Enacting Memoryscapes

Urban Assemblages and Embodied Memory in Post-Socialist Tashkent

Olma, Nikolaos

Enacting Memoryscapes

Urban Assemblages and Embodied Memory
in Post-Socialist Tashkent

Nikolaos Olma

PhD Thesis

IN MEMORIAM

Tadeusz Olma, Sr.   Nikolaos Tavlas

(1926 – 2012)   (1924 – 1977)

We travel not for trafficking alone;
By hotter winds our fiery hearts are fanned:
For lust of knowing what should not be known,
We take the Golden Road to Samarkand.

—James Elroy Flecker, *Hassan*

But the special quality of this city for the man who arrives there on a September evening, when the days are growing shorter and the multicolored lamps are lighted all at once at the doors of the food stalls and from a terrace a woman's voice cries ooh!, is that he feels envy toward those who now believe they have once before lived an evening identical to this and who think they were happy, that time.

—Italo Calvino, *Invisible Cities*

Καινούργιους τόπους δὲν θὰ βρεῖς, δὲν θάβρεις ἄλλες θάλασσες.
Ἡ πόλις θὰ σὲ ἀκολουθεῖ. Στοὺς δρόμους θὰ γυρνᾷς
τοὺς ἴδιους. Καὶ στὲς γειτονιὲς τὲς ἴδιες θὰ γερνᾷς·
καὶ μὲς στὰ ἴδια σπίτια αὐτὰ θ' ἀσπρίζεις.
Πάντα στὴν πόλι αὐτὴ θὰ φθάνεις. Γιὰ τὰ ἀλλοῦ — μὴ ἐλπίζεις —
δὲν ἔχει πλοῖο γιὰ σέ, δὲν ἔχει ὁδό.
Ἔτσι ποῦ τὴ ζωή σου ρήμαξες ἐδῶ
στὴν κώχη τούτη τὴν μικρή, σ' ὅλην τὴν γῆ τὴν χάλασες.

—C. P. Cavafy, *The City*

CONTENTS

ABSTRACT

Based on nine months of ethnographic fieldwork in Tashkent, Uzbekistan, this doctoral dissertation explores the ways in which embodied memory processes are generated by and through the interaction of humans with urban infrastructure. Drawing upon a wide range of approaches from across several disciplines – anthropology, sociology, human and cultural geography, and science and technology studies – in order to propose a framework capable of capturing the multiplicity, fluidity, messiness, and contingency of memory, this dissertation suggests a reconceptualisation of the notion of the memoryscape which departs from the traditional structuralist representational approaches to the notion. Instead, it sees the memoryscape as an assemblage – more than one but less than many, at the same time collective and individual – enacted by means of the co-functioning of human and non-human components, and especially by the various memory processes that this co-functioning generates. Accordingly, it argues that such a conceptualisation can provide us with an ontological, epistemological, and methodological apparatus suitable for understanding how memory processes are enacted in different ways at different sites within an urban context.

In this direction, the analytical chapters of this dissertation are devoted to the examination of three urban infrastructure systems in Tashkent – the informal taxi economy, the centralised district heating system, and urban trees – and explore the various forms of embodied memory processes that, in each case, are generated by the co-functioning of humans and non-humans. While these systems – in more or less the same material form – can be found in most post-Soviet Central Asian cities, in the case of Tashkent their negotiation results in everyday practices and bodily processes that are characteristic of and exclusive to urban life in the capital of Uzbekistan. By offering a historical and technical background to each of the

infrastructure systems selected and analysing the everyday context within which the practices produced and/or supported by them are situated, the chapters highlight the fact that the memory processes generated by means of these practices are unique as well. At the same time, however, they weave together memoryscapes that are both entities themselves and parts of larger memoryscapes, which essentially reveals each of these three infrastructure systems as a Latourian "oligopticon" offering sturdy but extremely narrow views of the whole, the "whole" in this case referring to both the city and to the memoryscape.

RESUMÉ

Denne afhandling undersøger, baseret på ni måneders etnografisk feltarbejde i Tasjkent, Usbekistan, hvordan kropsliggjorte hukommelsesprocesser skabes i interaktionen mellem mennesker og urban infrastruktur. Ved at anvende metoder fra forskellige discipliner såsom antropologi, sociologi, human- og kulturgeografi samt videnskabs- og teknologistudier præsenteres en ny tilgang, der er i stand til at opfange hukommelsens rodede, flydende, tilfældige og mangeartede beskaffenhed. I afhandlingen foreslås en rekonceptualisering af memoryscapes som afviger fra de traditionelt strukturalistisk repræsentative forståelser af begrebet. Memoryscapes betragtes i stedet som en blanding – mere end én, men mindre end mange – kollektiv og individuel på én og samme tid. De skabes i samarbejdet mellem menneskelige og ikke-menneskelige komponenter med særlig fokus på de hukommelsesprocesser som det medfører. I overensstemmelse hermed argumenteres der for, at en sådan konceptualisering giver os et ontologisk, epistemologisk og metodologisk begrebsapparat til at forstå, hvordan hukommelsesprocesser bliver udført og forhandlet på forskellige måder, på forskellige steder, inden for en bymæssig sammenhæng.

På den baggrund er de analytiske kapitler i denne afhandling viet til undersøgelsen af tre urbane infrastruktursystemer i Tasjkent – den uformelle taxaøkonomi, det centraliserede fjernvarmesystem og byens træer. Hermed undersøges forskellige former for kropsliggjorte hukommelsesprocesser, som i de nævnte eksempler er skabt i samarbejde og forhandlinger mellem det menneskelige og ikke-menneskelige. Selv om disse systemer findes, i mere eller mindre samme form, i de fleste post-sovjetiske centralasiatiske byer, så resulterer forhandlingerne i Tasjkent i dagligdagspraksisser og kropsliggjorte processer, som er karakteristiske og eksklusive for bylivet i hovedstaden i Usbekistan. Ved at give en historisk og teknisk

redegørelse for de valgte infrastruktursystemer og analysere dagligdagskonteksten i hvilken de producerede praksisser er situeret, understreger kapitlerne det unikke i de hukommelsesprocesser der er skabt på baggrund af disser praksisser. På en og sammen tid skabes memoryscapes, der både er selvstændige enheder, men også dele af større memoryscapes. Derved åbenbares disse tre infrastruktursystemer som eksempler på et Latoursk "oligopticon," der tilbyder robuste, men ekstremt afgrænsede syn på helheden. "Helheden" refererer i dette tilfælde både byen og til memoryscape.

PREFACE & ACKNOWLEDGEMENTS

The first time I heard of Tashkent I must have been seven. It was back then, in the early 1990s, that the last Greek political refugees who had fled Greece after the defeat of the communist insurgents in the Greek Civil War (1946 – 1949) were coming out of exile across Eastern Europe and the former Soviet Union and were repatriating to a country they hardly knew but nevertheless considered their motherland. My family, who since the early 1950s had lived in Wrocław, in the Polish People's Republic, decided to follow suit, and by the end of 1991, we had all settled in the southern suburbs of Athens. In spite of having spent several decades in Poland, my grandparents had not lost contact with their former comrades-in-arms who had found refuge in other socialist countries, and, upon repatriating, they all met quite frequently. Among them was Aunt Stella – aunt being less a degree of relation and more one of ideological proximity, a privilege to which all my grandparents' friends were entitled – who in the aftermath of the Civil War had escaped to Tashkent and had returned to Greece in the late 1980s. While Aunt Stella had been a close family friend, she never visited our family house, as the wounds she had suffered during her days in the communist insurgency haunted her last years and made it difficult for her to leave her apartment. Instead, she called my grandmother almost every day around noon. During those calls, which quite often went on for hours, the two of them reminisced the past and remembered those who had in the meantime passed away, including my grandfather, about whom Aunt Stella eagerly spoke for hours on end also to me whenever I happened to answer the telephone.

It was from Aunt Stella that I heard of a city situated far away, in the middle of a desert, where, despite being in what I then thought was Russia, the weather was as hot as in Greece. "Is it a city founded by Alexander the Great?" I once inquired,

trying to position Tashkent in relation to what was perhaps that day's history class in grade 2 or 3. "Close enough," she had said, "Alexander was in Tajikistan, Tashkent is in Uzbekistan." Maybe on that day, or maybe months later, I looked up Uzbekistan in our socialist-era family encyclopaedia and found photographs of domed oriental buildings. The conclusion was inevitable: Tashkent must be the setting for *One Thousand and One Nights* – known across the English-speaking world as *The Arabian Nights*. This clear picture of Tashkent as a quintessentially oriental city, with one-storey adobe houses, winding dirt streets, and desert all around, followed me through most of my teenage life. The word "socialist" that appeared so often throughout discussions and readings meant to me nothing other than that Tashkent had once been a city in the socialist Soviet Union. It was in *Zodchestvo Uzbekistana* (*Architecture of Uzbekistan*) (Pugachenkova 1959), a book presented to my maternal grandfather during his visit to Tashkent in the early 1960s and unearthed from a box in our basement almost forty years later, that I first saw that Tashkent is a city like any other, in many ways similar to the Polish city in which I was born. The disappointment was so great that I immediately lost all interest in Uzbekistan.

It was only after I started working on this very project that my interest in Tashkent resurfaced, triggered by the suggestion of my PhD supervisor, Ildikó Bellér-Hann, to focus my research on a city other than Astana. Astana's modern architecture and urban planning had enchanted me during my master thesis fieldwork in Central Asia in 2011, and my original PhD proposal had aimed at exploring memory processes in this newly built metropolis. Pointing out the abundance of scholarly work on Astana and the very limited literature on Tashkent, however, Ildikó eventually convinced me to turn my focus onto the city of my childhood fables. Little did I know back then that this would be only the first of a long series of suggestions which would all play a very important role in the completion of this dissertation. I am grateful to Ildikó for guiding me through this process, for sharing with me her vast knowledge on Central Asia, for the time she spent reading and commenting on my work, for her sharp – and witty – remarks, and for the academic freedom she allowed me and the chance she gave me to experiment with different approaches and frameworks. Most importantly, however, I would like to thank her for so generously opening her house and for freely sharing her office; in short, for being a real *Doktormutter* to me.

Needless to say, this dissertation has hugely benefited from generous suggestions and feedback provided by several other colleagues and friends as well, to whom all I am very grateful. Filippo Bertoni, Bani Gill, and Yannis Tsantoulis have spent a lot

Rasmussen, and Emilija Zabiliūtė were, over the years, the best officemates I could possibly have; without them, I would have never finished this dissertation – or would have finished it much earlier. Jes also translated the abstract of this dissertation into Danish. Michel Dziadul and Katya Barasheva kept me running with their stiff G&Ts at Gorki. Andreas Bandak, Tamara Beresh, Marion Caussanel, Saer El-Jaichi, Rinatania Fajriani, Erik Sporon Fiedler, Dimitrios Filippidis, Ann-Sophie Gast, Kathrin Grundmann, Mia Tarp Hansen, Vojtěch Hledík, Piero Iudiciani, Monika Juškaitė, Antonis Kountouriotis, Martin Schou Madsen, Clément Marcoux, Stephen McPhillips, Levent Özata, Panos Paraskevopoulos, and Saila Toikka all helped me in their own ways. And Yekaterina Totskaya was a constant source of support.

Special thanks are due to the Faculty of Humanities at the University of Copenhagen for the generous three-year PhD scholarship they provided me with and for the two travel grants I received from the Faculty's Asian Dynamics Initiative (ADI); none of this would have been possible without them. More than anyone, however, I would like to thank my family: my parents Tadeusz and Evanthia, for all their sacrifices, support, and love and for being the reason and inspiration for my writing those very lines today; my brother Matt, for his encouragement and for always supplying me with top-notch technology products – free of charge; and my partner Christina, for her love and patience, but, most importantly, for helping me understand who I am and what I want from life. Love you all.

It is noteworthy that several members of my family had visited Central Asia long before I first arrived in the region almost a decade ago. My father got off an Aeroflot Tu-104 jetliner at Kabul airport in July 1959, on the very day of his fourth birthday, asking his mother whether she had brought a birthday cake; and my own mother spent four weeks in Tashkent in 1978 as a visiting student, once nearly getting arrested for singing and dancing under Lenin's statue. But the first family member to set foot in that part of the world was my paternal grandfather, Tadeusz Olma, Sr. As a member of a team of Polish engineers who were invited to Afghanistan to set up a textile plant outside Kandahar, Tadeusz Sr. spent there a total of five years, from 1959 to 1963, before returning to his native Bielsko-Biała in southern Poland and becoming director of a state textile plant. Around the same time, my maternal grandfather, Nikolaos Tavlas, whose name I have inherited, was visiting the neighbouring Uzbek Soviet Socialist Republic as member of a delegation of the Association of Greek Political Refugees in Poland to Tashkent. A representative of Greek political refugees with higher education on that delegation, Nikolaos soon after became lecturer at the Wrocław Medical Academy and leading cardiologist

and surgeon. Despite the extensive time they both spent in the region, neither of them ever shared with me any of their experiences; Nikolaos because he did not live long enough to see his grandson get born, Tadeusz probably because he thought that little Niko would get utterly bored with stories from the past. Nevertheless, their stories-never-told and all the items they brought back from these journeys played, I now realise, an important role in my enthusiasm for the study of Central Asia. It is in memory of these two great men that I dedicate this work.

NOTE ON NAMING & TRANSLITERATION

The names given for all interlocutors – usually first names only – are all pseudonyms. When choosing them, I sought to remain faithful to the ethnic background of my interview partners, and have accordingly replaced Uzbek names with Uzbek names and Slavonic names with Slavonic names. In order to differentiate between ethnically Uzbek Uzbek-speakers and ethnically Uzbek Russian-speakers, I have chosen to insert directly after the name of the former a series of suffixes, which in Uzbekistan are widely used among Uzbek-speakers as honorifics. For men and women significantly older than me, I have used the forms of address "aka" and "opa," literally meaning "elder brother" and "elder sister," respectively, whereas for men and women younger or of approximately the same age as me, I have used the suffixes "–jon" and "–xon," respectively. While ethnically Uzbek Russian-speakers follow the Russian practice of addressing another person by using one's patronymic, I have rendered the use of patronymics for the purposes of this study redundant, and accordingly have indicated Russian-speakers by having only their first name mentioned.

Most of my fieldwork was conducted in Russian, and wherever Russian words appear in the text, they have been transliterated according to the Library of Congress system (without diacritics), although exceptions do occur for names with widely accepted English spellings (e.g. Yeltsin instead of Eltsin). For Uzbek, I have used the modern Uzbek Latin alphabet introduced in 1995 and have transliterated sources that are in the Cyrillic script accordingly. For names and place names, I have made a series of concessions which primarily aim at facilitating the reading for an Anglophone audience. While the names of my ethnically Uzbek interlocutors appear in their modern Uzbek Latin form, for the ethnically Uzbek individuals who lived during the Soviet era, I have chosen to use the Russian spelling of their names

(e.g. Gafur Guliam instead of G'afur G'ulom). Similarly, in order to navigate the problems created by the often faulty romanisation of the Uzbek Cyrillic script on street nameplates and the many different forms that street names can take due to the lack of standardised practice, I have used the Russian spelling for places that have several alternative spellings (e.g. Chilanzar instead of Chilonzor, Iunusabad instead of Yunus-obod, Katartal instead of Qotortol), the Russian form for places that have a well-used name in both Russian and Uzbek (e.g. Kosmonavtov instead of Kosmonavtlar), and the Uzbek form for place names that were bestowed after Independence, and as such do not have a modern name in the Russian language or in the Cyrillic script (e.g. Mustaqillik Square instead of Krasnaia ploshchad' or Red Square, but not Mustaqillik Maydoni or Independence Square).

INTRODUCTION

> I have forgotten that city; it is shaded by my sullen memory like a landscape is shaded by raindrops on the glass. I no longer remember the names of streets. But then they have been changed anyway. And I no longer love – I never loved – these adobe fences and alleys of the Old City, the khanesque splendour of the new marble palaces, the imperial amplitude of the avenues. My youth wandered these alleys, whizzed down these avenues, and vanished (Rubina 2016 [2006], 11; my translation from the Russian original).

These are the opening lines of *Na Solnechnoi Storone Ulitsy (On the Sunny Side of the Street)*, a 2006 novel by the Russian-Israeli writer Dina I. Rubina (1953 –), which tells the story of a young Russian girl who is during WWII evacuated to Tashkent, then the capital of the Uzbek Soviet Socialist Republic and today the capital of the independent Republic of Uzbekistan. Largely autobiographical, the book offers insights into life in the city during the Soviet era based on the personal experiences of the author herself, who was born and lived in Tashkent for thirty years before she moved to Moscow in the 1980s, as well as on the history of her family. Not unlike the book's main character, Rubina's mother, Rita A. Zhukovskaia (1924 –), was evacuated during WWII from her native Ukrainian city of Poltava to Tashkent at the age of seventeen, whereas her father, Il'ia D. Rubin (1924 – 2013), was a Jew from Kharkov who settled in Tashkent after he was demobilised from the Red Army. Rubina herself, thus, aptly represents the multinational nature of post-War Tashkent, an aspect of the city which she does not fail to highlight in her book, in which the different ethnicities, languages, and accents are evident throughout the story.

Even though *Na Solnechnoi Storone Ulitsy* was generally well received by the Russian literary audience and critics alike, having been awarded the third prize at the 2007 *Bol'shaia Kniga* Russian literature awards, in Tashkent its favourable reception was not due to its literary merits alone. The nostalgia permeating Rubina's novel was welcomed by the city's old-timers (Rus. *starozhily*), who felt that they had, at last, found a voice expressing their own sentiments. The book, thus, became overnight a sensation, as people frantically bought it or borrowed it from friends and neighbours and subsequently spent long sessions reminiscing, discussing, and comparing the fictional story to their own recollections of the Soviet era city. For many old-timers, reading the book meant reliving times long past, because, as many of them claim, the book offers an accurate picture of the way Tashkent was during the period in which the story is set, from the early 1940s until the late 1960s; younger generations, on their part, picked the book up in order to get a taste of this past. This is exactly what Rubina admittedly had intended when writing *Na Solnechnoi Storone Ulitsy*; as she has said in an interview with Tatiana Kalinina for Moscow's *Radio Kul'tura*:

> [This book is] a journey to oneself, in search of a lost city, I would say. In search of a lost place, in search of lost youth, in search of a lost city, because my city was Tashkent – it was a wonderful civilisation. A civilisation which sunk deep into the sea just like Atlantis did. And myself, like a diver, now dive and retrieve whatever is left of this civilisation, because it seems to me that it is in my power – or rather, in the power of a person who grew up and lived there – to preserve some remnants of this civilisation, so that it does not disappear completely. All writers are autobiographical to a certain extent, but in order for this novel to grab the reader and to force him to follow this novel, to follow the streets, cul-de-sacs, and squares of this long-departed city, I invented, of course, a certain story, sufficiently fascinating, sufficiently strong, sufficiently gripping (Rubina 2005, my translation from the Russian original).

Today, more than a decade after its original publication, the book has lost little of its relevance and appeal. Testament to this are the always fully-booked Rubina-themed excursions across Tashkent organised by "x-places," an online community of everyday people with an interest in the history and urban culture of Tashkent, brought together by a local entrepreneur and city enthusiast. To one of these excursions in autumn 2014, Evgeniia, an older ethnically Russian woman who regularly participated in the group's activities, came with a well-used copy of the novel, in which several passages were underlined. "These are the things that I can

relate to most strongly, the things that used to be part of my life here in Tashkent, forty-fifty years back…When I was reading the book for the first time it was as if I was reading my own thoughts, my own memories. I felt that I could have written this book," she told me when I asked her why she had chosen to highlight these particular sentences. On that day, Evgeniia had been accompanied, for the first time, by her youngest daughter, Dariia, who had only scattered recollections of a city similar to the one Rubina describes in her book. However, as she told me, she was grateful to her mother for having introduced her to the book, because it had given her the opportunity to find out more about, as she put it, the "city that no longer exists" (Rus. *gorod kotorogo uzhe net*).

Such monikers and narratives are quite popular among Tashkent's old-timers, who feel that their city has changed in the last quarter of a century to an extent that it no longer is the same city they once lived in. They are not the only ones to think so, however. Throughout Central Asia, the dissolution of the Soviet Union has brought along significant changes to the way in which cities both look and are experienced by their populations. The modernising and identity-building projects of the post-Soviet regimes; the new practices of consumption and mobility, spatial segregation, growing socio-economic disparities, and privatisation that came with the transition to the market economy; and the massive outmigration of Slavonic populations and the simultaneous arrival of substantial numbers of indigenous Central Asians from the provinces into cities have profoundly influenced everyday urban life across the region. Inevitably, these phenomena have triggered discussions as to the preferred form of cities and have subsequently generated various narratives that reminisce the bygone days and create the idea of "lost cities" (Rus. *utrachennye goroda*).

This is not to say that there is not a certain continuity in this change. Parvathi Raman and Harry West have remarked that "*socialist* economic, political, and cultural forms have in fact endured in a purportedly post-socialist era" (Raman and West 2009, 15; emphasis in the original) across Central and Eastern Europe and the former Soviet Union as well as in other formerly socialist countries in the Global South. Similarly, in the case of Tashkent, despite the significant socio-economic changes that have taken place, the framework in which most of the population's practices occur has remained largely unaffected. Indeed, a Muscovite colleague who attended my presentation at a conference in April 2016 pointed out that, if the Soviet era is still as evident throughout the everyday life of the city's population as I had claimed in my presentation, then I had not only conducted my fieldwork in Tashkent, but in fact had travelled back in time. The weekly collective unpaid

cleaning of public spaces and other community services, the mandatory mobilisation for cotton harvest, the seasonal shortage of certain goods (e.g. sugar), the foreign currency black market, the commonly occurring power cuts, and the long waiting lists for the purchase of new cars, to name a few, are aspects of the Soviet era that have defied change and to this day remain characteristic of everyday life in post-socialist Tashkent.

Instrumental to the endurance of many of these practices is their association with urban infrastructure. Urban life in Tashkent is heavily dependent upon socialist era infrastructure systems, such as the centralised district heating system or water supply, which date back to the 1950s and the 1960s and which, apart from some small-scale reparation and the occasional maintenance, have not been modernised – let alone replaced – since. Inevitably, they quite often break down or are shut down for shorter or longer periods in order to be repaired, maintained, or protected from overexploitation, which causes significant inconvenience to the city's inhabitants. However, not unlike in the case of the problems caused by goods shortages or foreign currency restrictions, the population of Tashkent has acquired, through time and repetition, an automatic behaviour which allows them to successfully navigate these disruptions. This behaviour is the result of the workings of what philosopher Edward S. Casey, building upon the work of fellow philosopher Henri Bergson, has called "habitual body memory" (Casey 1984), a process during which the past is acted out in the present through conscious and pre-conscious channels alike.

All this shows that, as geographer Nigel Thrift has suggested, influenced by the work of literary critic Helen Vendler, practices are "material bodies of work or styles that have gained enough stability over time, through, for example, the establishment of *corporeal routines* and *specialized devices*, to reproduce themselves" (Thrift 2008, 8; emphases added). As each and every one of us knows, however, in addition to being produced and stabilised by habitual memory and infrastructure, practices are also capable of themselves generating embodied memory by engaging with a wide range of affective processes, emotions, feelings, and the senses. The fact that bodies can potentially respond differently to similar stimuli suggests that the embodied memory generated is at once individual and shared by a larger collective, which essentially reveals it as multiple, fluid, messy, and contingent, working at different paces and scales, and taking different forms and directions. This memory work results in the weaving together of what cultural geographer Owain Jones has called "ecologies of memory," which "interlink through individual practicing bodies, texts, materialities, past/present/future

4

timespaces to make the present time deep/complex rather than flat/pure" (Jones 2011, 876).[1]

This dissertation aspires to untangle these very ecologies of memory and to comprehend the ways in which they come to be by focusing on the embodied memories that are generated during the interaction of humans with urban infrastructure. In this sense, its objective differs substantially from the bulk of the scholarly work dealing with memory processes in the post-socialist cities of Central Asia, which remains largely preoccupied with the study of the symbolic meaning attached to urban material forms and the reactions of urban dwellers – especially old-timers – to the changes that occur (or do not). More often than not, these changes and reactions concern the removal or modification of the commemorative technologies employed by the Soviet regime – such as monuments, statues, street names, etc. – and their subsequent replacement with artefacts that celebrate the titular nation in each of the Central Asian republics. While the study of these phenomena is undoubtedly relevant and important for our comprehension of nation-building practices or the processes accompanying post-socialism, it provides us with only limited insight into the memory work that informs urban life in the region. Simultaneously, the fact that this body of work treats both the Soviet commemorative technologies and their new – appropriately Central Asian – substitutes as manifestations of *the* – one – "collective memory" is very problematic as well.

The understanding of memory as a uniform collective socio-cultural process materialised and enacted in space and/or by objects has largely come as a result of a tendency, most widespread among historians, to equate collective memory with national history and to subsequently introduce notions such as "cultural memory" or even "official memory," overwhelmingly referring to the materialisation of official historical narratives put forward by nation-states. Consequently, several scholars have come to see commemorative technologies produced by various social groups – often against the state's will or intention – as manifestations of "counter-memory," as if memory works only in one specific way and is prone to be countered by another memory. In many cases, they have even gone as far as to claim that the removal of artefacts results in the "erasure of memory," and that their replacement by new ones is an act of "rewriting memory."[2] The particularities, and especially the

---

[1] See also Tolia-Kelly (2010).

[2] Even if we were to accept that monuments and statues represent some sort of "official memory," their removal would not necessarily entail "erasure." Acts of iconoclasm have been known to enhance the representational power of the object and so do the empty voids left after buildings or monuments

plurality and the resilience of collective memory, a notion first introduced by sociologist Maurice Halbwachs, are discussed later on in this very chapter, but this misunderstanding of the differences between memory and history I would rather address here, with the help of historian Pierre Nora, who has written that:

> Memory is life, always embodied in living societies and as such in permanent evolution, subject to the dialectic of remembering and forgetting, unconscious of the distortions to which it is subject, vulnerable in various ways to appropriation and manipulation, and capable of lying dormant for long periods only to be suddenly reawakened. History, on the other hand, is the reconstruction, always problematic and incomplete, of what is no longer (Nora 1996, 3).

Unlike history, memory does not make it into school books, nor is it reproduced, popularised, or countered by historians, politicians, and other interested parties. Memory is *experienced* and *performed* by individuals and collectives on a daily basis and as such it can be diverse and often contradictory, which makes its "erasure" a rather demanding task and its "rewriting" a nearly impossible endeavour. Hence, in order to be able to document memory work, we need to go beyond such essentialist views and focus on the ways in which memory becomes embedded in our bodily processes and embodied practices. While such an approach is clearly influenced by the work of anthropologist Paul Connerton and his understanding of "social memory" as "silted" into human corporeal consciousness and praxis (Connerton 1989), in this dissertation I reach beyond his focus on representations, such as rituals and commemorative ceremonies, and think about memory as a collective phenomenon which "in the end [is] lived out in individualized contexts of everyday lives of bodies moving through the time and space of affective life" (Jones and Garde-Hansen 2012, 12).

It thus becomes evident that this dissertation aspires to position itself in the relatively recent "affective turn" in social sciences, which has brought to the fore questions of the body and its practical entanglement in a wide range of socio-material configurations. Even more important, however, has been the influence of the "ontological turn," as advocated by a series of approaches informed by science and technology studies (STS) in general and Actor-Network Theory (ANT) in

---

have been demolished. As Adrian Forty has suggested in regards to the post-Soviet space, the removal of the statues of Vladimir I. Lenin and Karl Marx in the early 1990s left behind empty plinths, "above which the voids were as noticeable as the sculptures that stood on them previously had been invisible" (Forty 1999, 10); in the words of Andrea Connor, these empty plinths had "become the evocative traces of an absent regime and [had] continue[d] to resonate symbolically…in spite of their physical absence" (Connor 2017, 13).

particular. Among them, I have heavily drawn on so-called "assemblage urbanism" in order to conceptualise the city. Building upon the work of thinker Bruno Latour and his quest against seeing the "social" as a defined whole, scholars working within this line of thought have proposed we understand the city not as a social totality – bounded, organic, homogeneous, and solid – which gives shape to social relations, but a composite entity assembled in specific spaces and contexts (Bender 2010, 304) by means of practices. Simultaneously, I have chosen to inform my inquiry with non-representational theory, an approach which seeks "to cope with our self-evidently more-than-human, more-than-textual, multisensual worlds" (Lorimer 2005, 83) by turning focus beyond representations and symbolic meaning and instead looking into the embodied, performative, and habitual qualities of everyday life. This is not to say that I completely silence or ignore discourse, narratives, or the various meanings that individuals attach to things, but rather that I consider them as performative and as experienced differently by different individuals through affect, emotions, and the senses.

This dissertation then draws upon a wide range of approaches from across several disciplines – anthropology, sociology, human and cultural geography, and science and technology studies – in order to propose a framework capable of capturing the multiplicity, fluidity, messiness, and contingency of memory. In this direction, it suggests a reconceptualisation of the notion of the memoryscape which departs from the traditional structuralist representational approaches to the notion. Instead, it sees the memoryscape as an assemblage – more than one but less than many, at the same time collective and individual – enacted by and through the co-functioning of human and non-human components, and especially the various memory processes that this co-functioning generates. Accordingly, it argues that such a conceptualisation can provide us with an ontological, epistemological, and methodological apparatus suitable for understanding how memory processes are enacted in different ways at different sites within an urban context.

In this direction, I have devoted the analytical chapters of this dissertation – namely Chapters 2 to 4 – to the examination of three infrastructure systems that support urban life in Tashkent – the informal taxi economy, the centralised district heating system, and urban trees – and have explored the various embodied memory processes that, in each case, are generated by the co-functioning of humans and non-humans. While these systems – in more or less the same material form – can be found in most post-Soviet Central Asian cities, in the case of Tashkent their negotiation results in everyday practices and bodily processes that are characteristic of and exclusive to urban life in the capital of Uzbekistan. By offering a historical

and technical background to each of the infrastructure systems selected and analysing the everyday context within which the practices produced and/or supported by them are situated, the chapters highlight the fact that the memory processes generated by means of these practices are unique as well. At the same time, however, they weave together memoryscapes that are both entities themselves and parts of larger memoryscapes, which essentially reveals each of these three infrastructure systems as an "oligopticon" (Latour and Hermant 1998, Latour 2005) offering "sturdy but extremely narrow views of the (connected) whole" (Latour 2005, 181), the "whole" in this case referring to both the city and to the memoryscape.

In the pages that follow, I present the foundations upon which my argument is constructed. This introductory chapter begins by explaining the concept of the assemblage and presents the ways in which it has been used by urban scholars who have aimed at suggesting an alternative ontology for the city. Subsequently, it highlights some of the limitations of this approach when presented with the study of memory and introduces an alternative framework – spearheaded by non-representational theory – which allows us to examine embodied practices and with them the memory processes that they generate. The third section is devoted to the memoryscape and it is there that I present my take on this relatively untheorised concept and suggest that seeing it as an assemblage allows us to understand "how our spatial relations, our spatial lives, are not merely present relations between our bodies and their current spaces, but a fantastically complex entanglement of self, past spatial relations and memory in current life" (Jones and Garde-Hansen 2012, 11). In the last but second section, I offer ways in which this messy and elusive object can be understood and studied, and present my own research methods along with practical information regarding my long-term ethnographic fieldwork in Tashkent. Finally, the last section outlines the rest of the dissertation.

Assemblage thinking and the city

Assemblage thinking is part of a more general reconstitution of the social field as materially heterogeneous and practice-based (DeLanda 2006) which challenges long-standing dichotomies such as, among other, social/material, social/natural, human/non-human, physical/non-physical, body/technology, and structure /agency.[3] Due to its interest in emergence and process and in multiple temporalities and possibilities (McFarlane 2011a, 206) and its openness to compositional

---

[3] For more on the challenging of such dichotomies, see, inter alia, Haraway (1991), Latour (1993), Callon and Law (1997), and Whatmore (2002).

alignment and realignment (J. Phillips 2006), it has been increasingly employed across social sciences in order to connote indeterminacy, emergence, becoming, processuality, turbulence, and the socio-materiality of phenomena (McFarlane 2011c, 24). The origins of assemblage thinking are situated in the work of philosopher Gilles Deleuze who created and, in partnership with fellow philosopher Félix Guattari, developed the concept of the assemblage throughout a series of seminal books which the two of them co-authored in the 1970s and early 1980s.[4] Given, however, that this body of thought is scattered across different works and builds upon multiple lines of thinking, defining what assemblage is as a concept is not an easy task. In fact, Deleuze and Guattari have never done so, and the closest to a definition available is perhaps Deleuze's exegesis, offered in his *Dialogues* with journalist Claire Parnet:

> [An assemblage] is a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them, across ages, sexes and reigns – different natures. Thus, the assemblage's only unity is that of co-functioning: it is a symbiosis, a 'sympathy.' It is never filiations which are important but alliances, alloys; these are not successions, lines of descent, but contagions, epidemics, the wind (Deleuze and Parnet 2007 [1977], 69).[5]

While it acknowledges Deleuze and Guattari's understanding of the concept, most of contemporary assemblage thinking draws on the work of philosopher Manuel DeLanda. Having already brought together and reconstructed Deleuzian ontology – including those parts that are related to assemblages – elsewhere,[6] in his highly influential *A New Philosophy of Society* DeLanda has attempted to present his own take on the assemblage, which he has called "assemblage theory" (DeLanda 2006). DeLanda has rejected the structuralist understanding of society and the world at large as an organic totality defined by stable relations of *interiority*, namely relations that are defined by necessity – i.e. component A cannot exist without component B and vice versa – and which do not allow the various interrelated components to

---

[4] See Deleuze and Guattari (1983 [1972], 1986 [1975], 1987 [1980]).

[5] Rather than *assemblage*, in the French original Deleuze and Guattari have used the term *agencement,* which combines the notions of arrangement and agency. As John Phillips has suggested, "[a]*gencement* implies specific connections with the other concepts. It is, in fact, the *arrangement* of these *connections* that gives the concepts their sense. For Deleuze and Guattari, a philosophical concept never operates in isolation but comes to its sense in connection with other senses in specific yet creative and often unpredictable ways" (J. Phillips 2006, 108; emphases in the original). This meaning, however, is absent from the term *assemblage,* which first appeared in the 1981 translation of *A Thousand Plateaus* (by Paul Foss and Paul Patton) and has since been retained by most translators and commentators who have agreed, in a loose consensus, to keep to this early translation while acknowledging that it is not really accurate (ibid.).

[6] See DeLanda (2002).

have an independent existence apart from the relation in which they exist. Instead, he has proposed a view based on assemblages without essence characterised by relations of *exteriority,* according to which the components of an assemblage are not stable and fixed, but rather, as Håvard Haarstad and Tarje I. Wanvik have put it, "are harbouring unexercised capacities that might produce very different properties if the entities were to enter into relations with other entities" (Haarstad and Wanvik 2017, 439).

Assemblages are not logical outcomes of a fixed theory or process but rather are historical constructions of the close co-evolution between heterogeneous components, which means that such relations of *exteriority* are only local and contingent, or as DeLanda has put it, "contingently obligatory" (DeLanda 2006, 12). The various components of an assemblage are entities in their own right and the relations between them may become obligatory at a given time in history. This key feature implies that the different entities can be detached from an assemblage and plugged into another one in which the interactions are different (ibid., 10), suggesting that the relations between the components do not necessarily alter the identity of the latter; for example, a tourist assemblage might require the co-functioning of political buildings, art galleries, or public bus routes, but this co-functioning will not alter any of their particularities and they may be still involved in other assemblages, taking up differing roles in each (Farías 2010a, 15).

Indeed, the heterogeneous components that enter and subsequently define and reconstitute an assemblage become involved in variable processes. Each assemblage can have components working towards the achievement of internal homogeneity and the establishment of boundaries, and hence towards the stabilisation of its identity, but it can at the same time also have components that force it towards internal heterogeneity and the weakening of boundaries, and subsequently destabilisation (DeLanda 2006, 12); in fact, it is not unlikely for the same component to participate in both processes by exercising different sets of capacities in each. Deleuze and Guattari have called those two simultaneous and equal processes *territorialisation* and *de-territorialisation*, respectively (Deleuze and Guattari 1983 [1972]).[7] It, thus, becomes evident that an assemblage is not merely the result of the aggregate *properties* of the heterogeneous components – human and non-human, organic and inorganic, technical and natural – that form it, but rather it is a collection of the *interactions* among these very components (DeLanda 2006).

---

[7] Territorialisation is sustained by routinisation and "habitual repetition" (DeLanda 2006, 50) and results in assemblages that are convergent, irreversible, and stabilised, and which subsequently become what Michel Callon has called a "black box" (Callon 1991, 132). For more on black boxes, see also Latour (1999).

Given that these interactions are both made and dissolve in time renders the assemblage intrinsically complex, fluid, ephemeral, unpredictable, and, as Deleuze and Guattari have added, "constantly subject to transformations" (Deleuze and Guattari 1987 [1980], 82). As a result of this very fluidity, rather than *being*, an assemblage is constantly *becoming,* a state which, as Todd May has suggested, "is ephemeral, changing, inconstant, and therefore less substantial than being. Being is real, becoming is a passing illusion" (May 2005, 59).

It is, thus, not an exaggeration to claim that cities – those "exemplary contraptions, contrivances of concrete and human clay, always unfinished, often rickety, definitely constituted and powerfully constitutive" (Tonkiss 2011, 584) – are an ideal setting for deploying assemblage thinking. Following DeLanda, who has suggested that "cities are assemblages of people, networks, organizations, as well as a variety of infrastructural components, from buildings and streets to conduits for matter and energy flows" (DeLanda 2006, 5-6), several scholars have picked up on assemblage thinking in an attempt to conceptualise the city. Among others, geographer Thomas Bender has suggested that the city is "a combination of stabilized and destabilized elements…constantly in a double process of transformation and destruction, reconstruction and decay" (Bender 2010, 316), whereas geographer Colin McFarlane has proposed we see the city "not simply as an output or resultant formation, but as ongoing construction" (McFarlane 2011a, 221) and as a dwelling process (McFarlane 2011b), an approach particularly useful for conceiving the spatiality of the city as processual, relational, mobile, and unequal (ibid.).

Rather than sticking to one particular approach, the urban scholars who have engaged with the assemblage as a concept have done so in a wide range of loosely related approaches and lines of work. Quite influential among these approaches has been the shift towards a technological reading of cities, which, heavily influenced by ANT, understands the city as an enormous socio-technical artefact (Aibar and Bijker 1997) heterogeneously engineered by a wide range of competing actors.[8] Such an understanding neatly captures the fact that "cities are at the same time, and inseparably, cultural and physical realities, subjective and objective forms, people

---

[8] This is not to say that the focus on heterogeneous urban networks is a monopoly of ANT. Historian Thomas P. Hughes had highlighted the interconnectedness of the different networks at work in his history of the electrification of London, Berlin, and Chicago (Hughes 1983) long before ANT became a coherent line of thought. Similarly, historian William Cronon examined the development of Chicago by focusing on the natural resources and the connections with the rest of the USA and the world (Cronon 1991) without being familiar with ANT; nevertheless, Latour has called Cronon's work "a masterpiece of ANT because no hidden social force is added to explain the progressive composition of the metropolis itself" (Latour 2005, 11).

and things, interaction and artefact" (Tonkiss 2011, 584), and essentially reveals them as what geographers Ash Amin and Nigel Thrift, in their seminal quest to reimagine the urban, have called a "mechanosphere," namely:

> a set of constantly evolving systems or networks, machinic assemblages which intermix categories like the biological, technical, social, economic, and so on, with the boundaries of meaning and practice between the categories always shifting. This Deleuzo-Guattarian conception has a crucial consequence: the technical is not seen as separate from the social or the natural (Amin and Thrift 2002, 78).

Being among the pioneers of understanding the city as a process of assembling together technical and social aspects, geographers Stephen Graham and Simon Marvin have questioned the usual assumption that urban infrastructures – such as telecommunications, transport, energy, and water and waste networks – are simply public goods that deliver services to the human inhabitants of the city, and have unravelled the hidden associations between infrastructure projects and particular social groups with invested interests, which essentially "splinter" urban space into enclaves (Graham and Marvin 2001). Similarly, Graham's subsequent research projects have shown the enormous potential of this approach to unveil urban processes otherwise overlooked in urban studies; in particular, his work on strategies of urban warfare has shown that urban infrastructures are a matter of life-or-death for cities and citizens (Graham 2011), whereas in his work on urban maintenance and repair, taken up together with geographer Nigel Thrift, the two of them have revealed repair and maintenance not as "incidental activities" but as "the engine room of modern economies and societies" which "form[s] a minimal discourse of commands, dates, addresses, manuals, storage and feedback which whispers the world into existence" (Graham and Thrift 2007, 19-20).

In a similar spirit, the work of urban political ecologists on urban socio-natures, cyborg urbanisms, and urban metabolisms has examined the process of assembling natural, social, cultural, and political components in socio-natural constellations, presenting materials, technologies, and science as political objects.[9] This line of thought often employs the notion of assemblage – or that of metabolism – as a "descriptor of socio-material transformation" (McFarlane 2011a, 206). For example, geographer Erik Swyngedouw has suggested that "assemblages of metabolic transformation" take shape through the mobilisation of nature and labour in the generalised production of commodities (Swyngedouw 2006, 27), whereas

---

[9] For a literature review, see Chapter 4.

geographer Matthew Gandy has described the cyborg concept as a lens for capturing not simply the technologically enhanced human but rather a "vast assemblage of bodily and machinic entanglements which interconnect with the contemporary city in a multitude of different ways" (Gandy 2005, 40).

The idea of thinking of the city as a multiplicity of socio-material assemblages has been quite convincingly conceptualised by Ignacio Farías and Thomas Bender, who, in their edited volume, have suggested "an alternative ontology for the city, an alternative understa[nd]ing of this messy and elusive object" (Farías 2010a, 13). To this end, they have introduced the notion of "urban assemblages," which, as Farías has argued:

> offers a powerful foundation to grasp the city anew, as an object which is relentlessly being assembled at concrete sites of urban practice or, to put it differently, as a multiplicity of processes of becoming, affixing sociotechnical networks, hybrid collectives and alternative topologies. From this perspective, the city becomes a difficult and decentred object, which cannot any more be taken for granted as a bounded object, specific context or delimited site (ibid., 2).

While Farías and Bender have employed the term assemblage in order to describe the heterogeneous socio-material relations that constitute the city, they have firmly anchored their contribution in ANT literature, interchangeably drawing on both ontological frameworks for their "purposes of theorising a dynamic, lively socio-material world" (Müller and Schurr 2016, 219).[10] This convergence is possible thanks to the fact that – as sociologist John Law, one of the pioneers of ANT, has argued – there is little difference between assemblage thinking and ANT (Law 2004): both have a relational view of the world, in which action results from linking together initially disparate elements; both emphasise emergence, where the whole is more than the sum of its parts; both have a topological view of space, in which distance is a function of the intensity of a relation; and both underscore the importance of the socio-material, i.e. that the world is made up of associations of human and non-human elements (Müller and Schurr 2016, 217). Capitalising on these commonalities, "assemblage urbanism," as this approach has come to be known, gives analytical priority to the study of the heterogeneous connections between various components and subsequently allows us to scrutinise the multiple

---

[10] For other works that similarly have shuttled between ANT and assemblage thinking, see Whatmore (2002) and Bennett (2010). For works that have used resources from both approaches but tend to be more sympathetic to either ANT or assemblage thinking, see Allen (2003) and Barry (2013), and McFarlane (2011c), respectively.

ways in which the city is assembled through time and space. In this sense, the city is revealed as "not a whole, but a composite entity" (Bender 2010, 304), or, to paraphrase philosopher Annemarie Mol, as a city multiple.

The multiplicity of the city has been brought up by Latour himself in his photographic exploration of Paris with photographer Emilie Hermant, where he has suggested that Paris does not exist in one space, but rather is differently enacted at multiple sites (Latour and Hermant 1998), which, in turn, are defined not by spatial boundaries, but by types of activity. Thus, spaces – as well as time and eventually the city itself – emerge through the connections between different sites (Latour 2005), a feature of the city which has been also stressed by Amin and Thrift, who have argued that:

> the city is made up of potential and actual entities/associations/ togethernesses…The accumulation of these entities can produce new becomings – because they encounter each other in so many ways, because they can be apprehended in so many ways, and because they exhibit 'concrescence'…that is, when put together they produce something more than when apart, something which cannot be described by simple addition because it will exhibit what would now be called 'emergent' properties (Amin and Thrift 2002, 27).

Importantly, as Mol has shown in relation to the human body, these multiple enactments – or becomings – can easily be contradictory and mutually exclusive, as they can collide with each other, overlap, interfere, and thereby form a multiplicity that has to be managed, coordinated, or even held apart (Mol 2002).[11] In her ethnographic research on the diagnosis and treatment of atherosclerosis in a Dutch hospital, Mol has shown that different "atheroscleroses" are enacted depending on whether the disease is being looked at in a surgery room, in radiography, in the ultrasound department, or in the operating theatre. However, despite the fact that they may look discontinuous, contradictory, and mutually exclusive, these multiplicities become coherent through a variety of practices. The differences in the ways in which the human body – but also the city – is enacted at different moments and sites should be understood not epistemologically, namely as different perspectives on the object, but ontologically, in a way that acknowledges that different realities are being enacted here and there, now and then (ibid.).

This re-imagination of the city as "a multiplicity of changing, co-existing and mutually interfering urban assemblages" (Farías and Blok 2016, 2) and the premise

---

[11] See also Law and Mol (2008).

that "cities are made and unmade at particular sites of practice, brought into being by means of concrete relations, materials, knowledges, and engagements" (ibid., 1-2) has theoretically challenged the traditional understanding of the city as a singular bounded entity, hierarchised in wider global processes of capital circulation and accumulation.[12] In this sense, assemblage urbanism is a form of critique of the political economy-centric reading of urban space as a "site, medium, and outcome of historically specific relations of social power" (Brenner 2009, 198) that reduces the urban to the workings of underlying political-economic structures.[13] It is, thus, hardly surprising that such a radical reconsideration of the city and – as importantly – of urban studies has attracted considerable criticism. Several urban theorists have criticised assemblage urbanism for "affirming the current conditions of cities" (Brenner 2009, 198); for sticking to a naive positivism that insists upon the possibility of a value-free inquiry (Madden 2010); for ignoring key concepts and concerns of radical urban political economy (Brenner, Madden and Wachsmuth 2011); for accepting and describing reality as it appears without revealing the hidden forces, contradictions, and interests structuring it (ibid.); and for "disavowing long-standing traditions of structuralist…urban theory" and exhibiting "a distaste for decades of urban theory" (Shelton 2013, 575).[14]

As Farías has argued in his response to this criticism, however, assemblage urbanism does not silence asymmetries, inequalities, injustices, exclusions, hierarchies, and domination; on the contrary:

> [it] involves unveiling the actual practices, processes, socio-material orderings, reproducing asymmetries in the distribution of resources, of power and of agency capacities, opening up black-boxed arrangements and ways in which actors, things or processes are made present and made absent…By revealing who and what is taken into account and who or what is not, and how forms of life are composed, subordinated or excluded, the study of urban assemblages seeks to establish a foundation of empirical

---

[12] As is, for instance, the case with Saskia Sassen's "global city" (Sassen 1991).

[13] For more such criticisms, see McFarlane (2011c) and Roy and Ong (2011).

[14] This criticism sparked a rather heated debate between "assemblage urbanists" and "critical urbanists" that took place in the pages of the journal *City*. Colin McFarlane's (2011a) suggestion that taking an assemblage perspective on the urban is not necessarily incompatible with more traditional critical urban studies was rejected by Neil Brenner, David J. Madden, and David Wachsmuth (2011), who argued that an assemblage perspective is fundamentally incompatible with critical urban theory, as it would be based on a naive realism, a positivist epistemology and an affirmative political position. A detailed response to these critiques was given by Ignacio Farías (2011), parts of which I have chosen to include in the main text. For other contributions to the debate, see also Tonkiss (2011) and Simone (2011).

knowledge available to the public for a democratic politics (Farías 2011, 370-371).

To this end, far from altogether rejecting the role that capitalism plays in urban life, assemblage urbanism treats it "as a concrete process assuming multiple forms even within a city" rather than "a global abstract logic imposing its forms into local spaces (ibid., 368). Indeed, several urban scholars whose work has been informed by ANT and/or assemblage urbanism have employed these theoretical frameworks as "conceptual add-ons" (Farías and Blok 2016, 3) for underlying political economy frameworks. The work of Graham and Marvin on the splintering of urbanity through vertical segmentation of public utilities and the creation of premium spaces and infrastructural bypasses (Graham and Marvin 2001); the work of urban political ecologists and their understanding of capitalist accumulation and class politics as the explanatory framework for urban socio-natural assemblages (Heynen, Kaika and Swyngedouw 2006); and the so-called mobility turn with its focus on "motility" and "mobility capital," or the mobility potential of subjects in terms of resources for access, competence, and cognitive appropriation (Kaufmann, Bergman and Joye 2004), all point towards that direction. In other words, the fact that the urban assemblages approach promotes a symmetrical,[15] flat,[16] and fluid heuristics for understanding the traffic between the ontological and the epistemological does not mean that it stands for power-free social territories; quite on the contrary, the assemblage as a concept – and therefore urban assemblages as well – is intricately power-laden. As Colin McFarlane has put it:

> assemblage signals the emergence, labour and sociomateriality of the city, and the ways in which this process becomes structured and hierarchical through inequalities of power, resource and knowledge. Assemblage underlines the ways in which urbanism is produced as an unfolding set of uneven practices that are…never inevitable, but always capable of being produced otherwise (McFarlane 2011a, 221).

---

[15] One of the three principles introduced into ANT by Michel Callon, the principle of generalised symmetry holds that all entities in an actor-network can and should be described in the same terms, or in Callon's words, "[t]he rule which we must respect is not to change registers when we move from the technical to the social aspects of the problem studied" (Callon 1986, 200). The rationale behind this principle is that differences between various entities are generated in the network of relations and should not be presupposed.

[16] DeLanda describes flat ontology as follows: "while an ontology based on relations between general types and particular instances is *hierarchical*, each level representing a different ontological category (organism, species, genera), an approach in terms of interacting parts and emergent wholes leads to a *flat ontology*, one made exclusively of unique, singular individuals, differing in spatio-temporal scale but not in ontological status" (DeLanda 2002, 51; emphases in the original).

All this makes assemblage urbanism an important – if radical – contribution to the way we think about the city and about urban studies at large, away from the widely used and accepted structuralist narratives and explanatory models employed by neo-Marxist "critical urbanists." Building upon ANT's anti-structuralist stance and empirical commitment, assemblage urbanism turns away from an understanding of space as an underlying structure produced by capital or state policies, and instead reveals it as multiply enacted and assembled at concrete local sites, where concrete actors shape time-space dynamics in various ways (Farías 2010a, 6). In this sense, as Farías has argued, "[t]he public urban sphere is not a singular realm for citizen negotiation of access to spaces, identities, urban representations or values, but is made of multiple orders of value and groups of people often running parallel to each other" (ibid., 19). As importantly, assemblage thinking does not settle with either technological determinism or social constructivism, which allows us to engage with urban issues and processes by essentially "reassembling the social" (Latour 2005) by means of embracing a "hybrid ecology of social, natural, material, mechanical, and technological elements" (Farías 2010a, 18).

This, however, is not to say that such an approach does not have certain limitations. While the conceptual and methodological apparatus that assemblage urbanism offers is fairly useful when it comes to understanding how urban assemblages come to be, as Thrift has suggested in an interview with Farías, its strong empirical commitment makes its application to situations which are not strongly defined problematic (Farías 2010b, 112); or, as he has remarked elsewhere, an ANT-informed approach "is good at describing certain intermediated kinds of effectivity, but…dies a little when confronted with the flash of the unexpected and the unrequited" (Thrift 2000, 214). This complication, together with ANT's tendency to neglect the corporeal capacities of humans (ibid., 214-215), means that assemblage urbanism lacks the apparatus necessary to capture the embodied memory processes that are generated by the co-functioning of the heterogeneous components that assemble the city and which are at the heart of this dissertation. This is why I have employed what Thrift has called "non-representational theory,"[17] an approach which, similarly to ANT, "challenges and objects to commonly invoked spatial formations in urban studies" (Farías 2010a, 6), but very importantly also allows room for a focus on embodied practices, conscious and pre-conscious alike.

---

[17] See Thrift (1996, 1997, 2000). Ben Anderson and Paul Harrison have suggested that the plural "non-representational theories" better grasps the essence of this far from homogeneous approach (Anderson and Harrison 2010, 2, fn. 1).

Non-representational theory and embodied memory

Non-representational theory blends the relational-material thinking of Gilles Deleuze, Bruno Latour, and Michel Serres with the work of Pierre Bourdieu, Michel de Certeau, Martin Heidegger, Maurice Merleau-Ponty, and Ludwig Wittgenstein on practice, and offers an interdisciplinary theoretical perspective which emphasises "the flow of practice in everyday life as embodied, as caught up with and committed to the creation of affect, as contextual, and as inevitably technologised through language and objects" (Thrift and Dewsbury 2000, 415). It builds upon Thrift's dissatisfaction with the fact that a "hardly problematised sphere of representation is allowed to take precedence over lived experience and materiality, usually as a series of images or texts which a theorist contemplatively deconstructs, thus implicitly degrading practices" (Thrift 1996, 4). Taking this as a point of departure, non-representational theory focuses upon "mundane everyday practices that shape the conduct of human beings towards others and themselves in particular sites" and is "concerned with the performative 'presentations,' 'showings,' and 'manifestations' of everyday life" (Thrift 1997, 126-127).

A large part of what non-representational theory is about comes from ANT. Similarly to ANT, non-representational theory promotes an analytical symmetry between humans and non-humans by giving non-humans the same conceptual and empirical weight that it gives to humans. In fact, non-representational theory does not count the body as separate from the world, for "bodies and things are not easily separated terms" (Thrift 1996, 13) due to the human body's "unparalleled ability to co-evolve with things, taking them in and adding them to different parts of the biological body to produce something which…resemble[s] a constantly evolving distribution of different hybrids with different reaches" (Thrift 2008, 10). In this sense, non-representational theory acknowledges the fact that materials are active, or, as anthropologist Tim Ingold has put it, that "they circulate, mix with one another, solidify and dissolve in the formation of more or less enduring things" (Ingold 2011, 16). This, however, does not mean that non-representational theory aims at "de-humanising" the social. On the contrary, its most substantial difference from ANT is the fact that it is interested in human bodily practises and that it attempts to "write/not-write the human in nonhumanist, distributed ways which avoid the myth of self-presence" (Thrift 2000, 251, fn. 4).[18] In this sense, without

---

[18] Sarah Whatmore has similarly criticised the fact that "life seems to have been sucked out of the worlds that geography has come to inhabit" (Whatmore 2002, 2).

creating a new humanism or appearing anti-humanist, non-representational theory echoes Simon Glendinning's suggestion that we need:

> a conception of human existence which eschews bald naturalism but which does not simply affirm a new humanism[,]…an account which explains how something manifest in that behaviour might be (*pace* humanism) 'immanent to the behaviour as such' and yet (*pace* bald naturalism) 'transcendent in relation to the anatomical apparatus' (Merleau-Ponty 2005 [1945]) (Glendinning 1998, 4).

Indeed, maintaining a phenomenological perspective, non-representational theory sees humans as engaged in a constant process of interaction with their environs and understands action not as a unidirectional process during which someone or something acts upon someone or something else, but as "a relational phenomen[on] incessantly looping back and regulating itself through feedback phenomena such as proprioception, resistance, balance, rhythm and tone" (Anderson and Harrison 2010, 7). In other words, all action is interaction (Ingold 2000), which essentially reveals all bodies as interconnected with other bodies and contexts and hard to fix because, as Bruno Latour has written, "to have a body *is to learn to be affected*, meaning 'effectuated,' moved, put into motion by other entities, humans or non-humans" (Latour 2004, 205; emphasis in the original). Therefore, there is no singular body, but rather bodies in the plural, and their differences come about through their interactions with the world in the past, the present, and the future (Macpherson 2010, 4). Within this context, the body can be understood as an "*an interface that becomes more and more describable as it learns to be affected by more and more elements*" (Latour 2004, 206; emphasis in the original).

This constant interrelation and interaction means that the world we inhabit is neither an "out there" nor an "inert backdrop of brute things projected upon by our hopes, desires, and fears" (Anderson and Harrison 2010, 7-8). Rather, we are always "caught up in the world" (Merleau-Ponty 2005 [1945]) and we come to be from, with, and within it; as Ingold has argued:

> For any animal, the environmental conditions of development are liable to be shaped by the activities of predecessors. The beaver, for example, inhabits an environment that has been decisively modified by the labours of its forbears, in building dams and lodges, and will in turn contribute to the fashioning of an environment for its progeny. It is in such a modified environment that the beaver's own bodily orientations and patterns of activity undergo development. The same goes for human beings. Human

children, like the young of many other species, grow up in environments furnished by the work of previous generations, and as they do so they come literally to carry the forms of their dwelling in their bodies – in specific skills, sensibilities and dispositions (Ingold 2000, 186).

In this sense, the world is not formed in the mind before we have lived in it, but rather we come to know and enact it by dwelling in it. Our conscious thoughts and actions in any given environment are the result of pre-conscious thought shaped by the technologies and objects available and the contexts and cues of a particular landscape (Macpherson 2010, 5), which means that objects and landscapes are implicated in what the body is and does.[19] This is why Latour has suggested we refigure our understanding of the "social" and accordingly has defined it "not as a special domain, a specific realm, or a particular sort of thing, but only as a very peculiar movement of re-association and reassembling" (Latour 2005, 7). In other words, "the social is a weaving of material bodies that can never be cleanly or clearly cleaved into a set of named, known and represented identities" (Anderson and Harrison 2010, 13). Building upon these notions, non-representational theory does not limit *a priori* what kind of beings make up the social but rather acknowledges that everything takes part – "everything happens, everything acts" (ibid., 14) – and, again like ANT, rejects structuralist explanations and hidden forces; as Latour has written:

> In ANT, it is not permitted to say: 'No one mentions it. I have no proof but I know there is some hidden actor at work here behind the scene.' This is conspiracy theory, not social theory. The presence of the social has to be demonstrated each time anew; it can never be simply postulated (Latour 2005, 53).

The fact that non-representational theory turns the focus away from representations – i.e. discourse, cultural signification, ideology, and symbolic meaning – and instead emphasises the embodied, performative, practiced, and habitual qualities of everyday life[20] does not mean that it is anti-representational or that it renders representation as insignificant. On the contrary, rather than seeing representations as proxies "tasked with re-presenting some pre-existing order or force", it understands them as things and events which "have an expressive power

---

[19] For example, Ingold has offered a historical account of how, with the development of the technology of the shoe, people have been afforded differing movements through the landscape (Ingold 2004).

[20] As Peter Dirksmeier and Ilse Helbrecht have put it, non-representational theory aims at actions rather than at texts, at physical habitus rather than at symbol structures, and at the active social construction of reality rather than its representation (Dirksmeier and Helbrecht 2008, 4).

as active interventions in the co-fabrication of worlds" (Anderson and Harrison 2010, 14). As John David Dewsbury, Paul Harrison, Mitch Rose, and John Wylie have suggested, "[t]he point here is to redirect attention from the *posited meaning* towards the *material compositions and conduct* of representations (Dewsbury, et al. 2002, 438; emphases in the original).[21]

In addition to its relational materialist approach and its expanded understanding of the social, non-representational theory is also characterised by a sensitivity towards affects, emotions, feelings, and the senses. Those more-than-representational and more-than-linguistic aspects of subjective experience have recently attracted considerable scholarly attention as a result of the renewed interest in the body and bodily practices that has formed the so-called "affective turn" in social sciences.[22] While the terms "affect" and "emotion" are often used interchangeably, there is significant difference between the two. If emotion is essentially the conscious projection of a feeling, affect refers to the intensity of the very experience of feeling or emotion. Hence, while emotion involves the appraisal of situations and contexts, physiological and bodily sensations, expressive body actions, and a cultural label applied to specific constellations of one or more of the above (Thoits 1989, 318), affect is always prior to and/or outside of consciousness and cannot be fully realised in language (Massumi 2002); affect "*happens* to the body directly on the level of endocrinology, skin conduction, and viscera" (Callard and Papoulias 2010, 247; emphasis added). In other words, "affect is the *how* of emotion" (Thien 2005, 451; emphasis in the original).

Both emotion and affect are kinds of relational thinking which play an important role in how bodies function, how they interact with each other, and how they dwell our ever-changing world through simultaneous feeling and doing. However, if emotions are conscious ways of knowing, being, and doing, or, in short, "a kind of *corporeal* thinking" (Thrift 2004a, 67; emphasis added), affect is "*a form of thinking, often indirect and non-reflective…but thinking all the same*" (ibid., 60; emphasis in the original). Without affect we cannot *feel*, because our feelings have no intensity, and without feelings we cannot think or take decisions rationally (Damasio 2006 [1994], 204-222). In other words, thanks to affect, we come to *know* something

---

[21] In this sense, it is representationalism, rather than representation, that non-representational geographers find problematic (Lorimer 2005, 84-85), which is why Hayden Lorimer has suggested that the term "more-than-representational theory" is more appropriate (ibid., 83).

[22] For more on the affective turn, see Dewsbury et al. (2002), Massumi (2002), Clough and Halley (2007), Thrift (2008), Cadman (2009), Pile (2010), and Anderson and Harrison (2010).

about the world in the form of intuitive understanding without really *knowing* it in the cognitive sense of the term (Dirksmeier and Helbrecht 2008, 8).

Such pre-conscious and pre-reflective knowledge is best expressed in habitual actions (Phelan 1993). The key here is the fact that we never simply live in the moment, but rather live in a dynamic constellation of the lived pasts of our bodies, in which our bodies, space, and time enter into complex relations. This means that, to a certain extent, our performative everyday practices are the projection of the past in the present; as geographer Owain Jones and memory scholar Joanne Garde-Hansen have argued, "the richness and potential of the present moment in practice comes from what flows into it from previous moments, materially, through the body and…through memory of one kind or another" (Jones and Garde-Hansen 2012, 9). The past retentions that inform our practices in the present include "what we think of as subjective elements, such as habits, acquired skills, inclinations, desires, even willings, all of which come in patterns of repetition" (Massumi 2015, 49) and are "so deeply ingrained in our behavior as not to need explicit recalling" (Casey 1987, 163) or "consciousness in any explicit form" (ibid., 178). Building upon the work of philosopher Henri Bergson and in particular his notion of "habit memory" (Bergson 1991 [1911]), which Bergson employed in order to refer to what he saw as an automatic memory inscribed within the body, fellow philosopher Edward S. Casey has called this immanence of past actions "habitual body memory" (Casey 1984). This new mode or memory, which involves our *whole* body and operates in such a way as to allow us or help us to carry out particular task:

> combines repeatability with uniqueness (the organist has played many organs, but is now playing this new organ); permanence with transience (the skill of organ-playing is built into the being of the organist, yet is contingent on the coordinative capacities of his or her hands and limbs); perceptual with motoric action (the same organist sees and touches as he plays); and self with world (the organ player with the music played) (Casey 1984, 287).[23]

---

[23] This new mode of memory, Casey has gone on to argue, is essentially a form of being to which Merleau-Ponty has referred as "near-presence" (Merleau-Ponty 2005 [1945], 209) or "ambivalent presence" (ibid., 94), both of which call for "a middle term between presence and absence" (ibid., 93). All this suggests that our affective experiences are essentially composed of entities that are simultaneously present and absent, often making it almost impossible to distinguish presence from absence. This interplay of presence and absence is quite clear when we deal with material forms that are incomplete (such as ruins), in cases of haunting, and in nostalgic narratives. See Tim Edensor's (Edensor 2001, 2005a, 2005b) exploration of ruins, where the traces of past activities are articulated as absent through clothes and tools left behind, and their wear and tear. Similarly, Steve Pile (2005) and Karen E. Till (2005) have considered how ghosts (and memories as ghosts) can haunt cities as spectral traces. See also Svetlana Boym's (2001) work on nostalgia. All this shows that more than just the

Habitual body memory, thus, combines pre-conscious and pre-reflective affective processes with conscious and reflective capacities that are a result of an embodied type of memory generated by emotions and, as importantly, the senses. Such an understanding of memory processes – conscious and pre-conscious alike – as performative shifts the focus from what memory *is* and what it represents to what it *does* and how it works. This does not mean that such an approach leaves out narratives and the meaning attached to objects, but rather that it also considers them as performative, phenomenologically experienced by every individual differently, depending on varying subjectivities and relationships with the past. Nevertheless, despite the potential of this approach and the possibilities it offers us to understand memory processes and to unfold the richness of everyday practices, it has been seldom employed in examining memory processes,[24] as, rather than as an individual affective process, memory has been predominantly treated across social sciences as a collective social phenomenon.

Employing – and often misinterpreting – such notions as Maurice Halbwach's "collective memory" (Halbwachs 1992) and Pierre Nora's "*lieux de memoire*" (Nora 1996), memory scholars have largely neglected the neuro-psychological processes of individuals and have instead preferred to see memory as "an expression and active binding force of group identity" (Hoelscher and Alderman 2004, 349). With a clear preference for representations and structuralist explanatory models, this vast body of scholarly work has dealt with questions such as how the creation of shared memories is part of the construction of social groups or has investigated the various positions that individuals might adopt in relation to collective commemoration. Accordingly, it has predominantly focused on top-down narratives, in which nation-states and other powerful entities control what is remembered and forgotten, or on public debates about, resistance to, and conflicts around notable monuments and other commemorative technologies.

However, such an emphasis solely on the social aspects of memory is counter-productive and counter-intuitive, for a clear distinction between collective and individual memory is untenable (Jones 2011, 878); as Jones and Garde-Hansen have put it, "[c]ollective memories are vital, but in the end they are lived out in individualized contexts of everyday lives of bodies moving through the time and space of affective life" (Jones and Garde-Hansen 2012, 12). This is an aspect of memory often omitted by the proponents of the collective character of memory, but

---

opposite of presence, absence "is also a corporeal, emotional and sensuous phenomenon articulated in distinctly concrete, political and cultural registers" (Bille, Hastrup and Sørensen 2010, 13).

[24] For exceptions, see Anderson (2004) and Lorimer (2006).

nevertheless acknowledged by Halbwachs himself. While Halbwachs has indeed used social groups as the unit of analysis and has argued that individuals receive, localise, form, and recall their memories through their participation in social groups (Halbwachs 1992), he has not completely rejected individual memory or dissolved it altogether in collective memory. Rather, by acknowledging that each individual is simultaneously a member of many different social groups of various sizes and forms of activity, Halbwachs has recognised that at any given moment the individual is faced with various different – often contradicting – memory processes, as each groups evokes and reproduces its unique set of memories. This means that each individual has a unique aggregated set of collective memories which are as fluid as the groups that evoke them. All this essentially reveals memory as multiple by nature, "collective and plural, yet individual" (Nora 1996, 3), or, as historian James E. Young has suggested in his study of memorials, "collected" (Young 1993), a term which suggests that memory is sourced within individual minds and that collective outcomes are the result of aggregated individual psychological or neurological processes (Olick 1999, 338).[25]

Revisiting the memoryscape

Central to the understanding of memory processes is the fact that memory generates a series of links to our environment by means of the – often unreflective – immersion of our body in it over time; in this sense, "our spatial relations are not merely relations between current body and current space, but a hyper-complex entanglement of past/present spatial relations" (Jones and Garde-Hansen 2012, 10). Indeed, every human has specific memories tied to the space they live and move in,[26] which suggests that there exist "landscapes of memory" (Maus 2015), where materiality, social practices, individual experiences, and collective imaginations contextualise certain places as meaningful in relation to the past. Crucially, the term "landscape" should be understood here as referring not to fixed, static, and de-limitable entities which serve as the background to the various activities undertaken by humans, but to fluid "processes" (Hirsch 1995, M. Rose 2002) which at any given time reflect change and are themselves part of it, or to at once spatial entities and temporal processes (Amin and Thrift 2002) which are created by humans as much as they create humans.[27]

---

[25] See also Olick (2007).

[26] Ethnographic research has indeed shown that places often serve as cues to memory. For example, see Küchler (1993), Basso (1988, 1996), Hayden (1997), Boholm (1997), Shaw (2002), and Gordillo (2004).

[27] See also the work of Jo Lee, who has pointed out that "landscape is not just a palimpsest…, a historical layering in which the present is merely the sum of past episodes, but is also an *active*, present- and

As Ingold has suggested in a similar tone, landscape is part of who we are in the same way that we are part of it. Building upon philosopher Martin Heidegger's notion of dwelling,[28] Ingold has proposed what he has called his "dwelling perspective," namely "a perspective that treats the immersion of the organism-person in an environment or lifeworld as an inescapable condition of existence" (Ingold 2000, 153). This perspective involves "an everyday way of getting on with things" (Thomas 2001, 172) in which we skilfully negotiate and make sense of our surroundings, without thinking about them analytically most of the time (Relph 1985, 16). Very importantly, this embodiment should be understood not as an inscription *onto* the environment, but rather as an embedment *into* it, for landscape has no pre-existing form that is then inscribed with human activity: both the body and environment are mutually emergent, continuously brought into being through their interactions with each other (Ingold 2000, 204); for as Ingold has argued elsewhere, "[i]f we recognize a man's gait in the pattern of his footprints, it is not because the gait preceded the footprints and was 'inscribed' in them, but because both the gait and the prints arose within the movement of the man's walking" (Ingold 1993, 162).

Taking as a point of departure the axiom that a place owes its character not only to the experiences it affords – e.g. sights and sounds – but also to what is done there – e.g. looking and listening – Ingold has proposed the notion of the taskscape, a socially constructed space of human activity, understood, for the purposes of analysis, to have spatial boundaries and delimitations (Ingold 1993). The tasks performed in a taskscape "are the constitutive acts of dwelling" (Ingold 2000, 195) and each one of them takes its meaning from its position within an ensemble of tasks or actions, performed in series or in parallel by an individual or by many people working together (ibid.). Since each task is informed by habitual body memory, one could argue that every taskscape is essentially a *memoryscape;* in the same way that, in Ingold's words, "the landscape is an array of related features" and "the taskscape is an array of related activities" (Ingold 1993, 158), one could argue that – by analogy – the memoryscape is an array of related memory processes which enable or facilitate the interaction between humans – individually or in groups – and their environment. However, as this would mean that each and every locality is essentially a memoryscape, in the pages that follow, I would like to suggest instead

---

future-oriented engagement with the environment" (Lee 2007, 88; emphasis in the original), and of Mitch Rose and John Wylie, who have suggested that landscape is "tension" which potentially "animates" the embodied subject (Rose and Wylie 2006).

[28] As Heidegger has written, "*in dwelling* [mortals] persist through spaces by virtue of their stay among things and locations" (Heidegger 2001 [1971], 155; emphasis in the original).

that a memoryscape is an assemblage enacted by the memories *generated* as a result of the co-functioning of human and non-human components. In other words, the constitutive function of a memoryscape is the generation of memory.

The term "memoryscape" was coined by anthropologist Mark Nuttall in the early 1990s in an attempt to suggest ways in which the Greenlandic Inuit permeate space with time and to connote "people's mental images of the environment, with particular emphasis on places as remembered places" (Nuttall 1992, 39).[29] In Nuttall's view, humans perceive the physical world through their senses while simultaneously culturally modifying, ordering, and conceptualising it through experience, thought, and language (Pryce 1999, 91); as he has put it:

> the places a hunter frequents are stamped with the indelible marks of community. These marks are not visible, but are manifest in place names, memories of hunting and of past events. All give a sense of a bounded locality distinct from the memoryscape of neighbouring communities…Events, whether contemporary, historical or mythical, that happen at certain points in the local area tend to become integral elements of those places. They are thought about and remembered with reference to specific events and experiences…Memories take the form of stories about real and remembered things. They cannot be separated from the land (Nuttall 1992, 39-40, 54).

A memoryscape can be produced or expressed by means of verbal narratives, but it is most often experienced and felt by the individuals who live in or move through a particular territory. In this sense, the production of a memoryscape makes landscape "alive, meaningful, and personal" (Sejersen 2004, 74) and essentially reveals the former as what Christopher Tilley has called "perceptual space," namely:

> a space of personality, of encounter and emotional attachment. It is the constructed life-space of the individual, involving feelings and memories giving rise to a sense of awe, emotion, wonder or anguish in spatial encounters. Such a space may as often as not be felt rather than verbalized. It creates personal significances for an individual in his or her bodily routines – places remembered and places of affective importance (Tilley 1994, 16).

These affective bonds between humans and their environs are personal, but they are nevertheless intersected with collective meaning, which suggests that the memoryscape does not refer only to the physical territory as remembered by a particular individual, but to the community's interaction with this particular stretch

---

[29] See also Nuttall (1991, 1993, 1998).

of land over time as well. As Claudio Aporta has argued in his study of Inuit navigation, a memoryscape is something that is simultaneously fixed in culture and ever-changing with individual experience (Aporta 2004, 15), which neatly expresses the permanence of memory through time and highlights the impact of the interaction between individuals and their environment upon it. It is in this sense that "[m]emoryscapes are not transmitted from generation to generation as a mere corpus of geographical knowledge" (ibid.), but rather are always created and/or shaped anew.

In recent years, the concept of the memoryscape has become quite popular across memory studies as a tool suggesting ways in which people remember through their physical and material environment.[30] However, despite Nuttall's clear focus on embodied practices, most scholars have chosen to approach it from a structuralist representational perspective; for example, Hamzah Muzaini and Brenda S. A. Yeoh have suggested that memoryscapes "are the spatial-material, representational, and embodied platforms – e.g. museums, ceremonies, movies, roadside memorials, etc. – on and through which memories are reproduced to be encountered and engaged by individuals and groups" (Muzaini and Yeoh 2016, 9). Rather than as a result of spontaneous bodily experience, Muzaini and Yeoh have understood memoryscapes as "well thought out and executed physical and social constructions that entail human effort" (ibid.), whereas, in a very similar vein, Louis Bickford has written that:

> Public monuments, memorials, and museums shape the physical landscape of collective memory. They are 'memoryscapes' that contest official truths of the authoritarian era and give voice to its victims and survivors. From statuary and war memorials, to public art commemorating past events, to roadside historical markers, to plaques highlighting the heroes or villains of history, to museums designed to remember but not repeat the authoritarian past, memoryscapes recapture public spaces and transform them into sites of memory and alternative truth-telling about the authoritarian past (Bickford 2005, 96).

However, in this dissertation, I would like to suggest a take on the memoryscape which steers away from such structuralist narratives, reaches beyond representations, and understands memory as "*multidirectional:* as subject to ongoing negotiation, cross-referencing, and borrowing; as productive and not

---

[30] See, among other, Edensor (1997), Yoneyama (1999), Shaw (2002), Cole (2001), Aporta (2004, 2013), Bickford (2005), Argenti and Röschenthaler (2006), Butler (2008), Clack (2011), Phillips and Reyes (2011), Pittenger (2011), Ullberg (2013), and Muzaini and Yeoh (2016).

privative" (Rothberg 2009, 3; emphasis in the original). Accordingly, I propose that memoryscapes are assemblages enacted as a result of the co-functioning of humans and non-humans and in particular by the various memory processes – collective and individual, social and psychological – that this co-functioning generates.[31] Such an understanding borrows many of its features from Nuttall's memoryscape and Ingold's taskscape, not least because, like them, it acknowledges that the interaction between humans and their environs by means of embodied practice is not limited to humans, space, and time, but that it also incorporates several other factors. Unlike them, however, it aims at including those other factors in its analysis and at studying the memory processes that are the result of the various relations that are formed not only between humans and their environs but among all the things that become part of such arrangements.

To that end, I have focused on three urban assemblages and the embodied practices that are enacted and supported by them: Tashkent's informal taxi economy and its role in the wayfinding practices of the population; the centralised district heating system and the various ways in which the population of Tashkent deals with its decay; and the city's urban trees and how Tashkent dwellers negotiate their felling. In each case, the interaction between humans and the various actors that comprise those infrastructure systems that occurs by means of everyday practices results in the generation of memory processes. Riding taxis has resulted in the creation of a local system of orientation points known as *orientiry,* which, as I argue in Chapter 2, simultaneously exist in the present and in the past. Using the city's centralised district heating means devising strategies to heat up or cool down one's apartment, which, as I argue in Chapter 3, produces narratives that juxtapose the new alternatives with the socialist era infrastructure and position the latter in the past. And the felling of trees, discussed in Chapter 4, inflicts a series of various phantom pains, which can take the form of nostalgic narratives but can also evolve into physical somatic pain as a result of the exposure to sunrays and ultraviolet (UV) radiation.

