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Editorial Introduction to the Topical Issue on Philosophy of the City

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Broad and vibrant philosophical interest in cities has been on a steady rise since the beginning of this century. The movement has focused on how to use and apply philosophical concepts and create methodology to the study of urban environments. This endeavour has from the start been a decisively broad approach, engaging philosophical and philosophy-minded communities around the globe and cultures. The interdisciplinary and transcultural tendency is all the more crucial as many of the problems and challenges linked to urban growth and the contemporary conditions for urban life are increasingly shared in the globalized cultures and economies of the day. The particular form of philosophy concerns the city, most often takes place in a city, and the city can thus be understood also as an event of philosophy (Kochhar-Lindgren 2020).

The increase in not only interest but in the systematic study of Philosophy of the City is also apparent through the publication of specialized edited volumes in the very recent years on the topic (Meagher et al. 2020; Nagenborg et al. 2021). The Philosophy of the City Research Group (PotC RG) is an international open network of active researchers and practitioners working at the intersection of philosophy and the city. The role of the Research Group has been to facilitate connections between philosophers and other scholars of the field and to solidify the position of the new branch of philosophical and transdisciplinary inquiry. Following its annual conferences many topical issues have been published in various international philosophy journals such as *Environmental Ethics* (Epting 2018), *Open Philosophy*

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(Lehtinen 2020), and Topoi (Simon 2021). Now, the recently inaugurated *East Asian Journal of Philosophy* joins this list with the publication of six selected research articles and essays in this Topical Issue.

Philosophy of the city tends to address “the city” in general, and not any specific city. If it is concerned with a specific city, then only as a case study for a broader question posed about the urban form of life. This is what distinguishes it from empirical studies of cities as they are done in anthropology, sociology, history and urban studies – even though the boundaries to these disciplines are obviously porous since philosophers of the city seek to address currently relevant questions and are thereby empirically engaged in their philosophical inquiry.

However, since this is the *East Asian Journal of Philosophy* Topical Issue, it is tempting to wonder about the dynamics of the specifically Asian urban context. After all, according to the United Nations Habitat report (United Nations 2020), 96% of urban growth in the next ten years will take place in Asian and African cities (United Nations 2020, p. xvi). This rapid growth has contributed to the characteristic and often misunderstood experiential “messiness” of the layout and organization of Asian cities (Hou and Chalana 2016).

It is this perceived messiness that sometimes leads to the Othering of “the” Asian city, and to Orientalizing notions of a special essence, a distinguishing characteristic that makes it completely different from, and incomparable with “the” European city. Fantasies of irrational spaces and minds more concerned with the spiritual than with the material have fueled colonialist exploitation (Lobo 2021). Just as gesturing towards “non-Western” cultures, even as positive examples worth emulating, leads to crass simplifications, insisting on the Otherness of ‘the’ Asian city obstructs more nuanced analyses of the historical and cultural circumstances that have led to this perceived “mess.”

One of the factors for the explosive growth of Asian cities has surely been the outsourcing of industries and work to Asia since the second half of the 20th century (Cabannes et al. 2018). What seems like messiness to the European gaze, particularly in the East Asian context, might be the spatial logic shaped by the figuration of the Chinese (and in Japan Kanji) writing system. By contrast to the linearity of European scripts, Chinese and Japanese characters are multi-directional and modular, that is, built up of multiple independent components. This spatial logic, instilled from a very young age, translates into the spatial logic of cities that grow multi-directionally and modularly (Shelton 2012; Li 2014), creating the impression of a mess where there is in fact merely a spatial order alternative to linearity.

Each of the six articles of the Topical Issue presents a relevant contemporary approach to philosophy of the city. The array of themes range from justice issues to digitalization and smart city development and the gendered use of urban space

to the implications of the Covid-19 pandemic. The concepts presented and used represent current themes in Philosophy of the City and also areas of interest for further transcultural study of the links between philosophical approaches and urban topics. The styles and objectives of the contributions vary and one can find more traditional philosophical research articles joined by more poetic style. This also reflects the broad range of the contemporary Philosophy of the City.

The Topical Issue is opened by Shane Epting's article "People Love Cities – but do Cities Love them Back?" in which Epting muses on the multitude of ways in which affection towards one's own city is expressed and celebrated. The reciprocity of this affection, "urban love" is further examined by delving deep into the practices, relationships, and exchanges that are typical to urban everyday life. According to Epting, in art, entertainment, as well as popular culture cities are featured prominently as phenomena that arouse human curiosity and intellectual as well as creative interest. Epting seeks to explain the further resonance of these declarations of love to the practices that urban life constitutes. Epting's contribution is an apt reminder of an idea that could be highlighted as a central theme of this Topical Issue: that cities exist in order to serve their residents and any discussion aiming to facilitate this process is leading us forward in understanding the urban lifeform.

Sage Cammers-Goodwin's article which presents the readers with a case study of a sensor embedded 3D printed pedestrian bridge, traces how digitalization is changing the nature and uses of contemporary cities. Cammers-Goodwin's article "From Digitalization to Capturing 'Cityness': Is it Possible to Make the Essence of Good Cities Measurable with Sensors and Algorithms?" presents "cityness" as a value concept for further study that combines quantitative and qualitative approaches to the quality of urban life. The bridge installed in De Wallen, Amsterdam becomes emblematic of multiple strains of development that are taking place in cities at the moment: increased datafication of the use of the city, infrastructural innovation, as well as intentional increase in light transport modalities in order to reach climate targets through sustainability transformations. Operationalizing cityness with the help of digital tools such as GIS or IoT systems thus complements other, more qualitative approaches to studying the livability of built urban environments in clarifying why certain characteristics of cities clearly have tangible benefits for the users of the city and how to further foster the development of these types of characteristics.

In "Bridging Temporal and Transport Justice: A Case for Considerations of Time Use in Urban Justice" Maria Nordström draws attention to temporal inequality as a concern for urban justice. The scarcity of time has commonly been assumed to be convertible to financial resources potentially lost during transportation times.

Also accessibility has been standardly regarded as the main metric for transport justice. Nordström argues for focusing specifically on the justice of travel time, and especially in connection to gender issues in travel patterns. An over proportionate amount of time spent in transport due to carework (e.g. bringing children to daycare) is shouldered by women, and they tend to make multiple trips with complex routes using public transport in order to accomplish as many tasks as possible; women therefore tend to be considerably time-poorer than men. Nordström concludes by comparing the advantages and disadvantages of using time as a metric for urban transport justice, and concludes with a recommendation to take time more seriously in urban planning agendas.

The next article “How Has the Pandemic Situation Changed Our Perception of Space? The Phenomenology of Space in the Light of COVID-19 Restrictions” is written by Aneta Kohoutová. She focuses on the repercussions of the ongoing Covid-19 pandemic to the perception of urban space. Even though social interactions, including interactions in public spaces like parks, were reduced to a minimum, the pandemic offered the possibility for a fresh experience of urban spatiality. Kohoutová draws on the work of Henri Lefebvre, Michel de Certeau and Maurice Merleau-Ponty to analyze what she calls the “material layer” of space, namely the configuration of objects in public spaces that afford cultural and social activities. Precisely the abrupt pause to all public social and cultural activities during the pandemic provided an opportunity for the study and appreciation of spatial materiality.

Duane Allyson G. Pancho brings up an important topic in the article “Confronting the Spatiality of Women’s Fear, and Why It Matters.” The gendered nature of the use of urban public space becomes especially clear through the fear and threatening atmosphere and gestures that women experience in the urban space. The interpretation of these fears and their embodied and spatially manifested reasons is made by Pancho in relation to the writings of Gill Valentine, Leslie Kern, Iris Marion Young and Simone de Beauvoir. The mechanisms of objectification and suppression end up limiting the space that women literally take in cities. Despite many advances in equality during the past decades the different forms this spatial oppression gets is still very much a lived reality for the majority of women in contemporary cities. Pancho’s contribution gives voice to the everyday lives and experiences of women and urges philosophy of the city to take women into consideration as inhabitants with full rights to the city.

The group of architecture scholars consisting of Tordis Berstrand, Amir Djalali, Yiping Dong, Jiawen Han, Glen Wash Ivanovic, Teresa Hoskyns, Siti Balkish Roslan, and Claudia Westermann have contributed to the Topical Issue with a joint essay “A Conversation on a Paradise on Earth in Eight Frames.” The essay focuses on the

city of Suzhou, a dynamic, modern Chinese city that has maintained its aesthetic traditions of producing exquisite (silk) garments and gardens. It draws on ancient Chinese traditions of gardening, poetry and painting in order to analyze the experience of a contemporary Chinese city. The text is not classically argumentative: the authors do not make their case by means of premises and conclusions. Rather, it is dialogically essayistic in style. The form matches the content of a dialogue between the modern city and its ancient traditions, as well as with the Western gaze. The piece was presented first at the 24 hours of Philosophy of the City online conference in May 2021.

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People Love Cities – but Do Cities Love Them Back?

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ABSTRACT | People celebrate cities through art, music, and fashion, often claiming to love them. Several artists, including but not limited to Frank Sinatra, Elvis Presley, and Katy Perry have sung about cities in celebratory manners. However, such claims are inherently vague, and it remains unclear if these declarations hold meaning or are merely emotive. The author argues that these expressions have meaning and that cities return the love, which is why people love them in the first place, surprisingly. This article fleshes out these views, showing that the reciprocal nature of “urban love” is not empty. Instead, the feelings associated with such exchanges also bear the earmarks of typical interpersonal relationships that endure lengthy durations. The article ends by exhibiting that the line of thought explored here does not only reveal insights into human-urban relations, but it gestures toward novel ways of examining how cities can better serve residents.

KEYWORDS | Urban Love; Cities; Philosophy of the City

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1 Introduction

Numerous people love cities, and there are good reasons to believe that their cities love them back. This paper fleshes out these notions, focusing heavily on the latter because it sounds doubtful. I begin by showing the methodology necessary to situate the claims above to make this case. Next, it examines a range of proclamations regarding “urban love” in the arts. They show how metropolitan environments invoke people to make announcements about loving the city and other sentiments which resemble customary, interpersonal relationships. After establishing this view, the attention turns toward revealing what it means for a city to love people in a way that makes sense, offering further insights into contemporary urban life. This study concludes by suggesting a few additional areas of study that require investigation.

2 Methodology

Unpacking the views above requires undertaking a methodological enterprise that wildly deviates from conventional approaches in mainstream philosophy. However, the goal remains consistent with the pursuit and love of wisdom. The aim is to interrogate the ordinary to uncover something extraordinary about the human and, to a greater extent, urban conditions. These relations shape the contours of how cities make people feel over lengthy periods. The point is to pay attention to the elements that residents and municipalities can influence that get lost in the daily complexities of city life. Specifically, we can think about social-material arrangements in cities – including but not limited to infrastructure, architecture, laws, policies, codes, zones, commercial districts, business operations, and cultural centers as forms of expressions and actions – that result in urban dwellers feeling specific ways about the city and life in it.

Moreover, it is also not only an interdisciplinary enterprise wherein I rely on research from neighboring disciplines such as psychology or sociology that would ordinarily provide a plethora of insights regarding how the city affects people. This notion does not suggest that I go to extremes to avoid their contributions to metropolitan places. It is the case that my pursuits do require perspectives that fall outside of their respective orientations. Similarly, this research does not seek surveys to uncover how existing people feel to achieve a consensus, a social science endeavor. That kind of exploration would merely reveal what people thought in a particular location at a specific moment, which is also outside of my area of study.

Instead, the philosophical interrogation that follows calls upon the auditorial testimony of artists who, in several ways, love, hate, and or encounter numerous emotions while engaging with the city in a variety of capacities. While these instances lack a scholarly grounding, they illustrate how transdisciplinary measures can inform the academy, philosophy included. Holding the view that such sources are inherently problematic due to their emotive nature and lacking a disciplinary grounding asserts an arrogance that limits the rigor of philosophy. Such positions fail to acknowledge that sources regarding accurate states of affairs must bear specific characteristics to carry informative weight. In turn, perhaps inadvertently, they favor a binary wherein meaningfulness must remain an operation that exists solely within the confines of the academy – or it is stigmatically doubtful.

