walk aimlessly on the streets, the concept of "boundary" is used as the theme of the workshop. Referring to psychogeography, they asked to observe boundaries between different unities of the atmosphere in Ulus.

The workshop lasted two days. As a warm-up exercise, the participants were expected to draw boundaries of the neighborhood in which they live or frequently use before they come to the workshop. In the first day, the boundary maps prepared by the participants were discussed together. In this session, the elements forming the boundaries were identified. The following session was the introduction of the decision-making processes of map-making to the participants via examples of in-situ maps. The second half of the first day of the workshop was devoted to walking session. There were nine participants of the workshop, three of which attending from out of Ankara. The participants were given a start and end point and were expected to draw their routes. Approximately four hours were spent in the walking session. While the three of the participants walked alone, the others walk in groups of two and three. In the second day, participants described the routes they followed and how the unities of atmosphere differentiated through their routes. Then, the initial ideas of representing the walking experience are discussed in a panel session. Following the two days of the workshop process, individual interviews with the participants were held before the

exhibition. In the workshop, five maps are produced from the five different routes created by participants.

In the thesis, the two in-situ maps produced by the participants of the workshop *Invisible Boundaries* are decomposed to enrich the proposed generative toolset.

1.5. Thesis Outcomes

1.5.1. Core Scheme as a Tool of Decomposing Maps

A core scheme is used for reading the focused in-situ maps. It is constructed on the operations of map-making as schematized by James Corner and the five codes of map-making as defined by Denis Wood. It provides a set of phases of the map-making process under four titles. These phases are considered as interwoven and affecting the appearance of each other on the map surface.

The obtained *core schema* is used as a base for identifying the graphic decisions in the focused in-situ maps. Through the reading of the maps in terms of their structural autonomy, map features and acts altering them are matched, related, and added to the ones in the core scheme. The core scheme thus transformed into a *generative toolset*. The toolset includes the acts and grouped features of maps.

1.5.2. Critical Reading of Maps

This study provides a method of map-reading which requires the examination of the conceptions of the space (within which the map is produced) and how the plotting acts affect the map features. Thus, the focused in-situ maps are provided with the context they embedded and discussed in terms of their visual structure, simultaneously. In the second chapter, the identified in-situ map practices are discussed in terms of perception of space. In the following chapter, the study focuses on visual structure of the selected maps. Referring to the *core scheme*, a table is prepared for each focused example of the in-situ map. The table shows the map-features, extracts, and plotting acts which are matched with the core scheme as well as the ones unique to that map.

1.5.3. Generative Toolset

The proposed toolset derived from the in-situ map-making practices can be considered as a conceptual scaffold[89] in architectural representation; it provides the designer with a generative yet speculative list of acts of map-making. The provided modes and operations of representing the presence can be multiplied, adopted, deconstructed, and reconstructed in a unique way for different contexts. The toolset itself was constructed in this thesis by decomposing maps in terms of representational choices and operational structure.

[89] Scaffolding is a term borrowed from the field of construction to the educational research. Similar to the temporary structure that keeps a building up until the construction is done, a conceptual scaffold provides temporary support for achieving a condition (it can be completing a particular task or a design process). The term can be traced to the writings of John Dewey on education. He was offering that a relation exists between "activity" and learning. This approach offers a learning model in which students actively participate in the learning processes. Other theories of education followed the experiential and interactive mode of learning that Dewey proposed at the beginning of the 1900s had an important impact on the education theory. His model was followed by other theories of education. Psychologist L.S. Vgotsky's model is one of these studies but differs from Dewey's model in terms of the relationship between processes and goals in education. In terms of architectural education, learning in the design studio is claimed as based on experience rather than explanations. An evaluation of the use of conceptual scaffolds in architectural design studios can be found in:
-İpek Gürsel Dino. "An Experimental Pedagogy of Concept Development in the Introductory Architectural Design Studio," Online Journal of Art and Design, Vol.5(1), 2017
for further readings on education theory, see:
-John Dewey. "Democracy in Education," The Elementary School Teacher, 4, 1903:193-204
-L.S. Vgotsky. Mind in Society: The Development of Higher Psychological Processes, Cambridge: Harvard University Press, 1980,
-S, Ledewitz. "Models of Design in Studio Teaching," Journal of Architectural Education, 38(2), 2-8

CHAPTER 2

NOTIONS OF EXPERIENTIAL MAP-MAKINGS

As discussed in the previous chapters, the term map has varying meanings. This variety may be the corollary of widespread currency and ancientness of maps. It is claimed that there have been just a few "mapless societies" in the world[90]. Although only a few objects remained from the early times of the mapping impulse of the human being, the available reading of maps starting with the medieval times shows a great variety in terms of depicting the space. David Harvey states that "the maps as we know", totalistic representation of a field, was an invention of the sixteenth century[91]. The modernist approach in the history of cartography differentiates the early maps from the institutionalized map-making practices. The evaluation of maps in terms of precision implies a gradual progression from the early depictions of lived experience to the contemporary scientific practice of map-making. Although the history of science is not in the scope of this study, science and cartography have an intimately related history[92]. This historical relationship creates an illusion of a linear progress in the field of cartography in terms of accuracy and precision. Criticizing the overemphasis on the scientific notion of map-making, J.B. Harley states that the assumption of the "linear historical progression" suggests that the precision in measurement and accuracy were as important in the maps of early societies' as it is in the modern scientific approach of map-making[93]. The historiographical writings in

[90]John Brian Harley. "The Map and the Development of the History of Cartography", The History of Cartography, Volume 1 -Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean. Chicago: University Of Chicago Press,1987,3

[91] David Harvey. Maps in Tudor England, Chicago: University of Chicago Press, 1993: 464

[92] David Turnbull. "Cartography and Science in Early Modern Europe: Mapping the Construction of Knowledge Spaces". Imago Mundi, Vol.48,1996,1

[93] John Brian Harley,1987:3

cartography focusing on the progress tend to handle maps based on the experience of travelers, sailors, soldiers and the gathered information from various sources as "early maps" produced up to the 13th century[94]. It seems like that the adjective "early" accounts for the lack of objectivity and a set of consistent representational principles. The development of a systematic approach to map-making until the 17th century is considered as the first period, followed by the 19th and 20th century map-makings and finally the post-modern era of mapping.

As mentioned in the first chapter, de Certeau differentiates the itineraries from the maps as two different "practices organizing space". Similar to de Certeau's distinction, John Pickles points out to the transition from itineraries to the map-making as:

> "Throughout Europe between 1400 and 1600 a revolution occurred in the drawing, distribution, and use of maps. Itinerary maps and picture maps (usually from a bird's eye view) gradually began to disappear and maps of places or areas began to appear in increasing numbers."[95]

Pickles relates the major changes in the form, use, and availability of maps between 14th and 16th century with three conditions[96]. The technical innovations in map-making such as the introduction of standardized scale, the method of triangulation and legend box towards the end of the 15th century in England enabled the development of standards of the spatial representation. Alongside the technical developments, the transformations in European Renaissance ways of seeing (perspective, Ptolemy geography, increasing interest in quantification) are interrelated with the development of universalist map-making. Thirdly, the changes in the making and use of maps were influential in the emergence of national states[97]. Pickles draws parallels with the

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[94] J. Brian Harley, 1987:6

[95] John Pickles, 2004: 98

[96] Ibid.

[97] Ibid.,97-99.

characteristics of "national state consciousness"[98] and functioning of the maps as tools of definition and management of national territory and the administration of the the national economy.

As well as being tools of social formations, it is said that maps have been structuring the world "literally and figuratively"[99]. The conception of the world was based on the reading and interpretation of the maps in early societies. Similarly, the cartographic gaze[100] emerged with modernity had been shaped the relationship between human and nature. Valuing the vision over experience as a primary source of the spatial knowledge renders the earth as a source of "information and value in which all information will be available in one place at one time". Thus, the replacement of itineraries, marks of the experiential aspects of the mapped field, by demarcations with increasing concerns about property and identity is found problematic in terms of the conception of space in this thesis.

Searching the itineraries, the study focuses on map-making practices other than the standardized, prescriptive and proscriptive notion of scientific map-making. In this chapter, the periods and fields within which the experience-based maps produced are explored. This study claims that the boundaries of the scientific conception of map-making can be located in the shifts between measurable and experiential conceptions of space. The measurable conception of space coexists with a scientific authority to define a set of rules for the division of three-dimensional entity into homogeneous units. The experiential conception of space, then, can be traced to map-making

[98] Ibid., 97.

[99] Ibid., 92

[100] John Pickles come up with the term "cartographic gaze" to refer a particular mode of seeing in the modern era. Characteristics of the "cartographic gaze" are defined by Pickles as "Cartesian commitment to vision" as source of information about the world, observer epistemology, prioritizing the mathematical forms and universalist logic. See:
-Ibid., 76.

activities before Enlightenment and critique of the universalist standardization of space.

The first two section of this chapter focuses on map-making practices before the universalist standardization of map-making activity. The early maps and medieval sea maps are investigated in terms of their resemblance to itineraries. In the third section, map-making practices as a critic of the universalist conception of space in the avant-garde and land-art practices are mentioned. In the fourth section, the maps produced by fictional walkers in the post-modern novel is focused on to explore the acts of writing and reading the spatial stories.

2.1. Spatial Representations Before "Maps": Itineraries

> (…)
> Gus Grimly: Now, why would I do that?
> Lorne Malvo: Because some roads you shouldn't go down. Because maps used to say, "there be dragons here." Now they don't. But that don't mean the dragons aren't there.
>
> Dialoge form the Fargo,2014 (TV Series) [101]

Humankind from very early times has been interested in making records of the physical features of the earth. Egyptian and Babylonian map-makers are claimed as the starters of the history of cartography followed by ancient Greek and Roman influences and studies of Arabs during the Middle Ages[102]. Some of the early maps were in the format of the text, like "Periodos Ges"[103], the narrative of the walked part of the earth in ancient Greek. There are just a few objects from the early times of map-makings found. Instead, there exist textual evidence of Greek map-making and

[101]"Fargo: This is a True Story" , directed by Julia Ng, 2014. The Fargo TV series followed the movie éFargo" directed by Ethan & Joen Coen in 1996.

[102] Denis Wood. " The Power of Maps", Scientific American, Vol.268(5), 1993:90

[103] James S. Romm. "Roads Around the Earth," Geography, Exploration and Fiction, New Jersey: Princeton University Press,1992:.26-27

medieval copies of Roman itineraries. In this section, the means of exhibiting the itineraries of the spatial experience are investigated in the common features of the early maps.

As defined earlier, itineraries are descriptions of the experience of space in terms of operations, name of places, routes, mediums of mobility, and performative indicators of the places. The first resemblance between the itinerary form of spatial depiction and early maps is their selective interest. As records of safe routes, cities to pass through, holy areas, cities to stay at night[104] recorded by travelers (pilgrimages, explorers, and tradesman), the early maps did not represent the field as a whole. Instead of depicting all features of the field, they show the routes between important locations. The observations of the map-maker and journey stories were also included. Evliya Çelebi's map of the Nile (figure 2.2), for example, shows some focal points of the settlements around the river and taken notes about them.

Figure 2.1 Piece from the Nile Map of Evliya Çelebi

Source: http://docplayer.biz.tr/176173-Evliya-celebi-mappaemundi

The second feature of the early maps that can be related with the itinerary is the inclusion of perceptive features of the field. In the early maps as diaries of journeys,

[104] George H. T. Kimble. Geography in the Middle Ages. Londra: Methuen, 1938

the distances between nodes on the map are indicated in terms of duration changing according to the mode of mobility. By means of these records, the obtained safe routes of travel from one city to another had been transferred through generations in the form of visual and textual narrations. Descriptions of the local features of the field were accompanied by the possible dangers of the route and heard rumors and stories. In the Hereford Map, the edge of the known-world is depicted with strange creatures (Figure 2.2). The inclusion of depictions of the super-natural creatures described by the participants of the crusades on the 13th century maps can be given as another example of performative indicators of the early maps. (Figure 2.2)

Figure 2.2 (left) details from the lower right quadrant of the Ebstorf map (right) close-up of Hereford Mappa Mundi revealing several creatures from Africa continent, 13th century

Source: (left) http://www.medievalhistories.com/ebstorf-map

(right) P.D.A. Harvey, Medieval Maps, (London, The British Library, 1991), fig. 25, p. 33

In the early maps, the organization of the spatial knowledge is interlocked with the current beliefs and conception of the world. In the Ebstorf Map[105] (Image 2-4), for example, the body of Christ is depicted as earth. The changes in society's conception of the world can be observed in the variation in the organization of the lands. In the two types of the early maps, T-O maps and zonal maps, the representation of the

[105] Ebstorf Map is an example of a genre called "Mappaemundi", idealized representations of the known world, from 13th century. It is the largest medieval map hitherto known of. The map is oriented towards the east and the body of Christ is depicted as earth. See:
- G. Pischke. "The Ebstorf Map: Tradition and Contents of a Medieval Picture of the World". History of Geo- and Space Sciences, Vol.5. 2014:149-154

known and unknown parts of the world differentiates. [106] T-O maps show the three continents (Europe, Africa, and Asia) divided by the Great Sea and surrounded by the Great Ocean. Zonal maps, on the other hand, divides the world into temperature zones and locates habitable world of human in a temperate zone. While in the T-O maps the surrounded area depicts the habitable world, in the zonal maps both uninhabitable and prohibited zones were shown. The organization and representation of the unknown, uninhabited, unexplored parts of the world vary within the early maps. Nevertheless, they were transparent enough to differentiate the experienced space from the unknown landscapes. Unlike the modern maps of scientific map-making activity, these maps were displaying blank areas that consciously left empty due to lack of information.

Figure 2.3 Ebstorf Map, 13th Century

source: http://www.medievalhistories.com/ebstorf-map/

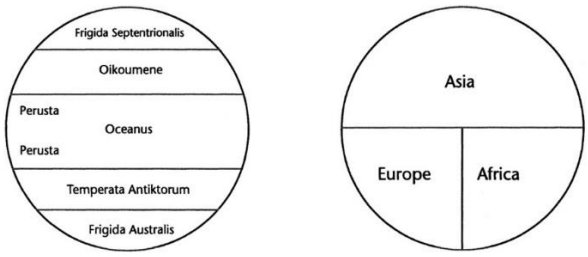

Figure 2.4 Diagrams showing the organization of T-O and Zonal Maps, produced by Naomi Reed Kline

source:http://www.medievalists.net/2018/09/maps-monsters-and-misericords-from-creation-to-apocalypse/

[106]Kline reveals how the different beliefs shapes the representation of the early maps. See:
-Naomi Reed Kline. "Maps, Monsters and Misericords: From Creation to Apocalypse", 2018 available at : http://www.medievalists.net/2018/09/maps-monsters-and-misericords-from-creation-to-apocalypse/

2.2. Maps Under Constant Revision: Medieval Sea Charts

The breaking up with early map-making is related to 13th century when the medieval sea charts were produced. Portolans[107], chart of the ports and observed lands produced by Mediterranean sailors, are considered as the first cartographic documents to display some degree of consistency in their scale[108]. In the portolan charts, similar to early maps, the represented geographical information was based on experiences and observations of the map-maker. Making the records of the continental coastlines and enabling navigation in the seas were the main purposes of these maps. They were records of self-knowledge of the areas covered in the map,[109] and they were under constant revision. As accumulated charts/catalogs of directions to navigate between experienced and recorded places on earth, portolan charts were heterogeneous; each portolan map was an assemblage of several fragments of maps with varying sources. In this study, the heterogeneous structure of portolan charts is valued for revealing the citational practices of map-making and experiential aspects of the field as itineraries do.

Although the portolan charts do not follow any prerequisite of a scientific map, they still have some common features to regard them as a family or type of maps. The simplification of the geographical features, effort to construct a consistent scale within the map, the network of rhumb lines and consistency in coloring the wind directions can be listed as shared characteristics of the portolan charts[110]. One of the remarkable

[107] The term "portolan chart" comes from the Italian word portolano, related with ports, used for assemblage of charts and written sailing directions. Tony Campbell claims that the term has an ambiguous usage and lists the various terms produced for portolan charts such as rhumb line charts, loxodromic charts, nautical charts. See:
Tony Campbell. "Portolan Charts from the Late Thirteenth Century to 1500", Map History / History of Cartography,1982, 375

[108] Ibid.

[109] The geographical content of the portolans was Mediterranean and Black Seas mainly. In some cases Atlantic coasts were also shown.
Ibid., 377.

features of the portolans for this study was the directionality provided by rhumb lines and uniqueness of the starting points for each map. The rhumb lines were not used for literally defining the line crossing all meridians of longitude at the same angle, but they connect the named points on the chart. One or two circles were drawn to cover as much as possible in the chart, which then were marked with sixteen or thirty-two equidistant points. The rhumb lines between these points represented the wind directions (Figure 2.3).

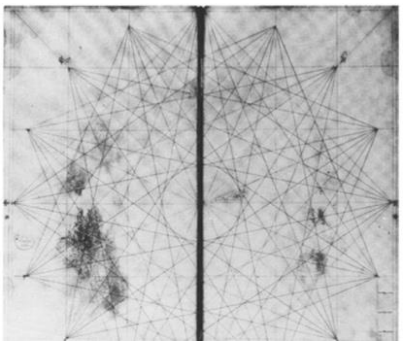

Figure 2.3 Sea Blackloth drawn by Petrus Vesconte to represent the framework of thumb lines

Source: *David Turnbull. "Cartography and Science in Early Modern Europe: Mapping the Construction of Knowledge Spaces". Imago Mundi, Vol.48,1996,11*

[110] For example, the coastlines were drawn as an overview and the protrusions represented in pointed, rounded and wedge shapes repeated in different portolan charts. The pristine areas such as Atlantic, Baltic and inland areas have been shown with even less detail. Though it is claimed that a typical chart had an approximate scale of 1:6 million, scale varies considerably from one to another . Though scale bar was among the shared features, no key to the unit of measurement was provided.
see: Ibid.