By looking into the ways in which humans interact with urban infrastructure, I show that apart from being the result of memory processes, everyday practices themselves produce memory processes as well. While each individual responds differently to similar stimuli, the standardisation, routinisation, and wide spatial distribution of those practices which have come as a result of the proliferation and

---

[31] The notion of the enactment offers an accurate understanding of how objects are brought into being. Similar to the notion of performance, the enactment of objects is not only social, but also material, and involves the heterogeneous ecologies of entities acting at sites and contexts of practice.

endurance of socialist era infrastructure essentially turns them into a mode of collected memory. In this sense, the memories generated are not only at once individual and collective, but they are also "spatially and temporarily complex" and render the relationships of humans with "others, timespace, information and materiality complex, multidimensional and non-linear" (Jones 2011, 877).

All this shows that memoryscapes are fluid and, as importantly, suggests that they are simultaneously a temporal process and a spatial entity, multiply enacted in different locations and in different ways. However, the fact that they are enacted by socio-material configurations that are scattered across the city means that memoryscapes are not bounded or tied up to a delimited location in Euclidean space, but rather are brought into being in a virtual non-defined space, which is produced by means of the co-functioning of heterogeneous components. As DeLanda has argued, each of these multiple enactments "defines a space of its own…[which] is key to the task of conceiving a virtual space which does not unify multiplicities, that is, a space composed by the coexisting multiplicities themselves in their heterogeneity" (DeLanda 2002, 112-113). The fact that these multiplicities are heterogeneous does not make memoryscapes dysfunctional, for they become coherent through the very practices that enact them, which, however, does not mean that the various multiplicities that are enacted are equal. Some memories last longer than others because they are better engrained and embedded in our practices, because the infrastructure that produces and supports them has a longer lifespan or simply because some memories are stronger than other. This suggests that memoryscapes are not flat but rather hierarchical structures, which enables us to think about the asymmetries of memory and to embrace both remembering and forgetting as interactive configurative forces of memory work; as Susann Ullberg has argued in her own take on the memoryscape, "[n]ot all memories are equally remembered in society and oblivion also lingers in the memoryscape" (Ullberg 2013, 21).

Despite the fact that forgetting is often seen as the opposite to remembering, *Lethe* does not necessarily inhibit or destroy *Mneme*. Heidegger has suggested that "just as expecting is possible only on the basis of awaiting, remembering is possible only on that of forgetting, and not vice versa" (Heidegger 1962, 388-389), a passage which Paul Ricoeur has interpreted as a reminder of the fact that "forgetting makes memory possible" (Ricoeur 2006, 442). Indeed, we remember because we are afraid to forget, but there is also another aspect of the dialectics of remembering and forgetting that is at play here: forgetting is part and particle of the process of remembering. Remembering involves reconstructing a particular reality, thus

automatically excluding – or forgetting – other realities. However, even in the one reality reconstructed, certain aspects of it are being left out; remembering a specific event does not trigger all the sensorial stimuli that were present at the time of the event's occurrence, but only those intricately related to the event itself. Similarly, the aspects of given realities that are recollected or omitted are not cast in stone, but vary greatly from person to person and from group to group and can even change over time.

Methodology and research methods

Such a complex ontological and epistemological approach to urbanity and to memory processes poses certain methodological challenges. If memoryscapes are, as I have argued, multiple, inconsistent, and incoherent, how do we deal with their inconsistency and contingency and how do we capture their multiplicity in a way that makes sense? In other words, if memoryscapes are such a mess, what kind of a methodological approach do we need to employ in order to get to know them? This last question – albeit not regarding memoryscapes but messy worlds at large – has been tackled by John Law, who, building upon the difficulties that he and his colleague Vicky Singleton faced when researching alcoholic liver disease in northern England,[32] has attempted to suggest ways to think about objects of study that are unstable and incoherent (Law 2004). Attributing Law and Singleton's difficulties to the messiness and heterogeneity of research and the inability of traditional research methods – which seek to pin down "reality" and to convert "mess" into something smooth, coherent, and precise – to capture these, Law has recommended that we "imagine methods when they no longer seek the definite, the repeatable, the more or less stable. When they no longer assume that this is what they are after" (ibid., 6).

One of the several approaches put forward by Law is the so-called "method assemblage." Law has argued that when we do research, we produce two kinds of things: whatever we are studying and describing, namely our object of research; and other things which we neglect and do not bring up. Inevitably, the things we study become present in our research, whereas those that we neglect remain absent, or, as Law has put it, "othered." Accordingly, in his own words:

> Method assemblage is the process of enacting or *crafting* bundles of ramifying relations that *condense* presence and (therefore also) generate absence by shaping, mediating and separating these. Often it is about

---

[32] For the findings of this research, see Law and Singleton (2003, 2005).

manifesting realities out-there and depictions of those realities in-here. It is also about enacting Othernesses (ibid., 122; emphases in the original).

A method assemblage enters into relations with "reality," itself multiple, fluid, relational, and emergent, which is another way to say that methods do not only capture multiple realities, but in fact construct them;[33] as Law has put it elsewhere, together with John Urry, research methods "have effects; they make differences; they enact realities; and they can help to bring into being what they also discover" (Law and Urry 2004, 393).[34] Crucially, the relations into which the method assemblage enters are not confined to, or exclusively mediated by, research methods (e.g. participant observation, questionnaires, or focus groups), but they themselves entail flux and multiplicity. Thus, while it inevitably creates boundaries between presence, absence, and otherness, the method assemblage invites us to "imagine more flexible boundaries, and different forms of presence and absence. Other possibilities can be imagined, for instance if we attend to non-coherence" (Law 2004, 85).

The idea that methods are not only descriptive and generative but also performative has been picked up by non-representational theory as well. Scholars engaging with the world from a more-than-representational perspective have rejected the "strange gap" (Latham 2003, 1993) between theory and empirical practice that characterises most of social scientific inquiry, and instead have tried to see theories and methods as tools that work together with empirical material rather than as overarching frameworks into which empirical information can be made to fit. In this sense, non-representational thought "tends toward an academic style which seeks to describe and present rather than diagnose and represent" (Cadman 2009, 461) and which, thanks to its potential to unshackle creativity in research design and method (Lorimer 2005, 89), advances experimental – yet always empirical – ways of knowing that do not prescribe outcomes in advance. This, however, has led to an overly critical stance towards traditional ethnographic methods – such as interviewing and participant observation – which have been accused, among other things, for being "nearly always cognitive in origin and effect" (Thrift 2000, 244).[35]

---

[33] For more on this, see Latour and Woolgar (1986).

[34] This is not to say that reality is arbitrary, nor to imply that social scientists are all-powerful figures who can magically conjure up the world they imagine, but rather it is to suggest that social scientists are themselves entangled within the assemblages they seek to study.

[35] This critique is often unfair, especially given the fact that a practical and coherent way in which non-representational theory can reconfigure fieldwork has yet to be suggested. For attempts, see McCormack (2002, 2005), Latham (2003), Doel and Clarke (2007), and Laurier and Lorimer (2012).

While I do not fully agree with Thrift and his colleagues in their criticisms, I do share their concern that ethnography – at least in the way that it has come to be understood, that is through the prism of "participant observation" – is inadequate to grasp the complexity of lived experience in cities; as Law and Urry have argued:

> Current methods do not resonate well with important reality enactments. They deal, for instance, poorly with the *fleeting* – that which is here today and gone tomorrow, only to reappear the day after tomorrow. They deal poorly with the *distributed* – that is to be found here and there but not in between – or that which slips and slides between one place and another. They deal poorly with the *multiple* – that which takes different shapes in different places. They deal poorly with the non-causal, the chaotic, the complex. And such methods have difficulty dealing with the *sensory* – that which is subject to vision, sound, taste, smell; with the *emotional* – time-space compressed outbursts of anger, pain, rage, pleasure, desire, or the spiritual; and the *kinaesthetic* – the pleasures and pains which follow the movement and displacement of people, objects, information and ideas (Law and Urry 2004, 403-404; emphases in the original).

Several scholars have attempted to tackle this methodological impasse by suggesting methods which – other more and other less successfully – embrace the flux, multiplicity, and contingency of lived experience while maintaining an empirical focus on embodied practices and dynamic processes.[36] Of the many approaches that have been suggested in the past decade, I have chosen to inform my research by a set of methods, propagated by sociologists Monika Büscher and John Urry, which examine the "fluid, fleeting, yet powerful performativity of a multitude of everyday (im)mobilities" (Büscher and Urry 2009, 99) and which "enable questions about sensory experience, embodiment, emplacement, about what changes and what stays the same, and about the configuration and re-configuration of assemblies of objects, spaces, people, ideas and information" (ibid., 110). Mobile methods, as this set of methods has come to be known, firstly, allow us to track in various ways – including physical displacement – the many and interdependent forms of intermittent

---

[36] See, among other, Whatmore (2006), and the volumes on methodology and research methods edited by Back and Puwar (2012), Lury and Wakeford (2012), Coleman and Ringrose (2013), and Knudsen and Stage (2015).

movement of people, images, information, and objects;[37] and, secondly, tune us into the social organisation of "moves" (ibid., 103).[38]

Such a dynamic methodological toolkit is particularly handy for the understanding of the two main concepts explored in this dissertation: urban assemblages and memorycapes. Conducting ethnography in an urban context means researching a wide range of practices that do not necessarily happen in a given location, as urban populations are constantly on the move, participate in many different social networks simultaneously, and traverse multiple situations and roles (Hannerz 1980); as Ger Duijzings has wondered, "[w]hat does 'participant observation' mean in this context: when do we participate, and how? And where do we observe?" (Duijzings 2012, 20).[39] At the same time, if memory is, as Michel de Certeau has claimed, "a sort of anti-museum" in the sense that "it is not localizable" (de Certeau 2011 [1984], 108) but rather it "comes from somewhere else, it is outside of itself, it moves things about" (ibid., 87), then participating in the flow is a way to capture the various memory processes at work by both witnessing the enactment of memoryscapes and by participating in it.

Before I present the ways in which I have employed mobility methods for these purposes, I would like to provide the reader with some practical information regarding my ethnographic fieldwork in Tashkent. "Entering the field" in Uzbekistan – not only in ethnographic terms but also very literally – can be rather time-consuming and nerve-racking due to excessive bureaucratic procedures and kilometres of red tape.[40] There are only two ways for foreign passport holders to visit Uzbekistan: either as short-term visitors, or as staff already affiliated with or employed by an institute, company, or international organisation. In either case, the potential visitor is required, when applying for a visa, to present a letter of invitation from an individual officially registered and residing in Uzbekistan or an institution or company operating in the republic. Individuals travelling on tourist visas are allowed to remain in the country for only up to 30 days, and throughout their visit

---

[37] For more on this, see Sheller and Urry (2006), but also Marcus (1995) and Falzon (2016 [2009]) for two different takes on "multi-sited ethnography."

[38] Mobile methods are part of a larger turn of social scientific inquiry towards the movement of people, ideas, and things, as well as the broader social implications of those movements, which has come to be known as the "new mobilities paradigm;" for more on this, see Chapter 2. For more on mobile methodologies and methods, see the edited volumes of Fincham, McGuinness, and Murray (2010) and Büscher, Urry, and Witchger (2011). For a more critical stance, see Merriman (2014).

[39] Roger Sanjek (2000) has also warned against the dangers of relying exclusively on interviews when conducting research in the urban context.

[40] There is considerable scholarly literature on the intricacies of entering the field with tips, hints, and tricks to guide researchers, as well as discussion of the theoretical dilemmas, political considerations, dangers and potential ethical impositions during fieldwork. See, among other, Kovats-Bernat (2002), Pollard (2009), and Hume and Mulcock (2014).

they are obliged to stay in certified hotels which register them with the local authorities for every night they spend there. Individuals affiliated with or employed by an institute, company, or international organisation, on the contrary, are allowed to stay in Uzbekistan for as long as their contracts last and can live wherever they want, provided that they register their address with the authorities.

When I started planning my own long-term ethnographic fieldwork in spring 2014, there was no doubt for which of the two categories of visitors I had to aim. Even though I had not managed to get into touch with any colleagues who had previously conducted ethnographic fieldwork in Uzbekistan, a historian who briefed me, over a cup of coffee in London, on the particularities of doing research in Tashkent suggested I contact the Institute of History of the Academy of Sciences of Uzbekistan and negotiate an affiliation.[41] Indeed, an affiliation with the Institute of History would not only provide me with the necessary administrative support but would also facilitate my access to libraries and archives throughout the republic. However, such an affiliation entails one being officially registered as foreign researcher and subsequently being supervised by a senior member of staff employed by the Institute. This unnerved me considerably, as the nature of my project had made me hesitant – almost paranoid – of informing the local authorities about my arrival and subsequent long-term stay. Instead, prompted by my former colleagues at the Hellenic National Commission for UNESCO in Athens, Greece, I contacted the UNESCO Tashkent Office hoping that they would agree to officially invite me to Tashkent. Indeed, during an online interview with the Head of the Office, we agreed that I would assist the Office's culture officers with their workload three days a week from the position of an unpaid UNESCO volunteer. Due to structural limitations, the initial duration of the contract we signed upon my arrival in Tashkent was six months, which, after its completion, was bilaterally extended for three more.

Thus, I arrived in Tashkent in early May 2014 and left in early February 2015, having spent there a total of nine months. I had from the very beginning aimed at starting my long-term ethnographic fieldwork in late spring, in order to benefit from the warm weather which would inevitably send more people outdoors, and had planned to stay there throughout winter in order to observe how the practices in which I was interested fluctuate on a seasonal basis. I had also, from the very beginning, aimed at renting a flat in a Soviet era apartment building, both because of my scholarly interest in socio-material assemblages and as part of my quest to

---

[41] Among others, Paul Stronski (2010) and Russell Zanca (2011) were also affiliated with the Institute of History of the Academy of Sciences of Uzbekistan during their research spells in Uzbekistan.

witness myself the endurance of socialism in everyday life. The location of the flat did not really matter to me as long as it was in the centre of the city, preferably close to a metro station. Luckily enough, I immediately found a comfortable flat situated next to the Kosmonavtov metro station, which in autumn I switched for another one a few hundred meters down Afrosiyob Avenue, next to the Aibek metro station.

Being employed by a UN agency while conducting my ethnographic fieldwork offered many advantages. Not only did the Office's administration greatly facilitate me with my visa and registration procedures, but additionally my position as UN staff gave me the opportunity to attend meetings, conferences, and events with colleagues, representatives of other UN agencies and international organisations, and local governmental and non-governmental partners. This opportunity significantly expanded my network and introduced me to individuals belonging to social strata that I would not have been able to reach otherwise. As importantly, working for UNESCO justified my presence in the eyes of the state and its agencies, and producing the UN staff badge got me out of several confrontations with law enforcement agencies throughout Uzbekistan. At the same time, it gave credibility to my research and reassured friends, acquaintances, and interlocutors that I could be trusted, a feat not easy to achieve, considering that in Uzbekistan, as much as in other post-Soviet republics, the structure and influence of the state and the fear of its strong and sometimes ruthless security apparatus have generated what Russian writer Viktor O. Pelevin (1962 –) has called a "genetically transmitted fear of the KGB" (Pelevin 2000, 69).[42]

While my dark Mediterranean features and heavily accented Russian largely allowed me to pass unnoticed, in an attempt to further penetrate the boundary between insider and outsider I picked up three somewhat unhealthy and unhygienic local habits: smoking cheap cigarettes, consuming dipping tobacco (Rus. *nasvai*), and cracking (and spitting) sunflower seeds (Rus. *semechki*). In addition to their assimilating effect, offering a cigarette, some *nasvai,* or a handful of *semechki* to any male individual was usually enough to start or enter a discussion. This practice became all the more useful when, by the end of my second month in Tashkent, I found myself spending most of my day talking to dozens of random men on a daily basis while riding Tashkent's informal taxis. Not only was I using a taxi for

---

[42] Several ethnographers who have conducted fieldwork in the Middle East have suggested that the local populations tend to perceive foreign researchers as spies working for foreign governments, especially when they speak Arabic well; for example, see Rabinow (1977), Shryock (1997), Dresch (2000), and Salamandra (2004). In my case, however, my interlocutors were more concerned that I could be working as a spy for the local National Security Service (*Sluzhba Natsional'noi Bezopasnosti* – SNB) rather than a foreign intelligence agency.

practically all everyday purposes – to get to and from the UNESCO office, to drive to interviews and meetings, to meet friends, to go to restaurants and cafés, etc. – but I also resorted to "riding along" taxi drivers and urban dwellers across the city for several hours in a row, day and night.

Despite the fact that they are widely considered to be the first point of contact and a valuable source of information for ethnographers,[43] taxi drivers – both formal and informal – and their practices have remained largely understudied in ethnographic work.[44] In an attempt to contribute towards covering this void, in this dissertation I have offered an ethnographic analysis of Tashkent's informal taxis and the ways in which they become enrolled into memory work. As I explain in Chapter 2, virtually every private car in Tashkent doubles as a taxi. Most drivers are simply individuals who on their way to work or home offer paid lifts to their fellow citizens, provided that the latter's destination is more or less on their way. However, with the average monthly salary at slightly over USD 330 and the real unemployment rate estimated anywhere between 20% and 40%, a considerable part of Tashkent's – almost exclusively male – population have taken up "taxiing" (Rus. *taksovanie*) as their main or secondary occupation, becoming informal taxi drivers, locally known as *bombily* (Rus. pl.; Rus. sing. *bombila*). Their accessibility and relatively low charges have made informal taxis the most popular means of urban transport among the inhabitants of Tashkent, as taxis cruise the city day and night, reaching even its most remote corners.

In order to benefit from their constant flow and, at the same time, to document the workings of this mobility assemblage, I devised an approach built upon what Margarethe Kusenbach has called "street phenomenology" or "street ethnography" (Kusenbach 2003). Puzzled by the lack of a method studying the phenomenological structures of lived experience, Kusenbach has suggested the "go-along," an ethnographic research tool which she has found to be particularly suited to explore five particular themes: environmental perception, spatial practices, biographies, social architecture, and social realms (ibid., 456). Most importantly, however, due

---

[43] As David Karjanen has written, "I have often told graduate students preparing for fieldwork that one of their best informants may turn out to be a taxi driver. Taxi drivers are often some of the first people one encounters when arriving in a new country, they often speak some English, they know their way around a city, and most importantly, from a research point of view, they know about the local and regional movement of people; everyone from businessmen and women to tourists, government officials, and prostitutes rely on taxi cabs, not to mention the use by the general public. Knowing about the movement of people from place to place, and what they may be doing there, provides a unique set of insights into the daily operations of an economy" (Karjanen 2014, 104).

[44] For exceptions, see Davis (1959), Suzuki (1985), Miller (2009), Luedke (2010), and Chong (2014). For an insider's view, see Mathew (2008 [2005]). For a historical study of the roles and functions of the taxi and its impact on contemporary urban life, see Cooper, Mundy, and Nelson (2010).

to the fact that it situates the ethnographer within the interlocutors' "mobile habitats," the "go-along" allows the researcher to scrutinise the constitutive role and the transcendent meaning of the physical environment (ibid., 458) in a way that "brings to the foreground some of the transcendent and reflexive aspects of lived experience as grounded in place" (ibid., 456).[45]

The most common and practical modes of the "go-along" are the "walk-along" and the "ride-along," and it is the latter that I have chosen to employ for the needs of this dissertation for a series of practical reasons. Compared to the "walk-along," the "ride-along" – or at least the type of the "ride-along" implemented here – allows the researcher more spatial freedom and makes research less demanding in terms of physical activity – a feature particularly important when elderly interlocutors are involved – and less dependent on weather conditions. At the same time, it guarantees a wide pool of random interlocutors and an infinite array of random routes, which makes each journey unpredictable and hence a bit less, to tackle Thrift's criticism quoted above, cognitive in origin and effect. Such an approach acknowledges the fact that mobility is dynamic and diversely produced across contexts and through heterogeneous practices, which makes it particularly useful when examining memory processes.

My first attempts to conduct "ride-alongs" were quite unsuccessful. For both practical and ethical reasons, I had decided that, prior to entering a taxi, I would explain to the driver that I was a researcher and would ask him whether he would have anything against my sitting inside the car documenting the trip and interacting with him and the occasional passengers. Mobilising taxi drivers from the street was almost impossible, as to explain what I wanted and to negotiate a price took time, much more time than most drivers were willing to spend. This meant that I could only turn to taxi drivers who picked passengers in specific locations across the city, such as markets and metro stations. However, due to the political situation in Uzbekistan and the nature of my work, most of the drivers I approached turned my offer down from the very onset, concerned about my intentions and credibility, whereas several of the taxi drivers that had initially agreed withdrew after the first or the first few rides, claiming that I jeopardised their business. Eventually, after exhausting most of my options and having recruited only three taxi drivers as full-time collaborators, I realised that I had to reconsider my original planning.

---

[45] For other such mobile methods, see Jim Morris' (2004) "walking with" people, Jørgen Ole Bærenholdt and colleagues' (2004) "participation-while-interviewing," Barbara Czarniawska's (2007) "shadowing," as well as Eric Laurier's (2004) research on office working while driving on the motorway.

Hence, I eventually resorted to a modified version of this method which I have called the "one-ride stand:" similarly to the sexually charged source of influence, the one-ride stand also presupposed an encounter which the next day would not be repeated and would sooner or later be forgotten. It involved taking random taxis for short trips across the city, without explaining who I was and what my aim was, asking them to take me to distant locations in order to spend as much time in the taxi as possible; once there, I would either exit the car and look for another one after a few minutes, or, if the discussion with the driver had been interesting, come up with an excuse to ask him to take me to another destination. An important element of a successful ride was selecting the right seat, something that I learned through trial and error. At first I used to sit in the front seat in order to be closer to the driver, which, however, made problematic my interaction with the passengers, as speaking to them meant turning over my left shoulder and minimised the possibility of an interaction between the passenger and the driver. Thus, I eventually decided to sit in the back seat, behind the driver, so that I could follow the discussion between the driver and the passenger, but also because leaving the front seat free increased the possibility of another passenger entering the taxi.[46]

While such rides did not give me the opportunity to build the ties that would make it possible to tell profound life histories, the intensity and the rhythm of each interaction allowed me to collect valuable ethnographic material on what mattered most to my inquiry: mobility, infrastructure, everyday practices, and the generation of memory processes. After all, the true reason why I sat in thousands of informal taxis all over Tashkent was to tell stories that are about individuals as much as they are about collectives, about humans as much as they are about infrastructure systems, and about the "social" as much as they are about the "technical" and the "natural." In other words, my aim was to get to know – and subsequently to describe – the heterogeneous relations which produce or are themselves produced by memory work.

Central to this aim was achieving great phenomenological sensibility; if mobility results in memory work, then I had to experience it with my own body. Towards this direction, I found it more appropriate to flip over the quintessential "participant observation" to "observant participation" (Thrift 2000, 252, fn. 13), which, in contrast to the passive *gaze* often associated with observation, implies an embedded, interactive, and multisensory perceptive *vision* committed to a process of mutual

---

[46] One of the main problems with this approach was the fact that, upon seeing two men inside, very few women entered cars in which I conducted research. Combined with the fact that almost all drivers are male, my mobile research is admittedly gendered, a fact which I have tried to address and balance by means of favouring female interlocutors in other settings.

exchange (Jensen 2015, 32-33).[47] Accordingly, more than simply observing what is happening or following people around, riding taxis allowed me to undergo the same activities that the population of Tashkent does, or, as Andre Novoa has put it, "to experience, feel and grasp the textures, smells, comforts and discomforts, pleasures and displeasures of a moving life" (Novoa 2015, 99). In this sense, I did not only engage with the worldviews of Tashkent taxi drivers and passengers, but I also had the chance to create my own worldview; if the "ride-along" makes the researcher "co-present" and facilitates the documentation of how social and material realities are made and ordered, this radical immersion into the world while being on the move offered me a "form of knowing as embodiment" (Law 2004) which gave me the chance to grasp the messiness, ephemerality, and unpredictability of memory work, and even to participate in it by becoming myself enrolled into both the mobility assemblage and the memoryscapes enacted by it.[48]

This is not to say that mobile methods have been my only source of ethnographical material. I have, quite naturally for an ethnographer, spent considerable time observing and participating in everyday life in Tashkent and speaking to people outside the taxi or the mobility-at-large context. Additionally, throughout my stay in Tashkent, I participated in the weekly excursions of "x-places," a Facebook-based online community of everyday people brought together by a local entrepreneur and city enthusiast. The group's thematic excursions are built upon various historical or cultural aspects of Tashkent's past and present,[49] and are usually led by an amateur historian and authority on Tashkent's urban history. Unlike the participants of other similar groups,[50] *ekspleisniki*, as this community has come to be known, are not particularly knowledgeable when it comes to the history or the "secrets" of Tashkent. Rather, their enthusiasm for discovering "the hidden places of everyday space" (Rus. *skrytye mesta povsednevnogo prostranstva*), as the group's Facebook page puts it, comes from their nostalgic affection towards Tashkent's Tsarist and Soviet past and their will to share and exchange their own experiences of the Soviet city that they lived in. In this sense, it is not surprising that most participants are people in their 50s and 60s.

---

[47] See also Büscher (2006) and Dewsbury (2010).

[48] This became very clear when, after only a few weeks in Tashkent, I had already created my very own cognitive map of the city and had generated my own system of *orientiry*, based on my own knowledge and experiences.

[49] For example, some of the themes of the excursions are "Literary Tashkent," "The Architecture of pre-Revolutionary Tashkent," "The Secrets of Grand Duke Romanov," "Tashkent's Ancient Settlements," "Along Tashkent's Canals," and the quintessential "In the steps of *Na Solnechnoi Storone Ulitsy.*"

[50] Such as, for example, the My Odessa club, a community of amateur historians in the Ukrainian port city of Odessa, brought together by means of a local television programme. For more on this, see Richardson (2005).

In late summer 2014, in order to more effectively study the mobility practices, orientation and navigation skills, and neighbourhood perceptions of Tashkent dwellers, I prepared and subsequently distributed a questionnaire – in Russian – among some of my interlocutors.[51] I had divided the questionnaire into four categories: demographic data and language dynamics, mobility practices, knowledge of the city, and neighbourhood perceptions. Despite the fact that the questionnaires were anonymous and did not bring up any sensitive issues, I had anticipated that several of my interlocutors would not feel comfortable about filling it in, concerned about their own well-being. Nevertheless, the level of participation was even lower than I had initially estimated, as I received back only one-third of the questionnaires I had distributed – 31 out of a total of 104. None of the taxi drivers I worked with agreed to fill one, and even my colleagues at UNESCO, with whom we had lunch every day and had drunk together on several occasions, were quite cautious in their responses.

When I started analysing the data, I found that, in almost all questionnaires, the last few questions had been left unanswered. Interestingly enough, these questions did not touch upon political issues; on the contrary, they were simply asking the respondent to choose numbers and indicate on the map provided which name corresponded to each of the city's districts. I decided to repeat the test but this time made sure that I was present when people filled the questionnaires, ready to push them to answer the questions that they had left unanswered. What I eventually found was that, despite the fact that Tashkent has only 11 districts and that everyone knows the name of the district in which they live, most respondents were not able to locate on the map their own district. However, even when they did locate their district on the map, they could not point to the districts that were adjacent to their own, despite the fact that they knew that district B or C is round the corner from their house. This realisation set the foundations for my interest in the construction of cognitive maps and the role of memory therein, which essentially resulted in what is now Chapter 2.

The fact that all the questionnaires I distributed were in Russian brings me to the linguistic particularities of my research. The language most widely used throughout the city is Russian, as the majority of the city's Slavonic population purposefully avoids to learn to speak Uzbek, despite the several years of mandatory Uzbek classes, whereas for the ethnically Uzbek old-timers, speaking Russian is an indicator of

---

[51] The questionnaire can be found in the appendix. Thanks to certain friends, I managed to reach people from various social backgrounds by having the questionnaire distributed in several companies and international organisations to which I did not have access.

belonging to the city and a marker that differentiates them from rural newcomers. Hence, most of my research was conducted in Russian, although some interlocutors preferred to talk to me in English (in order to practice their own skills, as they claimed), while the multinational mix of Tashkent meant that my fluency in Greek and Polish did not go unused: some of the most enlightening discussions took place at the Greek Society and the very active Polish community was a source of valuable information as well.

I have also attempted to utilise various kinds of documentary evidence in order to understand Tashkent's history and the ways in which the past has affected the practices of the city's inhabitants. Accordingly, I have spent a considerable time in the National Library of Uzbekistan as well as in second-hand bookstores and bazaars across Central Asia looking for books and publications which were published during the Soviet era and which deal with the issues upon which this dissertation touches. While I had also planned to visit the State Archives of Uzbekistan, the application I submitted was turned down and so was another one submitted on my behalf by the UNESCO Office for a project unrelated to my dissertation, under the pretext that foreigners are not allowed into the archives. Needless to say, several Western historians and colleagues of mine have managed to access the archives and conduct research there without such problems.

After my departure from Tashkent, I kept in touch with several of my interlocutors over the internet and continued following local news and developments by means of several news websites and Facebook groups. The interactivity of the latter, in particular, proved more than useful on several occasions, when I appealed to Tashkenters for help with questions on the city's history or toponymy and was each time met with overwhelming responsiveness. I have also hugely benefited from the dozens of comments that Facebook users make under each post; on several occasions I have used information and views that were offered there and blended it with my own ethnographic material which I had collected in situ. In autumn 2016, significant changes in Tashkent's infrastructure that were directly associated with this very dissertation and of which I found out through Facebook – namely, the liquidation of Tashkent's tramway system, the installation of traffic cameras on the city's main thoroughfares, and the felling of hundreds of trees across the city – rendered a second visit necessary. Accordingly, I visited Tashkent in October-November 2016 for a total of four weeks.

Before I move on to the outline of this dissertation, I would like to make a few remarks on the ethical considerations of my fieldwork. To the reader unfamiliar with the peculiarities of conducting ethnography in a politically sensitive

environment,[52] the fact that I had not applied for a research permit (provided that there is such a thing in Uzbekistan) nor informed several of my interlocutors about their participating in ethnographic research will no doubt seem problematic. And perhaps it indeed is. Nevertheless, I firmly believe that not informing the local authorities about my research was vital for the successful and uninterrupted conduct of my fieldwork, not least because it kept me "off the radar." Despite my initial concerns, I never felt that I was monitored by law enforcement agencies,[53] which allowed me to interact with my interlocutors without placing them in danger. At the same time, by favouring covert research I also protected myself and thereby my project; in a country where one's well-being largely depends on their willingness to cooperate with the authorities, not revealing my identity ensured that no interlocutor could inform about my presence and research. On the downside, this meant that I could not document our interactions by recording them or by taking notes.[54] Secretly recording the discussions was not an option for ethical – and probably legal – reasons, whereas producing a recorder or a notebook during a discussion would automatically make the interlocutor freeze and stop talking, destroy the curtain behind which I could hide my research identity and anonymity, and jeopardise my own research. Instead, when interacting with the driver and the passengers of a taxi, I resorted to taking short notes on my smartphone under the disguise of writing texts, and every two or three hours I sat in a *chaikhana* or a café where I could expand some of my thoughts and organise my notes. An hour later, I picked another taxi and continued in the same pattern.

My transcriptions, thus, are not verbatim. Unless some very peculiar things came up in Russian, such as terms I was not familiar with or things that stroked my interest and which I felt I had to note down, most of the notes I compiled on my phone were in English or in "Runglish," a result of my unfamiliarity with the layout of the Russian language keyboard on my smartphone. In this sense, if transcription is essentially a dynamic transformation of speech to text, or, as Steinar Kvale has put

---

[52] For more on sensitive research, see Lee and Renzetti (1993), Wall and Mollinga (2008), and Bell (2013). For more on the practical difficulties associated with conducting fieldwork research in Uzbekistan's distinctive political and cultural environment, see Veldwisch (2008) and Wall (2008).

[53] It is noteworthy that, while the presence of police officers on the streets of Tashkent may suggest an intrusive police state, despite my concerns, I was never questioned or accosted by any of them for any reasons other than my beard; as a bearded man, I was often perceived as a practicing Muslim, which despite being in many contexts an advantage, turned strongly against me whenever I dealt with the authorities in light of the Karimov administration's crack down on radical Islam.

[54] In his doctoral dissertation, Michael Gentile has also reflected on how the regulation that all taped interviews must be examined and approved by the Kazakhstani authorities one week before the researcher's departure from Kazakhstan "precludes the possibility to guarantee any kind of confidentiality or even anonymity" (Gentile 2004, 7) and eventually kept him away from recording his interviews (ibid., 13-14).

it, an "interpretive construction" (Kvale 1996, 165) during which we filter, simplify, and omit information, my field notes are "doubly transcribed," a presentation of the things said, preliminarily filtered, and cognitively translated at the same time I was taking the notes. What eventually has ended up on paper is a translated version of something that I remembered that my interlocutors had actually said, coloured with the emphasis that I felt they had drawn on certain parts, and perhaps an over-emotionalisation of the words actually pronounced in order to fit the way in which I felt that they had been meant.

Dissertation outline

Despite the fact that this thesis was, from the very beginning, conceived as a monograph, its structure is closer to the format of an article-based dissertation. Each chapter is written as a self-standing article which can be read separately without necessitating the reading of the chapters before and after. Apart from Chapter 1, which offers the historical, political, and social framework in which my study is situated, each of the three analytical chapters – namely, Chapters 2 to 4 – features its own ontological and epistemological setting, theoretical discussion, historical background, and argumentation. While this arrangement is undoubtedly practical, since it allows readers who are interested in a particular theme to follow the relevant theoretical and epistemological discussion without having to read parts of the thesis that they may not be interested in, it is only partly intentional. Rather, more than anything, it has come as a result of the diverse nature of the topics that I have chosen to touch upon and the fragmented and diverse nature of memoryscapes. This is, however, not to say that the dissertation cannot be read as a monograph; on the contrary, for the reader interested in urban life in Central Asia, (post)socialist urban infrastructure, and memory processes, a comprehensive reading will offer a hitherto missing understanding of everyday life and urban assemblages in post-socialist Tashkent.

In this direction, Chapter 1 demonstrates the various social, political, and economic forces that have shaped Tashkent over its history, thus offering the reader the background necessary for the comprehension of the larger framework in which the subsequent chapters are situated. Accordingly, the first section discusses the establishment of Tashkent and the various stages the city had gone through until it was conquered by the Imperial Russian Army in 1865, before it engages with the effect of the Russian Empire's colonial policy on the city's structure. The second section deals with Tashkent's development during the socialist period and the ways in which the Soviet Union's nationalities policy and ideology-building practices radically affected the city's built environment. The third section discusses the role

of the Uzbek state in the post-socialist transformation of the city, and in particular its resonance on Tashkent's public spaces and commemorative sphere as well as on the practices of the population. The fourth section brings in the various socio-economic parameters that have profoundly influenced urban life as a result of the transition to the market economy. Finally, the fifth and last section examines the impact that these socio-economic drives and the national-identity building policies of the post-Soviet administration have had on Tashkent's population mix and the ways in which they have affected the local urban identity.

The three next chapters have a twofold purpose: firstly, to provide a deep, empirical description of often ignored urban infrastructure systems and the practices they support; and secondly, to demonstrate ways in which the co-functioning of these systems and their users generates various embodied memory processes. Accordingly, the infrastructure system examined in Chapter 2 is Tashkent's system of automobility, and in particular the local informal taxi economy. While the automobilisation of Central and Eastern Europe and parts of the former Soviet Union has been the focus of several studies in recent years, to my knowledge no work has delved into urban car cultures in any of the Central Asian republics. Attempting to address these issues, Chapter 2 theorises and situates the private car within the so-called "new mobilities paradigm," before it continues with a socio-historical analysis presenting the ideological considerations, political decisions, and economic limitations that resulted in a scarcity of cars throughout the Eastern bloc and that effectively made the car one of the most sought-after objects for symbolic and practical reasons alike. In the next section, the chapter presents the Uzbek car market mechanisms and the ways in which the Uzbek car industry is largely built upon socialist-era political-economical underpinnings, thus making the purchase of a car a rather complicated process. It then goes on to present the informal taxi economy, before it turns its focus onto wayfinding and the role of memory therein, suggesting that memory has to such an extent become embedded in the local system of automobility that it has rendered navigating the city without evoking the past almost impossible.

Chapter 3 positions itself in the recent "infrastructure turn" in the social sciences and accordingly examines Tashkent's centralised district heating system. The first section presents the reader with a brief historical introduction to the Soviet Union's heatification (Rus. *teplofikatsiia*) endeavour, before it proceeds with offering a thorough technical analysis of the centralised district heating system and an account of the responses of the population to its structural limitations and failures both during the socialist era and after. The second section offers a comprehensive socio-

technical overview of the particular district heating system that has been installed in Tashkent, followed by an examination of how the system's obsolescence along with various socio-economic factors have hindered the everyday practices of the population and how the latter have adapted to these challenges. In the third section, I reflect upon the recent decentralisation attempt undertaken by both the city authorities and individual users and examine the various memory processes that the introduction of new technological equipment, such as boilers and radiator valves, enacts. It is there that I focus on thermoception, or the sense by which our body perceives the temperature of both the external and the internal environment, and argue that understanding it as affect can help us see heating and the warmth that it produces as a constitutive component of memory processes.

Chapter 4 turns the focus away from socio-technical urban assemblages and suggests ways in which memory processes can be enacted as a result of the co-functioning of socio-natural configurations. In this direction, it starts by theorising and situating the urban tree within the wider literature on the production of socio-natural hybrids, before it continues with a socio-historical narrative explaining the prevalence of some tree species over other in Tashkent. In the third section, it goes on with presenting and scrutinising the recent offensive against large deciduous trees based on my own observations retrieved from both *in situ* and electronic fieldwork conducted between December 2013 and July 2016, whereas the fourth and last section deals with how the felling of trees has enacted various memory processes, with a special focus on the bodily phantom pains that the presence of the absence of trees has inflicted upon the population. It is there that I suggest a new type of phantom pain, a physical – somatic – pain inflicted upon the population of Tashkent as a result of their direct exposure to sunrays and to ultraviolet (UV) radiation.

Finally, the last chapter concludes.

CHAPTER ONE

Microcosm

Portrait of a Central Asian City

The reader with an interest in the history of Central and East European cities will have most probably recognised that the title of this chapter is a direct reference to *Microcosm: Portrait of a Central European City*, Norman Davies and Roger Moorhouse's exemplary book on Wrocław, modern Poland's fourth largest city. Therein, Davies and Moorhouse have presented the history of Wrocław as a miniature of the history of Central and East Europe as a whole, based on the fact that the city has been exposed to and has shared in many of the developments that have, over the centuries, shaped that part of Europe (Davies and Moorhouse 2002). By partly naming this chapter after their book, I have similarly aimed at suggesting that Tashkent bears a complex of historical hallmarks which can be interpreted as being particular to the historical experience of Central Asia at large while at the same time showing that the city has both been shaped by and has itself shaped the various social, political, and economic processes that have taken place in the region from the mid-19th century until today.

Indeed, it is impossible to discuss Tashkent's urban development and architecture without delving into the political processes and ideological underpinnings that have characterised the various stages in Central Asia's long history. As this chapter shows, Tashkent has experienced five main historical phases, each of which has brought along a particular city type, distinguishable from the one before and the one after by means of a series of characteristics, such as layout, urban planning, architecture, property ownership, population mix, and the urban lifestyles and practices of the population, to name a few. These historical phases are: i) the pre-Islamic era, which begun in the 2nd century BCE and lasted until the Muslim conquest of Transoxiana in the 7th or 8th century; ii) the Islamic era, which begun in the 11th century and ended in 1865, when the Russian Empire conquered the city; iii) the colonial era,

which begun in 1865 and ended with the Russian Revolution of 1917; iv) the socialist era, which begun in the aftermath of the Russian Civil War (1917 – 1922) and ended abruptly with the dissolution of the USSR in 1991; and v) the so-called "post-socialist" era, which begun in 1991 and is still ongoing. Each of these historical phases is a result of political and economic changes that occurred in Central Asia and beyond, and as such are very indicative of the historical co-evolution of Tashkent and Central Asia through the exchange of ideas, materials, and populations.

However, while the history of Tashkent can be seen as a miniature of the history of Central Asia, Tashkent is by no means a representative Central Asian city, for both its long history and its urban development differ substantially from other cities' in the region. Except for the ancient cities that for centuries played a crucial role in the effective functioning of the Silk Road trade, most of Central Asia had largely remained bereft of cities, as the local population consisted mostly of nomads. It was not until the colonial era that several cities were established, starting either as garrisons and outposts for the Imperial Russian Army or as stations along the railways that the Russian Empire constructed across the region.[55] This urbanisation process took off in the Soviet era primarily as a by-product of industrialisation. The growth of extractive industries, the emergence of state and collective farms, and the expansion of infrastructure, as well as the forced sedentarisation of nomads, resulted in an unprecedented rate of settled population throughout Central Asia, and according to data retrieved from the USSR census, by the end of the Soviet era, the share of urban population in Central Asia had increased threefold, from 13.4% in 1926 to 45.6% in 1989 (Center for Economic Research 2013, 12).

Nevertheless, the fact that throughout this period urbanisation remained tightly connected with industrialisation resulted in serious imbalances in the spatial

---

[55] For example, all the cities that in the Soviet era became SSR capitals were established in the second half of the 19th century or the early 20th century. Almaty, or Alma-ata as it was known during the Soviet era, was founded in 1854 as a Russian military outpost under the name of Vernyi, before it became the capital of the Kazakh SSR in 1929 (then the Kazakh ASSR). Ashgabat was founded only in 1881 as a small village before the Bolsheviks took over it in 1917 and then again in 1919; following the second conquest, the city was named Poltoratsk, but returned to its original name in 1927, three years after the city had become the capital of the Turkmen SSR. Bishkek started as a *karavanserai*, became a fortress under the name of Pishpek in 1825, and eventually evolved into a Russian garrison city in 1868, only to become a proper city and the capital of the Kirghiz SSR in 1926 (then the Kirghiz ASSR), taking the name of Frunze. Dushanbe had been an insignificant market city for most of its existence, famous for its Monday bazaar, which ended up giving the city its name (*dushanbe* means "Monday" in Persian) before it was conquered by the Red Army in 1920 and became the capital of the Tajik SSR (then the Tajik ASSR). Finally, Astana's history largely begun when the town of Akmolinsk became the capital of the eponymous oblast in 1869; in the 1960s the city became the centre and focal point of the Virgin Lands campaign and was accordingly renamed Tselinograd, before it became the capital city of independent Kazakhstan in 1997.

development of Central Asia and limited the ability of cities to adapt to the conditions that emerged after the breakup of the centrally planned economic system (ibid.). Many of the Soviet-era industrial cities of Central Asia were "monocities" (Rus. *monogoroda*) dominated by a single industry which was more connected with cities and industries in other republics of the former Soviet Union than with the local economy. Inevitably, the closure of several of these industries in the aftermath of the dissolution of the Soviet Union led to economic decline, unemployment, and out-migration, which, combined with the growth of the agricultural sector, resulted in a decrease in the share of urban population in Central Asia from 44.7% in 1990 to 40.7% in 2010 (ibid., 17, fig. 7). In Uzbekistan in particular, this figure dropped from 40% in 1991 to 36% in 2006 as a result of the faster growth of the rural population due to higher birth rates, administrative constraints, and the emigration of substantial numbers of urban inhabitants in the early 1990s.[56]

The urbanisation of Central Asia is, thus, evidently a Soviet accomplishment, especially if one takes into account also the radical changes that Soviet planners brought to the already existing cities of the region in an attempt to modernise them and to propagate socialist ideology. This very Sovietness of the region's major cities has been a source of considerable discomfort for the post-Soviet regimes, as in the years that followed the dissolution of the Soviet Union it hindered their struggle for legitimacy and complicated their attempt to reinterpret the past. Accordingly, all republics responded to this challenge by modifying the built environment of the capital cities, but in each case the negotiation of the socialist period took different forms, ranging from retaining the city more or less intact, as in the case of Bishkek, to the moving of the capital to a new city, as in Kazakhstan, to the demolition of entire districts, as in Ashgabat. In the case of Dushanbe and Tashkent, the respective regimes have followed a more moderate approach, as a result of which Soviet era buildings and monuments have been demolished and replaced by more appropriately "national" alternatives, but, due to their necessity and the virtual inability of the state to replace them, Soviet era housing blocks and other infrastructure systems have remained largely non-politicised.

This chapter demonstrates the various social, political, and economic forces that shaped Tashkent (and Central Asia) during the five historical stages outlined above, thus offering the reader the background necessary for the comprehension of the larger framework in which the subsequent chapters are situated. Accordingly, the

---

[56] In an attempt to reverse this situation, in 2009, the government of Uzbekistan artificially increased the share of the urban population by reclassifying 965 large rural settlements into towns. Accordingly, in 2012 the share of the urban population in the republic had reached 51.1% (Center for Economic Research 2013, 21).

first section discusses the establishment of Tashkent and the various stages the city had gone through until it was conquered by the Imperial Russian Army in 1865, before it engages with the effect of the Russian Empire's colonial policy on the city's structure. The second section deals with Tashkent's development during the socialist period and the ways in which the Soviet Union's nationalities policy radically affected the city's built environment. The third section discusses the role of the Uzbek state in the post-socialist transformation of the city, and in particular its resonance on Tashkent's public spaces and commemorative sphere as well as on the practices of the population. The fourth section brings in the various socio-economic parameters that have profoundly influenced urban life as a result of the transition to the market economy. Finally, the fifth and last section examines the impact that these socio-economic drives and the national identity-building policies of the post-Soviet administration have had on Tashkent's population mix and the ways in which they have affected the local urban identity.

A short history of pre-revolutionary Tashkent

Archaeological excavations indicate that human settlements existed in the territory of contemporary Tashkent already back in the 6th century BCE. The general consensus among archaeologists and historians is that, in the 2nd century BCE, one of these settlements, known as Chach Tepa – situated in today's Sergeli district, south of the city centre – gradually developed into a locality with certain urban characteristics and subsequently formed the core of human activity in the area.[57] At some point in the 1st century CE, the urban nucleus moved to the location now known as Ming Urik, some 10 km to the east, in today's central Mirabad district. Chach (or Shash), as the city that emerged came to be known, developed rapidly and reached its apex in the 8th century CE, before it was completely burnt down during the Muslim conquest of Transoxiana (673 – 751). It took almost a century before a new urban centre was founded in the area, this time 5 km to the north-west of Ming Urik, on the bank of the Bozsu canal. This new locality was initially known as Binkath, but in the 11th century CE it acquired the name Tashkent – literally "the city of stone," from the Turkic word *tash*, meaning stone, and the Persian word *kand*, meaning city/fortress – presumably thanks to its strong fortifications and citadel.[58]

---

[57] Other settlements from that period remnants of which can be found in Tashkent today include the Chilanzar Ak Tepa, south-west of the city centre, and the Iunusabad Ak Tepa, in the northern part of Tashkent.

[58] Russian linguist Evgenii D. Polivanov has argued that there could be no stone constructions in pre-Islamic Tashkent, which led him to suggest that "Tashkent" means "city of the Arabs," from the word *Tazhik*, which at the time was used to refer to the tribes of northern Arabia. A series of scholars,

Over the centuries that followed, Tashkent changed hands many times and it was nearly abandoned by its population after its destruction by Genghis Khan's army in 1219, until it came, in the 14th century, under the rule of the Timurids. The Timurid period saw the construction of several monumental buildings and mausoleums and the development of the typical Central Asian Islamic city structure, which was characterised by a dense cluster of courtyard houses accessible from dead-end streets and by a network of long-distance trails leading radially into the city centre. In the 16th century Tashkent fell into the hands of the Shaybanids and became part of the Khanate of Bukhara. The Shaybanids ruled over it for two centuries until 1784, when Mukhammad Iunus Khodzha, ruler (*hakim)* of one of the city's four independent districts (*daha*),[59] extended his rule over the entire Tashkent and chased them away. Nevertheless, Tashkent did not remain independent for long, for in 1810 the Khanate of Kokand annexed the city. The Kokand rulers built a new outer wall, which separated the city from the orchards and kitchen gardens (*mauza*) that encircled it and which enclosed the new citadel (*Urda*) that had in the meantime been constructed on the east side of the Ankhor canal.[60] However, Kokand rule also signalised the beginning of a period of frequent wars and political instability which led to several rebellions and created a certain power vacuum both in the city and in the region at large.[61]

The Russian Empire, which already since the 17th century had established an indirect presence in Central Asia by means of trading relations between several of its southern cities and local merchants, decided to take advantage of this situation and became increasingly interested in taking over the region for a series of political, economic, and strategic reasons. For years the Russian Empire had been making efforts to control the vast Kazakh steppe in order to protect its newly conquered territories in southern Siberia and northern Kazakhstan from attacks by various nomadic tribes, the Emirate of Bukhara, and the Khanate of Khiva. At the same time, St. Petersburg had been struggling to establish its influence over Central Asia in order to ensure that the British Empire, its competitor in the so-called "Great

---

including the contributors to the Encyclopaedia of Islam, have rejected this etymology (Barthold, Bosworth and Poujol 2000, 348).

[59] From the 18th century onwards, Tashkent had been divided into four independent districts (*daha*): Kukcha, Besh Agach, Sibzar, and Shaikhantaur. Each *daha* was subdivided into *mahalla*s and occupied one section of the outer wall, in which it had access to three gates.

[60] A feature of several Central Asian cities, *mauza* (or *mavze*) encircled the whole city in a broad ring – 4 to 6 km wide – of well-watered agricultural land. *Mauza* were divided into allotments of various sizes and configurations and belonged to the *mahalla*s, who allocated them to the residents of the city, and in particular to those who lived in the heavily built-up central districts.

[61] For more on the pre-19th century history of Tashkent, see Sokolov (1965) and Khurshut (1992).

Game," did not make any commercial and military inroads into the region.[62] However, it was not until the 1860s that the drastic increases in world cotton prices as a result of the American Civil War (1861 – 1865) and the political necessity to compensate for the defeat suffered in the Crimean War (1853 – 1856) turned the tables in favour of those advocating a military conquest of the region. By 1864 the Imperial Russian Army had conquered the Kazakh steppe and had built a line of forts along the northern border of what is today Kyrgyzstan. In September that year, Major-General Mikhail G. Cherniaev (1828 – 1898),[63] on his own initiative and against direct orders from St. Petersburg, conquered Chimkent and decided to move south towards Tashkent. Despite an initially unsuccessful assault in October of the same year, Cherniaev eventually conquered Tashkent ten months later, on the night of June 26-27, 1865 (June 14-15, 1865 O.S.).

At that time, Tashkent was a well-developed city with an estimated population of approximately 76,000 inhabitants (Kostenko 1881), presenting five structural and functional elements typical of Central Asian Islamic cities: i) the Friday Mosque; ii) the bazaar; iii) the Citadel; iv) the compact earthen wall which physically separated urban from agricultural land; and v) residential clusters segmented into housing quarters, known as *mahalla*s, built around family bonds and ethnic, religious, and professional relationships (Giese 1979, 146).[64] *Mahalla*s constituted the smallest local unit of self-administration and had their own standards and rules. Each *mahalla* was ruled by an elected Council of the Elders, which was presided by an *aksakal*, and had its own commercial and cultural centre which was located on the main street and included a water pond or well, a small-scale market, a teahouse (*chaikhana*), bathing facilities, and a mosque which normally was not entitled to host the Friday prayer. All these covered all the daily needs of the community and allowed the inhabitants to live tightly interwoven and to collectively navigate all the important events of their social and individual lives alike.

Another characteristic feature of the Islamic cities of Central Asia was their chaotic layout. With the exception of the main streets, which formed a radial structure running from the wall gates towards the market which was situated in the city

---

[62] The "Great Game" refers to the political and diplomatic confrontation between the Russian Empire and the British Empire over Afghanistan and Central Asia which lasted for most of the 19th century. For more on the "Great Game," see Hopkirk (1990) and Sergeev (2013).

[63] For more on the life of Cherniaev, who later came to be known as the "Lion of Tashkent," see MacKenzie (1974).

[64] According to Marfua Tokhtakhodzhaeva, pre-Russian Tashkent consisted of 280 *mahalla*s with 13,260 households, eight madrassahs, eight bath houses, 4,548 shops, 116 mills, and many small handicraft workshops. The city's central bazaar covered roughly 16 ha and housed 16 caravanserais and 2,400 stalls (Tokhtakhodzhaeva 2007, 105).

centre, the rest of the city was a maze of narrow streets and blind alleys formed by the external adobe walls of the city's one-storey housing units. A door in the wall allowed entrance into the traditional courtyard, where all social life took place in a private setting, away from the public eye, and where vegetables and trees grew, providing the inhabitants with food and, in the summer, with much needed shade and coolness. The following account, provided by Danish military officer and explorer Ole Olufsen (1865 – 1929), describes fairly well what Islamic Tashkent must have looked like:

> When driving through a town or village nothing is seen but the continual yellowish grey clay-wells; it is as if one were in a ravine of erosion in the loess, in a narrow ditch; for all streets are narrow and unpaved, and the sides of the ditch, the clay-houses, which lean one against the other look as if they had shot up from the earth like mole-hills; one should not think that they had been built on the soil…The streets are always incredibly narrow, although the high-wheeled carriages (arba) of the natives are rather broad, and if two arbas meet each other, it often happens that the one cannot proceed, until the other has been drawn into a side-street…Windows looking upon the street are not seen, but at most a small trap-door coveted with a wooden shutter or a small hole in the wall so high up that no profane eye is able to look through it; there are no balconies, no verandas; everything looking upon the street is shut. Only low, narrow doors lead into the houses, and it is often difficult to catch sight of them, if a woman or another rare phenomenon does not appear in the opening (Olufsen 1911, 305).

After the Russian Empire conquered Tashkent, this setting was rejected by the Russian policy makers, who deemed it inscrutable, confusing, and backward, and instead decided to build a new – quintessentially European – town alongside the pre-existing Islamic one, in a manner widespread at the time across the colonised world. In the long-term, a parallel city was meant to manifest the power and prowess of the Russian Empire, but in the short-term this decision aimed at catering the needs of the military and administrative staff, as the authorities were concerned that, due to its lack of European comforts, Islamic Tashkent would be an undesirable destination to potential Russian colonists (Fick 1971, 174). Accordingly, the decision was taken to organise the Imperial Russian Army's temporary barracks, situated outside the walls of Tashkent to the east and across the Ankhor canal, into a permanent settlement. In this direction, in 1866, the city's first administrator D. I. Romanovskii commissioned military architect M. N. Kolesnikov to design a grid

street plan, and soon after the first houses for Russian bureaucrats, a club, and several shops were constructed (Sahadeo 2007, 24).

A similar strategy was followed in all the already existing cities of Central Asia after their conquest or annexation by the Russian Empire. New European towns, more or less distinctly separated from the old Islamic ones, were established in Andizhan, Khodzhent, Kokand, Namangan, Osh, and Samarkand, whereas in Bukhara and Margelan their European counterparts, Kagan and Novyi Margelan, respectively, were established more than 10 km away from the old towns due to local unrest.[65] In territories inhabited by nomadic populations, and as such bereft of cities, military outposts like Vernyi (est. 1854), Pishpek (est. 1868), or Ashkhabad (est. 1881) served as starting points for new cities, with their layout corresponding to the general conception of Russian colonial cities at that time, namely a regular pattern of chessboard or radial design; wide streets lined on either side with rows of trees and small irrigation ditches; and one-storey houses in gardens separated from each other by low mud walls (Giese 1979, 152).

Tashkent's European part would have most probably remained an ordinary Central Asian colonial town had it not become the capital of the Governor-Generalship of Turkestan upon its establishment in November 1867. As historian Svat Soucek has argued, the choice of Tashkent made sense on several counts:

> Its climate is salubrious and, although continental, without the extremes characteristic of places farther north or south; its location, at first sight somewhat eccentric, was quite central within the province of Turkestan; situated near the right bank of the Syr Darya, it also lay in an area where the worlds of historic Transoxania to the south and of the Kipchak steppe to the north met and overlapped; on the ethnolinguistic level, this was reflected in the Sart population of the city, which spoke Turki Turkic or Tajik Persian, and the Kazakh population of the countryside, which spoke Kipchak Turkic; this overlapping was also visible in the historic role of Tashkent as one of the crossroads of long-distance trade routes. The fact that its prominence had previously never equalled that of Bukhara or Samarkand may similarly be ascribed to this position in a transition zone: for although Tashkent benefited from the contact with the steppe nomads, it was also too exposed to their

---

[65] In these latter cases, a separate development of the two town bodies soon became apparent and, in contrast to the other cities mentioned here, they did not grow together into one unit. Today, Kogon, located 12 km south-east from Bukhara is home to Bukhara's main railway station, whereas Novyi Margelan – renamed Skobelev in 1907 and Fergana in 1924 – is today the centre of the Fergana province.

unpredictable incursions and tribal movements, and to occasional contests between the rulers of Transoxania and the Kazakhs and other nomads, to become a major metropolis. Once peace was solidly established by Russia, however, Tashkent quickly surpassed all other Central Asian cities (Soucek 2000, 202-203).

Despite the promising future that lied ahead, in its early days the European part of Tashkent was hardly impressive. What the first Governor-General of Turkestan Konstantin P. Kaufman (1818 – 1882) found upon his arrival in November 1867 was less a city and more a military encampment with a church, "desolate and treeless" (MacKenzie 1969, 212). Resolved to build a city that would manifest Russian imperial power and European culture and that would operate as a beacon of modernity, in 1870, Kaufman and his associates approved the plans of military engineer A. V. Makarov to develop the land east of the Russian settlement in such a way as to turn it into a "little Petersburg" (Buriakov, et al. 1965, 34). St. Petersburg embodied the idea of regularity, symmetry, order, and control (Wortman 2006, 27), and transposing a miniature version of it against the chaotic layout of Islamic Tashkent would highlight the Russian Empire's mission as a model of progress (Sahadeo 2007, 36); not unlike Marrakesh or New Delhi, Tashkent was meant to become a "theatre of colonial domination" (Jyoti 1992, 83).[66]

Within 15 years, the dual nature of Tashkent had become quite evident: the Islamic city, with its one-storey adobe houses and narrow winding streets, had been given a reflection on the east bank of the Ankhor, a distinct new city with European urban planning and architecture constructed in line with the latest scientific and technological achievements. The fact that Tashkent is situated in the fertile Chirchik valley with several canals flowing through its territory allowed Russian planners to engineer nature in such a way as to transform Tashkent from a desert city into a garden one by introducing vegetation that had previously been unknown to the region. Before long, Russian Tashkent streets were lined with poplars, mulberries, acacias, and chinars and the European bureaucrats could relax and get away from the heat and desert climate of Tashkent in the many gardens and parks – both public and private – that started at that time spreading across the city.[67] Simultaneously, hotels, banks, and shops – combining Art Nouveau, Gothic, and Baroque elements with local building materials – were built along the newly constructed avenues which radially spread outwards from the central Kaufmanskii

---

[66] For more on the nexus between urbanism and colonialism, see King (2007 [1976], 2015 [1990]) and Legg (Legg 2007). For more on the Islamic city as a colonial enterprise, see AlSayyad (1992).
[67] For more on this, see Chapter 4.

Square, a direct reference not only to St. Petersburg but also to Paris, where Baron Haussmann's renovation was at the time in progress.

For the rest of the 19th century, Tashkent remained the seat of the colonial administration and the most important city in Central Asia, which, quite expectedly, led to a steep increase in population numbers and a surge in political, economic, and cultural activity. In addition to the establishment of numerous enterprises, banks, and scientific institutions, the region's favourable climate persuaded thousands of Russian colonists to move to Tashkent, essentially doubling the city's population. Interestingly enough, this did not have an immediate impact on everyday life in the Islamic city, where self-governance and the limited interference of colonists allowed the indigenous population to largely preserve their own lifestyle and institutions (Tokhtakhodzhaeva 2007, 103). By the turn of the century, however, the demolition of the city walls, the opening of new streets that intersected the Islamic part, and the construction of a tram system that opened in 1906 begun to break down the separation between the Islamic town and its European counterpart. Accordingly, some wealthy Uzbek merchants moved to the new town, whereas several hundreds of Russian workers and employees, seeking cheaper accommodation, decided to live across the Ankhor. By 1910, Tashkent, with a population exceeding 200,000 inhabitants, had become a major city of the Russian Empire, and its cotton production critically contributed to the latter's economy.[68]

The political and economic significance of Tashkent was further enhanced by its railway connection with the rest of Central Asia and subsequently with the Russian Empire proper. The Trans-Caspian railway reached Tashkent in 1898, effectively connecting the city with the Caspian coast, and in 1901 work began on the Trans-Aral line which would connect it with Orenburg, a feat accomplished in 1906. The completion of the Trans-Aral railway was of paramount strategic and economic importance for Tashkent and Central Asia at large, as it tied the distant Governor-Generalship more firmly to the Russian metropole, allowing troops to be rushed to the region and raw cotton to be exported to Moscow's textile mills (Morrison 2012). At the same time, however, it facilitated access to the region for large numbers of poor Slavonic populations from the Russian Empire's Western provinces, who had started arriving to Tashkent – albeit in smaller numbers – already in the 1880s, much to the demise of the local authorities. This "underclass" (Morrison 2015), driven out of their hometowns as a result of economic or political forces, initially settled on the edge of the Russian city, which was being constructed at the time.

---

[68] For more on Tsarist Tashkent, see Nil'sen (1988).

Given, however, the challenges they posed to the colonial enterprise, as they were rendered to be undermining the civilising mission of the Empire, Tsar Alexander III (1845 – 1894; reign: 1881 – 1894) signed a decree in 1886 which limited them to the rural areas of Russian Turkestan.[69]

In addition to the development of this proletariat, the scarcity of building materials and the bad financial situation of the late Russian Empire meant that the building of Tashkent did not progress as planned, and that, rather than a new St. Petersburg, parts of European Tashkent soon started looking like some of the Empire's poorer cities. At the same time, the dynamics between the various ethnic and social groups that had come to constitute the population of Tashkent had led to several demonstrations and protests. In addition to the 1892 riots that broke out in the Islamic part of Tashkent against sanitary measures taken by the Russians during a cholera epidemic,[70] the 1906 rebellion of Tsarist officers in Sveaborg and the 1916 Central Asian anti-labour mobilisation revolt affected Tashkent as well and were the principal events preceding the outbreak of the 1917 Revolution. The Revolution and the subsequent Russian Civil War (1917 – 1922) brought chaos to Central Asia, which resulted in an outmigration of substantial volumes of Russian settlers and the influx of more poor refugees fleeing the war and famine that were ravaging some parts of Russia.

During the years of the Revolution and the Civil War, Tashkent remained the focal point of political activity in Turkestan, with the local All-Muslim Government and the pro-revolutionary Tashkent Soviet, consisting primarily of Russian railway workers, struggling for power.[71] With the support of Bolshevik troops and settlers, in 1919 the Tashkent Soviet defeated the Muslim government, and by 1923 the Basmachi resistance movement had been crushed as well.[72] In the aftermath of the Civil War, Tashkent lost some of its symbolic importance, particularly after Soviet officials designated, in 1924, the more appropriately Central Asian city of Samarkand, rather than the more Russian city of Tashkent, as the first capital of the newly established Uzbek Soviet Socialist Republic. This development briefly worked in Tashkent's favour, as in the first ten years of Bolshevik rule, the state largely held off making a direct assault on the city's built environment and on its cultural or social institutions, but when Tashkent regained its official claim as the political centre of the republic in 1930, the city started changing radically and

---

[69] For more on peasant settlers and Russia's "civilizing mission," see Sahadeo (2007), especially Chapter 4 (pp. 108-136), and Morrison (2015).

[70] For more on these riots, see Sahadeo (2005).

[71] For more on Muslim politics in Tashkent at the time of the Revolution, see Khalid (1996).

[72] For more on the Basmachi movement, see Olcott (1981) and Sonyel (1990).

became "a symbol of the Soviet Union's march toward the future and toward communism and a sign that attitudes toward Uzbekistan and its inhabitants were changing quickly" (Stronski 2010, 10).

Socialist Tashkent

In the aftermath of the 1917 Revolution, architecture and urban planning in the early Soviet Union became informed by architectural constructivism, a spin-off of Russian Futurism. Constructivist architects, most prominent among whom were Moisei Ia. Ginzburg, Ivan S. Nikolaev, and the three Vesnin brothers – Leonid, Viktor, and Aleksandr – aimed at meeting the need for new buildings – and especially housing – by advocating a minimalist design with a heavy emphasis upon function and rational planning. The majority of the population of Soviet Russia at the time lived in crowded collective apartments (Rus. *kommunal'nye kvartiry* or *kommunalki*) located in dilapidated 19th century houses, and constructivist architects intended to provide these masses with decent socialist housing while at the same time revolutionising living conditions. In that direction, they made full use of the technological advancements of the time in order to construct not only buildings, but also ideology, thus forming the spaces in which the struggle against petty household chores would take place and the new socialist utopia would be achieved. Central in achieving these goals was the idea that housing was to act as a sort of "social condenser,"[73] which would break down perceived social hierarchies and diminish petit bourgeois sentiments among the population, thus creating socially equitable spaces.[74]

In addition to the planning of buildings and internal spaces, constructivists had also attempted to suggest plans for entire cities, based on the same ideological criteria of building socialism, internationalism, and egalitarianism.[75] Not unlike the buildings they designed, they rendered the city as an incubator of social transformation and as a vital force fostering the collective rather than individual identity, but their preoccupation with modernity and progress came at a price for the ancient cities of

---

[73] For more on the social condenser, see the 2017 special issue of the Journal of Architecture entitled "The social condenser: a century of revolution through architecture, 1917-2017," edited by Michał Murawski and Jane Rendell.

[74] This is most evident in the design of one of the more well-known constructivist constructions, the NarKomFin building in Moscow (arch. M. Ginzburg, 1932), which, more than simply providing living space, was an intervention in the everyday life of its inhabitants. With access to facilities such as crèches and communal kitchens and laundry, tenants were encouraged to adopt a more socialist and – by taking women out of their traditional roles – egalitarian way of life. For more on the NarKomFin building, see Buchli (1999).

[75] Their approach towards achieving these goals differed, for they had been divided in two camps, the "urbanists" and the "disurbanists." For more on this, see Chapter 4.

Central Asia. Similarly to tsarist policy makers, Moscow- and Leningrad-based constructivists deemed the structure of the Islamic cities and the vernacular architecture of the region backward and feudal,[76] which in many cases led to the destruction of substantial parts of cities (Azzout 1999, 161). Tashkent was not spared from this offensive, and while the city's most important architectural monuments were preserved and restored,[77] by the late 1920s, most traditional markets had been closed down and increasing pressure was being exerted on the living quarters of the Islamic part of the city, with the aim of tackling the existing ethnic and social inequalities by means of modernising and subsequently unifying the city into a single spatial and functional whole.

In that direction, by the mid-1930s, the Islamic part's main roads had been paved and urban public transport had become available, communication infrastructure had been installed, several new housing blocks had been constructed, and the entire city had been electrified. In the meantime, the European part had also expanded, as industrialisation and a shortage of available housing had triggered intensive construction of public and residential buildings. In 1930, its administrative and spiritual heart, the Sobornaia Square, was reconstructed, which involved the demolition of the Cathedral of the Transfiguration of the Saviour and the restructuring of the former residence of the Governor-General of Turkestan, known as the White House, into the new Government House (Stronski 2010, 24, 37-38). Three years later, calls for an increase in parkland and an expansion of irrigation canals led, among other changes, to the demolition of the Voskresenskii Market, the main marketplace of Tashkent's European part, and its replacement by a small park, named Theatre Square, although the theatre that gave the square its name was not completed until 1948 (ibid., 39).

By that time, constructivism had lost its prominence and had become replaced with socialist realism as the official artistic style of the USSR; accordingly, constructivist architecture was soon replaced by Stalinist architecture.[78] Where constructivism advocated a minimalist design with a heavy emphasis upon functionality and rational planning, Stalinist architecture signalised a conservative turn which

---

[76] It is noteworthy that Russian and Soviet scholars, unable to shed off their ideological mantle, have paid little – if any – attention to the structure of Islamic cities, and instead have mostly identified them as feudal or medieval, liberated from backwardness or oppression by Imperial Russia and the Soviet Union, respectively. For a review of the study of pre-Soviet Central Asian cities by Russian and Soviet scholars, see Komatsu (1994).

[77] For more on initial stages of elaboration of policies for the preservation of cultural wealth in Soviet Central Asia in the aftermath of the Revolution, see Gorshenina (2013).

[78] For the rise of Stalinist architecture, see Day (2003). For a discussion of the decline of constructivist and modern architecture and the purges of architects from the profession and Soviet society at large, see Hudson (2015).

incorporated neoclassical and gothic forms. However, the differences between the two were not limited to aesthetic forms. While constructivists aspired to create a society which was built around the community rather than the individual, socialist realism marked a return to traditional Russian values, with the family at its very centre. And while constructivism aimed at building internationalism and egalitarianism by erasing the material manifestations of "backwardness" and "feudalism" and by erecting uniform buildings across the USSR without any reference to ethnic or other identity, socialist realism incorporated historical and ethnic aspects into architectural production. Socialist realism, then, aligned architectural production with nation-building practices and the aspirations and processes of the Soviet Union's nationalities policy, highlighting in the clearest way the paradox that characterised the latter: dividing the population into ethnic groups in order to build internationalism.

Indeed, despite the fact that they considered nationalism to be bourgeois and "*typical* and normal for the capitalist period" (Lenin 1964, 397; emphasis in the original), the members of the Council of People's Commissars (Rus. *Sovet Narodnykh Komisarov* – SovNarKom), the government institution of the early Soviet Union, believed that the establishment of ethno-cultural groups and the institutionalisation of a common language for each of them constituted the most efficient way to introduce the country's many different and – ethnically and linguistically – diverse peoples to socialist ideas. As Vladimir I. Lenin, Chairman of the Council, himself put it, a native language was necessary to "polemicize with 'their own' bourgeoisie, to spread anticlerical and antibourgeois ideas among 'their own' peasantry and burghers and to banish the virus of nationalism from their proletarian disciples and their own minds" (quoted in Slezkine 1994, 418). Following the orders of Iosif V. Stalin, who between 1917 and 1923 acted as People's Commissar for Nationalities Affairs, Soviet ethnographers were dispatched all over the Soviet Union in order to assess and classify the local population into different ethnic groups.[79]

Upon the completion of this task, the national delimitation and the demarcation of borders in Central Asia begun in 1924.[80] Theoretically, each ethnic group was

---

[79] For more on how former imperial ethnographers and local elites provided the Bolsheviks with ethnographic knowledge that shaped the very formation of the new Soviet Union, see Hirsch (2005).
[80] The aim and rational behind the demarcation of borders in Central Asia in the years that followed the 1917 Revolution has sparked fierce debates among Sovietologists. On the one side, scholars such as Charles Kurzman (1999) and Olivier Roy (2011 [2000]) have argued that the delineation was a divide-and-rule policy implemented by Moscow in order to control the peoples in this vast and remote region; on the other side, scholars such as Yuri Slezkine (1994), Adrienne Edgar (2004), and Francine Hirsch (2005) have suggested that the goal of the Bolsheviks was not to divide the population, but rather to

supposed to be delineated according to linguistic and ethno-territorial principles and each resulting territorial unit was to be named after the numerically dominant ethnic group. Thus, the territory that until then had consisted of the Turkestan Autonomous Soviet Socialist Republic, the Kirghiz Autonomous Socialist Soviet Republic, the Bukhara People's Soviet Republic, and the Khorezm People's Soviet Republic by the mid-1930s had been divided into five Soviet Socialist Republics (SSRs): the Turkmen (1924), the Uzbek (1924), the Tajik (1929), the Kazakh (1936), and the Kirghiz (1936).[81] After these new national-territorial units had been developed, it was the turn of a new national culture to be constructed in each of them, most evidently reflected in the attribution of a language for each ethno-cultural group, which was then followed by a policy of training and appointing representatives of titular nations to positions in local government and management, a process which came to be known as *korenizatsiia*.[82]

Prior to the introduction of these policies, the notion of a national identity was unknown to the local population. Rather, the various peoples of the region saw themselves as falling into two wide categories based not on their ethnic background but on their lifestyle: the settled city dwellers, colloquially known as Sarts,[83] and the nomads. Thus, when the Bolsheviks started their national delimitation campaign, they had to support it with intense national identity-building in order to teach the local population to think along ethnic lines, in accordance with territorial and linguistic ideas of nationhood.[84] Architecture and urban planning were rendered as important tools to support this process, and by the late 1930s, the Soviet planners in Moscow had invented a "national" architectural style for each Central Asian SSR, which had aimed at creating the illusion of tradition and continuity; as Paul Jones has argued, architecture is central to the cultural self-understanding of the nation-state because it provides "an opportunity for emerging states to give material form to their political power, while at the same time representing one way in which the

bring it together, under the internationalist umbrella of class struggle and socialist ideals. For an example of the debate, see Adrienne Edgar's (2002) critique of Olivier Roy's (2011 [2000]) and Paul Georg Geiss's (1995) overemphasis of the unique artificiality of Central Asian nations. What happened, however, was somewhere in between these two approaches, incorporating aspects from both, as the national delimitation process eventually came to demonstrate certain aspects of a policy of divide-and-rule, manifested most clearly in the numerous Tajik enclaves in the Uzbek and Kirghiz SSRs and the Uzbek enclaves in the Kirghiz SSR, in the merging of the Karakalpak ASSR with the Uzbek SSR, as well as in the diverse modified alphabets introduced for the different Turkic languages spoken in the region.

[81] This process was accompanied by collectivisation and the forced sedentarisation of nomads, policies which in many instances were resisted vehemently by the population. For collectivisation in the steppe of Kazakhstan, see Pianciola (2004).

[82] For more on *korenizatsiia*, see Martin (2001).

[83] For more on the term Sart, see Barthold and Subtelny's (1997) entry in the Encyclopaedia of Islam.

[84] For more on this, see Edgar (2004). For more on the making on the Kazakh and the Uzbek nation, see Ubiria (2016).

national community [is] presented as a continuous and 'natural entity'" (Jones 2011, 49).

In an attempt to provide the Uzbek SSR with a rich past, Soviet policy planners chose to attribute Timurid heritage to the republic, despite the fact that it is the Shaybanids that have been historically considered to be the ancestors of modern Uzbeks, because, as historian Beatrice Forbes Manz has written, "in the competition among Soviet republics for the glories of the past, name recognition was a crucial issue" (Manz 2002, 17). Accordingly, the architectural forms found in the 15ᵗʰ century public and religious buildings of Samarkand and Bukhara – such as arcs, grilles, vaults, and domes – and the traditional materials and techniques employed – such as glazed brick, wooden coverings, gypsum, and clay-framework constructions – were blended with the neoclassicism of socialist realism and produced a local current which dominated the cities that were constructed or expanded at the time. Simultaneously, several techniques used by Islamic architects, such as the decoration of the walls of religious buildings with recitations from the Koran, were also used by Soviet architects, albeit reworked in order to fit into the atheist Marxist-Leninist context: rather than the Koran, they used lines from the Holy Book of their own ideology, Karl Marx's *The Capital.* Soviet planners wanted national architecture to be a portrait of local history and culture, albeit purified from religion and reflecting socialist values, and to that end they used tradition as "an ideological weapon against itself in the continuing attempt to convert local people to atheism and socialism" (Sprague 2002, 515).[85]

The incorporation of such "national" forms and features in architectural production neatly reflected the socialist realist principle of "national in form, socialist in content." The Soviet state aimed at building a national identity which would be confined within the larger socialist context and at the same time at creating an urban space which would simultaneously justify the rule of the Communist Party in the republic and would legitimise Moscow as the unrivalled arbiter of social change throughout the Soviet Union (Giese 1979, 146). By imposing its own architectural principles, Moscow wanted cities to remind the population that power was not concentrated at the national, but rather at the supranational level; as James Bell has put it, "Russified, neoclassical architecture…celebrated the peculiar status of

---

[85] In addition, these techniques were supplemented by the invention of decorative symbols, dry of any unwanted connotations. Two symbols in particular, the rosette and the cotton bud, were introduced to local architectural production by architect Sergei Polupanov and immediately became popular, for they were simultaneously socialist and national, representing the role of Uzbekistan as a provider of agricultural products for the USSR (Stronski 2010).