In reality, we can find wisdom about the city and its numerous facets in its structures and in the multiple areas of life that they touch. This point suggests that there is no good reason to wholesale reject perspectives that originate in streets, bars, and cafes. After all, a philosophy of the city should start in such places for inspiration, meaning that testimony coming from there must count as significant authorities. With the spirit of this sentiment firmly positioned to guide this work, it begins by examining overtly public declarations of love that, after closer inspection, give the impression that one who is expressing a passionate desire shows an exuberance for a specific city.

These accounts represent expansive views of love for the city. They describe how urban environments can inspire artists to capture the intensity of emotions that cities can evoke, providing shared space for relations and celebratory engagement for people who hold similar experiences and or appreciations. Having shown that these examples establish a baseline for expressing love for the city, assuming that corporeal experiences have influenced their outlooks, the attention turns to works focusing on some particular ways that metropolitan places can solicit feelings beyond love in a broad sense. They reflect on the *actuality* of living in the city.

With a variety of songs that illustrate an extensive range of emotional responses in view, I provide a philosophical interrogation that reveals how socio-material arrangements in the city create feelings of love (and beyond). In turn, such configurations lead people to love and or hate the locations where they reside and work (and several emotions in between). This examination provides the stage for reflection, motivating us to look deeply at how we perform in the places we call home and how they influence our performances.

3 The City in Music and Music in the City

While love is the most recurring theme in popular music, songs involving cities arguably hold a second place (Cohen 2007). Their appeal endures, providing ways for songwriters to connect to specific views of urban places (Sheila 1992). Such notions exhibit how metropolitan troubadours discover timeless ways to connect with listeners who share their experiences. Many of these tracks are well-known, sung worldwide, featured in films and television, and probably hummed while trudging the roads of our happy, urban destinies.

For example, there are countless numbers dedicated to New York City. Frank Sinatra's "*Theme from New York, New York*" performance could be the most well-known (Kander and Fred 1980). More recently, Jay-Z and Alicia Keys celebrate the city with their hit "*Empire State of Mind*" (Shux et al. 2009). There is also Ryan Adam's 2001 "*New York, New York*." Old Blue Eyes was not a monogamous urban lover, lest we forget "*My Kind of Town (Chicago is)*" (Cahn and Van Heusen 1964). Yet, it is challenging to think of Sinatra without conjuring up images of Las Vegas, celebrated by Elvis Presley in "*Viva Las Vegas*," (Shuman and Doc 1964) along with a rendition by bearded troubadours, ZZ Top (Shuman and Doc 1992). Most recently, Katy Perry reminds us why people visit Sin City, along with some of the dangers of exceeding the limits of responsible alcohol consumption (Child, Carlsson, and Perry).

While the songs above focus almost entirely on being "in lust" with the city, other numbers draw more closely on experiences that reflect actual long-term relationships, paying attention to the good and bad realities of living in and loving an urban environment. Consider, for example, Randy Newman's 1983 classic hit, "*I Love L.A.*" The chorus of this track keeps an expression of admiration for the city in the highest regard. The lyrics and their tone suggest that, behind the adornment, Newman draws attention to less celebrated elements (Pell 2014). That is to say, Newman has a reputation for sarcasm, and this ditty did not escape it (Pell 2014). Despite the cheery nature of this track, he does not dismiss the unfortunate realities of Los Angeles, such as homelessness (Pell 2014). Still, aside from such conditions, Newman holds admiration for the place he calls home (Pell 2014).

Artists Hot Chelle Rae (2020) continue the duality of emotional attachment to Los Angeles with their number, "*I Hate LA.*" The video for this track begins with band members complaining about the city's parking enforcement, followed by an intermittent chorus about the local stretch of the Pacific Coast Highway (PCH) and its well-known traffic congestion (Hot Chelle Rae 2020). Throughout the first part of the song, they lament urban life in this sunny paradise (Hot Chelle Rae 2020). In the latter half, they are, despite the associated hardships, celebrating the city

and its many delights (Hot Chelle Rae 2020).

While the songs covered by Sinatra and others focus exclusively on the positive feelings associated with particular cities, Newman and Hot Chelle Rae move toward views showing balanced realities wherein the city is loved, but they also discuss negative aspects. These songs bring us closer to the realities of our everyday relationships. That is, yes, we love our significant others, but living with them can often test the limits of our love. However, when considering the totality of interactions with our loved ones, the good typically outweighs the bad. If the contrary is true, separation or divorce can occur in most cases for spouses and cities.

The songs referenced up until this point have focused on admiration for cities in grander senses, but some numbers pay attention to specific day-to-day interactions with the city. For instance, for a deeper investigation into an appreciation of odes to this city, the *Village Voice* Staff (*Village Voice* Staff 2014, para 1) narrowed their sixty favorite tracks on this theme, providing insight into the criteria that should accompany songs about New York City while challenging the authenticity of some of the songs listed above:

Our mission: to come up with a list of the 60 best songs ever written about our city, songs that best capture what it's like to live, love, struggle, and exist in the sprawling, unforgiving, culturally dense metropolis we pay too much to call home. We started by agreeing on the songs we shouldn't include – naked and clunky stabs at new New York anthems that fall flat and ring inauthentic, like Jay-Z's "Empire State of Mind," U2's "New York," and Taylor Swift's "Welcome to New York." Instead, we focus on tracks that are so New York, and so good, they can't be denied.

While not every song on their list deals directly with the emotional aspects of urban life, several of the tracks they discuss bring those elements into view. In turn, one gains insights into the experiences of New Yorkers and how the city impacts them in various ways. These songs reflect good and negative dimensions of urban existence that play a meaningful role in what it means to have a relationship with one's city. Such encounters easily stack up against what it is like to be in a long-term relationship with someone you love.

Consider, for instance, their take on Interpol's "NYC," noting how the inescapable need to navigate the city holds steady as an area of concern, similar to Hot Chelle Rae's sentiments on the PCH. *The Village Voice* staff (para 48) describes it as follows: "[T]here is a kind of hazy plod to Interpol's 'NYC' that does perfectly exemplify the everyday life of many a working New Yorker: those bits of your commute

where you keep your head down, downshift into autopilot, and strap on your mental and emotional armor for the battle you find daily in the rat-race capital.”

This passage exemplifies the common elements that provide shared experiences in cities, which urban dwellers can identify as playing critical roles in shaping their relationships with these places. Over time, they can arguably have a substantial effect. Along with Interpol’s song, other transportation-inspired numbers such as New York Dolls’ “Subway Train,” Tom Waits’ “Downtown Train,” Le Tigre’s “My Metrocard,” and Duke Ellington’s “Take the ‘A’ Train” also make their list (Village Voice Staff 2014). Including these tracks bolsters the view that daily experiences such as mobility influence urban residents’ relationships with cities. This point does not suggest that transportation is the only infrastructure influencing residents’ lives. Still, it is challenging to image rock songs about waste-water management or other infrastructure services.

Yet, urban relationships are more than how people experience mobility, and other songs in the *Village Voice*’s collection make that notion evident. For example, they note that Lou Reed’s “New York Telephone Conversation” shows how urban dwellers’ particular habits can also play roles in how we think about our relationships with cities. *The Village Voice* (Village Voice Staff 2014) staff maintains:

Is there any musician more New York than the late and beyond-great Lou Reed? Probably not, because no other artist could so succinctly capture the middle-of-the-night phone conversations we hear and have around the city as he did in his Transformer song “New York Telephone Conversation.” Clocking in at an insanely swift 1:31, the ditty bounces and satirizes both the gossip and desire for the gossip that New Yorkers can overhear from their windows and on the streets 24 hours a day while also partaking in it on our own.

The passage above illustrates that relationships with cities go beyond how urban technologies such as transportation systems affect our lives. Other people in the city also play roles in how the city affects urban life. This notion provides a clue as to what it means for the city to love you back, along with what it means to love one. Fully unpacking this idea means that we must turn the attention toward an account of what we love when we say that we love a city. In turn, the following section does just that. It examines the notion of a city as an object of study to understand what is meant by “the city” when proclaiming love for it and recognizing that it can love you back.

4 The City and Love

While the previous section focused on how people love and relate to cities, inverting that idea provides insights into how cities can love you back – or make you feel hated, neglected, and or a variety of emotions. For instance, if it is sound to say that people love the city, it makes sense to say that the city loves them back – if we can *show* the exchange – which is the task of this section. The surprising insight here is that people who love their cities might feel this way because the city *already* “loves” them. In this sense, the city can make a person feel love through the effects of its social and physical interconnectedness. As expressed in the songs mentioned above, we can gauge this love’s extent and quality through people’s experiences.

Conversely, people might feel as if their cities *hate* them. While hate could go too far in many instances, it seems safe to hold that cities can help produce a mixed bag of emotional responses from residents. Such feelings will increase and decrease over time, similar to other relationships that we hold dear. This view is worth entertaining because it bears a family resemblance to the realities associated with interpersonal relationships. People can love their cities while also being annoyed by specific elements, along with numerous gradations and extremes at both ends. Still, similar to loving a person over a duration, one might love the person entirely, but some attributes might cause slight mental disturbances. This notion suggests the thinking behind cities would benefit from an evaluation, hoping to discover the problematic elements that could make one feel that their city hates or dislikes them while also paying attention to the urban configurations that make them feel loved.

For example, Interpol’s “NYC” and Hot Chelle Rae’s frustration with traffic conditions should warrant planners to look for ways to mitigate the harms coming from these systems. Mobility is an isolated dimension. Numerous other elements such as green spaces also make people feel that their cities love them, which researchers have shown contribute to feelings of safety (e.g., Campagnaro et al. (2020)). Feeling safe in the city could easily qualify as a precondition for feeling that your city loves you. As socio-material arrangements, cities could create platforms for love through the amalgamation of infrastructure, art, commerce, and community – among other elements. As shown previously, musicians attest to essentially being in relationships of sorts with cities. Now, the challenging aspect is understanding how such relations are reciprocal. Establishing this position requires understanding cities’ ontological statuses, calling for closely examining the amalgamations above. The “received view of cities as technologies” brings this perspective into view (Epting 2021a).

For instance, several scholars across the academy have advanced views holding that cities are a kind of invention or technology (e.g., Jonas (1984), Guattari (2015), Swyngedouw (2006), Glaeser (2011), and Epting (2021a)). While such views differ, they collectively show how we can think of cities as technologies, hence the shorthand, “received view.” As with any technology, they are for some particular purpose, even though such reasons remain subject to debate. For the moment, we can entertain Aristotle’s idea that cities’ purposes are to promote virtue and happiness for their residents (Clayton, n.d.).¹ This notion holds that we create and reside in cities to help us live our best lives. It does not matter what a city has or lacks, and the point here is that it has a structure and services that help us secure desired outcomes. Listing the items of a city’s composition is an unending task, but it seems safe to assume that some of the “big-ticket” items customarily present should hold steady.

For example, cities have people and homes, which should also be on the list. Transportation, infrastructure, policies, laws, codes, government offices, buildings, parks, restaurants, and galleries likely are in the inventory. The point here is not to engage in persistent naming. Each city has a unique catalog that gives it character. Despite such differences, they have enough resemblance to provide enough shared ground for a conversation regarding how they can invoke feelings of love – along with others such as hate and indifference.

Nevertheless, we must remember that cities differ from most other technologies because it is challenging to imagine them without people. Cities without people hold a special designation: “ghost cities,” such as those dotting landscapes in China (Yu 2014). Their presences are eerie. This notion suggests that a city without residents, as a technology, amounts to any other technology abandoned across a given terrain wherein (nonhuman) nature reclaims the space. However, Edward Glaeser 2011 makes a case that cities remain humankind’s greatest inventions. Part of cities’ allure is the people who reside there, meaning that there are myriad opportunities for work, creativity, relationships, and much more (Glaeser 2011).