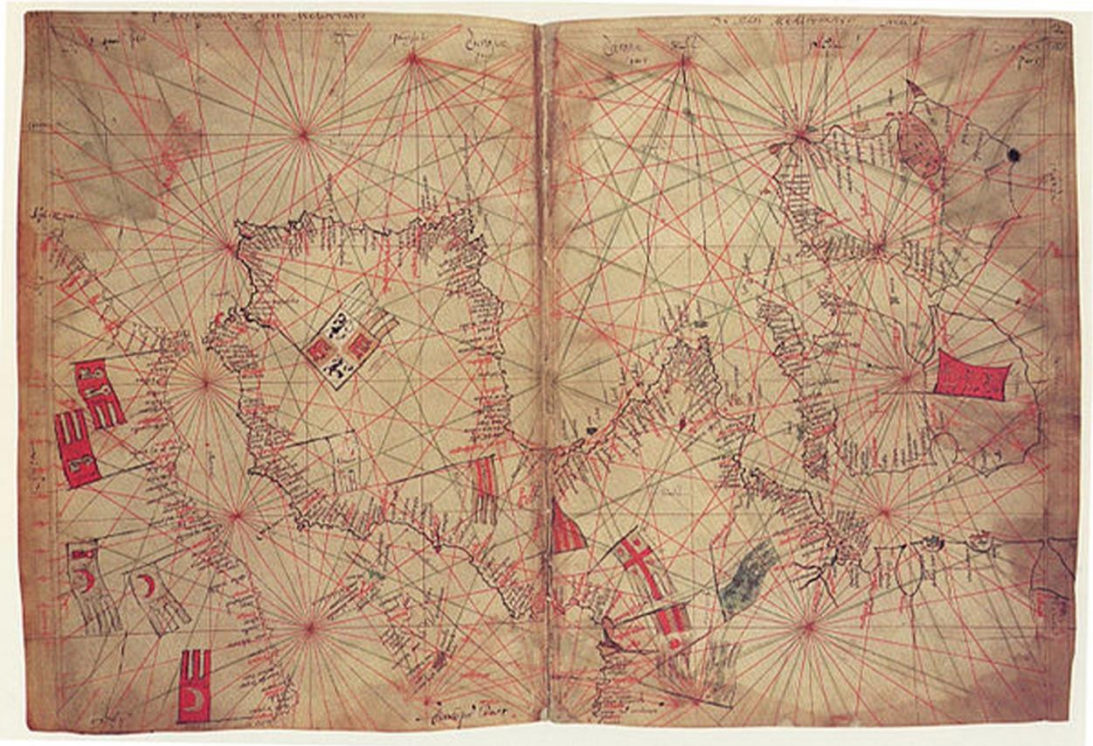

Figure 2.4 A sheet from the Map of the Atlantic including Britain and Spanish Isles, Vesconte, 1325

Source: Marino Sanuto Liber Secretorum Fidelium Crucis, c.1325, British Library

Figure 2.5 Portolan chart from around 1505, Italy , close view: wind directions

Source: https://www.wdl.org/en/item/8954/

Although the network of these lines gives the impression of a grid existing on the chart surface, the mapped subject, coastlines in the case of portolans, were not drawn within a grid system(Figure 2.4, 2.5). Instead, they were located according to distance and directionality. Taking the wind directions as regulators of the map, the portolan charts communicates the safe routes between ports and harbors. The winds were the main force of mobility in the seas for the medieval age. Thus, the spatial knowledge organized with the rhumb lines reveals the performative aspects of the defined route. In this term, the portolan charts resembled the itineraries. The representation of the mode of mobility is another feature of portolan charts that can be associated with the experiential and perceptive representation of the field. The depictions of the various types of ships is widespread in the portolan charts (Figure 2.4).

Figure 2.6 Piri Reis Map, 1513

Source: https://www.ttk.gov.tr/tarihveegitim/piri-reis-haritasi-hakkinda-izahname/

As representations based on the directional relations between locations, the new discoveries and the observed features of the earth were placed to the surface of the map according to attributed directionality of it to others. In addition to the spatial experiences of the map-maker, portolan charts were outcomes of the citational practices. Turnbull claims that the directionality of rhumb lines allowed map

producers to merge fractions of knowledge from various sources to portolans[111]. To illustrate the techniques of assembling several fragments of maps into a pre-constructed whole, the notion *bricolage* was developed by Frank Lestringant.[112] Notion of cartographic bricolage defines the functioning of the map-making practices in the16th century over decision-making phases of *montage* and *collage*. Montage, grafting the fragments from portolans onto the theoretical framework depends upon the act of collage, the combination of several modes of representation[113].

The portolan charts precede the standardization of spatial knowledge. The first systematic attempt to produce an assemblage of the already produced geographical knowledge from the maps that had been used was in the interest of regulating trade monopoly. Casa da Mina in Lisbon and Casa de la Contrataction in Seville, which are considered as Europe's first scientific institutions, were the first establishments to produce such a knowledge space. These Boards of Trade in Portugal and Spain launched offices where first Padreo Real(Figure 2.7)[114] and Padron Real, maps of the empire, were produced to record the knowledge of discoveries. The duty of these offices was assembling the geographical information from portolan charts showing regional variation in terms of scales, units of measure, and starting point. However, it was not an easy task considering that portolan charts were neither static nor finished

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[111] David Turnbull. "Cartography and Science in Early Modern Europe: Mapping the Construction of Knowledge Spaces". Imago Mundi, Vol.48,1996,10

[112] Frank Lestringant. Mapping the Renaissance World: The Geographical Imagination in the Age of Discovery, Berkeley: University of California Press, 1994,108

[113] John Pickles uses the Lestringant's term bricollage to discuss emergence of mapping practices in the Age of Discovery and claims that it illustrates a fundamental principle of all mapping and leads to post-structuralist and deconstructive cartography.

[114]David Turnbull refers to Kenneth Nebenzahl to accept the anonymus map Cantino Planisphere, named after Alberto Cantino, who smuggled it out of Portugal as a copy of Padreo Real.
-David Turnbull,1996:9
Kenneth Nebenzahl. Maps from the Age of Discovery, Columbus to Mercatorondon: Times Books, 1990, ix,234

representations but instead an accumulation of knowledge from various surveys and expeditions from the 13th century to the middle of the 16th century. The spatial knowledge system then did not rely on any prerequisite set of rules. Instead, map-making was about using several techniques of bringing together the local knowledge. The regulation of information from local sources eventually required a standardization in terms of representation to overcome the inconsistencies of different sources. To bring a variety of sources together in one map, there was an attempt to form a system of metrication. The two maps Padron Real and Padreo Real were referred as the first maps to act as a base organize universal spatial knowledge[115]. Turnbull states that the two maps "were examples of the kind of organization that was later developed in the integration of science, cartography and the interests of state (…)"[116] The template maps produced in Portugal and Spain had been started to lost favor at the second half of 16th century. Nevertheless, the standardization project starting with the 16th century, leads to replacement of the heterogeneous structure of the early maps by the homogenized space conceptions and consistency of units.

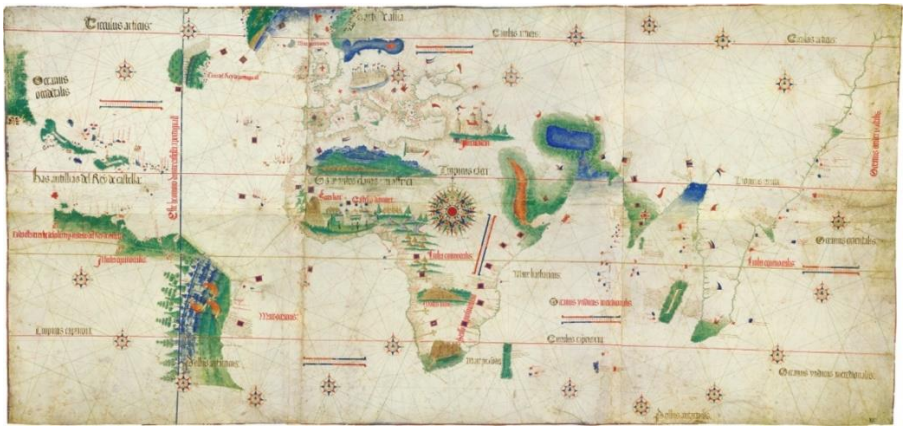

Figure 2.7 Anonymous map known as "The Cantino Planisphere", a copy of the Padreo Real, Portugese "Map of Empire" 1502,Vellum, 102 X 218 cm

Source: (Courtesy of Bibliotheque Nationale, Paris, Cartes et Plans; Res. Ge.B118)

[115] Ibid., 10.

[116] Ibid., 19.

2.3. In-situ Map Making: From Field to Spatiality

As mentioned in the literature review, with the Cartesian commitment to the vision, the performative map-making activities have been discredited until the shift in the conception of space from homogeneous entity to heterogeneity. With the critic of universalist notion of space, maps have been started to be reconsidered as subjective practices composed of iterative and citational processes. In this chapter, two discrete practice of in-situ map-making by the avant-garde group SI and land-artist Richard Long are investigated in terms of map-use and map-making.

2.3.1. Map-Making Through Drifts

As mentioned in the literature review, in the mid-1950's Guy Debord introduced the idea of a renovated cartography. This new cartography offers a mode of map-making united with a particular mode of walking, drift, to reveal "unities of atmosphere" in the city. In the "Introduction to a Critique of Urban Geography" published in 1955, Debord defines the unities of atmosphere as "the sudden change of atmosphere in a street, the sharp division of a city into one of the distinct psychological climates".[117] The "renovation" brought by SI to map-making can be found in the introduction of an urban unit which is independent of the cadastral regulations of state and re-shaped with personal experience. The maps produced by Guy Debord and Asger Jorn denies the space as a context or container of events but instead represent it as a social practice. Thomas McDonough claims that psychogeographic map-making "was not simply refuting an eighty-year-old tradition of academic geography,"[118] it was also led to the conception of space as a socially produced category. McDonough also points out the correlation between Debord's and Henri Lefebvre's criticism of the shift from the

[117] Guy-Ernest Debord. "Introduction to a Critique of Urban Geography," The Situationist International Anthology, ed. And trans. By Ken Knabb, Berkeley: Bureu of Public Secrets, 1981:5-8

[118] Thomas McDonough, 1994: 66

"lived space"[119] to "representational space". Similar to the Situationist investigation of unities of atmosphere, Lefebvre chose to study the "practice of inhabiting"[120] the urban units, and he defines the quarters as the unit of social life. Quarters, like unities of atmosphere, do not precisely defined and linked to others, but constantly shaped by the contradictions. Revealing these contradictions hidden by the homogeneous representation of cities was one of the aims of the Situationist project. The drift, then, can be seen as Situationists' mode of "inhabiting" the city "to contest the retreat of the directly lived into the realm of representation"[121].

In 1956, Debord writes the "Theory of the Dérive"[122] in which drift is offered as the act of discovery of the main components and locations of unities of atmosphere and their realization. The importance that the Situationists placed upon the concept of drift is relatable to the rejection of position disengaged with the observer body as used by conventional map-making methods. Drift requires experiential participation into the territory as opposed to the position of a master-plan maker. In that terms, Situationists' usage of maps is based on performative acts of map-making. They have a critical attitude toward the image of the city. Situationist map-making rejects the totalizing perception of the urban field in the plan view since it conflicts with the perception of the city in time by a situated subject. Instead of an illusory total revelation of the urban field, the Situationists offer map-making as a tool of investigation of perception and construction of urban space.

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[119] Henri Lefebvre. The Production of Space, trans. by Donald Nicholson-Smith, Oxford & Cambridge: Blackwell, 1991

[120] As cited in Thomas McDonough, 1994: 68
-Henri Lefebvre. "Quartier et vie de quartier, Paris," Cahiers de l'IAURP7, 1967

[121] Ibid., 70.

[122] Guy-Ernest Debord. "Theory of Derive," The Situationist International Anthology, ed. And trans. By Ken Knabb, Berkeley: Bureu of Public Secrets, 1981:53

The map “Naked City” (Figure 1.6) prepared by Guy Debord and Asger Jorn acts as a document to reveal the concerns shared by LI and SI. In the "Naked City", 19 cut-out fragments of the map of Paris were gathered together and linked by arrows. The map was presented with the subtitle “Illustration of the hypothesis of psychogeographical turntables”, which gives clues about the reading of the map. McDonough draws attention to the term turntable (plaque tournate) which is used to define the circular revolving platform changing the direction of locomotives. The subtitle implies an analogy between walkers’ movement restricted by the urban formation and a locomotive’s movement on the railroad. Thus, arrows define the “spontaneous turns of the direction taken by a subject moving through these surroundings in disregard of the useful connections that ordinarily govern his conduct.”[123]

The Naked City fragments an existing city plan and rearranges the fragments’ spatial and scalar relations. With the act of fragmentation, the map replaces the totality of representation, “the undifferentiated state of the visible-readable realm,”[124] with the selected segments. The omitted parts were left blank. Referring to de Certeau, Mcdonough defines the replacement the totalities with fragments as synecdochic procedures and omitting the linkages between various unities of the atmosphere as asyndeton. Rearranging the spatial continuity of the Plan de Paris disrupts the “false continuity” of it. Use of arrows to represent “spatializing actions” in the map reveals the diachrony of the drift as a contrast to the descriptive mode of the plan view. The city plan offers an abstract space as if the city is homogeneously present for an observer at a frozen moment of time. "Naked City" challenges the descriptive sets of projections that operate in homogeneous space; Instead it narrates the spontaneous changes in the direction of walking.

[123] Text printed on the reverse side of the map, as cited in Thomas McDonough, 1994: 60

[124] Henri Lefebvre, 1991: 355-56

The use of map-pieces had been repeated in the psychogeographic maps produced by SI. In the "Memories", book published five years earlier than the "Naked City", the metagraphies of Debord and Jorn preceding the Naked City in terms of the use of plan views. McDonough interprets the selective use of map-pieces as "the act of laying bare the social body through the city's architectural symbols"[125]. The citational use of existing city maps in the map-makings of Debord and Jorn reflects a critical attitude towards the selected maps.

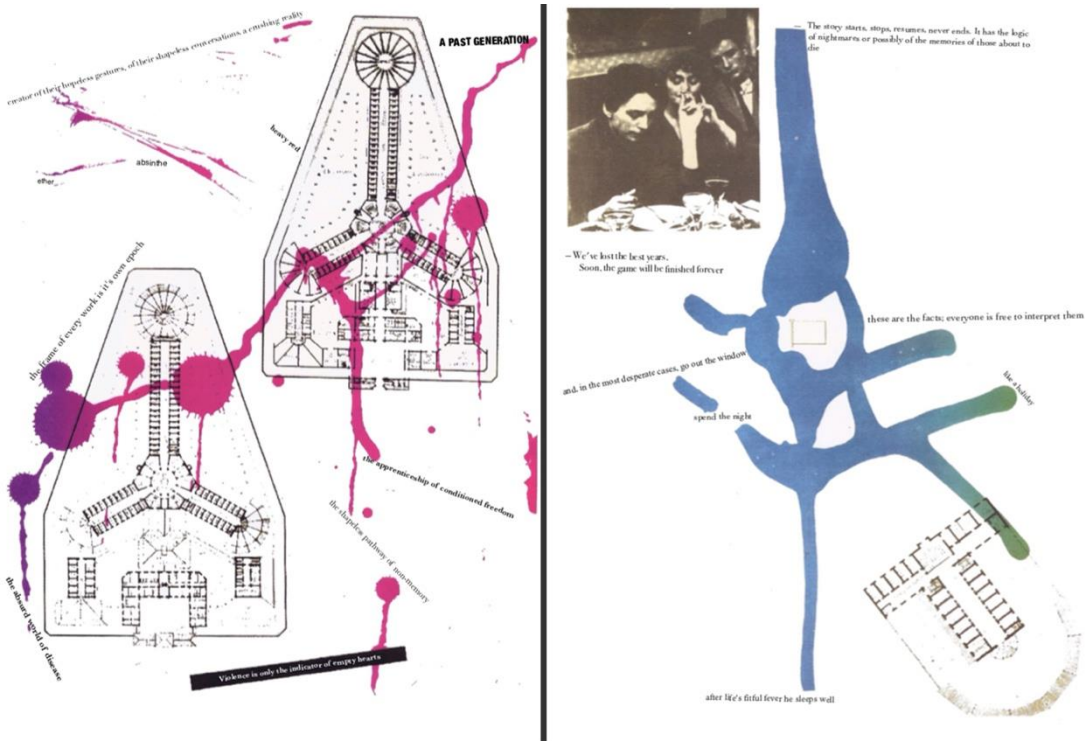

Figure 2.8 Two metagraphie produced by Guy Debord and Asger Jorn, 1952-53

2.3.2. Map-Works of "Walkings of Line": Richard Long

Richard Long is an artist whom works consists of complementary practices of walking, map-making, text-works, photography, and sculptures. Long differentiates himself from the American land-artists who "have to own the land to be able to do all

[125] Thomas McDonough, 1994: 62

the monumental staff."[126] Instead of the constructed land-works, Long focuses on the performance itself and leaving the tracks as evidence of his passing through the field. The two early works of Long were photographs of the traces of a snowball rolled by him and a line of flattened grass he made by walking back and forth. Following the works of lines made by walking in various fields, Long's third project was "A Hundred Mile Walk" (Figure 2.9) that he performed at the end of 1971. He repeated a circular route to walk a hundred mile. Starting with this work, Long has been using maps to represent the idea "to take a walk for a particular reason".[127] In this section, the various modes of map-making accompanying the walkings of Long will be investigated.