Uzbekistan as a subordinate state – and a 'lesser nation' – within the hierarchy of the Soviet multinational polity" (Bell 1999, 192).[86]

Nevertheless, the complete sovietisation of Tashkent was hindered by the city's pre-Russian past, as the Islamic part – with its dirt alleys and adobe housing quarters, lack of modern comforts, and, just as importantly, gender separation and religious undertones – undermined in the eyes of the Soviet planners everything that socialism was supposed to have brought along. As Russian geographer Nikolai N. Mikhailov has put it:

> [The Islamic part of Tashkent is] an ant-heap of clay huts with no windows facing the street, flat roofs, a labyrinth of narrow streets as tortuous as the path of a worm in a tree-trunk; the sinister reticence of the Mussulman family; the lack of rights for women before men, and men before the authorities; nests of white storks on the minarets of the mosques; the confused and noisy activity of the oriental bazaar (Mikhailov 1939, 294).

While the authorities had on many occasions considered the option of completely demolishing the Islamic part, the housing it provided – however substandard – was indispensable; with a continuous influx of people from other parts of the Soviet Union, Tashkent was in a constant need for more housing, but the republic's limited resources did not allow the Uzbek state to provide dwellings to all who needed it. Hence, since they could not raze it, the authorities decided to make the modernisation of the Islamic part of the city the central component of the 1937-1939 General Plan for the Reconstruction of Tashkent. One of the first actions taken in that direction was the extension of the European part's road network into the Islamic city, which began in 1943 with the reconstruction of the road that had hitherto been known as Dzharkucha Str. into Alisher Navoi Str. (Castillo 1997, 43). As part of this project, hundreds of indigenous structures were demolished and were subsequently replaced with modern three- and four-storey apartment buildings known as *stalinki*. Nevertheless, despite their monumental façades, their spacious and luxurious apartments, and the fact that they were intended to serve as housing for the local elites, most of these buildings were infamous for their low quality of construction, as tight timeframes, corruption, sloppy construction work, and a lack of modern building materials resulted in an image much different to the one initially envisaged.

---

[86] For more on the position of the Central Asian SSRs within the Soviet Union, see Slezkine (1994), Khalid (2007b), and Adams (2008).

This situation further deteriorated because of WWII which had in the meantime broke out. Due to its distance from the Eastern Front and its already developed industry, Tashkent became the destination for the Soviet Union's heavy industry, which had to be relocated from Western Russia due to the advancing German army. Hence, trains that would otherwise deliver construction materials from factories across the Soviet Union to Tashkent were reserved for the relocation of these industries, which meant that local constructors had to resort to using adobe or burnt mud bricks. An even more pressing matter, however, was the fact that the city became the destination also for thousands of people who were fleeing the invading Germans.[87] As a result, the city's population and its land area increased sharply during the War, as agricultural land was taken over in order to create new industrial zones and to provide accommodation for the evacuees. However, the republic was not in a position to provide dwellings for all and hence most of the new housing was constructed by individuals for their own private use, who were encouraged to do so by the Soviet state itself (Tokhtakhodzhaeva 2007, 108). Individual construction remained the primary source of new housing and the main drive behind the expansion of the city throughout the 1940s and early 1950s, when Rabochii Gorodok, in the south-east, Badamzar, in the north, and the southern parts of Beruni Str. and Shota Rustaveli Str., south of the city centre, were developed. The process of the construction of individual housing in these new districts has been summarised by Marfua Tokhtakhodzhaeva as follows:

> an area was singled out for building on farmland contiguous to the then border of the city; a plan of construction was drawn up; roads and communications engineering were laid; plots were allocated; public buildings – schools, kindergartens, shops, health centres – were put up. Plots were granted to residents of the city who needed housing for a period of 35-40 years (the plan at that stage was that some of the new buildings would eventually be taken down) by enterprise or by public authority and were officially registered, and building materials were then made available at discounted prices (Tokhtakhodzhaeva 2007, 108-109).

Due to the absence of a centralised and organised construction industry, the individual houses were constructed with traditional materials, such as unfired clay bricks and various varieties of timber. However, this did not affect the quality of the construction, as builders were required to work in accordance with the established regulations for standardised housing units, and their fulfilment of this obligation was subject to fairly rigorous control. While this measure caused a certain

---

[87] For more on the evacuation to Tashkent, see Manley (2009).

uniformity in the architectural profile of the districts, it also guaranteed a degree of quality control which was to save these buildings from serious damage in the 1966 earthquake (ibid.). Nevertheless, the realisation that the construction of low-rise individual housing was far from cost-effective, as those buildings occupied valuable land, led to the establishment of state house-building enterprises, which revolutionised the construction of housing and led to an extraordinary construction boom.

After Stalin's death, his successor, Nikita S. Khrushchev, attempted to address the Soviet Union's housing deficit by providing citizens, many of whom still lived in cramped *kommunalki*, with individual flats in new buildings constructed on a mass scale, at a low cost, within a short time.[88] In the case of Tashkent, this meant a decade of intense urbanisation, during which entire quarters of the Islamic part gave way to modern multi-storey apartment buildings and the total land area of the city increased considerably. Most noteworthy during this period is the expansion of the city towards the south-west, where the Chilanzar district was developed, consisting exclusively of newly constructed four- and five-storey brick apartment buildings arranged in *kvartaly*. In an attempt to compare the development of Tashkent to that of Moscow, Soviet propaganda organs referred to the Chilanzar district as "Tashkent's Cheremushki" (Rus. *Tashkentskie Cheremushki*), an analogy with the eponymous district of Moscow which in the 1950s became the site of the massive construction of affordable standardised high-rise apartment buildings known as *khrushchevki*.[89]

Most of this new housing was to be made available for the ethnic Uzbeks who lived in the Islamic part of the city as an incentive to move out from their traditional dwellings and into the modern socialist city; in the same way that "Uzbek peasants would eat with a knife and fork sitting at the table, wear European clothing, and adopt 'civilized' norms of social intercourse" (Khalid 2006, 238), it was expected that modern housing would facilitate and speed up their modernisation. However, the new apartments were from the very onset rejected by the local population as a result of the fact that they had been designed with the nuclear Slavonic family in mind,

---

[88] Between 1953 and 1970, 38 million apartments which housed 141 million people were constructed throughout the Soviet Union. For more on housing and urban development in the USSR, see Andrusz (1984). For more on Khrushchev's urban housing program, see Harris (2005, 2013) and Smith (2010).

[89] Initially expected to be only a temporary solution to the housing shortage, with a lifespan of 20 years, *khrushchevki* were low-cost, three- to five-storey apartment buildings constructed either of bricks or of prefabricated concrete panels. Apartments came in three types: one-, two-, and three-room, with an area of 30 m², 43 m², and 60 m², respectively. With the ceiling at between 2.5 and 2.7 m, depending on the series, they featured a kitchen, a bathroom, and either interconnecting or isolated rooms, and were infamous, especially these made of concrete panels rather than bricks, for their bad sound and thermal insulation.

without taking into consideration the customs, traditions, and practices of the traditional extended Uzbek family.[90] This is why most Uzbeks preferred to try to obtain an allotment on which they could build their own house or, if this was not possible, stay in their traditional dwellings in the Islamic part of Tashkent, thus further hindering the transformation of Tashkent into a quintessentially Soviet city.

Nevertheless, the state's quest for the sovietisation of Tashkent found an unexpected ally in the form of the 5.1-magnitude earthquake that shook the city at 05.22 on April 26, 1966 and the several weaker earthquakes that followed. Despite the earthquake's relatively limited force, the fact that its epicentre was in the very centre of the city and at a depth of 3-8 km resulted in massive destruction to property; in total, over one-fourth of the city was destroyed according to some estimates, including over half of the Islamic part and most other pre-Soviet buildings. This provided Soviet planners with an almost empty canvas on which they could redesign the city of the Soviet Man and Woman and hence "retell the story of Tashkent" (L. Adams 2010, 29). As importantly, it also gave the Soviet state the opportunity to further propagate its modernising campaign both locally and internationally by emphasising the hardy construction of socialist mass housing, which had indeed suffered little damage. To that end, a series of established Soviet journalists and writers were asked to record impressions of their field visits to post-earthquake Tashkent in a collection of essays and articles that was published shortly after. Among others, celebrated Uzbek writer Gafur Guliam (1903 – 1966), recipient of the USSR State Prize and People's Poet of the Uzbek SSR, has narrated an encounter he allegedly had with a local:

> I was talking to an older man, an old resident of Tashkent. 'Eh, son,' he said, 'Tsar Nikolashka,[91] it seems, deceived us all. Now look at the buildings that were constructed during his reign. Great boast and small roast. From the outside they shone, but from the inside they were all bricks and pebbles. One thrust and they fell, they collapsed. But admire the Soviet buildings. As if a mosquito had flapped at them with its wings. They stand! And how!' (Guliam 1966, 11; my translation from the Russian).

In addition to the metaphor and the symbolism attached to the comparison between the tsarist Russian Empire and the socialist Soviet Union, the former in ruins and

---

[90] It is noteworthy, however, that efforts had been made to accommodate residents of the same *maḥalla* together in the new apartment blocks, so as to preserve familial solidarity and traditional social habits. For the domestic conditions and the national traditions that should be taken into account in the design of multi-storey apartment buildings for large families, see Dzhabbar (1978).
[91] Diminutive form of the Russian name Nikolai; here it refers to the last Tsar of Russia, Nicholas II (1868 – 1918; reign: 1884 – 1917).

the latter standing proud, this excerpt, like most other essays and articles published in the weeks immediately after the earthquake, is an overenthusiastic tribute to Soviet engineering and urban construction; more than simply suggesting that Soviet cities could withstand a natural disaster, those narratives aimed at demonstrating that the Soviet Union could master nature. Focusing less on housing and more on other urban infrastructure systems in Tashkent, author Nikolai M. Gribachev, recipient of several state prizes and much later Chairman of the Supreme Soviet of the Russian SFSR (1980 – 1990), has similarly remarked, in the very same volume, that:

> The feeling is that in this city, one of the largest and most beautiful in the Soviet East, nothing extraordinary has happened. You get off at the airport, everything is in place, including seers-off with flowers. You ask: how is it with electricity, water, railway and urban public transport, these basic communications of urban life? The answer: 'All is well.' And it indeed is – as usual, electricity is supplied to houses and enterprises, the railway station stands in its usual form in its usual place, there is water in each tap, the telephone and the telephone operator work (Gribachev 1966, 15; my translation from the Russian).

The significance of the 1966 Tashkent earthquake for the Soviet state is perhaps best illustrated by the fact that the General Secretary of the Central Committee of the Communist Party of the Soviet Union, Leonid I. Brezhnev, the Premier of the Soviet Union, Alexei N. Kosygin, and several other senior Soviet officials flew to Tashkent on the very day the disaster stroke in order to supervise the recovery efforts. It is, thus, hardly surprising that in the massive reconstruction project that ensued little expense was spared, and money, building materials, and construction workers were quickly diverted from other SSRs to the Uzbek capital (Stronski 2010, 272).[92] It was this all-Union mobilisation, and especially the fact that Tashkent was essentially reconstructed by an army of thousands of construction workers who arrived to the city from across the Soviet Union, that made Tashkent quintessentially socialist in both essence and form. Many of these workers eventually decided to settle in the newly reconstructed city and start a new life there, thus increasing its population and further enhancing its internationalist character.

The post-earthquake reconstruction of Tashkent was based on a new urban plan which retained several of the suggestions of the earlier General Plan for the

---

[92] For more on serial mass housing and the post-earthquake rebuilding effort, see Meuser (2016), especially pp. 62-165.

Reconstruction of Tashkent. This time, however, the damage that the living quarters of the Islamic part had sustained during the earthquake facilitated the materialisation of the twin aims of transforming the Islamic part of the city into a modern urban structure and of eventually unifying the city. Destroyed housing was replaced and supplemented by newly constructed *khrushchevki* and – later – *brezhnevki*,[93] arranged in modern residential quarters which came to be known as microdistricts (Rus. *mikroraiony*);[94] parkland was expanded; the city's traffic flow was reorganised; a ring road was opened in 1969; and the construction of a metro system begun.[95] At the same time, the city expanded massively by the incorporation of several of the surrounding collective farms and villages into the city proper, and in this context, in the early 1980s, the Sergeli district, in the south of the city, was further developed and urban development reached the river Chirchik.

The connection of the residential areas in the periphery of the city with the centre was achieved by means of extensive bus, trolleybus, and tramway networks and a metro system. The system was fairly well developed and, according to the Tashkent Encyclopaedia, in 1981 the overground public transport network extended to an aggregate distance of 2,000 km, of which 1,025 km were covered by 118 bus routes, 223 km by 23 tramway routes, 222 km by 18 trolleybus routes, and 414 by 34 jitney minibus (Rus. *marshrutki*) routes. Tashkent's roughly 1,000 buses, 452 tramways, and 370 trolleybuses carried over 2.5 million passengers daily, whereas the – at the time – one-line metro system carried an extra 260 thousand. These areas of the city that were not adequately connected to the centre were serviced by 170 *marshrutki* which carried 30 thousand passengers daily, whereas 220 thousand more used the city's 3,100 taxis. The most popular mode of transport was the bus, accounting for 52% of the passengers carried daily, followed by the tramway (20%), the trolleybus

---

[93] The technological progress achieved in the 1960s and the 1970s allowed for a more advanced type of higher buildings with elevators and garbage chutes, larger areas, and, most famously, separate WC and bathrooms to be constructed. These *brezhnevki*, as they fast came to be known, became a generic term for buildings that offered apartments with an improved design (Rus. *uluchshennaia planirovka*). Unlike their predecessors that never exceeded the five-storey limit, *brezhnevki* ranged from nine to 12 storeys. With a ceiling height ranging from 2.6 to 2.75 meters, they came in one-room (33 to 39 m^2), two-room (48 to 53 m^2) and three-room (63 to 69 m^2) apartment layouts, with separate rooms, balconies, and loggias.

[94] Besides functioning as a living quarter, *mikroraiony* aimed at elevating the significance of peripheral areas and at diminishing the importance of the city centre. To that end, they provided for their inhabitants' daily needs through stores, laundries, cleaning and repair shops, restaurants, schools, and pre-school facilities, all within a radius of 150-200 meters (Reiner and Wilson 1979, 60), but were nevertheless well-connected with the city centre by means of affordable public transport networks. For the construction process and characteristics of *mikroraiony* in Bishkek, see Shatalova (2015).

[95] The Tashkent Metro was the first metro system to be built in Central Asia and the seventh to be built in the USSR. It officially opened in 1977.

(12%), and the metro (9%) (Tashkent Entsiklopediia 1983, passim).[96] With the Islamic part of the city now radically transformed and adequately connected to the rest of Tashkent, more and more ethnic Uzbeks moved into newly constructed apartment buildings throughout the city. By the end of the Soviet era, Tashkent, the fourth-largest city in the USSR, was no longer divided.

The post-socialist transformation of Tashkent and the role of the state

In August 1991, a few days after the coup d'état attempt in Moscow failed, Uzbekistan was "forced" to declare its independence,[97] which deprived the ruling elite of legitimacy (Matveeva 1999, 24). Hence, in order to cement their position in the new post-Soviet order, the administration of the first president of Uzbekistan, Islam Karimov (1938 – 2016), immediately launched a national identity-building campaign, which aimed at formulating and transmitting an "ideology of national independence" (March 2002), hoping, as Alexander C. Diener has argued, that it "would catalyse the kind of identities they desired" (Diener 2013, 2). Since the ruling elite were essentially the same individuals who had been building communism a few months earlier, they inevitably employed the same techniques they had been taught in the previous era. Central among them was the tested practice of narrating ideology and identity through architecture and urban space,[98] which involved the demolition and modification of dozens of Soviet era buildings and monuments and the construction of new ones that celebrated the Uzbek nation.

The removal of monuments and statues and the renaming of streets and places was a very characteristic feature of early post-socialist regimes across the post-Soviet space, for as Katherine Verdery has argued, "[d]ead bodies, of both flesh and bronze, were essential to symbolizing (and thus helping to produce) the end of socialism. The dismantling of the statues of socialism's founders…resembled the spectacle of public execution treated so vividly by Foucault" (Verdery 1996, 232). Accordingly, the first statue to go in Tashkent was the statue of Lenin, which was demolished in June 1992. Three different versions of the statue had stood on the central Red/Lenin

---

[96] For more on public transport in socialist Tashkent, see Ob"edinenie Tashgorpassavtotrans (1991) and Akimov and Banister (2011).

[97] The Uzbek SSR and the other Central Asian states had voted in favour of remaining part of the Soviet Union. The reluctant independence of the Central Asian republics has been thoroughly examined by political scientists with a regional interest in Central Asia, who have suggested that rather than an achievement, the fact that the Central Asian republics were "catapulted" towards independence (M. B. Olcott 1992) is "a by-product of the decision made by Boris Yeltsin…to dissolve the Soviet Union" (Fowkes 2002, 160) and a "decolonization by default" (Grant 1994).

[98] For other national identity-building processes in Uzbekistan, see Akbarzadeh (1996). For more on the patterns, processes, and practices concerning the national and cultural politics of architecture, urban planning, and identity in the post-socialist city, see Diener and Hagen (2013).

Square after the first of them had been erected there in 1936, and acclaimed travel writer Colin Thubron has offered what perhaps is the last eye-witness account of the last one:

> I crossed the swollen canal which had divided the czarist town from the native one, and entered the void which was once the largest square in the Soviet Union…It was less a square than a formless plain dotted by dwarfed monuments, ministries and gardens, and bisected by streets…Only the god himself, the biggest bronze Lenin in the world, threatening from his fifty-foot plinth behind belching regiments of fountains, tried to dominate these tremendous acres. But his gestures were meaningless. The clenched eyes, everybody knew now, were gazing into nothing. The scroll he clutched contained a terrible mistake…'They'll take him soon,' the [taxi] driver had said. 'But nobody knows what to replace him with.'…A month later, the statue of Lenin was gone (Thubron 2004 [1994], 201).

Thubron's taxi driver had been right: the lack of an equally potent symbol to replace Lenin resulted in the pedestal remaining empty for three months before the void was eventually filled by the Independence monument, a large globe with Uzbekistan positioned in its centre. This is perhaps why the replacement of the bust of another founding father of socialism, Karl Marx, which had been since 1968 standing on the eponymous square, was delayed until a worthy substitute had been invented. Indeed, very shortly after Marx's bust was removed in summer 1993, it was replaced by an equestrian statue of Amir Temur, which was publically revealed on August 31, 1993, the day before Uzbekistan's second independence anniversary.[99] Amir Temur (c. 1330 – 1405), known in the West as Tamerlane, was a Turkic-Mongol warrior, who, aspiring to restore the Mongol Empire of Genghis Khan to whose lineage he was related by marriage, led a series of successful – yet notoriously bloody – military campaigns, which resulted in the founding of the Timurid Empire in 1370; by Temur's death in 1405, his Empire stretched across most of West Asia.

As the erection of the statue suggests, the figure of Amir Temur has been central in the transformation of Tashkent and in the nation-building campaign of the Karimov administration at large, but the celebration of the great nomadic conqueror was far from a novelty introduced by the post-Soviet regime. Amir Temur and his descendants first achieved ideological prominence during the nation-building processes undertaken by the Soviet state in the 1920s and early 1930s. Aiming at offering the Uzbek people a glorious past, Soviet planners decided to downplay the

---

[99] For more on the transformation of Tashkent's "symbolic landscape" in the 1990s, see Bell (1999).

bloodbath and cruelty that accompanied the expansion of the Timurid Empire and instead highlighted the importance of the cultural and scientific contributions of Timurid rule, such as Timurid-era architecture; the scientific achievements of Ulugh Beg (1394 – 1449), Amir Temur's grandson, ruler, and renowned mathematician and astronomer; and the literary output of the Timurid-era poet Mir Ali-Shir Navai (1441 – 1501).

In 1941, Amir Temur's remains were exhumed by Soviet archaeologist and anthropologist Mikhail M. Gerasimov, who famously reconstructed Amir Temur's face, and, in the years that followed, a series of academic articles highlighting Amir Temur's cultural contributions was published. However, in the 1970s the winds changed and Amir Temur was revealed as a Central Asian ruler attached to Mongol traditions, whose campaigns and organisational activities were undertaken not for the benefit of the population, but to further the interests of the nomadic aristocracy who made up his following (Manz 2002, 19). Subsequently, Amir Temur fell out favour, but as the Uzbek national identity had already been constructed around him, "he could…not be omitted without threatening the position of cherished cultural icons" (ibid., 20).

In the aftermath of the dissolution of the Soviet Union, the fact that Amir Temur was both a recognisable historical figure and a national hero who was eventually oppressed by the Soviet apparatus rendered him an ideal symbol of independent Uzbekistan. Given, however, that, especially in the West, Amir Temur's reputation has been synonymous with his bloody military campaigns, the Soviet strategy of downplaying his conquests and violence and emphasising his cultural and scientific achievements was retained. This distillation of his deeds was necessary not only because it was supposed to become the basis on which the Uzbek nation was being constructed, but, as importantly, because the very persona of the reinvented national hero was used to symbolise and legitimise the Karimov administration, in a rare example of what Laura Adams has identified as a cult of personality by proxy (L. Adams 2004, 2010). In this way, the public was offered an object of admiration that was associated with President Karimov which, however, allowed him to remain more or less immune from criticism (ibid.).

The toppling of the statues of Lenin and Marx was not the only case in which Soviet era commemorative technologies were removed, as throughout the 1990s artefacts indicative of Tashkent's Soviet past remained under attack. Soviet era buildings did not manage to escape this offensive either, and several iconic examples of socialist architecture were demolished or modified, with reinforced glass and aluminium composite panels covering the minimalist façades of administrative, industrial, and

residential buildings. At the same time, newly constructed official buildings, such as the Timurid History Museum (arch. Abdukaxxor Turdyev, 1996), the city administration building (arch. Farkhad Tursunov, 1996), and the Supreme Assembly building (Uz. *Oliy Majlis*) (arch. Valerii A. Akopdzhanian, 1997), took on a distinctively oriental look, sporting colonnades and the blue domes found on Timurid era buildings, but it was mostly their monumental scale that expressed the ideology of the regime.

It is noteworthy that this first wave of de-Sovietisation was relatively coherent, as all monuments celebrating the Uzbek nation or commemorating ethnically Uzbek individuals were retained, regardless of the extent to which the latter were connected to the Soviet apparatus or the CPSU. Not only did these Uzbek-themed Soviet era artefacts contribute to the national identity-building policy of the new regime by essentially suggesting a certain historical continuity, but at the same they granted the ruling elite with legitimacy by manifesting their ties with the previous regime; as Shirin Akiner has put it, "the ruling elites, far from being discredited on account of their umbilical links to the Communist regime, gained additional legitimacy since they were regarded as symbols of continuity in a time of flux and uncertainty" (Akiner 1998, 20). In that sense, turning against former fellow CPSU apparatchiks by removing them from Tashkent's commemorative sphere would be oxymoron for the new ruling elites, as they themselves were part of the Soviet era *nomenklatura.*

In the late 2000s, a second offensive against the city's Soviet past begun, subtly carried out in the context of the preparations for Tashkent's 2200th anniversary, scheduled to take place in 2009. Whether de-Sovietisation was the result or the drive behind the decision to celebrate the anniversary cannot be said for sure. Nevertheless, taking into consideration the fact that the city had officially celebrated its 2000th anniversary only 26 years earlier, in 1983, it is relatively safe to assume that the anniversary was an attempt to organise a mass spectacle which would showcase the ethnic and civic national identity of Uzbekistan in a city that has been forged by the Soviet state and that is home to hundreds of thousands of non-Uzbeks.[100] In order to offer a scientific basis to the claim, the authorities allegedly dispatched a team of archaeologists from the Academy of Sciences of Uzbekistan to the archaeological site of Ming Urik, in the central Mirabad district,

---

[100] For more on mass spectacles in Uzbekistan, see Adams (2010).

who, after a few weeks of excavations, reported that evidence tracing the history of Ming Urik back to the 2nd century BCE had been unearthed.[101]

Preparations for the anniversary had started almost two years earlier with the renovation of historical religious buildings throughout Tashkent. In 2007, ISESCO designated Tashkent as one of the four Capitals of Islamic Culture for that year,[102] and on this occasion, the Uzbek state carried out a complete restoration of the 16th-century complex of religious buildings known as the Khast Imam (or Khazrat Imam) Ensemble, located in the formerly Islamic part of Tashkent, north of the Chor Su bazaar. The Khast Imam Ensemble had for decades been the nucleus of official Islam in Central Asia, as from 1943 it housed the headquarters of the Spiritual Administration of the Muslims of Central Asia and Kazakhstan (Rus. *Dukhovnoe Upravlenie Musul'man Srednei Azii i Kazakhstana* – SADUM), the official governing body for Islamic activities in the region.[103] Following SADUM's dissolution in 1990, its Uzbekistan branch was renamed Muslim Board of Uzbekistan (Rus. *Upravlenie Musul'man Uzbekistana* – UMU) and remained at the same site, based in the 16th-century Barakhan madrassah. Thanks to the 2007 restoration of the Ensemble, UMU moved into newly built headquarters, a series of other 16th century buildings were repaired and renovated,[104] and a new mosque, the Khazrat Imam mosque, was constructed on the premises.

The Khazrat Imam mosque was only one of a series of new mosques constructed and inaugurated by the Karimov administration. Despite the significant threat that mosques posed to the cautious secularism of his policies, President Karimov had felt compelled to support religion – one of the pillars upon which Uzbek identity is constructed – in order to keep it regulated by the state and away from extremist tendencies. As a result, recent years have seen the construction of some of the largest and most impressive mosques in Tashkent. Among other, the Shaikh Zainiddin mosque was opened in 1998 in the Kukcha district of the Old City at the site of the 15th century mausoleum of Shaikh Zainiddin (1164 – 1259); in 2014, the Minor mosque, the biggest mosque ever constructed in Uzbekistan, situated by the Ankhor canal next to the eponymous cemetery, was inaugurated by President Karimov

---

[101] For the use of archaeology and heritage for nation-building purposes in Central Asia, see Jorayev (2014).

[102] ISESCO (Islamic Educational, Scientific, and Cultural Organisation) is a specialised institution of the OIC (Organisation of Islamic Cooperation) in the fields of education, science, and culture.

[103] Among its other tasks, SADUM, which operated under strict state control, was charged with training clergy and publishing spiritual material (M. B. Olcott 1995, 197). For more on the effects of Soviet presence on Islam in Central Asia, see Khalid (2007a).

[104] Among these building is the 16th century Muyi Mubarak madrassah, which now houses UMU's library, which has in its collection several rare manuscripts, including the 7th- or 8th-century Kufic Quran considered to have been commissioned by the third caliph Uthman.

himself; whereas in October 2016, the former Jurabek Mosque, one of the oldest in Tashkent, was reconstructed after it was effectively destroyed in a fire and was renamed Islom ota Mosque, in the memory of Karimov, who had passed away a month earlier.

Despite the significance attached to the renovation of the Khast Imam Ensemble, the centrepiece of the 2200th anniversary celebrations was the – much more secular – transformation of the *skver*. Already in 1996, the piece of land on the north-western corner opposite the *skver* became the location for the Timurid History Museum, which was opened on the occasion of Amir Temur's 660th birth anniversary. Nevertheless, the *skver* remained a quintessentially Russian corner of the city, with Tashkent's old-timers spending considerable time in the shade and coolness offered by the century-old chinars that grew there. In an attempt to Uzbekify this part of the city, in 2009 the authorities fell all the trees, thus making the equestrian statue of Amir Temur visible from all directions.[105] In the same year, the 30-meter clock tower known as *kuranty* which has been standing on the *skver*'s south side since 1947 and is hence largely considered to be the symbol of Tashkent, was given a twin sibling which balanced the Soviet symbol with a post-Independence one.[106] Finally, on the east side of the square, a Stalin era housing block constructed in 1939 was demolished in order to make way for the pompously named Uzbekistan Palace of International Fora (*Dvorets Mezhdunarodnykh Forumov "Uzbekistan"*), the largest – and allegedly the most expensive – building constructed in post-independence Uzbekistan.[107]

The aforementioned Stalin era house was not the only building that was demolished in the months leading to the anniversary. Several old factories were razed, most significant – and historical – among which have been the Tashkent Agricultural Machinery Factory (TashSelMash), parts of the adjacent Tashkent Aviation Production Association (TAPOiCh) factory, and the Tashkent Wine Factory (VinZavod). The Church of Saint Aleksandr Nevskii by the Tashkent Teachers' Seminary, built in 1898 by renowned Russian architect Aleksei L. Benua (1838 – 1902), was demolished in 2009, despite the fact that it had been registered as a historical monument and as such was supposed to be protected by the state. Streets

---

[105] For more on this, see Chapter 4.

[106] The original clock tower was built in 1947 to mark the victory of the Soviet Union over Nazi Germany. The clock for the tower was brought and presented to Tashkent by I. A. Aizenshtein, a WWII veteran, who removed it from the city hall of the East Prussian city of Allenstein (today Olsztyn, Poland) during the plundering of the city by the advancing Red Army.

[107] Introduced by President Karimov as "an astounding example of national architecture," the Palace is said to be decorated with marble from the Greek island of Thasos and with chandeliers made of hundreds of thousands of Swarovski crystals. For more on the building, see Paskaleva (2013).

and places named after Soviet era personalities were renamed, while several Soviet era statues and monuments that had survived the first de-Sovietisation campaign were not spared a second time. Among them, in November 2009, the Park of Military Glory, first opened in 1975, was closed down and the monument commemorating Soviet soldiers and the military equipment that had stood there were removed, only to be replaced, in January 2010, by the Oath to the Motherland monument, a statue of a soldier kneeling and kissing the flag of Uzbekistan.[108] Similarly, in February 2011, a memorial to the TashSelMash workers killed in WWII, erected in 1975 outside the plant where they had worked, was also demolished.[109]

If these demolitions of Soviet-era war memorials upset mostly WWII veterans who felt that they made them look like "mercenaries who fought for another country,"[110] the removal of the Friendship of the Peoples monument in April 2008 unsettled far more people.[111] The monument, erected in 1982 to honour Shaakhmed Shamakhmudov (1890 – 1970) and his wife Bakhri Akramova (1903 – 1987), who adopted 15 orphans of different nationalities during WWII, had become a symbol of Uzbek humanism and generosity and spoke of the importance of international ethnic harmony. This is why, together with the Courage memorial complex, erected in 1970 to commemorate the remediation measures taken in the aftermath of the 1966 earthquake, the Friendship of the Peoples monument was seen as a representation of values intrinsic to the city's identity. As importantly, if the Friendship of the Peoples monument highlighted the warmth and humanism with which the population of Tashkent welcomed WWII evacuees, the Courage memorial symbolised the repayment of this warmth by means of an all-Union mobilisation for the rebuilding of post-earthquake Tashkent (L. Adams 2010, 30). The removal of the Shamakhmudov statue, then, undermined this balance, and, if anything, highlighted Tashkent as a city which has mostly benefited from Soviet assistance.

Such incidents leave the public puzzled as to the reasoning behind certain decisions and reveal the inconsistencies and lack of a coherent policy that characterised the de-Sovietisation campaign of the late 2000s. Another such example is the

---

[108] "Protests Promised as Uzbeks Remove Soviet War Memorial, Demolish Church," *RFE/RL,* November 26, 2009.

[109] "Tashkent Removes another Soviet-era Memorial," *UZnews.net,* February 1, 2011; "Uzbeks Raze WWII Monument to Fallen Factory Workers," *Central Asia Online,* February 1, 2011; "Uzbekistan Replaces Soviet-era Monuments," *Central Asia Online,* February 5, 2010.

[110] "Uzbekistan Replaces Soviet-era Monuments," *Central Asia Online,* February 5, 2010.

[111] As it was revealed much later, the monument was not demolished but dismantled and moved to the outskirts of the city, off Tashkent's ring road.

commemoration of Sharaf Rashidov (1917 – 1983), writer, head of the Uzbekistan Writers' Union, and First Secretary of the Communist Party of Uzbekistan (1959 – 1983), who became notorious across the Soviet Union in the early 1980s, when it was revealed that the Uzbek government had been fabricating reports showing an unprecedented growth in cotton production in order to receive substantial subsidies from the Soviet central budget.[112] When the "cotton scandal" or "Uzbek affair," as this case has come to be known, was revealed, Rashidov allegedly committed suicide, and most of the members of the Uzbek cabinet were purged.[113] Nevertheless, Rashidov still has a main street and a square named after him and his bust still stands only a few hundred meters down the street from Mustaqillik Square. The fact that he was victimised by the Soviet state has made him a symbol of a native leader who was punished because he stood against Moscow in an attempt to make the Uzbek SSR quite autonomous of central control,[114] but his remarkable longevity in Tashkent's commemorative sphere can be also attributed to the fact that Rashidov had been widely considered to be the political mentor of Karimov.

All this leads to three conclusions in regards to the use of Tashkent's symbolic landscape for ideology- and identity-building purposes by the Karimov administration: firstly, that the national symbols and legacies of the independent Uzbek nation-state are not new, but rather have been forged by the Soviet political and economic system (Bell 1999, 186). Secondly, that ideology production in the early 1990s was less a rejection of Soviet power and more a reappropriation of the Soviet interpretation of Uzbek national culture and identity (L. Adams 2010); if during the Soviet era nationalism and socialism were two sides of the same coin, in the aftermath of Independence nationalism was retained and socialism was discarded. And thirdly, that if the construction of national culture and identity has not been particularly challenging in Central and Eastern Europe due to the fact that most of these states possessed relatively well-defined national cultures before WWII (Diener and Hagen 2013, 488), in post-Soviet Uzbekistan and the rest of Central Asia the construction of a national identity has been a rather volatile process, resulting in several ludicrous situations and paradoxes.

However, the construction of a national identity was not the only set of policies implemented by the Karimov administration that significantly affected Tashkent

---

[112] Rashidov also produced false statistics regarding the success of his linguistic policies, which had made the Uzbek population appear fluent in both Uzbek and Russian.

[113] For more on the "Uzbek cotton affair," see Cucciolla (2017).

[114] In a similar case, the dismissal of Rashidov's Kazakh counterpart, Dinmukhammed Kunaev (1912 – 1993, First Secretary of the CPK: 1964 – 1986), by Mikhail Gorbachev on charges of corruption in December 1986 led to the wild street riots in Alma-Ata known as Zheltoksan.

and the everyday life of its inhabitants. As importantly, its crackdown on Islamic extremism and its attempt to repress domestic political opposition led to an intensive securitisation of the city, which still permeates the entire fabric of urban life. The main tool to control the population of Tashkent is the residents' registration system, known across the post-Soviet space as *propiska*.[115] *Propiska* was first introduced in 1932 as a residence permit and a migration-recording tool across the USSR, because the planned economy required a stable and predictable distribution of the population, but by the mid-1930s had developed into "an instrument of repression and police control" (Kessler 2001, 478). This system was retained in several post-Soviet republics, but unlike in the case of Kazakhstan or Kyrgyzstan, where the *propiska* system has been liberalised, in Uzbekistan, and especially in Tashkent, it has been significantly tightened (Tukmadiyeva 2016, 7). By tying one's civil and socio-economic rights to the place of residence, *propiska de facto* binds individuals to their places of registration, which has turned Tashkent into a virtually closed city (ibid.).

Security measures were additionally tightened in the late 1990s, in the aftermath of the 1999 Tashkent bombings, a series of terrorist attacks allegedly carried out by the Islamic Movement of Uzbekistan (IMU) in an attempt to assassinate President Karimov.[116] Restrictions concerning the entering and settling down in Tashkent, increased presence of law enforcement agencies on the streets, frequent police checks, mandatory screening upon entrance to metro stations, Western hotels, and government buildings, as well as repeated anti-veiling campaigns resulting in the forced unveiling or detention of women in headscarves and a registration of adult men publically praying and visiting mosques have become part of the everyday lives of Tashkent's residents.[117] Access to locations where ministries and other state buildings are located has also been restricted, whereas throughout the duration of Karimov's presidency, the 600-meter stretch of Afrosiyob Str. in front of the Presidential Palace was closed around the clock for all vehicles. The barriers closing the road off were moved only twice a day for no more than five minutes each time, first at approx. 08.30, when the President arrived to his office, and then again at 20.30 when he left for his residence. During his commuting, the whole route he

---

[115] *Propiska* is Russian for "inscription," because permission to reside in a given place is entered into one's passport.

[116] The 1999 bombings were never confirmed to have been carried out by the IMU; it is possible that they were planned by one of Karimov's political rivals, or, as some theories hold, by Karimov's government. For a survey of theories about the causes of the bombings and the identities of their perpetrators, see Polat and Butkevich (2000).

[117] For more on the promotion of an environment of fear by the Karimov administration in order to oust any form of non-conformist religiosity, see Rasanayagam (2006) and McGlinchey (2007). For more on Islam in post-Soviet Uzbekistan, see Louw (2007), Kehl-Bodrogi (2008), and Rasanayagam (2011).

took, colloquially known as *trassa,* was closed for traffic and cars moving on the streets intersecting with *trassa* were stopped approx. 100 meters from the crossroads.

In addition to these measures, the regime of the *trassa* differed from Tashkent's other main thoroughfares, as a result of which law enforcement along it was much stricter throughout the day. Several streets in the city centre were closed to block access to the route, buildings were demolished, and trees and bushes were uprooted in order to prevent potential assassins from using them as cover. In 2009, railings that separated pedestrian from vehicle traffic were installed along the full length of *trassa,* whereas in 2015, railings separating the two vehicle traffic currents were installed on most main thoroughfares, thus rendering these streets impossible to cross at any point other than pedestrian crossings, subways, or metro stations. The installation of these railings was followed by the closing of dozens of pedestrian crossings across Tashkent, which in many cases has resulted in a situation in which whoever wants to cross the street needs to have their bag checked, as police officers at all metro stations and subways screen the belongings of passers-by, even if they do not actually plan to take the metro. Simultaneously, the installation of traffic cameras on all the main thoroughfares of Tashkent has further intensified the feeling that Tashkent is becoming more and more securitised. Officially, these cameras are designed to record violations of the Highway Code, but as they are equipped with biometric facial recognition technology, they offer law enforcement agencies countless opportunities to monitor its citizens on the street. The introduction of new biometric passports in Uzbekistan has been only the first step in that direction.

The transition to market economy

Not unlike other major cities in Central Asia, post-socialist Tashkent has been developing at "a nexus of varied and often competing economic, cultural, and political forces" (Diener 2013, 1), which means that in addition to the role that state policies have played in the city's transformation, urban life in Tashkent has been profoundly influenced by socio-economic parameters as well. Most significant among them has undoubtedly been the transition to the market economy, which has brought along new practices of consumption and of mobility, spatial segregation, growing socio-economic disparities, and, very importantly, privatisation. Indeed, few processes have been as indicative of the collapse of the *ancien régime* as the various privatisation programmes that took place throughout the post-socialist space in the early 1990s, and, among them, the privatisation of the housing sector in particular has its own symbolic importance. As Srna Mandič and

Tine Stanovnik have argued in regards to reforms in the Slovenian housing sector in the aftermath of the breakup of Yugoslavia:

> Because social ownership was the vital point of the previous institutional and ideological order, it had a very strong symbolic meaning which can hardly be overemphasized. The sale of social rental accommodation signalled a crack in the fortress of social ownership which was giving way to radical changes unforeseen even two years earlier (Mandič and Stanovnik 1996, 142).

Throughout the Soviet period, the vast majority of residential property was owned by the Soviet state, as all hitherto private property had been nationalised in the aftermath of the 1917 Revolution. Although small houses were returned to their former owners and private persons were allowed to build and possess small houses during and after the New Economic Policy (NEP) period, the construction, operation, and maintenance of new apartment buildings remained exclusively in the hands of the state and its agencies. Individuals were provided with apartments as remuneration for work performed and were not expected to pay rent, save from a small amount covering a portion of the utility costs, which in most cases did not exceed 10% of the real expenditure.[118] Nevertheless, despite Khrushchev's housing reforms and the constantly increasing volume of construction work, there was a permanent housing shortage, to which the Soviet state responded by encouraging individuals to build their own houses. While all urban land technically remained property of the state, as I have already shown, individuals were provided with allotments on which they could construct houses at their own expense.[119]

This policy led to a new upsurge in the construction and reparation of traditional courtyard houses in Tashkent, but by the early 1980s the construction of private houses on the territory of the city was banned due to land shortage, as the percentage of land individual housing took up was significantly higher than the percentage of the population it provided with accommodation. Subsequently, all available urban land was allocated for the construction of high-rise apartment

---

[118] The rest was subsidised by the state, which often resulted in irresponsible use of water, electricity, and gas. For more on this, see Chapter 3.

[119] As Marco Buttino has suggested, "[t]he funding for building often came from the 'second economy;' that is, from activities that were neither state-run nor official, but tolerated by the state. To put it very schematically, we could say that a state economy and an allied state building sector, and a society organized according to the 'Soviet model' coexisted with a 'second economy,' neighbourhoods populated by private houses and a web of informal relationships based on values that were represented as traditional. These were not two parallel worlds but complementary aspects of the same world, officially Soviet and public, but also traditional and private" (Buttino 2013, 12). For more on the second economy, see Grossman (1977, 1985), Sampson (1987), and Shelley (1990).

buildings, which, however, did not resolve the problem of providing accommodation for all those who needed it. This is why, in 1989, the authorities permitted the construction of individual housing again and took a number of decisions which would have a long-term effect on the development of the city: i) all unofficially built housing was registered and legalised; ii) the demolition of all existing housing, including the old traditional dwellings in the former Islamic part of the city, was halted; and iii) a vast area for the construction of private housing was allocated, which in many cases included areas which had previously been set aside for high-rise apartment buildings (Tokhtakhodzhaeva 2007, 111).

Similarly to the rest of the former socialist countries, in the aftermath of the dissolution of the USSR the government of independent Uzbekistan decided to privatise the republic's housing stock for five main reasons. Firstly, it provided the state with much needed revenue. Secondly, it shifted the burden of operation and maintenance costs to the new owners and thus relieved the government of subsidising them. Thirdly, it allowed for the creation of a free housing market for privately negotiated purchase and rent. Fourthly, it was a popular demand which provided the new administration with legitimacy and with an easy way out of a thorny social and political issue. And fifthly, there was an expectation that privatisation would make tenants more invested in the maintenance and rehabilitation of the common spaces in their buildings and more willing to pay for improvements (Struyk 1996, 193).

Uzbekistan was the most successful among the Central Asian republics in privatising its housing sector, with 98% of Tashkent's housing stock and 45% of the republic's total housing stock privatised by December 1993 (Feiden, et al. 1993, 2).[120] Ownership was granted to sitting tenants at give-away prices that were calculated on socialist real-estate rather than market logic, which meant that the most valuable property was given to the *nomenklatura,* who during the socialist era had utilised their position and connections within the Soviet apparatus to gain access to larger, more central, or more luxurious apartments.[121] This inadvertently legalised the former Soviet distribution system and, upon the creation of a housing market, increased the disparity between rich and poor; as David Stark has put it in reference to how the managers of former state enterprises in Hungary managed to transfer the

---

[120] By the same time, Kazakhstan had privatised only 35% percent of its entire state housing stock and 60% of Almaty's, and Kyrgyzstan had privatised 25% throughout the republic and 23% in Bishkek (Feiden, et al. 1993, 2).
[121] For more on housing and social inequality in socialist cities, see Szelényi and Konrad (1969) and Szelényi (1969, 1978, 1983).

ownership of these assets to themselves, this was "a process by which political capital [was] converted into economic capital" (Stark 1990, 366).[122]

Privatisation meant that theoretically tenants could now sell their dwellings, but in these early days of post-socialist capitalism, the creation of a housing market was hampered by the lack of supply: despite the demand by the rural population who had started migrating into Tashkent, most available housing had been already taken by sitting tenants and almost no new buildings were underway. It was only after those who intended to move or emigrate or who were in financial difficulty started selling their houses that supply was created. The establishment of a housing market meant that even dilapidated Soviet era apartment buildings became valuable financial assets, thanks to their central location and their integration into various urban utility networks. Simultaneously, the relative economic growth and improvement of living standards allowed the population of Tashkent to opt for more comfortable and modern dwellings, which led them to undertake a series of improvements and modifications which substantially altered the form of the buildings and of the city at large. The façades of buildings changed, balconies and loggias were converted into living spaces, new aluminium frames replaced the original wooden window frames, new safety doors appeared in staircases, and apartments were refurbished according to perceived "European" standards (Rus. *evroremont*).[123]

Similarly, basements and ground-floor apartments were transformed into restaurants, cafés, and shops; one-storey stores were constructed adjacent to apartment buildings, taking advantage of the wide pavements; land that had hitherto been public was appropriated by the owners of ground-floor apartments who turned it into their private parking lots and kitchen gardens; and several access roads within *mikroraiony* were converted into dead end streets. At the same time, entire buildings were bought and renovated as a whole by private developers who appropriated and fenced off the areas around them, new "elite" (Rus. *elitnye*) apartment buildings were constructed – predominantly by banks – in some of the more upmarket central locations, whereas recent years have seen a proliferation of newly built luxurious private houses, known as *kottedzhy*, with tall solid fences, gates, closed-circuit video surveillance, and guarded entry checkpoints, located in exclusive residential areas.[124] These privileged areas are very indicative of the socio-

---

[122] For more on housing allocation in post-Soviet Kazakhstan, see Sharipova (2015).

[123] For more on how middle-class aspirants evaluate their own standards of living by comparison to imagined western ones, see Fehérváry (2002) and Seliverstova (2017).

[124] For more on these gated communities, see Humphrey (2002), especially Chapter 9 (pp. 175-201), Stoyanov and Frantz (2006), Blinnikov et al. (2006), and Hirt (2012).

spatial segregation that has characterised post-socialist Tashkent, as they have been built in districts relatively close to the city centre which until recently were home mostly to traditional or tsarist era one-storey buildings. Constructed on special 600 m² lots designated and marketed by the city administration, these new luxurious buildings are a hybrid of courtyard house and villa, and their façades also show a mixture of traditional and modern elements (Gangler, et al. n.d.).

New practices of consumption have also contributed to the transformation of Tashkent. Hundreds of new shops have opened across the city and provide the population of Tashkent with goods that had not been widely available before. New shopping malls, such as Next in the Iakkasarai district, the Mega Planet in the Iunusabad district, and the Samarkand Darvoza in the Shaikhantakhur district, have become attractions in themselves for the city's inhabitants, who visit them for shopping as much as simply for strolling. In July 2015, the first electronics megastore in Tashkent, Media Park, opened in the Shaikhantakhur district, instantly becoming a popular destination predominantly for the city's male population. Until then, all electronics used to be sold at the Malika bazaar by vendors who themselves imported or smuggled their goods from abroad, but the opening of the Media Park has substantially undermined the turnover of these enterprises.

However, this is not to say that bazaars have lost their commercial significance. On the contrary, as Abel Polese and Aleksandr Prigarin have suggested in their study of bazaars in post-socialist Odessa, bazaars have not only survived but have in fact gained new momentum in post-socialist cities thanks to their maintaining low prices, providing different demand-driven goods, responding to cultural and spiritual needs, and offering socialisation and networking opportunities (Polese and Prigarin 2013).[125] Indeed, the 1990s saw the launching of a large-scale programme of construction or renovation of Tashkent's bazaars, as a result of which the number of stall spaces in bazaars multiplied by five to ten times, and bazaars became the major places for the sale of both food and manufactured products. Today, district bazaars sell fresh produce and other day-to-day amenities, whereas a series of specialised markets which provide specific types of goods and services can be found further out from the city centre. For example, apartments can been rented, bought, and sold at the apartment market (Rus. *kvartirnii bazaar*) in the Uchtepa district, second hand cars change hands at the car market in Sergeli, various other second-hand items and Soviet era memorabilia can be found at the improvised second-hand market in Iangiabad, whereas clothes are sold at Ippodrom in the Chilanzar district.

---

[125] See also Hüwelmeier (2013).

Finally, the dissolution of the USSR has also significantly affected the population's practices of mobility, as the heavy subsidies that kept public transport systems running during the Soviet era were reduced as part of the transition to the market economy, which has led to their deterioration or collapse (Grime and Duke 1996). Tashkent's public transport suffered considerably in the years that followed Independence due to crumbling infrastructure and high maintenance costs which led to a sharp decline in the volumes of operating vehicles.[126] Routes were discontinued or experienced significant delays and long intervals between services, but nevertheless public transport remained state-owned and continued to function unscathed until the early 2010s, when decreasing numbers of passengers and ageing infrastructure eventually led to the closure of certain means of transport. In 2010, the entire trolleybus network was discontinued and dismantled in order to allegedly redirect resources into improving tramway infrastructure. However, city authorities not only did not expand the existing tramway network, but on the contrary closed several tramway lines before the alleged high costs of maintenance and low numbers of passengers resulted in the complete liquidation of tramways and tramway tracks from the streets of Tashkent in 2016. As of 2017, the metro and bus systems are owned and operated by public authorities, whereas *marshrutki* are privately owned and operated but are licensed and regulated by public authorities.[127] The main focus of the authorities seems to be on the metro system, with the already existing three lines being expanded and a new line, connecting the city centre with the remote Sergeli district in the south, under construction.

These developments have undermined the trust of the city's population in public transport, impeded their movement, and forced them to find new ways of moving around. This opportunity was grabbed by private operators, who took advantage of the massive liberalisation and privatisation that followed the dissolution of the USSR and paved the way for the establishment of an informal transport economy. At the very centre of this economy have been the *marshrutki* that operate on routes determined by the Tashkent City Passenger Transport company,[128] but just as significant in Tashkent has been the emergence of the private car as a means of public transport and the subsequent institutionalisation of an informal taxi economy.[129] The post-socialist period saw an unprecedented proliferation of private cars, which led to the automobilisation of the society, making virtually every car in

---

[126] A similar situation was encountered by most – if not all – post-Soviet republics. For more on this, see Gwilliam (2000).

[127] For more on public transport in post-socialist Tashkent, see Akimov and Banister (2011).

[128] For more on the *marshrutki* phenomenon in Central Asia, see Sgibnev and Vozyanov (2016).

[129] For more on this, see Chapter 2.

the city a potential taxi. In order to accommodate the increase of cars on the streets of Tashkent, several streets in the city centre have been enlarged, new bridges have been constructed, and the construction of a third ring road has been announced.

Tashkent's population mix and language dynamics

The "post-Soviet chaos" (Nazpary 2002) that followed the dissolution of the USSR not only affected Tashkent's urban spaces and the practices of its inhabitants, but it also significantly altered its population mix. The decline of the republic's industrial and agricultural sector and a scarcity of arable land led to unprecedented levels of unemployment, which, combined with low wages and crumbling infrastructure, forced thousands of ethnic Uzbeks from rural areas into urban centres. The significant inflow of those rural migrants intensified the already existing discomfort among the ethnically non-Uzbek population, who had been facing – in addition to the unfavourable economic environment – the "nationalising nationalism" (Brubaker 1996, 5) of the Karimov administration as well. Keeping these considerations in mind, many of these people decided to emigrate, with most of them "returning" to their titular countries, even if they had never set foot there before. Hundreds of thousands of ethnically non-Uzbek Russian-speakers left Uzbekistan during this massive "exodus" (Buckley 1996), with more than 500 thousand ethnic Russians migrating to Russia between 1990 and 1997 (Maksakova 1999, 238).[130]

This emigration generated a surplus of dwellings and vacant jobs in urban centres across Uzbekistan, which triggered further inflows of rural newcomers. However, unlike previous migrants, who over time acquired education, professional status, proficiency in Russian, and a level of cultural integration, these new migrants quickly became culturally and economically marginal.[131] Their reception, settlement, and adaptation have been nothing short of problematic, as the perceived differences between them and urban old-timers have resulted in severe contestations and an antagonistic relationship.[132] This antagonism is not structured along ethnic lines, but rather is a result of the fact that the – predominantly Russian-speaking – urban dwellers see the Uzbek-speaking rural newcomers as primitive,

---

[130] According to the last Soviet census, carried out in 1989, 1.6 million ethnic Russians, or 8% of the republic's entire population, lived in the Uzbek SSR. Although no such census has been conducted since, it appears that the Russian community of Uzbekistan consisted of about 800,000 people in 2013, or less than 4% of the population (Peyrouse 2013, 224). For more on the "fright and flight" of ethnic Russians in the early 1990s, see Kolstoe (1995), especially pp. 218-229.

[131] For more on the emergence of these "new poor" in Uzbekistan, see Ilkhamov (2001).

[132] For more on similar discourses on and perceptions of rural migration in post-Soviet Bishkek, see Kosmarskaya (2011) and Flynn and Kosmarskaya (2012).

uncultured, uneducated, and unfit to live in an urban environment. As Moya Flynn and Natalya Kosmarskaya have remarked in regards to the attitude of Bishkek old-timers towards newcomers from Kyrgyzstan's rural areas:

> There are many different expressions of this overall sense of a 'lack of culture:' a fixation on the worsening psychological climate in the city; the decline in everyday culture; the growth of aggressiveness and loutishness (on the side of migrants); complaints about (migrant) neighbours; migrants not respecting their surroundings, untidy, not knowing how to behave in an urban environment and not knowing how to use modern facilities (e.g. toilets, lift, etc.); and claims that migrants drop rubbish, urinate in public places, spit, etc. (Flynn and Kosmarskaya 2012, 463).

The old-timers' attitude towards rural newcomers in a way derives from the official position of the early Soviet state, which saw cities as "engines of modernisation" (Alexander and Buchli 2007, 1) and urban life as superior to rural life.[133] Rural newcomers are accordingly seen as agents of "ruralisation" (ibid., 2) who not only inhibit the progress of cities but in fact are the reason why levels of urban transformation are "going backwards" (ibid., 8) into "'pre-modern' forms of living and sociality" (ibid., 30). To that end, old-timers have invented a series of derogatory epithets in order to refer to rural newcomers, not only in Uzbekistan but throughout Central Asia.[134] In Tashkent, the most popular among these monikers are two: *indeets*, which is the Russian term for Native Americans; and the neologism *kharyp*,[135] which is used not only by non-Uzbeks but also by ethnically Uzbek Russian-speakers to refer to their rural migrant compatriots.

The following episode is very telling of how offensive the word *kharyp* is perceived to be. During one of my weekly visits to Iangiabad, Tashkent's biggest flea market, and following my tested practice, I purchased a bag of sunflower seeds (Rus. *semechki*), the hulls of which I cracked between my teeth and then spat on the street. Natalia, a young ethnically Russian woman who had been accompanying me, became visibly annoyed by it. "How can I walk down the street with a man who

---

[133] As V. I. Lenin himself has put it, "cities are the centers of economic, political, and intellectual or spiritual life of a people and constitute the chief promoters of progress" (quoted in Stites (1989, 197).
[134] For example, in Bishkek and in other cities in Kyrgyzstan rural migrants are referred to as *myrk* (Rus. sing.; Rus. pl. *myrki*) (Schröder 2010, 455-456).
[135] Although the etymology of *kharyp* is uncertain, it most likely derives from the Arabic *gharib*, which means "strange," "outlandish," or "foreign." In their attempts to help me understand the full meaning of the word with all its connotations, many of my interlocutors suggested that it is the equivalent of the Russian *bydlo*. A loan from the Polish *bydło*, meaning "cattle," *bydlo* is Russian slang for simple-minded provincial individuals with rough-manners, easily manipulated by others. The closest equivalent in English is probably "redneck."

bites *semechki* and spits them?" she exclaimed, "this is unacceptable – it is for villagers and barbarians." I found her remark amusing and casually discarded it, but nevertheless decided to narrate this confrontation to a company of friends over dinner later on the same day. Ravshanjon, originally from Urgench in the Khorezm province in western Uzbekistan, also scolded me, suggesting that a "cultured professor" like myself should know how to behave and instead of spitting the hulls on the street should collect them in a bag. Laughingly, Dildora, an ethnically Uzbek Russian-speaker born and raised in Tashkent, recalled that her family used to have a cleaning lady at home whose husband spat the hulls just like I had done. "But she herself was not much better – she did not know how the toilet worked and threw used teabags in there…These *kharypy* really do not know how to behave in the city," she added. This was the first time I had heard that term, but before I had time to ask Dildora what she had meant, Ravshanjon stood up, excused himself, and went out for a cigarette, with Dildora going after him. Surprised, I asked Stanislav, the fourth party at the table, what had just happened:

S: Dildora just called Ravshanjon a *kharyp.*
N: Is it really that bad?
S: Well, because he's not a Tashkenter, he might have gotten offended. Also, since Dildora is Uzbek, it has an extra offensive connotation.
N: What do you mean he's not a Tashkenter? He has been living here for ten years, if not more.
S: Sure, but originally he is from Urgench.

The fact that Ravshanjon had arrived in Tashkent "only" ten years earlier automatically excluded him in the eyes of those who have been born in the city from being a Tashkenter (Rus. sing. *Tashkentets*; pl. *Tashkenttsy*). Mostly used by the old-timers of Tashkent for themselves, Tashkenter is an all-encompassing term for these – Russians, Uzbeks, Koreans, Germans, Greeks, etc. – whose families have been living in Tashkent for several generations and whose first language of communication is Russian.[136] In that sense, the term is usually employed without any ethnic or national connotations, which suggests that in Tashkent the urban identity takes over the national, revealing the capital of Uzbekistan as a "space in which a denationalized dimension of collective and individual belonging appears to be founded on truly cross-national relationships and socio-spatial practices" (Rossi and Vanolo 2012, 160). Central to the formation of this identity have been several

---

[136] See Flynn, Kosmarskaya, and Sabirova (2014) for the similar notions of *Ferganets* and *Frunzenets*, which are used by people from Fergana and Bishkek, respectively, to describe and define local old-timers.

historical events, which have not only led to the city's ethnic pluralism, but which have also presented the city with the monikers by which it had been known throughout the Soviet Union: "the city of bread" (Rus. *gorod khlebnii*) and "the capital of friendship and warmth" (Rus. *stolitsa druzhby i tepla*).[137]

In addition to those – mostly of Slavonic origins – who came to the city during the Tsarist and the early Soviet era, the WWII evacuation, and the post-earthquake reconstruction of Tashkent, Tashkent was also the destination for various population groups deported to Central Asia by the Soviet state. In 1937, amidst a series of battles and skirmishes between the Soviet Union and the Empire of Japan, known as the Soviet-Japanese border conflicts (1932 – 1939), almost 200,000 ethnic Koreans were forcibly moved to Central Asia from the Russian Far East in order to ensure that they would not collaborate with the enemy in the event of a war.[138] Similar was the fate of the almost half-a-million Volga Germans, who were deported to Central Asia from their hearths in the Saratov oblast in southeast Russia during the 1941 German invasion of the USSR.[139] In the aftermath of WWII, several East European ethnic groups – Poles, Ukrainians, and people from the Baltic States – as well as the Pontic Greeks were exiled to Central Asia due to their suspected collaboration with the Germans during the War or on account of their post-war nationalist tendencies (Peyrouse 2013, 215), whereas in the early 1950s, several thousands of Greek communist insurgents were evacuated to Tashkent after their defeat in the Greek Civil War (1946 – 1949).[140]

This constant influx of people into Tashkent resulted in a significant diversity of ethnic groups residing in the city, but did not necessarily make the city cosmopolitan, in the way that other cities in the republic, such as Bukhara, had been. Indeed, in the already ethnically diverse Bukhara, the arrival of new Soviet citizens resulted in a "salad bowl," affecting but not completely diminishing the cultural division between them and the local population (Humphrey, Marsden and Skvirskaja 2009, 204), allowing them to live "together and apart at the same time"

---

[137] Tashkent was first called *gorod khlebnii* by Russian writer Aleksandr S. Neverov (1886 – 1923), who during the Russian famine of 1921 travelled from his hometown in the Volga region to Tashkent in order to obtain food for his family. He subsequently wrote a book called *Tashkent – Gorod Khlebnyi (The City of Bread)*, inspired by his journey, which became very well-known across the early Soviet Union. The second moniker, *stolitsa druzhby i tepla,* was coined in the aftermath of the WWII evacuation to reflect the openness with which the evacuees were welcomed in Tashkent by the local population.

[138] For more on the deportation and life of Koreans in Central Asia, see Chang (2016), especially Chapter 7 (pp. 151-179).

[139] For more on the 1941 deportation of the Volga Germans to Central Asia, see Fleischhauer and Pinkus (1986), especially Chapter 3 (pp. 66-91).

[140] For more on Greek political refugees in Central and Eastern Europe and the former Soviet Union, see Voutyra et al. (2005), Tsekou (2013), and Lampropoulos (2014).

(Redlich 2002, 164). On the contrary, Tashkent's openness towards people from across the USSR and beyond resulted more in a "melting pot" situation, in which different cultures and traditions were assimilated to a standardised Soviet norm. Nevertheless, despite the fact that it has never been essentially cosmopolitan, post-socialist Tashkent has come to share many of the challenges faced by what Caroline Humphrey and Vera Skvirskaja have called "post-cosmopolitan cities," especially since the departure of thousands of old-timers has left a feeling that "something precious has been lost" (Humphrey and Skvirskaja 2012, 1).

Central to this feeling have been the language policies of the Karimov administration and their effect on the everyday lives of Russian-speaking Tashkenters. A series of laws passed in the early 1990s made Uzbek the republic's only official language,[141] which resulted in situations in which Russian-speakers became unable to deal with the very same institutions they had been dealing for years. This exclusion from public life only reinforced their indifference – if not hostility – towards the Uzbek language to such an extent that for a large part of the Russian-speaking population – ethnic Uzbeks excluded – speaking or even learning Uzbek is seen as a betrayal of their own identity. Most Russian-speakers consciously avoid learning Uzbek at school despite the several years of mandatory classes, and even if they do speak Uzbek, they often downplay or deny their proficiency, especially when out with a larger group of Russian-speakers.

Speaking Russian or Uzbek as one's first language does not necessarily entail living in a particular part of Tashkent. Save from the traditional courtyard houses in the Old City, most of which have been in the hands of Uzbek-speakers for generations, the relatively equal distribution of apartments during the Soviet era and the moving of Uzbek-speaking newcomers into apartments vacated by Russian-speakers has made it hard, if not impossible, to claim that certain parts of the city are populated by a specific language group, as they both live intermingled across the entire city, in varying concentrations. Rather, language patterns appear to be much easier to identify at the neighbourhood – or *mahalla* – level.

Unlike the *mahalla*s of the pre-Soviet Islamic city, *mahalla*s in post-socialist Tashkent are not usually constructed around family bonds and ethnic or religious relationships. Rather, they are territorial subdivisions of residential areas which double as formal state institutions and as local communities based on the spontaneous cohabitation of people with various social, religious, and ethnic

---

[141] This reversed the earlier, Soviet-era situation in which the majority was forced to learn and use the language of the minority (Motyl 1987). For more on the politics of language in Central Asia, see Landau and Kellner-Heinkele (2001).

backgrounds. *Mahalla*s are officially governed by a committee elected by the local residents, which consists of a chair, a deputy chair who is always a woman and who heads a subcommittee on women and families, a secretary, and a district policeman (Rus. *uchastkovyi;* Uzb. *postbon*) who is elected by residents but who works closely with state law enforcement agencies.[142] *Mahalla* committees take decisions regarding the day-to-day administration of the territory under their jurisdiction, such as maintenance of local infrastructure, safety, permits for the establishment of shops and private services, the allocation of open spaces, and the organisation of various festivities. Simultaneously, they are also mandated with providing a wide range of social welfare services to their inhabitants, including the allocation of various benefits, the alleged preferential administration of which is one of the main reasons why *mahalla* committees are widely considered to be corrupted.[143]

In practice, the extent to which the official functions of the *mahalla* as a state institution are relevant to its residents varies greatly. For example, Russian-speakers are very cautious when it comes to their interactions with *mahalla* committees, aware of the fact that the *mahalla* is essentially a practical extension of the state's authority and control over the population. This is why they usually turn to them only with practical requests that cannot be addressed elsewhere, such as the removal of trees or garbage or the issue of official documentation. For Uzbek-speakers, however, *mahalla*s are where some of the most important events of life happen; they organise community life, maintain neighbourhood relationships, and often are called in to resolve family matters, such as the arrangement of marriages. Relatives and neighbours are expected to attend all the weddings, circumcisions, and funerals that take place in the *mahalla*, all of which are conducted in the traditional way, under the supervision of the community elders. However, while ethnically Uzbek Russian-speakers are much more ready to embrace the *mahalla* as a community, at least compared to Russian-speakers with Slavonic origins who usually avoid participating in those communal activities,[144] they are not always welcome to do so,

---

[142] While the chair and members of the *mahalla* committee are elected by the local residents, their election must meet the approval of the respective administrative government authorities at both district and city level.

[143] For more on the *mahalla* in Uzbekistan, see Sievers (2002), Massicard and Trevisani (2003), and Rasanayagam (2009). For information on all Tashkent's *mahalla*s, see Aminov, Hasanov, and Ismatullaev (2011).

[144] As Olga Brusina has observed, Russian-speaking inhabitants also come to be involved in the rituals of the *mahalla*. Nevertheless, they are free of any obligation and are allowed to reject the invitation if they wish, unlike Uzbek-speakers, whose declining an invitation is considered to be unacceptable. Only few Russian-speakers of Slavonic origins accept such invitations due to the fact that the majority of them has not mastered, to the degree necessary, Uzbek customs and language or because they are concerned that they might find themselves in an awkward situation (Brusina 2004). For more on the customs and traditions of Tashkent's Uzbeks, see Zununova (2004).

as they can be often seen as urban people who have been mutated by modernity to such an extent that they have dropped their own language and traditions.[145] It thus becomes clear that the division between ethnically Uzbek Russian-speakers and ethnically Uzbek Uzbek-speakers is not maintained only by the former, but the latter also feel that they have reasons to exclude Russian-speakers from their own everyday lives and environs.

Conclusion

The main objective of this chapter has been to provide the reader with the framework within which the subsequent chapters are situated and hence it significantly differs from the rest of this dissertation in that it has not scrutinised urban infrastructure, discussed memory processes, or exemplified how memoryscapes are enacted. Rather, it has offered a historical background to the development of Tashkent and a comprehensive account of the social, economic, and political processes that have taken place in and have formed the city over the last century and a half. The chapter has begun by diving the history of the city into five main historical phases – the pre-Islamic era, the Islamic era, the colonial era, the socialist era, and the post-socialist era – and has accordingly suggested that each of these eras has brought along a particular city type, distinguishable from the one before and the one after by means of a series of characteristics, such as layout, urban planning, architecture, property ownership, population mix, and the urban lifestyles and practices of the population, to name a few. Accordingly, every part of this chapter has been devoted to each of these historical phases – with the exception of the pre-Islamic era, which is briefly mentioned due to its limited impact on the formation and development of Tashkent as we know it today – hence offering a thorough introduction to Tashkent that has been hitherto missing from academic literature on Central Asian cities.

---

[145] In Almaty, rural Kazakhs call urbanised Kazakhs *mambet,* which as Catherine Alexander has written, "is offensive slang suggesting a person cut off from traditional ways and in the fundamentally alien environment of the city. Neither one thing nor another, a person who is *mambet* is betwixt and between, often materially successful, but at the cost of their place in the world" (Alexander 2009a, 156).

CHAPTER TWO

Take a Left on Memory Lane

Informal Taxis and Wayfinding

One of the first things that every newcomer to Tashkent learns upon their arrival is how to move around the city. All that one needs to do is stand by the curb and chances are that within the next few seconds a car will pull over. The driver will lower the window or open the door and the potential passenger will pronounce the destination and the amount they are willing to pay for the ride; then, depending on the driver's response, the potential passenger will either sit into the car or repeat the same procedure with the next one. In the vast majority of cases, the car that stops is not a taxi in the traditional meaning of the word. It is not distinctively marked, it does not have a TAXI sign on the roof, nor is it painted in any particular colour. Its driver is not a licenced driver, he does not have a taximeter or a CB radio, and there is high possibility that he has no idea how to reach the destination. Sometimes the door does not open unless one pushes it from inside the car, the windshield is shattered, or there is no space for one's legs because of a bag or crate. Fastening the safety belt might result in a disapproving look, and so might potential calls to turn the music down. And half way through the journey, the passenger might be asked to make room for one or more extra passengers or even to agree on a detour to accommodate a third party.

Yet, thanks to their around-the-clock availability and their relatively low fares, Tashkent's informal taxis are one of the most popular means of urban transport among the local population. Most drivers are simply individuals who on their way to work or home offer paid lifts to their fellow citizens in order to supplement their income, but high unemployment and low salaries have forced a considerable part of Tashkent's – almost exclusively male – population to take up informal "taxiing" (Rus. *taksovanie*) professionally, either as their primary occupation or as a secondary source of extra income. The fact that every car in Tashkent essentially

doubles as an informal taxi means that this practice is deeply engrained into the local system of automobility. In this sense, cars, drivers, passengers, and the infrastructure than supports and enables their movement come together in an urban infrastructural assemblage which is not only involved in the making of the local "car culture" (Miller 2001a), but very importantly also enacts a series of memory processes.

Due to the fact that anything, from streets to entire districts, could be renamed overnight as a result of the ideology-building campaign of the Soviet state and, more recently, the identity-building policies of the Karimov administration, the population of Tashkent has rejected the use of official street and place names and addresses and has substituted it with an abstract system of vernacular orientation points known as *orientiry* (Rus. pl.; Rus. sing. *orientir*) as their preferred wayfinding technology. *Orientiry* can refer to any aspect of the built environment that is either well-known or clearly visible by virtue of its centrality, signage, or features, but, very importantly, they often refer to sites or buildings that materially do not exist any longer or whose functions or names have changed. As this chapter argues, the generation, proliferation, and transmission of *orientiry* is a product of the widespread use of informal taxis and occurs by means of either wayfaring or the exchange of environmental knowledge between driver and passenger.

Drawing on the recent "mobility turn" in the social sciences and the interest in the study of automobility that it has sparked, this chapter offers an account of previously undocumented in academic literature mechanisms and processes related to the purchase and use of private cars in Tashkent. The fact that this chapter maintains a focus on private cars does not mean that they are the only popular means of transport in Tashkent or the only one to be involved in complex memory processes. The use of public transport is also contingent upon certain memory processes, but the fact that the route of mass public transport vehicle is predefined by the urban transport system allows little room for spatial and temporal freedom to its users and minimises the necessity for the utilisation of spatial memory and cognitive mapping. Additionally, unlike mass public transport, which is used only by certain population groups or individuals, the private car is used by virtually everyone in Tashkent due to its role in the informal taxi economy. Notwithstanding whether one owns a car or not, they become entangled in the same mechanisms of automobility and processes of memory, either from the driver's seat or from that of a passenger. Even those who do not usually ride a car for their daily commute will occasionally use it for shorter distances, which, however, does not work the other way around: those who own a car or who can afford taxis are much less likely to take public transport

or walk. A focus on the private car, thus, might not be representative of everyday urban travel patterns in Tashkent, but nevertheless covers processes experienced by virtually the whole population of Tashkent.

While the automobilisation of Central and Eastern Europe and parts of the former Soviet Union has been the focus of several studies in recent years, to my knowledge no work has delved into urban car cultures in any of the Central Asian republics. Attempting to address these issues, this chapter starts by theorising and situating the private car within the so-called "new mobilities paradigm," before it continues with a socio-historical analysis presenting the ideological considerations, political decisions, and economic limitations that resulted in a scarcity in cars throughout the Eastern bloc and that effectively made the car one of the most sought-after objects for symbolic and practical reasons alike. In the third section, the chapter presents the Uzbek car market mechanisms and the ways in which the Uzbek car industry is largely built upon socialist-era political-economical underpinnings, thus making the purchase of a car a rather complicated process. The fourth section presents the informal taxi economy, whereas in the fifth and last section I turn my focus onto wayfinding and the role of memory therein, suggesting that memory has to such an extent become embedded in the local system of automobility that it has rendered navigating the city without evoking the past almost impossible.

The new mobilities paradigm and automobility

In the early 2000s, a dissatisfaction with "a-mobile" academic work which treated travel as "a neutral set of technologies and processes predominantly permitting forms of economic, social, and political life that are seen as explicable in terms of other, more causally powerful processes" (Sheller and Urry 2006, 208) triggered an approach that highlighted physical, blocked, and potential movement, as well as the lack thereof, as entangled in the production of socio-material realities (Büscher and Urry 2009, 99). The "new mobilities paradigm" or "mobility turn," as this approach has come to be known, is an umbrella term for a wide range of interdisciplinary scholarly work which has argued for the conceptualisation of society through the study of movement (Urry 2000) by suggesting "an alternative theoretical and methodological landscape" (Büscher and Urry 2009, 99-100).[146] At the very core of this line of thought is the thesis that mobilities are not simply "instrumental acts of physical displacement" but, as importantly, they are "signifying and meaning-producing performances that create culture" (Jensen 2014, 54), associated with

---

[146] For more on the new mobilities paradigm, see Urry (2004, 2007), Creswell (2006), Sheller and Urry (2006), and Büscher and Urry (2009). For more on "mobile methods," see Introduction.

"complex habitations, practices of dwelling, embodied relations, material presences, placings and hybrid subjectivities" (Merriman 2004, 154). A focus on mobilities, thus, allows us to understand them as constitutive of economic, social, and political relations and to document and explore the framework within which they occur – or do not.

At the same time, as Tim Creswell has suggested, the study of mobilities presupposes a shift in how we investigate place and space as well (Cresswell 2006). More than fixed localities, places are entangled into complex networks of flows which stretch beyond each such locality and in, by, and through which heterogeneous human and non-human actors are brought together to produce certain performances at certain times (Sheller and Urry 2006, 214). In this sense, space is revealed as constituted of both static structures and flows – or, as James Clifford has famously put it, of "roots" and "routes" (Clifford 1997) – which are intimately and intricately connected and the co-functioning of which, as Gilles Deleuze and Félix Guattari have argued, is very evident in the case of cities:

> The town is the correlate of the road. The town exists only as a function of circulation, and of circuits; it is a remarkable point on the circuits that create it, and which it creates. It is defined by entries and exits; something must enter it and exit from it. It imposes a frequency. It effects a polarization of matter, inert, living or human; it causes the *phylum,* the flow, to pass through specific places, along horizontal lines. It is a phenomenon of *transconsistency,* a *network,* because it is fundamentally in contact with other towns (Deleuze and Guattari 1987 [1980], 432; emphases in the original).

However, cities are not only nods within wider networks of connections, but they are also themselves "extraordinary agglomerations of flows" (Amin and Thrift 2002, 42), constituted of configurations of "enclaves" linked and/or permeated by "armatures" which channel flows in complex networks of distribution (Shane 2005). These "armatures" – in this case the material infrastructure that facilitates urban mobility, such as roads, cables, railways, or tracks – are static, but at the same time they presuppose the emergent mobilities of the vehicles that utilise them – cars, trolleybuses, trains, and tramways – as well as a larger system the complexity, interdependence, and heterogeneity of which is very well depicted in what Ole B. Jensen has called "mobile assemblages," a concept which:

> captures how [the] systems and socio-technical networks that 'host' contemporary mobilities are complex and how large material environments

94

where technologies, humans, software, codes, semiotic and communicative systems, objects, and artefacts are assembled in specific combinations that facilitate and *afford* certain mobile practices and restrict or prevent others. The key issue is how systems and networks assemble humans and non-humans in an attempt to 'stage' mobilities (Jensen 2014, 53; emphasis added).

Of particular interest in this definition is Jensen's use of the verb "afford," which in this case stems not from the noun "affordability" but from the neologism "affordance." A term coined by psychologist James J. Gibson, "affordance" originally referred to "the complementarity of the animal and the environment" and in particular to what the environment "*offers* the animal, what it *provides* or *furnishes*, either for good or ill" (Gibson 2015 [1979], 119; emphases in the original). In recent years, the concept has been borrowed and applied across the social sciences in various contexts to denote how materials and elements may be comprehended according to how they allow or prevent various situations and practices (Lanng and Jensen 2016, 254). Accordingly, the term has been employed also in the mobility context in order to highlight the significance of socio-technical entanglements in the production and enactment, as well as in the obstruction and prevention, of different mobility practices.[147]

While the new mobilities paradigm has embraced a wider range of mainstream and alternative movements, a substantial volume of work within this line of thought has focused on the car, in an attempt to reverse a situation in which this symbol of modernity and the ways in which it has introduced new forms of social action had been minimally studied until the early 2000s.[148] The significance of the car lays in the fact that, in addition to being the dominant means of transport, "it reconfigures civil society involving distinct ways of dwelling, travelling and socialising in, and through, an automobilized time-space" (Urry 2000, 59). The car's flexibility and around-the-clock availability and the freedom, comfort, and convenience it offers enable its users – driver and passengers alike – to travel at any time in any direction along random road systems, simultaneously extending where people can go to and what they can do (Urry 2004, 28), thus often encouraging journeys that would not have been made otherwise.