A city without people, then, is a ghost city. Cities must have people. This point entails that, as technologies, cities have “human components.” Ergo: when people claim to love their cities, they are claiming to love the urban dwellers who make up a city, along with elements such as buildings, bridges, ballparks, zones, laws, and sidewalks. Like how a person can love another with numerous character

¹ It is worth mentioning that I am not making a claim that endorses or seriously engages with Aristotle’s work on the city here in any meaningful fashion, which is why I am limiting my engagement to a passing reference from Clayton. I acknowledge that going in that direction would involve an entirely separate enterprise. This reason explains why this sentence reads “for the moment,” indicating that additional pursuits are required.

deficiencies, one can love the city while disliking unsavory elements. Recall that we are dealing with a relationship that endures. Loving a city means looking at it like a marriage: “for richer or poorer,” “in sickness and in health,” and “through good times and bad.” However, if the city treats you poorly, the logical step would be to plan an escape.

This point aside, everything in a city was a decision that a person(s) made. For instance, Robert Moses prioritizing roadways in cities is a prime example showing how such choices can drastically shape urban life (Caro 1974). His visions negatively impacted many lives (Caro 1974). Some of his projects are now textbook cases in how not to build infrastructure because of the racist outcomes that they produce (Winner 1980). Yet, he was only *one* person, and mobility is only one dimension of living in the city, despite being a vital aspect of urban dwelling. One way to think about the outcomes is that they are the efforts of numerous people, spanning centuries in some cases. These decisions cut through businesses, urban planning, arts, and architecture – along with countless other dimensions. This incredible complexity forms the circumstances that define the urban condition, influencing how we experience life on a day-to-day basis. If someone loves their city, such love could be directly associated with how the abovementioned forces make them feel. These “collective acts,” while they could be entirely unintentional, are received and experienced as a kind of love in some cases. Calling them “collective” does not entail that a Collective (i.e., group of people with purpose) made them. Instead, this term suggests that we can think about them as a collective act, considering that a collection of urban artifacts (e.g., trains, policies, platforms, sidewalks) helped produce a particular feeling such as love or comfort.

Imagine this case. After working late, being exhausted, a man enters the bus. The driver, seeing him, greets him and asks, “how are you doing, working late again?” because she knows he typically catches her earlier route. He replies with an affirmative and asks about her day. After the driver responds quickly, he takes a comfortable seat and starts scrolling through social media while he takes in the familiarity of his ride home. Even though work was grueling, the bus ride home brought him warm feelings. This social-material arrangement – the driver, bus, seat, route, roadway, and bus schedule, helped produce the outcome of feeling loved (or comforted) by the city.²³ In turn, the city, as an expression involving nu-

² It is worth mentioning that I have no research interest in views concerning agency here, similar to Bruno Latour’s Actor-Network Theory. Instead, the focus remains on outcomes, which exist aside from any notions of nonhuman agency. Still, I have argued at length against such view of agency elsewhere. See, (Epting 2021b).

³ It is worth mentioning that cases involving bus drivers and passengers exchanging pleasantries might only be common in specific locations (e.g., select cities in The United States of America). I ap-

merous people over lengthy durations, can make you feel loved (or other states). Suppose the driver was indifferent and the bus was filthy and uncomfortable. In that case, riders could think that the city, in a small way, does not love them – or perhaps they could endure the situation as an annoying element without making them feel *completely* unloved, a high level of discomfort, or a similar feeling.

These latter points indicate that there is more at play here than simple occurrences that help produce individualized feelings in a particular moment. The totality of experiencing – formed through socio-material engagement over a considerable duration – seems more likely to deliver a more accurate perspective of how a city can generate such feelings. The point is not to analyze one bus trip or all of them. Instead, it is to investigate how all such engagements leave residents with a feeling wherein they can say with certainty that they love their city. On the contrary, they could maintain that they hate the city, feel indifferent towards it, or have lukewarm regards because it is “just ok” from their perspective.

While the points above make a strong case for love and the city, some issues require attention. For instance, the element of subjectivity requires acknowledgment. For example, each person will experience various urban interactions with different degrees of felt experiences, suggesting that coming to a consensus on whether a city loves its people is an inherently doomed affair. This challenge appears significant, but it fails to consider that reaching an agreement is a precondition for feeling love for the city, which is an act that results from the conditions wherein the city “has” love for a person.

One could argue that it takes intimate knowledge of a city to love it, holding that the majority of a city’s residents lack such information. This objection is fair. However, the counter position maintains that a person does not need to intimately know all aspects of a city to love it. They are only expressing a feeling of how the city makes them feel. This situation could always arise in interpersonal relationships wherein a person loves another, only to discover that they are a kleptomaniac, which they lacked knowledge about before falling in love with them.

Despite such circumstances, the reality is that discovering that one’s lover is addicted to stealing does not change the fact that they made someone feel loved. Once they find out those facts, it could change the relationship entirely, or they could accept the reality that they love a shoplifter. Perhaps they love them enough to help them overcome their unsavory habit. The same conditions might hold if a person discovers that their city has a horrible past or engages in unethical practices at present. This notion, however, moves us toward another issue that

precipitate the reviewer who pointed out this fact.

concerns how cities can love people differently. Such a concern goes beyond the initial investigation's parameters of what it means to love a city and have it love you back. In turn, the idea deserves a separate study, along with other questions that stem from this exploration. The following section moves in that direction to identify such issues, showing some of the future steps that this kind of research should undertake to reveal additional insights into how cities can play a better, more equitable role in shaping people's lives.

5 Areas of Future Research

While the songs mentioned above celebrating New York show how people love the city while other ditties highlight the particular features of day-to-day life, other numbers reveal aspects missing from their testimonies. For instance, Grand Masterflash and the Furious Five's "New York New York" illustrates a horrific view of urban life in the city (Robinson et al. 1983; Village Voice Staff 2014). They juxtapose the idea of the Big Apple as portrayed on television, the one that tourists encounter, which differs drastically (Robinson et al. 1983; Village Voice Staff 2014). In turn, people will not know of the unfortunate realities tucked away from the mainstream, conditions that reflect human suffering alongside the extravagance of high-rise homes (Robinson et al. 1983; Village Voice Staff 2014). This song paints a much different picture of New York, and it is one where the city does not love the people featured in the music. This notion gestures toward a future area of research, focusing on the question: how can we change cities so that all of its residents feel loved?

This inquiry not only challenges the status quo that controls the city, but it pushes against the "status quo of thought" concerning how we think about cities. That is to say, the mere thought that a city, as a social-material technology, should make residents feel loved is bound to make many people uncomfortable. One could argue that measures such as ensuring the fair and equitable distribution of harms and benefits, along with having a meaningful voice in policy decisions (e.g., environmental justice; see (Figuroa 2006)), should suffice.

However, one significant advantage of bringing "urban love" into these discussions is that it deals with how the outcomes of social-material arrangements make people feel. On the surface, this notion might sound ridiculous—or at least weird. Although arguments about the ethical dimensions of resource distribution remain subject to debate, there is no denying how people feel. If one group feels that the city hates them due to configurations of infrastructures and structures (i.e., residential, commercial, industrial, and cultural), the problem is undeniable. Feelings

such as love are not subject to the same considerations as resource distribution which can be measured and verified. One could argue that this reality is why we should not consider feelings like being loved. Yet, that position says more about the status quo than it does for reforms that challenge it. If we want to create cities that inspire *all* residents to sing about having love for their cities, developing and engaging in this kind of research deserves significant attention.

6 Conclusion

This paper showed that while numerous artists have expressed love for their city, we can also say that cities can love them back. People are in relationships with cities, which is apparent when considering a cities' social and material compositions. I argued that one way to think about a city is as a social-material technology composed of people, infrastructures, structures, and much more.

Urban dwellers love their cities because their cities already love them. This "love" is the outcome of arranging the urban elements above in a manner that makes them feel any range of positive emotions. People experience this love over durations from the cumulative, day-to-day experiences of living in the city. The benefit of investigating cities by focusing on the feelings they help create is that it challenges how many people typically think what it means to assess a city.

This line of thought also signals the need for additional research on how and why some groups of people feel less loved than other communities do. This notion is unorthodox. It pushes against research norms across the academy, even philosophy, the love of wisdom. In turn, this kind of approach will likely meet resistance or scorn. Yet, the state of feeling loved shows how unconventional ideas—such as questioning whether a city makes residents feel as if their city hates them to develop new ways of thinking about cities—extend beyond what traditional methods of investigation can deliver. In turn, thinking about why people love a city and what it means for a city to love them back does more than push against conventional ways of how people feel about urban environments. It signals that creating cities centered on equality demands challenging the status quo of inquiry to deliver better urban futures.

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From Digitalization to Capturing “Cityness”

Is it possible to make the essence of good cities measurable with sensors and algorithms?

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ABSTRACT | This paper seeks to uncover whether or not cityness can be made measurable and suggests a possible case study to operationalize cityness. Cityness is a value comprised of city users and the built environment. While it has repeatedly been confirmed that certain characteristics of cities have tangible benefits, it remains challenging to understand how and to what extent these traits can be nurtured by the built environment. Recently, however, the increasing digitalization of public space has brought new opportunities to operationalize physical properties and human interactions that lead to cityness. This article reviews and ethically examines a continuum of experiments using digital tools ranging from GIS to IoT systems to see to what extent they can successfully quantify previously intangible traits of city life. Finally, it introduces the case study of a sensor embedded 3D printed footbridge that was installed in De Wallen, Amsterdam Summer 2021. Ultimately, the bridge provides an opportunity to study how a singular infrastructure relates to cityness over time and in relation to naturally occurring events.

KEYWORDS | Cityness; Built Environment; Big Data; Digitalization

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1 Introduction

Some cities are better to live in than others. “Livability” indexes have been used to help people determine where to reside. These indexes rank outcomes of cities across domains such as stability, healthcare, culture, education, and infrastructure (The EIU 2021), but fail to capture the feeling of a city. To understand what truly makes a city a successful *city*, we must use a different term, “cityness.” This paper seeks to understand whether “cityness” can be made visible and measurable with the growing presence of digital tools in urban life. One such example is the MX3D bridge in Amsterdam, a 20 square meter 3D printed stainless steel structure equipped with a sensor system to monitor its structural integrity.

The central concept of “cityness” will be expanded upon in section three of this paper, but for now it is useful to know that the term was coined by Saskia Sassen as an alternative to Western notions of urbanism as a way to describe how people and infrastructure meld together to create new life worlds (Sassen 2010, pp. 13–18). A street can become a place for children to play baseball or the prime location to generate parking ticket revenue (or both). A corner brings together and connects the life worlds of hotdog vendors and business people. Just as the concept of “humanity” captures what we look for in the best of human beings, “cityness” functions in a similar form for cities. There are two main factors that contribute to cityness. One is the built environment. This conception of the city is mostly devoid of users and cultures, instead, emphasizing how physicality shapes usage. Alternatively, one could focus on users and their flow *through* infrastructure. From this perspective, culture, behavior and interactions define the city and shape its physicality, not the reverse. Such a mindset might suggest that any location could have “cityness” if the right people showed up and unleashed themselves upon the infrastructure. The blurry nature of the relationship between the built environment and city users can frustrate those trying to cultivate cityness.

Despite their economic, geographic, cultural, and infrastructural differences, cities have a thread that connects them – without which it would be impossible to distinguish cities from non-cities. Yet, separating out the thread into stands can be difficult as there are innumerable dependencies. Does one begin with the built environment or first work to facilitate interactions? More importantly, what makes a good city – what specific infrastructures and interactions in and around the built environment are desirable and needed?

While these questions are not new, the data with which life in the city can be studied empirically has increased with the digitalization of public space. Digital feedback mechanisms, such as mobile phones, smart cars, smart street lightening systems, and digital kiosks, are often more vigilant and consistent at recording

than humans, and, therefore, can be used to analyze behavior in spaces previously impossible to study with the same level of scrutiny. Due to the relative nascence of digital infrastructure in public space, the recently increased power to process big data, and the diversity of academic backgrounds connecting digital data to city characteristics, literature is scattered between disciplines and, therefore, inconsistently categorized.