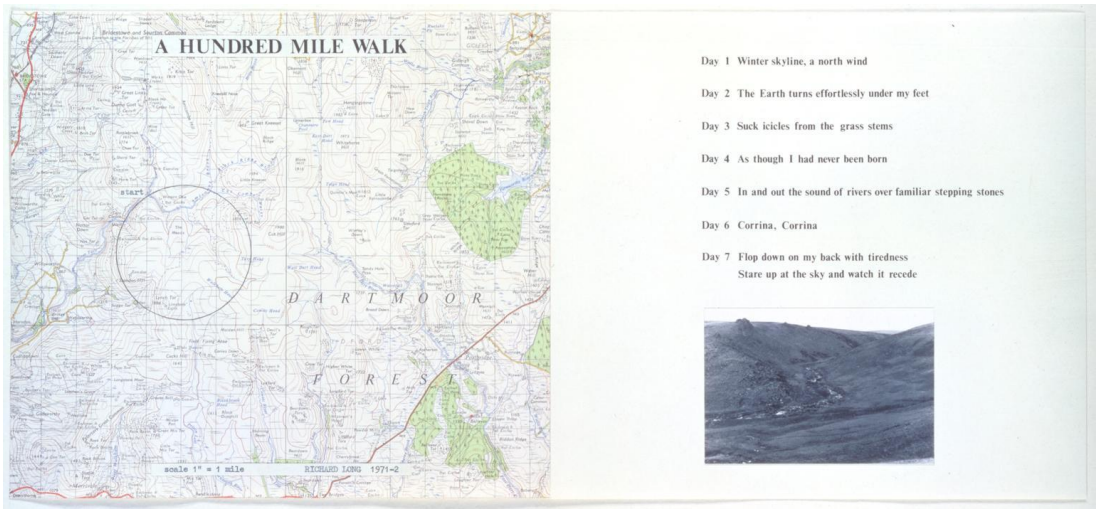

Figure 2.9 Map-work and Text-work of "A Hundred Mile Walking," Richard Long, 1971

Source: https://www.tate.org.uk/art/artworks/long-a-hundred-mile-walk-t01720

Richard Long's works can be considered as mixed-media works, in which maps serve to different interests. Walkings through isolated landscapes introduces the duration and spatiality to his works, for which Long requires maps as a tool of planning the walking. Each walk has its own itinerary which is organized, performed, and represented through maps. The text-works he prepared are also means of recording

[126] From a conversation with Richard Long, editted by Stephen Snoddy, Director of The New Art Gallery Walsal. The video is available at:
- https://www.youtube.com/watch?v=XVCEku5SAWo
[127] Ibid.

and communicating the spatial experience of walkings. Through "A Hundred Mile Walk", Long recorded the changes in the perceptual and sensory experience of the field and exhibited them in the form of text-works and photography.

In Richard Long's mixed-media works, iterative processes of his works are revealed through the citational map use. In an interview, Long describes his art-works as:

> "It is about geometry of time and distance, like the walked lines and circles are about geometry (…)"[128]

In all of the processes of his works, Long draws lines in varying mediums. Long states that "each walk is contained by a particular idea"[129] preceding the journey. Thus, a process of the organization takes place in which maps are referred to as tools of the selection of the field and articulation of variables of geometry, distance, and time. Following the selection of an isolated landscape, Long constructs an iterative process, "a completely unique original idea to make a walking for a particular reason."[130] Some of the iterations that Long come up with are about drawing basic geometric shapes on the field while the others defined in relation to natural forces. "A Hundred Mile Walk, 1975", "Concentric Days", "Cerne Abbas Walk,1975", and "Stepping Stones, 1976" can be given as examples of iterative processes of the first type. For the work "Concentric Days", Long walked around the perimeter defined by circles exactly in one hour, for five days starting with the inner-most circle (Figure 2.10). In the map-work, the boundaries for each day are marked with concentric circles. "Stepping Stones" (Figure 2.11) in 1976 is the first performance of the specific kind of iterative process that Long later repeated in different landscapes[131]. He uses each mountain on

[128] "Richard Long, 1984:9

[129] Ibid.,

[130] From the conversation with Richard Long, editted by Stephen Snoddy, Director of The New Art Gallery Walsal. The video is available at:
- https://www.youtube.com/watch?v=XVCEku5SAWo

[131] The Works "Mountains to Mountains Ireland" in 1980 and "Twelve Hours Twelve Summits" in 1983 follows the stepping stones approach of Richard Long.

the line he draws on the map as a step to go up to a higher level. In these works, map-making is used for representing the iterative process that walking act follows. On the other hand, map-work of the "Cerne Abbas Walk" in 1975 exhibits the records of the back-and-forth walkings to stay within a predetermined circle. Instead of the boundary, the walking route is displayed in the map.

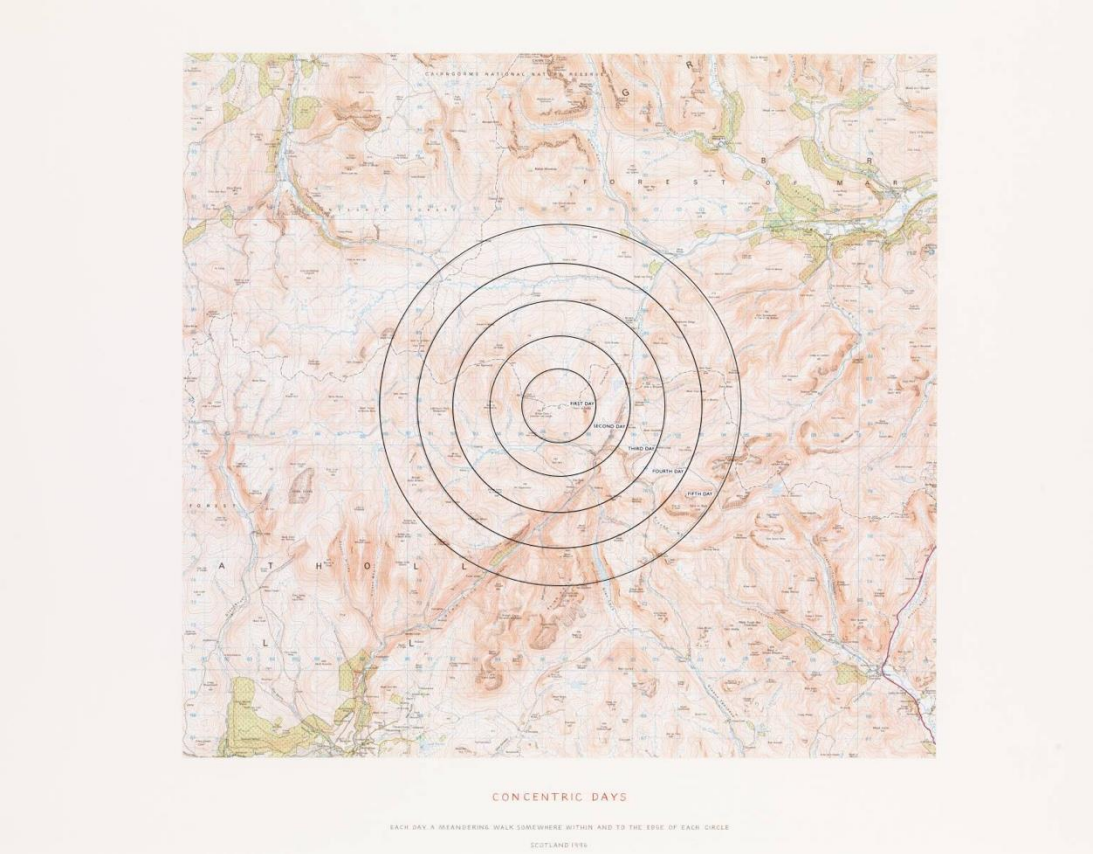

Figure 2.10 Map-Work of "Concentric Days", Richard Long, 1996

Source: https://www.tate.org.uk/art/artworks/long-concentric-days-al00213

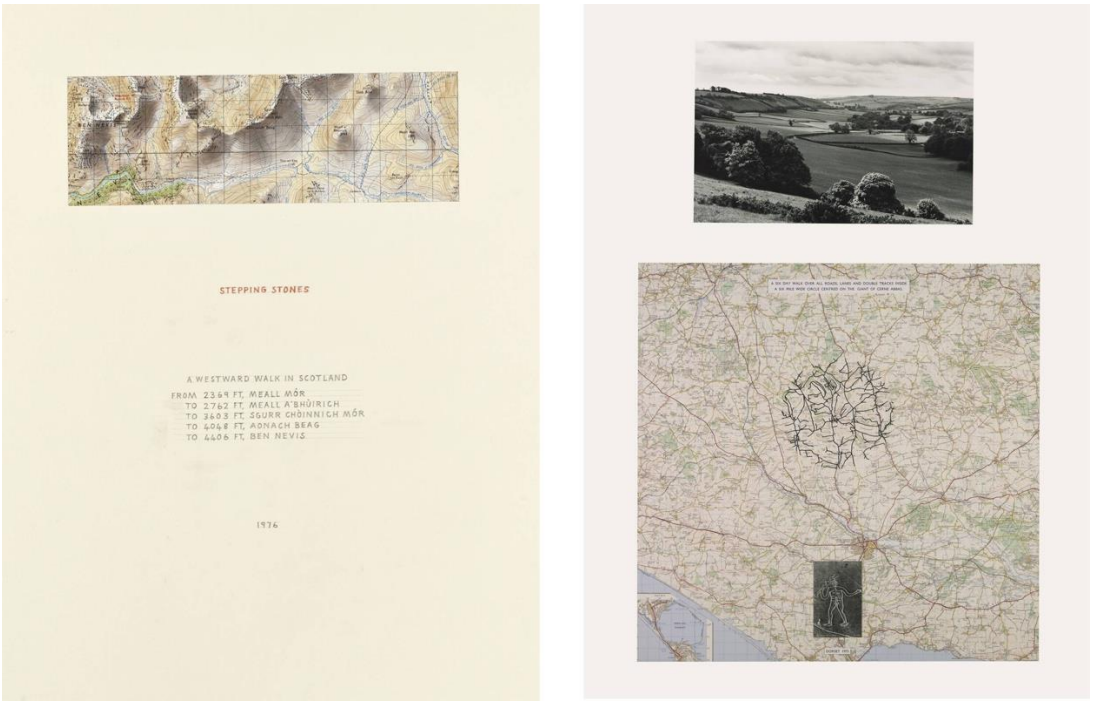

Figure 2.11 (left) map and the text, Stepping Stones, 1976, Richard Long (right) printed text and photographs on the map, Cerne Abbas Walk 1975, Richard Long

Source:(left)https://www.tate.org.uk/art/artworks/long-stepping-stones-al00217(right)
https://www.tate.org.uk/art/artworks/long-cerne-abbas-walk-t02066

The maps referred in the organization and planning of the mentioned walkings were also used as a base map in the map-works. Thus, the citational map-use is visible in Long's works.

Among the works of Long, "A Cloudless Walk", "Walking To Lunar Eclipse", "Natural Forces" belong to the second type of iterations; the duration of these walkings was determined by natural events. In 1995 he walks 121 miles in three and a half days until he saw the first cloud (Figure 2.12). In 1996, he started to walk in the midday high and stopped at the full moon eclipse. He represented these walking rituals with text-works (Figure 2.12).

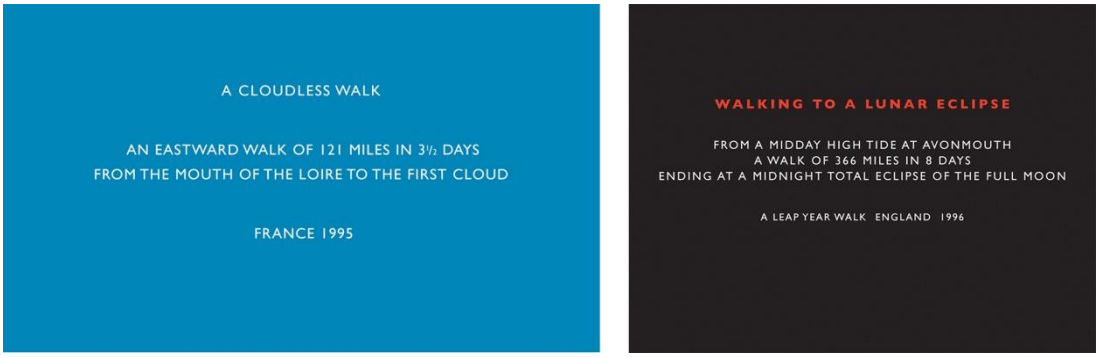

Figure 2.12 Text-work of "A Cloudless Walk", produced by Richard Long, 1995

Source: http://www.richardlong.org/Textworks/2011textworks/24.html

The walking act performed by Long leads to the formation of visible and invisible lines. Following the drawn lines on maps to determine the route, Long re-draws them on the field with his feet. As seen on the work "Cerne Abbas Walk", artist draw the lines both in the surface of the map and the field. Long also produce outdoor sculptures composed of natural materials such as stones, sticks, and mud (Figure 2.11). He refers these sculptures as "hand-works"[132] while the construction of intangible lines is defined as "foot-work"[133]. The body of the artist is the mediator of all the lines drawn by him, including the ones on the maps.

[132] "Richard Long, 1984:9

[133] Ibid.

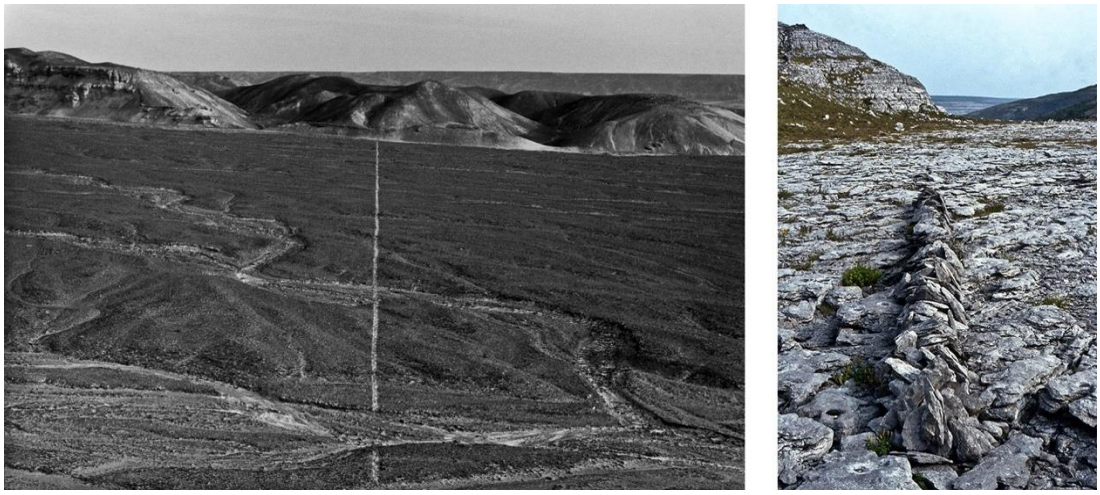

Figure 2.13 The visible lines in the foot-works and hand-works of Richard Long: (left) "Walking A Line in Peru", 1972 (right) "A Line in Ireland", 1974

Source: (left) http://www.richardlong.org/Textworks/2011textworks/24.html

(right) http://www.richardlong.org/Sculptures/2011sculptures/lineireland.html

Turning back from the field, Long continues to hand-works in the form of indoor sculptures and traces on the gallery walls. The artist repeats the geometry he produced in the field in different scales by using his hands.

It can be claimed that time and space are constitutive elements of Richard Long's works. He "make art out of time"[134] or "out of objects that are somehow outside time because they stay there."[135] The duration depends on the features of the field and the parameters of distance and performance of the walker. The walking act of the artist turns into the performance of the space-time. Map-making, on the other hand, organizes, records and represents the spatial experience and the iterative process of the performance that takes place without an audience.

[134] "Richard Long, 1984:12

[135] Ibid.

2.4. Writers of the Spatial Stories

> "Their story begins on the ground level, with footsteps. (…) They cannot be counted because each unit has a qualitative character: a style of tactile apprehension and kinesthetic appropriation. (…) Their intertwined paths give their shape to spaces. They weave places together[136]"
>
> (Michel de Certeau)

In Practice of Everyday Life, de Certeau mentions walking and seeing as the two modern practice of everyday life, under the chapters Spatial Practices and Spatial Stories. Considering the spatializing capacity of the walking practice, he refers to the pedestrians as the "practitioners of the city" operating on the ground. Seeing, on the other hand, defined as an act requiring a detached position above the ground. In de Certeau's writings, the two daily acts are separated with a "blindness", they do not coexist. Walkers, practitioners of the urban space, are unable to read the "manifold story" they composed on streets since they are located below the threshold of visibility[137]. De Certeau claims that the birds-eye view of the city is a representation, an optical artifact, an analogue of the plan of a city planner or projection of a cartographer; reading of which is only possible through a position detached from the ground. In that way, he separates the reading of the spatial story from the writing of it. As mentioned earlier, this study claims that map-making not necessarily requires a position of the observer detached from the field. In that terms, de Certeau's description of maps as totalistic representations can be evaluated as a reductionist approach. In this section, the examples of map-making as a practice of spatial story writing/reading are drawn from post-modern fiction. Maps done by fictional walkers in Orhan

[136] Michel de Certeau, 1990: 97

[137] de Certau differentiates voyeurs from walkers in terms of mode of seeing. A pedestrian turns into a voyeur by having a detached totalizing view, as he described "seeing Manhattan from the 110th floor of the World Trade Center." See:
-Michel de Certeau, 1984: 93

Pamuk's and Paul Auster's novels are investigated in terms of the positionality of the map-maker/walker.