Naturally, for the car to be available and flexible, a larger "socio-economic and technological complex" (Featherstone 2004, 1), consisting of roads, bridges, car-

---

[147] For more on this, see Michael (2000).

[148] This interest in the car was initiated by the volumes edited by Daniel Miller (2001a) and Mike Featherstone, Nigel Thrift, and John Urry (2005). For more on the neglect of the car in social scientific inquiry, see Hawkins (1986), Dant and Martin (2001), Miller (2001b), and Dant (2004).

carrying ferries, mechanics, roadside hotels and restaurants, petrol stations, parking lots, traffic police and regulations, insurance companies, and a large oil and iron industry, among other, needs to be in place. This complex has come to be known as "automobility," a term the meaning of which departs from the definition that the *Oxford English Dictionary* offers. More than simply "the capacity of a person or thing for self-propulsion" or "the use of automobiles or motor vehicles as a mode of transport,"[149] scholars working within the new mobilities paradigm have understood automobility as the larger "system" (Urry 2004) or "regime" (Böhm, et al. 2006) which has been produced around the car and which makes driving it possible, if not necessary (Paterson 2007). Automobility is enacted differently in different contexts in different places at different times and can take various forms, some of which have been identified by Steffen Böhm, Campbell Jones, Chris Land, and Mat Paterson:

> Automobility is one of the principal socio-technical institutions through which modernity is organized. It is a set of political institutions and practices that seek to organize, accelerate and shape the spatial movements and impacts of automobiles, whilst simultaneously regulating their many consequences. It is also an ideological…or discursive formation, embodying ideals of freedom, privacy, movement, progress and autonomy, motifs through which automobility is represented in popular and academic discourses alike, and through which its principal technical artefacts – roads, cars, etc. – are legitimized. Finally, it entails a phenomenology, a set of ways of experiencing the world which serve both to legitimize its dominance and radically unsettle taken-for-granted boundaries separating human from machine, nature from artifice and so on (Böhm, et al. 2006, 3).

Indeed, as Don Slater has argued, "[a] car is not a car because of its physicality but because systems of provision and categories of things are 'materialised' in a stable form" (Slater 2002, 101). Automobility is stabilised by the fact that the enterprises and individuals involved in it are provided with a wide array of economic and social benefits, ranging from increasing returns for those partaking in the production and promotion of the car and its associated infrastructure, products, and services to enhanced mobility opportunities and higher socio-economic status for the car's final users. Those benefits bring mass production and mass consumption of cars and proliferation of car-related products and services which essentially make driving a car a necessity and hence result in a vicious circle, which is very telling of automobility's capacity to generate the preconditions for its own self-expansion; as John Urry has suggested, "automobility can be conceptualized as a self-organizing

---

[149] "automobility, n." OED Online.

autopoietic,[150] non-linear system that spreads world-wide, and includes cars, car-drivers, roads, petroleum supplies and many novel objects, technologies and signs" (Urry 2004, 27; emphasis added).

Unsurprisingly, the self-expansion of automobility has led to a high density and intensity of car use and to a significant increase in the volume of car-oriented infrastructure, as a result of which "the layout of the largest part of the Euro-American city space assumes the presence of the complicated logistics of the car…[and] whole parts of the built environment are now a mute but still eloquent testimony to automobility" (Thrift 2004b, 46).[151] This condition, which George Martin has called "hyperautomobility" (Martin 1999),[152] has been associated with a wide range of discontents, not least because of its considerable impact on everyday mobility practices, social organisation of space, social life, public health, as well as the environment. Accordingly, it has been suggested that hyperautomobility: results in traffic congestion, road rage, trouble finding parking, and a higher risk of car accidents;[153] brings along the geographic sprawl of urban areas, thus promoting a more privatised and individualised community life;[154] affects public health in a variety of ways, such as air pollution, accidents, and the discouragement of routine walking; and is environmentally unsustainable and results in poor environmental conditions (Freund and Martin 2007, Conley and McLaren 2009).

As importantly, hyperautomobility is a source of social inequality and exclusion as a result of the fact that different social groups have distinct relationships to it; as Doreen Massey has argued, "some are more in charge of it than others; some initiate flows and movement, others don't; some are more on the receiving end of it than others; some are effectively imprisoned by it" (Massey 1993, 61). Women, the elderly, immigrants, but also those with lower income or less influence are more likely to become marginalised due to their inability to enact their potential for

---

[150] The very idea of *autopoiesis* – Greek for self-creation – comes from natural sciences, where it was introduced by biologists Humberto Maturana and Francisco Varela in order to define the self-maintaining chemistry of living cells (Maturana and Varela 1980). Subsequently, sociologist Niklas Luhmann borrowed the concept in order to suggest that each social system has a distinctive identity that is constantly reproduced in its communication and depends on what is considered meaningful and what is not (Luhmann 1990).

[151] For more on concrete and urban infrastructure as necessary constituents of automotive existence, see Simons (2009).

[152] For more on hyperautomobility, see Adams (1999) and Freund and Martin (2007).

[153] For more on road rage, see Lupton (1999, 2002). For more on morning queues and parking problems, see Hagman (2006).

[154] Robert D. Putnam (2001) has suggested that excessive dependence on automobility is one of the leading explanatory factors in the decreases in civic engagement in the USA. This argument has been countered by John Urry, who has proposed that the car not only does not isolate people from each other in American suburbia, but, on the contrary, that it is the central element of social citizenship (Urry 2002, 265).

mobility,[155] whereas the urban sprawl produced by increased motorisation not only displaces migrant workers and the poor to urban peripheries (Martin 2009) but simultaneously reduces job opportunities for those who cannot afford to buy a car, as it hinders their potential movement back and forth to the city centre (Henderson 2009). In this sense, while driving or having access to a car can offer many people a feeling of liberation, empowerment, and social inclusion,[156] inability to do so may lead to feelings of social exclusion and disempowerment.

The various power dynamics at play have been tackled by Vincent Kaufmann, who has introduced the notion of "motility" to capture the propensity of individuals and groups for movement within geographical, social, and economic spaces (Kaufmann 2002) and the dependence of potential movement on one's "mobility capital" (Kaufmann, Bergman and Joye 2004). Central to the enactment of the latter is the "competence" to recognise and make use of access to different forms and degrees of mobility, of which Kaufmann and colleagues have suggested three aspects: i) physical ability to move within given constraints; ii) acquired skills relating to rules and regulations of movement (e.g. licenses, permits, specific knowledge of the terrain or codes); and iii) organisational skills (e.g. planning and synchronising activities including the acquisition of information, abilities, and skills) (ibid., 750). The identification of these prerequisites for physical displacement is, of course, not a revelation, but is nevertheless a useful reminder of the fact that we should not take the ability to drive for granted, but rather see it as a largely habitual embodied skill.

Driving – and passengering – are, thus, revealed as an orientation of the human body towards the world in and through which it moves, which, complemented by kinaesthesia and the "feel" of the car, transforms both the way in which we sense the world and the capacities of our bodies to interact with it through a combination of affect, emotions, and the senses. Different impressions of motion produce different feelings and emotions in different people, and whereas some might experience feelings of happiness, excitement, or anticipation, others might become fearful, anxious, or nauseous. At the same time, cars often emerge as "toys" (Hagman 2010) through which dreams of adventure and freedom are realised, or as objects of desire to be collected, worshipped, taken care of, and, as Daniel Miller has suggested, sexualised as a wife or a lover (Miller 1997 [1994], 238). Finally, the very idea of

---

[155] For more on "gendered mobilities," see Uteng and Cresswell (2016 [2008]). For more on social exclusion and (auto)mobility, see Freund and Martin (1993), Skeggs (2004), Cass, Shove, and Urry (2005), and Hannam, Sheller, and Urry (2006).

[156] Note, however, the fact that the hierarchies of difference among car drivers produced by means of car makes and models can further stratify the driving experience.

driving elicits a wide range of feelings, such as the pleasures of driving, the thrill of speed, the outburst of road rage, but also hatred for traffic, annoyance with waiting,[157] boredom with taking the same route, or anger at government transport policies (Sheller 2004).

These feelings and emotions are neither located within the person nor produced by the car as a moving object, but occur as a circulation of affects between the two. The driver's sense of how fast they are going, what speed the road conditions permit, and how much space the car needs in order to fit into a parking place or into a narrow alley are all skills embodied through the vehicle (Featherstone 2004), because, as Mimi Sheller has argued, "[w]e not only feel the car, but we feel through the car and with the car" (Sheller 2004, 228). Driving is, thus, revealed as a profoundly embodied and sensuous habitual experience during which the car becomes part of the body of the human driver and vice versa; in the words of Merleau-Ponty, "[t]o get used to a hat, a car or a stick is to be transplanted into them, or conversely, to incorporate them into the bulk of our own body. Habit expresses our power of dilating our being-in-the-world, or changing our existence by appropriating fresh instruments" (Merleau-Ponty 2005 [1945], 166). All this suggests that this car-driver complex is "neither a thing nor a person; it is an assembled social being that takes on properties of both and cannot exist without both" (Dant 2004, 74), but which nevertheless "comes apart when the driver leaves the vehicle and which can be endlessly re-formed, or reassembled given the availability of the component cars and drivers" (ibid., 62).[158]

This understanding of the car-driver complex as an assemblage is clearly influenced by the work of Deleuze and Guattari, and in particular by what they have called a "machinic assemblage" (Deleuze and Guattari 1987 [1980]). Examining the effect of the introduction of the stirrup in the Middle Ages, Deleuze and Guattari have argued that the stirrup allowed the human body to enter into a new symbiotic relationship with the horse by means of a technology – a "machinic assemblage" of human-horse-stirrup – and at the same time made possible the development of new weapons, hence bringing along an entirely new form of warfare. The stirrup provided horse riders with a firm platform which allowed them to exponentially increase the force of their spears while riding on horseback, thus gradually leading

---

[157] For more on this, see Bissell (2007).

[158] The fact that the car-driver merger is only temporal has led Tim Dant to reject the use of the term "hybrid," which suggests a permanent co-functioning, and of the term "cyborg," because "the idea of the cyborg tends to fix and reify the assemblage. While the car can be seen as a mobility aid for the able-bodied, human subjectivity is in no sense constituted by getting into a car; it is a temporary assemblage within which the human remains complete in his or her self" (Dant 2004, 62). For the "co(a)gency" of car and person, see Michael (1998).

to the evolution of the lance as a weapon (Deleuze and Guattari 1987 [1980], 89-90). In her book on Deleuzian thought, Claire Colebrook has suggested another example of a Deleuzo-Guattarian "machinic assemblage," somewhat more relevant to urban mobility:

> Think of a bicycle, which obviously has no 'end' or intention. It only works when it is connected with another 'machine' such as the human body; and the production of these two machines can only be achieved through connection. The human body becomes a cyclist in connecting with the machine; the cycle becomes a vehicle (Colebrook 2002, 56).

The machinic assemblage that emerges in this case is not only a new entity in itself but has simultaneously altered the "machines" that have generated it by and through their co-functioning. As the human's legs set the mechanism of the bicycle in motion, the condition of the human body and the nature of the bicycle are both transformed – from walker to cyclist and from object placed against the wall to a mode of transport, respectively.[159] The ensuing movement changes also the feeling of moving in space – from feeling the ground with the sole of the shoe to feeling the traction of the bicycle tyres – and ultimately changes space itself – from pavement to road. Should we move the analogy to a human and a car, the socio-technical entanglement that is enacted similarly "requires and occasions a metaphysical merger, an intertwining of the identities of the driver and car that generates a distinctive ontology in the form of a person-thing, a humanized car or, alternatively, an automobilized person" (Katz 1999, 33). This machinic assemblage becomes all the more complex as a result of the fluid interconnections between the two "machines" that make this co-functioning possible, such as social practices, embodied dispositions, and technological innovations, but also between the machinic assemblage in question and the physical affordances that support it, such as roads and other spaces, regulatory institutions, and related businesses.

Despite the fact that the new mobilities paradigm treats "corporeal travel" (Urry 2000) as a condition for knowing and sensing the world, there is very limited scholarly work dealing with the nexus between memory and automobility, which largely ignores the various embodied memory processes involved in the actual process of driving or passengering.[160] No movement, however, is possible without delving into the past, and two types of memory largely define the way in which we

---

[159] But, as Colebrook has argued, "[t]he [bi]cycle becomes an art object when placed in a gallery; the human body becomes an 'artist' when connected with a paintbrush" (Colebrook 2002, 56), which suggests that different connections produce different machines.
[160] For an exception, see Bissell (2014).

manage to be on the move and to find our way. Firstly, all our motor skills – namely the learned abilities to cause a predetermined movement outcome with maximum certainty – are a result of our neuromuscular patterning and bodily kinaesthetic memory, which denotes "the way in which specific experiences and concepts of time/space are built into our bodily modus operandi" (Farnell 1999, 353). In this sense, the very embodied skills that constitute "driving" – such as progressively releasing the clutch while adding just the right amount of throttle in order to put a car into motion – are "remembered" through repeated movements, "stored" in our bodies, and recalled automatically whenever we need them; in other words, the know-how and experience of driving has sunk into our "technological unconscious" (Thrift 2004b, 41),[161] a notion not dissimilar to Edward S. Casey's "habitual body memory" discussed in the introductory chapter.

As important to car mobility is spatial memory, which records information about our environment and spatial orientation and is thus responsible for our wayfinding, for, as Tim Ingold has written, "to travel is to remember the path" (Ingold 2007, 91). Unlike navigation in an unknown location, wayfinding in a familiar environment does not require an actual map, because the wayfinder matches their surroundings with "the remembering of journeys previously made…that brought [them] to the place along the same or different paths" (Ingold 2000, 237). Rather, wayfinding is based on "the internal spatial representation of environmental information" (Golledge 1999, xiv) or "cognitive map" (Tolman 1948), the acquisition of which is "a process composed of a series of psychological transformations by which an individual acquires, codes, stores, recalls and decodes information about the relative locations and attributes of phenomena in his everyday spatial environment" (Downs and Stea 2011 [1973], 312). The acquisition of this information occurs kinaesthetically as people move through the environment over a number of times and takes place in three sequential stages: during the first stage, known as landmark knowledge, we get to know the reference points which can facilitate our wayfinding; during the second stage, known as route knowledge, we fill in the spaces between reference points by linking them into sequences of paths from one to the other; and during the third stage, known as survey knowledge, we become capable of understanding larger spatial configurations, such as neighbourhoods, and the ways in which reference points and paths are spatially related to each other (Vandenberg 2016, 20-21).

---

[161] For a critique of Nigel Thrift's distinction between "pre-cognition" and "cognition" and particularly his assertion that driving is frequently practised in unconscious, automatic, or non-cognitive ways, see Laurier (2011).

Nevertheless, as a result of differing motor, sensory, and cognitive abilities and the fact that our spatial behaviour is based less on the physical environment itself and more on our *perceptions* of the physical environment, the cognitive maps of different individuals can differ substantially, with some being more accurate and complete than other. However, given that we reach any destination by making inferences from what we *think* we know (Ishikawa 2016, 116), our mobility can be significantly inhibited if our perceptions are not accurate and representational of the space in which we move. For example, it often happens that we take routes that in terms of distance or time required are not the shortest or the fastest but we nevertheless choose them because we *think* they are, or that, in our quest to reach a destination, we often end up making large detours because we tend to move through locations we already know and *think* are in proximity to each other.

This suggests that a cognitive map should not be understood as holistic knowledge of a particular area. Not only can cognitive maps be incomplete or inaccurate, but they can also depend on the time of day (i.e. day or night), season (i.e. summer or winter), and direction of travel (travelling forward or backward); as importantly, they can be semi-permanent, such as the cognitive map of a familiar city, but they can also be extremely temporary, such as the cognitive map constructed by a parent who keeps track of the location of their children in the park where they play (Lloyd 1997, 57). Given that a cognitive map consists of "long-term stored information about the relative location of objects and phenomena in the everyday physical environment" (Gärling, Böök and Lindberg 1979, 200), the more permanent the cognitive map is, the higher is the possibility that it represents information about environments that are imagined or known to have existed but are no longer present; as Reginald G. Golledge and Robert J. Stimson have remarked, a cognitive map "may be a mixture of information received at quite disparate time periods, and at any particular point in time may be incomplete, more or less schematized, or distorted, and may contain fictional or hypothetical information, or relics of the past which no longer exist" (Golledge and Stimson 1997, 234). In this sense, a cognitive map, in addition to being a memory process in itself, also operates as a memoryscape, where social practice, materiality, individual experience, and collective imaginations co-function.

Private cars in socialism and post-socialism

Under socialism, car ownership and use throughout Central and Eastern Europe and the Soviet Union carried significant ideological weight and brought along particular articulations of power, politics, and materiality. Until the 1970s, cars were available only for those with an influential position or connections within the Communist

Party in each country, as the authorities' view that cars were "a luxury and a symbol of capitalism, materialism and consumerism inimical to the very principles of socialism" (Pucher 1995, 6) which "might awaken individualistic antisocial tendencies…and aggravate interpersonal conflicts that [were] incompatible with the moral standards and principles of Soviet [and socialist] society" (Andrusz 1984, 131) made them inaccessible to the majority of the population.[162] As a result, the number of privately-owned cars was very limited and most vehicles were state-owned, assigned to top functionaries to be used for official purposes or at their own convenience (Grava 1984, 196). Despite the fact that restrictions on car ownership were relaxed in the 1970s and more affordable models appeared on the market throughout the Eastern bloc, limited supply as a result of low production levels meant that cars remained scarce and expensive. However, neither scarcity nor high prices were enough to discourage the millions of aspirant car owners and demand remained exceptionally high not only due to the obvious advantages that the possession of a car offered to its owner, but as importantly due to its symbolic value; as Lewis H. Siegelbaum has argued:

> The Socialist Car was more than the metal, glass, upholstery, and plastic from which the Ladas, Dacias, Trabants, and other still extant and erstwhile models were fabricated; it also absorbed East Europeans' longings and compromises, their hopes and disappointments. The Socialist Car thus can be situated at the point of convergence between the state and the private sphere. It embodied aspirations for overcoming the gap in technology between the capitalist and socialist worlds, as well as for enhancing personal mobility, flexibility, and status in the latter. It brought those who possessed one a little closer to an imagined West even as its own limitations and those imposed on it frustrated the fulfillment of those imaginings (Siegelbaum 2011, 2).

The fastest way to purchase a car in the Soviet Union and most other socialist countries was by gaining access to a coupon that permitted such a transaction.[163] Every year, a number of such coupons was allocated to various state institutions to be distributed among their employees, as the socialist state – the sole producer, importer, and distributor of the entire stock of new cars – aimed at utilising the high demand for cars in order to achieve its ideological objectives; in this direction, cars were expected to serve as rewards for efficient work and political activism (Jastrząb 2011, 31). In practice, however, this system was exploited by the individuals

---

[162] For such socialist theorisations of car ownership, see, among other, Efimov and Mikerin (1976).
[163] A notable exception is Albania, where private car ownership was prohibited.

responsible for the distribution and allocation of cars, who exercised their capacity to influence the procedure in order to accomplish their own micropolitical goals, which "opened the field for the development of patron-client relations" (ibid.). Hene, in the Soviet Union in particular, the role of personal ties and of the entire favour system known as *blat* in acquiring a car became paramount.[164]

Those potential buyers who lacked the connections or the political capital to influence the distribution mechanism were expected to pay – in advance – a price often higher than the coupon holders and then wait for a considerable period of time – usually extending into several years – before the car they had already paid for was delivered to them.[165] In the early 1970s, as a result of increasing public demand, several socialist countries launched a series of measures which aimed at facilitating the purchase of cars by the public while at the same time improving the states' fiscal position. Most notably, the Polish state encouraged Poles to buy cars in US dollars at the Pewex hard currency stores by making them immediately available to domestic hard currency holders, while those without hard currency savings were lured into prepaying the entire amount in Polish złotys by means of reduced prices and drawings at the end of each year through which those who had paid full price could also acquire cars without further waiting (Jastrząb 2011). As importantly, potential car buyers without capital were offered the option of paying in advance in equated monthly instalments which were set aside in savings accounts at the state-owned Powszechna Kasa Oszczędności (PKO) bank. This strategy did not only make cars more easily available to a larger proportion of the population but at the same time channelled liquid assets into savings accounts, thus potentially contributing to the stabilisation of basic consumer goods prices and inflation.

The scarcity of new cars and the long waiting periods for their delivery skyrocketed demand for used cars and made them eagerly sought after at the second-hand market, where they were sold at prices significantly higher than those for brand new cars sold via official channels; as Jan Winiecki has noted in regards to the Polonez 1500 manufactured and sold in Poland, a car sold at the second-hand market could be up to 60% more expensive than a brand new one, an amount which at the time was equal to the average five years' salary (Winiecki 2011 [1991]). Legally, the Polish state permitted only used cars to be privately resold, but it was not uncommon for brand new cars to be put up for sale as well, at prices three, four, or five times higher than the official price tag, as individuals involved in the

---

[164] For more on *blat,* see Ledeneva (1998).
[165] In many cases, high inflation rates meant that potential car owners were asked to pay an additional amount before actually receiving the car.

distribution system were exploiting their positions and their access to new cars (Hanasz 1999, 5). As importantly, Poland's second-hand car market offered the possibility to potential car owners throughout the Eastern bloc to gain access to cars produced in the Soviet Union and other socialist republics, but also to Western makes and models, as several individuals profited by buying used cars in the Soviet Union, West Germany, or Austria and then reselling them in Poland at a much higher price.

The policies facilitating the purchase of cars and the emergence of the second-hand market had a significant impact on car ownership ratios across the Eastern bloc which for years had been lagging behind the West. In the mid-1970s, at a time when roughly one in two Americans and one in three Swedes owned a car (Eurostat 1977, 171), there were 111.1 cars per 1,000 people in the German Democratic Republic (GDR), 101 in Czechoslovakia, and 31.1 in Poland, whereas the USSR average was 26 cars per 1,000 people, with car ownership ranging from 61 cars per 1,000 people in the Estonian SSR to 14 cars per 1,000 people in the Tajik and the Moldavian SSRs (Siegelbaum 2011, 8-9). By 1985, car ownership in the GDR and in the USSR had increased two-fold and in Poland had increased three-fold (ibid.), but, nevertheless, private cars across Central and Eastern Europe and the USSR remained scarce compared to the West as a result of low production levels and pricing policies. Even in socialist countries with high levels of car production, such as Czechoslovakia, Poland, or the USSR, it was almost impossible for the average citizen to afford a car: the price of the cheapest car produced in Poland, the Polski Fiat 126p, popularly known as the "toddler" (Pol. *maluch*), was equal to two years' wages (Hanasz 1999, 5), whereas in 1984 the very popular Soviet-made Zhiguli costed approximately 9,000 roubles in the Soviet market, which meant that the average Soviet citizen had to work five to eight years in order to be able to purchase one (Grava 1984, 195).

As car prices increased every year due to inflation and the monopolistic power of the state, many people never managed to gather the entire sum needed for the purchase of a car. However, even those who eventually succeeded in their quest – by putting all savings aside for the car, taking up part-time side jobs, or participating in the second economy in order to supplement their income – soon realised that owning a car was a rather costly and demanding task. The scarcity of gas stations and the commonly occurring fuel shortages as a result of the direction of oil supplies towards industries rather than the public often resulted in people waiting at gas stations for hours and gas prices jumping up, sometimes doubling overnight.[166]

---

[166] In Poland, fuel was rationed from 1981 to 1988, leading to a black market in ration coupons that further increased its price (Pucher 1995, 6).

Similarly, the scarcity and unreliability of repair shops forced practically everybody to become an amateur mechanic, whereas the lack of spare parts and accessories, such as tyres, car radios, or sparkplugs, soon led to the establishment of an extensive black market and to widespread pilferage.[167] These limitations were so widespread throughout the Eastern bloc that they essentially came to constitute a part of its "common heritage" (Gatejel 2011), resulted in a particular type of "car cultures" (Miller 2001a), and brought forward "vernacular, generic motorscapes [which] stitch[ed] the local and the national together through their serial reproduction across space" (Edensor 2004, 108); in the words of Siegelbaum:

> Refraining from wearing seat belts in order not to offend the driver (or if you *were* the driver, not wanting to appear unmanly); expecting to settle with the traffic police if stopped rather than going through complicated formal procedures; adorning one's car with bunting, dolls, or some other good-luck charm on the occasion of a wedding; removing windshield wipers after parking; being prepared to maintain one's own car; and a host of other practices comprised the cultures (Siegelbaum 2011, 13; emphasis in the original).

As a result of all these limitations, the "socialist car" never became the ultimate consumer good, nor did it result in a rapid growth in car use and the automobilisation of society as it did in the West (Bole and Gabrovec 2014, 219). Instead, the dearth of cars was compensated for by the revival of the concept of the microdistrict (Rus. *mikroraion*), which in the 1950s emerged as the basic unit of residential development throughout the USSR and parts of Central and Eastern Europe, based on the premise that, for comfortable living in a socialist society, all citizens should have equal access to all the material, cultural, and welfare goods and services that they require (French and Hamilton 1979, 9). Accordingly, besides functioning as a living quarter, a *mikroraion* was supposed to provide for its population's daily needs through stores, laundries, repair shops, restaurants, schools, and pre-school facilities, all within a radius of 150-200 meters (Reiner and Wilson 1979, 60). This was expected to make all amenities easily accessible on foot and minimise urban travel needs, thus suggesting that, unlike the USA, where the automobilisation of society and urban sprawl required people to travel long distances by car even for groceries, Soviet citizens were given the option to travel by car, but they did not necessarily have to (Meier 2011, 117). This, however, is not

---

[167] As a result of the latter, the owners of cars that were parked for a long period in an unsupervised place routinely removed and locked away windshield wipers and other easily detachable parts in order to make sure they were not stolen.

to say that the road network – at least in larger urban centres – was not adequately developed. As Elke Beyer has argued:

> [socialist] planners assigned generous spaces to the roads and traffic intersections deemed necessary to avoid the 'collapse' that traffic had caused in the cities of capitalist countries with a much higher rate of motorization. Employing a frequently used modernist metaphor, they conceptualized the city as an organism requiring adequate circulation channels for its healthy development: a system of scientifically categorized pathways of movement ranging from pedestrian areas connected by quiet alleyways to access and service routes and finally to the main traffic thoroughfares of local and regional significance, leading to a national system of highways (Beyer 2011, 75).

Nevertheless, as cities grew in size and new high-density residential areas became even further removed from city centres, the low level of car ownership generated the need for affordable public transport systems with dense networks and high service frequencies which would interconnect them (Crouch 1979, Prileszky 1993). These systems operated thanks to heavy subsidies, which allowed for a wide geographic coverage and kept fares low, thus making public transport available and accessible to all. However, decades of subsidised operations, lack of competition due to state monopoly, the predominance of political goals, and an almost entirely captive ridership made public transport systems extremely inefficient (Pucher 1995, 9-10). Services were often delayed or missed entirely, vehicles were overcrowded, in poor repair, and not properly heated or ventilated, shelters for waiting were inadequate, and stops and stations were far from residential units, which meant that most urban dwellers had to walk long distances each day to or from bus stops and train stations (Grava 1984, 189).

This situation further deteriorated in the aftermath of the dissolution of the USSR, when the heavy subsidies that kept these systems running were reduced or even halted as part of the transition to the market economy (Grime and Duke 1996). Additionally, in the republics that continued regulating prices for public transport,[168] the hyperinflation that developed had particularly adverse consequences on revenues, whereas the impact that the radical decrease in income had on the living standards of the population meant that fewer people could afford or were willing to pay for the ticket (Gwilliam 2000). The lack of resources for the

---

[168] The post-Soviet Central Asian republics retained most of the Soviet public transport policies, including the regulation of prices.

maintenance and upgrade of infrastructure led to a sharp decline in the volumes of operating vehicles and a serious deterioration in the quality of service, with frequent breakdowns, slower speeds, discontinued routes, significant delays, and long intervals between services. As a result, the already problematic public transport services became even more unreliable and impeded the movement of urban populations instead of facilitating it, thus forcing them to find new ways of moving around, with many of them switching to the car which in the meantime had become more easily available.

Indeed, the collapse of the socialist bloc and the opening up of the former socialist countries to western markets greatly expanded the quantity and quality of the automobiles available across the post-socialist space and led to a demand for cars that exceeded what was actually necessary to meet mobility needs. Apart from the relative economic growth and the rise in the population's purchasing power,[169] this increase in car ownership and use was a result of the fact that cars were widely seen as "engines of liberty" (Hanasz 1999) and symbols of post-socialism which would potentially position the mobility culture of the former socialist republics at par with the West and would allow the population to break free of the routes and strict timetables imposed by public transport services. Simultaneously, in certain areas and contexts the car evolved into a financial asset, a token of coming of age among young men, and even a prerequisite for marriage, whereas its association with higher social status led many to buy one in order to make up for their lower socio-economic standing and material deprivation; in the eyes of the population, cars granted their owners what Paul Gilroy has called "compensatory prestige" (Gilroy 2001, 94).

In addition to its symbolic value, amidst the "chaos" (Nazpary 2002) that characterised early post-socialist everyday life, the car became an indispensable tool and a companion through the hardship. Depending on the need, a car could act as a bus for family and friends; as a lorry to move from one house or city to another, to carry building materials, to transfer goods to be sold at the market, or to import – or smuggle – products from abroad; as a tow truck to help a neighbour or fellow driver in need; and as a way to escape the cramped apartment and contemplate while aimlessly driving around the city.[170] Most importantly, however, the car succeeded in becoming a reliable income-generating machine. With the number of cars growing as fast as unemployment rates and with salaries plummeting, many car

[169] As Mimi Sheller has suggested, car consumption is never simply about rational economic choices, but is as much about aesthetic, emotional, and sensory responses to driving, as well as patterns of kinship, sociability, habitation, and work (Sheller 2004, 222).
[170] For more on such "therapeutic journeys," see Ferguson (2009).

owners resorted to carrying passengers as a way of earning a living or supplementing their income, essentially becoming informal taxi drivers.[171]

Working as an informal taxi driver is one of the "survival strategies" (Johnson, Kaufmann and Ustenko 1998) that have been employed by people across the former Eastern bloc, and especially in the former Soviet republics, in order to cope with the unfavourable socio-economic conditions that followed the dissolution of the USSR.[172] While most such informal activities emerged as part and parcel of the transition to the market economy, driving an informal taxi had been a relatively popular way of generating extra income already during the socialist era. In post-socialism, the unreliability of the underfunded state public transport systems and their association with lower social status, coupled with the willingness of the public to pay more for faster, more reliable, and more versatile service, not only helped this practice endure transition but in fact guaranteed a relatively stable flow of both clients and income both in rural areas and in larger urban centres.[173] Hence, even in some of the former USSR's largest cities, such as Moscow, Kiev, or Tashkent, it is still quite common to see locals standing at the curb flagging down informal taxis, which throughout the post-Soviet space have come to be known as *bombily* (Rus. pl.; Rus. sing. *bombila*).

Uzbek car market mechanisms

While in the past only those who already owned a car resorted to "taxiing" (Rus. *taksovanie*), in the aftermath of the dissolution of the Soviet Union ramping unemployment rates, combined with the increasing availability of cars, led people to buy or "rent" (Rus. *arendovat'*) one specifically in order to exploit it for this purpose. However, in the case of post-socialist Uzbekistan in particular, the fact that more cars have become available does not necessarily mean that they have become easier to access; on the contrary, the purchase of a car still remains a rather complex process contingent on a series of political and economic conditions and characterised by several limitations reminiscent of the socialist era, such as state

---

[171] The term "informal taxi driver" (or, as Peter T. Suzuki has suggested, "vernacular taxi driver") refers to individuals who offer paid lifts in their private cars and share some of the following features: i) they are illegal or quasi-illegal; ii) they have developed spontaneously; iii) they are informally organised; iv) fares are based upon negotiations or "gentlemen's agreements" rather than upon meters; v) they are devoid of any signs, logos, or marking distinguishing them as taxis; vi) they are indigenous; and vii) they are found in poverty-stricken areas (Suzuki 1985, 337).

[172] Other such strategies are: having a second job; using a dacha or other plot of land to grow food; renting out one's apartment; conducting business trips abroad in order to purchase goods for resale; and renting out one's garage (Johnson, Kaufmann and Ustenko 1998, 185-186).

[173] For more on taxi driving as an informal activity in a working class community in the Russian margins, see Morris (2016), especially pp. 102-109.

monopoly, protectionist measures, gas shortages, high prices, and long waiting periods, especially for car models and colours that are in high demand. In this sense, the way in which the Uzbek national car industry and the domestic car market operate are very telling of the endurance of socialist political-economic forms in yet another aspect of post-socialist everyday life in the republic.

Throughout the Soviet era, car ownership rates in the Uzbek SSR remained low, as there were only 16 cars per 1,000 people in 1977 and 36 cars per 1,000 people in 1985, ratios that on both occasions positioned it among the bottom five SSRs in terms of private car density (Siegelbaum 2011, 8-9).[174] After Independence, the establishment of a national automotive industry became a priority for the administration of President Karimov due to its perceived importance for the economy of the newly independent republic,[175] and towards that direction, in 1992, the administration founded the state company UzAvtosanoat. The next year, following President Karimov's visit to South Korea, UzAvtosanoat launched a partnership with Daewoo Motors, the automotive division of the now-defunct South Korean conglomerate Daewoo Group; the ensuing joint venture, Uz-DaewooAuto, constructed an assembly plant in Asaka, in the Andijon province, which began producing cars in 1996.[176] However, the Daewoo Group ran into financial trouble during the 1997 Asian financial crisis, as a result of which it sold its automotive division to the US-based multinational General Motors (GM) in 2001 and backed out from Uz-DaewooAuto. Having acquired Daewoo's shares in both Uz-DaewooAuto and the Asaka plant, UzAvtosanoat continued producing Daewoo-branded cars until March 2008, when GM bought a 25% stake in the company and renamed it to GM Uzbekistan. Subsequently, all Daewoo cars produced in Uzbekistan and sold domestically were rebadged as Chevrolet, while those intended for export continued to be sold in Russia and other CIS countries under the UZ-Daewoo brand until 2015, when they were rebadged as Ravon.[177]

---

[174] Unlike some other SSRs, the Uzbek SSR did not produce any vehicles other than tractors.

[175] For more on the symbolic significance of national automotive industries, see Ross (1995). For more on the significance of automobility to the production and consolidation of national identities, see Edensor (2004).

[176] The first models that came out of the plant were the microvan Damas (1996 –) and its pickup version Labo (1996 – 2004, 2015 –), the small family car Nexia N100 (1996 – 2008), and the city car Tico (1996 – 2003), before the latter was succeeded by the city car Matiz (2001 –).

[177] The first Chevrolet model assembled in Uzbekistan was the small family car Lacetti (2008 – 2011), which was soon followed by a facelifted version of the small family car Nexia, known as the Nexia N150 (a.k.a. Nexia II; 2008 – 2016), the short-lived multi-purpose small family car Tacuma (2008 – 2009), and the large family car Epica (2008 – 2012). In 2008, GM Uzbekistan started producing the suburban utility vehicle (SUV) Captiva (2008 –), which marked the launching of a series of more expensive cars for the upper middle class and which also included the large family car Malibu (2012 –) and the multi-purpose small family car Orlando (2014 –). In the meantime, a new version of the Lacetti, known as the Gentra

For most of the 2000s and early 2010s, a significant part of GM Uzbekistan's car production output was intended for export. Exports provided both the company and the state with much needed hard currency and the necessity to maintain access to foreign markets had led GM Uzbekistan to sell its cars abroad at competitive prices that left room for only minimal profit. Instead, most of the company's profits came from the domestic market, where its virtual monopoly over new car sales due to the protectionist measures in place[178] allowed it not only to maintain high prices, but also to increase them twice a year as it saw fit, at rates significantly higher than the official inflation rate. Depending on the wider economic climate, this situation often resulted in a paradox, where cars produced in Uzbekistan were more expensive locally than in Russia or Kazakhstan. For example, in 2014, official car dealers in Uzbekistan could buy the cheapest Nexia for UZS 31.3 mil (USD 13,652 at the official exchange rate or around USD 10,500 at the black-market exchange rate); the same car was being sold for USD 8,450 to dealers in Russia and for USD 8,200 to dealers in Kazakhstan.[179]

The company's desire to export as many cars as possible meant that the number of units released into the domestic market was rather limited, essentially making new cars in Uzbekistan relatively scarce. Hence, when new cars were released, two or three times every year, potential car owners literally rushed to official dealers to order a car and made a deposit of 85% of the car's retail price. Until 2017, GM Uzbekistan sold most of its models for US dollars and only few select ones, usually the most expensive ones, for Uzbek soums,[180] thus forcing buyers to spend their foreign currency savings or buy foreign currency on the black market in order to be able to buy a car. The cash US dollars buyers brought to official dealers were deposited onto a card connected to an account at the state-owned Asaka Bank and were then transferred to UzAvtosanoat. Limited supply and high demand meant that there could be long waiting lists for the cheaper and more popular models which could reach up to a year. If during the waiting period the price of the car changed due to fluctuations in the official exchange rate, buyers were expected to

---

(a.k.a. Lacetti II; 2013 –), and two new versions of the Nexia, the Cobalt (2012 –) and the Nexia T250 (a.k.a. Nexia III; 2015 –), appeared on the market, and together with a facelifted version of the Matiz, named Spark (2010 –), became the more popular middle class cars produced by GM Uzbekistan.

[178] According to the latest customs regulations, in place since 2012, in order to import or register in Uzbekistan, one has to pay an import duty of 30% of the car's retail price, plus USD 3 per each cubic centimetre of the volume of an engine exceeding 1,000 cubic centimetres. Such import tariffs make the purchase of an imported car prohibitive for most potential car owners, as they eventually add between 100% and 150% to the car's price.

[179] "Uzbekistan Still Faces Shortage of Locally Produced Cars despite Falling Exports," *bne IntelliNews*, June 25, 2014.

[180] "Uzbekistan-GM venture abandons dollars for domestic car sales," *Reuters*, June 1, 2017.

cover the difference if the price had gone up or received a refund to their card – in soums – if it had gone down.

The limited supply of cars meant that, when cars became available, those who wanted to obtain one had to stand in a line in front of the official dealership for the whole night, which required a lot of persistence and luck, as the potential car owners were systematically many more than the cars available. Hence, in order to avoid waiting and to make sure they would eventually obtain a car contract, many buyers either resorted to bribing the dealers by paying a "cap" (Rus. *shapka*) which could set them back as much as USD 1,200, or visited the second-hand car market in Sergeli, the southernmost district of Tashkent, which, however, could end up being even more expensive. The limited supply of new cars and the willingness of potential drivers to pay higher prices for a used car in order not to wait at times resulted in yet another paradoxical situation in which the price of a used car could be higher than that of a new one. For example, in late 2014, a well-used Chevrolet Nexia costed between USD 12,000 and USD 13,000 in cash at the Sergeli market, despite the fact that a new one could be purchased at the official dealership for around USD 10,000.

Additionally, a used car could also end up costing significantly more as a result of the different – both formal and informal – financial schemes that helped those who did not have the necessary capital to purchase a car.[181] In the 1990s, in order to make cars more easily accessible to the public and thus increase demand, Uz-DaewooAuto, in agreement with the state-owned Asaka Bank, had made a limited number of cars available on relatively manageable loans. In the years that followed demand for cars increased, and the company progressively started backing out from selling cars on loans. Nevertheless, with unemployment rate at unprecedented levels and prices making cars unavailable for most of the population, loan-like credit support institutions which offered leasing deals covering the need for consumer loans became increasingly popular. Thus, potential used car owners were given the option to "rent" cars from leasing firms or private car owners for a predefined period – usually up to three years – with the expectation that by the end of this period the car would belong to them. The – significantly higher – final price depended on the size of the deposit, the frequency and size of instalments, and the duration of the lease, and could often result in the car costing twice as much as if bought in cash.[182]

---

[181] For more on informal credit institutions and urban money lenders in Uzbekistan, see Ruziev and Midmore (2014).

[182] In 2017, banks resumed offering car loans. "Uzbekistantsam Stanet Proshche Kupit' Avto v Kredit," *sputnik*, June 21, 2017.

The high demand for cars and the significant difference in the prices between new and used cars can be partly explained also by the fact that, due to the limited availability of formal investment instruments, the population started purchasing cars for speculative purposes, effectively turning the car into a financial asset and thus further spiking the prices up. People would buy a new car for approximately USD 10,000, drive it for one or two years, and then sell it at the second-hand car market for up to USD 12,000.[183] For this purpose, when purchasing a car, it had been customary for buyers to consider its resale value as much as to take into account its features and characteristics, and after buying it, to meticulously take care of it, as any scratch could bring the resale price down. However, in 2015 used car prices suffered a sharp fall due to a plunge in GM Uzbekistan's exports, which flooded the Uzbek domestic market with new cars that were unsold abroad. Simultaneously, the substantial weakening of the black-market rate of the soum vis-à-vis the US dollar and a fall in remittances from Russia due to the Russian financial downturn affected the purchasing power of the population and led to a decline in used car purchases, thus further lowering used car prices. As a result, those who had hoped to speculate in cars saw their investment falter, as the decline in used car prices meant that their assets had lost up to USD 1,000 in value from the day they had purchased them.

The aforementioned plunge in export volumes came as a result of a series of political decisions and economic crises in Russia, GM Uzbekistan's largest export market. In 2012, upon joining the World Trade Organisation (WTO), Russia levied a "recycling fee" on all imported cars in order to protect its domestic production, thus making cars produced in Uzbekistan less competitive in the Russian market. And in 2014, the sharp fall in oil prices and the international sanctions imposed on Russia following its annexation of Crimea and military intervention in Ukraine sent the rouble tumbling and dragged the Russian economy into recession, thus slowing demand for cars in the country. A growth in GM Uzbekistan's car exports to neighbouring Kazakhstan had initially compensated for the partial loss of the Russian market, but a series of technical regulations related to Kazakhstan's membership in the Eurasian Economic Union (EEU) and a flood of cheap cars into Kazakhstan from Russia caused by the weakness of the Russian rouble against the Kazakh tenge came to further jeopardise Uzbekistan's car exports to the CIS countries.[184] On top of that, the 2014 decision of the National Bank of Kazakhstan

---

[183] In order to fight speculation, the resale of locally-produced cars within a year of purchase is banned.
[184] Cars imported into EEU member states are required, among other things, to have at least one air bag, an anti-lock braking system (ABS), specific attachment points for child-safety seats, and daytime headlights. The two Uzbekistan-produced models that are most popular in Kazakhstan, the Matiz and the Nexia, had at the time none of these features, and their import into the country was subsequently halted until GM Uzbekistan retooled their production lines.

to devalue the tenge and the collapse of the currency as a result of the Bank's 2015 decision to let it float freely (until then, the tenge had been pegged to the US dollar and the Russian rouble) made imported cars significantly more expensive – and thus less competitive – in the local market.

Nevertheless, despite the flooding of the Uzbek domestic market with new cars that were unsold abroad, their prices remained stable as a result of GM Uzbekistan's 2014 decision to reduce its production output. The propping up of prices has been of crucial importance for GM Uzbekistan and the smooth functioning of its operations, because, as some observers have suggested, the company uses the money potential car owners pay in advance for the purchase of a car in order to fund the production of that very car,[185] as most of the parts used for the cars produced in its kit-assembly plants need to be imported from abroad. All this shows that the financial mechanisms related to purchasing a car in Uzbekistan are contingent on a series of variables and developments that take place both domestically and abroad, which essentially makes the car market volatile. Indeed, while in 2015 and 2016 car export volumes remained scant, therefore keeping both waiting periods and used car prices relatively low, the massive increase in exports to Russia alone by 889% in 2017 is very likely to send waiting periods up again and make cars at the second-hand market more expensive than brand new ones. Similarly, the impact of the recent devaluation of the soum by almost 100%, combined with GM Uzbekistan's decision to sell its cars only for the national currency, are most likely to have a significant effect on car purchases in ways that can only be speculated.

GM Uzbekistan's monopoly on new cars sales means that the vast majority of cars cruising Tashkent's streets are locally-produced Daewoos and Chevrolets, supplemented by a constantly decreasing fleet of old Soviet-era models and, due to the high import tariffs, very few units produced abroad (Rus. *inomarki*). This relative uniformity is further enhanced by the fact that most drivers prefer to buy white cars, as white colour reflects heat in the hot summer months and allegedly makes the fading of the paint less visible,[186] essentially making Tashkent's "motorscape" (Edensor 2004) visually rather monotonous. Nevertheless, the various power dynamics are evident even within this setting, as the cost of a car is widely perceived to be indicative of one's socio-economic status. In this sense, expensive models, such as the Malibu, the Captiva, and the Orlando, are seen as symbols of wealth and success; the Lacetti, the Cobalt, and the Gentra are equivalent to the

---

[185] Personal interview with anonymous Tashkent-based economist, January 2015.
[186] There is also a widespread belief among taxi drivers that passengers avoid black and dark cars, which further limits the choice of informal taxi drivers to white and brighter colours.

middle class car; the Spark has become quite popular with the younger generation of Tashkenters thanks to its dynamic design and its bicolour interior; while the Nexia and the Matiz are the standard and most popular models due to their affordability, in terms of both retail price and gas consumption, and hence occupy the lower end of this vertical status scale. The more expensive the car is, the less likely the driver is to stop upon being flagged down by potential passengers, which makes it only to be expected that the most popular models among informal taxi drivers are the Nexia and the Matiz.

Tashkent's informal taxi economy

Tashkent's informal taxis have in recent years become one of the most popular means of urban transport among the local population thanks to their affordability and availability, as virtually every moving vehicle in the city doubles as an informal taxi. Most drivers are simply individuals who on their way to work or home offer paid lifts to their fellow citizens in order to supplement their income, provided that the latter's destination is more or less along their route. However, with the average monthly salary in Uzbekistan at slightly over USD 330 and the real unemployment rate estimated anywhere between 20% and 40%, a considerable part of Tashkent's – almost exclusively male – population has taken up taxiing professionally, either as their primary occupation or as a secondary source of extra income.[187] Additionally, taxiing has also evolved into the standard option for the scores of young men from the provinces who move to Tashkent in search of employment. The fact that many of these drivers do not speak Russian and often lack any knowledge of Tashkent substantially hinders their ability to successfully navigate Tashkent, but does not necessarily have an impact on their capacity to generate income, as it is not uncommon for passengers to explain to drivers how to get to their final destination.

The mechanisms behind taxiing are simple: *bombily* drive around Tashkent or wait at central points across the city – e.g. metro stations, markets, etc. – until they are flagged down by a potential passenger, who then pronounces the destination and the amount they are willing to pay for the ride into the open window or door. The driver can accept the fare offered, reject it all together and leave if he finds it too low or if the destination is not along his route, or suggest a slightly higher amount that he finds more reasonable, as most drivers are willing to make reasonable detours if the fare is worth it. The service is relatively cheap due to the fierce

---

[187] Those who do not have another source of income and who "taxi" (Rus. *taksuiut*) full-time need to work approximately 12 hours per day, six or seven days a week, in order to earn enough to cover their costs and take enough money home; those who do have a standard job, on the contrary, taxi only in the evenings and during the weekends in order to supplement their income.

competition among the thousands of drivers, and while there is no clear pricelist, the population of Tashkent knows more or less how much each itinerary costs by taking into account a series of variables. Among Russian-speaking Tashkenters, knowing the right price and never offering less or ending up paying more for a ride is considered to be something of a skill, indicative of having been born in the city or at least having lived there for a long time. Similarly, being cheated by the driver or ridiculed for offering too little is an indicator of weakness, provinciality, and, among male Uzbek-speakers, of unmanliness. To that end, people – and especially men – take negotiating the fare for a ride very seriously, which often results in long bargaining sessions.

The most important variable is distance – the further the destination, the higher the fare – but the remoteness of the destination, or, put differently, the chance that the driver will manage to find another client there who would pay for the journey back to the city centre, is something that professional *bombily* take into account as well. Additionally, a series of secondary variables, such as weather conditions or time of the day, can also affect the fare. Fares increase by as much as 50% on rainy days, as drivers take advantage of the higher demand for taxis. Similarly, in the winter months, snow or ice on the streets can increase the fare by approximately 30%, as driving on slippery surfaces is considered risky due to the higher probability of getting involved in a car accident; the extra charge is thus something of a safety net. High car supply during rush hour pushes fares down, whereas late at night low car supply and the unavailability of public transport increase the fare by up to 100%. The number of passengers also plays a role: in a company of two or more, each extra passenger increases the fare by approximately 30%, as drivers claim that the extra weight results in higher gas consumption and increases their costs; simultaneously, two or more passengers make it unlikely for the driver to take other passengers along the way, and the extra charge is seen as a compensation for this loss. Finally, asking the driver to drop one in front of their apartment building also increases the fare: due to the fact that *mikroraiony* are essentially mazes which are hard and time-consuming to navigate, drivers charge extra in order to enter them, which is why most passengers prefer to get off at the main street closest to their house and continue on foot.

The following incident is very telling of these pricing strategies. In the early hours of a rainy Saturday night in October 2014, I stopped a car to take me to my apartment block, less than five minutes by car away from where I was. The driver refused the usual price of UZS 2,000 and asked for UZS 4,000,[188] which I accepted

---

[188] USD 0.66 and USD 1.33, respectively, according to the black market rate in October 2014.

as there were no other cars on the street. After I sat in, the driver asked me to give him directions on how to reach my destination, because he was apparently unfamiliar with that part of the city. When I laughingly inquired why he had charged me that much if he did not even know where my destination was, he replied that at that time of the day and with that weather UZS 4,000 had sounded to him like a reasonable price, and since my initial offer had been UZS 2,000, he had assumed that my destination could not be too far. In addition to illustrating how certain conditions can affect the fare, this ethnographic vignette is also very telling of how in certain settings people – in this case myself – are much less willing to bargain. This is particularly true for young women, who often agree to take a taxi for a fare higher than the usual in order to avoid waiting alone on the side of the street or engaging into unnecessary conversation with their potential driver. As Zhenia, a notary's assistant in her early 30s, told me:

> Drivers can be very annoying. Some of them are okay, but some others ask you all kind of questions, and although I have got used to it, you never know where they will stop. There are times they mildly flirt and offer to give you a free ride in exchange for your phone number, sometimes they make inappropriate comments or constantly stare at you through the rear-view mirror, and there have been cases in which I have been panicking that something bad might happen to me.

This is one of the reasons why late at night many Tashkent residents prefer to call an officially registered taxi to take them to their destination. Far outnumbered by *bombily,* the number of which is estimated to be anywhere between 10,000 and 50,000, in 2015 there were only 2,664 official taxis registered in Tashkent;[189] with Tashkent's official population in that year estimated at 2.2 million inhabitants, it means that there was roughly one official taxi per 1,000 persons. This ratio, equivalent to cities with efficient public transport systems and an established bicycle culture, such as Copenhagen, has been understandably deemed too low by the authorities and a plan to increase the number of official taxis to 9,000, or to a ratio of four official taxis per 1,000 persons, has been put forward.[190] Among other provisions, the plan involves an offensive against informal taxis, which are seen by the authorities as the main factor inhibiting the development of the official taxi economy. In that direction, a team of municipal employees and plain clothes law enforcement officers was assembled in 2011 in order to launch sting operations

---

[189] "Rabota na Izvoz, ili Pochemu Khokimiat Boretsia s Legalnymi Taksi," *anhor.uz*, February 13, 2015.
[190] "I Snova o Lineinich Taksi," *Moi Gorod*, June 28, 2011.

against Tashkent's informal taxi drivers under the pretext that they present a danger to traffic.[191]

Although it is true that poorly maintained vehicles, broken windshields, potentially hazardous compressed natural gas (CNG) tanks, and missing or non-operative safety belts are the rule rather than the exception among Tashkent's informal taxis, the involvement of the tax authorities in those raids from 2014 onwards suggests that the incentives behind it are mostly financial. *Bombily* do not obtain a licence to carry passengers and do not declare their income, thus costing the state and municipal budgets billions of soums in lost revenues, and at the same time they undermine the operations of official taxi and public transport companies by competing with them and therefore keeping ticket prices and official taxi fares low. This is why the fines levied upon drivers caught carrying passengers without having obtained a licence to do so are very high and for many of them can be financially devastating. Fines typically range between 20 and 100 times the minimum monthly wage, and should the offence be repeated by the same individual within a year, the driver is deprived of his driving licence for up to five years and risks being sentenced to corrective labour for up to three years.[192]

Naturally, being deprived of a driving licence presupposes having one, which, however, is not always the case among Tashkent's drivers, as the high costs involved in obtaining one keep many of them, especially rural newcomers, away from driving schools.[193] But even those who do have a licence are quite likely to have never actually taken driving lessons, as until the early 2010s it was quite common among potential drivers to skip classes and to pass the exam at the State Agency for Road Safety (Rus. *Gosudarstvennaia Sluzhba Bezopasnosti Dorozhnogo Dvizhenia –* GSBDD) by giving a bribe of up to USD 50.[194] In an attempt to allegedly improve road safety, in 2011 the government decided to close all private driving schools across Uzbekistan, as it was rendered that the school owners' inability – or

---

[191] In the early days of these raids, drivers suspected of offering paid lifts were stopped and fined by traffic police officers. However, corruption and the difficulty to legally prove that a person carried in a private car indeed pays for the transport called for more ambitious measures. The tightening up of the framework for the acquisition of a driving licence, together with the aforementioned offensive against informal taxis, the traffic police checks directed towards cars with registration plates from other provinces (especially the Ferghana province, widely considered as the centre of radical political Islamism in Uzbekistan), the creation of artificial queues at gas stations and the subsequent screening of car drivers, and the installation of a system of 115 traffic control cameras on the city's main crossroads are very indicative of the administration's larger scheme to securitise everyday life in Tashkent.

[192] "UBDD Ob''yavit Voinu Bombilam v Ponedel'nik." *sputnik*, February 13, 2016.

[193] For example, the cost for obtaining a driving licence at the Avtotest driving school in January 2018 amounted to UZS 3 million (or USD 367 at the official rate).

[194] "Uzbek Government Orders Closure of Driving Schools," *RFE/RL,* January 9, 2011.

unwillingness – to enforce mandatory attendance to driving lessons and their facilitation of bribery and other illicit practices during the driving exam had resulted in the drivers' poor skills and in an increase in traffic accidents. Thus, since 2011, the training, re-training, and examination of drivers of all categories has been exclusively carried out by state institutions, and in particular the Transkasb association, the ToshShaharTransXizmat association, the Uzbekistan Motorists Voluntary Society, and the Vatanparvar Organisation for the Promotion of Uzbekistan's Defence (Rus. *Organizatsiia Sodeistviia Oborone Uzbekistana "Vatanparvar"*).[195]

Each of these organisations operates several driving schools across Tashkent, which, despite technically being branches of the same institution, compete with each other and maintain their own pricing policies. Nevertheless, the curriculum is regulated by the GSBDD and hence is the same in all driving schools, with potential drivers expected to take three hours of lessons every day, Monday to Friday, for a total of three months.[196] If officially the authorities' main problem with private driving schools was the fact that most candidates paid their way out of lessons, skipping a class in any of the state institutions is almost impossible and students need to get a permission from the school's administration if they cannot attend a class. Mandatory attendance and a more transparent final exam procedure have convinced many of my interlocutors that closing down private driving schools was the right thing to do, but some others have claimed that nothing has really changed in terms of transparency or efficiency. The only difference, they argue, is the fact that it is the state that now benefits from the revenues from tuition and exam fees and, as importantly, bribes which before used to go into private hands.

Whereas the measures against informal taxis have managed to provide the state and municipal budgets with several billions of soums in fines,[197] they have been less successful in keeping informal taxis off the streets. For many *bombily*, taxiing is the

---

[195] Vatanparvar (Uzbek for "defender of the homeland") is the successor of the Soviet era Voluntary Society for Cooperation with the Army, Aviation, and Fleet (Rus. *Dobrovol'noe Obshchestvo Sodeistviia Armii, Aviatsii i Flotu*), best known under its Russian acronym DOSAAF. According to its own website, Vatanparvar's mandate is to strengthen the defence power of Uzbekistan's armed forces, to prepare citizens to work for and defend their homeland, to assist state agencies in propagating patriotism among citizens, and to educate youth in a military-patriotic spirit. In addition, following the example of its predecessor, Vatanparvar also offers driving lessons and issues driving licences.

[196] In total, potential drivers needs to sit through 266 hours of theoretical classes, following courses such as Traffic Code, Vehicle Operation, Basics of Driving and Traffic Safety, and First Aid. After they complete the theoretical part, they are expected to spend 32 hours on driving practice.

[197] In October 2017 alone, the authorities conducted 1,200 raids during which they identified 5,700 cases of passenger transportation without a licence to do so. Of these cases, 1,700 were taken to court and generated a total of UZS 1.95 billion in fines. "S 'Bombil' v Uzbekistanie Vzyskali Pochti 2 Milliarda Sumov," *sputnik*, October 27, 2017.

only source of income and thus most of them have no choice other than to continue taxiing notwithstanding the risk of getting caught and fined. While the authorities had expected that raids would put *bombily* under pressure and make at least some of them consider becoming official taxi drivers, especially since the privileges official taxi drivers enjoy are quite significant,[198] excessive red tape, taxi company regulations,[199] and, most importantly, the high costs involved have hindered this transition. Indeed, becoming an official taxi driver is a rather costly endeavour, as it requires investing a considerable amount of money before even having started working. These expenses involve issuing a taxi licence, which annually costs USD 75; signing a contract with a taxi company, to which the driver must pay a fixed amount every day;[200] and modifying one's private car into a taxi by repainting it and by installing all taxi-related equipment, which can set interested parties back as much as USD 1,000.

Within this context, the raids carried out by state agencies against informal taxi drivers effectively raise questions as to what extent it is in the state's interest to deprive a significant part of the population of their only occupation and/or an extra source of income. In a country already badly hit by unemployment and with thousands of economic migrants returning from Russia due to the recent Russian financial downturn, such actions can lead to dissatisfaction and unrest. With scores of young men among the unemployed, the state has good reasons to be concerned about the consequences, and the numerous occasions on which drivers have physically assaulted the inspectors who levied on them a fine only confirm that. As several of my interlocutors suggested, a potential disappearance of informal taxis would not only have a grave impact on the income of almost the entire city's population, but in addition could lead to an increase in public transport ticket prices and official taxi rates – which are currently kept relatively low due to the competition from informal taxis – and even to an increase in crime rate. As

---

[198] Not only is working as an official taxi driver more profitable than being a *bombila*, but at the same time official taxi drivers are employed in accordance to labour law provisions – therefore they accrue seniority and are eligible for sick leave and paid days off – and have car maintenance costs (and in some case gas as well) covered by the company they work for.

[199] To be eligible for a taxi licence, the driver must be over 21 years old, already have a category B driving licence, and have been driving for at least three years; fully owning a car is not a prerequisite, and owners of leased cars can qualify as well, provided that the lessor accepts the modification. Unofficially, however, to consider hiring, taxi companies prefer older drivers – between 30 and 45 years old – who fully own their car, are fluent in both Russian and Uzbek, and have substantial driving experience.

[200] Each taxi driver pays the company he works for a fixed amount which largely depends on the company's popularity and clientele. Some drivers work for more than one companies simultaneously, which gives them a larger client basis and more work, but also means that they need to pay each of these companies a fee.

importantly, as the next section will suggest, the disappearance of informal taxis might also have a significant impact on spatial memory in Tashkent.

Informal taxis, wayfinding, and the institution of *orientiry*

As I have already hinted in Chapter 1, the removal of Soviet era monuments and statues that took place in Tashkent throughout the 1990s was accompanied – or even preceded – by the renaming of many of the city's streets and places, a process which indicated, as Laura Adams has put it, "what aspects of the past were retained and which were let go of in the first decade of Uzbekistan's independence" (L. Adams 2010, 31).[201] In total, over 1,500 of Tashkent's – at the time – 3,473 streets were renamed between 1991 and 2005 according to some estimates,[202] and the names of several hundred more were changed – in some cases for a second or even third time – in the years that followed.[203] Similarly to the removal and modification of monuments and statues, renamings also led to tensions and contestations among various population groups. However, of particular interest to this chapter is less the symbolic meaning of these changes and more their performativity, namely the way in which they – together with the thousands of renamings that took place during the Soviet era – have affected the everyday lives of the city's inhabitants and especially their wayfinding practices.

Due to the massive scale of the renamings, it has become practically impossible for the city's inhabitants to know which streets have been renamed, let alone remember what the new names have been in each case. This is further complicated by the fact that most of the latter are Uzbek-themed as a result of a recent requirement for all new street and place names to refer to toponyms which were colloquially used in 19th-century Tashkent but have since fallen into oblivion; hence, it has become particularly hard for those who do not speak or understand Uzbek to keep up-to-date. Simultaneously, the fact that, in many cases, renamings have undermined the

---

[201] Across Central and Eastern Europe and the former Soviet Union, place renamings were the earliest response to the change in the status quo. In many cases, the new regimes restored the names that streets and places had before the socialist era, thus essentially legitimising their own administrations as the lawful heirs of the pre-Soviet regimes and simultaneously establishing a historical continuum in which the Soviet period was presented as nothing but an unwelcome parenthesis. For more on the changes of the names of streets and places across the former Eastern bloc, see Azaryahu (1997), Tucker (1998), Light (2004), Gill (2005), and Marin (2012).

[202] "Gimn Natsionalizmu. Za Poslednie Semnadtsat' Let v Tashkente Pereimenovana Polovina Ulits," *fergana.ru*, January 31, 2008.

[203] "Uzbekistan Renames Capital's Soviet-Era Streets, Places," *RFE/RL*, January 27, 2010; "V Tashkente Pereimenovany Ulitsy i Makhalli," *gazeta.uz*, May 18, 2011; "Uzbekistan: Tashkent Continues to Dismantle Soviet Past," *eurasianet.org*, January 16, 2013; "V Tashkente Izmeneny Nazvaniia Riada Ulits i Makhallei," *gazeta.uz*, January 11, 2013; "Bolee 100 Makhallei Pereimenovany v Tashkente," *Moi Gorod*, May 2, 2016.

relationship between the place name and a local landmark that the Soviet planners had aimed at further complicates the process. For example, Soviet era Pedagogicheskaia Str. connected the city centre with the Pedagogical University, thus clearly informing the wayfinder where the street led. However, even though after Independence the University was named after the 12th-century Persian poet Nizami, Pedagogicheskaia Str. was renamed after Yusuf Khos Khojib, an 11th-century Turkic scholar essentially unrelated to pedagogy, the University, or the location.

Indeed, it has not been uncommon for renamings to result in ludicrous and utterly confusing situations. Another such example is the park situated opposite the Bunyodkor stadium in the Chilanzar district, which during the Soviet era was officially called the "Forty Years of Uzbekistan's Komsomol" Park of Culture and Leisure. In the early 1990s, the park and the adjacent "Fifty Years of the USSR" metro station were both renamed after Ulugh Beg, but on the centenary of Gafur Guliam's birth in 2003, the park took the writer's name and that of the Timurid ruler was transferred to the park hitherto known as Bogi Eram, situated next to the metro station named after poet Khamid Alimdzhan (1909 – 1944). As if only to make things more complicated, the names of the metro stations were not switched accordingly, which has resulted in the park named after writer Abdulla Kadyri (1894 – 1938) being adjacent to the Gafur Guliam metro station, the Gafur Guliam Park being situated right next to the Ulugh Beg metro station, and the Ulugh Beg Park close the Khamid Alimdzhan metro station.

While the majority of Russian-speaking Tashkenters has responded to the changes of street and place names by resorting to using the names that these streets and places had during the Soviet era, this strategy cannot adequately address all the practical challenges that renamings pose to the everyday life of the city's population. Several of my interlocutors complained that changing a place name entails much more than simply removing the old nameplate and replacing it with the new one. Rather, every time the name of a street changes, those who live there need to update their *propiska* and inform the public utility organisations about the change, both of which are essentially time-consuming and nerve-racking processes; additionally, it is not uncommon for renamings to be accompanied by new house numbering, which often hinders mail delivery. Most importantly, however, renamings, as well as respellings,[204] have rendered the use of street and place names for the purpose of

---

[204] Renamings do not necessarily involve the complete change of a place name, as several entail as little as a translation of a Russian term into Uzbek or a change in the Cyrillic script spelling of a given place name, most often by substituting the vowel <a> with <o>. The replacement of the Cyrillic script with the Latin one has also led to further confusion regarding the correct spelling of street and place names.

navigating and wayfinding in Tashkent an unreliable technology even for those equipped with GPS navigators or GPS-enabled smartphones; as Sasha, an emergency response ambulance driver in his forties, related:

> Some people call the emergency line and give their address without explaining whether it is the new or the old name of the street. Then we [the ambulance crew] have to start looking for the street, we call them back to ask, they say they don't know, we waste time, and eventually we run out of patience and mobile phone credit. Sometimes nameplates hang on the wrong street. Some other times you ask locals and they tell you that this is not the street you are looking for, and you go to the street they point to and other locals there tell you that this is not where the street is either, that the street indeed was called this or that three years ago but now it's called something else, and it goes on and on and on…There is no database, and street names often change twice a year, so even if there was a database, the chances that it would be kept up-to-date are zero, and you can never be sure that the street Yandex maps [a Russian web mapping service similar to Google maps] show you is the right one.

With more than fifteen years of sitting behind the wheel of an ambulance, Sasha proudly claimed that he knows most official street and place names, old and new alike, but admitted that he is concerned when they need to attend an emergency call inside residential districts (Rus. sing. *kvartal;* Rus. pl. *kvartaly*). Despite the fact that the space between buildings with *kvartaly* and former *mikroraiony* is officially administered by *mahalla* committees, private informal – and often illegal – initiatives are not uncommon and often result in makeshift obstacles such as garages, fences, irrigation canals, or barriers which hinder the movement of pedestrians and cars alike. As importantly, the planning of *kvartaly* has rendered several of the buildings too far away from main streets to have a street address, and instead a system of numbering housing blocks has prevailed, in which the location of one's apartment is given by a sequence of numbers indicating the *kvartal*, the housing block, and the apartment itself. For example, the address "Chilanzar 1-23-45" means that the tenant lives in the first *kvartal* in the Chilanzar district, in housing block No 23, in apartment No 45. This technology expects people to be familiar with the location and layout of each *kvartal* and each building in order to be able to find any given apartment, or as Sasha commented, "one has to search relying only on his experience" (Rus. *prikhoditsia iskat' opiraias' tol'ko na opyt*).

All this has made official street and place names and addresses scarcely – if ever – used by the population of Tashkent and has led to their substitution by an abstract

system of vernacular orientation points known as *orientiry* (Rus. pl.; Rus. sing. *orientir*) as the preferred navigational technology. In lieu of a definition of what an *orientir* is, I have taken the liberty to quote a rather long excerpt from a text posted on the Facebook page of the Tashkent resident Gul'zhamal Milibaeva which attracted considerable attention after it was reproduced by the popular website *Pis'ma o Tashkente*. Like many of my interlocutors, the author has also attempted to explain the system of *orientiry* by comparing it to wayfinding practices in Almaty:

> Almaty is divided into squares, and one's destination is given by indicating the intersection of two streets: "you have to drive to Dostyk [Str.] and Abai [Str.]," or "that store is on Dzhambul [Str.] and Bogembai Batyr [Str.]." To us Tashkenters this method looks unusual and certainly not applicable to our city. We hardly know the names of the streets, let alone their intersections. A guest visiting from Almaty called me once and asked, "What is the name of that street into which I need to turn from Amir Temur Str., near the TV tower?" Such a simple question, but it brought me into a light stupor. I was silent for two minutes, trying to remember; have I ever known the name of that street? All streets have been renamed two or three times. But I did not know the street's old name either, because there was no need to know it. I know that one needs to turn at this location called "Shakhristanskaia," but what exactly is "Shakhristanskaia?" A metro station? A square? (No, there is no square there, this I know.) Is it the name of the street itself? I had never before thought about it. "Shakhristanskaia," for us, is a "place," that is, the intersection and its surroundings within a one-hundred-meter radius. Or two hundred or five hundred meters, depending on the context or one's desire. The Alaiskii market is also a place. "Their office is located at Alaiskii," and everyone understands that the office is located somewhere around the Alaiskii and, of course, not inside the market itself. Almaty residents tell the taxi driver "such [street] and such [street];" we [Tashkenters] give *orientiry*: "to Pervushka" or "to [the] Korzinka [supermarket] at [the] Turkmenskii [market]." Almaty residents wonder how it is possible to navigate the city without naming street intersections, and we do not understand how you can remember the names of all the streets in the city (Milibaeva 2016).

The nature of the places – the author in her text uses the word *mesta* (Rus. pl.; Rus. sing. *mesto*) – that become *orientiry* varies. They can refer to historical locations, specific buildings, enterprises (such as cafés, restaurants, or stores), educational institutes of all levels, metro stations, bridges, parks, markets, and any other aspect

of the urban environment that is either well-known or clearly visible by virtue of its centrality, signage, or features. For example, some popular *orientiry* are the Efendi restaurant (*Efendi*), the Bibigon café (*Bibigon*), the Uzbekistan Airways ticket offices (*Aviakassy*), the Psychiatric Hospital (*Psikhushka*), the sporting goods store SportTovary, the Ye Old Chelsea Arms pub (*Chelsi*), the Tashkent Tractor Plant (TTZ), the shopping centre Next (*Nekst*), the bridge in Badamzar, the Aibek metro station, and the Westminster University. Each *orientir* can refer to the very place that gives the location its name, but it can as well denote the larger area in its vicinity. In this case, the "radius" of an *orientir* depends on the distance of the location from the city centre, as the closer it is to the latter, the more accurate it becomes; for instance, the *orientir* Bibigon indicates only the crossroads in the central Ts-1 district on which Bibigon café is located, *Psikhushka* is a metonym for the larger area behind the Railway Station, whereas TTZ designates the whole area outside the outer ring road at the north end of Mirzo Ulug'bek Str., north-east of the city centre.

Simultaneously, it is quite common for *orientiry* to refer to past names or functions of buildings and locations or even objects that materially no longer exist.[205] For example, the busy intersection of Mustaqillik Str. and Shahrisabz Str. is colloquially known as "Children's World" (Rus. *Detskii Mir*), after the big toys store that occupied the ground floor of one of the adjacent buildings from 1970 until the 1990s. The 16-storey building next to the Kosmonavtov metro station and its surrounding area are colloquially known as "Pearl" (Rus. *Zhemchug*), after the eponymous jewellery shop that functioned there in the early 1990s. And the square at the intersection of Buyuk Ipak yo'li Str. and Mirzo Ulug'bek Str. is colloquially known as "Svetlana," after the store that existed there throughout the Soviet era and until the mid-1990s. In some cases, the fact that *orientiry* refer to past names, functions, or forms of particular locations is indicated by the usage of the adjectives "old" (Rus. *staryi / staraia / staroe*) and "former" (Rus. *byvshii / byvshaia / byvshee*). The adjective "old" is scarcely used, and when it is employed it is to denote places which have materially vanished,[206] whereas the adjective "former," when not omitted, is

[205] For similar observations in other Central Asian cities, see the work of Mateusz Laszczkowski (2016) on Astana and Morgan Liu (2012) on Osh.
[206] For instance, the green zone east of the *skver* inside the inner ring road became colloquially known as "Old Zoo" (Rus. *Staryi Zoopark*) after the Tashkent zoo, originally opened there in 1928, was moved to a new location north-east of the city centre in 1997; today, there is nothing there indicating the location's past function. Similarly, the stretch of Mustaqillik Ave between *Detskii Mir* and the Khamid Alimdzan metro station has been known as the "Old Conservatory" (Rus. *Staraia Konservatoriia*) after the National Conservatory moved to a modern building close to the Pakhtakor stadium and the old socialist realist building that originally housed it was demolished in 2010.

used for cases in which the building or the location are materially still present and its function has been retained, but their name has changed.[207]

Although the origins of the *orientiry* technology most probably lie in the navigation of the Islamic era city, where the population used colloquial reference points due to lack of official place names, the term "*orientir*" and its contextualisation date back to the 1970s. The earliest written mention of *orientiry* I could find is in the 1972 Taxi Driver's Handbook, which, among other things, aimed at helping taxi drivers to locate less well-known streets by offering a list of reference points in the form of main streets, squares, parks, schools, factories, and hospitals (Tashkentskoe Proizvodstvennoe Ob"edinenie Taksomotornykh Perevozok Ministerstva Avtotransporta UzSSR 1972). Despite the fact that, to my knowledge, no other such Handbook has been published ever since and that there has never existed a catalogue of *orientiry*, this navigation technology has not only survived, but in fact is constantly updated. The fact that only few of the *orientiry* mentioned in the Handbook are still in use today suggests that the locations that serve as *orientiry* are often renewed and replaced by new ones, both temporally and physically situated closer to the experiences of the population of the city.[208]

Tashkent's *orientiry* are, thus, dynamic places with distinctive features and qualities which have entered into the individuals' actions, experiences, expectations, and pasts by means of the everyday practices that they afford, in the course of which they have been invested with different meanings, layers, and identities; as Tim Ingold has argued, a "place owes its character to the experiences it affords to those who spend time there – to the sights, sounds, and indeed smells that constitute its specific ambience…[which] in turn, depend on the kinds of activities in which its inhabitants engage" (Ingold 2000, 192). In that sense, *orientiry* are revealed as "containers of experiences" (Casey 1987, 186) and as "embodied spaces" (Low 2003) where human experience and consciousness take on material and spatial form (ibid., 9), produced as a result of the inhabitants' dwelling and experiencing the city both consciously, by means of affects, emotions, feelings, and the senses, and inattentively, as something that "is there for us to live in, to move about in, even

---

[207] This, for instance, is the case with Tashkent's Soviet era hotels, which are still known by their original names: the Grand Mir Hotel is referred to as the former Hotel Rossiia (*byvshaia gostinitsa "Rossiia"*) and the new Ramada as the former Hotel Leningrad (*byvshaia gostinitsa "Leningrad"*). The city's parks have colloquially retained their Soviet names as well: the Navoi National Park is often called the former Komsomol Lake (*byvshee Komsomolskoe Ozero*) and the Akvapark the former Victory Park (*byvshii Park Pobedy*).

[208] It is noteworthy, however, that several *orientiry* that refer back to the Islamic or the Tsarist era are still in use today, both in the formerly European part of the city (e.g. Urda, Darkhan, Pervushka, Tezikovka, or Kashgarka) and in the Old City, where Islamic era references have been in use continuously for centuries.

while we in a sense ignore it" (Connerton 2009, 34). As importantly, since it is experiences – both our own and of those we are closest to – that bound places to our memories, *orientiry* are revealed as important carriers of place memory and, at the same time, as the basis for cognitive mapping.

As every inhabitant can potentially experience each location differently, at any given time, each location can be potentially identified by a number of different *orientiry*. Simultaneously, as each location can be experienced differently over time as well, individuals coming from a specific age group can potentially refer to the same location by using *orientiry* which are unfamiliar to individuals who are considerably older or younger. This can result in contestations, as each group uses or tries to establish the meaning attached to their own "envelope of space-time" (Jess and Massey 1995),[209] a process which can take place in two ways: as a result of preconscious processes, e.g. we use the old name of a place because it comes to us automatically due to continuous use; or as a result of conscious decision-making, e.g. we use a particular old name in order to show to others that we have been in a given location longer, that we know it better, or, as is the case with Tashkent's Russian-speakers, that we belong to a particular place. In either case, this practice results in the proliferation of obsolete place names and *orientiry* and shows that, as Svetlana Boym has put it, the past of the city "suggests other dimensions of the lived experience and haunts [it] like a ghost" (Boym 2001, 76).

Although potentially this could result in a situation in which every inhabitant of Tashkent refers to any given location by using a personal subjective *orientir* that is the product of their own experiences, in practice the pool of the *orientiry* used to refer to each location is rather limited. This is because the construction of *orientiry* is a dynamic interaction between people and environment which depends not only on personal factors but also on a series of environmental qualities, such as the capacity of the environment to evoke strong images and to be readily identified and understood.[210] Places that are more well-known or more capable of eliciting emotions and stimulating the senses create strong images which stay with people, and while they grow out of personal experience and activities and hence vary from person to person, they are simultaneously shared by the wider community, for they are products of common histories, common experiences, and a similar habitual use of the city; as urban theorist Kevin Lynch has suggested, the images of cities that people create share certain elements with the images of cities created by others –

---

[209] See also Massey (1995).
[210] For more on this, see Lynch (1960).

there are "sets of images, which [are] more or less overlapped and interrelated" (Lynch 1960, 85).