This paper begins with the inherent relationship between cities and data in the current digital age, arguing that data collection has become a fixture of the built environment. Next, we will have a closer look at the value of cityness and why it is useful to understand how the built environment and city users come together to make thriving cities. These two sections provide the context for a brief literature review of projects connecting urban big data to concepts and aspects of cityness. This review ranges from experiments where individuals were likely left unaware of the research and outcomes (passive) to those that actively involve the data generators (active). We will analyze the benefits and shortcomings of both approaches, active and passive. The active/passive-distinction is important because it is possible to use preexisting digital technology to measure cityness and also feasible to create technology specifically with the intention of increasing or measuring cityness. Informed contributions also may have an impact on cityness itself.

This paper concludes by incorporating findings from the review to articulate data processing goals for an IoT footbridge installed in De Wallen Amsterdam in summer 2021. Given that pedestrians and cyclists function as load on the bridge, it is reasonable to expect that general usage trends may be monitored. Naturally, bridge users will actively cultivate cityness as they go about their lives passing across the infrastructure. These moments of interaction may be captured and processed, both passively and actively, to systematically analyze the intersection of built environment, city users and IoT technology over a two-year period.

2 Digitalization of the Built Environment

Data generation and processing has become a part of public space. Not just of self-identified smart cities, but of less technologically enriched locales as well. Generated largely through city users, big data is stored and accessed primarily by corporations and the government, and secondarily by practitioners of the city. From smart phones, to Google Maps, to public online review services, the conversation of cityness can hardly take place without acknowledging data, as increasingly more city artifacts are capable of digitally collecting and sharing information.

This dynamic only intensifies when one considers the volume of corporate and government owned IoT (internet of things), sensor embedded devices capable of communicating and reacting wirelessly, infrastructures increasingly proposed for introduction into public space.

City users are often unaware of the extent to which they contribute to public databases. "Public" here is a tricky term because data is commonly stored and shared in the gray area. Seemingly private data ownership frequently means shared rights between the maker of the data and the institute providing the means to capture and store it (Al-Khouri 2012). This means that the government can often access parts of seemingly private data. "Customers, Users, or Citizens," a 2016 report on Amsterdam, listed individual data collected in the city. The non-exhaustive list was extensive. It included mobile phone records, social media postings, volunteered geographic information, identity and address information, CCTV, license plate number recognition, car GPS, tax records, bank records, travel card information, WIFI data, healthcare data, pensions and benefits, drivers licenses, vehicle information, utility (water, gas, electricity) service records, education records, and criminal records (Taylor et al. 2016).

When considering future cities, the above examples might be just a taste of what is to come. IoT technologies will likely be applied to a growing subset of infrastructure. Already, smart lightening systems and walk buttons appear in a number of international metropolises such as Hongkong and Amsterdam. Smart environmental monitoring, structural health monitoring, and power grids may soon to follow. While IoT tools might seem to have a simple problem space and clear functionality, the consistency and volume of data they collect can allow for detailed analysis. For example, smart grids could be considered a privacy violation due to the fact home activity can be revealed by energy usage patterns (Tally, Rodrigues, and Wright 2019).

In 2012, Sargasso estimated that the Dutch government operated an estimated 5000 individual databases within which a resident's data could be stored (Door 2012). At the time, most Dutch citizens were only in a dozen or so, but residents with unique characteristics, such as individuals with a criminal history, disability, terminal illness, low academic attainment, social service beneficiaries, asylum seekers, and veterans, could be found in hundreds of databases (Door 2012). Unsurprisingly, not everyone is subject to the same scale and scope of surveillance and scrutiny, which creates disparities and concerns with regard to equal treatment.

While some demographics face increased data collection and scrutiny, others are excluded. Some lack the capability to use online resources and others choose to limit their online presence (Reisdorf and Groselj 2015). Meanwhile, government

can also deprioritize collecting data on certain groups either by surveilling some areas less than others or by using data collection tools that only register certain members of society. For example, individuals who own smart phones, but cannot afford unlimited data may be more likely to log in to public Wi-Fi networks.

This issue mirrors in reverse for public IoT infrastructures. Some people cannot avoid sensors in public space. They may be dependent on being tracked to participate fully in society by using infrastructures such as public transit or living in a heavily surveilled zone. In some cases, such as preventing theft, one might prefer to be part of a larger data set and feel disadvantaged if surveillance cameras were not in their neighborhood. An individual would be disadvantaged if they could not take part in a city that demands data in return for access to basic infrastructure.

Interestingly, in a study on strategies for perceived surveillance in Amsterdam, both a technical researcher and profiled individual expressed that a partial surveillance state might be worse than one with complete information as the former would be more likely to have false positives (Jameson, Richter, and Taylor 2019). This line of thought suggests that fairness and equality would mean collecting *more* data on *all* individuals so that everyone is registered under the same levels of scrutiny. Obviously, such a step would limit individual freedom, although, it seems that public space may already be digitalized to the point that freedom is irrelevant and autonomy to escape the system is restricted. From birth one is registered and captured as various data points. Perhaps the conversation will need to shift to what kind of data collection and governance promotes fairness to all members of society.

Digitalization has evolved with the city. Digital tools shape the way one navigates space: where it is light or dark, what is recommended to attend or visit, what route to take, where one feels secure or alone. All these factors have an influence on city dwellers and, thus, shape the cityness of an area. Given the degree to which cities and citizens depend on data gathering instruments, the lack of tools for users of the built environment to view their data in a form that is usable and accessible is noteworthy. Using data sources to openly measure and improve cityness might help make the data beneficial and visible to those actively contributing to these databases. The next section illustrates the value of cityness, and why, despite possible downfalls, it may be useful to use city data to operationalize the concept.

3 City Users and the Built Environment

It has been shown that certain layouts of urban environments are correlated with, and, therefore, likely to promote certain behaviors, which in turn have negative or positive associations with cityness. For example, bicycle lanes may decrease driving and walking (O'Sullivan 2017) communal spaces encourage community activity (Zhu 2015, pp. 44-53), lights decrease criminal activity and keep people out later into the night (Painter 1996), and indoor walkways between buildings may decrease business on the ground floor (Robertson 2007, p. 366). The factors are limitless, but overly grooming the built environment for cityness does not necessarily guarantee improvement.

In the 1960s American activist, Jane Jacobs, grew frustrated with the increasing presence of cars in American cities. She noted how builders of the city environment prioritized planned construction over spontaneous creation. Jacobs argued that cars and an overly architected built environment would kill the city. This led her to publish *The Death and Life of American Cities*, in which she argued that good cities require mixed land use, short street blocks, diversity of age and function of buildings, and density of people and infrastructure (Jacobs 1961). Jane Jacob's criteria for the good city imply that the wrong type of built environment would limit cityness in the American Cities she wished to protect.

Saskia Sassen expanded upon Jacob's approach, settling on the notion of "cityness" as a rejection of the previously westernized mindset on the ideal urban environments (Sassen 2013). She argues that cities require a level of unfinished-ness (Sassen 2013, p. 209). Leaving a purposeful gap in designing for cityness allows urban initiative to creep through the cracks. Sassen also notes that differing cultures will affect cityness differently in similar built environments (Sassen 2005, p. 1). In China, a locale may not need to be made "public" or given a designed purpose to turn into a community center. Community members are much more likely to pull up chairs and play mahjong at a bus stop in Shanghai than in Los Angeles, CA (Sassen 2005, p. 1).

Cityness reveals itself differently amongst varying cultures. The values that drive the feeling of a good city do not differ wildly, but the forms in which user initiative and the built environment take shape may vary greatly. For example, it is generally accepted that walking promotes health and elongates individual lifespans (De Nadai et al. 2016). Additionally, walking may result in more interactions within the built environment. Walkers may engage with stores, restaurants, parks, markets, or other individuals (Rogers et al. 2011). Yet, "walkability" is not a trait of cityness – rather, it is a value designed for in the built environment. Only the degree to which people *actually* walk and the interactions fostered by their move-

ment can have a bearing on the cityness of a locale.

Los Angeles, notorious for its urban sprawl has now become a popular zone for electric scooter rideshares (Fonseca 2019). This is unlikely a coincidence. An infrastructure built to support cars, mixed with tourists, traffic, warm weather, and those who cannot afford automobiles becomes a reasonable space to scoot. Ricky Burdett, Urban Studies scholar at London School of Economics has suggested that it is time to delve deeper into Sassen’s notion of cityness and focus on cities themselves. He points out that one would never mistake “Londoness” with physical essences of New York City, Hongkong, or Mumbai (Burdett 2012, p. 92). Such a framing may be useful when connecting city users to the built environment.

As Burdett argues, the spatial flavor of a city is strongly linked with an area’s sense of identity. This claim can be taken further still. Within each city, different districts have their own life and individuals operate bound by the rules of the subcultures. Cityness exists too in the microsites, that, upon zooming out, form thriving or failing metropolises. Cityness might be best thought of in the lens of Wittgenstein’s family resemblance (Wittgenstein 1953). Certain traits may stand out and link differing individuals together. Some traits might be more dominant than others. Two members of the same family might not even have any overlapping traits even though they overlap with other members of the group. In other words, cities that look and operate quite differently can still have a high degree of “cityness.”

Separating cityness into factors of user initiative and the built environment allows for measurement, division, and comparison in a way otherwise impossible by staring blankly at the macro city and its cityness. While attempts have been made for generations using sporadic manual counts to better understand how the city operates and functions (Shuldiner and Shuldiner 2013), until recently, consistently measuring relationships between city users and the built environment has been challenging due to the fact that cityness is formed by forgotten and often invisible interactions.

As philosopher, Michiel de Certeau poetically captured in the 1980s, “The ordinary practitioners of the city live ‘down below,’ below the thresholds at which visibility begins [...] they are walkers [...] whose bodies follow the thick and thins of an urban ‘text’ they write without being able to read it” (De Certeau 1988). This dynamic of the practitioners of the city actualizing cityness in a way impossible to continuously “read” is swiftly changing with the growing presence of data gathering in public space – now more invisible interactions can be revealed at a higher volume and clarity than ever before.

4 Capturing Cityness

Some mixture of urban initiative and built environment design should generate normatively positive outcomes such as beauty, tranquility, safety, sense of belonging, and navigability. These outcomes are positive values ascribed to cityness. With increasing forms of data in the public sphere, it becomes relatively easier to quantify empirically how cityness operates in varying urban locales. While it may be impossible to fully capture the essence of cityness, some underlying values may be more easily quantified. Surveying a range of studies and experiments in this domain makes it easier to determine what works and what does not to identify possibilities for future research.

To study the existing scholarship and literature in this domain, studies were found by first querying the following combinations of search terms in Google Scholar, Springer, and Science Open databases: ["cityness," "urbanism," "city," "built environment"] AND ["IoT," "data," "measure."] Second, filters were utilized to further narrow the papers to English manuscripts, published within the past twenty years that used IoT technology and or big data to capture and operationalize features of cityness. Relevant citations from these articles were also added in addition to incidental finds. Remaining works were further narrowed to those that could convey a diversity of current approaches. While all studies relate to cityness, capturing cityness was not the intent of all the authors listed. Variety was prioritized over representation. Some topics such as "walkability" have a greater body of supporting research while children's perceptions of cities are harder to find.

Finally, the distilled 13 studies were divided between passive and active techniques. Passive techniques operationalize (aspects of) cityness using big data and pre-existing datasets without outside participation from the practitioners of the city. Active techniques, conversely, employ the data sharers into the operationalization process. Admittedly, the distinction between passive and active technologies is not always clear cut. A narrow and strict understanding of "active technologies," would only include data that users of an urban space willingly and knowingly provide input for the measurement. With social media data, e.g., it might not always be clear, what is considered to be active. Clearly, the secondary use of data should be considered as passive. While the users do actively provide input to the social network, they do not intend to participate in research or a study. However, if a specific group consciously allows a researcher or a municipality to monitor their social media data, we may consider the approach to be active.