2.4.1. Maps of Prohibitions and Possibilities

De Certeau claims that improvisation of a walking activity creates, transform, and abandon spatial elements. A walker actualizes some of the possibilities of spatial experiences and interdictions as well as she/he creates new ones with the change of modalities from step to step. The two maps from the novel The Museum of Innocence" [138], reveals the changes in the alethic modalities of walking practices of a fictional character. One of the maps, "The Streets That Reminded Me of Her", represents the prohibitions created by the walker/map-maker himself. The second map, "The Shadows and I Mistook for Füsun" represents the illusions of unrealized encounters in the urban field.

"The Streets That Reminded Me of Her" (figure 2.14) is a map prepared by a fictional character, Kemal Bey[139] to represent the perception of Nişantaşı neighborhood in his mind in a particular period. The extracts of the map are fictional events and places that embedded in İstanbul. The map shows the prohibited streets that Kemal Bey forbade himself to pass through and the change in his speech act in the city. Thus, the map merges the "timeless present"[140] of a city map with a personal spatial story. The streets that remind Kemal Bey of Füsun are highlighted on a city plan.

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[138] The novel is constructed as a catalogue of a museum, devoted to the daily life objects of a love-affair to reconstruct the memory. Orhan Pamuk later concretize the fictional museum in İstanbul, Çukurcuma Caddesi and the map mentioned in the 30nd chapter has been exhibited since 2012. See:
-Orhan Pamuk, Masumiyet Müzesi,İstanbul: İletişim Yayınları, 2008

[139] The main male character from whom the story is told is referred as Kemal Bey throughout the novel. So, instead of his family name(Basmacı), 'Bey' is preferred in the study.

[140] Thomas McDonough, 1994: 64

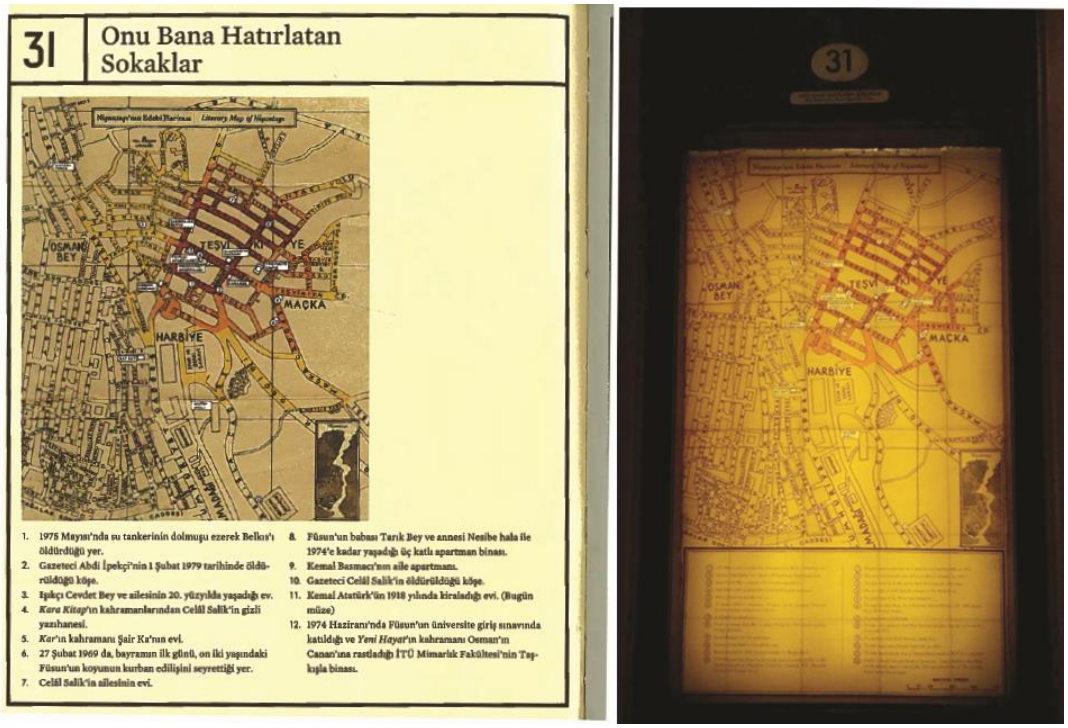


Figure 2.14 (left)"The Streets That Reminded Me of Her," the map prepared by Orhan Pamuk, as displayed in the catalog of the museum (right) The same map as displayed in the museum (photo was taken by the author)

source: Orhan Pamuk,Şeylerin Masumiyeti, İstanbul:İletişim Yayınevi,2012,146

Michel de Certeau claims that only the experience passed by is captured through these tracings of paths on city maps. Maybe this is the reason that Kemal Bey, the creator of the Museum of Innocence, asks Orhan Pamuk to place a map showing the location of the museum to the end of the book (Figure 2.15). He imagines the visitors as enthusiasts who find themselves in the direction of the museum while walking in the streets of Istanbul with the map. Although de Certeau claims that these tracings are only fixations of places, a part of the forgetting process; the maps of walking modalities make revisiting and re-creating the spatial experience possible.

Figure 2.15 Image 3.2 Map prepared by Miray Özkan to appear at the end of the story to describe the location of the museum for visitors.

source: Orhan Pamuk, Masumiyet Müzesi (the novel), 587

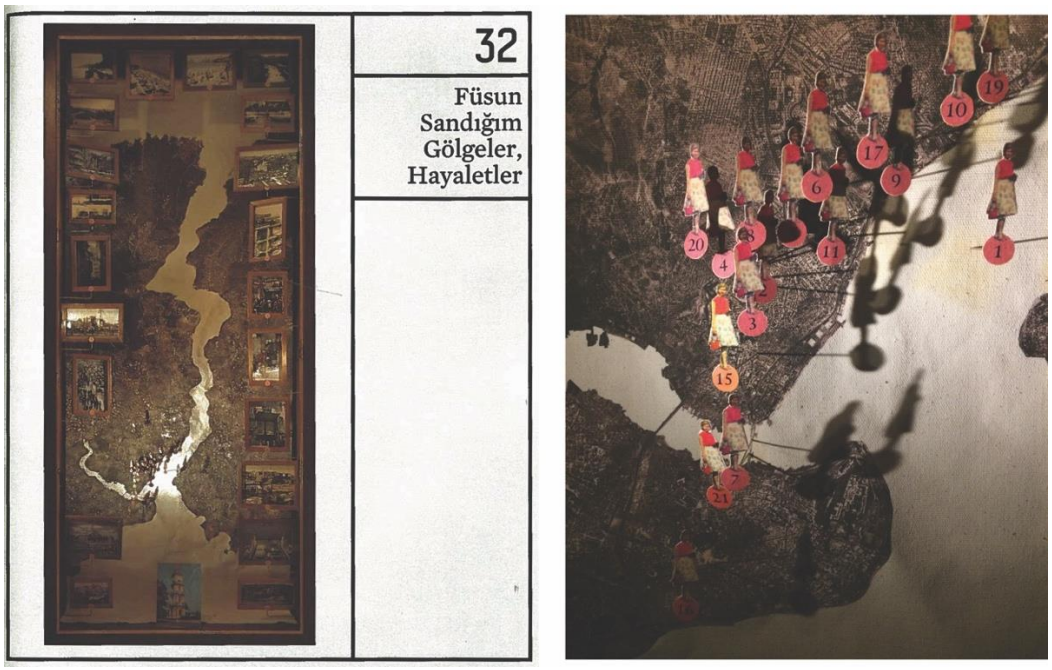


Figure 2.16 (left) The map "The Shadows and Ghosts I Mistook for Füsun" as displayed in the museum catalog (right) close up to the map displayed in the museum

source: Orhan Pamuk,Şeylerin Masumiyeti, İstanbul:İletişim Yayınevi,2012,146

In the second map, "The Shadows and Ghosts I Thought Füsun" (Figure 2.16), the locations that Kemal Bey thought he saw Füsun were marked by pins. The modality of the walking is illusions. The daily practices of Kemal Bey were interrupted when the illusion of the Füsun appears on the streets. Unlike the first one, this map is not mentioned in the novel but placed in the museum and catalog. Nevertheless, the scenes surrounding the map were detailly described in the 32nd chapter of the novel. Each photograph in the frame refers to one of the pinned and numbered locations that the illusion takes place.

The two maps created by Orhan Pamuk represents the intangible forces affecting the walking habits of a fictional character in everyday life.

2.4.2. Maps from the "City of Glass"

Thomas McDonough refers to de Certeau's separation of the act of reading and writing in terms of spatial stories as "paradoxical blindness of totalization.[141]" The blindness lies in the stable and detached position of the observer, who tries to see urban space as an entity. This type of position of the observer brings a scale that misses the spatiality of the patterns created by flows of movement. In this section, the possibilities and limitations of a detached[142] eye to read others' spatial stories is studied with another map-making in a spatial story.

City of Glass (the first part of The New York Trilogy by Paul Auster) is a post-modern detective fiction set in urban locales, in New York[143]. In the book maps of daily

[141] Thomas Mc Donough. "Situationist Space", October, Vol.67(Winter), 1994:73

[142] Detached from the body/ground

[143] Paul Auster. City of Glass, The New York Trilogy-I, Los Angeles:Sun&Moon Press,1985
The book can be interpreted as detective fiction. The story of Quin begins with a wrong number; the voice on the phone asks for Inspector Paul Auster. Quinn, instead of correcting this misunderstanding, takes on the identity of Inspector Auster.
The novel has three main characters: Quinn and the Peter Stillman (father and his son shares the same name). Peter Stillman (the son) locked in a dark room for nine years and banned from speaking by his father. The aim of the older Stillman was obtaining "the real words that correspond to the World" from a child who never learned any of the languages. Following the fire in Stillman's house, Stillman (the son) was rescued and father was put in prison. Years after, Peter Stillman (the son) asks help

walking routines of a character (Peter Stillman) are recorded and mapped by another walker (Quinn). In terms of the use of plan view of the city, the maps in the "City of Glass" resembles the maps in "The Museum of Innocence". Nevertheless, the map-making of the fictional character of Paul Auster differentiates from the latter in terms of the aim and use of the map-making. While Kemal Bey uses maps to communicate the changes in the experience of walking in the urban field, Quinn uses map-making as a research tool of investigating the "meaning" of Stillman's daily walking routes.

Similar to the previous example; map is both provided in the text and visual medium. The drawings in the book, written description of the maps and the map provided on the cover of the book (Figure 2.12) as published from Penguin Classics are complementary to each other.

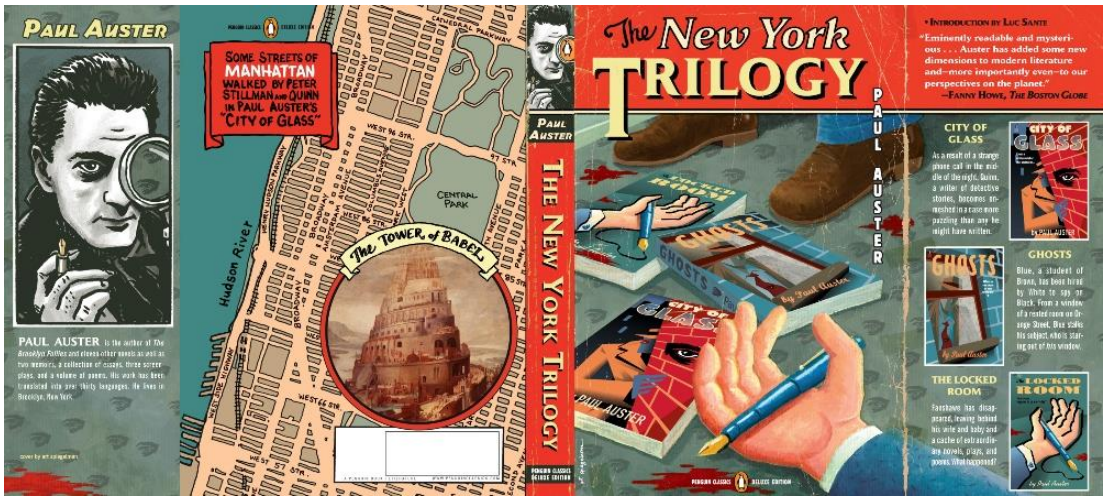


Figure 2.17 The cover of the New York Trilogy as published by Penguin Classics

The map placed at the back is presented with the title "Some Streets of Manhattan Walked by Peter Stillman and Quinn in the Paul Auster's City of Glass". It presents a

from Quinn to prevent his father to hurt him again.

Another cross-reading of the Paul Auster and Michel de Certeau is offered by Lindsey Michael Banco. He also draws parallels between Stillman's strolls through New York and de Certeau's urban practice. See:
Lindsey Michael Banco. "Mapping Authorship: Overhead Cartography in Paul Auster's City of Glass", Canadian Review of Comparative Literature, 2009,382

part of the Manhattan in plan view and provides an omnipresence of the scenes of different chapters of the book. Although the title of the map states that it shows the streets walked by the Stillman and Quinn, these streets are not differentiated on the map. Manhattan depicted as a homogeneous entity. The maps placed within the text, on the other hand, reveals only the routes of the walkers. Pulled off from the field, these maps appear as geometric shapes.

Quinn, the main character of the novel, prepares a series of maps showing the daily walking routes of Stillman, the character he is stalking.

> "For no particular reason that he was aware of, Quinn turned to a clean page of the red notebook and sketched a little map of the area Stillman had wandered in"[144]

The first map Quinn "sketched" is a mental map defining the field of the following maps (Figure 2.13).

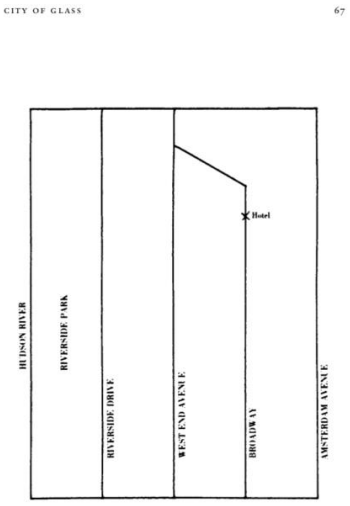


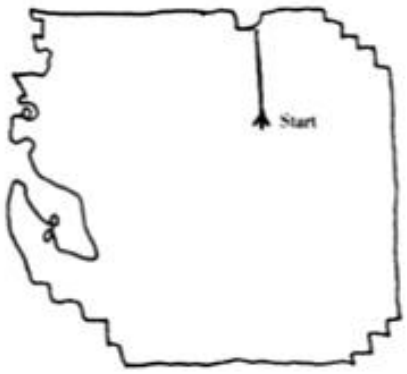
Figure 2.18 the first map of the area "Stillman had wandered in", prepared by the fictional character, Quinn.

source: Paul Auster, 1985,67

Instead of drawing the exact directions of the streets, he simplifies them to parallel lines except that the node where one of the avenues joins to the other. The following

[144] Paul Auster, 1985,66

maps are re-drawings of the lines Stillman draw by walking into the field. The shapes are reproduced every day by using the records of the "old man's wanderings." The first map is located with a text under it, explaining the locations of different shapes of the lines(Figure 2.15). Then, Quinn performs his first reading of the pattern; he extracts an "O" letter from the map.