Therefore, the production of *orientiry* and of cognitive maps at large cannot be divorced from the experience of space, but equally important in this process is the embodied physical movement through space, or, in other words, "wayfaring." Not unlike the Heideggerian notion of dwelling, "wayfaring" refers to being-in-the-world albeit in a way that emphasises physical displacement. As Tim Ingold has argued, wayfaring is "a trail of movement or growth…along which life is lived" (Ingold 2011, 69), which reveals it less as a channel for getting from A to B and more as a "conduit of inscribed activity" (Weiner 1991, 38) and an embodied multi-sensorial corporeal activity. In this sense, wayfaring "provides an increased sensitivity to and understanding of the polyvalence of *environmental reading* that takes place during daily life mobile situations in public space" (Lanng and Jensen 2016, 250; emphasis in the original) and that, additionally, results in the production of cognitive maps. When we move through the environment over a number of times, information concerning our surroundings is gathered by means of affect and the senses, processed by means of various cognitive resources, stored, and then retrieved, integrated, and applied for wayfinding purposes (Vandenberg 2016, 17-18). However, as "relationships to places are not lived exclusively or even mainly in contemplative moments of social isolation, but most often in the company of other people and in the process of doing something with them" (Connerton 2009, 33), the exchange of experiences and environmental knowledge while travelling with others becomes paramount in the production of these cognitive maps, as it reveals it as a collective endeavour undertaken by the flows of people that circulate the city.

The fact that physical displacement is key to the proliferation of similar navigational technologies across urban Central Asia has been highlighted by Mateusz Laszczkowski and Morgan Liu in their studies of Astana and Osh, respectively. Laszczkowski has argued that among the old-timers of Astana (Rus. *Tselinogradtsy*) walking together and using obsolete place names results in the creation of deep ties and at the same time contributes to the survivability of "echo-of-the-past names and shadow landmarks" (Laszczkowski 2016, 103). Liu, on his part, describing wayfinding in Osh's Uzbek *mahalla*s, has suggested that the local population uses Soviet era street names and orientation points in order to navigate the city by employing "the perspective of an embodied walker with actual engagements rather than an aloof map reader" (Liu 2012, 87). In Tashkent, the proliferation of *orientiry* is a result of both those processes, namely both the "mobile with" (Jensen 2014, 53) that *Tselinogradtsy* employ and the being-in-the-world of the Osh Uzbeks. Unlike

in those two cities, however, the role that walking plays in this process in Tashkent is not as important, as a series of factors have made it rather unpopular among the local population. The most significant of these factors are Tashkent's sprawl and the large distances in which it has resulted, the decline of the *mikroraion* system, the rapid automobilisation of the society, the association of walking with lower income and social status, and the local climate with hot and dry summers and cold and snowy winters.

Hence, I would like to suggest that *orientiry* in Tashkent are generated and proliferated by means of the use of informal taxis, and in particular the combination of individual cognitive mapping processes and the exchange of environmental information that occurs between driver and passenger while the find their way through various places and temporalities. This essentially turns informal taxis into the *de facto* mechanism for the production of *orientiry* and the proliferation of place memory. However, for this process to be successful, informal taxis need to be "immutable mobiles" (Latour 1990),[211] or, more precisely, *immutable automobiles,* which means that they need to be in a position to move around Tashkent and hold their shape both physically and as an assemblage of heterogeneous elements, such as the driver, the passenger(s), the car, unreliable public transport, and the other factors mentioned above. If any of these preconditions break down, the assemblage is disrupted, loses its form, and turns into something else, for a car that is parked (immobile); a car that has a flat tyre, has crashed, or has broken down (lost its shape physically); or a car without a passenger (lost its shape as a network) are no longer immutable automobiles and hence they have lost their capacity to produce environmental knowledge.

In other words, in order for *orientiry* to be produced and proliferated, there needs to be a car, the availability of which depends on political and economic developments both within Uzbekistan and abroad but also on the potential motorist's ability to navigate the mechanisms of purchasing a car. This car needs to be in a position to move, which means that its mechanical parts need to be assembled and maintained in a way that ensures motion and that the person behind the wheel needs to be able and legally permitted to drive. Additionally, certain socio-economic parameters which make individuals resort to taxiing must be in place, infrastructure must afford physical movement,[212] and gas stations must have enough gas or CNG to sell to motorists. As importantly, there also needs to be a

---

[211] For the research that influenced that term, see Law (1984).

[212] As importantly, infrastructure needs to afford immobility as well. For more on parking on the street and Bucharest's *parcagii*, see Chelcea and Iancu (2015). For more on garage areas in Estonia, see Tuvikene (2010, 2014).

passenger, which presupposes unreliable or cramped public transport, a need to move fast, the financial capacity to pay for the ride, and a knowledge of the local transport culture. Finally, the driver and the passenger need to be able to communicate with each other: they both need to speak enough Russian or Uzbek, the passenger needs to know what to tell the driver when the latter stops on the side of the street and opens the window, and at least one of them needs to know how to find their way around the city in order to reach the passenger's destination.[213]

This last point shows that *orientiry* are not only a product of movement, but they are also the prerequisite and the context in which the movement that produces them occurs, as they are the dominant wayfinding technology used among the population of Tashkent. Given that most drivers and passengers alike are largely unfamiliar with Tashkent's physical layout and that their ability to move in the city largely depends on following tested practices and well-known routes,[214] wayfinding takes place at the street level. Thus, while immutable automobiles move around the city in a continuous and coherent Euclidean space, wayfinding happens in a parallel fragmented two-dimensional matrix of nodes, with immutable automobiles moving from one *orientir* to another in what Ingold has called "an assembly of *point-to-point connectors*" (Ingold 2007, 74-75; emphasis in the original), based on the cognitive maps constructed by car users. Naturally, an immutable automobile cannot physically move on the matrix without moving in space, which presupposes following the existing urban infrastructure. Thus, those with a better sense of direction are able to choose the shortest path unlike others with lower orientation capacity, who prefer straight roads through open areas or who pass only through nodes they know, which, however, can often result in large detours. In that sense, the interconnectedness of places is based on one's capacity to apply the matrix on Euclidean space and calculate the distances.

The fragmented nature of the matrix means that large areas of the city, those between nodes, simply do not exist in this parallel spatiality. This becomes most clear in cases where a passenger's destination is a location that it is not known by means of an *orientir*. In order to get there, one way is to give the driver the closest *orientir*, and once there, explain to him where exactly to go next. However, this might result in a disruption in the network: if the driver is an occasional driver, he might not be willing to make a detour; or he might ask for extra money, which the

---

[213] It is not necessary for the driver to know the city, as long as the passenger can show him the way. But it is in his interest to know it well enough to know how much he should charge for a given ride.
[214] Indeed, most of my interlocutors were unable to point their position on a map or indicate which way is e.g. north and did not know which district lies next to which.

passenger might be unwilling to offer. This is why in most cases passengers prefer to provide the driver with the precise destination before entering the taxi by means of their relational location to existing *orientiry*, such as "nearby," "behind," "in between," or "opposite." Understanding Tashkent's navigation as a matrix consisting of such nodes offers an interesting apt analogy with the ancient memory enhancement method known as the "method of *loci.*" Also known as "memory palace," this method entails associating specific ideas with unique *loci* within a perceived or imagined structure and then linking them by means of a memory "walk" from *locus* to *locus* in order to quickly and efficiently recall information. John O'Keefe and Lynn Nadel, authors of the influential 1978 *The Hippocampus as a Cognitive Map*, have explained it as follows:

> the subject memorizes the layout of some building, or the arrangement of shops on a street, or any geographical entity which is composed of a number of discrete loci. When desiring to remember a set of items the subject 'walks' through these loci in their imagination and commits an item to each one by forming an image between the item and any feature of that locus. Retrieval of items is achieved by 'walking' through the loci, allowing the latter to activate the desired items (O'Keefe and Nadel 1978, 390).

The analogy becomes all the clearer if instead of a room or street one memorises their daily commute to work, such as the sequence of orientiry in the form of buildings, traffic lights, or bars and restaurants along the way. One might be unable to draw the route on a map or locate oneself geographically in space, but nevertheless by "walking" from *orientir* to *orientir*, manages to reach their workplace, even if that means taking a longer route and spending more time in traffic. While such an arrangement has a certain exclusionary nature, as it potentially hinders mobility for people with no previous experience or memory of a given place, in Tashkent the combination of individual cognitive mapping processes and the exchange of environmental information that occurs between driver and passenger during the widespread practice of taxiing ensures that every individual participates in the generation of *orientiry*.

Conclusion

This chapter is the first of the three analytical chapters that scrutinise a particular urban infrastructure system in Tashkent and that deal with the ways in which the co-functioning between infrastructure and its users is both informed by and results in memory processes. The infrastructure system this chapter focuses upon is the system of automobility and more concretely Tashkent's informal taxi economy,

which makes it a rather unconventional choice for two reasons. Firstly, because automobility is typically seen not as an infrastructure system, but rather as a system of which "infrastructure" in the more traditional sense – i.e. roads, bridges, car-ferries, gas stations, etc. – is simply one component which co-functions with other components in order to make the movement of cars possible. And secondly, because taxis, at least in the Euro-American cities and context, are regarded less as cars and more as public hire vehicles, which means that they are usually not seen as part of the system of automobility. In the case of Tashkent, however, where the unreliable mass public transport system hinders the physical displacement of individuals, informal taxis have become the most popular means of transport, therefore themselves becoming a basic infrastructure system supporting the everyday movement of the population. At the same time, the fact that virtually every car cruising the streets doubles as a taxi reveals taxiing as deeply embedded in both the local car culture and the system of automobility.

This chapter has argued that the local automobility system in Uzbekistan has largely remained unaffected by the transition to market economy, as the way in which the Uzbek national car industry and the domestic car market operate are very telling of the endurance of socialist political-economic forms in yet another aspect of post-socialist everyday life. While more cars have indeed become available, they have not become easier to access; on the contrary, the purchase of a car still remains a rather complex process contingent on a series of political and economic conditions and characterised by several limitations reminiscent of the socialist era, such as state monopoly, protectionist measures, gas shortages, high prices, and long waiting periods, especially for car models and colours that are in high demand. Inevitably, this has led to other processes and practices reminiscent of the socialist era, such as the purchase of cars at the second hand market for a significantly higher price, but also to the institutionalisation of new ones, such as the treatment of a car as a financial asset utilised for speculation purposes or the leasing of a car. The latter in particular has led to the widespread practice of taxiing, which in many cases is simply a way to generate income in order to repay the car that one has leased.

In regards to the study of memory processes and the enactment of memoryscapes, this chapter has argued that not only is the movement of a car contingent upon certain types of memory – most notably kinaesthetic and spatial – but it itself also generates memory processes in the form of cognitive mapping. The scarce use of street names and addresses in Tashkent has made the abstract system of vernacular orientation points known as *orientiry* the preferred wayfinding technology among the population of Tashkent. Accordingly, this chapter has suggested that the

negotiation of these *orientiry* is essentially the working of cognitive mapping processes; *orientiry* are not fixed or universal places but rather dynamic ones, generated by means of the wayfaring of the population and proliferated by means of cognitive mapping and the exchange of environmental knowledge between driver and passenger as they find their way through various places and temporal periods. Hence, they are revealed as personal and collective at the same time, fluid, multidirectional, and generated by social as much as by psychological stimuli by means of affective relationships between humans and their environment. The fact that *orientiry* are about forgetting and oblivion as much as they are about remembering makes them fragile, negotiated, and heterogeneous spatiotemporal orders which are asymmetrical, hierarchical, and often unequal, but which nevertheless remain functional, as they are kept coherent by means of the population's wayfinding.

CHAPTER THREE

Warm Memories on Cold Days

District Heating and Warmth

A visitor to Tashkent, not unlike a visitor to most cities across the post-Soviet space, "cannot but be struck by the obtrusive presence of pipes. Thick silver heating pipes up to a meter in diameter emerge suddenly from the ground, in the midst of a park or walkway, often two in parallel. Heating pipes…may run discreetly along fences or buildings, but then leap over driveways and roads,…often draped with shreds of insulation or metal wrapping" (Collier 2004, 50). Some of these pipes rest above ground on high supports, others are buried underground, visible only by means of the "proverbial lines of melted snow" (Poputoaia and Bouzarovski 2010, 3821) that they leave on the pavements above them, whereas still others – of a smaller diameter – penetrate walls and ceilings. Part of the centralised district heating systems that provide many cities across the region with heat and domestic hot water, heating pipes remain a common characteristic of the built environment of and everyday life in post-socialist Tashkent, bringing infrastructure and its users together into complex networks of relations.

Such large centralised infrastructure systems were fundamental for the operation of cities in the socialist era, when, apart from "the basic equipment, facilities and services necessary for the functioning of a community" (Humphrey 2003, 91), they were also perceived as the superstructure upon which a communist utopia would be constructed (ibid.); hence, they "acted as an implementation tool for the political ideologies and development policies of communist states" (Poputoaia and Bouzarovski 2010, 3820) and manifested the "continuing bonds and renewal between a paternalistic state and its citizens" (Alexander 2007, 73). However, in the aftermath of the dissolution of the Soviet Union, many of these utility networks were "un-bundled" (Collier 2011) due to the reforms that accompanied the transition to the market economy. Among other changes, the substantial subsidies

that kept utilities rates low during the socialist era were reduced or eliminated and prices increased in an attempt to improve cost recovery, which led to experiences of "social upheaval" and "moral loss" (Humphrey 2003, 92) and challenged long-held conceptions of what is private and what is public, hence creating anxieties among the population (Alexander 2009b, 55). More importantly, however, the rapid increase of heating tariffs left millions across the post-Soviet space without access to heating and domestic hot water supply, which not only created significant inequality and "splintered" urban space (Graham and Marvin 2001), but also "generated stories about cold-invoked deprivation and discontent and triggered nostalgic reminiscences of better [and warmer] Soviet times" (Klumbytė 2009, 103).

In the case of Tashkent, district heating was not liberalised or privatised but the quality of the service deteriorated nonetheless, as the dire socio-economic conditions inhibited the modernisation of the obsolete infrastructure. In lack of an alternative, the population of the city had for years been forced to resort to employing socialist-era practices in order to receive adequate heat and domestic hot water. Nevertheless, more recently, the relative improvement in living standards has presented users with a way out of the monopoly of the city-owned heating company, and with it out of the low quality of the service and the constant increases in heat prices, by allowing them to switch to gas boilers and other individual heating technologies. Such a forced decentralisation of the system has led to a radical reworking of the material infrastructure involved in the generation of heat and the practices associated with it, but has also resulted in contestations among the various parties involved, effectively reconfiguring the relationships between households, neighbours, the heating company, and the local and central government. At the same time, it has also led to a series of memory processes generated as a result of the comparison of the warmth and convenience provided by the centralised and individual heating technologies.

Positioning itself in the recent "infrastructure turn" in the social sciences, this chapter examines these memory processes by maintaining a focus on the everyday interaction between infrastructure and its users and on "the embodied, affective details of inhabitation" (Kraftl and Adey 2008, 214). To that end, the first section presents the reader with a brief historical introduction to the Soviet Union's heatification (Rus. *teplofikatsiia*) endeavour, before it proceeds with offering a thorough technical analysis of the centralised district heating system and an account of the responses of the population to its structural limitations and failures both during the socialist era and after. The second section offers a comprehensive socio-technical overview of the particular district heating system that has been installed

in Tashkent, followed by an examination of how the system's obsolescence along with various socio-economic factors have hindered the everyday practices of the population and how the latter have adapted to these challenges. In the third section, I reflect upon the recent decentralisation attempt undertaken by both the city authorities and individual users and examine the various memory processes that the introduction of new technological equipment, such as boilers and radiator valves, enacts. It is there that I focus on thermoception, or the sense by which our body perceives the temperature of both the external and the internal environment, and argue that understanding it as affect can help us see heating and the warmth that it produces as a constitutive component of memory processes.

Heatifying the Soviet Union

Early Soviet leaders saw infrastructure as the material foundation on which a new society would be moulded, which, as Caroline Humphrey has pointed out, suggests that "ideology is found not only in texts and speeches; it is a political practice that is also manifest in constructing material objects" (Humphrey 2005, 39). Indeed, Lenin himself saw the technological progress of the Soviet Union as "an inalienable premise to council democracy" (Fischer 2017 [1948]) and considered electrification in particular as the platform for the transformation of the small-peasant system that the country was at the time into a large-scale industrial economy (Lenin 1966, 516). As importantly, he also deemed electrification as crucial for the population's "transition from darkness and ignorance to a normal life" (ibid., 518) and believed that connecting the entire population to the grid would "put an end to the division between town and country, [would] make it possible to raise the level of culture in the countryside and to overcome, even in the most remote corners of the land, backwardness, ignorance, poverty, disease and barbarism" (Lenin 1965, 335). In this sense, as David Sneath has argued in regards to the Soviet electrification programme in Mongolia, "electric light was metonymic for [both] development and enlightenment" (Sneath 2009, 86).

It is in this context that Lenin famously defined communism as "Soviet power plus the electrification of the whole country" (Lenin 1966, 516), an aphorism which he employed during his presentation of the plan for the electrification of Soviet Russia, known as the GOELRO plan (Rus. *Plan Gosudarstvennoi Komissii po Elektrifikatsii Rossii*), at the 8th All-Russian Congress of Soviets in December 1920. Initiated and supervised by Lenin himself,[215] the GOELRO plan identified a series of key

---

[215] Some parts of the plan were led by the Head of the State Committee for the Electrification of Russia, Gleb M. Krzhizhanovskii, an engineer and close friend of Lenin.

developments that had to be undertaken in order to revolutionise Soviet Russia's energy industry and to effectively electrify the country in its entirety; among those were the construction of twenty modern large power plants with a total output of 1,110 MW; the construction of ten hydroelectric power stations with a total output of 640 MW; an even geographic dispersion of power plants; the utilisation of a combination of fuels rather than a single type; the utilisation of fuels that were available in each location; the integration of all power plants into a complex, dynamic hierarchy of power systems; and, most importantly for this chapter, the utilisation of the power plants' thermal output in order to provide heat to local industries and residential areas (Leversedge 1977, 241).[216]

Thermal power plants generate electricity by burning a carbon fuel – i.e. coal, natural gas, or oil – which heats water in a boiler and turns it into steam. This steam then turns the blades of a steam turbine and sets it into rotary motion, essentially transforming thermal energy into kinetic energy. The turbine is linked by an axle to a generator which rotates together with it and uses the kinetic energy from the turbine to generate electricity. However, due to the fact that not all thermal energy can be transformed into kinetic energy,[217] tremendous volumes of heat are lost to the environment during this process, unless they are recovered and employed as useful heat. The operation during which the heat released as a by-product of electricity generation is captured and utilised is known as cogeneration and is possible only in specially designed power plants, known as combined heat and power (CHP) plants. The heat captured in CHP plants is subsequently supplied to industrial consumers and residential areas through an extensive network of heat pipes in order to be utilised for industrial purposes, district heating, or domestic hot water supply.

The GOELRO plan did not explicitly envisage the construction of such CHP plants, known in Russian as *TeploElektroTsentrali* (TETs),[218] but it nevertheless did stress the importance of developing and implementing cogeneration projects in order to provide the population with heat administered centrally. In addition to the social advantages that it offered by providing heating and domestic hot water to the majority of the population, the introduction of cogeneration – and therefore of centralised district heating – also made sense from an economic standpoint, for it realised economies of scale and hence reduced the costs associated with the production and distribution of heat. In that direction, the Soviet Union's first CHP

---

[216] For more on the electrification of Russia, see Coopersmith (1992).

[217] For a theoretical explanation of this limitation, see the second law of thermodynamics.

[218] This was one of the main critiques the plan received. For such a critique, see Lomov (1932).

plant, Leningrad's TETs-3, began supplying consumers with heat on November 25, 1924, thus marking the birth of the country's heatification (Rus. *teplofikatsiia*) system. Nevertheless, in the years that followed, the lack of concrete long-term planning regarding CHP plants inhibited their proliferation, and it was not until 1931 that the road for the construction of large CHP plants across the Soviet Union was paved. In June that year, the Plenum of the Central Committee of the Communist Party of the Soviet Union suggested that the Supreme Soviet of the National Economy develops a plan for the construction of high-capacity CHP plants in large urban and industrial centres across the country (Sokolov 1963), and the construction of several CHP plants with a capacity ranging from 100 MW to 200 MW begun (Leversedge 1977, 245).

This, however, is not to say that CHP plants had been the only heat generation facilities constructed and used in the Soviet Union, as heat supply was often supplemented by large heat-only boiler stations (Rus. *raionnye kotel'nye* or *TeploTsentrali* – TTs), local boiler houses (Rus. *lokal'nye kotel'nye*), and waste heat recovery units. Before WWII, relatively few cities had centralised district heating infrastructure in place; more specifically, in 1940, the total heat capacity of all the heat-producing units across the Soviet Union was 1,364 MW, the aggregated annual production was 56 Gcal per year, and the total length of heat networks was 300 km (Kozin, et al. 1980, 10). Nevertheless, the rapid urbanisation and industrialisation of the Soviet Union that took place in the years that followed WWII led to the construction of centralised heating systems in all large urban centres across the country, as "systems were relatively easy to build and maintain throughout due to their alignment with the centrally planned construction of new housing, services, and industries, as well as the spatially concentrated nature of urban development" (Bouzarovski, Sýkora and Matoušek 2016, 631). Hence, by 1975 the total heat capacity of all heat-producing units had reached 48,100 MW, the annual production of thermal energy was 2,880 Gcal, and the length of the heating pipe network had been expanded to 15,189 km (Kozin, et al. 1980, 10).

Throughout the Soviet Union, each city's heat pipe network was divided into two types of pipes: i) primary pipes (Rus. *magistrali* or *magistral'nye truboprovody*), which were large-diameter pipes – typically between 500mm and 1,400mm – forming a single loop system and connecting heat-production facilities with specific points across the city; and ii) secondary pipes (Rus. *raspredelitel'nye truboprovody*) which had smaller diameters – up to 400mm – and formed autonomous channels through which heat was delivered to districts and micro-districts. The range of most heat networks was typically between 10 km and 20 km, although some larger

systems could effectively supply heat over distances up to 30 km by means of pumping substations installed along the pipes or an additional increase in the pressure of the heat carrier flowing in the primary pipe network. Increasing the pressure of the heat carrier also meant achieving higher temperature, which could be regulated only at the heat-producing unit and depended on the size of the network and on the average air temperature. While temperature typically ranged between 70°C and 130°C, it could be increased to 170°C in order to improve the efficiency of the heating system when long distances had to be covered.

Significant in the regulation of the pressure and temperature of the heat carrier was the way in which *mikroraiony* and individual buildings were connected to the primary pipe network. As far as heating was concerned, there were two main technical solutions: in the so-called dependent system (Rus. *zavisimaia sistema*), the hot water that entered the in-building pipe network came directly from the heat-producing unit; whereas in the so-called independent system (Rus. *nezavisimaia sistema*), the hot water circulated in a closed circuit which was hydraulically separated from the in-building pipe network, to which it released its heat by means of a heat exchanger. Similarly, there were also two distinct ways in which domestic hot water was supplied to buildings: in the so-called open system (Rus. *otkrytaia sistema*), water for domestic hot water consumption was taken directly from the heating network, which essentially meant that the water in the radiators and the water in the tap was the very same water; whereas in the so-called closed system (Rus. *zakrytaia sistema*), water for domestic hot water consumption was taken from the water pipe and was heated by the heat exchanger before it ended up in the tap. Quite naturally, for a closed system to be possible, an independent system with a heat exchanger needed to be in place, which, as importantly, also allowed the heat-producing unit to produce heat at a higher pressure and therefore at a higher temperature, which could then be regulated at the heat exchanger. On the contrary, in cities or districts were dependent systems were in place, the pressure – and hence the temperature – of the heat carrier leaving the heat-producing unit had to be lower.[219]

Centralised control over the pressure, temperature, and volume of the heat produced often led to an inaccurate heat distribution due to temperature variations within the pipe network and time delays in the responsiveness of the system to air

---

[219] Each of these systems had their advantages and disadvantages, but it is widely accepted that an independent system was more efficient and less costly to maintain and operate than a dependent one. Nevertheless, as dependent heating systems with open water intake were cheaper to construct, they became quite popular in cities in the periphery, such as in Almaty and Tashkent. For more on the technical differences between these systems, see Shumilov (1985).

temperature changes. This was particularly evident in cities or districts serviced by dependent systems, but also in areas where one heat exchanger was used for more than one buildings. In such cases, buildings were connected to the primary network by a single pipe that went through all of them without the technical possibility for a by-pass or disconnection, which meant that the buildings closer to the source received more heat than those at the end of the pipe. Even within the same building, however, the distribution of heat between floors and/or apartments could also be unequal due to hydraulic imbalances and the design of the radiator system. Typically, heating pipes ran vertically through apartments, linking them not in loops, which would allow individual flats to be separated, but sequentially (Johnson 2013).[220] Therefore, hot water flowed from the basement upwards through several floors, which meant that by the time it had reached the higher floors it had already lost much of its pressure and heat. As a result, first floor apartments were usually overheated, whereas those on the highest floor were cold.

This situation was further complicated by the fact that the centralised district heating system did not take into consideration the preferences of its end users, who had no influence over when and how much heat they received.[221] The system was centrally turned on in late autumn as soon as air temperature dropped below an average of 8°C over a period of 120 hours and remained turned on – day and night – until air temperature raised again above an average of 8°C over a period of 120 hours, usually in late spring. Throughout the heating season, radiators were supposed to maintain a fixed temperature of 20°C which was not adjustable, as individual radiators were not equipped with valves that could control the flow of hot water in the heating body. Thus, regulating the temperature in the room by adjusting or shutting off radiators was impossible at the apartment level, and the only flexibility some systems allowed was to regulate the temperature at the building or the district level if an independent system with a heat exchanger was in place.

Hence, in order to adjust the temperature in their apartments, those who resided in overheated first-floor apartments had to open windows and let the cold winter air in, while their neighbours who lived in underheated apartments higher up were often forced to huddle in the kitchen with the stove-top and oven turned on, wear winter clothing indoors, sleep under a multitude of blankets, or buy and plug in

---

[220] This type of connection, known as the one-pipe system, was more common across the Soviet Union than its alternative, the so-called two-pipe system, because it was less sophisticated and demanded fewer pipes, which made it considerably cheaper to construct and maintain.
[221] For more on how in Soviet cities housing and utility companies were the main actors while residents were a mostly ignored agent, see Collier (2011).

electric heaters (Bychkova 2007). In several cases, the residents' quest to heat up their apartments resulted in contestations and clashes between neighbours, as some decided to install extra radiators in their apartments or expand the already existing ones, thus affecting the hydraulic balance of the in-building heating system and therefore the supply of heat to all other radiators connected to the same pipe. Others went as far as to call in and bribe a repairperson to tamper with the building's pipe network so that their apartments would get more heat. When the affected parties in apartments on lower floors realised why their apartments had lost heat, they in turn called the same repairperson who had only one solution – to remodel the pipes back again for another bribe (ibid.).[222]

Such manipulations further deteriorated the pipe networks which, by the late 1970s, were already in a bad condition as a result of poor quality, scarce maintenance, inadequate management, and limited funding. A series of structural malfunctions, such as the build-up of limescale and other deposits, internal and external corrosion, and inadequate thermal insulation – or a complete lack thereof – typically led to leakages and high heat losses which not only made the heating system inefficient both economically and thermally, but also notoriously unreliable. The various maintenance attempts concentrated less on preventing damage from happening and more on repairing it after it had occurred or even causing it deliberately in order to detect and locate weak points in the pipe network. Indeed, in lack of a more efficient technology, the utilities enterprises responsible for the operation and maintenance of heat supply tested the robustness of the pipe network by increasing the pressure of the water flowing in the system. During this test, these parts of the network that had deteriorated simply gave in and burst, unable to withstand the internal pressure due to their considerable wear, and repair crews were then sent in to repair or replace the parts that had been affected. Throughout the testing and reparation process, which was carried out annually or twice a year, before and/or after the heating season, the secondary pipe networks were disconnected and consumers did not obtain any hot water for domestic use.

For Soviet residents, who had grown used to living in an "always-almost-falling-apart world" (Jackson 2014, 222), unreliable district heating systems were simply part of their everyday life in the socialist city. Accordingly, populations across the Soviet Union developed various practices and new conceptions of "washing, hygiene and bodily privacy" (Gandy 2004, 366) that allowed them to navigate such

---

[222] For a similar practice in another context, see Lisa Björkman's ethnography of the municipal housing colony of Shavajinagar-Bainganwadi in north-east Mumbai, where residents often pay "plumbers" to "transfer" their water connections to different parts of the pipe network when the water quality or quantity suffers (Björkman 2015, forthcoming).

phenomena and not be overly bothered by them. Very important to that end was the fact that the bills for heating – just like the bills for all utilities – were disproportionally low, as household prices were sustained and cross-subsidised by relatively high prices charged to industry (Gray 1995). Equally significant was the impact of the fact that, unlike electricity, which was metered and read every month, heating and domestic hot water consumption were not metered, as the fact that consumers were unable to control the volume of heat they were supplied with made the installation of meters pointless (Lampietti and Meyer 2002). Instead, the cost for heating and domestic hot water supply was fixed at a standard rate per square meter of heated area, which meant that tenants in apartments with a larger area paid more than tenants in smaller apartments, notwithstanding whether they indeed needed or utilised all the heat they were supplied with. Hence, the thermal and cost efficiency of the centralised district heating system was of little concern to most tenants.

This stance started changing in the aftermath of the dissolution of the Soviet Union, when economic factors dictated a reform in the way public utilities were regulated and operated and led to their "un-bundling" (Collier 2011, 8). The substantial subsidies that kept utilities rates low during the socialist era were reduced or eliminated as the state withdrew from their management, whereas the processes of "marketization (of gas provision and maintenance), commercialization (of heat production), and 'responsibilization' (of 'users')" (Collier 2011, 8) transformed access to utilities "from a basic citizenship right to a consumer good" (Chelcea and Pulay 2015, 348). As a result, utility prices increased in an attempt to improve cost recovery and millions across the post-Soviet space were left without access to district heating, either because entire district heating systems were shut down (as, for instance, was the case in Armenia), or because they simply could not foot the heating bill. This created significant inequality, "splintered" urban space (Graham and Marvin 2001), and exposed a "psychological-ideological landscape, which has specific post-soviet contours" (Humphrey 2003, 104).

Even in countries and contexts where district heating systems remained operative, however, the quality of the service further deteriorated as the unfavourable economic conditions inhibited the modernisation of the obsolete infrastructure. Accordingly, the systems continued experiencing high thermal losses – due to leakages and lack of thermal insulation in pipe networks as well as due to the energy inefficiency of the existing building stock – which in many cases approximated 60% of the total volume of heat supplied. As research into the efficiency of post-Soviet Russia's heating systems in the 1990s has shown, 15% of the heat losses suffered

occurred during heat transportation as a result of leakages and broken pipes; a total 45% of the overall losses has been attributed to the poor thermal insulation of residential buildings (and, more precisely, 35% to windows and 10% to walls); 30% of heat was lost due to overheating; and 10% was lost by means of the domestic hot water supply system (Makarova 2001). Unsurprisingly, as a result of high losses, the volume of heat needed to provide heating for a square meter of residential space anywhere in Russia was several times higher than in Western Europe; for example, in the early 2000s, an ordinary Soviet era five-storey apartment building required between 0.22 and 0.4 Gcal of heat per square meter, when in Denmark a similarly sized building consumed only 0.043 Gcal of heat per square meter (Mikhailov and Semenov 2002).

Hence, by the end of the millennium, central heating systems had been transformed from a "taken-for-granted support" to "a source of anxiety and destabilization" and from "an index of modernity" to "a sign of decay" (Humphrey 2003, 104). This considerably unnerved consumers, because, as Julian A. Lampietti and Anke S. Meyer have put it, "[w]hile not having control over the amount of heat consumed may have been acceptable when heat was essentially free of charge, it became untenable as prices rose" (Lampietti and Meyer 2002, 6). Accordingly, wherever and whenever it was possible, consumers tried to reduce their heating bills by opting for lower temperatures, less heating time, and less area heated, or altogether abandoned centralised district heating and switched to individual gas boilers, a process which in Russia has come to be known as "boilerisation" (Rus. *boilerizatsiia*) (Boute 2012). However, in many countries and contexts, the design of Soviet era in-building heating systems and the monopoly of state- or city-owned enterprises over heat supply have made such alternatives impossible and have resulted in situations in which users have found themselves "trapped in the heat" (Tirado Herrero and Ürge-Vorsatz 2012). Needless to say, such an "entrapment" is undoubtedly more consequential for those with low income, as it often leads to indebtedness, risk of disconnection, or reduced consumption of other basic goods and services in order to save for heating (ibid.), but nevertheless it is a pressing concern also among population groups with higher socio-economic backgrounds, who, in addition to being discontented with the decay of the infrastructure and the constant increase in energy prices, want to be in charge of choosing how much heat they consume and when.

For such an option to become available, however, a radical rethinking and redesign of existing district heating systems needs to take place. Some post-Soviet republics, such as the Baltic States, are closer to that goal than others, such as the Central Asian

republics, where the reluctance of the state to introduce meters and/or charge market prices for heat supply has led to the continuing deterioration of existing systems. Instead, heat tariffs are still based on norms rather than actual consumption and hence do not reflect the real cost of heat production and distribution, which does not allow the utility companies to cover their operating costs or invest in the rehabilitation of their main assets. Without meters, consumer bills cannot reflect actual consumption and households have no incentive to conserve water or heat, thus driving up operating costs, whereas efforts to improve cost-recovery levels have been hindered by technical constraints arising from the design of the system and the lack of cut-off valves in apartment buildings. Without a mechanism for cutting off supply to individual apartments, utility companies cannot shut off service to delinquent accounts without cutting off entire buildings, which has allowed several households, already affected by decreased incomes and pensions, to respond to higher heat tariffs by not paying their heating bills or by falling behind in their payments.

Tashkent's centralised district heating system

The foundations for Tashkent's district heating system were laid in 1939, when the then newly constructed Tashkent Combined Heat and Power plant (Rus. *Tashkentskaia TeploElektroTsentral'* – TashTETs) begun supplying the local textile plant with steam and hot water for the latter's industrial and heating needs. Nevertheless, it was not until 1954 that the heat produced at TashTETs was utilised in order to provide residential areas with heating and hot water. The first district to be connected to TashTETs by means of an extensive pipe network was Chilanzar, which was at the time being constructed, and the connection of the rest of Tashkent to the centralised district heating system was completed after the 1966 earthquake, when the almost complete reconstruction of the city allowed for the expansion of the pipe network and the construction of eight large heat-only boiler stations across Tashkent. In the years that followed, the district heating system expanded rapidly, driven by the development of the city, and, according to the Tashkent Encyclopaedia, by the early 1980s, Tashkent's district heating system consisted of one CHP plant with a power production capacity of 43.5 MW and a heat production capacity of 995 Gcal/h; eight large heat-only boiler stations with a total heat-production capacity of 2500 Gcal/h; a heat supply network of 499 km, 164 km of which were primary pipes and 335 km secondary ones; 13 pumping stations with a pumping capacity of 20,000 m³/h; and hot water storage tanks with a total capacity of 20,000 m³. In 1981, the city's district heating system produced and distributed 15 million Gcal/h of heat, which were used to heat and to provide domestic hot water

to 1.4 million inhabitants and 6,457 buildings and enterprises (Tashkent Entsiklopediia 1983, 320, 331, 339).

Unlike what happened in other post-Soviet cities, Tashkent's district heating system was not privatised in the aftermath of the dissolution of the Soviet Union but remained in the hands of the city authorities and, to a lesser extent, the state. In the present day, three distinct companies produce the heat that is utilised in Tashkent's district heating system: TashTeploTsentral' (Uzb. *Toshkent Issiqlik Markazi*), the majority stake of which is owned by the City of Tashkent, runs nine large heat-only boiler stations;[223] TashTETs (Uzb. *Toshkent Issiqlik Elektr Markazi*), part of the state-owned UzbekEnergo energy company, runs the eponymous CHP plant; and TashTeploEnergo (Uzb. *ToshIssiqQuvvati*), also owned by the City of Tashkent, runs three large heat-only boiler stations and 199 local boiler stations (Rus. *lokal'nye kotel'nye*).[224] As of 2017, the total installed capacity of all heat-producing units in Tashkent is 6,233 Gcal/h, the connected capacity is 3,602 Gcal/h, and the volume of heat produced annually is 9.67 million Gcal.[225] The individual capacity and output of each of the three companies is hard to estimate,[226] but it appears that 70%-80% of the heat is produced by TashTeploTsentral' and that the rest of the production is more or less equally divided between TashTETs and TashTeploEnergo.

Despite the fact that all three companies produce heat, they are not in a position to compete with each other, because Tashkent's entire heat pipe network is owned and operated exclusively by TashTeploEnergo, which essentially makes the company the sole distributor of heat in the city. TashTeploEnergo buys the heat produced by TashTeploTsentral' and TashTETs at wholesale prices set by the state and then resells it, along with the heat itself produces, to consumers at retail prices set by the state. This heat is supplied to end users in the form of hot water through a dependent heating system and an open domestic how water system, which means that the same

---

[223] The large heat-only boiler stations owned and operated by TashTeploTsentral' are the TTs-1 "Severo-Vostochnaia," the TTs-3 "Zapadnaia," the TTs-4 "Severnaia," the TTs-5 "Chilanzarskaia," the TTs-6 "Iugo-Vostochnaia," the TTs-7 "Aviastroitelei," the TTs-8 "Sergeli," the TTs-9, and the TTs-10.

[224] The three large heat-only boiler stations owned by TashTeploEnergo are the TTs-2 "Karasu," the "Vodnik" boiler station, and the "Sanoatenergo" boiler station.

[225] "Tashkent k 2019 godu Polnostiu Pereidet na Novuiu Sistemu Teplosnabzheniia," *sputnik,* April 4, 2017.

[226] More specifically, the official websites of TashTeploTsentral' and TashTETs specify only their production capacity (Rus. *proizvodstvennaia moshchnost'*) – 4,580 Gcal/h and 650 Gcal/h, respectively – whereas TashTeploEnergo's website simply mentions that the total combined heat load (Rus. *summarnaia prisoedinennaia teplovaia nagruzka*) of all three enterprises is 3,532 Gcal/h. For more information, see <http://tashteplocentral.uz/?page_id=6> for TashTeploTsentral', <http://tashtec.uz/ru/about-org-rus/istoriya> for TashTETs, and <http://www.teploenergo.uz> for TashTeploEnergo. All websites last accessed on February 11, 2018.

water, supplied directly from the heat source, is used for both heating and domestic hot water use. The temperature of the water in the primary pipes can vary according to the weather, but is typically between 70°C and 150°C, whereas the water that has not been consumed is redirected into the return pipe, typically at a temperature of between 40°C and 50°C. According to heating regulations passed by the Cabinet of Ministers of the Republic of Uzbekistan in 2014, the temperature of the hot water by the time it enters and circulates the in-house pipe networks of apartment buildings should be in the range of 50°C and 75°C, with an allowable deviation of ±5°C at night and ±3°C during daytime. In terms of heating, this should translate into an air temperature within apartments of at least 20°C if the buildings have been constructed after 1995 and/or have been adequately insulated and at least 18°C for buildings that have been constructed before 1995; the allowable deviation in either case is ±3°C at night only.

In 2017, the total length of the pipe network operated by TashTeploEnergo was 1,355 km, consisting of 255 km of primary pipes and 1,100 km of secondary ones, with two-thirds of them situated underground in reinforced concrete ducts and the rest constructed above ground on high supports. A lack of adequate investment in the heating sector in recent years has resulted in the obsolescence of much of the system, with 880.9 km of heating channels, or 65% of the city's heat network, having exceeded their operational lifespan in 2017.[227] Despite the fact that the Soviet-era technical norms that apply to Tashkent's pipe network dictate that a total of 160 km of heating channels – 30 km of primary pipes and 130 of secondary pipes – need to be replaced annually, in 2016 only 38.72 km of pipes were relayed anew.[228] Simultaneously, the condition of the pipe network has further deteriorated as a result of the fact that the various maintenance attempts are concentrated less on preventing damage from happening and more on repairing it after it has occurred. Even then, however, infrastructure is usually mended and reused rather than replaced with new parts. Consequently, together with overexploitation and the deterioration of the pipe network as a result of corrosion and limescale build-up, the obsolescence of the system and its inadequate maintenance have led to reduced performance and efficiency, increased costs, and regular disruptions.

In order to ensure that the entire system does not collapse during the heating season, which would leave thousands of consumers with no heating and domestic hot water when they need it most, the pipes are tested twice a year, in April/May and

---

[227] "Tashkent k 2019 godu Polnostiu Pereidet na Novuiu Sistemu Teplosnabzheniia," *sputnik,* April 4, 2017.
[228] Ibid.

September/October, namely before and after heating season. During this process, known among the population of Tashkent as "prevention" (Rus. *profilaktika*), the pressure in the pipe network is increased to up to 20 atmospheres in order to ensure that the infrastructure can withstand such stress. This procedure is based on the simple premise that these parts of the network that have deteriorated will simply give in and burst, unable to withstand the internal pressure due to their considerable wear. Subsequently, all the utility company needs to do is to wait until affected citizens call in to report an emergency and then to dispatch a repair crew to fix the damage that the pipes have sustained. Since the pipe networks inside buildings are not designed to withstand such an internal pressure load, housing blocks and enterprises are disconnected from the district heating system during *profilaktika*. Given, however, that in Tashkent heat for both heating and domestic hot water is supplied by means of the same pipe, the testing of the pipe network inevitably obstructs the supply of the latter. Hence, in order not to leave the entire city without domestic hot water for a whole week, supply is cut off in stages. Each segment of the network is cut off for five days – Monday to Friday – but the exact time of the year, the sequence in which different segments are cut off, the number of the stages, the combination of the heating sources shut, and the total duration of *profilaktika* can vary annually.[229]

The break-up of the pipe network into segments is based on the way in which the entire system is divided among the different plants and boilers that supply it with heat, and hence does not correspond to the city's administrative divisions. As a result, the population of Tashkent is never certain within which segment their house or apartment building falls and, consequently, when domestic hot water supply in their respective area will be cut off. In some *mahallas* the local committees communicate the dates to local residents by posting notifications at building entrances and in recent years the *profilaktika* schedule is posted online by TashTeploEnergo and then reproduced by various news websites, but usually the population finds out that it is time for *profilaktika* only when they open the tap and all that comes out is hiss and air. Bathing during that time can be quite a challenge. The usual practice is to heat up water in pots and kettles and then mix it with cold

---

[229] For example, in autumn 2017, *profilaktika* begun in early September and took place in five stages: supply in the areas serviced by TTs-8 was shut off between September 4 and September 8; supply in the areas serviced by TTs-2, TTs-3, and TTs-7 was shut off between September 11 and September 15; supply in the areas serviced by TTs-4, TTs-6, and the "Vodnik" boiler station was shut off between September 18 and September 22; supply in the areas serviced by TTs-1, TTs-5, and the "Sanoatenergo" boiler station was shut off between September 25 and September 29; and supply in the areas serviced by TashTETs was shut off between October 2 and October 6. See "Grafik Otkliuchenii Goriachei Vody v Tashkente," *gazeta.uz*, September 4, 2017.

water from the tap in the bathtub, but it is also not uncommon for people to shower at the dwellings of relatives or friends located in parts of the city where hot water supply has not been cut off. Similarly, others decide to deal with the lack of hot water by frequenting indoor swimming pools and other sports facilities, where they shower at locker rooms, or – women in particular – by having their hair washed at the hairdresser's.

Nevertheless, the city's primary pipe network is not the only part of the system that is in decay, as the bad condition in which the technical equipment inside most Soviet-era apartment buildings is has a heavy toll on the efficiency of the system as well. Very few in-building pipes are "dressed" in insulation jackets, which leads to high heat losses and low water temperature, whereas the poor thermal insulation of walls, doors, and windows also results in significant thermal energy losses. As importantly, the efficient performance of the heating system is hindered by the various strategies employed by residents in an attempt to control the temperature in their apartments, such as the opening of the windows to cool down overheated apartments, the installation of additional radiators in order to increase temperature, the tampering with the building's heating system in order to achieve either, or the siphoning of hot water from the radiator in order to use as domestic hot water in cases where the water in the tap is not hot enough. Since in-building heating systems are unified hydraulically-balanced structures, the connection, disconnection, or tampering with radiators or pipes in any given apartment alters the volume of the hot water that flows in the system and therefore leads to the thermal and hydraulic misalignment of the entire building's heat supply.

Unsurprisingly, all those limitations – both those intrinsic to the design of the system and those caused by its negligence or misuse – have resulted in distrust and dissatisfaction among users, even if quite often the latter are themselves to blame for the heating system's decay. Complaints often concern the late beginning of the heating season, inadequate heat supply, or supply disruptions, but in recent years the most pressing matter for most consumers has become TashTeploEnergo's monopoly and the way in which it is reflected on its pricing policy. Despite the fact that the heating season usually lasts less than five months annually – from mid-November until late March – the population is nevertheless expected to pay for heating throughout the year. While a campaign aiming at the installation of meters has been launched and punitive measures towards those who do not install meters are in place, in the vast majority of cases heat consumption is Uzbekistan is not metered. Instead, the cost for heat is fixed at a standard rate per square meter of heated area (UZS 1,323.68/m² as of July 2017), whereas the cost for hot water supply

can be either fixed at a standard rate per person registered in each apartment if there is no meter installed (UZS 22,938.78/person as of July 2017) or, if there is a meter, the tariff is UZS 3,915.90/m³.[230]

Very importantly, due to the increasing costs associated with the production and distribution of heat, these rates constantly increase, often several times a year, at rates much higher than the minimum wage or the inflation rate; for example, in 2015 alone, the rate for heating increased three times – on May 15, on August 1, and on October 1 – by as much as 27% in total, when salaries increased only once – on September 1 – by approximately 10% and the official inflation rate was calculated at 5.6%.[231] Similarly very telling of the attempts of TashTeploEnergo to increase its cost-efficiency is the fact that, between 2000 and 2016, the heating rate increased by more than 14,600% and the rate for hot water supply increased by 11,000% when the minimum wage increased by only 7,440%.[232]

While all this has made many consumers contemplate disconnecting from the district heating system, existing legislation aiming at preventing disconnection prohibits them from doing so, for the shut off and dismantling of radiators in any one apartment would allegedly unbalance the entire in-building heating system.[233] Therefore, even if they uninstall the radiators in their own apartment, they are more likely to be fined than to be exempted from paying for heat supply, unless they have acquired a special permission from TashTeploEnergo.[234] As a result, many consumers have become increasingly resistant to paying for heating and domestic hot water supply, assured that, due to the heating system's hydraulic architecture, TashTeploEnergo cannot shut off heat supply to non-paying apartments without cutting off the entire buildings in which they are situated.[235] Others have chosen to

---

[230] The tariff given here for domestic hot water with no meter is the so-called tariff with an increased co-efficient, a punitive measure directed towards those who have not installed meters. The tariff with an increased co-efficient is calculated by multiplying the standard tariff of UZS 15,292.52 per person by a co-efficient of 1.5.

[231] https://uzbchron.wordpress.com/2016/03/23/4776/

[232] Ibid.

[233] Nevertheless, while the residents of apartment buildings cannot refuse district heating, they have the right to refuse hot water supply.

[234] Acquiring such a permission is next to impossible; as an informal taxi driver who attempted to disconnect from the district heating system told me, "I also wanted to give up district heating, but they [at TashTeploEnergo] began explaining to me that unauthorised disconnection from the district heating system will affect heat circulation in the entire apartment building, and therefore I am not allowed to do this without some kind of expert commission, the consent of all the tenants living in my building, as well as representatives from Teploenergo and the *mahalla* committee. The only people I don't need a permission from seem to be the janitors and the dairymen."

[235] Non-payment of bill incurs a penalty of 0.1% for each day of delay, which, however, cannot exceed 50% of the amount of the overdue payment. In April 2017, arrears in hot water payments reached UZS 96 billion. See "Tashkenttsy Zadolzhali za Goriachuiu i Kholodnuiu Vodu Okolo 114 mlrd Sumov," *sputnik,* April 5, 2017.

keep paying their bills, but have additionally installed – either at the apartment or the building level – gas boilers which provide efficient and independent heating and domestic hot water supply on demand and hence offer an effective and relatively affordable way out of the "heat trap."

Gas boilers (Rus. *gazovye kotly*) are individual boilers which generate heat for both heating and domestic hot water purposes by burning natural gas, which in Tashkent – and in most other cities across the former Soviet Union – is supplied to most buildings via a centralised gas supply system. Large gas boilers can be installed in the basement of an apartment building and provide all the apartments with heat, but disagreements between residents over the significant costs involved most often result in the installation of smaller gas boilers within individual apartments, which generate heat for domestic use only. In the 1990s, the dire socio-economic conditions and the fact that Uzbekistan remained a closed market meant that such gas boilers were available and affordable only to a very small fraction of the population, and hence makeshift heating devices constructed by local craftsmen using nonstandard components and without proper safety compliance became particularly popular. Modern gas boilers appeared in Tashkent in the early 2000s, but punitive measures and administrative constraints designed to prevent the public from disconnecting from the centralised district heating system officially limited gas boilers only to newly built buildings that were not structurally connected to the centralised district heating system. Nevertheless, the public widely installed such boilers informally, often against basic safety requirements, and hence the authorities had no other option than to permit their installation, at first only to buildings with no more than five storeys and more recently to buildings with up to nine storeys.[236]

In the 2010s, expansive marketing campaigns carried out by the importers of gas boilers appeared on media and billboards throughout Tashkent, luring customers by promising "hot water at all times,"[237] and in 2013 the Italian corporation Ariston Thermo which specialises in heating systems set up a joint venture with the Uzbek energy company UzTransGaz. The ensuing company, Ariston Thermo-UTG, produces gas boilers and other domestic heating systems in its plant in Navoiy, in the Navoiy province in central Uzbekistan, and then distributes them across the republic. It is, hence, not surprising that the stance of the Uzbek state towards the proliferation of gas boilers has changed in recent years. Not only the installation of

---

[236] "Gazovye Kotly Razresheno Ustanavlivat' v Deviatietazhkakh," *gazeta.uz*, September 7, 2017.

[237] In late autumn 2016, several billboards advertising gas boilers produced by the Chinese electronics company Haier appeared on the streets of Tashkent; the main slogan of this advertising campaign was "hot water at all times" (Rus. *vsegda goriachaia voda*; Uzb. *doim issiq suv*).

such boilers has been legalised, but, in August 2017, President Mirzieev himself promised that 5,000 gas boilers produced by Ariston Thermo-UTG will be installed in the city of Bekobod, situated 140 km south of Tashkent.[238] As importantly, the installation of such boilers is also a part of the newly launched District Heating Energy Efficiency Project.

The District Heating Energy Efficiency Project is an endeavour backed by the World Bank and financed by the International Development Association by means of a USD 140 million credit which aims at modernising and enhancing the capacity of district heating systems and improving the efficiency and quality of heating and hot water services in five cities across Uzbekistan: Andijan, Bukhara, Chirchik, Samarkand, and Tashkent's Sergeli district. As far as Sergeli in particular is concerned, the project will provide for the modernisation and reconstruction of the large heat-only boiler station TTs-8 and the transformation of the local district heating system into an independent one. To that end, among other actions, the existing pipe network will be replaced, pipes will be insulated with polyurethane foam, consumers will be equipped with meters, and heat exchangers will be installed in apartment buildings. Very importantly, the project also envisages the construction of a solar power plant and the installation of 1,134 solar collectors over an area of 2,970 m^2, which during the summer months will have the capacity to generate 1,161 Gcal, hence saving 187,920 m^3 of gas annually (Capcelea 2017).

At the same time, Tashkent's district heating system is bound to be decentralised as part of a larger project which aims at reducing the costs connected to the production and distribution of heat in the city. The first steps in this direction were in fact taken in 2015, when TashTeploEnergo, under the weight of crumbling infrastructure and increasing costs, decided to progressively replace large heat-only boiler stations with local boiler houses. In the case of Tashkent, such a transition to a decentralised heating system is bound to offer a number of advantages, such as reduced fuel consumption, the capacity to regulate heat supply depending on the weather or time of day, the possibility to heat only selected rooms or apartments in an apartment building, and the avoidance of the disruptions associated with *profilaktika*.[239] In that direction, a pilot project involving the demolition of the large heat-only boiler

---

[238] "5 Thousand Heaters of 'ARISTON THERMO-UTG' will be Installed in Bekabad in the Near Future," *uza.uz*, August 18, 2017.

[239] This is not to say that a decentralised district heating system is in general more efficient that a centralised one. District heating is considered to be more beneficial than individual heating because it is associated with lower capital, energy, operating and maintenance costs, and is more reliable and environmentally friendly. However, while district heating is indeed one of the tenets of sustainable urban development in cities like Copenhagen and Stockholm, unlike Tashkent, the population of which is sensitive to tariff fluctuations, these cities can afford to charge higher tariffs.

station "TTZ" and its replacement by 46 newly constructed local boiler houses was launched in Tashkent's Mirzo-Ulugbek district in 2015.[240] After a rather smooth operation during the 2015-2016 heating season, the project was deemed successful and TashTeploEnergo decided to construct 1,514 new energy-efficient local boiler houses that will serve the areas where heat is currently supplied by the large heat-only boiler stations TTs-2, TTs-3, TTs-5, TTs-6, and TTs-7;[241] whether these large boiler stations will remain in place or will be decommissioned has not been specified.

Supplemented by the provision of incentives and financial assistance for the purchase and installation of gas boilers by individuals and housing cooperatives and the introduction of solar collectors across the city, the disconnection of particular areas from the centralised district heating system is expected to result in significant economic benefits, for it will both obviate the need to relay heat networks, as the existing pipe networks will be decommissioned, and will, according to some estimates, save 197.9 million cubic meters of natural gas, 59.7 million kW/h of electricity, and 22.2 million cubic meters of cold water annually.[242] This reduction in operating costs will subsequently allow TashTeploEnergo to invest in the modernisation of the rest of the district heating system and to introduce cogeneration units at TTs-8, TTs-9, and TTs-10, which is expected to reduce the needs of these stations in natural gas by as much as 40%.[243]

Gas boilers, warmth, and memory

It becomes evident from all this that district heating systems across the former Eastern bloc have been intimately tied to the various social, political, economic, and spatial considerations of their users both during the socialist era and after the dissolution of the Soviet Union. Accordingly, whether as functioning systems, as disrupted systems,[244] or as bits and pieces,[245] district heating is revealed as a socio-technical assemblage consisting of affective encounters between users and infrastructure by and through which various strategies and practices are generated in response to the shortcomings and limitations of these systems. These shortcomings and limitations – such as the overheating or underheating of

---

[240] "Bolee 300 Lokal'nykh Kotel'nykh Postroiat v Tashkente," *gazeta.uz*, November 27, 2015.
[241] "Gorodskuiu Sistemu Teplosnabzheniia Stolitsy Detsentraliziruiut," *Uzbekistan Today,* April 6, 2017.
[242] Ibid.
[243] "Tashkent k 2019 godu Polnostiu Pereidet na Novuiu Sistemu Teplosnabzheniia," *sputnik,* April 4, 2017; "Uzbekistan Postepenno Otkazhetsia ot Sistemy Tsentral'nogo Teplosnabzheniia," *CA-News.org*, April 25, 2017.
[244] See, for example, Humphrey (2003).
[245] See, among other, Laszczkowski (2015).

apartments and the commonly occurring disruptions – have a levelling effect on those affected by them and have essentially created what Liviu Chelcea and Gergő Pulay, paraphrasing Clifford Geertz, have called an ideology of "shared infrastructural poverty" (Chelcea and Pulay 2015, 347).[246] This "shared ideology" is further enhanced by the fact that the practices that have been generated as a response to these limitations – such as opening windows in winter or bathing at friends' and relatives' during *profilaktika* – are also revealed as markers and makers of a shared socio-technical heritage and identity and denote a certain sense of community belonging (Star 1999, 381), even if some of them, such as tampering with pipes, essentially deprive others of heat and hence have brought to the fore discussions about their moral and ethical underpinnings.[247]

While these practices have essentially become stabilised as a result of the repeated co-functioning of humans and infrastructure over time, essentially becoming inscribed into the "habitual body memory" (Casey 1984) of their users, their very conception is less a matter of the workings of a "technological unconscious" (Thrift 2004b, 41) and more of the human body's sense of perceiving temperature. It is only natural for a human body sitting in an overheated room to opt for some coolness by opening the window, in the same way that it is to be expected that a body sitting in an underheated apartment will choose to sit in the area which can provide most heat. The sense by which our body perceives the temperature of both the external and the internal environment and hence enacts such bodily functions and the embodied responses to them is known as thermoception. Despite the fact that it is not listed as one of our five senses, thermoception is one of the most important senses we have, because it makes sure our body maintains a core body temperature of around 37°C; if this temperature is not maintained at this level and our body gets too hot or too cold, we die (Ong 2012).

While thermoception is a sense "done" by the skin and internal skin passages, Phillip Vannini and Jonathan Taggart have suggested that it can also be understood as an "interface" and therefore "as a skill, a hub of activities…, a sensibility, and an orientation to modulate the world" and hence "a type of affect" (Vannini and Taggart 2014, 66). Such an understanding of thermoception in turn paves the way for seeing it "as a nexus of intersecting practices and experiences through which different actors become entangled in the lifeworld" (ibid.) and highlights "the capacity of the body to affect temperature and be affected by it" (ibid., 67). Indeed,

---

[246] Geertz has employed the term "shared poverty" in order to describe the commitment of Indonesian peasants to communal arrangements by sharing food equally when they have it and share its absence equally when they don't have it (Geertz 1956, 141).

[247] For more on repair, maintenance, and the ethics of care, see Jackson (2014).

the thermal register of our bodies is not a passive recorder of conditions already laid out, but rather an agent which is capable of affecting the temperature and the conditions of the world in which our body is immersed. Hence, the thermal conditions of our domestic environment are the result of not only the operation of complex socio-technical heating networks but also of socio-cultural processes of standardisation of sensory experiences, needs, and expectations (Shove 2003).

Since these experiences, needs, and expectations vary qualitatively, the need of human bodies to feel comfortable in subjective thermal conditions has prompted, in the case of Tashkent, the population to opt for heating solutions that allow them to adjust the temperature of their dwellings according to their needs. Access to such modern heating technologies has been facilitated in recent years thanks to the relative improvement in the income level and the relative opening of the market, effectively improving the living standards of the population by neutralising the pitfalls of socialist-era infrastructure. In this context, as the previous section has shown, gas boilers have become symbols of emancipation from socialist era centralised infrastructure systems thanks to their pivotal role in the decentralisation of Tashkent's district heating system, but at the same time they have become involved in a series of memory processes. However, unlike the embodied practices enacted by the chronic malfunctioning of district heating systems, the memory processes enacted by gas boilers are less a product of the boilers' presence and more of the way in which they renegotiate the relationship between district heating systems and their users, primarily by allowing those who have invested into gas boilers to leave behind the days of overheating or underheating and supply disruptions.

The following ethnographic vignette is very telling of this renegotiation. When in autumn 2014 domestic hot water supply in my apartment was cut off as a result of *profilaktika,* Dilshod aka, a colleague from the UN, suggested I join him for a tennis doubles match with two of his friends at the Iunusabad tennis club and bathe there. The next morning, on my way into the shower after the match, one of Dilshod aka's friends, a middle-aged Russian speaker called Egor, approached me and laughingly inquired whether I happened to live in the Mirabad district. When I confirmed his theory, he laughed again and commented that he had thought so, since he had not seen me at the club before and had assumed that I had joined in order to be able to bathe there. After several weeks and many more early morning matches, Egor invited me to his apartment for dinner with him and his wife Maiia, who very fondly showed me around their spacious newly refurbished apartment situated in a Soviet era building not far from where I lived. Among the things Maiia had allegedly

been most happy with was their new gas boiler, which provided them with heating and domestic hot water supply on demand. Upon seeing the boiler, I immediately recalled our first exchange with Egor:

> N: [Pointing at the boiler. Laughingly.] Is this why you had asked me whether I live in Mirabad? You were making fun of me?

> E: [Laughingly.] Yes, I remember that discussion. I had asked you if you lived in Mirabad because I knew that they had cut off hot water over here and had assumed that you must have lived somewhere near as well. [Egor points at boiler.] As you see, we don't have such problems any more. Ever since we installed this boiler, we have forgotten about all problems, *profilaktika*, heat, no heat, pressure, no pressure. When I told Maiia that I had invited you over, she asked me where I had met you. I said that you were a foreigner who was not used to *profilaktika*. And then I laughed. I had not used that word in a very long time. I had almost forgotten what *profilaktika* is.

Such narratives, contrasting the limitations of Soviet era infrastructure systems with the technological improvements provided by modern alternatives, are quite popular among the population of Tashkent, and so is the claim that new technologies can help one forget the problems that centralised urban infrastructure generates. Such a narrative is not merely a way to present the present favourably by contrasting it with the past, but rather is a reminder that the past makes the present meaningful. Forgetting the limitations associated with centralised district heating and their manifestation in the users' bodily processes and practices of hygiene – such as sweating, feeling cold, or being unable to bathe – automatically means forgetting why the present is better; with no past there is no present. It is the juxtaposition between the affective and bodily processes of the past and the present that retains the memory of the former and gives meaning to the latter.

At the same time, the installation of radiator valves, another modification of the centralised district heating system aiming at delegating control of domestic temperature to users has resulted in contestations between neighbours. As Jamshid aka, an informal taxi driver in his late 50s, relates:

> Our apartment is on the seventh floor. We live with my mother-in-law who is an old woman. She is always cold so she needs the radiator on. But our neighbours on the third floor keep turning their radiator off. They did *evroremont* in their apartment and they bought new radiators with valves. So they can turn them off. But when they turn their radiator off, they also

turn all the other radiators off, because in our building there is a one-pipe system. So I have gone to them many times and they pretend they open it but then they close it again. They are from god-knows-where and they don't know how to use heating in a buildings where other people also live. 'And what should we do? It's too hot in here,' the husband told me yesterday. You know what I told him? 'Open the window. Like we all do. Like we all have been doing for years.'

The installation of radiators with cut-off valves that give their users control over the temperature inside apartments in Soviet era apartment buildings with one-pipe heating systems is essentially seen as an unethical thing to do, as it has a knock on effect for others connected to the system. Switching off one's radiator cuts off heating supply to the apartments above the cut-off point and increases the temperature in the apartments below, which gives the radiator valve the capacity, as Charlotte Johnson has put in her work on radiators in Belgrade, "to produce types of material spaces and social forms" (Johnson 2013, 166). However, in addition to the moral dimension of installing and using radiator valves, the narrative above also highlights the fact that knowing how to deal with the heating system comes with having experienced it over an extended timeframe. Hence, the practices involved are an identity marker suggestive of one's having lived in the city for a long time, but more importantly they are also a type of embodied memory which the body pre-consciously "remembers" when the apartment gets too hot – as in this case – or too cold.

Conclusion

Maintaining a focus on Tashkent's centralised district heating system, this chapter has shown that urban life in post-socialist Tashkent is still largely supported by socialist era infrastructure, which, due to obsolescence and inadequate maintenance, often fails. This results in a "disrupted city" (Graham 2010) and prompts the population to resort to ingenious practices in order to continue their everyday lives uninterrupted. Inevitably, since the infrastructure has changed little if at all in the last 70 years, most of the practices that the population employs today in order to heat up or cool down their apartments and to bathe are essentially the same ones that they employed during the socialist era. Accordingly, these practices are revealed as an automatic behaviour acquired through time and repetition, the result of the workings of what philosopher Edward S. Casey, building upon the work of fellow philosopher Henri Bergson, has called "habitual body memory" (Casey 1984), a process during which the past is acted out in the present through conscious and pre-conscious channels alike.

In addition to being produced and stabilised by habitual memory and infrastructure, however, these practices are also capable of generating embodied memory themselves by engaging with a wide range of affective processes, emotions, feelings, and the senses. As this chapter argues, in the case of Tashkent's centralised district heating system, these embodied memory processes are enacted less by the practices generated as a result of the co-functioning between the system and its users and more by the practices generated due to the co-functioning between users and the alternative technologies that have come to replace centralised district heating. As a result of the decay of the infrastructure and the constant increase in energy prices, many users decided to seek decentralisation by means of switching to alternative heating technologies, and most notably gas boilers, in order to escape the "trap" set up by the monopoly of the city-owned heating company. These alternative heating technologies facilitate the everyday life of the population and at the same help them "forget" the problems that socialist era urban infrastructure creates by allowing them to regulate the volume of heat they consume and by making sure they receive "hot water at all times."

CHAPTER FOUR

Oversized Forget-Me-Nots

Of Trees and Humans

For the air passenger approaching Tashkent airport from the west, the city appears on the horizon almost like a mirage. Having crossed Uzbekistan – and a part of Kazakhstan – longitudinally, the airplane has flown over the Kyzyl-Kum desert for hours before it starts its decent just as it reaches the Syr Darya River, signalling the end of barren land and the beginning of the arable Syr Darya basin in which Tashkent sits. The geological and geographical position of Tashkent and its favourable climate were capitalised upon substantially by both the Russian Empire and the USSR in an attempt to demonstrate their scientific and technological achievements, which, among other things, resulted in Tashkent becoming, by the 1980s, one of the greenest cities in the world. The stark contrast between the desert landscape of most of Uzbekistan and the greenness of Tashkent has for years been the city's defining characteristic, but its post-Independence transformation has not left its urban natures unscathed, as the closing of parks, the decay of the common areas within *mikroraiony,* and the large-scale felling of trees have all significantly altered the city.

The destruction of hitherto green spaces, however, is not limited to the capital of Uzbekistan, as similar phenomena have been observed across the post-socialist space in the aftermath of the dissolution of the USSR.[248] Wherever they have taken place, they have triggered discussions as to the preferred form of the city and have generated nostalgic narratives that reminisce the bygone days of, as Catherine Alexander has put it in regards to Almaty, the "aesthetic of natural abundance and greenness" (Alexander 2009, 151). As this chapter shows, the presence of these narratives in Tashkent is predominantly associated with large deciduous trees,

---

[248] Among other, for Almaty, see Alexander (2009a); for Yerevan, see Ter-Ghazaryan (2013).

which for historical reasons have come to be seen as a synecdoche for urbanity. Despite the fact that the occasional cutting of individual trees across the city was relatively common and relatively uncontested throughout the early post-socialist era, the recent large-scale offensive against Tashkent's deciduous trees – which began in 2009 with the complete deforestation of the *skver* but took off in 2016 – has generated unexpected and hitherto unseen reactions among the city's old residents and – very importantly for this chapter – has produced a wide range of diverse memory processes that have remained undocumented.

Trees are capable of enacting memory by engaging a range of human bodily practices, non-cognitive affective processes, and senses through their various qualities and competences. This is why this chapter explores less the symbolic and representational connotations associated with Tashkent's trees and more the embodied narratives enacted by the presence of the absence of the trees, or what I have called their "post-treeness," manifested by means of the "phantom pains" that the felling of trees inflicts. In this sense, if the previous two chapters dealt with socio-technical assemblages in which the past becomes entangled in the present as a result of the enrolment of participatory, multivalent, and intertwined – and hence often conflicting – embodied narratives of infrastructure that is mostly physically present, this chapter focuses on socio-natural assemblages which present the past by means of absence.

The chapter starts by theorising and situating the urban tree within the wider literature on the production of socio-natural hybrids, before it continues with a socio-historical narrative explaining the prevalence of some tree species over other in Tashkent. In the third section, it goes on with presenting and scrutinising the recent offensive against large deciduous trees based on my own observations retrieved from both *in situ* and electronic fieldwork conducted between December 2013 and July 2016, whereas the fourth and last section deals with how the felling of trees has enacted various memory processes, with a special focus on the bodily phantom pains that the presence of the absence of trees has inflicted upon the population. It is there that I suggest a new type of phantom pain, a physical – somatic – pain inflicted upon the population of Tashkent as a result of their direct exposure to sunrays and to ultraviolet (UV) radiation.

Theorising and situating the urban tree

Much of the scholarly work in urban and environmental studies alike considers the city to be the antithesis of nature; in the words of the anarchist and libertarian socialist author Murray Bookchin, "[t]he modern city represents a regressive

encroachment of the synthetic on the natural, of the inorganic (concrete, metals, and glass) on the organic, [and] of crude, elemental stimuli on variegated, wide-ranging ones" (Bookchin 1986, 87). This approach, known in environmental studies as the declensionist narrative, sees humans as agents of harmful physical change and the city as a product of human action and as such artificial and inferior to nature.[249] Similarly, urban ecologists, *de facto* students of human habitats, focus only on non-human urban species, examining the ways in which these adapt to the changes that are brought about by humans,[250] thus suggesting that the latter are intruders who destroy nature with their practices, such as construction of dwellings, cultivation of food crops, and generation of energy, even if these are vital for their biological survival.

Unsurprisingly, this portrayal of humans, a species like any other, and by implication of human settlements as outside of nature has not remained unchallenged. Already in the 1930s, Lewis Mumford argued that "[t]he city is a fact in nature, like a cave, a run of mackerel or an ant-heap" (Mumford 1970 [1938], 5), whereas in a very similar vein Jane Jacobs has added that "[t]he cities of human beings are as natural, being a product of one form of nature, as are the colonies of prairie dogs or the beds of oysters" (J. Jacobs 1961, 443-444). More recently, Marxist geographer David Harvey has famously claimed that "in a fundamental sense, there is in the final analysis nothing *unnatural* about New York City" (Harvey 1993, 28; emphasis in the original). This enthusiastic statement has influenced a whole new generation of urban scholars who have argued against the "crude binary" (Heynen, Kaika and Swyngedouw 2006, 3) ontologically separating city from nature, thus echoing Harvey's exhortation that the "artificial break between 'society' and 'nature' must be eroded, rendered porous, and eventually dissolved" (Harvey 1996, 192).

This dialectic has been based on Marxist thought and on what John Bellamy Foster has called "metabolic rift" (Foster 1999), but it has been heavily influenced by Actor-Network Theory (ANT) and the work of Bruno Latour at large, who has argued that, despite our tendency to structure the natural and the social as ontologically distinct categories, one of the main characteristics of modernity is the proliferation of socio-natural hybrids (Latour 1993). Latour, following philosopher Michel Serres (1982), has chosen to call these hybrids "quasi-objects," a concept sharing many similarities with Donna Haraway's "cyborg" (Haraway 1991), which

---

[249] For example, Eugene Odum has argued that "the city is a parasite on the natural and domesticated environments, since it makes no food, cleans no air, and cleans very little water to a point where it could be reused" (Odum 1989, 17). For more on declensionist narratives, see Merchant (1996).
[250] For more on this, see Rees (1999) and Haughton and Hunter (2003 [1994]).

also rejects dualisms, and in particular those separating "human" from "animal," "animal-human" from "machine," and "physical" from "non-physical." Both "quasi-object" and "cyborg" allow us to understand and subsequently to scrutinise "hybrid geographies" (Whatmore 2002), or settings in which various heterogeneous actors – human and non-human, social and natural – are mobilised and assembled into "hybrid collectifs" (Callon and Law 1997), namely "configuration[s] of human and non-human participants…replacing classical definitions and related oppositional distinctions of agency" (Smith and Plotnitsky 1997, 14). Such an approach, pioneered by ANT:

> accentuates the *relational*, subjugating the importance of particular actors per se within networks in favour of a focus on the multiplicity of mutually constitutive and positioning 'actants' which together serve to hybridize agency. ANT has, therefore, both emphasized the 'non-humanness' of agency and declined to categorize it as such because to do so might jeopardize the overall project of deconstructing the antinomy of nature and society (Jones and Cloke 2002, 48-49; emphasis in the original).[251]

Understanding nature and society as intricately entangled reveals both the natural and the social as ontologically ambiguous terms; after all, as Latour has argued elsewhere, "the social…is visible only by the *traces* it leaves (under trials) when a *new* association is being produced between elements which themselves are in no way 'social'" (Latour 2005, 8; emphases in the original). In this sense, nature is simultaneously a socially constructed object and an embodied material actor (Demeritt 1994, 165), or, to put it differently, both a social construction of the non-human environment produced by and through practices and a set of particular ecological conditions which form the context for the very practices that they produce.[252] However, given the fact that, for the humans involved in them, these practices are laden with different meanings, the construction of nature becomes an inherently political process, as it occurs within a context of uneven power relations and as such it raises questions regarding "whose nature" can be legitimately practiced (Escobar 1998). This unavoidably leads to a disparity in the ways in which different individuals with different historical, ethnic, social, cultural, political, or economic backgrounds can – by and through their everyday urban practices –

---

[251] ANT has recognised the agency of non-humans as an essential element in how the natural and the social flow into one another. For example, Michel Callon's (1986) classic discussion of scallop-fishing treats the scallop as an active agent rather than a passive subject of human activity. In doing so, Callon has dismantled the existing protocols which confined agency to the social sphere and has set in train a move beyond socio-biology into terrains of agency in which the human and the non-human are networked together.

[252] For more on this, see Escobar (1999).

influence these processes according to their own "drives, desires, [and] imaginations" (Swyngedouw 2006, 24), which often results in highly uneven urban environments, with certain population groups benefitting more than other.

The political character of the production of socio-natural hybrids is at the very centre of the Marxist line of thought known as urban political ecology,[253] a relatively young and relatively small subfield of political ecology, which has set, as Bruce Braun has put it, to unsettle the impression that:

> cities are purely *social* spaces, and that cultural, economic and political processes exist, by some strange magic, entirely separate from the countless nonhuman entities and organisms that are enrolled in, and help shape, urban life" (Braun 2005, 635; emphasis in the original).

By employing historical and geographic accounts of production of "metropolitan natures" (Gandy 2005), proponents of this approach have argued that urbanisation is a complex process of transformation of the non-human environment both within the city and in its hinterland.[254] Consequently, rather than seeing cities as "places where nature stops" (Hinchliffe 1999, 138) or treating nature "as an external blueprint or template…to the urban process" (Gandy 2004, 364), they have suggested that the city is a "hybrid fabrication" (Lachmund 2013, 5) and a dynamic "imbroglio of metabolisms" (K. Grove 2009, 208),[255] such as "alleys of trees, planned by city councils and planted with the help of scientific knowledge in botany; [or] urban drinking water and waste water that are treated and distributed through pipelines only to be treated again with the help of specific bacteria after us" (Zimmer 2010, 345).

Over the last few years, scholarly work has scrutinised a wide variety of such "metabolical" processes,[256] but only recently has the spotlight been turned onto

---

[253] Urban political ecology (henceforth UPE) has been built upon the work of Marxist thinkers such as David Harvey (1993, 1996), Piers Blaikie (1985), and Neil Smith (2008 [1984]), and has been fused with Bruno Latour's (1987) early Actor-Network Theory. The term itself was coined by Erik Swyngedouw (1996), but the contemporary thought of UPE has additionally been formed by a series of other works. For reviews, see Keil (2003, 2005).

[254] See Williams (1973); Cronon (1991); and Wilson (1992).

[255] As Erik Swyngedouw has put it, "in contrast to other fashionable metaphors that attempt to fuse together heterogeneous entities – like networks, assemblages, rhizomes, imbroglios, collectives – [metabolism] convey[s] a sense of flow, process, change, transformation, and dynamism in addition to the 'inner-connectedness' suggested by the other tropes. [It embodies] what modernity has been, and will always be about: change, transformation, flux, movement, creative destruction" (Swyngedouw 2006, 21). For a critique of the term, see Braun (2005).

[256] Inter alia, water and sanitation (Tarr 2002, Kaika 2005), production of green space (Heynen, Perkins and Roy 2006); lawns (Robbins and Sharp 2006); urban air quality (Graham 2015); and the politics of food (N. Heynen 2006a).

urban trees. In everyday urban life – and to a certain extent in academic literature as well – trees are taken for granted and often perceived as one of the "more 'thingy' bump-into-able, stubbornly there-in-the-world kinds of matter" (Philo 2000, 33) which happen to grow here and there, randomly dispersed across the city.[257] When their presence is acknowledged, it is mostly due to the wide range of ways in which urban trees – directly or indirectly – serve ecological functions or offer "services" to the city and to its human inhabitants; as research has shown, trees help conserve energy and water and reduce carbon dioxide (Heisler 1986, McPherson 1990, Meier 1991, Rowntree and Nowak 1991); moderate urban climate (Oke 1989); improve the quality of air (W. H. Smith 1990); help mitigate flooding and rainfall runoff (Sanders 1986); reduce urban noise levels (Cook 1978); provide habitat for wildlife (Johnson 1988, Adams 2016); reduce human stress levels (Ulrich 1984); enhance the attractiveness of cities (Schroeder 1991); and have many socio-psychological benefits for young and old alike (Taylor, et al. 1998, Kweon, Sullivan and Wiley 1998).