4.1 Capturing Cityness with Passive Techniques

There are some positive aspects of passive data collection techniques including lowering opt-out bias. In participatory or active systems, typically people can choose whether or not to take part in data collection or the degree to which they are involved. Those with more knowledge or who can afford alternatives might opt out thus making the data less representative. Conversely, if people are not aware that they are being recorded they are much more likely to “act normal” thereby making the data more accurate. It is also worth noting that this may also work in reverse, sometimes the least privileged lack access to “standard” devices like credit cards and cellphones. Therefore, conclusions from general population data would naturally bias the privileged.

Moreover passive techniques for operationalizing cityness with IoT technology often involve the secondary use of data or function creep. “Function creep” refers to when a device originally designed for one intended purpose is used for another (Dahl and Sætnan 2009). One result of function creep is the lack of freedom for participants to choose their research contributions. This is not solely an issue of the initial data collection itself, which was likely already consented to without a clear informative process or access to alternatives, but the lack of awareness of *what* they contributed to and its outcomes. Passive techniques also leave researchers to determine *why* certain data processing outcomes were found instead of allowing the data producers to inform. This could lead to inaccurate conclusions from data analysis and false future predictions if behavior shifts for cultural reasons not captured in the data.

Among passive techniques, call detail records (CDRs) were the most common form of data collected for analysis. Researchers would access anonymized sets of data from telecom companies and use the data for a variety of purposes including determining commuter behavior (Kung et al. 2014) and tracking individual locations to find important places in individual’s lives (Isaacman et al. 2011). Cell phone usage patterns were used to estimate regional poverty rates (Smith-Clarke, Mashhadi, and Capra 2014) and urban behavioral differences across continents (Grauwin et al. 2014). None of these studies made any mention of informing the main data group that their anonymized cell phone data was used or the results of the study. The one exception was a group of primarily friends and colleagues used to train machine learning systems to identify important locations in people’s lives, that machine learning system then was used to make sense of a large anonymous dataset (Isaacman et al. 2011).

Digital collaborative platforms such as Foursquare, Fliqr and Twitter were also well utilized. Foursquare was used to help determine “mixed use” areas in an

Italian study to verify Jane Jacob's criteria for good cities (De Nadai et al. 2016). Foursquare and Fliqr were used to operationalize two theories relating city user initiative and the built environment to street safety (Quercia et al. 2015). Foursquare and Twitter data were used to connect built environment attributes and social network updates to crime rates throughout New York City (Yang et al. 2018). These researchers found that categories "'Argentinian Restaurant' and 'Mexican Restaurant' [...] will probably lead to a prediction of crime incidents. On the other hand, [...] 'College Auditorium' and 'College & University', [...] will reduce the probability of crime incidents" (Yang et al. 2018). This finding is interesting when US college campuses are notorious for crimes like underage drinking, sexual assault, and drug use. This outcome suggests that the pre-existing dataset used to train the crime predictions may have been already biased. Likely, a combination of the types of crime the researchers chose to target and the reality of which groups are more heavily policed led to these correlations.

In order to make the sensor data useful, nearly all studies had to corroborated by pre-existing data. This took the form of census records (De Nadai et al. 2016; Grauwin et al. 2014; Isaacman et al. 2011; Smith-Clarke, Mashhadi, and Capra 2014), land use data (Grauwin et al. 2014), mapping data (Isaacman et al. 2011), poverty rate estimates (Smith-Clarke, Mashhadi, and Capra 2014), and open crime data (Yang et al. 2018; Quercia et al. 2015). Essentially, validation of the new big data systems was frequently performed by correlating findings with older and or less precise, non-digitally sourced systems. On one hand, there is a desire for quicker and more accurate data systems, on the other, these systems require validation and calibration from pre-existing non-digitally sensing sources.

As much as big data combined with machine learning has the potential to be more precise than prior systems, building it often involves training correlations on earlier, possibly more biased data. Due to this, it could be possible that real world improvements may not be captured in machine learning systems based off historic trends – especially when "the sensed" are not actively involved in adjusting the system. See Table 1 for a full overview of experiments referenced, including data used, techniques, and purpose in association with the corresponding city.

From Digitalization to Capturing “Cityness”

Table 1: Passive Experiments Operationalizing Cityness

	CITIES	“CITYNESS”	DATA	TECHNIQUE
(Grauwin et al. 2014)	London, New York, Hong Kong	Universality in cross cultural mobile activity	Aggregate 3G mobile traffic data (# of calls, SMS, requests, amount of data downloaded) and census and land use data	Used K-means clustering of pixelized mobile activity. Distinguished moving and call patterns between regions within cities and then between all cities.
(Isaacman et al. 2011)	Los Angeles, New York, New Jersey Counties	Favorite locations across cities	Call detail records (CDRs), US census for validation	Used clustering and regression of CDR tower start and end locations to predict where people frequent across days.
(Kung et al. 2014)	Ivory Coast, Portugal, Boston, Saudi Arabi, Milan	Universality in commute patterns	Call detail records (CDRs), GPS car data for Milan	Determined location for home and office from CDR using time of day and call frequency. Commute time = time between locations for those who call every hour average.
(De Nadai et al. 2016)	Bologna, Florence, Milan, Palermo, Rome, and Turin	Mixed use, small blocks, building (age/form), density	Mobile phones, Italian census records (ISTAT), Open Street Map, Urban Atlas, Foursquare	Built regression models for each criteria using various combinations of datasets.

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Table 1: Passive Experiments Operationalizing Cityness

	CITIES	“CITYNESS”	DATA	TECHNIQUE
(Quercia et al. 2015)	London	Jane Jacob’s safety criteria: “eyes on the street” and Jeff Speck’s walking criteria: useful, safe, interesting, comfortable	Mapping data, Foursquare, Flickr, Walkonomics (app derived by one of the authors that combines user input and government data – including crime rates – to rate street walkability)	Analyzed data in correlation with research questions – can walkability be found from user photo tags or presence of specific types of places? Can safety be determined from night activity, activity segmented by gender/age, or the presence of types of places?
(Smith-Clarke, Mashhadi, and Capra 2014)	Cote d’Ivoire, Anonymous Region ‘B’	Regional poverty	Poverty rate estimates from International Monetary Fund, census data, call detail records (CDRs)	Linked and correlated CDR mobile activity levels to poverty levels.
(Yang et al. 2018)	New York City	Safety, regional aesthetics	Twitter, Foursquare, Open Crime Data	Used historical crime data, features extracted from Twitter and the built environment (Foursquare), and linked them to see which combination worked best under a variety of statistical analysis techniques, including neural networks and logistic regression.

4.2 Capturing Cityness with Active Techniques

Active techniques also come with their own positive and negative consequences. Actively receiving input from individuals often forces subjective outcomes even when the data is meant to be quantitative. For example, individuals can choose whether or not to take part in the data gathering process, thereby making all results only reflective of interested parties. Processing and formatting qualitative

data (as opposed to quantitative) can be more difficult because there is no “standard” human, unlike sensing devices that are built to operate equivalently. Feedback on metrics such as beauty or safety may differ greatly on an individual level. Two people could describe and interact with the same built environment differently.

Gathering feedback in the form of questionnaires and surveys, even when quantitative, can be time intensive and may also require overcoming possible language barriers. In addition, transforming qualitative data into a quantitative format can be challenging. For example, different standardization methods may lead to opposing results. It is also harder to maintain the constant active feedback systems that might be inherent to more passive, sensor laden, techniques. Also, since qualitative work often involves eliciting the opinions and permission of individuals, anonymity is harder to achieve. The calculations become groupings of individual's *thoughts* as opposed to group *behavioral* trends.

Still, there are some clear positives to active cityness and IoT research. First, opinions are inherent to understanding perceptions of the city. Behavior might take up one aspect of urbanism, but to fully understand how the city works it is useful to know why people are compelled to perceive the city in a certain way. Instead of collecting and processing data to find patterns and then later hypothesizing about why certain behaviors occurred, active research seems to better answer the question of why and then find the behaviors associated with that perception.

There were differing forms of active techniques used to operationalize the concept of cityness using big data with many of the digital tools made to receive input or be viewed or interacted with by individuals. Google Street View was commonly utilized as it allowed participants to virtually interact with and therefore provide feedback on the built environment. Two experiments had platforms for online participants to use Google Street View to rank images for values such as “tranquility,” “beauty,” “happiness,” “safety,” and “wealth” (Dubey et al. 2016; Quercia, O’Hare, and Cramer 2014). The results of these surveys were used to train machine learning systems that could predictively score a street image according to value driven criteria. These examples are considered active because the machine learning algorithms developed relied on informed participation.

Geographic information systems (GIS) were also employed because they can layer data on top three-dimensional maps, embedding greater significance into the projection. GIS was used to determine walkability based on macro and micro elements of the built environment (Zandieh et al. 2018). The GIS system contained the environmental attributes that might not be captured on a regular map that could impact walking patterns. This experiment also surveyed older adults to see their thoughts on what areas they considered walkable and why. A study on

children's perceptions of the city used GIS to mark areas that the children found "comfortable," "a sense of belonging," and other criteria (Alarasi, Martinez, and Amer 2016). Generally, human feedback combined with location data was popular in active research; in one study, Twitter data was combined with surveys to see if tweets could predict regional quality of life (Zivanovic, Martinez, and Verplanke 2020).

Perhaps the most interesting case is SmartSantander and the Pace of the City mobile phone applications. In this instance, users of the applications agreed to share sensor data from their mobile phones and also usage behavior within the application in exchange for city data and aggregated data from other users (Gutiérrez et al. 2013). Monitoring usage behavior allowed researchers to understand trends in how the application was utilized. The concept was that instead of a top down corporate or government enforced smart city, city practitioners were the producers and consumers of the smart city and its data. Nonetheless, having one entity that processes, organizes, and also studies how city users produce and consume data may be too structured and diminish "unfinished-ness" and therefore, according to Sassen's line of reasoning, may also reduce *cityness*.

Active approaches to measuring cityness generally avoided the need to corroborate or calibrate data with older data sets like census records. There was one exception in this short overview. In the study to measure walkability, transportation data was utilized along with questionnaires (Zandieh et al. 2018). Still, it is unclear if active feedback is necessarily better or worse than larger, pre-existing datasets due to issues like opt in bias, but at least they may give a more detailed and up to date reasoning than solely quantitative data points. For an overview of the studies presented, see Table 2, where the city, value of cityness, data, and operationalization techniques are highlighted.

Table 2: Active Experiments Operationalizing Cityness

	CITIES	“CITYNESS”	DATA	TECHNIQUE
(Alarasi, Martinez, and Amer 2016)	Enschede	Social integration, Community space, belonging, comfort, variety of activity, interest	Participatory mapping, focus group discussions, guided tours, interviews, GPS, photo/voice recordings, Google Earth, Google Street View, Geographic Information Systems (GIS)	Children mapped their perceptions of the city, toured the city, stopped to take photos and tell narratives in certain areas, and had lengthier interviews on their perceptions of the city. All steps were combined into a GIS tool.
(Dubey et al. 2016)	(56 major cities from 28 countries)	Safe, lively, boring, wealthy, depressing, beautiful, universality	Google Street View images, crowdsourcing results	Crowdsourcing ranking game for humans to rate images as more or less (safe, lively, etc.) and neural networks for computer to predict rating of new images.
(Gutiérrez et al. 2013)	Santander	Citizen participation (data sharing and engagement)	Public government data, phone sensor data (GPS, acceleration, temperature, humidity, etc.)	Crowdsourced mobile phone sensors aggregated information which then was shared back to the users of the Pace of the City application. Additionally, people could upload information such as events. SmartSantander, another application, took available city data and along with user data and shared it using maps and augmented reality.
(Quercia, O’Hare, and Cramer 2014)	London	Tranquility, beauty, happiness	Google Street View, Geograph (broke up into colors, textures and words), crowdsourcing results	Crowdsourcing ranking game for humans to rate images as more or less (tranquil, beautiful, safe) and three computer vision techniques (color, texture, object) to predict rankings of new images.