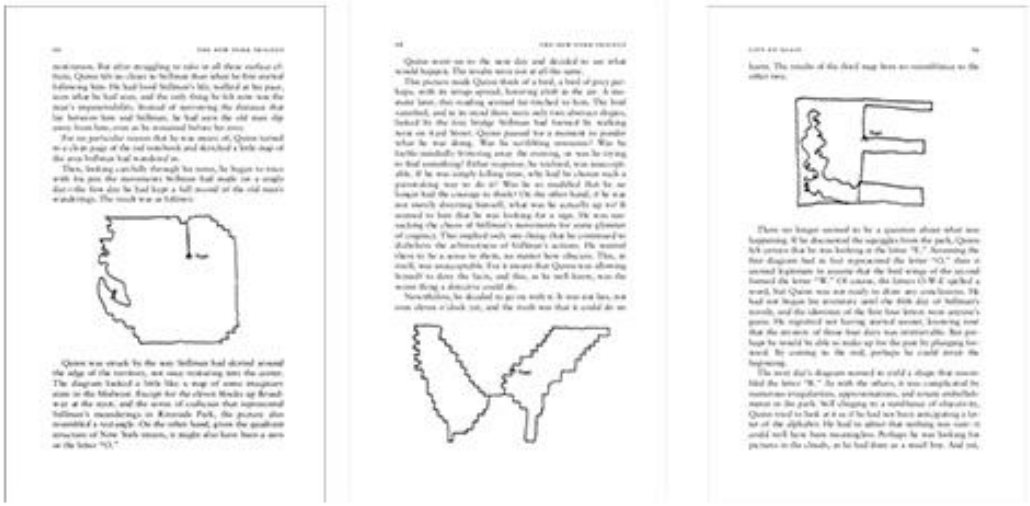


Figure 2.19(top) the first record of Stillman's wanderings, drawn by Quinn about the written records (bottom) the pages from the novel showing the three map

source: Paul Auster, 1985,66-68

Following the third day's map drawing, Quinn decides that he had the three letters of a word, the first four letters of which is missed. (figure 3-7)

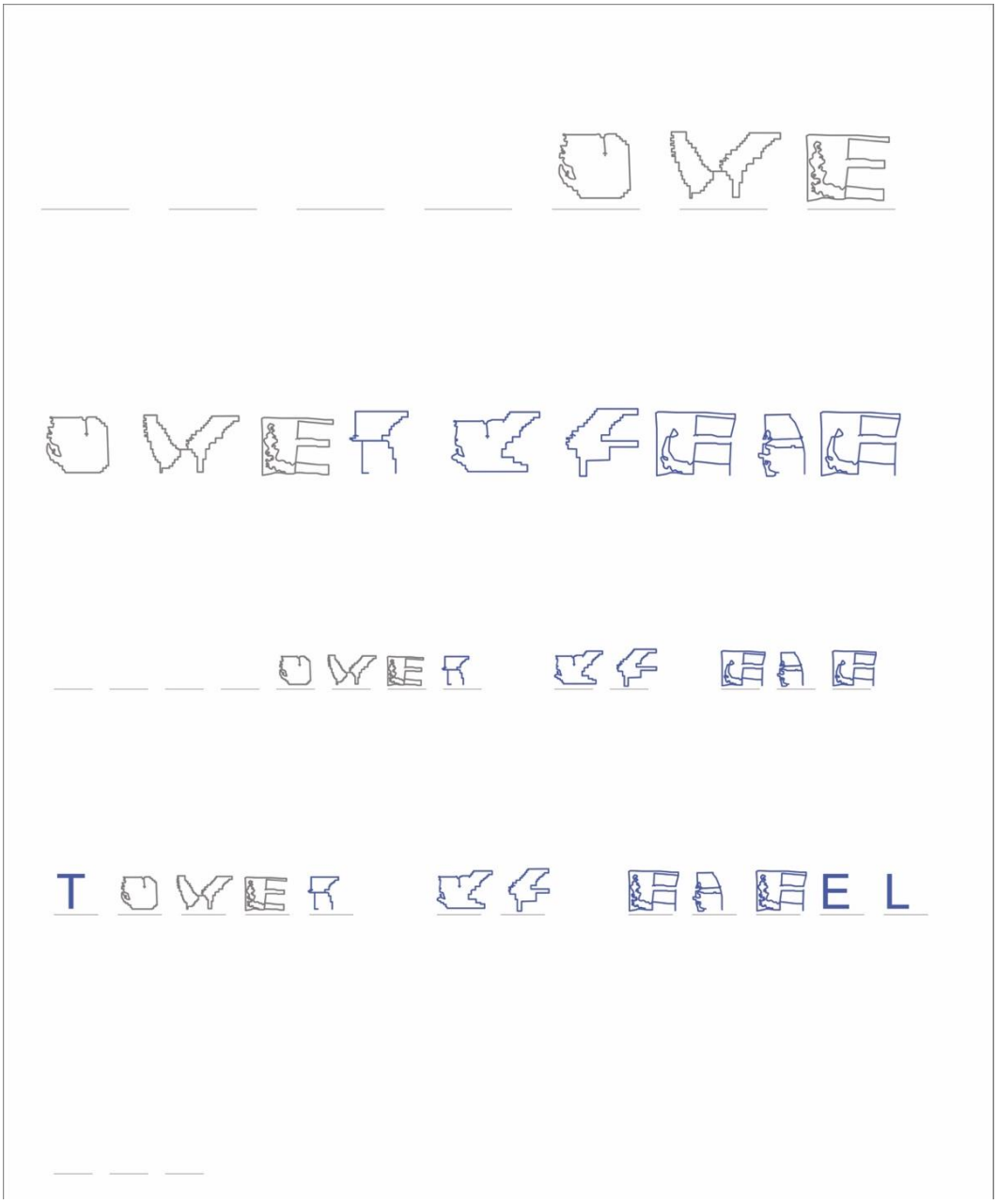


Figure 2.20 from the top to the bottom:(1) Quinn's reading of the letters following the third map of the records (2) Quinn's further readings of letters #01: "Quinn then copied out the letters in order " (the maps of the records are not provided by Auster. The letters in blue color are drawn by the author) (3) Quinn's reading of the letters following the acts switching, pulling apart, rearranging (the sequence) (4) the way Quinn rearrange the letters to complete the word. (drawn by the author)

source: Paul Auster, 1985, 66-68

After the next five letters, Quinn still has a meaningless word: OVEROFBAB. In order to draw meaning from the letters, Quinn firstly plays with the arrangement of them;

after switching, pulling apart, and rearranging the sequence, he returns to the first arrangement of them and writes: OWER OF BAB. From this stage, the answer seems inescapable to him: THE TOWER OF BABEL.

Map-making process of Quinn does not end with the extracting shapes of the routes from Stillman's walking practice. Quinn arranges the extracts to reach a total revelation of the text written by Stillman.

The arrangement of the extracts, in this case, is shaped by the information about the walker. The interpretation of the word as shapes as letters of the word *Tower of Babel* seems to be affected by Stillman's previous effort to find the forgotten language of God. Like Quinn, readers of the book are oriented by the fiction to read the maps in a particular way. Rather than visual language, the written one is preferred for plotting the records of the observation. Only the third of the eleven letters of the word is given in the book; the other letters are provided in the text. In the book, maps appear as a part of the narration; fiction and map complete each other.

Turning back to the possibilities and limitations of the detached eye to read others' spatial stories, the map-making and map-reading within the Paul Auster's story can be interpreted as an example of how the outside spectators' reading can be irrelevant with the personal experience. Although Quinn, the map-maker, is also drawing the same patterns with Stillman, a different reading of the same route would be performed by another outside observer (maybe another inspector hired by someone else) mapping the daily routes of Quinn. Similar to the cross-reading of Auster and de Certeau in this study, Lindsey Michael Banco also claims that Auster has a critical attitude toward Quinn's mode of seeing to produce a "fiction of knowledge,"[145], "a text that claims to be able to, but in fact cannot apprehend transcendent meaning in a malleable, uncertain, poststructuralist world[146]". Although Quinn employs a birds-eye view to

[145] Michel de Certeau, 1990: 92

[146] Lindsy Michael Banco, 2009: 382

achieve a total revelation," the overhead view produces knowledge driven by illusion, elision, and misperception."[147]

[147] Ibid.

CHAPTER 3

TOOLSET DEVELOPMENT

3.1. Constructing the Core Scheme

As mentioned in the methodology, a *core scheme* based on mapping operations schematized by James Corner and the five cartographic codes defined by Denis Wood is prepared to be used for map-reading.

The "three essential operations in mapping" are defined and schematized by James Corner as (construction of the) "field," "extracts," and "plotting"[148](figure 1.4). The three phases, constructing the map field, selection of extracts from the field to be included in the map, and the mode of drawing are considered as simultaneous processes affecting each other. The acts of defining the field and extracts can be carried out simultaneously. Field of the map can be read as the analogical equivalent to the actual surface of the studied territory. This step can be regarded as the process of forming a graphic system. Constructing the map includes a set of decisions about the frame, orientation, coordinates, scale, units of measure, and the type of the graphic projection such as isometric, oblique, anamorphic, folded. The second phase that Corner mentioned is deciding on what will be included in the map. Extracts are selected and included informational data such as quantities, velocities, forces to maps[149]. Plotting is the extraction of the relationships on the field. In the phase of plotting, extracts are re-arranged, re-territorialized, and gathered together to draw/construct the map.

[148] James Corner,1999: 213-252

[149]It can also be read as an act of gathering data on field-trip such as circulation patterns, light conditions (dark/light, shade/shadow), the flow of movements, wind, vegetation, human activities, access routes, sensual information.

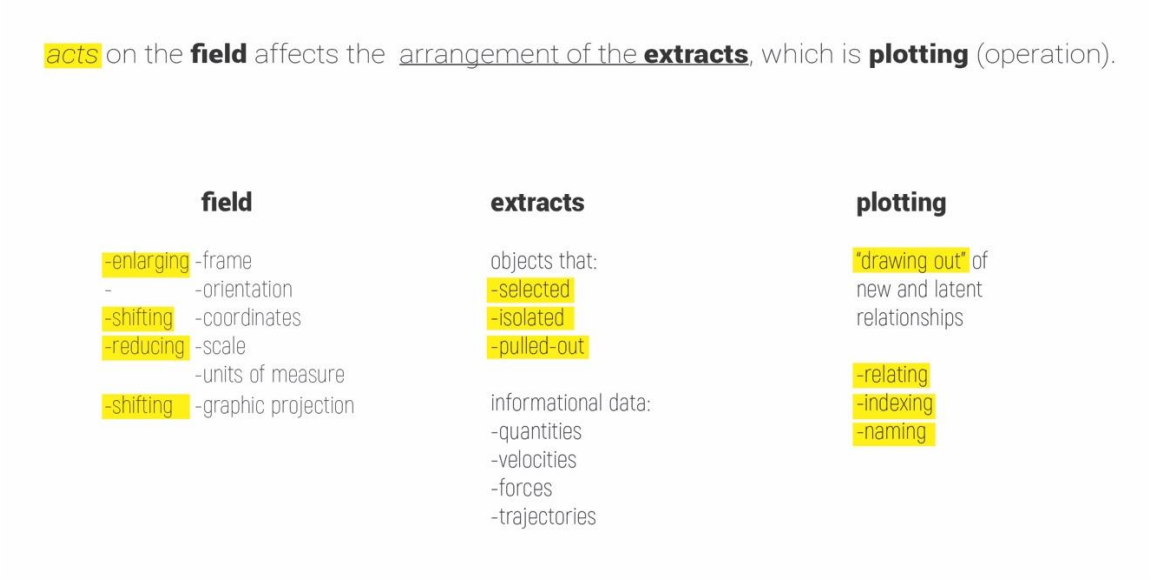


Figure 3.1: re-writing and paraphrasing of the "three essential operations of mapping" as defined by James Corner in "Agency of Mapping" (prepared by the author)

Denis Wood claims that "maps are about relationships": they are about the relation of one "landscape" (it can be the landscape of roads, of rivers, of cities) and how each of them are positioned in relation to each other. Considering that a map includes diverse systems projected into each other, Wood defines the map image as a super-design. As a synthesis of different systems, a map acquires a level of discourse, which is constructed via a formal strategy. To explain the different domains of the formal strategy of a map, Denis Wood defines ten codes of cartography that binds the content with the expression. He defines the five inescapable tectonic codes of map-making as iconic, linguistic, tectonic, temporal, presentational. The iconic code is about the formal correspondence between expression in the map and referent in the field. Similar to the definition of the field as "analogical equivalent to the actual ground"[150] , the iconic code is defined as "the principle of the map's analogy to objects, places, relations, and events" by Denis Wood. The second code is linguistic, which is "the code of classification, or ownership." It includes acts of identifying, naming, listing, explaining, elaborating, crediting, cautioning. These acts of classification and relating

[150] James Corner, 1999: 229

is referred under the plotting operation by Corner. The linguistic code is the dominant code in the organization of the legend of a map. The tectonic code organizes the relationship between the things given in space. It defines a set of conventions for scalar and topological relations. In that terms, the tectonic code is similar to the construction of the field. The tectonic code can also be related to the extracts; it is about finding and getting the extracts to reveal spatial meanings. The fourth code listed by Wood is the temporal code. It codes duration and tense. The tense of a map is a direction in time: it can be past, present, future, or it can assume a temporal posture. Duration is about the scalar aspect of time, shows the period. Denis Wood differentiates the fifth code, presentation from the others since it organizes how the signs (constructed through the mentioned codes) come together. It layers, arranges, orders, structures the title, map image, text, illustrations, inset map images, explanations, arrows, color scheme to achieve a coherent speech. So, the code of representation refers to both what included in the graphic language of the map (field) and the way of drawing out them (plotting as defined by Corner).

It is possible to draw some parallels between the two proposals of schematization of the map-making processes. Both of them decompose maps into systems that are shaped by their relation to other systems in the process of map-making. While Corner fragments the map-making process into operations, Woods offers codes upon which a map is bonded. Constructing the map field, the selection of extracts, and the act of drawing are interwoven processes. The codes upon which map features are bond are also correlated. In both schemas, revealed features of a map and acts shaping/molding them are identified. It is also possible to observe matches between operations and codes in terms of acts and contents (figure1.3).

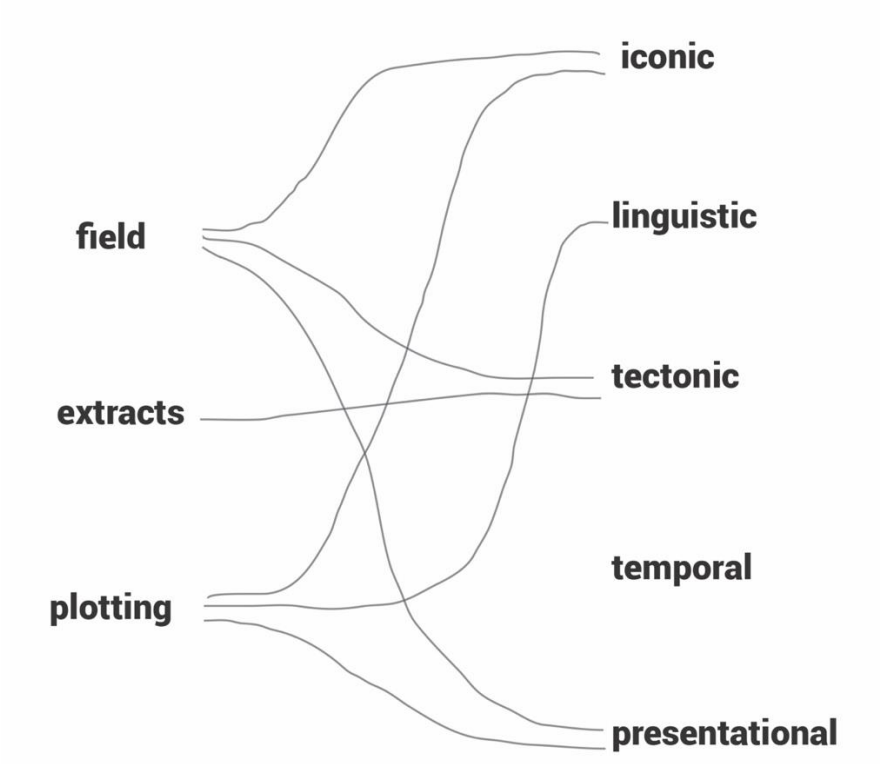


Figure 3.2: the diagram showing the matches between operations schematized by James Corner and the codes of map-making defined by Denis Wood (drawn by the author)

In the duration of the study, the two sets are gathered together and turned into an *initial scheme* (Appendix B). The *core scheme* (Figure 3.3) of the map-decomposition is constructed on the *initial scheme,* which reveals the grouping of map features and acts affecting their arrangement. In the *core scheme,* the mentioned map features and acts bond by the five codes are grouped into the two processes of map-making as defined by Corner. The two processes are constructing the field of map surface and deciding on the extracts to be included in the map. The third phase of map-making, plotting the extracts on the map field, constitutes the third group of the *core scheme*. The acts affecting the organization of the map features and extracts are listed in the third group. The fourth group refers to the temporal codes, which state the duration and tense of the map. The core scheme considers these four processes as interdependent phases of decision-making.

1. constucting the field of the map surface

"analogical equivalent to the actual ground"
"the graphic system within which the extracts later be organized"
"offers a legitimate discourse"
"principle of the map's analogy to objects, places, relations,

features :

-frame
-orientation
-coordinates
-scale statement
-graphic projection (oblique, zenithal, isometric, folded, etc.)
-scalar relations
-set of conventions:

-title	-charts	-decorations
-legend box	-apologies	-color scheme
-map image	-diagrams	-footnotes
-text	-photos	-dates
-illustrations	-explanations	
-instructions	-arrows	

2. deciding on the extracts

"things that are observed within a given milieu and drawn onto the graphic field"

"relationship of the things given in space"

features:

-objects
-informational data:
quantities
velocities
forces
trajectories
distance
direction

3. plotting

"drawing out of new and latent relationships that can be seen amongst the various extracts"

acts:

-articulating	-explaining	-molding	-relating
-arranging	-finding	-naming	-scaling
-cautioning	-fragmenting	-net-working	-selecting
-combining	-getting there	-nomenclature	-setting-in relation
-crediting	-identfying	-ordering	-shaping
-de-territorializing	-indexing	-organizing	-shifting
-designation	-inventorying	-projecting	-shifting
-drawing	-isolating	-propogandize	-structuring
-elaborating	-layering	-pulling-out	-tracing
-enlarging	-listing	-reducing	-tracking

4. temporal statement

"codes of duration, codes of tense"

features:

-duration
-tense : past, present ,future, temporal postures

Figure 3.3 Core Scheme of Map-Reading based on the operations and codes of map-making as defined by Corner and Wood (prepared by the author)

3.2. Visual Decomposition of the Focused In-Situ Maps

In this section, the examples of the walking-based map-making strategies are investigated in terms of the representation of perceptive and sensory experiences of the act of walking in the field. The aim of this investigation is providing the unique toolset of each selected map of different modes of walking. The maps mentioned in this chapter are selected as examples of varying interests of walking and discrete uses of map-making. The maps mentioned in the second chapter exemplify three different modes of mobility: drifting, walking as a means of drawing lines on the field, walking as an everyday practice. To reveal how map-making changes for distinct spatial experiences, the maps of these three walking modes, "The Naked City", the two map-works of "Walkings in Lines" by Richard Long, the maps of prohibitions and possibilities made by Orhan Pamuk are investigated in terms of their structural organization.