However, even though trees indeed grow, photosynthesise, multiply, decay, and die as part of their biological life cycle, these biophysical processes are profoundly affected by human actions, designed and controlled by the needs and wants of the humans involved (Perkins 2015), and serve particular interests and purposes (Swyngedouw and Heynen 2003). Not only are trees often planted by humans,[258] but humans also choose specific species over other according to their physical characteristics and biological features. Similarly, trees are often cut down by individuals for cultural or personal reasons,[259] or by the authorities or private developers who decide to sacrifice them in order to construct housing or infrastructure. The production, distribution, and shaping of urban trees, thus, is revealed as a highly politicised and power-laden process, in which the role of elected politicians is important, but so are the social and economic status and the subjective valuations of various individuals, groups, or institutions and the discursive power of experts (Sandberg, Bardekjian and Butt 2015, 2).

---

[257] This is not to say that trees and forests have been entirely absent from recent academic discourse. Robert P. Harrison (1992) has considered woodland as a symbolic other to western civilisation, Judith Tsouvalis (2000) has discussed the meanings and the materiality of British forests and woodlands, Phil McManus (1999) has considered national and international histories of how woodlands and forests have been constructed, whereas Nik Heynen (2003, 2006b) has looked into the relations between household income and urban forest canopy cover. Finally, approaching tree from an anthropological perspective, Laura Rival's (1998a) edited volume has considered the rich range of symbolisms attached to trees.

[258] For more on this, see Heynen (2003).

[259] For more on this, see Ley (1995).

Urban trees are, thus, a manifestation of the decisions, preferences, and choices of the humans who co-inhabit the city with them and the result of the visions of some humans prevailing over others' (ibid., 6). As L. Anders Sandberg, Adrina Bardekjian, and Sadia Butt have argued, the subjectivity of these decisions, preferences, choices, and visions leads to different approaches towards trees, as they are not embraced in all places, at all times, in similar ways, by all people:

> A shade tree for one person may constitute a blocked view for another. A gnarly or old and crumbling tree may be a source of admiration and beauty for some but a safety hazard to others…People may prefer trees for aesthetic reasons, others may prefer utility trees that create shade or bear fruit, while still others do not like trees at all because of the work related to the clean-up of falling fruits, seeds, and leaves or because trees shade their vegetable gardens. Professional foresters and arborists have different preferences too. Some like native trees because of their connections to local ecologies and natural and cultural histories, others favour exotics because of their ease of growth and management (ibid., 2).

All these different approaches towards trees are often responsible for their uneven distribution in cities. Even though it is a fact that urban areas and suburbs inhabited by minorities, immigrants, and the working class tend to have fewer trees as a result of the marginalisation of these population groups by city authorities,[260] the sentiments and perceptions of these people towards trees are also significant factors that shape the urban forest. For example, Nik Heynen, Harold A. Perkins, and Parama Roy have noted that several residents in African-American neighbourhoods in Milwaukee and Detroit see trees as a nuisance and a liability, and that Hmong communities in Milwaukee similarly prefer not to have trees planted near their homes because they shade their sun-loving urban gardens (Heynen, Perkins and Roy 2006).[261]

Such views usually come as a result of the fact that trees are unpredictable agents that resist being managed by humans; as Evan Eisenberg has put it, "trees are among the few creatures on earth that really compete with us" (Eisenberg 1998, 7). As the living organisms they are, trees face multiple physical and physiological stresses, which result in poor performance, premature decline, and high mortality.[262] They also lean, refuse to stand in line, sabotage urban infrastructure, fall down during

---

[260] For more on this, see Talarchek (1990) and Landry and Chakraborty (2009).
[261] For similar stories from Baltimore and New York City, see Grove et al. (2006) and Susman (2009), respectively.
[262] For more on this, see Loeb (1992) and Pellissier, Roze, and Clergeau (2010).

storms, contract diseases, attract insects, emit allergenic pollen, interfere with other kinds of land uses, shade gardens, and shed leaves, debris, and fruit that annoy inhabitants and are a source of trouble for city authorities: the leaves, debris, and fruit that trees shed need to be cleaned; the pavements and pipes that they break need to be repaired; the damage to property that they cause needs to be compensated for; and the allergies that they trigger need to be dealt with.

Thus, in order to counter the messiness and "unruliness" (J. Dean 2015) of trees and to make them more likeable in the eyes of the population, city authorities worldwide manage urban trees; as Paul Montpellier, the former chief arborist of the City of Vancouver, has told Irus Braverman, "you have to maintain them for people to see them as an amenity, so that they see them as a good thing…trees can be a huge pain in the ass" (Braverman 2008, 113). To that end, urban arborists develop practices and techniques which not only control trees, but also minimise their need for maintenance. They choose particular species which they expect will cause as little inconvenience as possible (e.g. trees with deep roots that do not interfere with pavements and underground urban infrastructure), graft different types of trees together, or even genetically modify other in order to make them more easily adaptable to certain conditions, pests, or diseases or to ensure that they, e.g., do not bear fruit. Similarly, they stake trees in order to make them grow straight and hence create a balanced canopy, whitewash them in order to prevent sun scald, protect them from damage and vandalism by means of iron guards, and prune them regularly in order to remove dead or diseased wood and excessive weight from the ends of branches. It thus becomes evident that the practices and techniques that humans employ in order to produce, manage, and shape trees are determined and configured by the biophysical processes of trees themselves.[263] As Owain Jones and Paul Cloke have put it regarding pruning:

> Pruning is not an arbitrary process imposed on the trees. It is an accomplishment which has evolved over a long period of time, where the desire to control the tree is shaped by the biology of the tree. Pruning is shaped by the innate disposition of the tree to grow in a certain way at certain times. Pruning has been adapted to best work with this disposition. Trees have shaped pruning just as much as, in the end, pruning shapes the tree (Jones and Cloke 2002, 68).

---

[263] Steve Woolgar has similarly suggested that the processes of design which go into a new range of microcomputers not only socially construct the user, but also attempt to configure the user by setting parameters for the user's actions (Woolgar 1990, 61).

Interestingly enough, while pruning indeed relieves the tree from diseased wood or heavy branches, more than anything it aims at ensuring that these very branches or even entire trees will not fall onto pedestrians or cars. In this sense, the final recipients of sanitary pruning are the human inhabitants of the city, whereby trees are merely the proxy through which the well-being of humans is enhanced. Following this line of thought, one could go as far as to argue that the word *sanitary* as used in sanitary pruning does not refer to pruning's capacity to maintain the health and vigour of the tree, but rather to the sanitary services that pruning offers to humans by securing their health and safety. Such an understanding allows us to see in a new light another similar term, sanitary felling, used for the felling of trees that are considered hazardous for humans, urban infrastructure, or other trees, often following complaints from local residents and *in situ* inspections by arborists and other experts.

As this chapter shows, such sanitary claims can be fabricated in order to legitimise the felling of trees for political and, especially, for economic purposes. Very important in this direction is the fact that urban trees are essentially commodities (Perkins, Heynen and Wilson 2004) which can be bought and sold and which, once planted, increase the value of the land on which they stand in the long term (Anderson and Cordell 1988, Luttik 2000) thanks to the enhanced aesthetics they offer and to the shading and sheltering they provide, which in turn reduces costs for cooling and heating, among other use-values (Perkins 2015). However, trees are also commodities by virtue of the very material of which they are made, wood, a constitutive quality of theirs often neglected in academic literature on urban trees.[264] Even though an explanation for this neglect might be the limited occurrence of felling for the explicit purpose of gaining wood in the Western cities usually examined by political ecologists and urban political ecologists, the epistemological and ontological implications it raises are universal, as they add an extra layer of agency, which is a result not of the relationship between trees and humans but rather of one between wood and humans.

All this suggests that urban trees are neither natural nor social, but rather are hybrids which interact with humans and other non-humans in various complex and unexpected manners as trees at large, as trees belonging to a particular species with specific biophysical characteristics and functions, as individual trees with unique features, forms, and competences, and as wood resources. It is through all these

---

[264] On the contrary, the felling of trees for economic purposes in the hinterland is better documented. For the importance of lumber from the "Great West" to the transformation of Chicago, see Cronon (1991). For industrial tree plantations in the Global South and their role in the world paper economy, see Carrere and Lohmann (1996).

capacities that trees become entangled in memory processes in various ways, both representational and non-representational.[265] Trees can act as a commemorative technology,[266] or as natural and/or cultural heritage inscribed with symbolic significance and meaning;[267] can memorialise the political regimes or individuals who planted them; can take in the status of "living monuments" (Bardenstein 1998) when planted in memory of certain people or events; or can act as tools in political disputes and interstate conflicts.[268] Due to the fact that they often live longer than humans, trees can be also understood as "a living symbol of the past" (J. Dean 2015, 165) serving as the material manifestation of the community's collective memory that links past to present (Jim and Zhang 2013), and at the same time can function as living records of past environmental changes and of past and present relationships between different actors (Perkins 2015, 19). Very importantly, as Paul Cloke and Eric Pawson have suggested, the role of trees in memorialisation processes is very dynamic and often unpredictable:

> Trees can be socially constructed as markers of memory, but they also make active contributions to the relational agency of place-related nature-culture assemblages, so deepening the significances of the places concerned. The living, growing, changing presence of trees can outgrow the original intention of their planting, and contribute to a wider portfolio of memories

---

[265] In addition to becoming entangled into memory processes among humans, as the living organisms they are, trees also have their own memory. Ruuhola et al. (2007) have shown that downy birches (*Betula pubescens*) exposed to the autumnal moth (*Epirrita autumnata*) five years earlier were more strongly defended than control trees without an herbivory history, thus suggesting that they do possess a long-term memory.

[266] See, for example, Gough (2009).

[267] The discussion around "heritage trees," or individual trees with unique value, is quite prominent in anthropological enquiry. According to Paul L. Aird, a heritage tree is "a notable specimen because of its size, form, shape, beauty, age, colour, rarity, genetic constitution, or other distinctive features; a living relic that displays evidence of cultural modification by native or non-native people, including strips of bark or knot-free wood removed, test hole cut to determine soundness, furrows cut to collect pitch or sap, or blazes to mark a trail; a prominent community landmark; a specimen associated with a historic person, place, event or period; a representative of a crop grown by ancestors and their successors that is at risk of disappearing from cultivation; a tree associated with local folklore, myths, legends or traditions; a specimen identified by members of a community as deserving heritage recognition" (Aird 2005, 593).

[268] Quite popular in this direction has been the study of the role of trees in the Israeli-Palestinian conflict. For the planting of trees as an attempt to create configurations of collective memory and an assertion of Jewish rootedness and natural connection to the Holy Land, see Bardenstein (1998). For the symbolic layers of the Jewish National Fund's (JNF) tree-planting activities and the redefinition of Jewish collective memory in the construction of Israeli collective memory as a narrative of return, see Bardenstein (1999). For the complex historical and cultural processes that have led to the symbiotic identification between pine trees and the Jewish people in Israel/Palestine, see Braverman (2009a). For the complex historical and cultural processes that have led to the strong identification between the olive tree and the Palestinian people and the massive uprooting of olive trees by both the State of Israel and Israeli settlers, see Braverman (2009b).

and unfolding emotional geographies. This shift is from 'memorial trees' to broader 'treescape memories,' and describes the ways in which the original commemorative purpose of memorial trees has been challenged, dispersed, or emptied out both by changing cultural circumstances and by the relational agency of trees themselves (Cloke and Pawson 2008, 107).

As importantly, and centrally to the argument of this chapter, trees also enact memory by engaging a range of human bodily practices, non-cognitive affective processes, and senses through their various qualities and competences. If, as Nigel Thrift has argued, cities are "roiling maelstroms of affect" (Thrift 2004a, 57), then, to a certain extent, they owe it to trees. Through their various performances, trees transmit substantial streams of data which stimulate the senses and other bodily skills of humans: trees set out the tone and feel of urban space by composing a landscape, stimulate smell by exuding smells and odours,[269] bear fruit that are often edible, and generate sounds of rustling leaves, creaking branches, and the whistling of wind, or even provide music by virtue of the birds nesting on them.[270]

However, each of these performances is conditional upon different "timescapes." As Phil Macnaghten and John Urry have suggested, the temporal processes and rhythms that inhibit or order the natural world are different and often opposed to time as experienced by humans (Macnaghten and Urry 1998, 135). For instance, unlike humans and animals, not all trees grow, develop, decay, and die in a linear fashion. Botanist Aline Raynal-Roques has noted that the trunk of a tree might be composed of a mixture of dead and living tissues and yet be intensely alive (Raynal-Roques 1994, 168-172; cited in, Rival 1998b), which means that, as ecologist Patrick Blandin has put it, long-living trees start dying while they keep on living (Blandin 1995, 70; cited in, Rival 1998b). In addition to this, deciduous trees in particular have their own seasonal growth cycles and at each of the stages of these cycles they perform and affect the human inhabitants of the city differently: they lose their leaves in the fall and then grow them back in the spring; they are green in the spring and summer, brown or yellow in the autumn, and grey or white in the winter (Clark and Jauhiainen 2006, 2); they bear fruit once a year; they emit different smells in different seasons; and in the spring, they emit pollen which can trigger allergies. Trees, thus, are revealed as performing within their very own complex tree-time, a kind of spiralling coming together of their – linear – annual growth and their – cyclical – seasonal cycles (Jones and Cloke 2002, 69), which results in multiple

---

[269] For example, Donald Appleyard (1980) has shown that the scent of pine trees, especially after rain, conjures up quite vivid memories of certain experiences or associations.

[270] For more on people, plants, and performance, see Hitchings (2003).

"rhythms" (Lefebvre 2004) of urban spaces and multiple ways in which these rhythms affect humans.

Without downplaying the commemorative role of trees or their affective lives, I would like to expand this line of thought in order to include a more material kind of bodily practice capable of enacting memory. Earlier I argued that trees are often felled by humans for their wood, and suggested that this practice adds a new layer of agency to the relationship between trees and humans, which, ironically, means the end of the tree's life. Indeed, felling transforms the nature of the tree, as the tree stops existing and two ontologically distinct things that until then did not exist emerge, the stump and the trunk. Separated but yet together, the stump and the trunk form what I have called the "post-tree," a neologism I had to create because the English language does not offer a noun for a tree that has fallen or that has been felled, equivalent to "cadaver" or "corpse" for dead humans and "carcass" for dead animals.[271] In the same way that a cadaver is not a human and a carcass is not an animal, a post-tree is not a tree: the separation of its upper – overground – part from its lower – underground – part results in the tree's death, as it can no longer perform the biophysical processes necessary for its survival.

"Post-treeness" is not a permanent state of being, as fallen trees are post-trees only for as long as the trunk lies next to the stump it has been separated from or when they have been overturned and uprooted; once the trunk is removed and processed, it is metabolised into timber and the post-tree is reduced into a stump. In this sense, the post-tree is again similar to the nouns used for dead humans and dead animals, which apply only for the relatively short period of time between their death and their burying or decomposition. However, unlike them, it can be discursively used for trees which are present in their absence, as a result of either the "traces" that their stumps leave or the memory enacted by the "phantom pains" they inflict; in this case, post-trees double as the tree analogues of both "cadaver" and "ghost." These "phantom pains" can be metaphorical, a "form of sensing the presence of people, places and things that have been obliterated, lost, missing or missed, or that have not yet materialized" (Bille, Hastrup and Sørensen 2010, 3), but as I suggest, they can also take the form of very literal physical bodily pain, evoked upon human bodies as a result of their direct exposure to sunrays.

Before I proceed with this argument, I would like to point out that, by treating trees as active agents, I do not mean to suggest environmental determinism, but rather

---

[271] The closest existing word is "snag," used in forest ecology to refer to a still standing, dead or dying tree.

follow Tim Ingold's suggestion to think of humans and their activities as part of the environment for plants and animals instead of thinking about plants or animals as part of the natural environment for human beings (Ingold 1997, 244). Such an approach highlights the fact that the agency of non-humans is an essential element in the ways in which the natural and the social intertwine, and that the biophysical dynamics of trees and the processes related to them need to be recognised both in their own terms and in terms of the agencies developed as a result of the relations between trees and humans. In other words, while acknowledging the fact that urban trees are managed and controlled by humans, this approach also highlights the importance of nature's unruliness, the actions, attributes, and roles played by different species and trees – collectively and independently – and even the various animals and insects that live in, depend on, and pass through them. It is by and through all these interconnections that memoryscapes are weaved together.

The trees of Tashkent

Even though the introduction of urban trees on a large scale in Tashkent has been historically associated with the city's Russian era, the Islamic city was anything but barren of vegetation. The inner courtyards of the inward-looking traditional adobe houses and the yards of the city's religious buildings were adorned with gardens and fruit trees which provided their inhabitants and users with food, offered shade, and controlled the microclimate, whereas in the outskirts of the city colonies of larger trees provided the wood that was necessary for tools and constructions. In the aftermath of the 1865 conquest, as I have already discussed in Chapter 1, the tsarist authorities deemed the existing city with its traditional dwellings and narrow alleys backward, and decided to build a new city alongside it, which would be quintessentially European in character and form, sporting wide avenues, extensive public spaces, and modern buildings. Drawing on examples of contemporary European cities, and especially on St. Petersburg and Paris, where Baron Haussmann's renovation was at the time in progress, the newly constructed boulevards of European Tashkent were embellished along the sides by trees and several parks and gardens were opened across Tashkent, all expected to selflessly provide various services to the new modern city and its human residents.

In essence, the services offered by these newly planted urban trees did not differ much from those offered by the trees that already grew within the courtyards of the Islamic city. Rather, this attempt to bring greenery out into the public more than anything served "high modernist" (Scott 1998) purposes, as the parks and gardens and the long lines of identical trees, alike in age and in species, were expected to order, tame, and beautify the desert landscape, thus demonstrating the wealth,

colonial power, and scientific and technological achievements of the Russian Empire and suggesting that the latter could control nature.[272] As importantly, these parks and gardens were not only meant to be pleasant havens where the population could relax and cope with the hot Central Asian summer in favourable climatic conditions, but were also supposed to separate the colonisers from the locals,[273] and to act as enclaves of hygiene in an environment otherwise seen, by the Russian elite, as unhygienic and contaminated (Stronski 2010, 24).[274]

Widespread parks and large urban trees remained a unique – by Central Asian standards – characteristic of Tashkent until the 1917 Revolution and the subsequent Civil War (1917 – 1922), when their cultural and political significance was overshadowed by their very combustibility. The vivid memoirs of British intelligence officer F. M. Bailey (1882 – 1967), who briefly lived in Tashkent in the late 1910s, say much about the fate of the city's trees at that time of great change:

> Tashkent was a well wooded town. Streets were lined with double avenues of trees – poplars, elms, chenars, oaks, mulberries and acacias. Down the gutters of the streets ran water turned on from the irrigation system. This flowing water under the shady trees gave a cool and pleasant impression on hot summer days, a characteristic which Tashkent perhaps shares with no other city…[However, a]ll trees were measured up and cut down for fuel in the late summer of 1919. You were given a coupon for fuel on your ration card. When you asked for your share of fuel you were shown a tree standing in the street and told to take it…I hope these acacias, poplars, and mulberries have since been replaced as the absence of trees quite altered the town and ruined its amenities and special character (Bailey 1992 [1946], 32-33).

In the aftermath of the establishment of Soviet rule in the city in the early 1920s, Tashkent's special character was in a way returned, as the Bolsheviks, who had in the meantime emerged victorious from the Civil War, opened all previously private gardens to the public, developed new parks, and planted new trees across the city. However, Tashkent was not the only city in the early Soviet Union to have undergone such green development. The greening of cities and the improvement of life in urban centres in general was among the priorities of the new central government, who had theorised the socialist city upon two important Marxist engagements with nature as an analytical category. As Mark Whitehead has argued:

---

[272] For more on this, see Jacobs, MacDonald and Rofé (2002) and Lawrence (2008).
[273] For more on this, see King (2007 [1976]).
[274] For more on the importance of gardens for the Russian elites during the Tsarist era, see Floryan (1996) and Schönle (2007).

First, there was Marx's concern with the increasing alienation (or estrangement) of workers (and in particular metropolitan labourers) from nature (in Marx's words, their inorganic body) and consequently from their collective species being (Marx 1971, 11, Marx 1981, 67-70). Second, there was the Marxist assertion that the division between the city and the countryside (and by definition the division between metropolitan society and nature) was the basis for deeper forms of class exploitation (particularly in relation to the agricultural peasantry) (Bater 1980, 22). In this context, it was clear that the dismantling of capitalist urbanisation under socialism was to be based not only upon reordering the internal socioeconomic fabric of the city, but also on a reconstituted set of relationships between cities and the natural world (M. Whitehead 2005, 276).

Significant to this end had been also the influence of Friedrich Engels, who already in 1845 had deplored the sanitary and ecological conditions of the working classes in industrialising English cities,[275] as well as the work of Sir Ebenezer Howard, who had been appalled as much as Engels by the social costs of British industrialisation. In 1898, Howard published his *To-morrow: A Peaceful Path to Real Reform*,[276] in which he introduced the principle of the Garden City and proposed the creation of independent and self-contained suburban towns, surrounded by a permanent "greenbelt" of agricultural land. These "garden cities" would be planned and built on ground owned by groups of trustees, leased to and managed by their inhabitants, and financed by ground rents on the Georgist model; in that sense, as Robert Fishman has suggested, the Garden City movement aimed at breaking the stronghold of capitalism and leading to cooperative socialism (Fishman 1982).

It is thus not accidental that early Soviet urban planning was heavily influenced by Howard's ideas. The concept of the Garden City was introduced to Russian audiences by Vladimir N. Semenov (1874 – 1960), whose 1912 *The Public Servicing of Cities* became what Catharine Cooke has called "the canonical work of Russian and early Soviet [urban] planning" (Cooke 1978, 356). In 1927, Semenov became the head of the NKVD's Bureau for the Planning of Cities (Rus. *Biuro po Planirovke Gorodov*), which in 1929 was turned into Giprogor – the first Soviet urban planning institute – thus allowing Semenov to implement his ideas in the planning of several cities, among other Astrakhan, Vladimir, and Yaroslavl. Nevertheless, it was from his position as Chief Architect of Moscow and, later, as co-author, together with

---

[275] See Engels (2009 [1845]).

[276] See Howard (2010 [1898]). A significantly revised second edition was published in 1902 as *Garden Cities of To-Morrow*. See Howard (1902).

Sergei E. Chernyshev (1881 – 1963), of the 1935 General Plan for the Reconstruction of Moscow that Semenov revolutionised Soviet urban planning.

Semenov's plans envisaged expansive green spaces within cities and vast greenbelts around them, but the extent to which they were eventually realised in practice was either limited or temporary. To this contributed a rather fierce debate between the proponents of two opposing approaches to the urban planning of the socialist city. On the one hand, the *urbanists* (Rus. *urbanisty*) opposed the expansion of existing cities and instead advocated for a partial decentralisation to a system of self-contained, compact centres located around industry (Bater 1980). And on the other hand, the *disurbanists* (Rus. *dezurbanisty*), driven by the Marxist aim to dissolve the town-country dichotomy and with it the traditional concept of the town (R. A. French 1995), proposed that settlement should be dispersed across the whole of the Soviet Union in the form of continuous zones, in which individual dwellings would be distributed along roads in natural and rural surroundings, but within easy reach of communal services and amenities (Bater 1980).

If Semenov's ideas to a certain extent reflected the views of the *urbanists*, those of the *disurbanists* found an advocate in Nikolai A. Miliutin (1889 – 1942), whose 1930 *Sotsgorod* tackled what he perceived to have been the irrational urban planning of the early USSR. Capitalising on his experience from authoring the urban plan for Stalingrad, Miliutin proposed a system of segregated parallel belts laid along road and rail networks, in which housing and industry were separated by greenery (Miliutin 1974).[277] This "linear city" idea was taken to a more extreme level by disurbanist Mikhail A. Okhitovich (1896 – 1937), who proposed a system of one-person or one-family houses spread over a vast area and connected by linear transport networks, thus blurring and eventually dissolving the boundaries between town and country.

Even though Miliutin's plans for Stalingrad were implemented and to a certain degree still remain in place today despite the destruction of most of the city during WWII,[278] the extreme ideas of the *disurbanists* were never realised. Nevertheless, they influenced discussions upon the form and essence of the ideal socialist city, and most importantly, they became the basis for the concept of the *mikroraion* (microdistrict). Theorised by Stanislav G. Strumilin (1877 – 1974), who saw forms

---

[277] Very important in this design was the relational position of the zones. In the case of Stalingrad, Milyutin took into account the climatic particularities of the area and the direction of the wind, and thus designed the city in such a way as to have parks and the River Volga to windward and industrial zones to leeward of the residential areas.

[278] For more on this, see Lipiavkin (1971).

of communal living as the basis for the Soviet society, the *mikroraiony* were self-contained communities of residential quarters, linked, through locational proximity and through employment of its inhabitants, with an industrial plant or other major activity (Strumilin 1961).[279] The areas between the buildings that comprised these *mikroraiony*, known as *dvory* (courtyards), were supposed to be developed into gardens which would provide the residents of the adjacent housing blocks with space for recreation and leisure and with amenities such as playgrounds for children, areas for drying clothes or dusting carpets, garages and parking lots, and garbage collection areas, separated and located in accordance to their function – e.g. playgrounds were to be far from apartments in order to minimise the sounds of playing children and the possibility of a ball breaking any windows (Gorbachev 1983, 64). However, in several cases across the USSR, the high demand for housing did not allow planners and workers to focus on these spaces. Quite often, after completing one housing block, construction crews immediately proceeded to building the next one, allocating only minimal time, resources, and effort to trees and bushes, which were either planted hastily and carelessly or were left for the residents of the newly constructed blocks to plant and take care of, during their voluntary get-togethers for the improvement or cleaning of communal spaces, known as *subbotniki* and *voskresniki* (Anan'ich and Kobak 2006, 267). Consequently, few – if any – of these gardens were planned, laid out, and maintained by specialised individuals or agencies, which often resulted in trees and other plants dying due to neglect, lack of water, or wrong choice of species.

In Tashkent, the problem was even more evident. Due to the local climatic particularities, the *mikroraiony* and *kvartaly* constructed in the city throughout the 1950s had a different land-to-building ratio compared to urban centres in northern SSRs. That not only meant that building density in Tashkent was lower, as buildings were spread over a larger area, but also that the total area allocated for gardens was larger in order to facilitate air circulation and to technically create more favourable living conditions. The prompt watering of these spaces was supposed to be ensured by means of an extensive network of water channels and irrigation ditches traversing the city, known as *aryki*.[280] However, during the Khrushchev era, economisation and the prioritisation of the expansion of the cotton monoculture at

---

[279] For more on mobility within *mikroraiony*, see Chapter 2.
[280] Most – if not all – cities in Central Asia have an extensive network of *aryki* constructed parallel to the road infrastructure. *Aryki* operate as both urban canalisation and irrigation ditches, as the rain water they collect from the road surface is then used to water the street-side trees. The functions of *aryki* can differ from city to city; for instance, in Almaty, the water in *aryki* runs throughout the year, coming from the Tien-Shan Mountains. In Tashkent, on the other hand, *aryki* have water only when it rains.

the expense of other vegetation diverted water to cotton fields (Stronski 2010, 231) and rendered the plots allocated for urban gardens barren wastelands which were not used for their intended purpose (Gordeeva 1974, 34-35) and which only euphemistically could be called "green." In order to reverse this situation, in the late 1960s, urban planners and architects suggested a change in the structure of these gardens, which involved a substitution of the large garden located in the centre of the *mikroraion* with a network of green paths (ibid., 34),[281] adorned with local plants that required less water and adapted more easily to drought. Such a solution had a functional and operational advantage in comparison to the garden, because it brought green areas closer to the buildings and thereby increased the intensity of their use while decreasing the costs and effort connected to their maintenance, which was nevertheless still to be carried out by local residents (Gorbachev 1983, 64).

The areas within the *mikroraiony* and *kvartaly* were not the only spaces in Tashkent – and in the socialist city at large – allocated for greenery. Along boulevards and streets, trees of the same species, planted at equal intervals, formed green corridors and created a dense canopy which protected people from wind, dust, and the scorching sun, and simultaneously separated pedestrian routes from traffic flow, acting as "nonhuman policemen" (Braverman 2015, 134), physically restricting movement from sidewalk to road and vice versa. Similarly, in central locations throughout the city, no more than 10 or 15 minutes on foot from most residential areas, various parks and gardens played a vital role in health maintenance by improving the microclimate, reducing noise levels, regulating wind speed, and absorbing carbon dioxide and other potentially hazardous gases. Parks also provided space for recreation, relaxation, and socialisation by offering facilities for sport, entertainment, exhibitions, and cultural activities, thus suggesting that the Soviet state cared for the health and well-being of its citizens (Qualls 2002, 26), and – just as importantly – served demonstration and propaganda purposes which aimed at the education and ideological edification of the population.[282]

Thus, even though the ways in which urban planning ideas were eventually implemented in practice in the planning of Soviet cities varied and differed substantially from the Garden City idea that had influenced them, the principle remained the same: humans were supposed to harmoniously merge with nature (Khodzhayev and Khorev 1972). As a result, despite the fact that Soviet planners

---

[281] See also Gordeeva (1969) and Chebotareva (1970).
[282] Here, the Parks of Culture and Leisure (*Parki Kul'tury i Otdykha* – PKiO), those "fundamental structural and functional elements of the socialist city" (Giese 1979, 159), deserve special mention. For more on PKiO, see Kitaev (2006).

considered cities as "engines of modernisation" (Alexander and Buchli 2007, 1) and urban life as superior to rural life,[283] the socialist city was not completely divorced from the rural milieu (D. J. Shaw 1979, 125). Rather, the city was meant to be a system of interconnected green spaces which would add to its hygienic and aesthetic qualities, provide for the health and recreation of the population, and at the same time bring the latter closer together, thus adding a new dimension to the meaning of socialism (ibid.).

Due to the fact that Tashkent was seen by Soviet planners as "the showpiece of Soviet developmental efficiency in Middle Asia" (Giese 1979, 155), the demonstration of the power and prowess of Soviet science and technology in mastering nature was considered a priority and resulted in one of the greenest cities of the USSR.[284] Even before the 1966 earthquake, the Soviet popular magazine *Ogonek* (Little Flame) had reported that "Tashkent is already a green city, but soon here will appear 250 thousand trees more and about the same quantity of shrubs. The inhabitants of the city will plant approximately 800 thousand plants for hedgerows and about 10 million flowers."[285] Although these plans were never realised, as less than two months later the city as its inhabitants knew it ceased to exist, enhancing Tashkent's greenery was at the very centre of the city's post-earthquake reconstruction. Not only were all new thoroughfares lined with trees and new parks were opened, but also the new districts that popped up in the periphery of the city soon acquired a green character. By the early 1980s, 9,000 ha out of Tashkent's total of 25,600 ha – or 35% of its area – were covered by vegetation (Tashkent Entsiklopediia 1983), at a time when the average Soviet metropolis of more than 250,000 inhabitants allocated only 20.3% of its area for parks and other greenery (Reiner and Wilson 1979, 64).[286]

Interestingly enough, as Paul Stronski has noted, the modernisation of the city had come at a price for Tashkent's already existing flora, as it had necessitated the progressive destruction of grapevines and fruit trees growing in the Old City (Stronski 2010, 293; fn. 84), and their replacement with new species fit for urban life and more appropriate for a Soviet metropolis. As a result of several decades of

---

[283] In Lenin's words, "cities are the centers of economic, political, and intellectual or spiritual life of a people and constitute the chief promoters of progress" (quoted in Stites (1989, 197).

[284] The greening of urban centres across the USSR was only one of the many cases in which the Soviet state attempted to subjugate the forces of the natural world for its own state- and nation-building purposes. Several other such monumental projects include the large-scale afforestations (Brain 2011), the construction of the White Sea-Baltic Canal (Ruder 1998), the Great Plan for the Transformation of Nature (Brain 2010), the Virgin Lands Campaign (Durgin 1962), and the Siberian river reversal (Micklin 1983, 1985, 1987).

[285] "Gorod Tianetsia k Solntsu," *Ogonek*, March 6, 1966, p. 28.

[286] Cities in the USA allocated on average only half of this area for parks (Reiner and Wilson 1979, 64).

such targeted planting,[287] Tashkent's green spaces became home to a remarkable variety of both endemic and imported plant species. Old City yards and Soviet era *dvory* alike were adorned by various species of endemic fruit trees, such as pistachio (*Pistacia vera*), almond (*Prunus dulcis*), cherry (*Prunus avium*), and wild apple (mostly *Malus sieversii* and *M. niedzwetzkyana*) trees. In the city's parks and along boulevards, trees with dense crowns and luxuriant foliage, such as the chinar or oriental plane tree (*Platanus orientalis*, locally known as *chinara*), the oak tree (*Quercus robur* and *Q. macranthera*), the elm tree (mostly *Ulmus minor*, *U. densa*, locally known as *denza*, and *U. × androssowii*, locally known as *karagach*), and the poplar tree (mostly *Populus nigra* and *P. alba*), provided shade with their wide canopies and created a favourable microclimate. Thanks to its slow growth, the mulberry tree (*Morus alba*) was planted below overhead cables, whereas the narrow conical crowns of the juniper tree (predominantly *Juniperus pseudosabina* and *J. seravchanica*, locally known as *archa*) and arborvitae (*Platycladus orientalis*) became useful in the confined areas between pedestrian and road traffic. Finally, the catalpa tree (predominantly *Catalpa bignonioides*), the chitalpa tree (× *Chitalpa tashkentensis*),[288] and the tulip tree (*Liriodendron tulipifera*) provided vital colour to the urban landscape when blossoming.[289]

These greening policies had a considerable effect on urban life and the everyday practices of Tashkent's population. Research into the recreational choices of the citizens of the capitals and big cities of all SSRs conducted from 1959 to 1970 revealed that 20-25% of Tashkent's population spent their time in parks at peak periods, when parks in Leningrad were at any one time used at the most by only 5% of the population (Khromov 1972). A combination of Soviet planning and the favourable climate with long summers had thus successfully created the basis for practices and habits that until then had not been common in the city. These practices became embedded in the everyday life of Tashkent's population to such an extent that, for many years, people of all ages spent a considerable amount of time outdoors, in *dvory*, parks, or simply strolling the city's tree-lined boulevards.

---

[287] See Kuzmichev and Pechenitsin (1979).

[288] The chitalpa, or chilocatalpa, is an intergeneric hybrid tree bred from desert willow (*Chilopsis linearis*) for desert hardiness and colour and southern catalpa (*Catalpa bignonioides*) for larger blooms. It was first created in Tashkent in 1964 by Nikolai F. Rusanov of the Botanical Garden of the Academy of Sciences of the Uzbek SSR.

[289] Tashkent's position on the Silk Routes has also had an impact on the city's flora, as ailanthus (*Ailanthus altissima*), peach (*Prunus persica*), and other similar species had been brought from China over the centuries, whereas several North American species of mostly urban trees – such as maple (*Acer negundo*), white ash (*Fraxinus americana*), honey locust (*Gleditsia triacanthos*), and Osage orange (*Maclura pomifera*) trees – were introduced during the construction of the Trans-Caspian Railway, in the late 19th century. For more on the trees of Central Asia, see Whitehead (1981, 1982).

Nevertheless, in the years that followed Independence, large-scale privatisations and widespread formal and informal appropriations of hitherto public space – such as fenced off areas, gated communities, and construction within *dvory,* gardens, and street-side areas – transformed Tashkent and made many of its green spaces inaccessible to large parts of the city's population. Similarly, several parks were closed, abandoned, or utilised for construction – e.g. the former Lenin PKiO was closed for the public and subsequently became the location for the *Ok Sarai* (White Palace), the Presidential Office of Islam Karimov; the former Gorkij PKiO was significantly reduced in size due to the appropriation of large parts of it for a series of state and municipal buildings; the Victory Park was privatised and turned into the Akvapark, which charges for admission; and the green area of the old Zoo was completely abandoned after the Tashkent Zoo was moved to a new location in 1997.

Significant in the transformation of Tashkent's green spaces have also been the actions and practices of laymen. The regular disruptions in heating and gas supply that were occurring in Tashkent throughout the 1990s led many inhabitants to cut down trees for wood fuel in order either to heat up their own apartments or to sell it and hence generate income. The large-scale automobilisation of the society which started at the same time also had an impact on the city's greenery, as car owners appropriated space allocated for gardens, often uprooting bushes and cutting trees, in order to make room for garages and parking lots. Finally, the radical change in the population mix of Tashkent has affected the overall sentiment towards trees and greenery, as the newcomers that have arrived in Tashkent from the provinces see trees and green spaces primarily as a constant source of hazard and waste.

This view is to a certain extent shared by the local authorities, for whom the maintenance of the city's green spaces and the many practical complications related to trees, such as trimming their branches, gathering their leaves, or repairing installations and infrastructure damaged by their roots, demand manpower, resources, and time. During the hot summer months, trees require large volumes of water, which is supplied through irrigation, sprinkler systems, or by a water truck and a man with a hose, and the fact that these watering technologies are very inefficient, costly, and unreliable significantly increases the costs for the city budget. As a result, these considerations have brought along a stance towards greenery which involves direct actions against trees and greenery, such as the widespread felling examined in the next section, but also a more passive role in the way in which the city's greenery is maintained and taken care of, as a result of which a considerable volume of Tashkent's trees have died or have fallen sick in recent years.

Indeed, several tree species have recently come under attack by various pests and diseases which have caused serious damage to trees and have threatened the very existence of entire species. Poplars have been hit by the great capricorn beetle (*Cerambyx cerdo*), catalpas by the larvae of the catalpa sphinx moth (*Ceratomia catalpae*), whereas Tashkent's elms have been on two separate occasions hit by a Dutch elm disease (DED) pandemic, caused by the fungi *Ophiostoma ulmi* (in the 1930s) and *O. novo-ulmi* (in the 1970s) and spread by the banded elm bark beetle (*Scolytus schevyrewi*).[290] More recently, junipers have been attacked by mealybugs (*Paracoccus juniperi*), which arrived in Tashkent on juniper seedlings delivered from nurseries situated in Surkhandarya province, in the south of Uzbekistan, where they are very common, and blue spruces (*Picea pungens*) have been infected by spruce budworms (*Christoneura*).

The almost complete extinction of elm trees and the significant decrease in the numbers of other species with similarly softer wood has had a side-effect on these with harder wood, such as oaks and chinars, as insects, which usually prefer the former, have been forced to move to the previously unaffected latter. In addition, the recent offensive against Tashkent's trees and bushes has led to the progressive disappearance of the birds nesting in or under them and feeding on insects, thus resulting in an unprecedented volume of various insects. Although technically these insects could be dealt with by the specialised personnel of the Tashkent Regional Institute of Phytopathology, the institute was closed in the early 2000s. The closing of the Institute deprived Uzbekistan of the only specialised institution of its kind, but also opened the way for the uncontrolled logging of trees on environmental protection grounds, as without the Institute's expertise, infections by pests or diseases have on numerous occasions been used as an excuse for the felling of trees.

The offensive against Tashkent's deciduous trees

In January 2015, I arrived at my meeting with Elena, an ethnic Russian woman in her mid-thirties, only to find her upset; scrolling down her Facebook feed on her smartphone while waiting for me, Elena had come across an online article, published the day before, which documented the felling of several chinars in the fifth *kvartal* in Chilanzar, not far from where she lives.[291] Written in a rather emotional tone, the article described the quest of a local resident to find out who had ordered the felling in an attempt to stop the workers before they had cut down all the trees. After she had called all the institutions that could have had given such

---

[290] As a result of the second pandemic, the elm cultivar *Ulmus densa* has almost disappeared from the streets of Tashkent and can be now found only in Khorezm province, in the west of Uzbekistan.

[291] "Uzbekistan: V Tashkente Prodolzhaiut Taino Spilivat' Derev'ia," *fergana.ru*, January 19, 2015.

an order to no avail, the resident eventually confronted the workers themselves and found out that they did not have any permission to fell trees; they were poachers.

While looking at the photographs that the online article featured, I was struck by the audacity of these men; one would expect that they would try to keep as low a profile as possible, but instead they had arrived in broad daylight in a large truck and had used noisy chainsaws to cut and log the trees. "They probably didn't expect that anyone would question their task and the legality of their actions," commented Elena. Indeed, the fact that a resident protested and went to such lengths to find out who had ordered the felling was as surprising as the audacity of the poachers; in Uzbekistan, challenging the state – or any kind of authority for that matter – is rather rare, as people are worried about the potential repercussions that it might have on their wellbeing. In one such case, several of the residents of the adjacent sixth *kvartal* in Chilanzar still remember how, in late 2003, a construction firm secured permission to build a shop inside their *dvor* and to cut the two dozen chinars that grew there. Locals had then tried to confront the workers in order to save the gardens and trees by joining hands and creating a human chain to block access to the *dvor*. Despite threats by officials, which scared off most of them, the residents of two apartment blocks did not give up and went as far as to sue the Tashkent city administration for issuing the permission. On an evening in April 2004, a prosecutor showed up at the blocks and copied the passport data of all tenants. Shortly after, a court ruled that the residents were not entitled to claim the chinars, because most of them had settled in the *kvartal* after 1963, the year in which these trees had allegedly been planted. Meanwhile, all the trees had been cut long before the verdict was announced.[292]

In recent years, cases in which groups of men carrying chainsaws visit the well-wooded *kvartaly* of Chilanzar and Iunusabad and do not leave until they have fully loaded their Kamaz trucks – often with governmental registration plates – with wood have become more common than before. Most of my interlocutors agree that the large-scale deforestation begun in 2009, when the authorities ordered the felling of all the century-old chinars that had been growing on the *skver* since the establishment of European Tashkent. To this day, the real reasons behind the destruction of these trees, which during the Soviet era were protected by law as natural monuments,[293] remain a mystery. The initial official version was that the *skver's* chinars had been infected by an unspecified species of beetle and had to be felled before the beetle destroyed all the trees in the city. The authorities could not

---

[292] "Chinary Vyrubayut v Tashkentskom Zhilom Massive Chilanzar," *sreda.uz*, February 16, 2016.
[293] For more on the protection of nature in the USSR, see Weiner (1999).

explain why only the trees on the *skver* had been infected, and thus subsequently suggested that the trees had to be felled because the privacy they provided made the *skver* a popular working environment for prostitutes, thereby combining the reason for the physical decline of trees with the moral decay of the people sharing space with these trees. Eventually, however, the official version that prevailed was that the chinars were felled because they did not fit into the new master plan for Tashkent.

The inconsistent, ambiguous, and absurd official communications convinced very few. Instead, the population was at the time certain that the reason for the transformation of the *skver* was the elimination of any potential refuges for demonstrators in the event of an unrest. In a country still shocked by the 2005 Andizhan events, it seemed only logical that the authorities were getting the urban battlefield ready; after all, it is easier to restore order in the open rather than in a densely planted park.[294] Today, however, the general belief is that the main objectives of this reconstruction were twofold: first and foremost, to destroy a quintessentially Russian corner of the city; and second, to make the equestrian statue of Amir Temur and the then newly built Palace of International Fora visible not only from across the square, but also from Sayilgoh Str., a pleasant leafy pedestrian area known among Tashkent inhabitants as Brodvei, connecting the *skver* with Mustaqillik Sq.

The various debates concerning the 2009 destruction of the *skver's* chinars were revived in late 2015, when the seasonal sanitary pruning of trees, undertaken by the city administration annually, turned into a massive deforestation of central Tashkent, with several dozen trees across the city's central districts felled and logged for no apparent reason. Amidst the public outcry that ensued, concerned citizens and local media alike contacted the Tashkent City Committee for the Protection of Nature (Rus. *Tashkentskii Gorodskoi Komitet po Okhrane Prirody –* TashGorKomPrirody), who had allegedly given the permission for the felling, in an attempt to understand the reasons behind the deforestation and to potentially halt it. The officials that appeared on the media, however, were full of contradictions. Having initially stated that only sick trees were being felled as part of the annual sanitary measures and promising that they would be soon replaced by new ones, a few days later the officials added that in addition to sick trees, also unstable ones, potentially harmful for public health and safety, were being cut following *in situ*

---

[294] This feeling was intensified by the fact that, around the same time, centuries-old trees were cut down not only in Tashkent but also in Samarkand, Fergana, and other cities across Uzbekistan.

inspections conducted by – unnamed – experts.[295] As protests grew and eyewitnesses came forward with testimonies of healthy trees being reduced to little more than sawdust, several new parameters justifying the felling were added by the authorities. One official argued that trees that look healthy also need to be cut and revealed that the authorities had decided to fell poplar trees across Tashkent because their age had allegedly exceeded the average life-span of poplar trees.[296] He also added that most of these trees were being felled as a result of the numerous requests that the authorities had received from citizens, who were frustrated with the inconvenience that trees cause and were concerned about the dangers that they might pose to their health and safety.

The extent to which this claim is valid is debatable, but nevertheless it is a fact that many people in Tashkent see trees as a nuisance, primarily due to their messiness. Trees shed fruit, flowers, and twigs which work their way into the crevices of cars, excrete sap which stain clothes, and drop branches or even collapse, thus posing a threat to property and to the safety of the population. As importantly, in autumn, trees shed their leaves, which litter yards and *dvory* and clog gutters, thus often resulting in spectacular flooding when the autumn rains start. The removal of this waste requires time and labour due to the significant volume amassed, and even though in parks and along streets it is usually conducted by municipal services, inside *dvory* it is mostly local residents who gather the leaves under instructions from *mahalla* committees. Once collected, dry leaves are stored on the premises of the *mahalla* administration until garbage trucks dispose of them at the city landfill, where they are covered by layers of soil in order to be later used as organic fertiliser. However, it is not uncommon for the piles of leaves to be simply burnt on site, often by the *mahalla* officials themselves, due to lack of storage space, considerable delays in collection, or in order to avoid – or pocket – the garbage collection fees, or even by the garbage collectors who arrive in already full tracks or who simply want to avoid the manual labour of loading the truck. The smoke from burning leaves had for many years been the typical autumn smell of Tashkent, but in recent years the occurrence of the practice has considerably decreased, as the massive burning of dry leaves and other litter releases smoke and various potential hazardous substances into the air, which provoked a public outcry and led to high fines being levied on both the ordinary citizens and the officials who practice it.

[295] "Sluzhby Blagoustroistva Ob"iasnili Obrezku Derev'ev v Tashkente," *UZ24.uz*, January 25, 2016.
[296] "Sluzhby Blagoustroistva Ob"iasnili Prichiny Vyrubki Derev'ev Vdol' Prospekta Mustakillik," *UZ24.uz*, January 27, 2016.

Even though these practical problems are caused by almost all trees, in recent years, Tashkent's chinars have found themselves on the receiving end of scrutiny more than any other tree species. The primary reason for their unpopularity is the fact that they have been blamed by laymen and officials alike for "stealing" oxygen from the atmosphere and substituting it with carbon dioxide. Needless to say, this claim is scientifically invalid, as, just like all other tree species, through the process known as photosynthesis, chinars "inhale" carbon dioxide and "exhale" oxygen.[297] Nevertheless, despite the ludicrousness of those accusations, chinars are indeed responsible for a way more realistic health problem, and in particular for the throat, nasal, and eye symptoms that Tashkent's inhabitants suffer annually. Like most trees, in early spring the flowers of chinars release copious amounts of pollen which is carried by wind in order to pollinate other flowers on the same or different tree (the chinar is monecious, meaning that every tree has both male and female flower clusters), but is also inhaled by humans, triggering a type of seasonal allergic rhinitis, also known as pollen allergy or hay fever.[298]

As if the problems caused by these allergenic pollen particles were not enough, the fruits and leaves of chinars are covered by sharp microscopic fibres, called trichomes, which blow off in the summer months when leaves expand and reach their maturity. In colder and more humid climates low temperatures and precipitation cause the trichomes to sit on the ground and decompose, but in the dry climate of Uzbekistan they mix with dust and other matter polluting the air and irritate the population's airways. It is still unclear whether these airborne trichomes are indeed allergens, but nevertheless, the "dust" (Rus. *pyl*) that chinars produce has earned them a bad reputation. Avoiding areas where chinars grow is not an option for allergy sufferers, as, together with poplars, they are among the most widely planted trees in Tashkent. Both Tsarist and Soviet urban planners considered chinars ideal for landscaping due to the fact that they provide shade and coolness thanks to their luxuriant canopy, grow fast, adapt easily to most kinds of soil and climate, and are resistant to heat, pollution, wind, and various pests, fungi, and diseases. At the same time, unlike oak trees, another popular urban tree, chinars are more at home in a well-watered habitat like Tashkent's, as their roots absorb water fast and reach very deep, which makes them less likely to disturb pipes and surrounding pavement installations.

---

[297] A rumour that the harmfulness of chinars has been mentioned in one of the many books written by late President Karimov has turned it into a political confrontation.

[298] Of all the different *Platanus* species, only the chinar and the London plane (*Platanus acerifolia*) are recognised as allergenic trees by the World Health Organisation and International Union of Immunological Societies (WHO/IUIS) Allergen Nomenclature Sub-committee (Asam, et al. 2015).

Due to the chinars' practical significance and aesthetic value and the fact that they have inadvertently become a symbol of the Soviet era city due to their extensive planting by the Soviet authorities, the 2016 offensive against deciduous trees triggered an unexpected and unprecedented mobilisation among the inhabitants of Tashkent. In January 2016, an online petition against the felling of chinars in the city appeared on the popular online petition platform change.org, amassing within two days over 1,500 signatures.[299] The petition, addressed to the Mayor of Tashkent, the Head of the State Commission for the Protection of Nature, and the Deputy Speaker of the Ecological Movement of Uzbekistan Party, was followed by two more initiatives. In early February 2016, a collective letter signed by 46 concerned citizens was addressed to the Cabinet of Ministers. The letter's signees criticised city administration officials for publically arguing that chinars were being cut due to their harmfulness, condemned the non-scientific claim that they absorb oxygen and produce carbon dioxide, highlighted their cultural and practical importance, and called for an end to the deforestation and for the institutionalisation of a framework for the protection of urban forests.[300] A week later, the director of the Institute of Democracy and Human Rights, Saiera Khodzhaeva, sent an open letter to the Mayor of Tashkent, asking him to clarify which laws had given him the authority to order the felling and requested the names of the experts that had been consulted.[301] After Khodzhaeva's request was ignored by the Mayor's office, she sent a second letter which, however, also remained unanswered.[302]

While the population of Tashkent was debating whether the felling orchestrated by the city authorities was legit, a series of incidents in which groups of loggers felled trees in *dvory* and school premises throughout the city without having acquired a permission added a new layer to the discussion. Equipped with chainsaws and trucks and claiming that they worked for various state companies and agencies, these loggers disregarded the reactions and protests of residents or the warnings of district policemen (Rus. *uchastkovye*), and, in a few cases, were reported to have gone as far as to have used physical violence to break the human chains that residents formed in order to save the trees. Unsure about who these loggers were, the locals did not dare go too far in their protestations and actions, until it became clear that

---

[299] The petition was closed without ever reaching its goal of 5,000 signatures. These numbers are only a fraction of the overall population of Tashkent – approximately 2.2 million in 2014 – but are nevertheless important considering the political situation in the country and the general hesitation of the population to openly criticise the authorities.

[300] "Tashkenttsy Obratilis' v Kabmin po Povodu Vyrubki Derev'ev," *gazeta.uz*, February 8, 2016.

[301] "Uzbekistan: Problemoi Massovoi Vyrubki Chinar Ozabotilsia Institut Demokratii i Prav Cheloveka," *fergana.ru*, February 18, 2016.

[302] "Demokratiia i Zakonnost' – Protiv Chinovnikov i Drovosekov. Kto Kogo?" *fergana.ru*, April 18, 2016.

the vast majority were illegal poachers and that unexpected interest or uncalled for commotion was enough to disorient most of them. Thus, a series of Facebook groups and websites begun urging the city's population to contact the local authorities should suspicious tree felling come to their attention. In one such example, the popular online news website UZ24 reminded its readers that:

> …the felling of trees requires a special permission from the deputy of the Mayor. If you notice that in your area trees are cut either directly above the roots or only a few meters of bare trunk are left, then it is a clear violation and you should immediately contact TashGorKomPrirody.[303]

The attention that the matter drew paid back, as more and more concerned citizens started confronting the poachers, taking photos of their faces or of the registration plates of their trucks, and filming their entire encounters and exchanges with them. Most of this material was then uploaded online in order to inform and encourage more people to stand up against illicit tree felling. The following account, posted in April 2016 on the Facebook profile of a woman who reacted to a group of men felling healthy trees inside a school yard in Iunusabad, is very telling of the citizens' determination and boldness vis-à-vis poachers:[304]

> On April 1, trees were being felled on the territory of school No 240, in the eleventh *kvartal* in Iunusabad. I asked the group of men who were cutting the trees whether they had obtained a permission from the authorities, but I was ignored. So I called TashGorKomPrirody…and then ran for the district policeman…who came and asked for their documents and the permission to fell trees. Suddenly, I heard commotion from inside the school. It turns out TashGorKomPrirody had called the school administration and they had started panicking. The director and some others came out, they were all calling someone, probably trying to arrange a permission for the felling before it was too late. In the meantime, the cutting had temporarily stopped. Then, the leader of the poachers ran to me, shouting that there was no permission and there would not be, and insolently began to cut trees again. But he was stopped by Farkhod Abdurakhmanov from TashGorKomPrirody's Department of Conservation of Flora and Fauna. Big thanks to him.

> PS: I would like to point out that neither the district nor the city authorities reacted to the complaint. Calling them did not give any results.

---

[303] "Vyrubka Derev'ev v Tashkente Prodolzhaetsia," *UZ24.uz*, November 17, 2014.
[304] https://www.change.org/p/5655826/u/16138577

In addition to the determination of the city's population, however, this post is very telling of two more things characteristic of the recent offensive against trees in Tashkent. First, it highlights the dubious actions and practices of TashGorKomPrirody, who only acts when trees are being cut by poachers without permission, but allows or even justifies unnecessary tree cuttings when they are conducted by the authorities. And second, it shows that in most cases the poachers do not act alone, but are instructed or facilitated by various officials, such as, in this case, the director of the school. The following account of a confrontation of Nigora, a hairdresser in her early 50s, with yet another group of men who were felling trees in her *dvor* in the area known as Algoritm in Chilanzar says much about the mechanisms of illicit tree felling:

> Some men were cutting trees with an axe, not a chainsaw. I asked them who had sent them, and they said the electricity company had. 'What are you doing?' I asked. 'These trees are in the way of cables,' one of them responded. So I asked them, 'where are the chainsaws? Why are you chopping the branches with an axe, like monkeys? And the cables are fifteen meters high, why are you cutting small trees?' 'So we were told,' they said. So I called their company, and I told them that I will send everything – I was filming this whole encounter with my phone – to the prosecutor and will upload it on the internet. They left immediately. So it is clear that everybody wants a portion of the pie, whatever organisation you can think of.

Indeed, it has become evident that any official who can order or persuade a group of men to fell trees will try to do so, and the only thing that varies is the position of the mastermind behind each felling: officials in state companies who send workers to fell trees under the pretext that they come in the way of cables or pipes; school and kindergarten directors who invite or turn a blind eye to poachers who if caught will claim that trees cause allergies to the children; *mahalla* committee members and representatives of housing associations who allow felling without the consent of residents, suggesting that old trees might fall on parked cars and pedestrians; and city or district officials who order felling or simply do not intervene or respond when they receive complaints related to these matters.

What is the aim of all this, though? The population of Tashkent had initially assumed that trees were felled in order to provide – or to be sold for – wood fuel, an assumption not entirely without foundation. In the summer of 2014, residents of Chirchik, a city 32 km northeast of Tashkent and part of the wider Tashkent agglomeration, reported that following the felling of trees in their city, trunks were cut into logs and loaded late at night onto trucks with governmental registration

plates, registered in Fergana province, in the east of Uzbekistan. Fergana province regularly experiences natural gas supply interruption, which during the winter months results in disruption of heating. Thus, it is quite likely that the authorities had been stocking up wood in order to ensure the undisturbed heating of local governmental buildings throughout winter. However, when, in December 2015, Uzbek mass media begun running advertisements commissioned by furniture manufacturers, this assumption gave way to a certainty among the population of Tashkent that trees were felled in order to be turned into furniture.[305] The fact that all domestically produced furniture items exhibited at the furniture exhibition MebelExpo Uzbekistan 2016 that took place in Tashkent in March 2016 were made of chinar wood only confirmed those suspicions.[306]

During the Soviet era, the needs of the Uzbek SSR in construction timber, furniture, roundwood, wood fuel, and paper were fulfilled by means of deliveries from other SSRs, predominantly the Russian SFSR and the Kazakh SSR. After the dissolution of the USSR, these flows were not completely halted, but nevertheless wood had to be imported at free market prices over long distances, which considerably increased the costs and consequently reduced the volume of wood that independent Uzbekistan could import. Simultaneously, various efforts to develop Uzbekistan's domestic production of wood have been hindered by the republic's legal framework and lack of know-how. Most importantly, tree felling for industrial purposes in all natural and semi-natural forests is prohibited and harvesting of wood is permitted only as part of sanitary felling and thinning. However, the wood harvested is generally of low quality and small diameter, which makes it unfit for construction, and is hence used mainly for sawnwood, hardboards, and matches, in the pulp and paper industry, and as wood fuel. Even though a resolution for the creation of industrial plantations of poplars and other fast-growing species was issued in 1994, lack of water resources for irrigation, soil salinity, and the affliction of several trees by trunk rot-causing fungi reduced the survival rate of the planted trees and resulted in a decrease of the area of poplar plantations (Vildanova 2006). As a result, high-quality wood is rather scarce in Uzbekistan, which has significantly hindered the operations of the republic's wood processing and furniture industry and has rendered them unable to meet the increasing demand prompted by the relative improvement of living standards and the emergence of an upper middle class.

It is, thus, quite likely that the trees felled in Tashkent end up in these wood processing facilities, which can explain the remarkable growth of the industry

---

[305] "'Podarok' ot Mebel'shchikov Uzbekistana," *sreda.uz*, January 4, 2016.
[306] "Vystavka MebelExpo Uzbekistan – 2016," *sreda.uz*, March 3, 2016.

despite the fact that the framework for the domestic production of wood has not been changed.[307] The targeting of chinars more than other species by municipal workers and poachers alike points towards this direction as well, as chinar wood is particularly good for furniture manufacturing and has quite a high price on the black market. Evgenii, a carpenter who works as a part-time *bombila,* remarked that "a Kamaz [truck] full of chinar wood can sell for about one million soums," before he went on to assume that certain officials have an interest in this financial scheme, which can explain not only their silence, but also the fact that, unlike forests, urban forests are not protected by law. However, Evgenii's estimate is only a fraction of the real value of wood; as a person working in one of the many quasi-legal carpentry workshops that operate in Tashkent told me, a truck-load of chinar, oak, and other similarly hard woods can be sold for as much as four million sums (USD 560 according to the unofficial exchange rate in July 2016), and quite often workers or poachers earn extra money if they manage to also excavate the roots, despite the considerable effort, as they are apparently highly valued by parquet manufacturers.

The state has a certain interest in providing wood industries with raw materials, as it keeps the economy running, reduces unemployment, and results in revenues to the state budget. However, in many cases, the officials involved also have personal – monetary or other – interest in commissioning, allowing, or turning a blind eye to the cutting of trees and the appropriation of wood by private enterprises. Even though the population of Tashkent seems to acknowledge the extent of these informal arrangements, suspicions of corruption are directed almost exclusively towards municipal officials, as the general belief is that politicians higher up, e.g. in the Cabinet of Ministers or within the Presidential Palace, are either unaware of the situation or simply perceive it to be right, themselves tricked by the Town Hall.[308] What Tashkent citizens seem not to take into account is the fact that the Mayor of Tashkent is handpicked by the President of Uzbekistan and then approved by the Tashkent City Council of People's Deputies rather than elected by the citizens; similarly, the mayors of city districts are picked by the Mayor of Tashkent and then approved by the City Council. Thus, considering the political situation in Uzbekistan, it would not be an exaggeration to assume that the Mayor of Tashkent and the district mayors are very unlikely to go against orders from the higher

---

[307] As the organisers of the MebelExpo 2016 proudly claim in their official announcement, "the furniture and wood processing industry of Uzbekistan is one of the fastest growing industries in the country. If 5-8 years ago, 65-70% of the products sold on the domestic market were produced abroad, today about 90% of the demand is met by high-quality domestic products." See "Vystavka MebelExpo Uzbekistan – 2016," *sreda.uz*, March 3, 2016.

[308] This is also the reason why the 46 residents who signed the collective letter criticising the authorities decided to send it to the Cabinet of Ministers rather than the Town Hall.

echelons of the political system. What these orders are and who gives them can only be speculated, but it is a fact that the figure of the late President Karimov was quite prominent in the discussion regarding tree felling, despite the fact that his assumed position had been contested by the various parties involved.

The discussion around President Karimov's involvement revolved mostly around the symbolic value of urban trees, as a large part of Tashkent's population believes that the massive felling of deciduous trees has aimed at altering the character of the city in the same way that the modification of the material manifestations of the Soviet era has aimed at rewriting its history. Central to this claim has been the fact that the organised, large-scale offensive against trees began with the deforestation of the *skver* in 2009, the year the authorities chose to celebrate Tashkent's 2200ᵗʰ anniversary. To that end, critics argue, the authorities have ordered tree felling along streets and inside parks, namely where they have had the jurisdiction to do so, and have chosen to commission, encourage, or remain silent in the cases of felling undertaken by poachers in areas over which other institutions have power, such as *dvory,* schools, and even cemeteries.[309] The significant monetary value of the felled trees, they add, has been used as a motivation for the workers and the poachers and as a cover up for the rest of the population.

Despite reassurances by city officials that the felled chinars would be replaced by other deciduous shade-producing species, such as oak, chestnut, or tulip trees,[310] in the few cases that they have been replaced by anything, the species that has eventually appeared on the streets of Tashkent has been a rather odd choice. The blue spruce tree (*Picea pungens*), first introduced in the city in the late 1990s, is a coniferous evergreen species with densely growing horizontal branches, endemic to the Rocky Mountains. Even though it was, from the very beginning, planted in large numbers, its presence was not particularly felt or acknowledged by the city's population until 2009, when spruce trees replaced the chinars that were felled as a result of the transformation of the *skver*. Spruce trees have since appeared in most public parks, around public buildings, and along streets, but high rates of mortality have complicated their potential spread across the city. Not only are coniferous trees highly sensitive to air pollution (Goryshina 1991), but additionally, in the wild, blue spruces most commonly grow along streams in mountain valleys, and thus the hot

---

[309] Apart from being sacred places, people feel that the usual arguments that the authorities use when it comes to logging could not be used in the context of a cemetery. There are no roads to be expanded, no buildings and infrastructure with which trees could interfere, and the life of the locals is not under threat, they add with sarcasm, nor can they be affected by allergies.

[310] Following the cutting of trees on Mukimi Str. in Chilanzar in 2016, dozens of signs informing the population about the trees that would be planted there appeared along the pavements.

and dry climate of Tashkent is, quite understandably, hostile to this coniferous species. Attempts to help them adapt have included intense watering throughout the day and their covering with awnings made of calico, but even these have proved only partly successful. Rather than accepting the fact, however, the authorities keep replacing the trees that die with new ones, at a substantial cost for the city budget.

Lately, spruce trees have been faced with yet another challenge. One or more of the tree batches that were imported from Belgium to Uzbekistan in the summer of 2013 were infected by spruce budworms (*Choristoneura*), and before long, the infection had spread to several older spruce trees across Tashkent. Since the budworm had never been observed in Uzbekistan before, local entomologists lacked the expertise and know-how to exterminate it, and as a result, hundreds of spruce trees have died or have been cut down. In order to make the damage as little visible as possible, the Tashkent authorities came up with a rather ludicrous plan: in 2016, in the weeks preceding the festivities for Independence Day (September 1), city administration workers were spotted spray-painting all the spruce trees that had turned yellow.[311] Naturally enough, the dye further deteriorated the condition of the trees and only accelerated their death.

It is unclear why blue spruce trees were chosen to be planted in Tashkent. This particular species of spruce tree is not endemic to the region, unlike the Asian – or Schrenk's – spruce (*Picea schrenkiana*), which is native to the Tian Shan mountains, nor has it any historical, traditional, or cultural links to Tashkent or Uzbekistan. Additionally, if by choosing to plant deciduous trees in a desert environment both the Tsarist and the Soviet states demonstrated their power, showcased their scientific and technological advancements, and improved the lives of their citizens, the introduction of spruce trees by the Karimov administration has failed in all three. The fact that the species chosen as the administration's signature tree is an imported species without any traditional association to the city's identity and history and one that cannot get acclimatised in the region has considerably embarrassed the administration, whereas the persistent refusal to accept the facts and the subsequent ludicrous attempts to dye the sick or dead trees have further exposed the state in the eyes of the population.

The answer to why spruce trees were introduced in Tashkent, thus, might lie in the rumour that they used to be President Karimov's favourite tree due to their always being green. Even though I did not manage to gain access to any concrete sources

---

[311] "V Uzbekistane Gotoviatsia k Prazdniku Nezavisimosti: Krasiat Elki," *fergana.ru*, July 27, 2016.

that would confirm or reject this rumour, its validity is not unlikely, not least because Natalie Koch has noted a similar rumour in Turkmenistan:

> The late President [of Turkmenistan, Saparmurat] Niyazov [(1940 – 2006)], I was told, was once preparing to visit a village and his official apparatus arrived in advance to confirm that all was in order for his travels. At the hotel reserved for his stay, the owners had recently planted cherry trees, which were intended to blossom in time for his arrival. But they had not yet blossomed and their branches were barren. The presidential team was not pleased because they thought this sullied the image of the place…and ordered them to be cut down. And 'from that day forward,' it became imperative to plant evergreens, so that the country and its trees are always green. The 'truth' of this story is not overly relevant, for its significance lies first, in how it normalizes and explains elite decisions with reference to the agenda of pleasing the leader, and second, how it illustrates a particular popular understanding of how nature should be arranged as an aesthetic to accomplish precisely this (Koch 2015, 686).

Trees, memory processes, and phantom pains

Even though the officials' claims that trees are felled following complaints by concerned citizens are often merely an attempt to legitimise the felling, a part of the population of Tashkent indeed does not like trees and is supportive of the gradual decrease in the volume of the city's deciduous trees. The majority of these people appear to be Uzbek-speaking newcomers from the provinces who, for their own personal reasons, tend to see trees as a nuisance. Several Uzbek-speaking *bombily* expressed to me their frustration with the trees in their neighbourhoods due to the dust they accumulate and the sap they drop on their cars, whereas many of my Russian-speaking interlocutors complained about their Uzbek-speaking neighbours who arrive to Tashkent and within weeks contact the local authorities to prune or fell trees which block the view from their windows or throw too much shade into their apartments. Alena, a Russian-speaking resident of the fifth *kvartal* in Chilanzar, was allegedly verbally abused by her Uzbek-speaking neighbour when she tried to stop the workers from cutting down a tree in her *dvor* in December 2014:

> My husband had heard that pruning season is about to begin and two weeks ago he went to the authorities and filed in an official request to have the dead tree in front of our entrance removed. When the workers started cutting trees in the *dvor* next to ours, he personally went there and asked them

whether they will remove also our tree. They said that yes, there are trees in front of our building that they have been instructed to cut…Two days ago I woke up to the noise of chainsaws and I realised that they were working directly under our apartment. So I walked up to the window and I was shocked – they were cutting a healthy tree under our window. My husband had already left for work, so I ran downstairs and shouted at them that they are cutting the wrong tree. The foreman responded that I shouldn't worry, that they will also cut the dead tree after they finish with the one they were working on. I shouted that they should stop cutting the tree immediately, but then this woman who lives in the next entrance started screaming at me from her window – half in Russian, half in Uzbek – that this tree only causes problems, that it's her who has to clean all the garbage that it produces, that she cannot see anything in her flat without the lights on, that there is so much dust that she cannot open her windows, that it's easy for me to say because I never clean the area in front of our entrance, and more…I was so taken aback I didn't utter a word – I went back inside and cried.

Coupled with the fact that most workers and poachers felling trees have been reported to be newcomers speaking little – if any – Russian, such incidents strengthen the Russian speakers' perception of Uzbek speakers as people who are culturally or even genetically predisposed against greenery and who endanger the city with desertification.[312] Given that most of Uzbekistan is a near-treeless environment, newcomers are seen as people with no memory of trees in the sense that trees are not related to any of their everyday practices and do not constitute part of their collective memory and identity; as a result, Uzbek speakers are often referred to, among the other derogatory epithets presented in Chapter 1, as *mankurty* (Rus. pl.; Rus. sing. *mankurt*). A word popularised by Kyrgyz writer Chinghiz T. Aitmatov (1928 – 2008) in his 1980 novel *I Dol'she Veka Dlitsia Den'* (translated into English as *The Day Lasts More than a Hundred Years*), the *mankurty* were men taken prisoners by a tribe of cruel warriors. The warriors wrapped the men's heads in camel skin, which, under the sun, dried tight and enslaved them forever, turning them into soulless creatures, completely subordinated to their owners and unable to remember anything from their previous lives. In Aitmatov's own words, "[t]he *mankurt* did not know who he had been, whence and from what tribe he had come, did not know his name, could not

---

[312] A quite popular taunt is that Uzbek speakers aim at turning Tashkent into Tashkum, a pun with *kum*, the Uzbek word for "sand."

remember his childhood, father or mother – in short, he could not recognize himself as a human being" (Aitmatov 1984, 126).[313]

This colloquial analogy, attributing one's sentiments towards trees to memory, is, interestingly enough, in line with academic literature in environmental psychology, and especially the work of Rachel Kaplan and Stephen Kaplan, who have argued that people who do not experience "nature" early in their lives and on a regular basis are less likely to care about and take care of greenery (Kaplan and Kaplan 1989, Kaplan, Kaplan and Ryan 1998). Thus, what Russian speakers refer to as "mankurtism" (Rus. *mankurtizm*) is very similar to the concept of "environmental generational amnesia," introduced by psychologist Peter H. Kahn; as he has argued:

> we all take the natural environment we encounter during childhood as the norm against which we measure environmental degradation later in our lives. With each ensuing generation, the amount of environmental degradation increases, but each generation in its youth takes that degraded condition as the nondegraded condition – as the normal experience (Kahn 2002, 106).

For the Uzbek speakers who have been born and brought up in the provinces, the "normal experience" is their native near-treeless environment, and thereby Tashkent's tree-lined streets and *dvory* are mostly seen as an unnecessary source of constant inconvenience. Following environmental psychologists, then, one can argue that it is their lack of what has been termed "social-ecological memory" (Barthel, Folke and Colding 2010) that makes Uzbek speakers incapable of developing sentimental ties towards greenery. This, to a certain extent, explains why, amidst the recent offensive against trees, they were unable to comprehend the reactions of Russian speakers to, as Farkhodjon, a young *bombila* from Khorezm, told me, "a few out of Tashkent's *millions* of trees being felled." For Russian speakers, however, trees are perceived as a synecdoche for urbanity and the possession of "social-ecological memory" is seen as a certificate of Tashkentness which differentiates them from the *mankurty.*

---

[313] The word became widely used across the USSR in the 1980s amidst *glasnost'* and the revisiting of the past that it triggered in order to refer to this part of the population that had chosen to abandon their national customs and traditions and instead believed in state communism despite the revelations and flow of information that had become available. Nowadays it is most often used to indicate a person who has no respect for the past or, following Russian science fiction writer Oleg I. Divov (1968 –), as synonymous to zombie. See Divov's (2008 [1998]) novel *Molodye i Sil'nye Vyzhivut (The Young and the Strong will Survive),* originally published in 1998 as *Zakon Frontira (The Law of the Frontier).*

Indeed, Russian-speaking Tashkenters are tied to trees in many diverse ways, both symbolic and material, with different meanings and different kinds of memory attached to and enacted by them. Not only are trees at large seen as a quintessential part of Tashkent's history and identity, associated with its Soviet era, a time when the city was one of the greenest in the world, but particular species, groups of trees, or single specimens are also capable of stimulating memory processes through a range of affective bodily practices, feelings, emotions, and the senses. For example, particular trees are often symbolically associated with particular events or persons, such as in the case of Elia, a retired factory worker who every weekend visits the little grove that she used to frequent with her late husband and son who both died tragically; or of the old woman from the following incident, which was witnessed by one of my interlocutors, a resident of the eight *kvartal* in Iunusabad:

> The workers arrived [at the *dvor*] and prepared all the machinery and everything. And imagine people all over looking down from their windows, only a few tenants came downstairs and after a few inquiries stood aside, and then, out of nowhere, this old woman came almost running out of her entrance. The tree, a really big chinar, had been apparently planted by her father when he first arrived in Tashkent before the War, and she herself is in her 70s, so you can understand how old the tree is. 'First kill me and then the tree,' she was shouting. She screamed so much nobody knew what to do…In the end, they left without cutting the tree, and it still stands there.

It is thus not surprising that for many Tashkenters the effect of the massive deforestation is comparable – if not stronger – to the effect of the demolition of Soviet era buildings and monuments. This feeling is predominantly connected to the fact that Tashkent's greenspace has for decades been the location for many of the population's outdoor activities during the hot summer months. Capitalising on the opportunities offered by the combination of Tashkent's favourable climate and the Soviet Union's scientific and technological achievements, many Tashkenters had grown used to strolling under the canopy of trees, spending family time in PKiOs, playing chess in the parks, or, after the heat had subsided in the evening, simply sitting in *dvory* talking with friends, family, and neighbours. Those routines and practices, inseparable from Tashkent's green spaces, became embedded into their everyday lives and came to constitute an important part of their urban identity. Naturally, different spaces and different tree species enacted different practices among different population groups, very telling of which is the following narration by Lena, a Tashkent-born entrepreneur in her late 40s who permanently lives and works in Moscow and who visits her family in Tashkent every summer:

195

I grew up in a common *dvor,* [which means that] our yards were not separated by fences from each other, as was sometimes the case in other *dvory*…Near each house there was a vineyard and various fruit trees. We, children, were allowed to pick fruits from any tree, without worrying whether it was our tree or the neighbour's. We did not wash those fruits, but ate them right off the tree. Among other fruits, we also ate these small unripe green apples, but because they were very sour, we put salt on them – always one kid in the *dvor* had a small box of salt – which made them sweet. Every time my grandmother would see us picking these unripe sour apples she would shout from the window that the fridge is full of apples with "red cheeks," that's what she called them, but we wanted those green apples with salt. They seemed so much tastier.

This practice was quite popular among children all over Tashkent up until the late 1980s to such an extent that the image of a green apple side by side with a matchbox full of salt is often used on social media as a symbol of an earlier, more innocent era. However, in the years immediately after Independence, most fruit trees inside *dvory* died as a result of neglect or were felled in order to be used as wood fuel, and inevitably the practices enacted by them, such as the eating of unripe apples with salt, were discontinued. In the same way, the gradual deforestation of Tashkent has been posing a threat to the everyday practices and routines of the city's inhabitants that are associated with other urban tree species. Most importantly, the felling of deciduous trees with luxuriant crowns and their replacement with much shorter coniferous ones has jeopardised the capacity of Tashkent's greenspace to provide the population of the city with shade and coolness, thus resulting in people abandoning parks and other hitherto green spaces and with them their own practices. As Dildora, a travel agent in her early 40s, says:

I haven't been to the *skver* in years. Earlier we used to go there every weekend, we took the metro to Mustaqillik Sq., walked down Brodvej, and then sat at the *skver* until lunch time. Our children loved it. Even in the summer it was very pleasant, you could hide there from the summer heat. But now, there is nothing to see there and nothing to protect you from the sun…The same thing happened with the little park we had in our neighbourhood, in the *kvartal* next to ours. There were several chinars growing there, forming a nice grove, and the whole *mahalla* gathered there in the evenings. Last fall they felled most of these trees, and all that is left is cudgels, and nobody goes there anymore, either.