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Table 2: Active Experiments Operationalizing Cityness

	CITIES	“CITYNESS”	DATA	TECHNIQUE
(Zandieh et al. 2018)	Birmingham	Walkability based on macro and micro environmental attributes	Geographic Information Systems (GIS), transportation data, questionnaires	Elderly population surveys were done to gather information on the micro environment. This was combined with macro GIS data on the built environment and both were compared to transportation data to see the correlation between built environment attributes and walking.
(Zivanovic, Martinez, and Verplanke 2020)	Bristol	Quality of life	Twitter, quality of life surveys	Automated sentiment analysis of tweets, rating positive and negative in a five point scale. This data was compared to quality of life surveys.

5 IoT Smart Bridge and Cityness

Before moving forward, it may be helpful to review whether any of these studies were successful in measuring cityness. Returning to Wittgenstein’s family resemblance, no singular trait can individually be said to capture cityness. Choosing to focus on a subset of characteristics may also overlook equally important cityness factors that may occur to a greater magnitude in a different location. There is a possibility that in the process to operationalize cityness we shift to a world where cityness becomes defined by quantitative characteristics instead of a qualitative sense of place. This blurring may intensify as machine learning tools adapt to make more features able to be sensed. As more qualitative features become measurable, cityness may come to be understood by the less subjective machine as opposed to the masses of city practitioners. Such a formulation for cityness may lack the very nuance that we seek by using the term over others such as “livability.” Conversely, there may eventually be a plethora of algorithms in disagreement over what constitutes cityness. This scenario however does seem to fit the trend of technology aligning to standardized forms of measurement.

Another less dramatic conclusion that may be more likely in the near future is that as digital technology becomes further infused with the built environment, these technologies themselves will have an effect on cityness and be able to communicate their role back to us (Cammers-Goodwin and Nagenborg 2020). When looking towards future cities, the capabilities to gather both quantitative and qual-

itative data digitally is expanding. Smart lamp posts already exist, but there is room to go further, the city of Den Haag, the Netherlands sponsored research on citizen reactions to a lamp post that could parse conversations and talk to passerby (Leeuwen et al. 2018). These tools will be embedded in the built environment and how they are used will be shaped by city user initiative. At the same time, IoT infrastructure will have a large impact on cityness and offer unique data to study it. The question is how to determine what is useful and what is necessary. In order to begin to answer some of these questions the BRIDE project is beginning empirical work on the sensor embedded MX3D bridge.

The 20 square meter surface area of MX3D's 3D printed stainless steel bridge has the potential to act as a nervous system for the region it creates. The structure itself physically adds usable area to the built environment, but through an artistic form, and unlike most current infrastructures has the ability to “feel” what is happening to it. Embedded into its body is a sensor system that can measure acceleration, incline, strain, and temperature, among other criteria. Pending city approval, on each side, a camera will be stationed that skeletonizes human movement, transforming the image into a JSON file of stick figure coordinates. Actual video footage will not be accessible to most researchers and will be deleted within six months. The sensors will primarily be used to ensure and test the structural integrity of the bridge. This is useful because 3D printed stainless steel is a relatively new material and the bridge was designed with optimization software in a virtual replica of the canal in which it is to be placed. The sensors embedded on the bridge will offer security in the space of uncertainty inherent with new forms of construction.

The bridge, which is installed in Amsterdam's centrally located Red Light District has the secondary possibility to operationalize local cityness. With the sensor data one can measure how usage of infrastructure changes for city users based on local temporal changes such as time of day, day of the week, season, and events. Ongoing qualitative research has informed what aspects of data most interest individuals ranging from tourists to commuters to residents.

People are most interested in data that they can understand such as load and temperature as opposed to acceleration, for example. Data visualizations are currently provided to the public through the bridge website thus creating a feedback loop



Figure 1: MX3D Printed Bridge 2018, photo by Thijs Wolzak.

connecting city practitioners, sensors, and the built environment.¹

Operationalization is planned to work by using partially active participation to recognize general bridge behaviors which can be translated into machine learning algorithms that connect sensor feedback to bridge activities with varying levels of certainty. At the base of the bridge are small plaques that show that the bridge is smart and also link to a site with additional information. The external site informs 1) that the bridge is collecting data 2) what data is collected 3) who is collecting the data, and 4) what are the research purposes. Theoretically, a user of the bridge could know that the bridge is collecting data, especially those that live and commute in the area. However, it is also probable that for most inebriated tourists, children, those with visual impairments, and the average pedestrians whose eyes are not searching for signs, their contributions will be passive. The long-term goal is that anonymous data from the bridge can be transformed into useful feedback to the public. It should be noted that goals like these easily become justifications for public data collection whose primary interests will not enhance the lives of those who contribute to research (Cammers-Goodwin and Stralen 2021). Admittedly, operationalizing cityness accounts for a fraction of the research utilizing the bridge data, which mainly centers on civil engineering interests.

Of course, a singular bridge in an iconic area cannot be used to make city-wide generalizations on cityness. The area is too small and both the region and the bridge are too specific. Nonetheless, understanding how the region functions might help inform improvements for all user groups. Residents of the area are notoriously concerned about crowdedness, understanding factors that generate more crowds, or, better yet, *less* crowds, may make the area more pleasant and safe for all involved, especially if the measures taken do not diminish the cityness of the area. In fact, concern over crowdedness is so strong that, pre-placement, surveillance was not a primary interest for bridge users or current residents of the De Wallen area, whose main apprehension is the bridge generating more visitors.

A prototype of how the bridge may inspire and help operationalize cityness occurred in October 2018 during Dutch Design week, where the bridge took home the People's Choice Award. Most passerby were taken with the physical structure of the bridge despite technologists walking around with tablets displaying live feedback from load sensors and accelerometers adhered to the underside of the deck. Even though the bridge hovered over flat ground at the event, people gathered and leisured on the structure, banging on the walls, jumping on the deck, and taking photos. Compared to the studies examined in the prior section, the bridge being an infrastructure that happens to be "smart" has a closer relationship to cityness

¹ See: <https://www.smartbridgeamsterdam.com/>.

The bridge effectively generated activity that would not have occurred without the presence of the structure. The bridge, *the built environment*, inspired cityness.

6 Conclusion

The complex multivariable system that gives identity and flavor to the city can be distilled into cityness and further understood as the symbiotic relationship between urbanism and the built environment. Understanding cityness has long term value to the practitioners of the city. With the increasing presence of pre-existing data, data gathering instruments within cities, and tools to elicit qualitative data from city practitioners, operationalizing the factors that generate positive city values is more feasible than ever. In fact, attempts to connect city values to big data sources have already been attempted with call detail records, social media, satellite, Google Street View, phone sensors, online surveys, geographic information systems and other digital tools. The possibility to have a detailed understanding of infrastructure and city user behavior with sensor embedded IoT, however, has yet to reach its full potential. Furthermore, the consequences of such work and appropriate measures for future research have yet to be outlined. The MX3D 3D printed bridge provides an opportunity to explore these unknowns by creating a living laboratory of city practitioner engagement. Users of the bridge can be informed that the bridge is collecting data, and be able to learn from who and for what purpose. The bridge can also serve as a case study to determine if the positive aspects of understanding and cultivating cityness outweigh some of the ethical concerns raised in this paper. This will depend on how the research is conducted and to what extent the research is successful. Hopefully, through qualitative research, not only can behavior be studied, but also *why* groups engage in certain behaviors. Practical data findings can be returned to city users so that the data they generate may be of benefit to them.

Finally the bridge is an opportunity to study local cityness in De Wallen, Amsterdam and understand regional urbanism in relation to times of day, days of week, seasons, and events. There are bound to be complications along the way and questions to be answered about privacy, security, data accuracy, and processing. The issues that occur in this transparent process will hopefully inform future smart city research. Essentially, the MX3D bridge is a case study for what could become the new normal. It is an opportunity to research how smart cities should (and should not) operate to maintain cityness.

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Bridging Temporal and Transport Justice

A case for considerations of time use in urban justice food

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ABSTRACT | The transportation system is essential for urban life – the spatial nature of our cities requires us to travel. Hence, we need to spend time in transit. However, time is a scarce resource. In transportation research, travel time savings are the key benefit of transportation improvements. Yet, “time savings” primarily function as a proxy for presumed societal benefits rather than reflect actual reductions in travel time. Moreover, time constraints are rarely considered in the transport justice literature. Based on the case of gender differences in travel patterns and travel time, this paper argues that a lack of interest in time is partly due to *accessibility* being the established metric for transport justice. Nevertheless, temporal inequality should be a concern for urban justice. The answer to “justice of what” needs to include a temporal component. By connecting the literature on temporal justice with the literature on transport justice, this paper considers the foundations of a time-specific metric as well as its advantages and disadvantages.

KEYWORDS | Urban Justice; Temporal Justice; Transport Justice; Accessibility; Gender Differences

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1 Introduction

“No amount of money can make agents autonomous, if every hour of their day is under external control; if others decide how we spend all of our time, we simply cannot live our lives as we see fit, regardless of our other resources. Therefore, if the way we live our lives is to reflect our own decisions, control over how we spend our time is of crucial importance.”

(Eriksson et al. 2007)

Time is, in many ways, at the center of life. Almost everything we can wish to pursue requires time: “[t]ime is a scarce resource that individuals and households must allocate to produce goods, obtain services, and pursue rest and relaxation” (Williams et al. 2016). Much of what we wish to pursue as part of city life also requires movement of sorts, often some sort of travel. Both time, travel, and travel time (and time travel, though it lies far beyond the scope of this paper) have been extensively studied by various scholars in philosophy, urban studies and transport economics (among other fields). The aim of this paper is to contribute with a philosophical perspective on mobility by bridging the literature regarding time in political philosophy, the literature on time poverty, and the literature on transport and urban justice. In doing so, I wish to explore the possibilities and challenges of amending time to the currently established metric of transport justice, namely accessibility (Martens 2006). I believe that insights from the literature on temporal justice could serve as a complement to the generally accepted view and raise important questions: what does it mean for urban justice if time is recognised as a valuable resource in itself to which people have distinct claims? Although the value of time is key in transport economics, I will show that the current framework and established practices do not consider the temporal circumstances of travellers in a way that one might believe at first glance. While ‘time savings’ are at the heart of transport economics, no time is actually being saved. The underlying assumption is that willingness to pay for shorter travel time reflects and encompasses the potential scarcity of time. This assumption, I claim, is not justified. As argued by Julie L. Rose, there is no perfect substitution between time and money (Rose 2016). Hence, I argue in this paper that time needs to be considered in its own right for urban justice to reflect the circumstances of urban living.

The value of considering time will be illustrated by a case of gender inequalities in time use, in particular in travel time. I argue that such inequalities are not being captured by the established account of accessibility as the metric of transport justice. I have chosen to frame the argument in terms of gender inequalities

since there is a substantial body of literature that considers gender aspects concerning travel with recent contributions on the gender gap in cycling, time constraints impacting women's car use and even how travel patterns were affected by the covid-19 pandemic (Shaw et al. 2020; Shirgaokar and Lanyi-Bennett 2019; Bin et al. 2021). Yet, this perspective is notably absent in most mainstream literature on transport justice.

The focus of this paper is to explore time as the "currency" of transport justice. Hence, it adds to the literature on "justice of what" rather than building on any particular normative theory. Only a few philosophers have developed distributive justice accounts that involve time directly. Specifically, arguments for considering time have been put forward by Goodin and coauthors and by Julie L Rose. Goodin et al. develop an account of justice of discretionary control over one's time, so-called "discretionary time" which time you have autonomous control over (Goodin et al. 2008). Rose, in turn, argues that in order "to pursue any end other than meeting the necessities of life, one must have some amount of free time" (Rose 2021). These perspectives should be relevant to the discourse on urban justice and contribute to the theoretical diversification of the subject, which is a recent trend (Verlinghieri and Schwanen 2020). By bridging the related but rarely connected literature, I also strive to show that there are aspects of valuing travel time that are relevant to the philosophical understanding of temporal justice and urban policies.