The core scheme provided in the previous section is used as a framework to identify the map features, extracts from the field and plotting acts. Through the decomposition of the selected in-situ maps, the layers of information are resolved and related to the four groups of the core scheme. In this section, the selected maps are described in terms of how the extracts from the field and features of the map-field are arranged, combined, ordered and related by the plotting acts. The description is fragmented into the three processes of map-making as provided in the core scheme. The descriptions are also accompanied by the text-works revealing the list of acts affecting the particular extracts and features of the described maps. Among the elements of the map fragmented into three processes, the ones already mentioned in the *core scheme* is provided in italic in the reports and the text-work.

The first map studied in this section is "the Naked City" to exemplify how map-making becomes a tool of investigation of urban units and the impulses caused by the field when connected with a particular mode of walking, drift. Following the Naked City, the two map-works of Richard Long for the projects "A Hundred Mile Walk"

and “Cerne Abbas Walk” are decomposed to reveal that how maps can serve to both of the organization, performance, record, and representation of the itinerary of a walk. The two successive maps of prohibitions and possibilities prepared by the fictional character of the novel The Museum of Innocence are included as the examples of map-use as a representation tool of the sensory experience of the field.

3.2.1. “The Naked City” (Figure 1.6)

Features of the Map-field: The borders of the paper it was printed define the frame of the map. The map consists of a map *fragmented* into 19 pieces, and arrows varying in size and direction *relating* them. The links between the selected map pieces are omitted on the base map. The scalar and spatial relations between the map fragments are re-arranged in the Naked City. The map does not have consistency in terms of scale and orientation: The pieces cut-out from the base map are rotated, and the scale is switched through the map. The units of measurement are not displayed. The map is *named* with the title “Naked City” and subtitle “illustration of the hypothesis of psycho-geographical turntables”, located at the left bottom part of the map. The map displays the author at the right bottom.

Extracts from the Field: The map-fragments are selected and get into the map to reveal the 19 different locales of the Paris, *explained* as “unities of atmospheres” by the map-maker. As mentioned in the second chapter, the “renovated cartography” aims to discover the “unities of atmosphere”. The touristic attractions of Paris are *identified* as atmospheric units that attract or push the drifters and *set* in relation with each other in the map. The fragments of the city are *isolated* from the whole and *pulled-out* from their exact locations. When the Naked City is compared with Plan de Paris, the operations that map-fragments are undergone can be seen. The continuity represented in the city map is disrupted through omission. This re-arrangement follows “the sudden change of atmosphere in a street”[151] as explained by the author. The map also

[151] From the text provided by the author on the reverse side of the printed map. The map was reprinted in:

displays the ways these fragments linked to each other in terms of the spatial experience of map-maker. The arrows represent "the spontaneous turns of the direction taken by a subject moving through these surroundings in disregard of the useful connections that ordinarily govern his conduct[152]." The changes in length and width of them can be read as referring to the changes in map-makers' walking rhythm. The arrows reveal the velocities of movement, trajectories, and forces acting on walkers.

P**lotting:** The map is printed in white and black. The cut-out map-fragments are attached to the paper. While re-arranging the spatial relations, the fragments are distorted, re-oriented, and re-scaled. The arrows linking the fragments are *drawn* with red ink on paper.

Temporal Statement: The map reveals the discoveries of a particular drift, thus it represents a transitory experience of the field.

"The Naked City" exemplifies the use of map-making acts of *articulating, drawing-out, explaining, fragmenting, getting there, identifying, isolating, naming, net-working, pulling-out, relating, selecting, setting,* and *structuring*. Through the decomposition of the map, the acts of attaching, cutting-out, discovering, disrupting, distorting, juxtaposing, linking, omitting, re-arranging, re-orienting, re-scaling, revealing, rotating, and spacing are added to the plotting acts in the core scheme. In the figure 3.9, how the plotting acts matched with the extracts from the field and features of the map field is provided.

3.2.2. Map-works of Richard Long

<u>"A Hundred Mile Walk" (Figure 2.9)</u>

Features of the Map-field: The map-work of the performance "A Hundred Mile Walk" consists of a scaled map of the field and the circle *drawn* on the map. On the

Gerard Berreby. Documents relatifs a la fondation de l'Internationale Situationniste:1948-1957, Paris: Editions Allia, 1985: 535

[152] Gerard Berreby, 1985, 535

base map[153] the title, scale of the map, date, and the author are superimposed. The variables of the geometry of the walking route are *ordered* on the base map preceding the walking act on the field. The circle marked on the map shows the route of the artist on the field. Long re-crossed the same circular line in six days. The map is accompanied by a photograph taken on the field and records in the text medium for each day of the walking. In the text, the duration of the walking act is *fragmented* into days.

Extracts from the Field: The written records for each day reveals the sensory and perceptual experience of the field. Weather conditions, feelings like "tiredness", a song in his mind, and performative aspects of the walking are *identified* and *listed* down. The recorded experiential aspects of the field are time, space, movement, sight, sound, touch, taste, and illusions. The circle *drawn out* on the map refers to both description of the route of the walking and records of the re-crossings in six days. The circle links the starting and ending points of the walking. The photograph taken on the field *frames* a moment of the sight of walker looking onwards in the direction of the walk.

Plotting: The route is drawn on the OS map (scale: 1 inch = 1 mile). The printed text, photograph, printed labels, and the map is attached on the paper.

Temporal Statement: The date of the performance is indicated on the map. Revealing the performative aspects of the field for each day of walking, the map-work of the artist represents the duration of the study.

The map-work of the performance "A Hundred Mile Walk" exemplifies the use of map-making acts of *articulating, drawing out, framing, fragmenting, identifying,* and *ordering* mentioned in the core scheme. Through the decomposition of the map, the acts of attaching, describing, juxtaposing, linking, marking, and revealing are added

[153] The base map is taken from Ordnance Survey map (OS), the natioal map institution of the UK.

to the plotting acts in the core scheme. In the figure 3.9, how the plotting acts matched with the extracts from the field and features of the map field is provided.

"Cerne AbbasWalk" (Figure 2.11)

Features of the map-field: The OS map of the town Cerne Abbas is used as a base map to record the route of the walking. The photograph placed on the bottom of the map is taken from a local shop in the field. The photograph reveals the view of the site from above. The photograph on the top of the map, on the other hand, is taken by the artist on the field. It gives the sight of the walker on the field. The title of the work is a written description of the itinerary of the walking: "A Six Day Walk Over All Roads, Lanes and Double Tracks inside a Six Mile Wide Circle Centred on the Giant of Cerne Abbas".

Extracts from the field: The lines on the map are *drawn* on the field while walking and re-crossings the same paths to stay within the pre-determined circle. The base map is used to *order* the variables of time and distance, both preceding the walking and on the field. The lines *drawn* by Long on the field are *identified* and re-traced on the base map to obtain the route of the walking. In the title of the map-work duration, location, and the geometry of the walking is described. The two photographs multiply the modes of seeing the field. The photo of the Cerne Abbas Giant purchased from a local shop and the photograph framed by the artist reveals different kinds of spatial relations.

Plotting: The route of the walking is drawn on the map with black ink. The photograph and the printed text is attached to the map.

Temporal Statement: The walking route of the map-maker is marked on the map to represent a temporal experience of the field.

The map-work of the performance "Cerne Abbas Walk" exemplifies the use of map-making acts of *articulating, drawing out, identifying, ordering, and selecting*. Through the decomposition of the map, the acts of attaching, defining, describing,

framing, linking, multiplying, revealing, re-crossing, and re-tracing are added to the plotting acts in the core scheme. In the figure 3.19, how the plotting acts matched with the extracts from the field and features of the map field is provided.

3.2.3. The Streets That Reminded Me of Her" (Figure 2.14) & "The Shadows and Ghosts I Mistook for Füsun" (Figure 2.16)

In the 31st chapter of the novel "Museum of Innocence"[154], the "Literary Map of Nişantaşı" is introduced to the readers as the map of prohibited streets of Nişantaşı to avoid memories of a love affair. The map is displayed with the title of the chapter, "The Streets That Reminded Me of Her". The locations *identified* in the map are described in the text, too. In the 32nd chapter of the novel, different parts of the city in which the illusion of the lover appears are described. Although there is no map mentioned in the 32nd chapter of the novel, in the museum, a map is displayed in part devoted to this section of the book. The base map of "The Shadows and Ghosts I Mistook for Füsun" is used as a key map in the preceding map. The two maps are considered as successive and investigated together.

Features of the map-field: In the museum and the catalog, the maps are given with a frame, *named* with the number and the title of the chapter that they are mentioned. The orientation of the map is tilted from north to west. There are no coordinates shown on the map yet two-set of parallel lines intersecting each other with a right angle *divides* the map surface into six pieces. The hierarchy of the visibility between these lines and the extracts are *arranged* inconsistently: at some parts, division lines disappear when they intersect with a street and in others do not. The paper surface of the map reveals folding traces as if a reader carried it, opened to read on the street, marked and re-folded. These traces of folding, together with the four division lines, can be read as decorative additions to the graphic language to give it an *aura of a map.* The street map seems consistent in scale; however, no units of measurement provided. At the right bottom, a key map showing the Golden Horn is placed. The same map is *enlarged*

[154] Orhan Pamuk, 2008

and used as the base of the map "The Ghosts and Shadows I Mistook For Füsun". The two maps *project* the net-work of the locations of the prohibitions and illusions in orthographic view. In the first map, the streets of Nişantaşı are *drawn* and *named.* While the first map is *named* with a title, "Literary Map of Nişantaşı", the following one does not have a title. The fictional places that Pamuk mentioned in his novels are marked with numbers on the Literary Map of Nişantaşı and *listed* in the legend box. The second map consists of the re-scaled key map of the first one, framed photographs attached to the base map, and cut-out photograph of Füsun copied and pinned on the map.

Extracts from the field: The Literary Map of Nişantaşı *sets* the prohibited streets and locations mentioned in the novel in spatial and scalar relation with the rest of the neighborhood. Thus, the map *relates* the streets of Nişantaşı with the fictional places. Among the streets projected on the map, the ones that Kemal Bey avoid are *tracked*, *selected* on the network of streets, *ordered*, classified and highlighted in three different colors. The colors are changing from yellow to red, *cautioning* the map-reader about the danger of walking in these streets. In the map, the particular locations with the danger of remembering her such as the shop Füsun had been working are also *inventoried*. The representation of the change in the sensation of the streets reveals the prohibitions created by the walker. The successive map, on the other hand, reveals the possibilities that the walker prospects. In the map, each location that the illusion of Füsun appeared is *found* and pinned on the map. The framed photographs attached to the map are matched with the numbers on the pins for each different location. The photographs on the pins are placed into the scenes of the photographs, to re-create the illusion.

Plotting: The Literary Map of Nişantaşı draws only the borders of the streets; the building blocks and open spaces such as parks are not differentiated. The streets and boulevards are *named* with handwriting, in a unique spacing of the letters for each lane. The key plan in this map *is enlarged* and printed as the base map of the "The Shadows and Ghosts I Mistook For Füsun".

Temporal statement: the map highlights a transitory condition for the experience of some streets of Nişantaşı.

The two successive map "Streets That Remind Me Her" and "The Shadows and Ghosts I Mistook For Füsun" exemplifies the use of map-making acts of *arranging, articulating, cautioning, drawing out, enlarging, finding, getting there, identifying, inventorying, isolating, layering, listing, naming, net-working, ordering, projecting, relating, selecting, setting, structuring* and *tracking.* Through the decomposition of the map, the acts of attaching, classifying, folding, framing, highlighting, linking, marking, pinning, re-scaling, superimposing, and tilting are noted down to the plotting acts in the core scheme. In the figure 3.11, how the plotting acts matched with the extracts from the field and features of the map field is provided.

3.3. Generative Toolset

In this thesis, the core scheme of map-making acts and map features enriched by decomposing the examples of in-situ maps is offered as a generative toolset (Figure 3.4). As mentioned in the methodology, the proposed toolset is considered as a conceptual scaffold of spatial representation; the provided acts and features can be replaced, omitted and enriched through distinct readings of the mentioned maps. Also, the features of the toolset will be multiplied, adopted, reconstructed and assembled in a unique way for each representation of the distinct spatial experiences.

features of the map field

-apologies
-arrows
-author
-charts
-color scheme
-coordinates
-credits
-dates
-decorations
-diagrams
-division lines
-explanations
-footnotes
-frame
-graphic projection
-illustrations
-inset map images
-instructions
-itinerary
-key plan
-legend box
-lines
-narration
-orientation
-photos
-perspective sketch
-scalar relations
-scale statement
-sub-title
-text
-title

extracts from the field included in map

-borders
-daily speech
-direction
-distance
-ficitonal places
-flows
-forces
-geometry
-illusions
-mediums of mobility
-noise
-objects
-perceptual experience
-prohibitions
-quantities
-routes
-sensory experience
-sight
-sound
-starting /ending point
-stimulus
-taste
-touch
-trajectories
-unities of atmosphere
-velocities

plotting acts

-articulating
-arranging
-attaching
-cautioning
-classifying
-combining
-crediting
-cutting-out
-describing
-de-territorializing
-discovering
-disrupting
-distorting
-drawing out
-elaborating
-enlarging
-explaining
-finding
-folding
-fragmenting
-getting there
-highlighting
-identfying:
-indexing
-inventorying
-imitating
-isolating
-juxtaposing
-layering
-linking
-listing
-marking
-molding
-merging
-multiplying
-naming
-narrating
-net-working
-nomenclature
-omitting
-ordering
-organizing
-pinning
-projecting
-propogandizing
-pulling-out
-re-arranging
-re-orienting
-re-scaling
-reducing
-relating
-revealing
-re-crossing
-scaling
-selecting
-setting-in relation
-shaping
-shifting
-spacing
-superimposing
-structuring
-tilting
-tracing
-tracking

temporal statements

-duration
-tense: past, present, future, temporal postures

Figure 3.4 Generative Toolset of map-making acts (produced by the author)

3.3.1. Maps of "Invisible Boundaries" In Reference to Generative Toolset

In this section, how the toolset obtained from the decomposition of the in-situ maps can be used to produce personal maps of a various modes of walking is discussed on the maps produced by the participants of the workshop "Invisible Boundaries".

Following the warm-up session in which the boundary maps prepared by the participants[155] were discussed in terms of identification of the elements forming boundaries, the decision-making processes of the map-making are introduced. The presentation of plotting acts and map features provided in the generative toolset was accompanied by the identification of these acts and features on the selected maps. These selected maps reveal how the use of these acts can dramatically change the appearance of the maps.

The toolset is adopted by each participant to represent distinct modes of presence in the field. The two maps decomposed in this section are maps of different routes drawn by the two walkers on the field. The two modes of walking differentiates in terms of the experience of the field; while the map-maker #1 has already been in the site as an every-day walker, the map-maker #2 defines the Ulus neighborhood as "an unexperienced part of the city with certain attractions such as the Castle, bazaars and museums".

[155] As mentioned in the methodology, participants were expected to draw boundary maps of the neighborhood in which they live or frequently use before they come to the workshop.

3.2.1.1 Map #01 “Labyrinth”

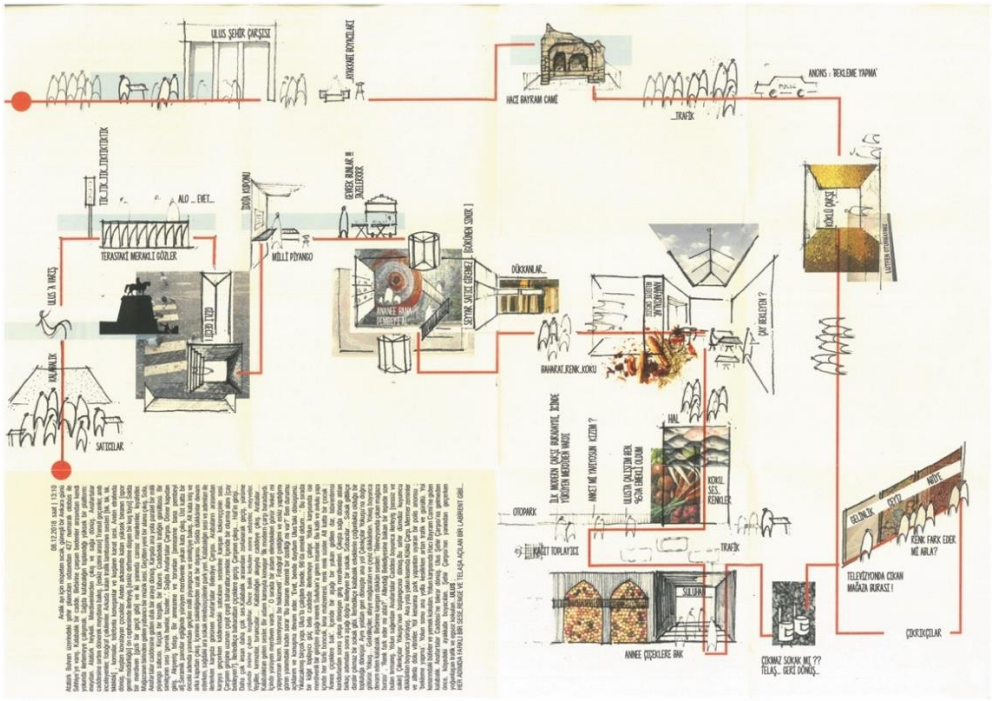


Figure 3.5 Map #01, “Labyrinth”

Figure 3.6 The cover of the map #01 “Labyrinth”

Features of the map-field: The map is printed on an A3 scale paper, which is divided into twelve and folded. Unfolding the map starting from the smallest division reveals the title of the map, the route and the nodes of the of the walking *identified*, *isolated* and *marked* on a base map, *listed* locations on the base map, citation from de Certeau, and starting point of the walking route, date, author on the one face of the map (Figure 3.1). On the back page, the itinerary of the walking is provided in the text format. It is accompanied by the *drawing* of the itinerary with lines and juxtaposition of photographs taken on the field with perspective sketches. The itinerary is merged into the map in "Labyrinth".