The stumps and cudgels left behind after the workers or poachers have removed the trunk give, to many Tashkenters, the impression of a wounded city in which trees continue to influence the people's practices and affective experiences despite their material absence. As I have suggested earlier in this chapter, the presence of the trees after they have been felled – a state which I have called post-treeness – can take many different forms, but of particular importance here is the trees' capacity to *haunt* humans and become enrolled into memory processes by virtue of the phantom pains that they inflict upon them. Haunting, for Avery F. Gordon, "describes how that which appears to be not there is often a seething presence, acting on and often meddling with taken-for granted realities" (Gordon 2008 [1997], 8), which means that the past can live on in the present in various forms. In this sense, post-trees are essentially what Mikkel Bille, Frida Hastrup, and Tim Flohr Sørensen have referred to as "absent elements [that] are sensuously, emotionally and ideationally present to people, and [that] are articulated or materialized in various ways through narratives, commemorations, enactments of past experiences or visualisations of future scenarios" (Bille, Hastrup and Sørensen 2010, 3-4).

All this makes post-trees a kind of socio-natural ruins and, accordingly, renders the deforestation of Tashkent similar to what Yael Navaro-Yashin has called "ruination," a term by which she refers to "the material remains or artefacts of destruction and violation, but also to the subjectivities and residual affects that linger, like a hangover, in the aftermath of war or violence" (Navaro-Yashin 2009, 5).[314] In Tashkent, this hangover has been intensified as a result of the replacement of the felled shade-producing trees with coniferous ones, as, political and economic aspects aside, in the eyes of many, spruce trees are lesser trees, if trees at all; as Misha, a 66-year-old retired textile factory worker-turned-*bombila*, puts it, "they spend our own money to plant trees that nobody wants and can do nothing for the city and its inhabitants…Real trees, like chinars, they look beautiful, they feel beautiful, they offer shade and coolness, or at least they produce fruit that you can eat – like peach trees do. But what do spruce trees do? None of these." Indeed, unlike Tashkent's deciduous trees, spruce trees do not seem to offer any services to the city or its inhabitants and their very presence is first and foremost associated with the costs they incur to the city budget. Even if they manage to grow in Tashkent's unwelcoming climate, their limited size and growth and their conical shape make them incapable of creating a canopy; as a result, among other things, they are unable to reduce the number of potential potholes in the streets by shielding the asphalt from overheating, nor do they reduce the need for air-conditioning and electricity

---

[314] See also Tim Edensor's (2001, 2005a, 2005b) work on ruins.

consumption by limiting the exposure of apartment blocks to the sun. Most importantly, however, due to their size, form, and shape of leaves, spruce trees cannot protect Tashkent's population from the scorching sun and from harmful ultraviolet (UV) radiation.

UV radiation constitutes about 10% of the electromagnetic radiation given off by the Sun. While this radiation is emitted at all wavelengths, only radiation in the UVA range (wavelengths of 315-400 nm) and the UVB range (280-315 nm) reaches the Earth's surface, as UVC rays (100-280 nm) are absorbed by the atmospheric ozone, water vapour, oxygen, and carbon dioxide. In small amounts, both UVA and UVB rays are important to human health, as they are essential for the production of vitamin D, but overexposure to either may result in acute and chronic health effects on the skin, eye, and immune system, best known among which are sunburn and an increased risk of skin cancer.[315] In order to shield itself against damage from UV radiation, human skin produces a dark-coloured pigment, called melanin, which, apart from offering cosmetically desirable suntan, provides a certain degree of protection. In cases of prolonged exposure to sunrays, however, the protection provided by melanin is not adequate and the high intake of UV radiation can result in sunburn. In its mildest form, sunburn consists of a reddening of the skin called erythema accompanied by headache, a general fatigue, and mild dizziness, but, if stronger, it can cause the skin to blister and peel, which is not only painful but also leaves the very white and new skin underneath unprotected and even more prone to damage.[316]

It has been well documented in academic literature that deciduous trees, regardless of species and including the individual specimens scattered across cities, reduce UV radiation in their vicinity thanks to their ability to absorb, reflect, and transmit it through their leaves (Yang, et al. 1995, Dean, et al. 2014, Grant, Heisler, et al. 2003), thus providing with their shade a safe and pleasant haven from the scorching sun. However, not all shade is equally protective, as UVB rays, considered the most harmful part of the solar spectrum, can reach the skin indirectly.[317] This means that in locations typically perceived as shady, humans are still exposed to 40-60% of the

---

[315] High doses of UV radiation kill or damage most of the skin cells in the upper skin layer, but UV radiation also penetrates into the deeper skin layers, where it affects connective tissue and blood vessels and results in the skin gradually losing its elasticity and starting to wrinkle, thus causing premature skin ageing and potentially enhancing the development of skin cancers. While non-melanoma skin cancers can be surgically removed and are rarely lethal, malignant melanoma substantially contributes to mortality rates in fair-skinned populations.

[316] For more on UV radiation and its effects on the human body, see World Health Organisation (2002) and Lucas et al. (2006).

[317] Indirect or diffuse UV light is radiation that has been scattered by the clouds and other elements in the atmosphere, and/or bounced back from UV-reflective surfaces, such as dry sand or concrete.

UVB radiation that they are exposed to under direct sunlight; for example, a person who, on a clear day, stands in direct sunlight receives only 50% more radiation than a person who at the same time stands under a tree with a 50% coverage (Grant, Heisler and Gao 2002). As Gordon M. Heisler and Richard H. Grant have empirically shown, the canopy of urban trees can significantly reduce UV radiation only when it completely obscures both sun and sky view (Heisler and Grant 2000).

All this shows that a dense canopy protects humans from UV radiation much more effectively than a spare one and, consequently, that planting trees with dense foliage in an open area is vital for the protection of the population (Yoshimura, et al. 2010). In the absence of trees or other cover, the direct exposure of humans to UV rays can result in physical pain, in the form of, among other symptoms, erythema, nausea, or headache. It is in this sense that the felling of trees in Tashkent directly affects the human body and that the phantom pains inflicted by the absence of trees take on a very literal somatic meaning. Even though in medical and psychological terms "phantom pain" refers to the sensuous experience relating to a limb or an organ that is no longer physically part of the body,[318] I use it here for the physical pain inflicted upon a human body as a result of the absence of a thing – in this case a tree – which used to be there and which, had it been present, would have had prevented this pain. These phantom pains are the main reason why people like Dildora have stopped visiting the *skver* and other formerly green spaces across Tashkent, but their intensity is even stronger in cases where felling has occurred not in recreational areas but along streets, thus affecting everyday practices more necessary than a weekly stroll in the park. Vera, an inhabitant of the second *kvartal* in Chilanzar, was shocked to find that the trees along Mukimi Str., the main thoroughfare connecting the *kvartaly* of Chilanzar with the Novza metro station and therefore with the rest of the city, had been felled in July 2016 while she was on vacation abroad:

> They cut the trees along Mukimi [Str.] a week before *chillia* started.[319] What were they thinking, if anything at all? How am I supposed to walk here now? Or perhaps this is what they want, for people to stay in. Getting to the metro station is a nightmare now, I sweat and – you see how naturally white my skin is – got sunburnt twice already…These chinars and poplars protected

---

[318] For more on the psycho-somatic aspects of "phantom pains," see Wade (2003).

[319] *Chillia*, from the Farsi word *chelle* which means "40 days," is the period between early July and early August when the highest temperatures occur in Tashkent. During this time, air temperature in the shade typically exceeds +40°C and does not fall below +30°C at night.

> pedestrians so efficiently, and now they have cut them down or turned them into palm trees.

With the sixty-year-old trees that used to provide shade now felled or – as Vera says – turned into palm trees, with branches and leaves left only on the very top, the residents of Chilanzar's *kvartaly* have been faced with the dilemma of either readjusting their routes and mobility practices or risking suffering a sunburn every time they walk towards the metro station during the summer months. This dilemma, triggered by the felling of the trees, is fundamental in understanding tree-related memory processes in Tashkent. Should the residents consciously choose to commute to the metro station by car or bus instead of walking, or simply make a detour by walking through the interconnected *dvory* of the *kvartaly*, the absence of trees will no longer haunt them and the trees that used to grow along Mukimi Str. will fall into oblivion. However, should walking down Mukimi Str. be so embedded in their everyday life that they will consciously or unconsciously stick to it, the sunburn that it might result in will act as an embodied reminder of the absence of the trees. Similarly, even if they consciously decide to walk down Mukimi Str. to the metro station because the distance is too short to be worth a taxi ride or a bus ticket or because walking through the *dvory* is too time-consuming, the sensation of the scorching sun on their skin will enact past narratives of the trees that are materially no longer there.

Crucial in the occurrence of these "phantom pains" are the seasonal cycles of the trees and the biological particularities of the human bodies upon which the pains are inflicted. Firstly, and most importantly, the presence of the absence of trees leads to somatic phantom pains only in the summer months, when the scorching sun inflicts sunburn upon the bodies of pedestrians. The fact that between October and April the sun is not strong enough to cause sunburn, coupled with the fact that deciduous trees shed their leaves in autumn and thereby would not be able to protect the population even if there were days in winter on which the sun is strong, means that trees would not be able to protect pedestrians from sunburn even if they were present. And secondly, population groups with fair and light skin tones, such as the Slavonic population of Tashkent, are more prone to sunburn, unlike ethnic Uzbeks who have darker skin tones and are thus naturally protected against it. Thus, the higher occurrence of sunburn among certain population groups means that phantom pains, and subsequently memory processes, work differently along different ethnic groups.

Conclusion

The fourth and last chapter of this dissertation moves away from socio-technical urban assemblages and suggests ways in which memory processes can be enacted as a result of the co-functioning of socio-natural configurations as well. In this direction, the chapter has examined yet another urban assemblage which is not traditionally seen as an infrastructure system – urban trees – and has shown that trees have been historically employed in Tashkent in order to perform a series of socio-natural processes, including, but not being limited to, improving the quality of life of the population by adding to the city's hygienic and aesthetic qualities and providing for the health and recreation of the population. In this sense, I do find it appropriate to consider urban trees as an infrastructure system not different from water supply or waste management.

Accordingly, this chapter has focused on the offensive against urban trees that has been taking place in Tashkent since 2015 and has highlighted the various ways in which the city's trees – deciduous and coniferous alike – are at the very nexus of its social, economic, and political landscapes. Not only do trees influence the urban environment in various unique, unpredictable, and unintended ways, among other things by playing a distinctively creative role in the dynamic unfolding of place characteristics, but very important is also their capacity to act as carriers of memory, a capacity enacted by their presence and their absence alike. Indeed, Tashkent's urban trees are capable of enacting memory not only by means of their physical interaction with the population of Tashkent but also through their post-treeness, namely through the things that they no longer do to Tashkent's residents, the affective processes that they no longer stimulate, and, most importantly, through the bodily pain experienced by the human body as a result of their absence. This feeling, but also the purposeful avoidance of treeless locations in order to avoid experiencing it, enact the memory of the previous status of these locations, at a time when they were covered in trees. In that sense, sunburn is in a way a "phantom pain," an embodied reminder of absence enrolled into memory processes as a result of established everyday practices and routines. Absence is, thus, revealed not simply as the logical antonym to presence, but rather as a corporeal, emotional, and sensuous phenomenon articulated in distinctly concrete political and cultural registers. The agency of the absent is never finite, but entangled in dynamics of transformation and resonance, which makes absence – just like presence – possible to understand only through the study of a wide range of complex sensuous engagements with the world, as these are practiced through paradoxical intersections of what is there and what is not.

CONCLUSION

> I walked and everything was on the way, everything, by the way, everything moved with me, along and next to me, as if I had become the axis around which my own, long-sunk city grew. [The city] was assembling, recovering, emerging from the faded pictures of my disordered memory, like the dead will in the future rise from a small yet imperishable bone. Like the strange name of the street – Malomirabadskaia – had assembled and lined up in the back of my head. Like the old brick building of the pharmacy had suddenly appeared on the corner. "Dorikhona!" How did I dare forget this word? After all, I grew up with it, with this word smelling of iodine and brand new bandages, my mother's "Votchel's drops" and the sugary pads of "hematogen!" (Rubina 2016 [2006], 505; my translation from the Russian original).

I have found it rather appropriate to close this dissertation in the same way that I opened it, namely with an excerpt from Dina Rubina's *Na Solnechnoi Storone Ulitsy*. In this case, the excerpt quoted above happens to be the novel's closing lines, but more than simply being a narrative device enhancing the flow and continuity of this dissertation, these lines are also very telling of the embodied nature of memory processes in Tashkent and of the enactment of the city in particular sites by means of particular embodied practices. The view of the pharmacy triggered a series of memory processes ranging from ones involving the senses – in this case the smell of iodine and the taste of hematogen – to ones involving practices – such as the purchase and use of Votchel's drops by the author's mother. Quite fittingly, perhaps, pharmacies in contemporary Tashkent are one of the few enterprises in which the inefficient and time-consuming Soviet era method of selling is still alive; today, as in 1973, "the consumer can examine the product only with the help and

supervision of a salesman, pays at a special cashier's stand, and then goes back to the counter to pick up the item bought" (Ofer 1973, 97).

While in this dissertation I have indeed aimed at highlighting the persistence of socialist era practices in post-socialism, the main focus has been on the co-functioning of humans and urban infrastructure and on the ways in which it generates various memory processes. In the pages that follow, I have attempted to summarise and bring together the findings and conclusions that have emerged from the examination of each infrastructure system that is in the heart of each of the three analytical chapters. However, in a somewhat unconventional manner, I have chosen to do so in a form of a glossary, which simultaneously summarises this dissertation and explains the reason why the words employed for the title and subtitle of this dissertation were selected. Since, as it often happens in academic work, the subtitle is more informative than the title, I have chosen to begin by scrutinising the former. At this point, in order to save the reader the effort of closing this booklet – or, worse, scrolling all the way up to the beginning of the document – in order to take a look at the cover page, let me reiterate that the full title of this work is *Enacting Memoryscapes: Urban Assemblages and Embodied Memory in Post-Socialist Tashkent.*

Urban assemblages – A notion introduced by Ignacio Farías and Thomas Bender, "urban assemblages" aims at providing us, as I have already mentioned in the introductory chapter, with "an alternative ontology for the city" (Farías 2010a, 13). As Farías has gone on to argue, this notion "provides a concrete and graspable image of how the city is brought into being and made present in ensembles of heterogeneous actors, material and social aspects" (ibid., 14) and reveals the city as "a contingent, situated, partial and heterogeneous achievement: an ontological achievement, indeed, as it involves the enactment of an object otherwise inexistent" (ibid., 15). Crucially, the **enactment** of these urban assemblages, a term I will return to further down, occurs by means of practices, or, more precisely, by means of the co-functioning of the various heterogeneous components that constitute them, hence enacting what, paraphrasing Annemarie Mol, one could call a city multiple. In this sense, the city does not exist in one space, but rather is differently enacted at multiple sites (Latour and Hermant 1998), which, in turn, are defined not by spatial boundaries, but by types of activity. Thus, the city emerges through the connections between different sites, or, as Bruno Latour has put it, it is "molded by an accumulation of series of views, one after the other, juxtaposed but never summed up" (ibid., 88).

Building upon the work of Latour, I have understood each of these urban assemblages – or "series of views" – as an "oligopticon" which makes possible "sturdy but extremely narrow views of the (connected) whole" (Latour 2005, 181). Focusing on such oligopticons, Latour has argued elsewhere, "helps us to grasp the importance of ordinary objects…[and] enable[s] us to take a new look at a more theoretical question on the nature of the social link and on the very particular ways in which society remains elusive" (Latour and Hermant 1998, 1-2). It is in this context that in this dissertation I have focused upon three specific urban assemblages – the informal taxi economy, the centralised district heating system, and urban trees – the study of which, I have argued, offers a hint of the various social, political, and economic processes that take place in **post-socialist Tashkent**. In this direction, in the case of each of the three urban assemblages examined, I have turned away from the narrow confines of technical or functional concerns and have taken into account the social and cultural relationality of infrastructure systems, hence highlighting the socio-material nature of "social" phenomena. The study of these configurations has allowed me to identify patterns that focus on more than one dimension, which in turn allows us to ask in what way infrastructure can expand our knowledge about how our more-than-human worlds come to be; or, as Brian Larkin has put it, "what an analysis of infrastructures offers to anthropological analysis and what anthropology adds to the study of infrastructures" (Larkin 2013, 328).

While this dissertation has aspired to position itself in the recent "infrastructure turn," the urban assemblages examined here do not necessarily fall under what is traditionally seen as "infrastructure," that is "[t]he physical components of interrelated systems providing commodities and services essential to enable, sustain, or enhance societal living conditions" (Fulmer 2009, 32), such as roads, bridges, tunnels, water supply, sewers, electrical grids, telecommunications, and so on. Instead, I have understood infrastructure in a wider sense which is not limited only to the interrelated physical systems but which incorporates all "the basic equipment, facilities and services necessary for the functioning of a community" (Humphrey 2003, 91). Accordingly, in Chapter 2, I have focused upon the system of automobility and more concretely on Tashkent's informal taxi economy, arguing that, in the case of Tashkent, where the unreliable mass public transport system hinders the physical displacement of individuals, informal taxis offer an accessible and affordable alternative, therefore themselves becoming a basic infrastructure system supporting the movement of the population. Similarly, in Chapter 4, where I have examined urban trees, I have argued that the trees' capacity to perform a series of socio-natural processes, including, but not being limited to, improving the quality of life of the population by adding to the city's hygienic and aesthetic

qualities and providing for the health and recreation of the population, makes them an infrastructure system not different from water supply or waste management.

By studying these urban assemblages, I have aimed at achieving three main objectives. Firstly, to offer a deep ethnographic analysis that illuminates how people interact with, adapt to, and alter urban infrastructure by and through their everyday practices, especially since urban infrastructure systems have been largely ignored by the social scientists studying the cities of post-Soviet Central Asia. Secondly, to suggest ways in which the dissolution of the Soviet Union and the transition to the market economy have affected both the infrastructure systems and the practices of the population generated and/or supported by them, but also to highlight the fact that there has been a certain continuity in this change. And thirdly, by arguing that memory is not an exclusively socio-cultural phenomenon uniformly experienced by clearly bounded social groups but rather something that is *experienced* and *performed* by individuals and collectives on a daily basis, I have aimed at examining the ways in which various memory processes are generated by the co-functioning of urban infrastructure and its users and at documenting the **memoryscapes** that those urban assemblages **enact**.

Embodied memory – By embodied memory, in this dissertation I have understood the two parallel memory processes that are involved in any co-functioning between humans and urban infrastructure: on the one hand, there is "habitual body memory" (Casey 1984), which essentially is the type of memory embedded in our bodies that informs our bodily processes and practices by combining pre-conscious and pre-reflective affective processes with conscious and reflective capacities, hence making the co-functioning between humans and infrastructure possible. On the other hand, in addition to being the result of memory processes, everyday practices themselves generate embodied memory processes as well by engaging with a wide range of affective processes, emotions, feelings, and the senses. The fact that bodies can potentially respond differently to similar stimuli suggests that the embodied memory generated is at once individual and shared by a larger collective, which essentially reveals it as multiple, fluid, messy, and contingent, working at different paces and scales, and taking different forms and directions.

While throughout this dissertation I have acknowledged, taken into account, and examined both types of embodied memory, my focus has remained mostly on the latter. In this direction, in the analytical chapters I have explored the various embodied memory processes that, in each case, are generated by the co-functioning of humans and non-humans. In Chapter 2, for example, I have shown how the movement of a car is not only contingent upon certain types of memory – most

notably kinaesthetic and spatial – but have also indicated how it generates memory processes in the form of cognitive mapping. In Chapter 3, where I have scrutinised Tashkent's centralised district heating system, I have moved onto another kind of embodied memory processes, which are enacted less by the practices generated as a result of the co-functioning between the system and its users and more by the practices generated due to the co-functioning between users and the alternative technologies that have come to replace the former. The fact that these alternative heating technologies facilitate the everyday life of the population by providing them with heat and domestic hot water supply at demand suggest that memory here is a result of thermoception, or the sense by which our body perceives the temperature of both the external and the internal environment. Finally, in Chapter 4, where I have focused on the felling of Tashkent's urban trees, I have argued that Tashkent's urban trees are capable of enacting memory not only by means of their physical interaction with the population of Tashkent but also through their post-treeness, namely through the things that they no longer do to Tashkent's residents, the affective processes that they no longer stimulate, and, most importantly, through the bodily pain experienced by the human body as a result of their absence. In that sense, sunburn is in a way a "phantom pain," an embodied reminder of absence enrolled into memory processes as a result of established everyday practices and routines.

Post-Socialist Tashkent – Throughout this dissertation, I have used the term "post-socialist" primarily as a chronological indicator of the period that has followed socialism, and hence in some case I have used it, for stylistic purposes more than anything else, as synonymous to "post-Soviet Tashkent/Uzbekistan" or "independent Uzbekistan." This, however, does not mean that this term is free of other connotations. On the contrary, throughout this thesis I have highlighted the fact that the dissolution of the Soviet Union had a very significant impact on the everyday lives of the people by means of the various ways in which it has affected the wider socio-economic and political framework in which these lives are situated. As I have highlighted in the introductory chapter, three parallel processes in particular can be seen as being suggestive of the larger changes that the dissolution of the Soviet Union had on the way in which cities both look and are experienced by their populations. The modernising and identity-building projects of the post-Soviet regimes; the new practices of consumption and mobility, spatial segregation, growing socio-economic disparities, and privatisation that came with the transition to the market economy; and the massive outmigration of Slavonic populations and the simultaneous arrival of substantial numbers of indigenous Central Asians from the provinces into cities have profoundly influenced everyday urban life across the

region. Inevitably, these phenomena have triggered discussions as to the preferred form of cities and have subsequently generated various narratives that reminisce the bygone days and create the image of "lost cities."

Nevertheless, as it has become evident throughout all the chapters, despite the undisputable changes that have occurred, a certain level of continuity has been maintained. Chapter 1 illustrates that quite vividly by showing that the various nation-building processes implemented by the post-Soviet regime of President Karinov and a series of other policies had essentially been an extension of socialist era policies into post-socialism. The three analytical chapters make that point even clearer by focusing on infrastructure systems. More specifically, Chapter 2 has shown that the local automobility system in Uzbekistan – including the Uzbek national car industry and the domestic car market – has largely remained unaffected by the transition to market economy. While more cars have indeed become available, they have not become easier to access; on the contrary, the purchase of a car still remains a rather complex process contingent on a series of political and economic conditions and characterised by several limitations reminiscent of the socialist era, such as state monopoly, protectionist measures, gas shortages, high prices, and long waiting periods, especially for car models and colours that are in high demand. Similarly, Chapter 3 has shown that urban life in post-socialist Tashkent is still largely supported by socialist era infrastructure, which, due to obsolescence and inadequate maintenance, often fails. This results in a "disrupted city" (Graham 2010) and prompts the population to resort to ingenious practices in order to continue their everyday lives uninterrupted. Inevitably, since the infrastructure has changed little if at all in the last 70 years, most of the practices that the population employs today in order to heat up or cool down their apartments and to bathe are essentially the same ones that they employed during the socialist era.

Enacting – In the words of Ignacio Farías, the notion of enactment offers an accurate understanding of "how objects are brought into being. Similar to the notion of performance (of subjects), the enactment of objects…is not only social, but also material, and involves the heterogeneous ecologies of entities acting at sites and contexts of practice" (Farías 2010a, 13).

Memoryscapes – As I have extensively discussed in the introductory chapter, I have understood memoryscapes as assemblages enacted as a result of the co-functioning of humans and non-humans and especially of the various memory processes – collective and individual, social and psychological – that this co-functioning generates. In order to capture the ways in which the concept of memoryscape can

be used as an analytical tool to make sense of embodied memory processes in **post-socialist Tashkent**, the chapters of this dissertation have looked into how such memoryscapes are enacted by means of the coming together of the urban assemblages that I examine. These memoryscapes are simultaneously entities in their own right and parts of larger memoryscapes, which essentially means that memoryscapes should be understood as oligopticons into a larger memoryscape, in the same way that urban assemblages are oligopticons offering a view into how the city at large is enacted. Hence, memoryscapes allow us to see the city as a landscape of memory, intricately entangled into and enacted by memory processes, rather than as a passive location in which memory processes occur.

The very characteristics of memoryscapes which I have provided in the introductory chapter are largely a result of the processes enacted by the co-functioning of these infrastructure systems and examined in each of the analytical chapters. For example, Chapter 2 has suggested that *orientiry* are not fixed or universal places but rather dynamic ones, generated, transmitted, and proliferated by means of the wayfaring of the population and the exchange of environmental knowledge between driver and passenger as they find their way through various places and temporal periods. Hence, they are revealed as personal and collective at the same time, fluid, multidirectional, and generated by social as much as by psychological stimuli by means of affective relationships between users and their environment. The fact that *orientiry* are about forgetting and oblivion as much as they are about remembering makes them fragile, negotiated, and heterogeneous spatiotemporal orders which are asymmetrical, hierarchical, and often unequal, but which nevertheless remain functional, as they are kept coherent by means of the population's wayfinding. At the same time, Chapters 3 and 4 also emphasise the memory processes generated by objects which are no longer physically present, thus highlighting the fact that absence is not simply the logical antonym to presence, but rather a corporeal, emotional, and sensuous phenomenon articulated in distinctly concrete political and cultural registers.

A series of other observations that come from the analysis of the empirical chapters is also very telling about how memoryscapes work. They are about remembering as much as they are about forgetting; they can be gendered, as in the case of cars driven exclusively by males; they can be racialised, as when people with fair or light skin tones are more likely to get sunburnt; they can be hierarchical, as it happens when certain memories are stronger than other because they are more deeply engrained into the practices of certain populations groups due to the fact that they have living in a given area longer; they can be temporal, as it happens with the absence of trees

enacting memory during the summer months but not in the winter; they can be spatio-temporal, as in the case of obsolete place names and *orientiry;* and, finally, they can be finite, because the infrastructure that produces and supports them has a limited lifespan.

REFERENCES

Adams, Clark E. 2016. *Urban Wildlife Management.* 3rd Edition. Boca Raton, FL: CRC Press.

Adams, John. 1999. "The Social Implications of Hypermobility: Speculations about the Social Consequences of the OECD Scenarios for Environmentally Sustainable Transport and Business-as-Usual Trend Projections." In *The Economic and Social Implications of Sustainable Transportation*, by Project on Environmentally Sustainable Transport;, 95-133. Paris: OECD.

Adams, Laura. 2004. "Cultural Elites in Uzbekistan: Ideological Production and the State." In *The Transformation of Central Asia: States and Societies from Soviet Rule to Independence*, by Pauline Jones Luong, 93-119. Ithaca, NY & London: Cornell University Press.

—. 2008. "Can We Apply Postcolonial Theory to Central Eurasia?" *Central Eurasian Studies Review* 7 (1): 2-7.

—. 2010. *The Spectacular State: Culture and National Identity in Uzbekistan.* Durham, NC & London: Duke University Press.

Aibar, Eduardo, and Wiebe E. Bijker. 1997. "Constructing a City: The Cerdà Plan for the Extension of Barcelona." *Science, Technology & Human Values* 22 (1): 3-30.

Aird, Paul L. 2005. "Heritage, Natural Heritage, Cultural Heritage and Heritage Tree Defined." *Forestry Chronicle* 81 (4): 593.

Aitmatov, Chingiz. 1984. *The Day Lasts More than a Hundred Years.* Translated by John French. London: Futura.

Akbarzadeh, Shahram. 1996. "Nation-building in Uzbekistan." *Central Asian Survey* 15 (1): 23-32.

Akimov, Alexandr, and David Banister. 2011. "Urban Public Transport in Post-Communist Transition: The Case of Tashkent, Uzbekistan." *Comparative Economic Studies* 53 (4): 721-755.

Akiner, Shirin. 1998. "Social and Political Reorganisation in Central Asia: Transition from Pre-Colonial to Post-Colonial Society." In *Post-Soviet Central Asia*, by Touraj Atabaki and John O'Kane, 1-34. London & New York, NY: Tauris Academic Studies.

Alexander, Catherine. 2007. "Almaty: Rethinking the Public Sector." In *Urban Life in Post-Soviet Asia*, by Catherine Alexander, Victor Buchli and Caroline Humphrey, 70-101. London: UCL Press.

—. 2009a. "Waste under Socialism and After: A Case Study from Almaty." In *Enduring Socialism: Explorations of Revolution and Transformation, Restoration and Continuation*, by Harry G. West and Parvathi Raman, 148-168. Oxford & New York, NY: Berghahn.

—. 2009b. "Privatization: Jokes, Scandal, and Absurdity in a Time of Rapid Change." In *Ethnographies of Moral Reasoning: Living Paradoxes of a Global Age*, by Karen Sykes, 43-65. Basingstoke & New York, NY: Palgrave Macmillan.

Alexander, Catherine, and Victor Buchli. 2007. "Introduction." In *Urban Life in Post-Soviet Asia*, by Catherine Alexander, Victor Buchli and Caroline Humphrey, 1-39. London: UCL Press.

Allen, John. 2003. *Lost Geographies of Power.* Oxford: Blackwell.

AlSayyad, Nezar. 1992. "The Islamic City as a Colonial Enterprise." In *Forms of Dominance: On the Architecture and Urbanism of the Colonial Enterprise*, by Nezar AlSayyad, 27-43. Aldershot & Brookfield, VT: Avebury.

Amin, Ash, and Nigel Thrift. 2002. *Cities: Reimagining the Urban.* Cambridge: Polity.

Aminov, M., F. Hasanov, and E. Ismatullaev. 2011. *Toshkent Mahallalari.* Tashkent: "O'zbekiston Milliy Ensiklopediyasi" Davlat Ilmiy Nashriyoti.

Anan'ich, Boris, and Alexander Kobak. 2006. "St Petersburg and Green Space, 1850-2000: An Introduction." In *The European City and Green Space: London, Stockholm, Helsinki and St Petersburg, 1850-2000*, by Peter Clark, 247-271. Aldershot & Burlington, VT: Ashgate.

Anderson, Ben. 2004. "Recorded Music and Practices of Remembering." *Social & Cultural Geography* 5 (1): 3-20.

Anderson, Ben, and Paul Harrison. 2010. "The Promise of Non-Representational Theories." In *Taking-Place: Non-Representational Theories and Geography*, by Ben Anderson and Paul Harrison, 1-34. Farnham & Burlington, VT: Ashgate.

Anderson, L. M., and H. K. Cordell. 1988. "Influence of Trees on Residential Property Values in Athens, Georgia (USA): A Survey based on Actual Sales Prices." *Landscape and Urban Planning* 15 (1-2): 153-164.

Andrusz, Gregory D. 1984. *Housing and Urban Development in the USSR.* London & Basingstoke: Macmillan.

Aporta, Claudio. 2004. "Routes, Trails and Tracks: Trail Breaking among the Inuit of Igloolik." *Études/Inuit/Studies* 28 (2): 9-38.

—. 2013. "From Inuit Wayfinding to the Google World: Living within an Ecology of Technologies." In *Nomadic and Indigenous Spaces: Productions and Cognitions*, by Judith Miggelbrink, Joachim Otto Habeck and Peter Koch. Farnham & Burlington, VT: Ashgate.

Appleyard, Donald. 1980. "Urban Trees, Urban Forests: What Do They Mean?" In *Proceedings of the National Urban Forestry Conference*, by G. Hopkins, 138-155. Syracuse, NY: SUNY College of Environmental Science and Forestry.

Argenti, Nicolas, and Ute Röschenthaler. 2006. "Introduction: Between Cameroon and Cuba: Youth, Slave Trades and Translocal Memoryscapes." *Social Anthropology* 14 (1): 33-47.

Asam, C., H. Hofer, M. Wolf, L. Aglas, and M. Wallner. 2015. "Tree Pollen Allergens - An Update from a Molecular Perspective." *Allergy* 70: 1201-1211.

Azaryahu, Maoz. 1997. "German Reunification and the Politics of Street Names: The Case of East Berlin." *Political Geography* 16 (6): 479-493.

Azzout, Mounira. 1999. "The Soviet Interpretation and Preservation of the Ancient Heritage of Uzbekistan: The Example of Bukhara." In *Bukhara: The Myth and the Architecture*, by Attilio Petruccioli, 161-172. Cambridge, MA: The Aga Khan Program for Islamic Architecture.

Back, Les, and Nirmal Puwar. 2012. *Live Methods.* Malden, MA & Oxford: Wiley-Blackwell/The Sociological Review.

Bærenholdt, Jørgen Ole, Michael Haldrup, Jonas Larsen, and John Urry. 2004. *Performing Tourist Places.* Aldershot: Ashgate.

Bailey, Frederick M. 1992 [1946]. *Mission to Tashkent.* Oxford & New York, NY: Oxford University Press.

Bardenstein, Carol. 1998. "Threads of Memory and Discourses of Rootedness of Trees, Oranges and the Prickly-Pear Cactus in Israel Palestine." *Edebiyat* 8 (1): 1-36.

—. 1999. "Trees, Forests, and the Shaping of Palestinian and Israeli Collective Memory." In *Acts or Memory: Cultural Recall in the Present*, by Mieke Bal, Jonathan Crewe and Leo Spitzer, 148-168. Hanover, NH & London: Dartmouth College – University Press of New England.

Barry, Andrew. 2013. *Material Politics: Disputes Along the Pipeline.* Oxford: Wiley-Blackwell.

Barthel, Stephan, Carl Folke, and Johan Colding. 2010. "Social-Ecological Memory in Urban Gardens - Retaining the Capacity for Management of Ecosystem Services." *Global Environmental Change* 20 (2): 255-265.

Barthold, W., and M. E. Subtelny. 1997. "Sārt." In *Encyclopaedia of Islam, Volume IX*, by Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs P. Bearman, 66-68. Leiden: Brill.

Barthold, W., C. E. Bosworth, and Catherine Poujol. 2000. "Tashkent." In *Encyclopaedia of Islam, Volume X*, by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel and W.P. Heinrichs, 348-351. Leiden: Brill.

Basso, Keith H. 1988. "'Speaking with Names:' Language and Landscape among the Western Apache." *Cultural Anthropology* 3 (2): 99-130.

—. 1996. *Wisdom Sits in Places: Landscape and Language Among the Western Apache.* Albuquerque, NM: University of New Mexico Press.

Bater, James H. 1980. *The Soviet City: Ideal and Reality.* Beverly Hills, CA: SAGE.

Bell, James. 1999. "Redefining National Identity in Uzbekistan: Symbolic Tensions in Tashkent's Official Public Landscape." *Ecumene* 6 (2): 183-212.

Bell, Karen. 2013. "Doing Qualitative Fieldwork in Cuba: Social Research in Politically Sensitive Locations." *International Journal of Social Research Methodology* 16 (2): 109-124.

Bender, Thomas. 2010. "Postscript: Re-assembling the City: Networks and Urban Imaginaries." In *Urban Assemblages: How Actor-Network Theory Changes Urban Studies*, by Ignacio Farías and Thomas Bender, 303-324. London & New York, NY: Routledge.

Bennett, Jane. 2010. *Vibrant Matter: A Political Ecology of Things.* Durham, NC: Duke University Press.

Bergson, Henri. 1991 [1911]. *Matter and Memory.* Translated by Nancy Margaret Paul and W. Scott Palmer. New York, NY: Zone Books.

Beyer, Elke. 2011. "Planning for Mobility: Designing City Centers and New Towns in the USSR and the GDR in the 1960s." In *The Socialist Car: Automobility in the Eastern Bloc*, by Lewis H. Siegelbaum, 71-91. Ithaca, NY & London: Cornell University Press.

Bickford, Louis. 2005. "Memoryscapes." In *The Art of Truth-Telling about Authoritarian Rule*, by Ksenija Bilbija, Jo Ellen Fair, Cynthia E. Milton and Leigh A. Payne, 96-102. Madison, WI: University of Wisconsin Press.

Bille, Mikkel, Frida Hastrup, and Tim Flohr Sørensen. 2010. "Introduction: An Anthropology of Absence." In *An Anthropology of Absence:*

Materializations of Transcendence and Loss, by Mikkel Bille, Frida Hastrup and Tim Flohr Sørensen, 3-22. New York, NY: Springer.

Bissell, David. 2007. "Animating Suspension: Waiting for Mobilities." *Mobilities* 2 (2): 277-298.

—. 2014. "Transforming Commuting Mobilities: The Memory of Practice." *Environment and Planning A* 46 (8): 1946-1965.

Björkman, Lisa. 2015. *Pipe Politics, Contested Waters: Embedded Infrastructures of Millennial Mumbai.* Durham, NC & London: Duke University Press.

—. forthcoming. "The Engineer and The Plumber: Mediating Mumbai's Conflicting Infrastructural Imaginaries." *International Journal of Urban and Regional Research.*

Blaikie, Piers. 1985. *The Political Economy of Soil Erosion in Developing Countries.* London and New York, NY: Longman.

Blandin, Patrick. 1995. "Dans la Forêt des Idées Reçues: Regards d'un Écologue." In *La Forêt, les Savoirs et le Citoyen: Regards Croisés sur les Acteurs, les Pratiques et les Représentations*, by Daniel Meiller and Paul Vannier, 69-73. Chalon-sur-Saône: Editions ANCR.

Blinnikov, Mikhail, Andrey Shanin, Nikolay Sobolev, and Lyudmila Volkova. 2006. "Gated Communities of the Moscow Green Belt: Newly Segregated Landscapes and the Suburban Russian Environment." *GeoJournal* 66 (1-2): 65-81.

Böhm, Steffen, Campbell Jones, Chris Land, and Mat Paterson. 2006. "Introduction: Impossibilities of Automobility." *Sociological Review* 54 (1): 3-16.

Boholm, Åsa. 1997. "Reinvented Histories: Medieval Rome as Memorial Landscape." *Cultural Geographies* 4 (3): 247-272.

Bole, David, and Matej Gabrovec. 2014. "Geography of Daily Mobilities in Post-Socialist European Countries: Evidence from Slovenia." In *Mobilities in Socialist and Post-Socialist States: Societies on the Move*, by Kathy Burrell and Kathrin Hörschelmann, 217-239. London: Palgrave Macmillan.

Bookchin, Murray. 1986. *Post-Scarcity Anarchism.* 2nd Edition. Montreal & Buffalo, NY: Black Rose Books.

Boute, Anatole. 2012. "Modernizing the Russian District Heating Sector: Financing Energy Efficiency and Renewable Energy Investments under the New Federal Heat Law." *Pace Environmental Law Review* 29 (3): 746-810.

Bouzarovski, Stefan, Luděk Sýkora, and Roman Matoušek. 2016. "Locked-In Post-Socialism: Rolling Path Dependencies in Liberec's District Heating System." *Eurasian Geography and Economics* 57 (4-5): 624-642.

Boym, Svetlana. 2001. *The Future of Nostalgia.* New York, NY: Basic Books.

Brain, Stephen. 2010. "The Great Stalin Plan for the Transformation of Nature." *Environmental History* 15 (4): 670-700.

—. 2011. *Song of the Forest: Russian Forestry and Stalinist Environmentalism, 1905-1953.* Pittsburgh, PA: University of Pittsburgh Press.

Braun, Bruce. 2005. "Environmental Issues: Writing a More-than-Human Urban Geography." *Progress in Human Geography* 29 (5): 635-650.

Braverman, Irus. 2008. "'Everybody Loves Trees': Policing American Cities Through Street Trees." *Duke Environmental Law & Policy Forum* 19: 81-118.

—. 2009a. "Planting the Promised Landscape: Zionism, Nature, and Resistance in Israel/Palestine." *Natural Resources Journal* 49 (2): 317-365.

—. 2009b. "Uprooting Identities: The Regulation of Olive Trees in the Occupied West Bank." *PoLAR* 32 (2): 237-264.

—. 2015. "Order and Disorder in the Urban Forest: A Foucauldian–Latourian Perspective." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, by L. Anders Sandberg, Adrina Bardekjian and Sadia Butt, 132-146. London & New York, NY: Routledge.

Brenner, Neil. 2009. "What is Critical Urban Theory?" *City* 13 (2-3): 198-207.

Brenner, Neil, David J. Madden, and David Wachsmuth. 2011. "Assemblage Urbanism and the Challenges of Critical Urban Theory." *City* 15 (2): 225-240.

Brubaker, Rogers. 1996. *Nationalism Reframed: Nationhood and the National Question in the New Europe.* Cambridge & New York, NY: Cambridge University Press.

Brusina, Olga. 2004. "The Participation of the Slavic Inhabitants in the Ritual Life of Uzbek Communities." In *Central Asia on Display: Proceedings of the VII. Conference of the European Society for Central Asian Studies*, by Gabriele Rasuly-Paleczek and Julia Katschnig, 225-230. Vienna: LIT.

Buchli, Victor. 1999. *An Archaeology of Socialism.* Oxford & New York, NY: Berg.

Buckley, Cynthia. 1996. "Exodus? Out Migration from Central Asian Successor States to the Russian Federation." *Central Asian Monitor* 3: 16-22.

Buriakov, Iurii F., Iurii I. Glass, Iurii A. Sokolov, and Georgii N. Chadrov. 1965. *Po Ulitsam Tashkenta.* Tashkent: Uzbekistan.

Büscher, Monika. 2006. "Vision in Motion." *Environment and Planning A* 38 (2): 281-299.

Büscher, Monika, and John Urry. 2009. "Mobile Methods and the Empirical." *European Journal of Social Theory* 12 (1): 99-116.

Büscher, Monika, John Urry, and Katian Witchger. 2011. *Mobile Methods.* London & New York, NY: Routledge.

Butler, Toby. 2008. "'Memoryscape': Integrating Oral History, Memory and Landscape on the River Thames." In *People and their Pasts: Public History Today*, by Paul Ashton and Hilda Kean, 223-239. London: Palgrave Macmillan.

Buttino, Marco. 2013. "Introduction." In *Changing Urban Landscapes: Eastern European and Post-Soviet Cities since 1989*, by Marco Buttino, 7-22. Rome: Viella.

Bychkova, Olga V. 2007. *What Do Things Do in Policy? Describing the Heating Sector Reform in Post-Soviet Russia.* Unpublished PhD Dissertation. Columbus, OH: The Ohio State University.

Cadman, Louisa. 2009. "Non-Representational Theory/Non-Representational Geographies." In *International Encyclopedia of Human Geography*, by Bob Kitchin and Nigel Thrift, 456-463. Amsterdam: Elsevier.

Callard, Felicity, and Constantina Papoulias. 2010. "Affect and Embodiment." In *Memory: Histories, Theories, Debates*, by Susannah Radstone and Bill Schwarz, 246-262. New York, NY: Fordham University Press.

Callon, Michel. 1986. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay." In *Power, Action, and Belief: A New Sociology of Knowledge?*, by John Law, 196-233. London: Routledge & Kegan Paul.

—. 1991. "Techno-Economic Networks and Irreversibility." In *A Sociology of Monsters: Essays on Power, Technology and Domination*, by John Law, 132-165. London: Routledge.

Callon, Michel, and John Law. 1997. "Agency and the Hybrid Collectif." In *Mathematics, Science, and Postclassical Theory*, by Barbara Herrnstein Smith and Arkady Plotnitsky, 95-117. Durham, NC: Duke University Press.

Capcelea, Arcadii. 2017. *Republic of Uzbekistan - District Heating Energy Efficiency Project: Environmental Impact Assessment & Environmental Management Plan.* Tashkent: World Bank. http://documents.worldbank.org/curated/en/379631468334262222/Uzbekis tan-District-Heating-Energy-Efficiency-Project-en.

Carrere, Ricardo, and Larry Lohmann. 1996. *Pulping the South: Industrial Tree Plantations and the World Paper Economy.* London & Atlantic Highlands, NJ: Zed Books.

Casey, Edward S. 1984. "Habitual Body and Memory in Merleau-Ponty." *Man and World* 17 (3): 279-297.

—. 1987. *Remembering: A Phenomenological Study.* Bloomington, IN & Indianapolis, IN: Indiana University Press.

Cass, Noel, Elizabeth Shove, and John Urry. 2005. "Social Exclusion, Mobility and Access." *Sociological Review* 53 (3): 539-555.

Castillo, Greg. 1997. "Soviet Orientalism: Socialist Realism and Built Tradition." *Traditional Dwellings and Settlements Review* 8 (2): 33-47.

Center for Economic Research. 2013. *Urbanization in Central Asia: Challenges, Issues and Prospects.* Analytical Report 2013/03, Tashkent: Center for Economic Research.

Chang, Jon K. 2016. *Burnt by the Sun: The Koreans of the Russian Far East.* Honolulu, HI: University of Hawai'i Press.

Chebotareva, Z. N. 1970. "Sovershenstvovat' Zhiluiu Zastroiku Gorodov Srednei Azii." *Stroitel'stvo i Arkhitektura Uzbekistana* 11: 16-20.

Chelcea, Liviu, and Gergő Pulay. 2015. "Networked Infrastructures and the 'Local': Flows and Connectivity in a Postsocialist City." *City* 19 (2-3): 344-355.

Chelcea, Liviu, and Ioana Iancu. 2015. "An Anthropology of Parking: Infrastructures of Automobility, Work, and Circulation." *Anthropology of Work Review* 46 (2): 62-73.

Chong, Gladys Pak Lei. 2014. "Driving the City: Taxi Drivers and the Tactics of Everyday Life in Beijing." *Journal of Current Chinese Affairs* 43 (4): 175-205.

Clack, Timothy. 2011. "Thinking Through Memoryscapes: Symbolic Environmental Potency on Mount Kilimanjaro, Tanzania." In *Thinking Through the Environment: Green Approaches to Global History*, by Timo Myllyntaus, 115-134. Cambridge: White Horse Press.

Clark, Peter, and Jussi S. Jauhiainen. 2006. "Introduction." In *The European City and Green Space: London, Stockholm, Helsinki and St Petersburg, 1850-2000*, by Peter Clark. Aldershot: Ashgate.

Clifford, James. 1997. *Routes: Travel and Translation in the Late Twentieth Century.* Cambridge, MA & London: Harvard University Press.

Cloke, Paul, and Eric Pawson. 2008. "Memorial Tress and Treescape Memories." *Environment and Planning D: Society and Space* 26 (1): 107-122.

Clough, Patricia Ticineto, and Jean Halley. 2007. *The Affective Turn: Theorizing the Social.* Durham, NC: Duke University Press.

Cole, Jennifer. 2001. *Forget Colonialism?: Sacrifice and the Art of Memory in Madagascar.* Berkeley, CA: University of California Press.

Colebrook, Claire. 2002. *Gilles Deleuze.* London and New York, NY: Routledge.

Coleman, Rebecca, and Jessica Ringrose. 2013. *Deleuze and Research Methodologies.* Edinburgh: Edinburgh University Press.

Collier, Stephen J. 2004. "Pipes." In *Patterned Ground: Entanglements of Nature and Culture*, by Stephan Harrison, Steve Pile and Nigel Thrift, 50-52. London: Reaktion Books.

—. 2011. *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics.* Princeton, NJ & Oxford: Princeton University Press.

Conley, Jim, and Arlene Tigar McLaren. 2009. "Introduction." In *Car Troubles: Critical Studies of Automobility and Auto-Mobility*, by Jim Conley and Arlene Tigar McLaren, 1-17. Farnham & Burlington, VT: Ashgate.

Connerton, Paul. 1989. *How Societies Remember.* Cambridge: Cambridge University Press.

—. 2009. *How Modernity Forgets.* Cambridge: Cambridge University Press.

Connor, Andrea. 2017. *The Political Afterlife of Sites of Monumental Destruction: Reconstructing Affect in Mostar and New York.* London & New York, NY: Routledge.

Cook, David I. 1978. "Trees, Solid Barriers, and Combinations: Alternatives for Noise Control." In *Proceedings of the National Urban Forestry Conference*, by George Hopkins, 330-339. New York, NY: USDA Forest Service & SUNY College of Environmental Science and Forestry.

Cooke, Catherine. 1978. "Russian Responses to the Garden City Idea." *Architectural Review* 163: 354-363.

Cooper, James, Ray Mundy, and John Nelson. 2010. *Taxi! Urban Economies and the Social and Transport Impacts of the Taxicab.* Farnham & Burlington, VT: Ashgate.

Coopersmith, Jonathan. 1992. *The Electrification of Russia, 1880-1926.* Ithaca, NY & London: Cornell University Press.

Crang, Mike, and Penny S. Travlou. 2001. "The City and Topologies of Memory." *Environment and Planning D: Society and Space* 19 (2): 161-177.

Cresswell, Tim. 2006. *On the Move: Mobility in the Modern Western World.* London: Routledge.

Cronon, William. 1991. *Nature's Metropolis: Chicago and the Great West.* London & New York, NY: W. W. Norton & Co.

Crouch, Martin. 1979. "Problems of Soviet Urban Transport." *Soviet Studies* 31 (2): 231-256.

Cucciolla, Riccardo Mario. 2017. *The Crisis of Soviet Power in Central Asia: The 'Uzbek Cotton Affair' (1975-1991).* Unpublished PhD Dissertation. Lucca: IMT School for Advanced Studies.

Czarniawska, Barbara. 2007. *Shadowing and Other Techniques for Doing Fieldwork in Modern Societies.* Malmø, Frederiksberg, & Oslo: Liber; Copenhagen Business School Press; Universitetsforlaget.

Damasio, Antonio. 2006 [1994]. *Descartes' Error: Emotion, Reason, and the Human Brain.* London: Vintage.

Dant, Tim. 2004. "The Driver-car." *Theory, Culture & Society* 21 (4-5): 61-79.

Dant, Tim, and Peter J. Martin. 2001. "By Car: Carrying Modern Society." In *Ordinary Consumption*, by Jukka Gronow and Alan Warde, 143-157. London & New York, NY: Routledge.

Davies, Norman, and Roger Moorhouse. 2002. *Microcosm: Portrait of a Central European City.* London: Jonathan Cape.

Davis, Fred. 1959. "The Cabdriver and His Fare: Facets of a Fleeting Relationship." *American Journal of Sociology* 65 (2): 158-165.

Day, Andrew. 2003. "The Rise and Fall of Stalinist Architecture." In *Architectures of Russian Identity: 1500 to the Present*, by James Cracraft and Daniel Rowland, 172-190. Ithaca, NY: Cornell University Press.

de Certeau, Michel. 2011 [1984]. *The Practice of Everyday Life.* 3rd Edition. Translated by Steven Rendall. Berkeley, CA: University of California Press.

Dean, Jacob C., Ryoji Kusaka, Patrick S. Walsh, Florent Allais, and Timothy S. Zwier. 2014. "Plant Sunscreens in the UV-B: Ultraviolet Spectroscopy of Jet-Cooled Sinapoyl Malate, Sinapic Acid, and Sinapate Ester Derivatives." *Journal of the American Chemical Society* 136 (42): 14780-14795.

Dean, Joanna. 2015. "The Unruly Tree: Stories from the Archives." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, by L. Anders Sandberg, Adrina Bardekjian and Sadia Butt, 162-175. London & New York, NY: Routledge.

DeLanda, Manuel. 2002. *Intensive Science and Virtual Philosophy.* London: Continuum.

—. 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity.* London & New York, NY: Bloomsbury.

Deleuze, Gilles, and Claire Parnet. 2007 [1977]. *Dialogues II.* Translated by Hugh Tomlinson and Barbara Habberjam. New York, NY: Columbia University Press.

Deleuze, Gilles, and Felix Guattari. 1983 [1972]. *Anti-Œdipus.* Translated by Mark Seem, and Helen R. Lane Robert Hurley. Minneapolis, MN: University of Minnesota Press.

—. 1986 [1975]. *Kafka: Toward a Minor Literature.* Translated by Dana Polan. Minneapolis, MN: University of Minnesota Press.

—. 1987 [1980]. *A Thousand Plateaus.* Translated by Brian Massumi. Minneapolis, MN: University of Minnesota Press.

Demeritt, David. 1994. "The Nature of Metaphors in Cultural Geography and Environmental History." *Progress in Human Geography* 18 (2): 163-185.

Dewsbury, John David, Paul Harrison, Mitch Rose, and John Wylie. 2002. "Enacting Geographies." *Geoforum* 33 (4): 437-440.

Dewsbury, John-David. 2010. "Performative, Non-Representational, and Affect-Based Research: Seven Injunctions." In *The SAGE Handbook of Qualitative Geography*, by Dydia DeLyser, Steve Herbert, Stuart Aitken, Mike Crang and Linda McDowell, 321-334. London: SAGE.

Diener, Alexander C. 2013. *Performing Post-Socialism in the Urban-scape of Bishkek, Kyrgyzstan.* CASI Working Paper. Bishkek: American University of Central Asia.

Diener, Alexander C., and Joshua Hagen. 2013. "From Socialist to Post-Socialist Cities: Narrating the Nation through Urban Space." *Nationalities Papers* 41 (4): 487-514.

Dirksmeier, Peter, and Ilse Helbrecht. 2008. "Time, Non-representational Theory and the "Performative Turn" - Towards a New Methodology in Qualitative Social Research." *Forum: Qualitative Social Research* 9 (2): Art. 55. doi:http://dx.doi.org/10.17169/fqs-9.2.385.

Divov, Oleg. 2008 [1998]. *Molodye i Sil'nye Vyzhivut.* Moscow: Eksmo.

Doel, Marcus A., and David B. Clarke. 2007. "Afterimages." *Environment and Planning D: Society and Space* 25 (5): 890-910.

Downs, Roger M., and David Stea. 2011 [1973]. "Cognitive Maps and Spatial Behaviour: Process and Products." In *The Map Reader: Theories of Mapping Practice and Cartographic Representation*, by Martin Dodge, Rob Kitchin and Chris Perkins, 312-317. Chichester: John Wiley & Sons.

Dresch, Paul. 2000. "Wilderness of Mirrors: Truth and Vulnerability in Middle Eastern Fieldwork." In *Anthropologists in a Wider World.*, by Paul Dresch, Wendy James and David Parkin, 109-127. Oxford & New York, NY: Berghahn.

Duijzings, Ger. 2012. "Miejskie Trajektorie: Tworzenie Antropologii Ruchu." *Kultura Współczesna* 72 (2): 19-24.

Durgin, Jr., Frank A. 1962. "The Virgin Lands Programme 1954-1960." *Soviet Studies* 13 (3): 255-280.

Dzhabbar, O. S. 1978. "Uchet Bytovykh Uslovii i Natsional'nykh Traditsii pri Proektirovanii Mnogoetazhnogo Zhilishcha dlia Bol'shikh Semei Tashkenta." In *Voprosy Teorii i Istorii Arkhitektury Uzbekistana*, by T. K.

Kosova and I. I. Grudtsyna, 21-29. Tashkent: Tashkentskii Politekhnicheskii Institut im. A. R. Beruni.

Edensor, Tim. 1997. "National Identity and the Politics of Memory: Remembering Bruce and Wallace in Symbolic Space." *Environment and Planning D: Society and Space* 15 (2): 175-194.

—. 2001. "Haunting in the Ruins: Matter and Immateriality." *Space and Culture* 5 (11-12): 42-51.

—. 2004. "Automobility and National Identity: Representation, Geography and Driving Practice." *Theory, Culture & Society* 21 (4-5): 101-120.

—. 2005a. *Industrial Ruins: Space, Aesthetics and Materiality.* Oxford & New York, NY: Berg.

—. 2005b. "Waste Matter - The Debris of Industrial Ruins and the Disordering of the Material World." *Journal of Material Culture* 10 (3): 311-332.

Edgar, Adrienne Lynn. 2002. "Review of Olivier Roy, The New Central Asia: The Creation of Nations; and Paul Georg Geiss, Nationenwerdung in Mittelasiend." *Kritika: Explorations in Russian and Eurasian History* 3 (1): 182-190.

—. 2004. *Tribal Nation: The Making of Soviet Turkmenistan.* Princeton, NJ & Oxford: Princeton University Press.

Efimov, V. T., and G. I. Mikerin. 1976. "Avtomobilizatsiia v Razvitom Sotsialisticheskom Obshchestve." *Sotsiologicheskie Issledovaniia* 1: 128-138.

Eisenberg, Evan. 1998. *The Ecology of Eden: An Inquiry into the Dream of Paradise and a New Vision of Our Role in Nature.* New York, NY: Alfred A. Knopf.

Engels, Friedrich. 2009 [1845]. *The Condition of the Working Class in England.* London: Penguin Books.

Escobar, Arturo. 1998. "Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements." *Journal of Political Ecology* 5: 53-82.

—. 1999. "After Nature: Steps to an Antiessentialist Political Ecology." *Current Anthropology* 40 (1): 1-30.

Eurostat. 1977. *Basic Statistics of the Community: Comparisons with Some European Countries, Canada, the United States of America, Japan and the Union of Soviet Socialist Republics.* 15th Edition. Luxemburg: Statistical Office of the European Communities.

Falzon, Mark-Anthony. 2016 [2009]. *Multi-Sited Ethnography: Theory, Praxis and Locality in Contemporary Research.* London & New York, NY: Routledge.

Farías, Ignacio. 2010a. "Introduction: Decentring the Object of Urban Studies." In *Urban Assemblages: How Actor-Network Theory Changes Urban Studies*,

by Ignacio Farías and Thomas Bender, 1-24. London & New York, NY: Routledge.

—. 2010b. "Interview with Nigel Thrift." In *Urban Assemblages: How Actor-Network Theory Changes Urban Studies*, by Ignacio Farías and Thomas Bender, 109-119. London & New York, NY: Routledge.

—. 2011. "The Politics of Urban Assemblages." *City* 15 (3-4): 365-374.

Farías, Ignacio, and Anders Blok. 2016. "Introducing Urban Cosmopolitics: Multiplicity and the Search for a Common World." In *Urban Cosmopolitics: Agencements, Assemblies, Atmospheres*, by Anders Blok and Ignacio Farías, 1-22. London & New York, NY: Routledge.

Farnell, B. 1999. "Moving Bodies, Acting Selves." *Annual Review of Anthropology* 28: 341-373.

Featherstone, Mike. 2004. "Automobilities: An Introduction." *Theory, Culture & Society* 21 (4-5): 1-24.

Featherstone, Mike, Nigel Thrift, and John Urry. 2005. *Automobilities.* London: SAGE.

Fehérváry, Krisztina. 2002. "American Kitchens, Luxury Bathrooms, and the Search for a 'Normal' Life in Postsocialist Hungary." *Ethnos* 67 (3): 369-400.

Feiden, Peter, Pablo Salcido, Caroline Harris, Mark Dinaberg, and Ernest Leonardo. 1993. *Housing Privatization in the Central Asian Republics of the Former Soviet Union: Uzbekistan, Kyrgyzstan, Turkmenistan, Kazakhstan.* Prepared for the U.S. Agency for International Development by the International City/County Management Association. Washington, DC: United States Agency for International Development.

Ferguson, Harry. 2009. "Driven to Care: The Car, Automobility and Social Work." *Mobilities* 4 (2): 275-293.

Fick, K. E. 1971. "Die Grossstädte in Sowjet-Mittelasien: Entwicklung, Gestalt und Funktion der Siedlungszentren eines kontinentalen Trockenraumes." In *Wirtschafts- und Kulturräume der aussereuropäischen Welt, Festschrift für Albert Kolb*, by Günter Borchert, Gerhard Oberbeck and Gerhard Sander, 159-197. Hamburg: Universitat Hamburg.

Fincham, Ben, Mark McGuinness, and Lesley Murray. 2010. *Mobile Methodologies.* Basingstoke & New York, NY: Palgrave Macmillan.

Fischer, Ruth. 2017 [1948]. *Stalin and German Communism: A Study in the Origins of the State Party.* Abingdon & New York, NY: Routledge.

Fishman, Robert. 1982. *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright and Le Corbusier.* Cambridge, MA: MIT Press.

Fleischhauer, Ingeborg, and Benjamin Pinkus. 1986. *The Soviet Germans: Past and Present.* London: Hurst & Company.

Floryan, Margrethe. 1996. *Gardens of the Tsars: A Study of the Aesthetics, Semantics and Uses of Late 18th Century Russian Gardens.* Aarhus: Aarhus University Press.

Flynn, Moya, and Natalya Kosmarskaya. 2012. "Exploring 'North' and 'South' in post-Soviet Bishkek: Discourses and Perceptions of Rural-Urban Migration." *Nationalities Papers* 40 (3): 453-471.

Flynn, Moya, Natalya Kosmarskaya, and Guzel Sabirova. 2014. "The Place of Memory in Understanding Urban Change in Central Asia: The Cities of Bishkek and Ferghana." *Europe-Asia Studies* 66 (9): 1501-1524.

Forty, Adrian. 1999. "Introduction." In *The Art of Forgetting*, by Adrian Forty and Susanne Küchler, 1-18. Oxford & New York, NY: Berg.

Foster, John Bellamy. 1999. "Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology." *American Journal of Sociology* 105 (2): 366-405.

Fowkes, Ben. 2002. *Ethnicity and Ethnic Conflict in the Post-Communist World.* Basingtoke & New York, NY: Palgrave.

French, R. Anthony. 1995. *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities.* London: UCL Press.

French, Richard A., and F. E. Ian Hamilton. 1979. "Is There a Socialist City?" In *The Socialist City: Spatial Structure and Urban Policy*, by Richard A. French and F. E. Ian Hamilton, 1-21. Chichester & New York, NY: John Wiley & Sons.

Freund, Peter, and George Martin. 1993. *The Ecology of the Automobile.* Montreal: Black Rose Books.

—. 2007. "Hyperautomobility, the Social Organization of Space, and Health." *Mobilities* 2 (1): 37-49.

Fulmer, Jeffrey E. 2009. "What in the World is Infrastructure?" *Infrastructure Investor* 30-32.

Gandy, Matthew. 2004. "Rethinking Urban Metabolism: Water, Space and the Modern City." *City* 8 (3): 363-379.

—. 2005. "Cyborg Urbanization: Complexity and Monstrosity in the Contemporary City." *International Journal of Urban and Regional Research* 29 (1): 26-49.

Gangler, Anette, Heinz Nagler, Frank Schwartze, and Eckhart Ribbeck. n.d. "Tashkent in Change: Transformation of the Urban Structure." Stuttgart: Universität Stuttgart.

Gärling, T., A. Böök, and E. Lindberg. 1979. "The Acquisition and Use of an Internal Representation of the Spatial Layout of the Environment During Locomotion." *Man-Environment Systems* 9: 200-208.

Gatejel, Luminita. 2011. "The Common Heritage of the Socialist Car Culture." In *The Socialist Car: Automobility in the Eastern Bloc*, by Lewis H. Siegelbaum, 143-156. Ithaca, NY & London: Cornell University Press.

Geertz, Clifford. 1956. "Religious Belief and Economic Behavior in a Central Javanese Town: Some Preliminary Considerations." *Economic Development and Cultural Change* 4 (2): 134-158.

Geiss, Paul Georg. 1995. *Nationenwerdung in Mittelasien.* Frankfurt am Main: Peter Lang.

Gentile, Michael. 2004. *Studies in the Transformation of Post-Soviet Cities: Case Studies from Kazakhstan.* Unpublished PhD Dissertation. Uppsala: Uppsala University.

Gibson, James J. 2015 [1979]. *The Ecological Approach to Visual Perception.* New York, NY & Hove: Psychology Press.

Giese, Ernst. 1979. "Transformation of Islamic Cities in Soviet Middle Asia into Socialist Cities." In *The Socialist City: Spatial Structure and Urban Policy*, by Richard A. French and F. E. Ian Hamilton, 145-165. Chichester & New York, NY: John Wiley & Sons.

Gill, Graeme. 2005. "Changing Symbols: The Renovation of Moscow Place Names." *The Russian Review* 64 (3): 480-503.

Gilroy, Paul. 2001. "Driving While Black." In *Car Cultures*, by Daniel Miller, 81-104. Oxford & New York, NY: Berg.

Glendinning, Simon. 1998. *On Being With Others: Heidegger - Wittgenstein - Derrida.* London & New York, NY: Routledge.

Golledge, Reginald G. 1999. "Preface." In *Wayfinding Behavior: Cognitive Mapping and Other Spatial Processes*, by Reginald G. Golledge. Baltimore, MD: The John Hopkins University Press.

Golledge, Reginald G., and Robert J. Stimson. 1997. *Spatial Behavior: A Geographic Perspective.* New York, NY & London: The Guilford Press.

Gorbachev, Vladimir N. 1983. *Arkhitekturno-Khudozhestvennye Komponenty Ozeleneniia Gorodov.* Moscow: Vysshaia Shkola.

Gordeeva, I. I. 1969. "Gradostroitel'noe Raionirovanie Srednei Azii po Usloviiam Organizatsii Prigorodnykh Zon." *Stroitel'stvo i Arkhitektura Uzbekistana* 10: 28-30.

—. 1974. "Normirovanie i Planirovochnaia Organizatsiia Zelenykh Nasazhdenii Mikroraionov v Usloviiakh Srednei Azii." In *Arkhitektura,*

Gradostroitel'stvo i Konstruktsii v Srednei Azii: Sbornik Nauchnykh Trudov, by I. G. Rashidova, 27-40. Tbilisi: TbilZNIIEP.

Gordillo, Gastón R. 2004. *Landscapes of Devils: Tensions of Place and Memory in the Argentinean Chaco.* Durham, NC: Duke University Press.

Gordon, Avery F. 2008 [1997]. *Ghostly Matters: Haunting and the Sociological Imagination.* Minneapolis, MN: University of Minnesota Press.

Gorshenina, Svetlana M. 2013. "Turkomstaris-Sredazkomstaris-Uzkomstaris: Institutional Formation and Ethnocentric Divisions of Central Asian Cultural Heritage." *Anthropology & Archeology of Eurasia* 52 (2): 51-72.

Goryshina, Tamara K. 1991. *Rastenie v Gorode.* Leningrad: Izdatel'stvo Leningradskogo Universiteta.

Gough, Paul. 2009. "'Garden of Gratitude': The National Memorial Arboretum and Strategic Remembering." In *People and their Pasts: Public History Today*, by Paul Ashton and Hilda Kean, 95-112. London & New York, NY: Palgrave Macmillan.

Graham, Stephen. 2010. *Disrupted Cities: When Infrastructure Fails.* London & New York, NY: Routledge.

—. 2011. *Cities Under Siege: The New Military Urbanism.* London & Brooklyn, NY: Verso.

—. 2015. "Life Support: The Political Ecology of Urban Air." *City* 19 (2-3): 192-215.

Graham, Stephen, and Nigel Thrift. 2007. "Out of Order: Understanding Repair and Maintenance." *Theory, Culture & Society* 24 (3): 1-25.

Graham, Stephen, and Simon Marvin. 2001. *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition.* London & New York, NY: Routledge.

Grant, Jonathan. 1994. "Decolonization by Default: Independence in Soviet Central Asia." *Central Asian Survey* 13 (1): 51-58.

Grant, Richard H., Gordon M. Heisler, and Wei Gao. 2002. "Estimation of Pedestrian Level UV Exposure Under Trees." *Photochemistry and Photobiology* 75 (4): 369-376.

Grant, Richard H., Gordon M. Heisler, Wei Gao, and Matthew Jenks. 2003. "Ultraviolet Leaf Reflectance of Common Urban Trees and the Prediction of Reflectance from Leaf Surface Characteristics." *Agricultural and Forest Meteorology* 120 (1-4): 127-139.

Grava, Sigurd. 1984. "Urban Transport in the Soviet Union." In *The Contemporary Soviet City*, by Henry W. Morton and Robert C. Stuart, 180-201. Basingstoke & London: Macmillan.

Gray, Dale. 1995. *Reforming the Energy Sector in Transition Economies: Selected Experience and Lessons.* Washington, DC: The World Bank.

Gribachev, Nikolai. 1966. "Tashkent v Mae." In *Drama i Podvig Tashkenta*, by V. Karpov and Kh. Tadzhibaev, 14-23. Tashkent: Uzbekistan.

Grime, Keith, and Vic Duke. 1996. "Urban Transport Choice: A Post-Communist Dilemma." *Regional Studies* 30 (8): 791-795.

Grossman, Gregory. 1977. "The 'Second Economy' of the USSR." *Problems of Communism* 26 (5): 25-40.

—. 1985. "The Second Economy in the USSR and Eastern Europe: A Bibliography." Berkeley-Duke Occasional Papers on the Second Economy in the USSR #1, Berkeley, CA & Durham, NC.

Grove, J. M., A. R. Troy, J. P. M. O'Neil-Dunne, W. R. Burch Jr., M. L. Cadenasso, and S. T. A. Pickett. 2006. "Characterization of Households and its Implications for the Vegetation of Urban Ecosystems." *Ecosystems* 9 (4): 578-597.

Grove, Kevin. 2009. "Rethinking the Nature of Urban Environmental Politics: Security, Subjectivity, and the Non-Human." *Geoforum* 40: 207-216.

Guliam, Gafur. 1966. "Gordyi Sootechestvennik Moi." In *Drama i Podvig Tashkenta*, by V. Karpov and Kh. Tadzhibaev, translated by M. Saliev, 5-13. Tashkent: Uzbekistan.

Gwilliam, Kenneth M. 2000. *Private Participation in Public Transport in the FSU.* Discussion Paper, Washington, DC: World Bank Transport Division.

Haarstad, Håvard, and Tarje I. Wanvik. 2017. "Carbonscapes and Beyond: Conceptualizing the Instability of Oil Landscapes." *Progress in Human Geography* 41 (4): 432-450.

Hagman, Olle. 2006. "Morning Queues and Parking Problems: On the Broken Promises of the Automobile." *Mobilities* 1 (1): 63-74.

—. 2010. "Driving Pleasure: A Key Concept in Swedish Car Culture." *Mobilities* 5 (1): 25-39.

Halbwachs, Maurice. 1992. *On Collective Memory.* Edited by Lewis A. Coser. Translated by Lewis A. Coser. Chicago, IL: The Universiy of Chicago Press.

Hanasz, Waldemar. 1999. *Engines of Liberty: Cars and the Collapse of Communism in Eastern Europe.* 30 November. https://cei.org/studies-issue-analysis/engines-liberty-cars-and-collapse-communism-eastern-europe.

Hannam, Kevin, Mimi Sheller, and John Urry. 2006. "Editorial: Mobilities, Immobilities and Moorings." *Mobilities* 1 (1): 1-22.

Hannerz, Ulf. 1980. *Exploring the City: Inquiries Toward an Urban Anthropology.* New York, NY: Columbia University Press.

Haraway, Donna J. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature.* New York, NY: Routledge.

Harris, Steven E. 2005. "'We Too Want to Live in Normal Apartments:' Soviet Mass Housing and the Marginalization of the Elderly under Khrushchev and Brezhnev." *The Soviet and Post-Soviet Review* 32 (2-3): 143-174.

—. 2013. *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin.* Baltimore, MD: Johns Hopkins University Press.

Harrison, Robert Pogue. 1992. *Forests: The Shadow of Civilization.* London & Chicago, IL: The University of Chicago Press.

Harvey, David. 1993. "The Nature of Environment: Dialectics of Social and Environmental Change." In *Social Register 1993: Real Problems, False Solutions*, by Ralph Miliband and Leo Panitch, 1-51. London: The Merlin Press.

—. 1996. *Justice, Nature and the Geography of Difference.* Oxford & Malden, MA: Blackwell.

Haughton, Graham, and Colin Hunter. 2003 [1994]. *Sustainable Cities.* London & New York, NY: Routledge.

Hawkins, Richard D. 1986. "A Road Not Taken: Sociology and the Neglect of the Automobile." *California Sociologist* 9 (1-2): 61-79.

Hayden, Dolores. 1997. *The Power of Place: Urban Landscapes as Public History.* Cambridge, MA: The MIT Press.

Heidegger, Martin. 1962. *Being and Time.* Translated by John Macquarrie and Edward Robinson. New York, NY: Harper and Row.

—. 2001 [1971]. *Poetry, Language, Thought.* Translated by Albert Hofstadter. New York, NY: Harper Perennial.

Heisler, Gordon M. 1986. "Energy Savings with Trees." *Journal of Aboriculture* 12 (5): 113-125.

Heisler, Gordon M., and Richard H. Grant. 2000. "Ultraviolet Radiation in Urban Ecosystems with Consideration of Effects on Human Health." *Urban Ecosystems* 4: 193-229.

Henderson, Jason. 2009. "The Politics of Mobility: De-essentializing Automobility and Contesting Urban Space." In *Car Troubles: Critical Studies of Automobility and Auto-Mobility*, by Jim Conley and Arlene Tigar McLaren, 147-164. Farnham & Burlington, VT: Ashgate.

Heynen, Nik. 2006a. "Justice of Eating in the City: The Political Ecology of Urban Hunger." In *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, by Nik Heynen, Maria Kaika and Erik Swyngedouw, 124-136. London & New York, NY: Routledge.

—. 2006b. "Green Urban Political Ecologies: Toward a Better Understanding of Inner-City Environmental Change." *Environment and Planning A* 38 (3): 499-516.

Heynen, Nik, Harold A. Perkins, and Parama Roy. 2006. "The Political Ecology of Uneven Urban Green Space: The Impact of Political Economy on Race and Ethnicity in Producing Environmental Inequality in Milwaukee." *Urban Affairs Review* 42 (1): 3-25.

Heynen, Nik, Maria Kaika, and Erik Swyngedouw. 2006. "Urban Political Ecology: Politicizing the Production of Urban Natures." In *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, by Nik Heynen, Maria Kaika and Erik Swyngedouw, 1-19. London & New York, NY: Routledge.

Heynen, Nikolas C. 2003. "The Scalar Production of Injustice within the Urban Forest." *Antipode* 35 (5): 980-998.

Hinchliffe, Steve. 1999. "Cities and Natures: Intimate Strangers." In *Unsettling Cities: Movement/Settlement*, by John Allen, Doreen Massey and Michael Pryke, 137-180. London & New York, NY: Routledge.

Hirsch, Eric. 1995. "Introduction: Landscape: Between Place and Space." In *The Anthropology of Landscape: Perspectives on Place and Space*, by Eric Hirsch and Michael O'Hanlon, 1-30. Oxford: Clarendon Press.

Hirsch, Francine. 2005. *Empire of Nations: Ethnographic Knowledge and the Making of the Soviet Union.* Ithaka, NY: Cornell University Press.

Hirt, Sonia A. 2012. *Iron Curtains: Gates, Suburbs and Privatization of Space in the Post-Socialist City.* Chichester & Malden, MA: Wiley-Blackwell.

Hitchings, Russell. 2003. "People, Plants and Performance: On Actor Network Theory and the Material Pleasures of the Private Garden." *Social & Cultural Geography* 4 (1): 99-114.

Hoelscher, Steven, and Derek H. Alderman. 2004. "Memory and Place: Geographies of a Critical Relationship." *Social & Cultural Geography* 5 (3): 347-355.

Hopkirk, Peter. 1990. *The Great Game: On Secret Service in High Asia.* London: John Murray.

Howard, Ebenezer. 1902. *Garden Cities of To-morrow.* London: Swan Sonnenschein & Co., Ltd.

—. 2010 [1898]. *To-Morrow: A Peaceful Path to Real Reform.* Cambridge & New York, NY: Cambridge University Press.

Hudson, Hugh D., Jr. 2015. *Blueprints and Blood: The Stalinization of Soviet Architecture, 1917-1937.* Princeton, NJ: Princeton University Press.

Hughes, Thomas P. 1983. *Networks of Power: Electrification in Western Society, 1880-1930.* Baltimore, MD & London: The Johns Hopkins University Press.

Hume, Lynne, and Jane Mulcock. 2014. *Anthropologists in the Field: Cases in Participant Observation.* New York, NY: Columbia University Press.

Humphrey, Caroline. 2002. *The Unmaking of Soviet Life.* Ithaca, NY & London: Cornell University Press.

—. 2003. "Rethinking Infrastructure: Siberian Cities and the Great Freeze of January 2001." In *Wounded Cities: Destruction and Reconstruction in a Globalized World*, by Jane Schneider and Ida Susser, 91-107. Oxford & New York, NY: Berg.

—. 2005. "Ideology in Infrastructure: Architecture and Soviet Imagination." *Journal of the Royal Anthropological Institute* 11 (1): 39-58.

Humphrey, Caroline, and Vera Skvirskaja. 2012. "Introduction." In *Post-Cosmopolitan Cities: Explorations of Urban Coexistence*, by Caroline Humphrey and Vera Skvirskaja, 1-16. New York, NY & Oxford: Berghahn.

Humphrey, Caroline, Magnus Marsden, and Vera Skvirskaja. 2009. "Cosmopolitanism and the City: Interaction and Coexistence in Bukhara." In *The Other Global City*, by Shail Mayaram, 202-231. New York, NY & Abingdon: Routledge.

Hüwelmeier, Gertrud. 2013. "Post-Socialist Bazaars: Diversity, Solidarity, and Conflict in the Marketplace." *Laboratorium* 5 (1): 52-72.