The outline of this paper is as follows. In section 2, I set the stage by introducing the argument against the substitutability between time and money and the notion of accessibility as the metric of transport justice. I then, in section 3, present a case for why temporal aspects should be considered in urban justice, namely, the case on gender inequalities in travel time and travel behaviour. I provide an overview of time in transport economics, time poverty and temporal justice in section 4 and motivate why it is relevant to consider time in addition to accessibility in a framework for urban justice in section 5. Section 6 considers the advantages and the disadvantages of such an account. Section 7 concludes.

2 Setting the Stage

In her book *Free Time*, Julie L. Rose provides a summary of what political philosophers have said on the topic of time (Rose 2016). She argues that the so-called *time-money substitutability claim* is the reason why distributive theorists have not paid much attention to temporal resources (Rose 2016). If there is substitutability between time and money, it would be sufficient for a theory of justice

only to consider the distribution of income and wealth. However, Rose argues that the time-money substitutability claim is false because it rests on two false assumptions. The first is *the perfect divisibility of labor demand*, namely that “all individuals can freely choose to reduce their hours of paid work to the level they prefer” (Rose 2016). This, she claims, is empirically false. The second assumption is *the perfect substitutability of money and basic needs satisfaction*, i.e., all household and bodily basic needs can be met by purchasing goods or services. This is false since not all activities can be bought with money. Despite being true that for *some* necessary activities, one *can* substitute income for time, “it does not follow that a theory of justice is entitled to assume that citizens should make such a substitution” (Rose 2016). Rose further argues that under some social circumstances, hiring somebody to help meet one’s household or bodily needs presents a threat to civic equality.

Indeed there seems to be something special with time as a resource, good or commodity. Time allocation is a zero-sum game of sorts; time saved on one activity has to be allocated toward other activities immediately and cannot be saved due to constraints and characteristics of time (Nordström et al. 2019). Any changes in activity times must add up to zero. On the one hand, we all have equal amounts of time (seen from a day-to-day rather than a lifetime perspective). On the other hand, our circumstances and commitments concerning time differ. Broadly, time-use can be divided into five categories: (1) work time, (2) unpaid work, (3) childcare, (4) leisure and (5) personal care (Williams et al. 2016). And then there is ‘travel time’. Given the spatial structure of our cities, the mismatch of residential location, work and place of leisure often require us to move from one place to another. This movement, the necessary travel, takes time.

In transportation research, the need to travel is commonly seen as derived, i.e., travel is needed to participate in desired activities, such as work or leisure.¹ In this context, the interest in transportation justice has been rapidly growing (Martens 2006; Gössling 2016; Pereira et al. 2017). If the purpose of a transportation network is to provide access to desired activities, it is understandable that transport justice is commonly viewed as just access to such activities. Here, accessibility refers to the mere potential of access; “[h]aving accessibility to a wide number

¹ There have been arguments for more nuanced treatment of time in transport economics (Metz 2008), but transport is still primarily seen as a purely derived need in mainstream transport research. The fields of transport geography and urban studies, as well as work related to mobility planning, provide a substantially more complex framing of travel as mobility and the role of mobility for cities (Jensen 2009; Sheller and Urry 2006). However, the work in these fields rarely overlaps with the mainstream literature on transport justice which is taken as the basis for the argument in this paper. Therefore, it is outside the scope of this paper.

of jobs, shops, medical services or educational facilities is a value in itself, even if no actual use is made of these destinations, as it increases choice and thus future options" (Martens 2006). Geurs and van Wee put forward a more formal definition of accessibility as "the extent to which land-use and transport systems enable (groups of) individuals to reach activities or destinations by means of a (combination of) transport mode(s)" (Geurs and Van Wee 2004). They also identify four components of accessibility: land-use, transportation, temporal and individual. For the purposes of this paper, the *temporal* component is the most relevant. It is intended to reflect temporal constraints, such as the available time that individuals have to participate in activities (e.g., work, leisure and so on) and the availability of these activities at different times of the day. For example, a store is only accessible when it is open, so shopping has to be done during opening hours.

The components identified by Geurs and van Wee are, in turn, relevant when considering various measures of accessibility (Geurs and Van Wee 2004). The authors point out that while an accessibility measure ideally should include all components, this is rarely the case in practice. Measures of accessibility can broadly be divided into four categories: infrastructure based, location-based, person-based and utility-based (Geurs and Van Wee 2004). Infrastructure-based measures do not account for temporal components at all, they focus on the performance of the transport network, such as "average speed on the roads." Location-based measures do include temporal components in a general sense by measures such as "number of jobs within 30 minutes of travel from origin." Such measures hence reflect that the focus should be on access to activities within reasonable travel time (Banister 2008). However, the individual temporal constraints are not considered. Geurs and van Wee note that infrastructure-based measures are typically used in transport planning, while location-based measures are used in urban planning. The person-based measures, in turn, can be found in the field of space-time geography (Hägerstrand 1970) with accessibility considered at an individual level: "the activities in which an individual can participate at a given time" (Geurs and Van Wee 2004). Such measures arguably provide the best basis for taking individuals' temporal constraints into account, which is also reflected in some of the work that has considered gendered perspectives thus far (Kwan 1999; Schwanen et al. 2008; Scholten et al. 2012). As will become evident, the gender differences in travel patterns, behaviour and choices are well-studied and well-known. Still, little attention has been given to these differences in the context of transport justice. I will now use the case of gender inequalities in relation to urban transport. The case will illustrate that a justice account that does not consider time runs the risk of not providing the necessary basis for an analysis that would capture such inequalities.

3 Gender Inequalities in Relation to Transport and Time

Time, as hopefully has been established by now, is a scarce resource. How this resource is allocated differs between times, cultures and individuals. Time-use studies make it possible for scholars to observe differences in time use. In transportation, the differences in travel time use depend on travel behaviour, i.e., the choices about travel one makes. These choices subsequently influence the time that has to be allocated towards travel and the quality of this time. Differences in travel behaviour can lead to so-called temporal inequalities. For the purposes of this paper, I will discuss one type of such inequalities, namely gender inequalities. Such temporal inequalities are prominent in the realm of transport due to the gender differences in travel behaviour: “[w]omen in the developed world have different transport and travel patterns from men. Women are often involved in poorly resourced, highly complex, multiple purpose trips (trip chaining); men tend to make single-purpose trips at higher cost and using superior modes of transport” (Turner and Grieco 2000).² Women, as it often stands, face the challenge of coordination. They need to manage the work, household responsibilities and childcare, including taking the children to childcare (if outside of the home). As a result, women are time poor due to the disproportionate level of household tasks they are required to perform within present social structures (Turner and Grieco 2000). Turner and Grieco argue that public transport services are not designed to fit the needs of mothers with small children. Additionally, poor quality of public transport can contribute to time poverty. Their view is that the coordination challenges women face have been understudied, neglected and rarely regarded as a fit topic of interest for transport planners. Even though it has been argued that there is an increasing convergence in travel patterns on an aggregated level (Rosenbloom 2004),³ the differences in travel behaviour is a trend that seems to continue. A recent Swedish study that included data over a period of 30 years concluded that women in younger generations are more active in out-of-home non-work activities, and their trip chaining is more complex compared to men (Susilo et al. 2019). Additionally, attitudes among men and women about time aspects of transport differ: women have a more positive attitude towards public transport and are willing to accept longer travel times by public transport compared to car travel (Hjorthol 2001).

As noted above, women’s time-space commitments are often more complex

² See Loukaitou-Sideris (2020) for an overview of cultural, economic, physical and psychological barriers affecting women’s travel as well as gender differences in travel patterns.

³ Though Rosenbloom concludes that travel behaviour is still far from equal and trends towards convergence may be slowing (Rosenbloom 2004).

because women are generally more involved in managing domestic responsibilities than men. Such responsibilities and the travel associated with care work – i.e., “[u]npaid labour performed by adults for children or other dependents, including labour related to the upkeep of a household” – is neither commute nor strictly leisure and is understudied, at least from a value of time perspective (De Madariaga 2013). The standard is to value work time, commute time and leisure time differently, with time spent travelling for leisure valued the lowest. The travel time necessary to perform care work and the “weight” of mobility of care is systematically under-represented in urban transport (De Madariaga 2013). Sánchez de Madariaga argues that this unveils unconscious gender bias built into concepts, methods and theories since it undervalues care mobility and overvalues trips to the workplace. Additionally, short trips are not counted because they are not considered relevant for infrastructure policy-making, but women in their daily routines more frequently make such trips. In a recent paper, Loukaitou-Sideris argues that transportation policies still neglect and disregard women’s needs even though there are initiatives to include gender perspectives into every stage of the policy process (Loukaitou-Sideris 2020).

Besides the neglect of gender inequalities in urban transport policies, gender inequalities are also largely neglected in the mainstream literature on transport justice.⁴ Though there is recent work on, for instance, the gendered harassment and violence on city transit (Lubitow et al. 2020) and the need to recognise and examine particular mobility needs has been called for (Verlinghieri and Schwanen 2020), there is still a gap between the empirical work on temporal inequalities and differences in travel behaviour and the work on transport justice. This can partly be explained by the difficulty of capturing gender differences in a transport justice framework based on accessibility. If accessibility is the opportunity to reach destinations of interest, these opportunities are (at least hypothetically) the same for individuals that share place of residence and have the same access to means of transportation. Imagine a household where all adult family members have equal access to a car and shared financial resources, meaning it is equally costly for them to travel. On most accessibility accounts, their level of accessibility is equal. Given that we are not studying actual behaviour nor taking temporal constraints into account, no difference in accessibility can be observed. Even understanding accessibility as a capability and thus taking into account how personal characteristics such as gender shape interpersonal differences in accessibility levels requires

⁴ It ought to be noted that there is a literature on gendered mobilities, for example (Hanson 2010; Cresswell and Uteng 2016; Greed 2016; Rosenbloom 2004; Sheller 2016), among others. However, there seems to be a disconnect between this literature and the literature on transportation justice where the gender differences are rarely framed as a matter of justice.

a metric that would capture such differences (Pereira et al. 2017). Building more comprehensive accessibility measures, as is claimed to be necessary by Pereira et al., should mean including temporal constraints to enable a gender analysis.

In summary, the empirically evident differences in travel behaviour and consequently differences in travel time and the resulting temporal inequality should be a concern for urban justice. To include this perspective, two conditions are necessary. The first condition is a person-based measure of accessibility. This would capture interpersonal differences in general. Second, time-specific differences need to be captured, namely, differences in temporal constraints, commitments and circumstances. These conditions, and ultimately a broadened account would not replace but rather complement the accessibility account. I believe it is crucial to ensure that an urban justice framework supports gender analysis of accessibility and that it allows considerations of gendered time use. Hence, the answer to transport “justice of what” needs to include a temporal aspect. The neglect of travel time for carework and lack of attention to trip-chaining and short trips will not be solved by including time in a justice measure, but it would at least provide tools to carry out the necessary analysis.

4 Value of Time and Time as a Resource

To further develop and understand how to incorporate a temporal aspect into urban justice, I will in the following section introduce and briefly summarise relevant literature on time in transport economics, time poverty and temporal justice. Though much of the literature concerns notions of time and fairly similar themes, it rarely overlaps. Thus, I will in this section provide an overview to connect, or at least to provide enough background for the reader to identify similarities and differences.