Figure 3.7 Re-folding Map #01 Labyrinth

Extracts from the field: The map unfolds new sets of information about the field. While the itinerary and drawn route of the map-maker revealing the perceptual experience of the field is provided on one face of the map, the record of the route and *identification* of the places on the route on a base map is provided in the other face. The map provides a multiplicity of views of the field in terms of the positionality of the map-maker. The itinerary describes the route in terms of directions, modes of mobility, points of interests, and perceptual experience. The lines linking the starting and ending points of the walking are changing direction as defined in the written itinerary. The lines of the walking route are *fragmented* with the representations of the

nodes of walking. The nodes are *selected* from well-known places of Ulus. The attraction points of Ulus are framed by the map-maker through the sketches and photographs on the field. The map in the itinerary form *narrates* the route of the walker and records the stimulus affecting the changes in the direction such as flows of the crowd and traffic, noise and rhythms, daily speeches. On the other hand, the map selectively displays the experienced part of the field while omitting the non-walked parts. The isolated parts of the field and lines of direction re-arranged in terms of spatial relations and the scalar relations are distorted. Acts *ordering* and re-arranging the route of walking and spacing between the nodes are affected by the restrictions of print size.

Plotting: The lines of the fold are used to *arrange* the contents of the map. The cut-out pieces of photographs are overlapped with the perspective drawings, which are *set* in relation with lines.

Temporal Statement: The map indicates the date of the performance. The present conditions of the field on the exact day of the walking is recorded and represented in the map.

Map #1 exemplifies the use of map-making acts of *arranging, articulating, drawing-out, explaining, fragmenting, identifying, isolating, listing, narrating, ordering, selecting, setting in-relation* and *structuring*. In addition to these acts mentioned in the core scheme, the map#1 adopts the acts used in the decomposed maps: cutting-out, describing, distorting, folding, juxtaposing, linking, merging, multiplying, omitting, re-arranging, re-orienting, re-scaling, revealing and spacing. In the figure 3.12, how the plotting acts matched with the extracts from the field and features of the map field is provided.

3.2.1.1 Map #02

Figure 3.8 Map #02

Features of the map-field: The map displays the route of the walking *drawn* in a line and *isolated* from the base map it was recorded on. The drawing of the linear route is merged into the sketches of the points of interests in the field.

Extracts from the field: The map reveals only the experienced part of the field by omitting the whole network of streets. Various impressions of the field such as iconic buildings, landmarks, souvenirs gathered into the map and linked with the route of the walking.

Plotting: The route of the walking is marked on a scaled base map of the field. The line created on the field through walking is melted into the lines of the impressions drawn on the route.

Temporal Statement: the map#2 records a transitory impression on the field.

Map #2 exemplifies the use of map-making acts of *articulating, drawing-out, isolating, linking, setting in-relation* and *structuring*. In addition to these acts

mentioned in the core scheme, the map#1 adopts the acts used in the decomposed maps: linking, marking, merging, and omitting. In the figure 3.13, how the plotting acts matched with the extracts from the field and features of the map field is provided.

3.3.2. Remarks on the Generative Toolset

The third chapter of the study, toolset development, focuses on the ways map as a representation of distinct spatial practices is constructed through the acts, extracts from the mapped field and map-features. The first three decomposed maps provided in this chapter reveals the transformation of the representational toolset of prescriptive map-making practice into an expanded set of map-making acts and map-features. The generative toolset constructed through a critical reading of experience-based maps can serve two main interests: map-interpretation and map-making. The map-making workshop In*visible Boundaries* conducted within the scope of this thesis exemplifies the use of generative toolset as a guide of the map-making process. The generative toolset is introduced to students of architecture and urban planning in the process of the workshop *Invisible Boundaries.* The participants adopted the content of the generative toolset and extended the set through personal map-making practices. The decomposition of the two maps produced in the workshop reveals that there are matches between the acts adopted by the participants and other map-makers. The resemblance between different maps in terms of shared features of the map points out that the acts provided in the toolset can be settled in a unique way of interrelation throughout personal map-makings. Thus, as a list of acts and features of experience-based map-making, the proposed generative toolset can be introduced in architectural design studios as a conceptual scaffold for investigation of the design field and representation of the spatial practice. The mini-lectures performed within the process of this thesis work also revealed that the fragmentation of map-making process into operations of construction of the map field, selection of the extracts from the field and map-making acts as provided in the toolset is an effective way of communicating the critical map-making methods. In that terms, the generative toolset serves both map-interpretation and map-making practices.

MAP-MAKING ACTS	EXTRACTS FROM THE FIELD and FEATURES OF THE MAP-FIELD
-articulating	the extracts from field
-attaching	a'. *map fragments* as f. *the printed text*
-cutting-out	a'. *map fragments* from a city plan
-discovering	a. *"unities of atmosphere"*
-disrupting	the continiouty of the base map
-distorting	a'. *map fragments*
-drawing out	b. the pattern of the drift as b'. *arrows*
-explaining	*the conventions* in *text* c. *title* , d. sub-title
-fragmenting	*base map* into a. *"unities of atmosphere"*
-getting there	b. pattern of the drift , a. *"unities of atmosphere"*
-identfying:	a. *"unities of atmosphere"*
-isolating	a. *"unities of atmosphere"* from the "wholeness" of the city
-juxtaposing	a'. *map fragments* with b'. *arrows*
-linking	a'. *map fragments* ; a. *"unities of atmosphere"* with b'. *arrows*
-naming	the map with c. *title* , d. sub-title
-net-working	a. *"unities of atmosphere"*
-omitting	the links between the a'. *map fragments*
-pulling-out	a. *"unities of atmosphere"*
-re-arranging	the scalar and spatial relations of a. *"unities of atmosphere"*
-re-orienting	a. *"unities of atmosphere"*
-re-scaling	a. *"unities of atmosphere"*
-relating	a'. *map fragments* with the other a. *"unities of atmosphere"* with b'. *arrows*
-revealing	*forces* , *direction* , *trajectories* , *velocities* by b'. *arrows* / e. *the author*
-rotating	a'. *map fragments*
-selecting	a. *"unities of atmosphere"*
-setting	a. *"unities of atmosphere"* in relation with the others
-spacing	a'. *map fragments*
-structuring	the map field

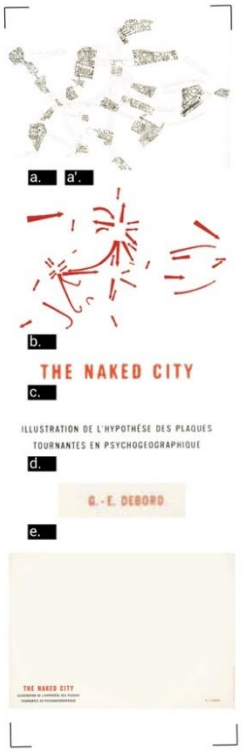


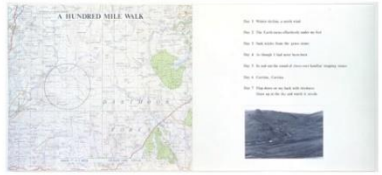
Figure 3.4 | DECOMPOSING THE MAPS INTO ACTS, FEATURES and EXTRACTS

"The Naked City", *Guy Debord, Asger Jorn, 1957*

Figure 3.5 | DECOMPOSING THE MAPS INTO ACTS, FEATURES and EXTRACTS

MAP-MAKING ACTS — EXTRACTS FROM THE FIELD and FEATURES OF THE MAP-FIELD

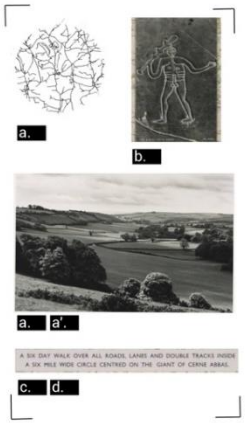
- *-attaching* — b. photographs, *printed text* on a base map
- *-articulating* — the extracts from field
- *-describing* — d. the sensory experience in *text* — a. the route of the walking
- *-drawing out* — a. the route of the walking on a base map
- *-framing* — sight
- *-fragmenting* — duration into days
- *-identfying:* — sound
- *-juxtaposing* — a. the route of the walking with base map
- *-linking* — e. starting (and ending) point with b'. lines
- *-listing* — d. the sensory experience, c. perceptual experience of each day in *text*
- *-marking* — a. the route of the walking on a base map
- *-ordering* — time, geometry, distance, f. *scale* of walking
- *-revealing* — *the author*, *date*, d. the sensory experience, c. perceptual experience: time, movement, sight, sound, touch, taste, illusion
- *-re-crossing* — a. the route of the walking
- *-superimposing* — *printed text* on a base map
- *-structuring* — the map field

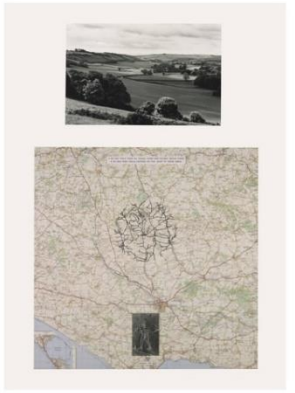


"A Hundred Mile Walk", *Richard Long, 1971*

MAP-MAKING ACTS — EXTRACTS FROM THE FIELD and FEATURES OF THE MAP-FIELD

- *-attaching* — b. photographs, *printed text* on a base map
- *-articulating* — the extracts from field, *text*
- *-defining* — d. itinerary in *printed text*
- *-describing* — a. the route of the walking in *printed text*
- *-drawing out* — a. the route of the walking on a base map
- -framing — sight
- *-identfying:* — a. the route of the walking on a base map
- *-linking* — e. starting (and ending) point with a'. lines
- *-multiplying* — the modes of seeing
- *-naming* — the map with c. *title*
- *-ordering* — time, geometry, distance, f. *scale* of walking on base map
- *-revealing* — *date*, a. the route of the walking, sight
- *-re-crossing* — a. the route of the walking
- -re-tracing — a. the route of the walking
- *-selecting* — geometry of a. the route of the walking
- *-structuring* — the map field





"Cerne Abbas Walk", *Richard Long, 1971*

MAP-MAKING ACTS	EXTRACTS FROM THE FIELD and FEATURES OF THE MAP-FIELD
-attaching	*photographs* on *the inset map image*
-arranging	*text* , *footnotes*
-cautioning	the map-maker about c. the prohibited streets
-classifying	c. the prohibited streets
-drawing out	*frame* , *decorations* , *division lines* / b. borders of the streets of Nişantaşı
-enlarging	*the inset map image*
-finding	e. locations that the illusion of Füsun appears on *the inset map image*
-folding	the map
-framing	*photographs*
-highlighting	c. the prohibited streets
-identfying:	e. locations that the illusion of Füsun appears c. the prohibited streets
-inventorying	f. the fictional places in *the legend box*
-isolating	c. the prohibited streets
-linking	f. the scenes of the illusion with e. locations that the illusion of Füsun appears
-listing	f. the fictional places in *the legend box*
-marking	c. the prohibited streets on a. the streets of Nişantaşı
-naming	the map with a *title* / a. the streets of Nişantaşı
-ordering	c. the prohibited streets
-pinning	e. locations that the illusion of Füsun appears on *the inset map image*
-projecting	a. the streets of Nişantaşı in the ortographic set
-re-scaling	*the inset map image*
-relating	a. the streets of Nişantaşı with f. the fictional places
-selecting	c. the prohibited streets from a. the streets of Nişantaşı
-setting	a. *the streets of Nişantaşı* in *scalar relations* *frame*
-superimposing	f. the scenes of the illusion on *the inset map image*
-structuring	the map field
-tilting	*orientation* from the north-south axis
-tracking	c. the prohibited streets

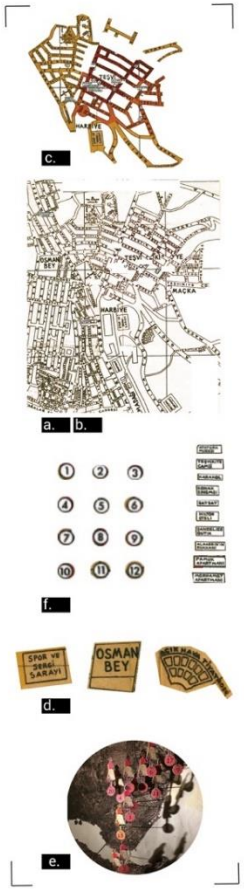
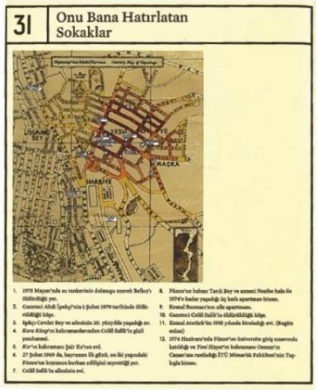
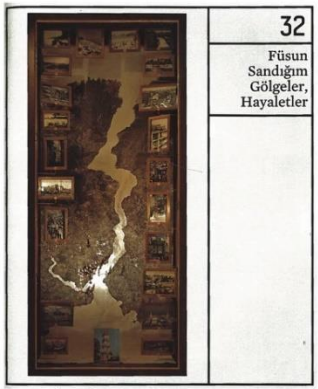


Figure 3.6 | DECOMPOSING THE MAPS INTO ACTS, FEATURES and EXTRACTS



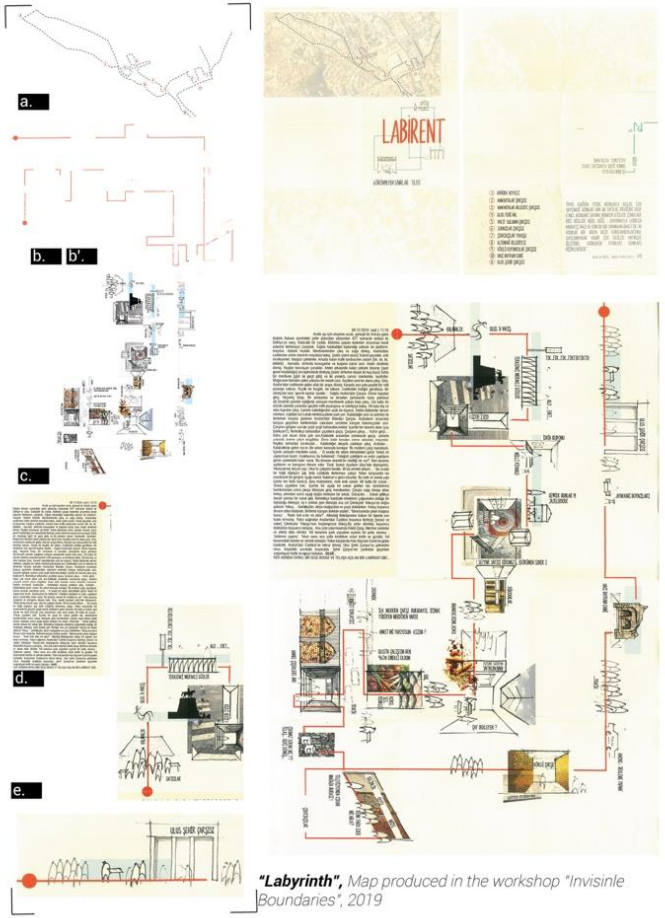
"Literary Map of Nişantaşı", *Orhan Pamuk, Şeylerin Masumiyeti, İstanbul: İletişim Yayınevi, 2012, 146*



"The Ghosts I Thought Füsun", *Orhan Pamuk, Şeylerin Masumiyeti, İstanbul: İletişim Yayınevi, 2012, 147*