Ilkhamov, Alisher. 2001. "Impoverishment of the Masses in the Transition Period: Signs of an Emerging 'New Poor' Identity in Uzbekistan." *Central Asian Survey* 20 (1): 33-54.

Ingold, Tim. 1993. "The Temporality of the Landscape." *World Archaeology* 25 (2): 152-174.

—. 1997. "Life beyond the Edge of Nature? Or, The Mirage of Society." In *The Mark of the Social: Discovery or Invention?*, by John D. Greenwood, 231-252. London: Rowman & Littlefield.

—. 2000. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill.* London and New York, NY: Routledge.

—. 2004. "Culture on the Ground: The World Perceived Through the Feet." *Journal of Material Culture* 9 (3): 315-340.

—. 2007. *Lines: A Brief History.* London & New York, NY: Routledge.

—. 2011. *Being Alive: Essays on Movement, Knowledge and Description.* London & New York, NY: Routledge.

Ishikawa, Toru. 2016. "Maps in the Head and Tools in the Hand: Wayfinding and Navigation in a Spatially Enabled Society." In *Community Wayfinding: Pathways to Understanding*, by Rebecca H. Hunter, Lynda A. Anderson and Basia L. Belza, 115-136. Basel: Springer.

Jackson, Steven J. 2014. "Rethinking Repair." In *Media Technologies: Essays on Communication, Materiality, and Society*, by Tarleton Gillespie, Pablo J. Boczkowski and Kirsten A. Foot, 221-239. Cambridge, MA & London: The MIT Press.

Jacobs, Allan, Elizabeth Macdonald, and Yodan Rofé. 2002. *The Boulevard Book: History, Evolution, Design of Multiway Boulevards.* Cambridge, MA: MIT Press.

Jacobs, Jane. 1961. *The Death and Life of Great American Cities.* New York, NY: Vintage Books.

Jastrząb, Mariusz. 2011. "Cars as Favors in People's Poland." In *The Socialist Car: Automobility in the Eastern Bloc*, by Lewis H. Siegelbaum, 30-46. Ithaca, NY & London: Cornell University Press.

Jensen, Martin Trandberg. 2015. *Sensing Interrail Mobility: Towards Multimodal Methodologies.* Unpublished PhD Dissertation. Aalborg: Aalborg University.

Jensen, Ole B. 2014. *Designing Mobilities.* Aalborg: Aalborg University Press.

Jess, Pat, and Doreen Massey. 1995. "The Contestation of Place." In *A Place in the World?: Places, Cultures and Globalization*, by Doreen Massey and Pat Jess, 133-174. Oxford & New York, NY: Oxford University Press.

Jim, C. Y., and Hao Zhang. 2013. "Species Diversity and Spatial Differentiation of Old-Valuable Trees in Urban Hong Kong." *Urban Forestry & Urban Greening* 12 (2): 171-182.

Johnson, Charlotte. 2013. *Infrastructures of Continuity and Change: A Material Culture Approach to Finance, Heating and Maintenance in Belgrade Homes.* Unpublished PhD Dissertation. Newcastle upon Tyne: Newcastle University.

Johnson, Craig W. 1988. "Planning for Avian Wildlife in Urbanizing Areas in American Desert/Mountain Valley Environments." *Landscape and Urban Planning* 16 (3): 245-252.

Johnson, Simon, Daniel Kaufmann, and Oleg Ustenko. 1998. "Formal Employment and Survival Strategies after Communism." In *Transforming Post-Communist Political Economies*, by National Research Council, 177-202. Washington, DC: The National Academies Press.

Jones, Owain. 2007. "An Ecology of Emotion, Memory, Self and Landscape." In *Emotional Geographies*, by Joyce Davidson, Liz Bondi and Mick Smith, 205-218. Aldershot & Burlington, VT: Ashgate.

—. 2011. "Geography, Memory and Non-Representational Geographies." *Geography Compass* 5 (12): 875-885.

—. 2015. "(Urban) Places of Trees Affective Embodiment, Politics, Identity, and Materiality." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, by L. Anders Sandberg, Adrina Bardekjian and Sadia Butt, 111-131. London & New York, NY: Routledge.

Jones, Owain, and Joanne Garde-Hansen. 2012. *Geography and Memory: Explorations in Identity, Place and Becoming.* London: Palgrave Macmillan.

Jones, Owain, and Paul Cloke. 2002. *Tree Cultures: The Place of Trees and Trees in their Place.* Oxford & New York, NY: Berg.

Jones, Paul. 2011. *The Sociology of Architecture: Constructing Identities.* Liverpool: Liverpool University Press.

Jorayev, Gai. 2014. *A Comparative Study of the Role of Heritage in Post-Soviet Central Asian Nation-Building.* Unpublished PhD Dissertation. London: University College London.

Jyoti, Hosagrahar. 1992. "City as Durbar: Theater and Power in Imperial Delhi." In *Forms of Dominance: On the Architecture and Urbanism of the Colonial Enterprise*, by Nezar AlSayyad, 83-105. Aldershot & Brookfield, VT: Avebury.

Kahn, Peter H., Jr. 2002. "Children's Affiliations with Nature: Structure, Development, and the Problem of Environmental Generational Amnesia." In *Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations*, by Peter H. Kahn, Jr. and Stephen R. Kellert, 93-116. Cambridge, MA: The MIT Press.

Kaika, Maria. 2005. *City of Flows: Modernity, Nature, and the City.* London: Routledge.

Kansteiner, Wulf. 2002. "Finding Meaning in Memory: A Methodological Critique of Collective Memory Studies." *History and Theory* 41 (2): 179-197.

Kaplan, Rachel, and Stephen Kaplan. 1989. *The Experience of Nature: A Psychological Perspective.* Cambridge & New York, NY: Cambridge University Press.

Kaplan, Rachel, Stephen Kaplan, and Robert L. Ryan. 1998. *With People in Mind: Design and Management of Everyday Nature.* Washington, DC & Covelo, CA: Island Press.

Karjanen, David. 2014. "When is an Illicit Taxi Driver more than a Taxi Driver? Case Studies from Transit and Trucking in Post-Socialist Slovakia." In *The Informal Post-Socialist Economy: Embedded Practices and Livelihoods*, by Jeremy Morris and Abel Polese, 102-118. London & New York, NY: Routledge.

Katz, Jack. 1999. *How Emotions Work.* Chicago, IL: The University of Chicago Press.

Kaufmann, Vincent. 2002. *Re-thinking Mobility: Contemporary Sociology.* Aldershot & Burlington, VT: Ashgate.

Kaufmann, Vincent, Manfred Max Bergman, and Dominique Joye. 2004. "Motility: Mobility as Capital." *International Journal of Urban and Regional Research* 28 (4): 745-756.

Kehl-Bodrogi, Krisztina. 2008. *'Religion is not so Strong Here:' Muslim Religious Life in Khorezm after Socialism .* Berlin: LIT.

Keil, Roger. 2003. "Progress Report: Urban Political Ecology." *Urban Geography* 24 (8): 723-738.

—. 2005. "Progress Report - Urban Political Ecology." *Urban Geography* 26 (7): 640-651.

Kessler, Gijs. 2001. "The Passport System and State Control over Population Flows in the Soviet Union, 1932–1940." *Cahiers du Monde Russe* 42 (2-4): 477-503.

Khalid, Adeeb. 1996. "Tashkent 1917: Muslim Politics in Revolutionary Turkestan." *Slavic Review* 55 (2): 270-296.

—. 2006. "Backwardness and the Quest for Civilization: Early Soviet Central Asia in Comparative Perspective." *Slavic Review* 65 (2): 231-251.

—. 2007a. *Islam after Communism: Religion and Politics in Central Asia.* Berkeley, CA & Los Angeles, CA: University of California Press.

—. 2007b. "The Soviet Union as an Imperial Formation: A View from Central Asia." In *Imperial Formations*, by Ann Laura Stoler, Carole McGranahan and Peter C. Perdue, 123-151. Santa Fe, NM & Oxford: School for Advanced Research Press/James Currey.

Khodzhayev, D. G., and B. S. Khorev. 1972. "The Conception of a Unified System of Settlement and the Planned Regulation of City Growth in the USSR." *Soviet Geography* 13 (2): 90-98.

Khromov, Yuri B. 1972. "Organizatsiia Ezhednevnogo Otdykha Naseleniia Krupnykh Gorodov." *Arkhitektura SSSR* 6: 65-70.

Khurshut, Enver. 1992. *Shi - Chach - Tashkent.* Tashkent: O'zbekiston.

King, Anthony D. 2007 [1976]. *Colonial Urban Development: Culture, Social Power and Environment.* Abingdon & New York, NY: Routledge.

—. 2015 [1990]. *Urbanism, Colonialism, and the World-Economy: Cultural and Spatial Foundations of the World Urban System.* London & New York, NY: Routledge.

Kitaev, Alexei. 2006. "Red Parks: Green Space in Leningrad, 1917-1990." In *The European City and Green Space: London, Stockholm, Helsinki and St Petersburg, 1850-2000*, by Peter Clark, 289-305. Aldershot & Burlington, VT: Ashgate.

Klumbytė, Neringa. 2009. "Post-Socialist Sensations: Nostalgia, the Self, and Alterity in Lithuania." *Lietuvos Etnologija* 9 (18): 93-116.

Knudsen, Britta Timm, and Carsten Stage. 2015. *Affective Methodologies: Developing Cultural Research Strategies for the Study of Affect.* Basingstoke: Palgrave Macmillan.

Koch, Natalie. 2015. "The Violence of Spectacle: Statist Schemes to Green the Desert and Constructing Astana and Ashgabat as Urban Oases." *Social & Cultural Geography* 16 (6): 675-697.

Kolstoe, Paul. 1995. *Russians in the Former Soviet Republics.* London: Hurst & Company.

Komatsu, Hisao. 1994. "Central Asia." In *Islamic Urban Studies: Historical Review and Perspectives*, by Masashi Haneda and Toru Miura, 281-328. London & New York, NY: Kegan Paul International.

Kosmarskaya, Natalya P. 2011. "'Ponaekhali Tut...' po-Bishkekski: Migranty i Starozhily Goroda kak Zerkalo 'Kirgizskoi Revoliutsii'." In *Antropologiia Sotsial'nykh Peremen*, by E. M. Guchinova and G. A. Komarova, 595-614. Moscow: ROSSPEN.

Kostenko, L.T. 1881. "Turkestan." *Journal of the Royal United Service Institution* 24 (108): 898-921.

Kovats-Bernat, Christopher J. 2002. "Negotiating Dangerous Fields: Pragmatic Strategies for Fieldwork amid Violence and Terror." *American Anthropologist* 104 (1): 208-222.

Kozin, Viktor E., Tat'iana A. Levina, Aleksei P. Markov, Irina B. Pronina, and Valentin A. Slemzin. 1980. *Teplosnabzhenie: Uchebnoe Posobie dlia Studentov Vuzov.* Moscow: Vysshaia Shkola.

Kraftl, Peter, and Peter Adey. 2008. "Architecture/Affect/Inhabitation: Geographies of Being-In Buildings." *Annals of the Association of American Geographers* 98 (1): 213-231.

Küchler, Susanne. 1993. "Landscape as Memory: The Mapping of Process and Its Representation in a Melanesian Society." In *Landscape: Politics and Perspectives*, by Barbara Bender, 85-106. Providence, RI & Oxford: Berg.

Kurzman, Charles. 1999. "Uzbekistan: The Invention of Nationalism in an Invented Nation." *Critique* 15: 77-98.

Kusenbach, Margarethe. 2003. "Street Phenomenology: The Go-Along as Ethnographic Research Tool." *Ethnography* 4 (3): 455-485.

Kuzmichev, I., and V. Pechenitsin. 1979. *Ozelenenie Gorodov i Sel Uzbekistana.* Tashkent: Uzbekistan.

Kvale, Steinar. 1996. *InterViews: An Introduction to Qualitative Research Interviewing.* Thousand Oaks, CA & London: SAGE.

Kweon, Byoung-Suk, William C. Sullivan, and Angela R. Wiley. 1998. "Green Common Spaces and the Social Integration of Inner-City Older Adults." *Environment and Behavior* 30 (6): 832-858.

Lachmund, Jens. 2013. *Greening Berlin: The Co-Production of Science, Politics, and Urban Nature.* Cambridge, MA: MIT Press.

Lampietti, Julian A., and Anke S. Meyer. 2002. *Coping with the Cold: Heating Strategies for Eastern Europe and Central Asia's Urban Poor.* Washington, DC: The World Bank.

Lampropoulos, Elaina Maria. 2014. *Belonging to Greece and the Soviet Union: Greeks of Tashkent, 1949-1974.* Unpublished Master's Dissertation. Toronto, ON: York University.

Landau, Jacob M., and Barbara Kellner-Heinkele. 2001. *Politics of Language in the ex-Soviet Muslim States: Azerbayjan, Uzbekistan, Kazakhstan, Kyrgyzstan, Turkmenistan and Tajikistan.* Ann Arbor, MI: The University of Michigan Press.

Landry, Shawn M., and Jayajit Chakraborty. 2009. "Street Trees and Equity: Evaluating the Spatial Distribution of an Urban Amenity." *Environment and Planning A* 41 (11): 2651-2670.

Lanng, Ditte Bendix, and Ole B. Jensen. 2016. "Linking Wayfinding and Wayfaring." In *Community Wayfinding: Pathways to Understanding*, by Rebecca H. Hunter, Lynda A. Anderson and Basia L. Belza, 247-260. Basel: Springer.

Larkin, Brian. 2013. "The Politics and Poetics." *Annual Review of Anthropology* 42: 327-343.

Laszczkowski, Mateusz. 2015. "Scraps, Neighbors, and Committees: Material Things, Place-Making, and the State in an Astana Apartment Block." *City & Society* 27 (2): 136-159.

—. 2016. *"City of the Future:" Built Space, Modernity and Urban Change in Astana.* New York, NY & Oxford: Berghahn.

Latham, Alan. 2003. "Research, Performance, and Doing Human Geography: Some Reflections on the Diary-Photograph, Diary-Interview Method." *Environment and Planning A* 35 (11): 1993-2017.

Latour, Bruno. 1987. *Science in Action: How to Follow Scientists and Engineers Through Society.* Cambridge, MA: Harvard University Press.

—. 1990. "Drawing Things Together." In *Representation in Scientific Practice*, by Michael Lynch and Steve Woolgar, 19-68. Cambridge, MA: The MIT Press.

—. 1993. *We Have Never Been Modern.* Translated by Catherine Porter. Cambridge, MA: Harvard University Press.

—. 1999. *Pandora's Hope: Essays on the Reality of Science Studies.* Cambridge, MA & London: Harvard University Press.

—. 2004. "How to Talk About the Body?: The Normative Dimension of Science Studies." *Body & Society* 10 (2-3): 205-229.

—. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory.* Oxford & New York, NY: Oxford University Press.

Latour, Bruno, and Emilie Hermant. 1998. *Paris Ville Invisible.* Paris: La Découverte.

Latour, Bruno, and Steve Woolgar. 1986. *Laboratory Life: The Construction of Scientific Facts.* 2nd Edition. Princeton, NJ: Princeton University Press.

Laurier, Eric. 2004. "Doing Office Work on the Motorway." *Theory, Culture & Society* 21 (4-5): 261-277.

—. 2011. "Driving: Pre-Cognition and Driving." In *Geographies of Mobilities: Practices, Spaces, Subjects*, by Tim Cresswell and Peter Merriman, 69-81. Farnham & Burlington, VT: Ashgate.

Laurier, Eric, and Hayden Lorimer. 2012. "Other Ways: Landscapes of Commuting." *Landscape Research* 37 (2): 207-224.

Law, John. 1984. "On the Methods of Long-Distance Control: Vessels, Navigation and the Portuguese Route to India." *The Sociological Review* 32 (S1): 234-263.

—. 2004. *After Method: Mess in Social Science Research.* London & New York, NY: Routledge.

Law, John, and Annemarie Mol. 2008. "The Actor-Enacted: Cumbrian Sheep in 2001." In *Material Agency*, by Carl Knappett and Lambros Malafouris, 57-77. Boston, MA: Springer.

Law, John, and John Urry. 2004. "Enacting the Social." *Economy and Society* 33 (3): 390-410.

Law, John, and Vicky Singleton. 2003. "Allegory and Its Others." In *Knowing in Organizations: A Practice-Based Approach*, by Davide Nicolini, Silvia Gherardi and Dvora Yanow, 225-254. New York, NY: M. E. Sharpe.

—. 2005. "Object Lessons." *Organization* 12 (3): 331-355.

Lawrence, Henry W. 2008. *City Trees: A Historical Geography from the Renaissance through the Nineteenth Century.* Charlottesville, VA: University of Virginia Press.

Ledeneva, Alena V. 1998. *Russia's Economy of Favours: Blat, Networking and Informal Exchange.* Cambridge & New York, NY: Cambridge University Press.

Lee, Jo. 2007. "Experiencing Landscape: Orkney Hill Land and Farming." *Journal of Rural Studies* 23 (1): 88-100.

Lee, Raymond M., and Claire M. Renzetti. 1993. "The Problems of Researching Sensitive Topics: An Overview and Introduction." In *Researching Sensitive Topics*, by Claire M. Renzetti and Raymond M. Lee, 3-13. London: SAGE.

Lefebvre, Henri. 2004. *Rhythmanalysis: Space, Time and Everyday Life.* London: Continuum.

Legg, Stephen. 2007. *Spaces of Colonialism: Delhi's Urban Governmentalities.* Oxford: Wiley-Blackwell.

Lenin, Vladimir I. 1964. *Collected Works, Vol. 20: December 1913 - August 1914.* 4th Edition. Edited by Julius Katzer. Translated by Bernard Isaacs and Joe Fineberg. Moscow: Progress Publishers.

—. 1965. *Collected Works, Vol. 30: September 1919 - April 1920.* 4th Edition. Edited by George Hanna. Translated by George Hanna. Moscow: Progress Publishers.

—. 1966. *Collected Works, Vol. 31: April - December 1920.* 4th Edition. Edited by Julius Katzer. Translated by Julius Katzer. Moscow: Progress Publishers.

Leversedge, Francis M. 1977. "Plan GOELRO and Soviet Electric Power Development." *The Soviet and Post-Soviet Review* 4 (1): 237-255.

Ley, David. 1995. "Between Europe and Asia: The Case of the Missing Sequoias." *Ecumene* 2 (2): 185-210.

Light, Duncan. 2004. "Street Names in Bucharest, 1990-1997: Exploring the Modern Historical Geographies of Post-Socialist Change." *Journal of Historical Geography* 30 (1): 154-172.

Lipiavkin, Aleksandr F. 1971. *Volgograd.* Volgograd: Nizhne-Volzhskoe Knizhnoe Izdatel'stvo.

Liu, Morgan Y. 2012. *Under Solomon's Throne: Uzbek Visions of Renewal in Osh.* Pittsburgh, PA: University of Pittsburgh Press.

Lloyd, Robert. 1997. *Spatial Cognition: Geographic Environments.* Springer.

Loeb, Robert E. 1992. "Will a Tree Grow in Brooklyn? Developmental Trends of the New York City Street Tree Forest." *Journal of Forestry* 90: 20-24.

Lomov, G. I. 1932. "Novyi Plan Elektrofikatsii SSSR i Zadachi Rabotnikov Energokhoziaistva." *Elektricheskie Stantsii* 277.

Lorimer, Hayden. 2005. "Cultural Geography: The Busyness of Being 'More-than-Representational'." *Progress in Human Geography* 29 (1): 83-94.

—. 2006. "Herding Memories of Humans and Animals." *Environment and Planning D: Society and Space* 24 (4): 497-518.

Louw, Maria Elisabeth. 2007. *Everyday Islam in Post-Soviet Central Asia.* London: Routledge.

Low, Setha M. 2003. "Embodied Space(s): Anthropological Theories of Body, Space, and Culture." *Space and Culture* 6 (1): 9-18.

Lucas, Robyn, Tony McMichael, Wayne Smith, and Bruce Armstrong. 2006. *Solar Ultraviolet Radiation: Global Burden of Disease from Solar Ultraviolet Radiation.* Edited by Annette Prüss-Üstün, Hajo Zeeb, Colin Mathers and Michael Repacholi. Geneva: World Health Organization.

Luedke, Tracy. 2010. "Driving Lives: An Ethnography of Chicago Taxi Drivers." *Paper presented at the 2010 Industry Studies Conference, 7 May 2010, Chicago, IL.*

Luhmann, Niklas. 1990. *Essays on Self-Reference.* New York, NY & Oxford: Columbia University Press.

Lupton, Deborah. 1999. "Monsters in Metal Cocoons: 'Road Rage' and Cyborg Bodies." *Body & Society* 5 (1): 57-72.

—. 2002. "Road Rage: Drivers' Understandings and Experiences." *Journal of Sociology* 38 (3): 275-290.

Lury, Celia, and Nina Wakeford. 2012. "Introduction: A Perpetual Inventory." In *Inventive Methods: The Happening of the Social*, by Celia Lury and Nina Wakeford, 1-24. London & New York, NY: Routledge.

Luttik, Joke. 2000. "The Value of Trees, Water and Open Space as Reflected by House Prices in the Netherlands." *Landscape and Urban Planning* 48 (3-4): 161-167.

Lynch, Kevin. 1960. *The Image of the City.* Cambridge, MA: The Technology Press & Harvard University Press.

MacKenzie, David. 1969. "Tashkent - Past and Present." *Russian Review* 28 (2): 207-216.

—. 1974. *The Lion of Tashkent: The Career of General M. G. Cherniaev.* Athens, GA: The University of Georgia Press.

Macnaghten, Phil, and John Urry. 1998. *Contested Natures.* London & Thousand Oaks, CA: SAGE.

Macpherson, Hannah. 2010. "Non-Representational Approaches to Body-Landscape Relations." *Geography Compass* 4 (1): 1-13.

Madden, David J. 2010. "Urban ANTs: A Review Essay." *Qualitative Sociology* 33 (4): 583-589.

Makarova, E. M. 2001. "Effektivnost' Detsentralizovannogo Teplosnabzheniia Zhilogo Sektora i Vliianie na nee Energosberezheniia." doi:https://www.allbeton.ru/upload/iblock/827/effektivnost-decentralizovannogo-teplosnabjeniya-jilogo-sektora-i-vliyanie-na-nee-energosberejeniya-dmakarovaa.pdf.

Maksakova, L. P. 1999. "Osnovnye Cherty Migratsionnoi Situatsii v Uzbekistane." In *Migratsionnaia Situatsiia v Stranakh SNG*, by Zh. A. Zaionchkovskaia, 235-245. Moscow: Kompleks-Progress.

Mandič, Srna, and Tine Stanovnik. 1996. "Slovenia: Fast Privatization of the Stock, Slow Reform of Housing Policy." In *Economic Restructuring of the Former Soviet Bloc: The Case of Housing*, by Raymond J. Struyk, 139-174. Washington, DC: The Urban Institute Press.

Manley, Rebecca. 2009. *To the Tashkent Station: Evacuation and Survival in the Soviet Union at War.* Ithaca, NY: Cornell University Press.

Manz, Beatrice Forbes. 2002. "Tamerlane's Career and Its Uses." *Journal of World History* 13 (1): 1-25.

March, Andrew F. 2002. "The Use and Abuse of History: 'National Ideology' as Transcendental Object in Islam Karimov's 'Ideology of National Independence'." *Central Asian Survey* 21 (4): 371-384.

Marcus, George E. 1995. "Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography." *Annual Review of Anthropology* 24: 95-117.

Marin, Anaïs. 2012. "Bordering Time in the Cityscape. Toponymic Changes as Temporal Boundary-Making: Street Renaming in Leningrad/St. Petersburg." *Geopolitics* 17 (1): 192-216.

Martin, George. 1999. *Hyperautomobility and its Sociomaterial Impacts.* CES Working Paper 02/99. Guildford: Centre for Environmental Strategy, University of Surrey.

—. 2009. "The Global Intensification of Motorization and Its Impacts on Urban Social Ecologies." In *Car Troubles: Critical Studies of Automobility and Auto-Mobility*, by Jim Conley and Arlene Tigar McLaren, 219-233. Farnham & Burlington, VT: Ashgate.

Martin, Terry. 2001. *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923-1939.* Ithaca, NY & London: Cornell University Press.

Marx, Karl. 1971. *Critique of the Gotha Programme.* Moscow: Progress Publishers.

—. 1981. *Economic and Philosophic Manuscripts of 1844.* Moscow: Progress Publishers.

Massey, Doreen. 1993. "Power-Geometry and a Progressive Sense of Place." In *Mapping the Future: Local Cultures, Global Change*, by Jon Bird, Barry Curtis, Tim Putnam, George Robertson and Lisa Tickner, 59-69. London & New York, NY: Routledge.

—. 1995. "Places and Their Pasts." *History Workshop Journal* 39: 182-192.

Massicard, Elise, and Tommaso Trevisani. 2003. "The Uzbek Mahalla: Between State and Society." In *Central Asia: Aspects of Transition*, by Tom Everett-Heath, 205-218. London: RoutledgeCurzon.

Massumi, Brian. 2002. *Parables for the Virtual: Movement, Affect, Sensation.* Durham, NC & London: Duke University Press.

—. 2015. *Politics of Affect.* Cambridge & Malden, MA: Polity.

Mathew, Biju. 2008 [2005]. *Taxi!: Cabs and Capitalism in New York City.* Ithaca, NY: Cornell University Press.

Maturana, Humberto R., and Francisco J. Varela. 1980. *Autopoiesis and Cognition: The Realization of the Living.* Dordrecht: D. Reidel Publishing Company.

Matveeva, Anna. 1999. "Democratization, Legitimacy and Political Change in Central Asia." *International Affairs* 75 (1): 23-44.

Maus, Gunnar. 2015. "Landscapes of Memory: A Practice Theory Approach to Geographies of Memory." *Geographica Helvetica* 70 (3): 215-223.

May, Todd. 2005. *Gilles Deleuze: An Introduction.* Cambridge & New York, NY: Cambridge University Press.

McCormack, Derek P. 2005. "Diagramming Practice and Performance." *Environment and Planning D: Society and Space* 23 (1): 119-147.

McFarlane, Colin. 2011a. "Assemblage and Critical Urbanism." *City* 15 (2): 204-224.

—. 2011b. "The City as Assemblage: Dwelling and Urban Space." *Environment and Planning D: Society and Space* 29 (4): 649-671.

—. 2011c. *Learning the City: Knowledge and Translocal Assemblage.* Oxford: Wiley-Blackwell.

McGlinchey, Eric. 2007. "Divided Faith: Trapped between State and Islam in Uzbekistan." In *Everyday Life in Central Asia: Past and Present*, by Jeff Sahadeo and Russell Zanca, 305-318. Bloomington, IN: Indiana University Press.

McManus, Phil. 1999. "Histories of Forestry: Ideas, Networks and Silences." *Environment and History* 5 (2): 185-208.

McPherson, E. Gregory. 1990. "Modeling Residential Landscape Water and Energy Use to Evaluate Water Conservation Policies." *Landscape Journal* 9 (2): 122-134.

Meier, Alan K. 1991. "Measured Cooling Savings from Vegetative Landscapes." In *Energy Efficiency and the Environment: Forging the Link*, by Edward Vine, Drury Crawley and Paul Centolella, 321-334. Washington, DC: American Council for an Energy-Efficient Economy in cooperation with Universitywide Energy Research Group, University of California.

Meier, Esther. 2011. "On the Streets of a Truck-Building City: Naberezhnye Chelny in the Brezhnev Era." In *The Socialist Car: Automobility in the Eastern Bloc*, by Lewis H. Siegelbaum, 105-123. Ithaca & New York, NY: Cornell University Press.

Merchant, Carolyn. 1996. "Reinventing Eden: Western Culture as a Recovery Narrative." In *Uncommon Ground: Rethinking the Human Place in Nature*, by William Cronon, 132-159. New York, NY: W.W. Norton.

Merleau-Ponty, Maurice. 2005 [1945]. *Phenomenology of Perception.* Translated by Colin Smith. London & New York, NY: Routledge.

Merriman, Peter. 2004. "Driving Places: Marc Augé, Non-places, and the Geographies of England's M1 Motorway." *Theory, Culture & Society* 21 (4-5): 145-167.

—. 2014. "Rethinking Mobile Methods." *Mobilities* 9 (2): 167-187.

Meuser, Philipp. 2016. *Seismic Modernism: Architecture and Housing in Soviet Tashkent.* Translated by Clarice Knowles. Berlin: DOM Publishers.

Michael, Mike. 1998. "Co(a)gency and the Car: Attributing Agency in the Case of the 'Road Rage'." In *Machines, Agency and Desire*, by Brita Brenna, John Law and Ingunn Moser, 125-141. Oslo: Center for Technology and Culture, University of Oslo.

—. 2000. "These Boots Are Made for Walking...: Mundane Technology, the Body and Human-Environment Relations." *Body & Society* 6 (3-4): 107-126.

Micklin, Philip P. 1983. "Soviet Water Diversion Plans: Implications for Kazakhstan and Central Asia." *Central Asian Survey* 1 (4): 9-43.

—. 1985. "The Vast Diversion of Soviet Rivers." *Environment: Science and Policy for Sustainable Development* 27 (2): 12-45.

—. 1987. "The Fate of 'Sibaral': Soviet Water Politics in the Gorbachev Era." *Central Asian Survey* 6 (2): 67-88.

Mikhailov, Nicholas. 1939. *Land of the Soviets: A Handbook of the U.S.S.R.* Translated by Nathalie Rothstein. New York, NY: Lee Furman.

Mikhailov, S. A., and V. G. Semenov. 2002. "Teplosnabzhenie Rossiiskoi Federatsii v Tsifrakh." *Novosti Teplosnabzheniia* 8.

Milibaeva, Gul'zhamal. 2016. "Kvadraty i Krugi." *Pis'ma o Tashkente.* 2 June. Accessed January 13, 2018. http://mytashkent.uz/2016/06/02/kvadraty-i-krugi/.

Miliutin, Nikolai A. 1974. *Sotsgorod: The Problem of Building Socialist Cities.* Translated by Arthur Sprague. Cambridge, MA: The MIT Press.

Miller, Daniel. 1997 [1994]. *Modernity, An Ethnographic Approach: Dualism and Mass Consumption in Trinidad.* Oxford and New York, NY: Berg.

—. 2001a. *Car Cultures.* Oxford & New York, NY: Berg.

—. 2001b. "Driven Societies." In *Car Cultures*, by Daniel Miller, 1-33. Oxford & New York, NY: Berg.

—. 2009. "The Christian and the Taxi Driver: Poverty and Aspiration in Rural Jamaica." In *Anthropology and the Individual: A Material Culture Perspective*, by Daniel Miller, 69-82. Oxford: Berg.

Mol, Annemarie. 2002. *The Body Multiple: Ontology in Medical Practice.* Durham, NC and London: Duke University Press.

Morris, Jeremy. 2016. *Everyday Post-Socialism: Working-Class Communities in the Russian Margins.* London: Palgrave Macmillan.

Morris, Jim. 2004. *Locals and Experts: The New Conservation Paradigm in the MANU Biosphere Reserve, Peru and the Yorkshire Dales National Park, England.* Unpublished PhD Thesis. Lancaster: Lancaster University.

Morrison, Alexander. 2012. "Railways in Central Asia." *CESMI - Central Eurasian Scholars & Media Initiative.* 28 March. http://cesmi.info/wp/?p=61.

—. 2015. "Peasant Settlers and the 'Civilising Mission' in Russian Turkestan, 1865-1917." *The Journal of Imperial and Commonwealth History* 43 (3): 387-417.

Motyl, Alexander J. 1987. *Will the Non-Russians Rebel?: State, Ethnicity, and Stability in the USSR.* Ithaca, NY & London: Cornell University Press.

Müller, Martin, and Carolin Schurr. 2016. "Assemblage Thinking and Actor-Network Theory: Conjunctions, Disjunctions, Cross-Fertilisations." *Transactions of the Institute of British Geographers* 41 (3): 217-229.

Mumford, Lewis. 1970 [1938]. *The Culture of Cities.* New York, NY: Harcourt Brace Jovanovich.

Muzaini, Hamzah, and Brenda S.A. Yeoh. 2016. *Contested Memoryscapes: The Politics of Second World War Commemoration in Singapore.* London & New York, NY: Routledge.

Navaro-Yashin, Yael. 2009. "Affective Spaces, Melancholic Objects: Ruination and the Production of Anthropological Knowledge." *Journal of the Royal Anthropological Institute* 15 (1): 1-18.

Nazpary, Joma. 2002. *Post-Soviet Chaos: Violence and Dispossession in Kazakhstan.* London & Sterling, VA: Pluto Press.

Nil'sen, V.A. 1988. *U Istokov Sovremennogo Gradostroitel'stva Uzbekistana: XIX - Nachalo XX Vekov.* Tashkent: Izdatel'stvo Literatury i Iskusstva im. Gafura Guliama.

Nora, Pierre. 1996. "General Introduction: Between Memory and History." In *Realms of Memory: Rethinking the French Past; Vol. I: Conflicts and Divisions*, by Pierre Nora and Lawrence D. Kritzman, translated by Arthur Goldhammer, 1-20. New York, NY: Columbia University Press.

Novoa, Andre. 2015. "Mobile Ethnography: Emergence, Techniques and its Importance to Geography." *Human Geographies – Journal of Studies and Research in Human Geography* 9 (1): 97-107.

Nuttall, Mark. 1991. "Memoryscape: A Sense of Locality in Northwest Greenland." *North Atlantic Studies* 1 (2): 39-50.

—. 1992. *Arctic Homeland: Kinship, Community and Development in Northwest Greenland.* Toronto: University of Toronto Press.

—. 1993. "Place, Identity and Landscape in North West Greenland." In *Mapping Invisible Worlds*, by Gavin D. Flood, 75-88. Edinburgh: Edinburgh University Press.

—. 1998. *Protecting the Arctic: Indigenous Peoples and Cultural Survival.* Amsterdam: Harwood Academic Publishers.

Ob"edinenie Tashgorpassavtotrans. 1991. *Stanovlenie i Razvitie Passazhirskogo Avtotransporta v Tashkente.* Tashkent: O'zbekiston.

Odum, Eugene P. 1989. *Ecology and Our Endangered Life-Support Systems.* Sunderland, MA: Sinauer Associates.

Ofer, Gur. 1973. *The Service Sector in Soviet Economic Growth: A Comparative Study.* Cambridge, MA: Harvard University Press.

Oke, Timothy R. 1989. "The Micrometeorology of the Urban Forest." *Philosophical Transactions of the Royal Society of London, Series B: Biological Sciences* 324 (1223): 335-349.

O'Keefe, John, and Lynn Nadel. 1978. *The Hippocampus as A Cognitive Map.* Oxford: Clarendon Press.

Olcott, Martha B. 1981. "The Basmachi or Freemen's Revolt in Turkestan 1918-24." *Soviet Studies* 33 (3): 352-369.

—. 1992. "Central Asia's Catapult to Independence." *Foreign Affairs* 71 (3): 108-130.

—. 1995. *The Kazakhs.* 2nd Edition. Stanford, CA: Hoover Institution Press.

Olick, Jeffrey K. 1999. "Collective Memory: The Two Cultures." *Sociological Theory* 17 (3): 333-348.

—. 2007. *The Politics of Regret: On Collective Memory and Historical Responsibility.* New York, NY & London: Routledge.

Olufsen, Ole. 1911. *The Emir of Bokhara and His Country: Journeys and Studies in Bokhara (with a Chapter on My Voyage on the Amu Darya to Khiva).* Copenhagen: Gyldendalske Boghandel, Nordisk Forlag.

Ong, Boon Lay. 2012. "Warming up to Heat." *Senses & Society* 7 (1): 5-21.

Paskaleva, Elena. 2013. "The Cityscape of Modern Central Asia." *IIAS Newsletter* 66: 48-49.

Paterson, Matthew. 2007. *Automobile Politics: Ecology and Cultural Political Economy.* Cambridge: Cambridge University Press.

Pelevin, Victor. 2000. *Babylon.* Translated by Andrew Bromfield. London: Faber & Faber.

Pellissier, Vincent, Francoise Roze, and Phillipe Clergeau. 2010. "Constraints of Urbanization on Vegetation Dynamics in a Growing City: A Chronological Framework in Rennes (France)." In *Urban Biodiversity and Design*, by Norbert Muller, Peter Werner and John G. Kelcey, 206-226. Oxford: Wiley-Blackwell.

Perkins, Harold A. 2015. "Urban Forests are Social Natures: Markets, Race, Class, and Gender in Relation to (Un)Just Urban Environments." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, by L. Anders Sandberg, Adrina Bardekjian and Sadia Butt, 19-34. London & New York, NY: Routledge.

Perkins, Harold A., Nik Heynen, and Joe Wilson. 2004. "Inequitable Access to Urban Reforestation: The Impact of Urban Political Economy on Housing Tenure and Urban Forests." *Cities* 21 (4): 291-299.

Peyrouse, Sebastien. 2013. "Former Colonists on the Move: The Migration of Russian-Speaking Populations." In *Migration and Social Upheaval as the Face of Globalization in Central Asia*, by Marlene Laruelle, 215-237. Leiden & Boston, MA: Brill.

Phelan, Peggy. 1993. *Unmarked: The Politics of Performance.* London & New York, NY: Routledge.

Phillips, John. 2006. "Agencement/Assemblage." *Theory, Culture & Society* 23 (2-3): 108-109.

Phillips, Kendall R., and G. Mitchell Reyes. 2011. *Global Memoryscapes: Contesting Remembrance in a Transnational Age.* Tuscaloosa, AL: The University of Alabama Press.

Philo, Chris. 2000. "More Words, More Worlds: Reflections on the 'Cultural Turn' and Social Geography." In *Cultural Turns/Geographical Turns: Perspectives on Cultural Geography*, by Simon Naylor, James Ryan, Ian Cook and David Couch, 27-53. Harlow: Prentice Hall.

Pianciola, Niccolò. 2004. "Famine in the Steppe: The Collectivization of Agriculture and the Kazak Herdsmen, 1928-1934." *Cahiers du Monde Russe* 45 (1-2): 137-192.

Pile, Steve. 2005. *Real Cities: Modernity, Space and the Phantasmagorias of City Life.* London: SAGE.

—. 2010. "Emotions and Affect in Recent Human Geography." *Transactions of the Institute of British Geographers* 35 (1): 5-20.

Pittenger, Rebbecca M. 2011. *Memoryscapes: Place, Mobility, and Memory in the Post-Dictatorial Southern Cone.* Unpublished PhD Dissertation. Lexington, KY: University of Kentucky.

Polat, Abdumannob, and Nickolai Butkevich. 2000. "Unraveling the Mystery of the Tashkent Bombings: Theories and Implications." *Demokratizatsiya* 8 (4): 541-553.

Polese, Abel, and Aleksandr Prigarin. 2013. "On the Persistence of Bazaars in the Newly Capitalist World: Reflections from Odessa." *Anthropology of East Europe Review* 31 (1): 110-136.

Pollard, Amy. 2009. "Field of Screams: Difficulty and Ethnographic Fieldwork." *Anthropology* 11 (2): () Anthropology. https://www.anthropologymatters.com/index.php/anth_matters/article/view/10/10.

Poputoaia, Diana, and Stefan Bouzarovski. 2010. "Regulating District Heating in Romania: Legislative Challenges and Energy Efficiency Barriers." *Energy Policy* 38 (7): 3820-3829.

Prileszky, István. 1993. "Transport Restructuring in Hungary." In *Transport and Economic Development in the New Central and Eastern Europe*, by Derek R. Hall, 93-107. London & New York, NY : Belbaven Press.

Pryce, Paula. 1999. *"Keeping the Lakes' Way": Reburial and the Re-creation of a Moral World among an Invisible People.* Toronto: University of Toronto Press.

Pucher, John. 1995. "The Road to Ruin? Impacts of Economic Shock Therapy on Urban Transport in Poland." *Transport Policy* 2 (1): 5-13.

Pugachenkova, Galina Anatol'evna. 1959. *Zodchestvo Uzbekistana.* Tashkent: Gosudarstvennoe Izdatel'stvo Khudozhestvennoi Literatury Uzbekskoi SSR.

Putnam, Robert D. 2001. *Bowling Alone: The Collapse and Revival of American Community.* New York, NY & London: Simon & Schuster.

Qualls, Karl D. 2002. "Accommodation and Agitation in Sevastopol: Redefining Socialist Space in the Postwar 'City of Glory'." In *Socialist Spaces: Sites of Everyday Life in the Eastern Bloc*, by David Crowley and Susan E. Reid, 23-45. Oxford & New York, NY: Berg.

Rabinow, Paul. 1977. *Reflections on Fieldwork in Morocco.* Berkeley, CA: University of California Press.

Raman, Parvathi, and Harry G. West. 2009. "Introduction: Poetries of the Past in a Socialist World Remade." In *Enduring Socialism: Explorations of Revolution and Transformation, Restoration and Continuation*, by Harry G. West and Parvathi Raman, 1-28. Oxford & New York, NY: Berghahn.

Rasanayagam, Johan. 2006. "'I am not a Wahhabi:' State Power and Muslim Orthodoxy in Uzbekistan." In *The Postsocialist Religious Question: Faith and Power in Central Asia and East-Central Europe*, by Chris Hann and 'Civil Religion' Group, 99-124. Berlin: LIT.

—. 2009. "Morality, Self and Power: The Idea of the Mahalla in Uzbekistan." In *The Anthropology of Moralities*, by Monica Heintz, 102-117. New York, NY & Oxford: Berghahn.

—. 2011. *Islam in Post-Soviet Uzbekistan: The Moraility of Experience.* Cambridge: Cambridge University Press.

Raynal-Roques, Aline. 1994. *La Botanique Redécouverte.* Paris: Belin.

Redlich, Shimon. 2002. *Together and Apart in Brzezany: Poles, Jews, and Ukrainians, 1919-1945.* Bloomington, IN & Indianapolis, IN: Indiana University Press.

Rees, William. 1999. "Understanding Urban Ecosystems: An Ecological Economics Perspective." In *Understanding Urban Ecosystems: A New Frontier for Science and Education*, by Alan R. Berkowitz, Charles H. Nilon and Karen S. Hollweg, 115-135. New York, NY: Springer.

Reiner, Thomas A., and Robert H. Wilson. 1979. "Planning and Decision-Making in the Soviet City: Rent, Land, and Urban Form." In *The Socialist City: Spatial Structure and Urban Policy*, by Richard A. French and F. E. Ian Hamilton, 49-71. Chichester & New York, NY: John Wiley & Sons.

Relph, Edward. 1985. "Geographical Experiences and Being-in-the-World: The Phenomenological Origins of Geography." In *Dwelling, Place and Environment: Towards a Phenomenology of Person and World*, by David

Seamon and Robert Mugerauer, 15-31. Dordrecht: Martinus Nijhoff Publishers.

Richardson, Tanya. 2005. "Walking Streets, Talking History: The Making of Odessa." *Ethnology* 44 (1): 13-33.

Ricoeur, Paul. 2006. *Memory, History, Forgetting.* Translated by Kathleen Blamey and David Pellauer. Chicago, IL & London: The University of Chicago Press.

Rival, Laura. 1998a. *The Social Life of Trees: Anthropological Perspectives on Tree Symbolism.* Oxford & New York, NY: Berg.

—. 1998b. "Trees, from Symbols of Life and Regeneration to Political Artefacts." In *The Social Life of Trees: Anthropological Perspectives on Tree Symbolism*, by Laura Rival, 1-36. Oxford & New York, NY: Berg.

Robbins, Paul, and Julie Sharp. 2006. "Turfgross Subjects: The Political Economy of Urban Monoculture." In *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, by Nik Heynen, Maria Kaika and Erik Swyngedouw, 106-123. London & New York, NY: Routledge.

Rose, Mitch. 2002. "Landscape and Labyrinths." *Geoforum* 33 (4): 455-467.

Rose, Mitch, and John Wylie. 2006. "Animating Landscape." *Environment and Planning D: Society and Space* 24 (4): 475-479.

Ross, Kristin. 1995. *Fast Cars, Clean Bodies: Decolonization and the Reordering of French Culture.* Cambridge, MA & London: The MIT Press.

Rossi, Ugo, and Alberto Vanolo. 2012. *Urban Political Geographies: A Global Perspective.* Los Angeles, CA & London: SAGE.

Rothberg, Michael. 2009. *Multidirectional Memory: Remembering the Holocaust in the Age of Decolonization.* Stanford, CA: Stanford University Press.

Rowntree, Rowan A., and David J. Nowak. 1991. "Quantifying the Role of Urban Forests in Removing Atmospheric Carbon Dioxide." *Journal of Arboriculture* 17 (10): 269-275.

Roy, Ananya, and Aihwa Ong. 2011. *Worlding Cities: Asian Experiments and the Art of Being Global.* Oxford: Wiley-Blackwell.

Roy, Olivier. 2011 [2000]. *The New Central Asia: Geopolitics and the Birth of Nations.* London & New York, NY: I.B. Tauris.

Rubina, Dina, interview by Tatyana Kalinina. 2005. *Deistvuiushchie Litsa.* Moscow, (19 October). http://www.cultradio.ru/brand/episode/id/57958/episode_id/1047841/.

—. 2016 [2006]. *Na Solnechnoi Storone Ulitsy.* Moscow: Eksmo.

Ruder, Cynthia A. 1998. *Making History for Stalin: The Story of the Belomor Canal.* Gainesville, FL: University Press of Florida.

Ruuhola, Teija, Juha-Pekka Salminen, Sanna Haviola, Shiyong Yang, and Markus J. Rantala. 2007. "Immunological Memory of Mountain Birches: Effects of Phenolics on Performance of the Autumnal Moth Depend on Herbivory History of Trees." *Journal of Chemical Ecology* 33 (6): 1160-1176.

Ruziev, Kobil, and Peter Midmore. 2014. "Informal Credit Institutions in Transition Countries: A Study of Urban Money Lenders in Post-Communist Uzbekistan." *Post-Communist Economies* 26 (3): 415-435.

Sahadeo, Jeff. 2005. "Epidemic and Empire: Ethnicity, Class, and 'Civilization' in the 1892 Tashkent Cholera Riot." *Slavic Review* 64 (1): 117-139.

—. 2007. *Russian Colonial Society in Tashkent: 1865-1923.* Bloomington, IN: Indiana University Press.

Salamandra, Christa. 2004. *A New Old Damascus: Authenticity and Distinction in Urban Syria.* Bloomington, IN & Indianapolis, IN: Indiana University Press.

Sampson, Steven L. 1987. "The Second Economy of the Soviet Union and Eastern Europe." *The Annals of the American Academy of Political and Social Science* 493 (1): 120-136.

Sandberg, L. Anders, Adrina Bardekjian, and Sadia Butt. 2015. "Introduction." In *Urban Forests, Trees, and Greenspace: A Political Ecology Perspective*, by L. Anders Sandberg, Adrina Bardekjian and Sadia Butt, 1-16. London & New York, NY: Routledge.

Sanders, Ralph A. 1986. "Urban Vegetation Impacts on the Hydrology of Dayton, Ohio." *Urban Ecology* 9 (3-4): 361-376.

Sanjek, Roger. 2000. "Keeping Ethnography Alive in an Urbanizing World." *Human Organization* 59 (3): 280-288.

Sassen, Saskia. 1991. *The Global City: New York, London, Tokyo.* Princeton, NJ: Princeton University Press.

Schönle, Andreas. 2007. *Ruler in the Garden: Politics and Landscape Design in Imperial Russia.* Bern: Peter Lang.

Schröder, Philipp. 2010. "'Urbanizing' Bishkek: Interrelations of Boundaries, Migration, Group Size and Opportunity Structure." *Central Asian Survey* 29 (4): 453-467.

Schroeder, Herbert W. 1991. "Preference and Meaning of Arboretum Landscapes: Combining Quantitative and Qualitative Data." *Journal of Environmental Psychology* 11 (3): 231-248.

Scott, James C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed.* New Haven, CT & London: Yale University Press.

Sejersen, Frank. 2004. "Horizons of Sustainability in Greenland: Inuit Landscapes of Memory and Vision." *Arctic Anthropology* 41 (1): 71-89.

Seliverstova, Oleksandra. 2017. "Keeping Alive the 'Imaginary West' in Post-Soviet Countries." *Journal of Contemporary Central and Eastern Europe* 25 (1): 117-134.

Sergeev, Evgeny. 2013. *The Great Game, 1856-1907: Russo-British Relations in Central and East Asia.* Washington, DC: Woodrow Wilson Center/Johns Hopkins University Press.

Serres, Michel. 1982. *The Parasite.* Baltimore, MD: Johns Hopkins University Press.

Sgibnev, Wladimir, and Andrey Vozyanov. 2016. "Assemblages of Mobility: The Marshrutkas of Central Asia." *Central Asian Survey* 35 (2): 276-291.

Shane, David Grahame. 2005. *Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design, and City Theory.* Chichester: Wiley.

Sharipova, Dina. 2015. "Who Gets What, When and How? Housing and Informal Institutions in the Soviet Union and Post-Soviet Kazakhstan." *Central Asian Affairs* 2 (2): 140-167.

Shatalova, Oksana. 2015. "Bez Iskliuchennykh: Fenomenologiia Sotsialisticheskogo Goroda." In *Bishkek Utopicheskii*, by Georgii Mamedov and Oksana Shatalova, 72-111. Bishkek: ShTAB.

Shaw, Denis J. B. 1979. "Recreation and the Soviet City." In *The Socialist City: Spatial Structure and Urban Policy*, by Richard A. French and F. E. Ian Hamilton, 119-143. Chichester & New York, NY: John Wiley & Sons.

Shaw, Rosalind. 2002. *Memories of the Slave Trade: Ritual and the Historical Imagination in Sierra Leone.* Chicago, IL: University of Chicago Press.

Sheller, Mimi. 2004. "Automotive Emotions: Feeling the Car." *Theory, Culture & Society* 21 (4-5): 221-242.

Sheller, Mimi, and John Urry. 2006. "The New Mobilities Paradigm." *Environment and Planning A* 38 (2): 207-226.

Shelley, Louise I. 1990. "The Second Economy in the Soviet Union." In *The Second Economy in Marxist States*, by Maria Łoś, 11-26. London: Palgrave Macmillan.

Shelton, Taylor. 2013. "Review of Urban Assemblages: How Actor-Network Theory Changes Urban Studies. Ignacio Farías and Thomas Bender, eds." *Urban Geography* 34 (4): 575-576.

Shove, Elizabeth. 2003. *Comfort, Cleanliness, and Convenience: The Social Organization of Normality.* Oxford and New York, NY: Berg.

Shryock, Andrew. 1997. *Nationalism and the Genealogical Imagination: Oral History and Textual Authority in Tribal Jordan.* Berkeley, CA: University of California Press.

Shumilov, Mikhail S. 1985. *Grazhdanskie Zdaniia i ikh Tekhnicheskaia Ekspluatatsiia: Uchebnik dlia Studentov Vuzov po Spets. 'Ekonomika i Org. Gor. Khoz-va'.* Moscow: Vysshaia Shkola.

Siegelbaum, Lewis H. 2011. "Introduction." In *The Socialist Car: Automobility in the Eastern Bloc*, by Lewis H. Siegelbaum, 1-13. Ithaca, NY & London: Cornell University Press.

Sievers, Eric W. 2002. "Uzbekistan's Mahalla: From Soviet to Absolutist Residential Community Associations." *Chicago-Kent Journal of International and Comparative Law* 2: 91-158.

Simone, AbdouMaliq. 2011. "The Surfacing of Urban Life: A Response to Colin McFarlane and Neil Brenner, David Madden and David Wachsmuth." *City* 15 (3-4): 355-364.

Simons, Derek. 2009. "Bad Impressions: The Will to Concrete and the Projectile Economy of Cities." In *Car Troubles: Critical Studies of Automobility and Auto-Mobility*, by Jim Conley and Arlene Tigar McLaren, 77-92. Farnham & Burlington, VT: Ashgate.

Skeggs, Beverley. 2004. *Class, Self, Culture.* London & New York, NY: Routledge.

Slater, Don. 2002. "Markets, Materiality, and the 'New Economy'." In *Market Relations and the Competitive Process*, by Stan Metcalfe and Alan Warde, 95-113. Manchester & New York, NY: Manchester University Press.

Slezkine, Yuri. 1994. "The USSR as a Communal Apartment, or How a Socialist State Promoted Ethnic Particularism." *Slavic Review* 53 (2): 414-452.

Smith, Barbara Herrnstein, and Arkady Plotnitsky. 1997. "Introduction: Networks and Symmetries, Decidable and Undecidable." In *Mathematics, Science, and Postclassical Theory*, by Barbara Herrnstein Smith and Arkady Plotnitsky, 1-16. Durham, NC: Duke University Press.

Smith, Mark B. 2010. *Property of Communists: The Urban Housing Program from Stalin to Khrushchev.* DeKalb, IL: Northern Illinois University Press.

Smith, Neil. 2008 [1984]. *Uneven Development: Nature, Capital, and the Production of Space.* 3rd Edition. Athens, GA: The University of Georgia Press.

Smith, William H. 1990. *Air Pollution and Forests: Interactions Between Air Contaminants and Forest Ecosystems.* 2nd Edition. Berlin & New York, NY: Springer-Verlag.

Sneath, David. 2009. "Reading the Signs by Lenin's Light: Development, Divination and Metonymic Fields in Mongolia." *Ethnos* 74 (1): 72-90.

Sokolov, E. Ia. 1963. *Teplofikatsiia i Teplovye Seti.* 3rd Edition. Moscow & Leningrad: Gosudarstvennoe Energeticheskoe Izdatel'stvo.

Sokolov, Iu. A. 1965. *Tashkent, Tashkenttsy i Rossiia.* Tashkent: Uzbekistan.

Sonyel, Salahi R. 1990. "Enver Pasha and the Basmaji Movement in Central Asia." *Middle Eastern Studies* 26 (1): 52-64.

Soucek, Svat. 2000. *A History of Inner Asia.* Cambridge and New York, NY: Cambridge University Press.

Sprague, Arthur. 2002. "Modernizing Architecture, Art, and Town Plans." In *Central Asia: 130 Years of Russian Dominance, A Historical Overview*, by Edward Allworth, 485-526. Durham, NC: Duke University Press.

Star, Susan Leigh. 1999. "The Ethnography of Infrastructure." *American Behavioral Scientist* 43 (3): 377-391.

Stark, David. 1990. "Privatization in Hungary: From Plan to Market or from Plan to Clan?" *East European Politics and Societies* 4 (3): 351-392.

Stites, Richard. 1989. *Revolutionary Dreams: Utopian Vision and Experimental Life in the Russian Revolution.* Oxford & New York, NY: Oxford University Press.

Stoyanov, Petar, and Klaus Frantz. 2006. "Gated Communities in Bulgaria: Interpreting a New Trend in Post-Communist Urban Development." *GeoJournal* 66 (1-2): 57-63.

Stronski, Paul. 2010. *Tashkent: Forging a Soviet City, 1930-1966.* Pittsburgh, PA: University of Pittsburgh Press.

Strumilin, Stanislav. 1961. "Family and Community in the Society of the Future." *Soviet Review* 2 (2): 3-29.

Struyk, Raymond J. 1996. "Housing Privatization in the Former Soviet Bloc to 1995." In *Cities after Socialism: Urban and Regional Change and Conflict in Post-Socialist Societies*, by Gregory Andrusz, Michael Harloe and Ivan Szelenyi, 192-213. Oxford & Cambridge, MA: Blackwell Publishers.

Susman, Tina. 2009. "A Tree Grows (and Dies) in Brooklyn." *Los Angeles Times*, 15 October.

Susser, Ida, and Jane Schneider. 2003. "Wounded Cities: Destruction and Reconstruction in a Globalized World." In *Wounded Cities: Destruction and Reconstruction in a Globalized World*, by Jane Schneider and Ida Susser, 1-23. Oxford & New York, NY: Berg.

Suzuki, Peter T. 1985. "Vernacular Cabs: Jitneys and Gypsies in Five Cities." *Transportation Research Part A: General* 19 (4): 337-347.

Swyngedouw, Erik. 1996. "The City as a Hybrid: On Nature, Society and Cyborg Urbanization." *Capitalism Nature Socialism* 7 (2): 65-80.

—. 2006. "Metabolic Urbanization: The Making of Cyborg Cities." In *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, by Nik Heynen, Maria Kaika and Erik Swyngedouw, 20-39. London & New York, NY: Routledge.

Swyngedouw, Erik, and Nikolas C. Heynen. 2003. "Urban Political Ecology, Justice and the Politics of Scale." *Antipode* 35 (5): 898-918.

Szelényi, Ivan. 1969. "Housing System and Social Structure." *Sociological Review* 269-297.

—. 1978. "Social Inequalities in State Socialist Redistributive Economies." *International Journal of Comparative Sociology* 19 (1-2): 63-87.

—. 1983. *Urban Inequalities Under State Socialism.* Oxford: Oxford University Press.

Szelényi, Iván, and György Konrád. 1969. *Az új lakótelepek szociológiai problémái.* Budapest: Akadémiai Kiadó.

Talarchek, Gary M. 1990. "The Urban Forest of New Orleans: An Exploratory Analysis of Relationships." *Urban Geography* 11 (1): 65-86.

Tarr, Joel A. 2002. "The Metabolism of the Industrial City: The Case of Pittsburgh." *Journal of Urban History* 28 (5): 511-545.

Tashkent Entsiklopediia. 1983. *Tashkent Entsiklopediia.* Tashkent: Glavnaia Redaktsiia Uzbekskoi Sovetskoi Entsiklopedii.

Tashkentskoe Proizvodstvennoe Ob"edinenie Taksomotornykh Perevozok Ministerstva Avtotransporta UzSSR. 1972. *Spravochnik Voditelia Taksi.* Tashkent: Uzbekistan.

Taylor, Andrea Faber, Angela Wiley, Frances E. Kuo, and William C. Sullivan. 1998. "Growing Up in the Inner-City: Green Spaces as Places to Grow." *Environment and Behavior* 30 (1): 3-27.

Ter-Ghazaryan, Diana K. 2013. "'Civilizing the City Center': Symbolic Spaces and Narratives of the Nation in Yerevan's Post-Soviet Landscape." *Nationalities Papers* 41 (4): 570-589.

Thien, Deborah. 2005. "After or Beyond Feeling? A Consideration of Affect and Emotion in Geography." *Area* 37 (4): 450-454.

Thoits, Peggy A. 1989. "The Sociology of Emotions." *Annual Review of Sociology* 15: 317-342.

Thomas, Julian. 2001. "Archaeologies of Place and Landscape." In *Archaeological Theory Today*, by Ian Hodder, 165-186. Cambridge: Polity.

Thrift, Nigel. 1996. *Spatial Formations.* London: SAGE.

—. 1997. "The Still Point: Resistance, Expressive Embodiment and Dance." In *Geographies of Resistance*, by Steve Pile and Michael Keith, 124-151. London & New York, NY: Routledge.

—. 2000. "Afterwords." *Environment and Planning D: Society and Space* 18 (2): 213-255.

—. 2004a. "Intensities of Feeling: Towards a Spatial Politics of Affect." *Geografiska Annaler: Series B, Human Geography* 86 (1): 57-78.

—. 2004b. "Driving in the City." *Theory, Culture & Society* 21 (4-5): 41-59.

—. 2008. *Non-Representational Theory: Space | Politics | Affect.* London & New York, NY: Routledge.

Thrift, Nigel, and John-David Dewsbury. 2000. "Dead Geographies—And How to Make Them Live." *Environment and Planning D: Society and Space* 18 (4): 411-432.

Thubron, Colin. 2004 [1994]. *The Lost Heart Of Asia.* London: Vintage.

Till, Karen E. 2005. *The New Berlin: Memory, Politics, Place.* Minneapolis, MN: University of Minnesota Press.

Tilley, Christopher. 1994. *A Phenomenology of Landscape: Places, Paths and Monuments.* Oxford & Providence, RI: Berg.

Tirado Herrero, Sergio, and Diana Ürge-Vorsatz. 2012. "Trapped in the Heat: A Post-Communist Type of Fuel Poverty." *Energy Policy* 49: 60-68.

Tokhtakhodzhaeva, Marfua. 2007. "Tashkent: Three Capitals, Three Worlds." In *Urban Life in Post-Soviet Asia*, by Catherine Alexander, Victor Buchli and Caroline Humphrey, 102-124. London: UCL Press.

Tolia-Kelly, Divya Praful. 2010. *Landscape, Race and Memory: Material Ecologies of Citizenship.* London & New York, NY: Routledge.

Tolman, Edward C. 1948. "Cognitive Maps in Rats and Men." *The Psychological Review* 55 (4): 189-208.

Tonkiss, Fran. 2011. "Template Urbanism: Four Points about Assemblage." *City* 15 (5): 584-588.

Tsekou, Katerina. 2013. *Ellines Politikoi Prosfyges stin Anatoliki Europi, 1945-1989.* Athens: Ekdoseis Alexandreia.

Tsouvalis, Judith. 2000. "Socialized Nature: England's Royal and Plantation Forests." In *Cultural Turns/Geographical Turns: Perspectives on Cultural Geography*, by Simon Naylor, James Ryan, Ian Cook and David Couch, 288-312. Harlow: Prentice Hall.

Tucker, Erica L. 1998. "Renaming Capital Street: Competing Visions of the Past in Post-Communist Warsaw." *City & Society* 10 (1): 223-244.

Tukmadiyeva, Malika. 2016. *Propiska as a Tool of Discrimination in Central Asia.* The Central Asia Fellowship Papers, No. 12, Washington, DC: Central Asia Program, The George Washington University.

Tuvikene, Tauri. 2010. "From Soviet to Post-Soviet with Transformation of the Fragmented Urban Landscape: The Case of Garage Areas in Estonia." *Landscape Research* 35 (5): 509-528.

—. 2014. *Freedom to Park: Post-Socialist Automobility in Tallinn, Estonia.* Unpublished PhD Thesis. London: University College London.

Ubiria, Grigol. 2016. *Soviet Nation-Building in Central Asia: The Making of the Kazakh and Uzbek Nations.* Abington & New York, NY: Routledge.

Ullberg, Susann. 2013. *Watermarks: Urban Flooding and Memoryscape in Argentina.* Stockholm: Acta Universitatis Stockholmiensis.

Ulrich, Roger S. 1984. "View Through a Window May Influence Recovery from Surgery." *Science* 224 (4647): 420-421.

Urry, John. 2000. *Sociology Beyond Societies: Mobilities for the Twenty First Century.* London & New York, NY: Routledge.

—. 2002. "Mobility and Proximity." *Sociology* 36 (2): 255-274.

—. 2004. "The 'System' of Automobility." *Theory, Culture & Society* 21 (4-5): 25-39.

—. 2007. *Mobilities.* Cambridge & Malden, MA: Polity.

Uteng, Tanu Priya, and Tim Cresswell. 2016 [2008]. *Gendered Mobilities.* London & New York, NY: Routledge.

Vandenberg, Ann E. 2016. "Human Wayfinding: Integration of Mind and Body." In *Community Wayfinding: Pathways to Understanding*, by Rebecca H. Hunter, Lynda A. Anderson and Basia L. Belza, 17-32. Basel: Springer.

Vannini, Phillip. 2009. "The Cultures of Alternative Mobilities." In *The Cultures of Alternative Mobilities: Routes Less Travelled*, by Phillip Vannini, 1-18. Farnham & Burlington, VT: Ashgate.

—. 2012. *Ferry Tales: Mobility, Place, and Time on Canada's West Coast.* London & New York, NY: Routledge.

Vannini, Phillip, and Jonathan Taggart. 2014. "Making Sense of Domestic Warmth: Affect, Involvement, and Thermoception in Off-grid Homes." *Body & Society* 20 (1): 61-84.

Veldwisch, G. J. A. 2008. "Authoritarianism, Validity, and Security: Researching Water Distribution in Khorezm, Uzbekistan." In *Fieldwork in Difficult Environments: Methodology as Boundary Work in Development Research*, by Caleb R. L. Wall and Peter P. Mollinga, 161-181. Berlin: LIT Verlag.

Verdery, Katherine. 1996. *What Was Socialism, and What Comes Next?* Princeton, NJ: Princeton University Press.

Vildanova, Gulusa. 2006. *Forest and Forest Products Country Profile: Uzbekistan.* Geneva Timber and Forest Discussion Paper, UNECE/FAO Timber Section, United Nations, Geneva & New York, NY: United Nations.

Voutyra, Eutychia, Vasilis Dalkavoukis, Nikos Marantzidis, and Maria Mpontila. 2005. *To Oplo para Poda: Oi Politikoi Prosfyges tou Ellinikou Emfyliou Polemou stin Anatoliki Europi.* Thessaloniki: Ekdoseis Panepistimiou Makedonias.

Wade, Nicholas J. 2003. "The Legacy of Phantom Limbs." *Perception* 32 (5): 517-524.

Wall, Caleb R. L. 2008. "Working in Fields in Fieldwork: Khashar, Participant Observation and the Tamorka as Ways to Access Local Knowledge in Rural Uzbekistan." In *Fieldwork in Difficult Environments: Methodology as Boundary Work in Development Research*, by Caleb R. L. Wall and Peter P. Mollinga, 137-159. Berlin: LIT Verlag.

Wall, Caleb R. L., and Peter P. Mollinga. 2008. *Fieldwork in Difficult Environments: Methodology as Boundary Work in Development Research.* Berlin: LIT Verlag.

Weiner, Douglas R. 1999. *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev.* Berkeley, CA: University of California Press.

Weiner, James F. 1991. *The Empty Place: Poetry, Space, and Being Among the Foi of Papua New Guinea.* Bloomington, IN: Indiana University Press.

Whatmore, Sarah. 2002. *Hybrid Geographies: Natures, Culture, Spaces.* London & Thousand Oaks, CA: SAGE.

—. 2006. "Materialist Returns: Practising Cultural Geography in and for a More-than-Human World." *Cultural Geographies* 13 (4): 600-609.

Whitehead, M.J. 1981. "Trees of Soviet Central Asian Mountains." *Journal of Arboriculture* 7 (8): 211-214.

—. 1982. "Trees of Soviet Central Asia." *Journal of Arboriculture* 8 (2): 40-44.

Whitehead, Mark. 2005. "Between the Marvellous and the Mundane: Everyday Life in the Socialist City and the Politics of the Environment." *Environment and Planning D: Society and Space* 23 (2): 273-294.

Williams, Raymond. 1973. *The Country and the City.* Oxford & New York, NY: Oxford University Press.

Wilson, Alexander. 1992. *The Culture of Nature: North American Landscape from Disney to the Exxon Valdez.* Oxford & Cambridge, MA: Blackwell.

Winiecki, Jan. 2011 [1991]. *Resistance to Change in the Soviet Economic System: A Property Rights Approach.* Abingdon & New York, NY: Routledge.

Woolgar, Steve. 1990. "Configuring the User: The Case of Usability Trials." *Sociological Review* 38 (S1): 58-99.

World Health Organization. 2002. *Global Solar UV Index: A Practical Guide.* Geneva: WHO.

Wortman, Richard S. 2006. *Scenarios of Power: Myth and Ceremony in Russian Monarchy - From Peter the Great to the Abdication of Nicholas II.* New Abridged One-Volume Paperback Edition. Princeton, NJ & Oxford: Princeton University Press.

Yang, Xiusheng, Gordon M. Heisler, Michael E. Montgomery, Joseph H. Sullivan, Edward B. Whereat, and David R. Miller. 1995. "Radiative Properties of Hardwood Leaves to Ultraviolet Irradiation." *International Journal of Biometeorology* 38 (2): 60-66.

Yoneyama, Lisa. 1999. *Hiroshima Traces: Time, Space, and the Dialectics of Memory.* Berkeley, CA: University of California Press.

Yoshimura, Haruka, Hui Zhu, Yunying Wu, and Ruijun Ma. 2010. "Spectral Properties of Plant Leaves Pertaining to Urban Landscape Design of Broad-Spectrum Solar Ultraviolet Radiation Reduction." *International Journal of Biometeorology* 54 (2): 179-191.

Young, James E. 1993. *The Texture of Memory: Holocaust Memorials and Meaning.* New Haven, CT & London: Yale University Press.

Zanca, Russell. 2011. *Life in a Muslim Uzbek Village: Cotton Farming after Communism.* Belmont, CA: Wadsworth.

Zimmer, Anna. 2010. "Urban Political Ecology: Theoretical Concepts, Challenges, and Suggested Future Directions." *Erdkunde* 64 (4): 343-354.

Zununova, G. 2004. "Obriady i Obychai, Sviazannye s Zhilishchem Tashkentskikh Uzbekov." *O'zbekistan Tarixi* 1/2004: 62-71.

APPENDIX

АНКЕТА

1. Сколько Вам лет?

    < 20   20-25   26-35   36-45   46-55   > 55

2. Вы родились в Ташкенте?

    Да   Нет

3. Если НЕТ, сколько лет назад вы переехали в Ташкент?

    < 1   1-5   6-10   11-20   21-30   > 30

4. Вы свободно владеете узбекским языком?

    Да   Нет

5. Вы свободно владеете русским языком?

    Да   Нет

6. Если Вы владеете и узбекским и русским языком, какой из них Вы чаще используете дома?

    Узбекский   Русский

7. Какой транспорт Вы обычно используете при поездке на работу / с работы? (Вы можете выбрать <u>несколько вариантов</u> в случае если Вы пользуетесь ими в течении <u>одной</u> поездки.)

    ☐ Моя машина   ☐ Трамвай

    ☐ Автобус   ☐ Такси (с улицы)

    ☐ Маршрутка   ☐ Такси (по вызову)

    ☐ Метро

    ☐ Другие (объясните): _____

8. Если Вы пользуетесь своей машиной или такси, объясните, почему Вы не пользуетесь общественным транспортом?

    ☐ Нужно делать очень много пересадок

    ☐ Дорога занимает очень много времени

    ☐ Нет остановки у моего дома

    ☐ Нет остановки у здания моей работы

    ☐ В общественном транспорте может быть слишком много людей

    ☐ Общественный транспорт не для таких людей, как я

    ☐ Я очень устаю от общественного транспорта

    ☐ Другое (объясните): _____

9. Сколько времени у Вас занимает дорога <u>в одну сторону</u>?

< 15 мин.   15-30 мин.   31-45 мин.   46-60 мин.   > 60 мин.

10. Сколько денег Вы в среднем тратите <u>ежедневно</u> на транспорт?

< 2,000   2,000   3,000-5,000   6,000-10,000   > 10,000

11. Какие названия улиц Вы лучше знаете: узбекские, русские, или и те, и другие?

Узбекские   Русские   И те, и другие
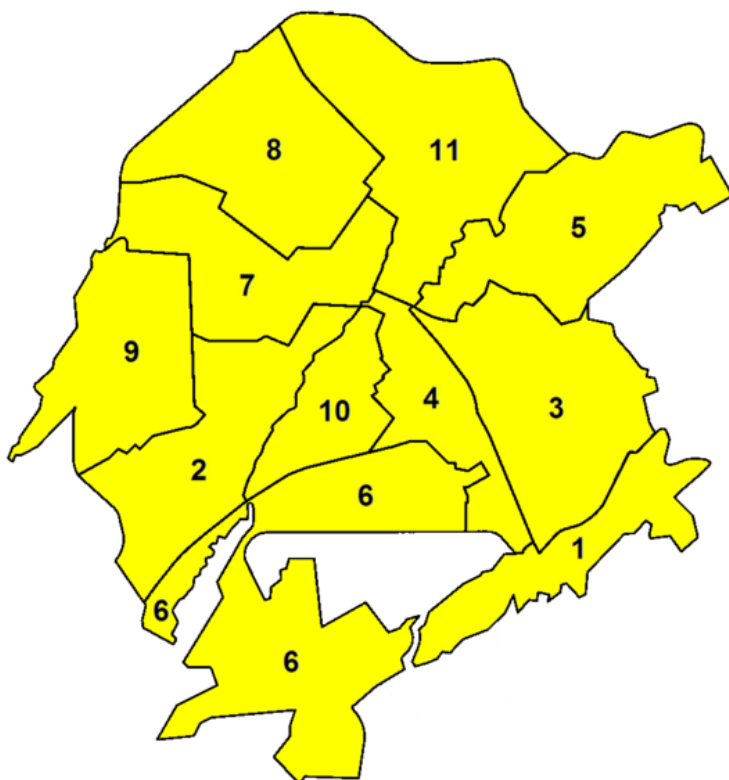
12. Улица Миробод ранее была известна как улица Педагогическая.

☐ Верно

☐ Неверно

☐ Я не знаю старое название ул. Миробод

☐ Я не знаю что ето за ул. Миробод

13. <u>Перед тем как перевернуть страницу,</u> дайте первые названия, которые ассоциируются с указанными ниже районами.
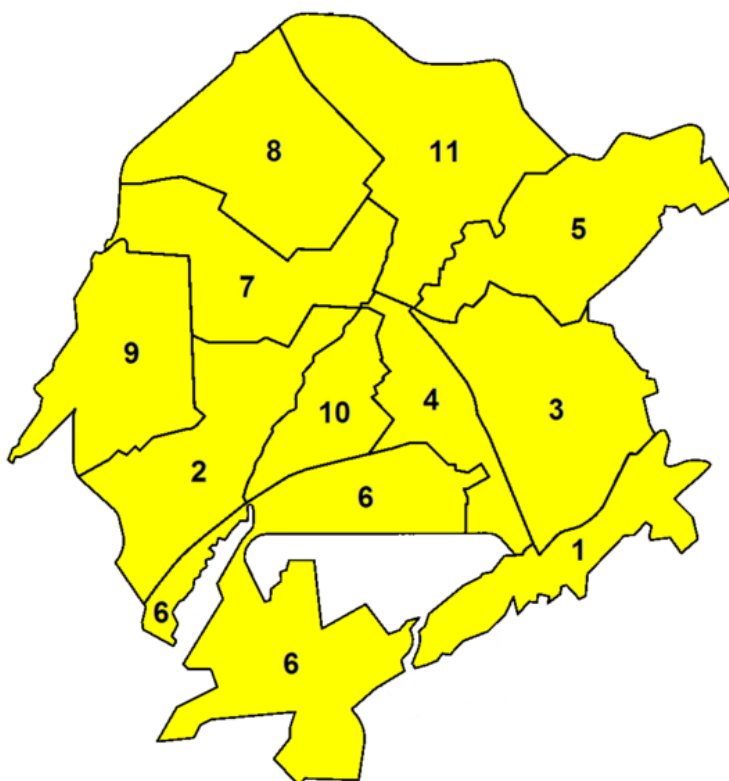
1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

14. Ответьте, пожалуйста, на вопросы ниже:

1. Бектемирский район

2. Чиланзарский район

3. Яшнабадский район

4. Мирабадский район

5. Мирзо-Улугбекский район

6. Сергелийский район

7. Шайхантахурский район

8. Алмазарский район

9. Учтепинский район

10. Яккасарайский район

11. Юнусабадский район

a. Я живу в _____

b. Самый дорогой район это _____

c. Самый дешёвый район это _____

d. Самый исторический район это _____

e. Самый новый район это _____

f. Самый безопасный район это _____

g. Самый опасный район это _____

h. Какой район, по вашему мнению, является в основном, узбеко-говорящим?

☐ Бектемирский

☐ Чиланзарский

☐ Яшнабадский

☐ Мирабадский

☐ Мирзо-Улугбекский

☐ Сергелийский

☐ Шайхантахурский

☐ Алмазарский

☐ Учтепинский

☐ Яккасарайский

☐ Юнусабадский

i. Какой район, по вашему мнению, является в основном, русско-говорящим?

☐ Бектемирский ☐ Сергелийский
☐ Чиланзарский ☐ Шайхантахурский
☐ Яшнабадский ☐ Алмазарский
☐ Мирабадский ☐ Учтепинский
☐ Мирзо- ☐ Яккасарайский
   Улугбекский ☐ Юнусабадский

j. Какие районы, по вашему мнению, заселены в основном коренными жителями Ташкента?

☐ Бектемирский ☐ Сергелийский
☐ Чиланзарский ☐ Шайхантахурский
☐ Яшнабадский ☐ Алмазарский
☐ Мирабадский ☐ Учтепинский
☐ Мирзо- ☐ Яккасарайский
   Улугбекский ☐ Юнусабадский

k. Какие районы, по вашему мнению, заселены людьми, приехавшими в Ташкент в последние 10 лет?

☐ Бектемирский
☐ Чиланзарский
☐ Яшнабадский
☐ Мирабадский
☐ Мирзо-
   Улугбекский
☐ Сергелийский
☐ Шайхантахурский
☐ Алмазарский
☐ Учтепинский
☐ Яккасарайский
☐ Юнусабадский