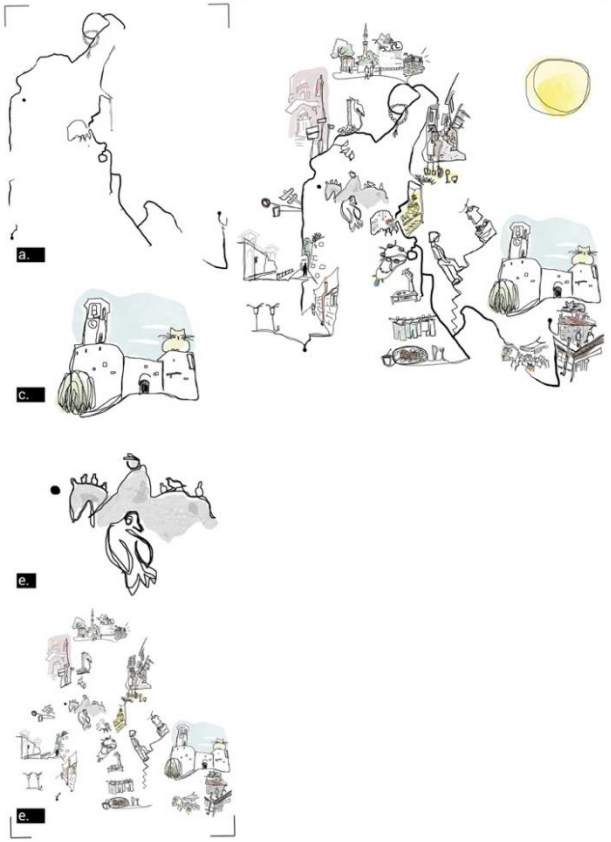
Figure 3.11 DECOMPOSING THE MAPS INTO ACTS, FEATURES and EXTRACTS

MAP-MAKING ACTS	EXTRACTS FROM THE FIELD and FEATURES OF THE MAP-FIELD
-arranging	*text* , *frame* ,
-articulating	the extracts from field
-cutting-out	pieces from *photographs* of the field
-describing	a. the route of the map-maker , c. the stimulus in d. the itinerary in the text format
-distorting	*scalar relations* , a. the route of the map-maker
-drawing out	d. the itinerary in the text format / perspective sketches while walking
-explaining	*the conventions* in *the legend box*
-folding	the map
-fragmenting	a. the route of the map-maker
-identfying:	f. the places on the route on a *inset map image*
-isolating	a. the experienced part of the field
-juxtaposing	perspective sketches with *photographs*
-linking	e. starting and ending points , f. the places on the route with b'. lines
-listing	f. the places on the route in *the legend box*
-merging	d. the itinerary in the text format into the map
-multiplying	*orientation* , *projection*
-naming	f. the places on the route / the map with c. *title* , d. sub-title
-narrating	a. the route of the map-maker
-omitting	the unwalked parts of the field
-ordering	a. the route of the map-maker
-re-arranging	a. the route of the map-maker in accordance with d. the itinerary in the text format
-re-orienting	a. the route of the map-maker
-re-scaling	f. the places on the route
-revealing	*the author* , *date* , credits , a. the experienced part of the field , c. the stimulus : noises , ryhtms , mediums of mobility , daily speech , flows of people / traffic
-selecting	f. the places on the route
-setting	f. the places on the route in relation with the others
-spacing	f. the places on the route according to *the frame*
-structuring	the map field



***"Labyrinth"**, Map produced in the workshop "Invisinle Boundaries", 2019*

MAP-MAKING ACTS	EXTRACTS FROM THE FIELD and FEATURES OF THE MAP-FIELD
-articulating	the extracts from field
-drawing out	a. the route of the walking , d. impressions from the field
-gathering	d. impressions from the field
-isolating	a. the experienced part of the field
-linking	d. impressions from the field with a. the route of the walking
-marking	a. the route of the walking on a base map
-merging	d. impressions from the field with a. the route of the walking
-omitting	the unwalked parts of the field
-setting	d. impressions from the field in relation with a. the route of the walking
-structuring	the map field



CHAPTER 4

CONCLUSION

In the process of this study, walking-based practices of map-making are unpacked through the search of tools suitable for representing the temporal, perceptive and sensory experience of space. Considering map as a tool emerges in-situ through a set of iterative and citational practices, the ways map-making becomes a tool of representation when it is connected with walking practice is investigated. To obtain a set of modes and operations of representing the spatial experience, a reading of in-situ maps is conducted. As mentioned in the methodology, the critical reading of in-situ maps is based on the assumption that a map is an embedded figure and yet it has a structural autonomy requiring a distinctive analysis. Based on this assumption, this study argues that maps' action is not limited to the structural aspects of presentation, yet the practice of map-making can be explored in relation to how they employ certain representational techniques, the content of the maps, and the context in which they are made and used. The domain of the map-reading is constructed on the map-making activities which are out of the standardized, prescriptive/proscriptive practices of institutionalized map-making. In the study, the examples of experience-based maps are selected from the early maps in the form of itineraries, medieval sea charts, critical walking activities of avant-gardes and land-artists, and maps produced by the fictional walkers. Accepting that that there is an interdependency between the conception of space and spatial representation, in the second chapter the focused maps are provided with the modes of seeing they are embedded. In the third chapter, the focused maps are studied in terms of their structural autonomy. To identify the actions and choices of the map-making process, a core scheme is constructed based on the operations of map-making as schematized by James Corner and the five codes of map-making as defined by Denis Wood. Referring to the core scheme, the in-situ maps mentioned in

the second chapter are decomposed into features of the graphic system, extractions from the field and map-making acts organizing them. The core scheme thus enriched is provided as one of the outcomes of the study. It is offered as a generative toolset of in-situ map-making which is not static but can be multiplied, adopted, deconstructed, and reconstructed in a unique way for different contexts. Through the decomposition of the maps of "Invisible Boundaries", produced by the participants of the workshop, the generative toolset is enriched in terms of the map-making acts and map features.

In this chapter, it is intended to review and conclude the discussion by comparing the four maps investigated to obtain the generative toolset and two personal maps produced in the workshop "Invisible Boundaries" in terms of use of the generative toolset. To this end, map-making acts, map-features and the content of the map obtained throughout the process of decomposing are re-read in the light of the context these maps are made and used. To perform the cross-reading of the second and third chapters, firstly, I will define the map-use for each different mode of the walking act mentioned in the second chapter. Next, I will examine the map-making acts, map-features and the extracts in terms of the conception of space, position of the map-maker and spatial representation for the identified distinct map-uses.

4.1. Map-use For Different Modes of Walking

In the study, the map-making acts are investigated on the maps produced by the walkers with varying interests. The three modes of walking mentioned in the second chapter, drift, walking in lines, and everyday-walk, differ from each other in terms of aim, intention, arbitrariness, and use of maps all through the process.

In the "Naked City" prepared by Guy Debord and Asger Jorn, the walking act serves as a practice of realization/discovering/inhabiting the atmospheric units in the city. In the Situationists' "renovated cartography", the map-making practice as a part of drift turns into an investigation tool of the urban units and a representation tool of the impulses caused by the urban field. The walkings performed by the land-artist Richard Long, on the other hand, are means of drawing on the field. Long uses map-making

for several purposes; as a tool for articulating the variables of geometry, distance and time, as a tool of recording and representing the perceptive and sensory experience of the field, and as an itinerary of the performance. Walking in the works of Long is the materialization of a certain idea of drawing. Thus, the mode of walking in "The Naked City" differs from the Long's "walking in lines" in terms of arbitrariness. While the route of the drift mode of walking is undetermined but instead shaped by the attractiveness of the urban units, the geometry of Long's walkings are already organized on a map. Nevertheless, the practice of map-making in the works of SI and Richard Long share one common aim; maps produced by them serves as a representation of the walking performance that takes place without an audience.

The mode of walking of the fictional character of the novel "The Museum of Innocence" can be considered as everyday walk. In the case of the two maps, "Streets That Remind Me Her" and "The Shadows and Ghosts I Mistook For Füsun", the map-making serves as a representational tool of the sensory experience of the field in terms of prohibitions and disabilities.

The two maps produced in the workshop Invisible Boundaries are embedded in every-day walking practices showing influences of the flaneur and drift. Map #1 is produced by a walker who already been and walked the map-field. The second map-maker, on the other hand, experienced the field for the first time as a part of the map-making process. As products of different modes of spatial practice, the two map-making as an investigation of the invisible boundaries in the same urban field differs from each other in terms of the content of the map and acts binding them.

4.2. Map-making As A Selective Interest

4.2.1. Map As An Investigation Tool

As mentioned above, the Naked City is prepared to investigate the unities of atmosphere and their perception in relation to each other. While avant-garde groups such as Dadaists, surrealists and 19th century flaneurs using walking as a critical activity and aesthetic operation adopts text and photography mediums to record and

communicate the spatial practice, LI and SI use maps to document and represent their acts. The appearance of maps in the works of Lettrist artists and Situationists can be related with their critical attitude toward the descriptive mode of representing the city as a coherent entity, a reduction into "the undifferentiated state of the visible-readable realm". Naked City, the map composed of nineteen fragments of Plan de Paris, rejects the detached mode of an observer in search of a totalized perception. The practice of map-making in the renovated cartography proposed by Guy Debord is predicated on a model of moving on as a contrast to the descriptive mode of spatial representation as used in Plan de Paris. The map-making as a tool of investigation is based on spatializing actions instead of presenting the city from a totalizing point of view. Thus, the displacement of the plan view of the city through the acts of fragmenting, cutting-out, re-arranging, distorting and spacing aims to reveal the contradictions hidden in the homogeneous depiction of the urban field.

It is possible to observe similarities between "The Naked City" and "The Labyrinth", a map produced in the workshop, in terms of used map-making acts. Although these acts in the generative toolset were derived from The Naked City throughout the decomposition process, the same acts are related with other acts, map-features and extracts in a distinct way throughout the map-making practice of "The Labyrinth". To investigate the invisible boundaries around which the multi-sensory experience of the Ulus Neighborhood changes, the map-maker #01 walked aimlessly on the streets. The route of walker/map-maker between a determined starting and ending points were shaped by the traffic sounds, everyday speech's, direction of the flow of the crowd. The mode of walker #01 resembles "The Naked City" in terms of observing the perceptual impulses on the streets. On the other hand, these two walking modes differ in terms of the objectives and political attitudes of the activity. As a representation of two separate practices, the usage of the map-making acts and map-features produce different relations among them. For example, arrow as a map-feature used on both maps appear in different ways; in the Naked City arrows links the map-fragments as psycho-geographic hubs while in "The Labyrinth" arrows reconstruct the map field in

reference to the itinerary of the spatial practice. These two map-making practice of spatial investigation subverts the prescriptive map-making through the acts cutting-out, describing, distorting, juxtaposing, linking, omitting, re-arranging, re-orienting, re-scaling, revealing, and spacing adopted in two map-making practice of spatial investigation.

4.2.2. Map As An Organizational Tool of Spatial Practice

The map-works produced by Richard Long as a part of the walking projects differ from the other map-use and map-making examples discussed in this thesis in terms of that these maps precede the spatial practice. The walking projects performed by Richard Long are contained by a particular idea that precedes it and takes place in isolated landscapes. To organize the duration and spatiality introduced by movement, Long uses maps as a tool for planning the walking process. The artist refers to maps taken from the national map institution of the UK for the selection of the field and determination of the route. As in the case of the two included works of the artist in this thesis "A Hundred Mile Walk" and "Cerne Abbas Walk", the iterations that Long come up with are based on drawing lines or basic geometric shapes on the field. In the map-works, the artist used the plan view of the field as a base map on which the route of the walking is marked. In Long's works, the usage of a coherent view of the field aims to identify the location and geometry that walking practice takes place. Using the OS maps as a navigational tool, Long re-crosses the lines traced on these maps[156]. The fragments of the OS maps juxtaposed with the geometry of the particular mode walking provide both the experienced and non-experienced parts of the field. In that terms, the map-use in Long's projects differs from the map-making as an investigational tool discussed in the previous section. Instead of a critical attitude towards the totalizing view and homogeneous conception of space through fragmentation, distortion and displacement, the artist adopts traditional maps to

[156] In the case of some map-works of the artist such as "Cerne Abbas Walk" it can be claimed that throughout the map-making Long re-traces the route of the walking on the map.

organize the event, perform the walking in accordance with the decided iterative process, and record and represent the spatial practice.

4.2.3. Map As A Representational Tool of Spatial Practice

Till now the uses of map-making practice to organize the walking event and investigate the variation in perceptive and sensory experience of the field is mentioned. In these separate cases where map production is used as an investigation and organizational tool, map-making also functions as a record and representation of spatial practice takes place in the mapped field. The map as an outcome of the context-dependent map-making practice becomes a representation of the map-makers' spatial experience. The map describes the mapped field as exposed to map-makers' mode of questioning.

The map of prohibitions and possibilities prepared by Orhan Pamuk for the Museum of Innocence, the novel and the museum, can be given as an example of the map-use as a representational tool of a particular mode of spatial experience. The two map, "The Streets That Remind Me Her" and "The Ghosts and Shadows I Mistook for Füsun", represents the changes in the walker's sensory experience of the streets of Nişantaşı. The map-making process of these two maps differs from the other maps mentioned in this study in terms of the attitude towards walking. In the practices of drift, walkings in line and walking in search of invisible boundaries the map-use and map-making are interrelated with the aim and mode of the walking. Map-making precedes and accompanies the walking event and continues afterwards. The two maps prepared by the author of the novel, on the other hand, follows the daily walks of the fictional character. Thus, the map-making practice serves to represent a coherent perception of walking takes place in a specific period and space. To this end, the two maps employ a plan view of the city as base maps to mark and highlight the prohibited streets and identify and pin the locations that the illusion appears. The base maps set the streets of Nişantaşı in scalar relation, provides a total revelation of the sensory experience of the field. As a map produced within the boundaries of a traditional map-

making, “Streets That Remind Me Her” and “The Ghosts and Shadows I Mistook for Füsun” adopts quite a few acts and features of the core scheme. Nevertheless, through the acts of folding, pinning, superimposing, and attaching the two map enlarges the boundaries of the toolset of traditional map-making.

The cross-reading of the map-making and map-use for different modes of walking conducted in this chapter of the study reveals that different maps may contain the similar acts and map-features yet when map-making is combined with different modes of spatial practice the same acts and features are set in unique relations among them. Throughout the process of critical reading and map decomposition, the thesis establishes a notion of map-making as a tool of spatial representation and investigation, emerges in-situ in accordance with the variables of the mode of walking, interest in map-making, and particularities of the field. Considering the performative aspects of the map-making, the generative toolset serves as a framework of map interpretation and a set of map-making acts and map-features that adopted by each map-maker in a distinct way. The generative and speculative list of acts and features provided in the toolset will be transformed through the map-makers with varying purposes and modes of spatial practice.

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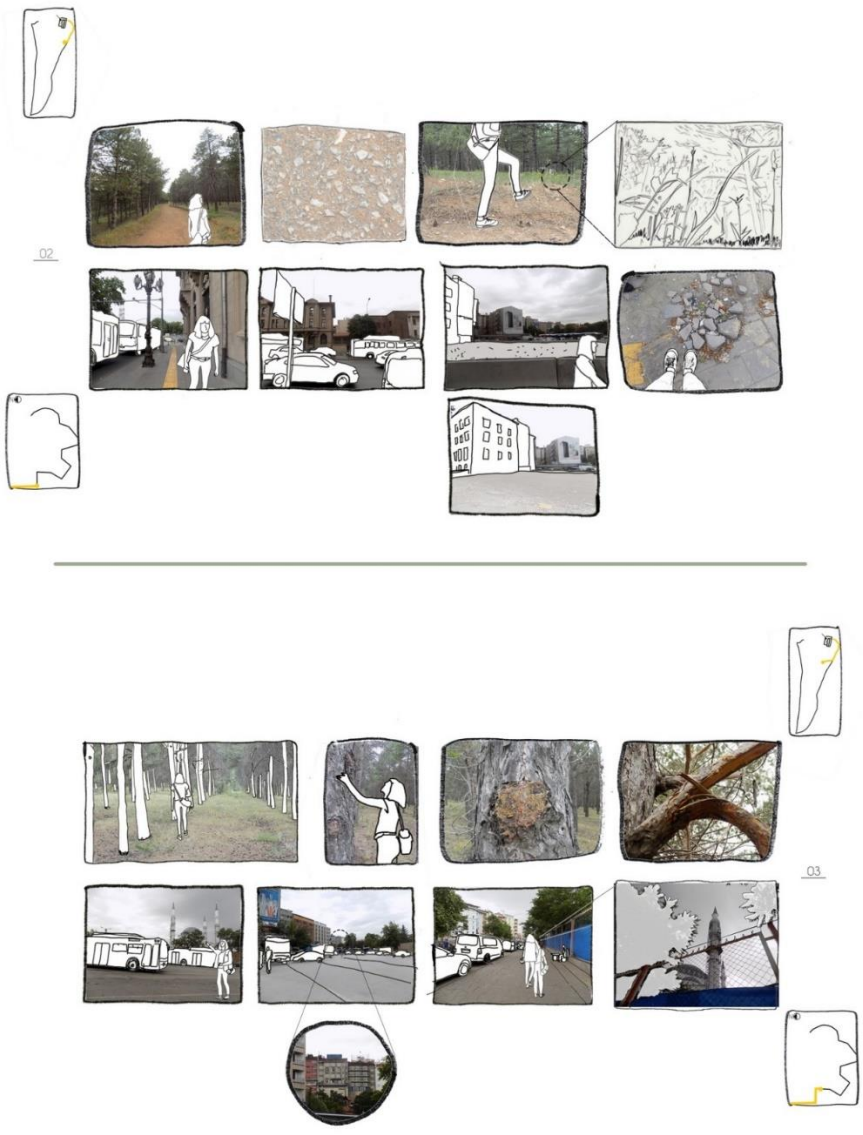
APPENDICES

A. Previous Maps Prepared by the Author

A-01 Urban Walking vs. Nature Walking



A-02 Map of the 'METU Road'

A Map of the “METU Road”, prepared by the author as a part of the site analysis of the 4th year design studio project conducted by Ayşen Savaş, Agnes van der Meij, Onat Öktem, Pınar Yazdıç

B. Initial Scheme