4.1 Time in Transport Economics

Time is of great importance in transportation research since travel time savings are considered the key benefit of transportation improvements. Duration, understood as quantitate time, is the dominating aspect in transport economic models. It is also seen as the main component of the perception of the travel even though the conditions of the journey, i.e., the qualitative aspects of time, do matter to some degree. In transport economics, the qualitative aspects of time, such as under crowded conditions, are by definition seen as subjective, compared to the objective measure of clock time. However, this distinction between clock time and subjective conditions is not as clear-cut as it might seem. For example, Hjorthol (2001)

distinguished between quantitative time (clock time) and qualitative time, which relates to how the time is perceived. On her account, there can be a qualitative aspect to duration. Interestingly enough, transport economists see quantitative time as an objective measure even though some research indicates that commuters' response to time duration is non-linear (Johansson et al. 2003). So, while actual time is used when modelling expected travel behaviour, travel time can actually be perceived individually, not only concerning the qualitative aspects but concerning the quantitative aspects as well.⁵

Since the underlying assumption is that travel is a derived need, less travel and thus shorter travel time is preferable, all things considered. Willingness-to-pay is used to obtain a monetary value for travel time savings. This monetary value of time is then used in cost-benefit analysis of transport investments. But, the term "savings" can lead to misunderstandings (Daly and Hess 2020). Extensive academic and applied work has been carried out to derive the value of travel time. However, it is primarily used in appraisal, for example of infrastructure projects. In this context, what is being evaluated is the time differences between alternative futures. So, as Daly and Hess put it: "[t]he use of the term VTTS [i.e., value of travel time savings] is misleading, giving the reader the impression that it is being applied to situations in which individuals gain time as a result of transport policy" (Daly and Hess 2020). But this is not the case. Most transport investments generate long-term benefits. Furthermore, the transport system is constantly changing with changes accumulating over time (Börjesson and Eliasson 2014). Most importantly, the travellers and the travel option they face and the travel choices they make change over time: "[t]ravelers are gradually replaced, as people move, change jobs, are born and die" (Börjesson and Eliasson 2014). New travellers do not have the same reference points as previous travellers. Hence, it is not considered meaningful to think in terms of stable reference points for such long time horizons. Think of a new bridge built to connect two sides of a city. It will shorten the time it takes to travel from residences on one side of the river to jobs on the other side. Even if the current residents are time-poor, the bridge will take five years to build. New residents might move in in that time, and we can no longer know if they are also time-poor. Thus, taking the reference point to be someone who is time-poor and estimating benefits based on that reference point can wrongly indicate the 'actual' future benefits. As Daly and Hess write: "[w]hile of course it is to be hoped that do-something will lead to better time outcomes for most travellers than do-minimum, these differences are not experienced by travellers and so time gains

⁵ So-called distorted perception of travel time can be a reason for discrepancies between forecast models and actual behaviour of travellers (Peer et al. 2014).

or losses are not relevant” (Daly and Hess 2020).

The constant changes in urban transport, land-use and life circumstances lead to new travel patterns. These lead to gains and losses of time, unrelated to transport and not relevant for a particular appraisal at hand. To evaluate an investment is to compare two possible futures, one where no changes are made and one where a transport intervention is implemented. It is argued that “[f]ew if anyone will ever be in a position where they can actually compare the two alternative realities directly against each other. For the people living in one of the realized path, the other one will simply not exist; the fork in the road may have happened months, years or decades ago” (Börjesson and Eliasson 2014). Furthermore, the changes in accessibility lead to changes in land development and consequently to changes to the wider economy (P. Mackie et al. 2018). Hence, an improvement in accessibility is positive from a societal point for two reasons: (1) potential increase in individual’s welfare and (2) economic growth due to increased productivity (P. J. Mackie et al. 2001).

Since reference points are not considered meaningful,⁶ welfare evaluations have to be based on stable, long-term preferences. In the transport welfare economics-based evaluation framework, the marginal rate of substitution (such as the value of travel time savings) is the cornerstone. Additionally, when forecasting travel demand, a standard value of time that applies to each time instance and all amounts of travel time is required (Daly and Hess 2020).

It is not within the scope of this paper to comprehensively assess the validity of assuming that there is perfect substitutability between time and money for the purpose of urban transport investment appraisal. Neither is it to assess whether a stable rate of substitution exists. I do believe it is sufficient to point out that aside from obvious differences between time and money as such (Nordström et al. 2019), the argument put forward against the time-money substitutability claim by Rose is applicable here. Additionally, taking short-term willingness to pay data framed around short-term decisions and assuming this to be representative of long-term substitution rates has been criticised (Beck et al. 2017). All in all, it seems at least warranted to question whether it is justified to assume perfect substitutability between time and money, even in this particular context.

What is important to note here is the difference between what we fundamentally take to be true and what we believe to be good-enough assumptions for pragmatic reasons. The time-money substitutability claim might be a good-enough

⁶ However, even Börjesson and Eliasson note that reference-dependent evaluation can be relevant and justified in certain situations, for example, “in cases where for instance residents are compensated for increased noise due to a transport investment at a specific point in time” (Börjesson and Eliasson 2014).

assumption, at least given certain market conditions (such as a reasonable match between supply and demand on the labor market). It might also be a good-enough assumption for the specific purpose of transport investment appraisal. However, it can, at the same time, be false in the sense that there is no actual substitutability between time and money. From the perspective of justice, we need to consider whether the lack of actual substitutability should be accounted for in a justice framework. How does the assumption that time is a personal resource and a commodity that can be sold and bought at the market impact how we formulate an account of urban justice? As I will discuss further, this disconnect between a good-enough assumption and actuality also matters from a policy perspective. It does not imply that time is generally treated in transport economics unsatisfactorily; it might just be so in the particular context of distributive justice of transport resources.

4.2 Time Poverty

Time poverty or time scarcity and the connection between time use and wellbeing have been studied and considered at the policy level over the past two decades (Williams et al. 2016). It fits into a broader literature highlighting the need for an expanded set of measures for understanding the state of society beyond GDP and income poverty. Vickery first introduced the notion of time poverty in a paper where she argued that a benefits scheme that defined poverty in terms of money alone would create an equity problem (Vickery 1977). It has since been prevalent in the debate on inequalities in time-use and time pressure. At the core is the familiar assumption that money and time are not perfect substitutes. In support of this assumption, it has been found that material affluence does not lead to temporal affluence. Even when general wealth rises, people report that they feel time poor (Giurge et al. 2020). In theory, this is not particularly surprising - even if there were unlimited wealth, we would still have to decide on an allocation of time. Furthermore, time is inherently embedded into the mechanisms connecting low economic status and health (as well as other outcomes): you need time to engage in physical activity, to be able to study and to rest (Williams et al. 2016). Time poverty has been linked to lower well-being, physical health, and productivity.

A simplistic way of defining time poverty is to say that people are time-poor when they have too many necessary things to do and not enough time. From a scientific perspective, time poverty can be understood on a conceptual, methodological and empirical level (Giurge et al. 2020). Giurge et al. note that there is room for improvement in terms of clarity on the three levels, which is aligned with work by Williams et al., where they point out the lack of a unifying framework of

time poverty (Williams et al. 2016). For example, there are many definitions of time poverty. Time poverty can be understood as consisting of both quantitative and qualitative aspects of time, meaning concerning the quantity of time as well as the quality of time. Not only should one have sufficient time, one needs to have autonomy over time allocation. Going back to the difference between time and money, having “time” is substantially different from having “money” in the sense that there are many more constraints on time. While the quantitative aspect of time is to have time to allocate, the qualitative aspect can be said to involve such constraints. Measurements of time poverty can be both relative and absolute, with varying strengths and weaknesses for each type of measure. While clearer conceptualisation would ease further research on the subject and increase adaptation, scholars have noted the difficulty of categorising activities as necessary in contrast to discretionary (Harvey and Mukhopadhyay 2007). For time poverty to be a useful measure, more rigor must be applied, and systematic and transparent categorisation of time use activities when defining and calculating time poverty must be adopted (Williams et al. 2016). Williams et al. conclude by noting that policies that could benefit time allocation and especially benefit women have been largely unstudied. As will be discussed in section 5, the role the transport network plays for time allocation reserves be recognised. There is a clear connection between urban planning and time poverty.

4.3 Temporal Justice: (Value of) Free and Discretionary Time

It is surprising that philosophical interest in time as a commodity so far has been fairly modest, given that time is necessary for almost everything we do. The notion of temporal justice stems from the view that temporal inequalities track an important dimension of how people can be better or worse off. The interest in the normative significance of temporal inequalities has mostly concerned inequalities in amounts of free time (Rose 2016; Goodin et al. 2008). Goodin considers time, or rather, discretionary time necessary in the same way as “self-respect” is the primary of primary goods in a Rawlsian sense (Goodin 2010). Without self-respect, other primary goods cannot be made use of. Time functions similarly; it is needed to pursue any type of project or plan.

As a starting point, Eriksson et al. put forward a hypothesis: that people’s subjective satisfaction is (among other things) a function of how much autonomy they have over the allocation of their time (Eriksson et al. 2007). Autonomy, meaning freedom and capability to choose, is on this account correlated with quality of life. All things equal, having more control is more satisfying than having less control. So, control matters for instrumental as well as for intrinsic reasons. In their

work, and consequently, in the work of Goodin, discretionary time is defined as the amount of time left after people have spent the strictly necessary time in three dimensions: paid labor, unpaid household labor and personal care (Goodin 2010). Eriksson et al. and Goodin then define “strictly necessary” in the three dimensions. For example, strictly necessary time in paid labor is the time needed to earn enough to have a poverty-level income. Even though people usually spend more time doing paid labor than “strictly necessary” striving for a above poverty-level income, anything above the ‘strictly necessary’ threshold is considered a choice. Hence, it can be seen as an exercise of autonomy (Eriksson et al. 2007). From a justice perspective, it should be of interest to consider how policies and practices affect differences in temporal autonomy of different groups of people.

Similarly, Rose argues that free time should be regarded as a necessary resource or opportunity, alongside money and other opportunities that are commonly considered in theories of distributive justice (Rose 2016). Furthermore, she argues that citizens have legitimate claims to fair shares of free time. These claims are grounded in the liberal egalitarian theories of justice where it is believed that “citizens have legitimate claims to fair shares of the resources that are generally required to exercise their liberties and opportunities” (Rose 2016). Rose continues: “[t]o exercise one’s right to vote, to participate in a town meeting, or to join in a protest, one must have not only the means to travel to the polls, the town hall and the public square, one must also have the free time to exercise these liberties” (Rose 2021). Thus, time is necessary for autonomy. Time is also needed in order to access to most fundamental liberal rights.

In the above example, the time it takes to exercise these liberties has to (arguably) include travel time. However, travel time is rarely explicitly discussed. When discussing what governments can do to close the gap between those that have less discretionary time (such as lone mothers) and those that have more discretionary time (such as members of a dual-earner household with no kids), Goodin considers measures such as tax-transfers and child-care systems as well as influencing the terms of divorce (Goodin 2010). Yet, as is discussed in Section 3, travel behaviour and having to spend (more) time on inconvenient travel is a clear ‘time trap’ for women that are already pressed for time. So, from an urban planning and policy perspective, easing travel and focusing on travel time should also be considered an alternative. After all, transport interventions already set out to shorten travel time (in theory, not in practice).

Tyssedal argues that it is a mistake for a theory of temporal justice to only consider shares of time, the quality of time has to be considered as well (Tyssedal 2021). He argues that the notion of free time does not sufficiently track valuable time, that time is a resource for which units differ in use-value. This is well-aligned

with the accounts that argue for a distinction between the quantity of time and the quality of time. From a policy perspective, closing the gap in discretionary time and taking women's more complex travel patterns into account has to include qualitative aspects of travel time.

5 Why Consider Time in a Framework for Transport Justice?

As made evident by the case of gender inequalities presented in section 3, not considering time as a resource is an obvious limitation of any account of urban justice based solely on accessibility with no temporal component. Although time or the value of time savings has a prominent place in transport economics and transport appraisal, it has not been given much attention in the discourse on urban justice. Technically, saved time is transformed into increased accessibility,⁷ based on which most accounts of transport justice are framed. But as has been explained in section 4.1, the time savings do not imply shorter travel times for individuals. The standard view in transport economics is that what is done with the saved travel time doesn't matter:

Of course, on a strict constructionist view, it is not possible to save time, only to transfer it between higher valued and lower valued activities. But similar considerations apply to many other consumer decisions. People buy electric hedge trimmers in order to reduce the time and physical effort of trimming their garden hedge. If they then invest part of the time saving in trimming their next door neighbour's hedge, this does not deny the value of investing in the hedge trimmer. Similarly, whether or not people choose to take out part or all of a travel time saving in travelling to/from a preferred location is very relevant to modelling but does not undermine the concept of travel time values as a proxy for the value of enhanced accessibility. (P. Mackie et al. 2018)

This quote is a response to a critique of accessibility relying on people spending their saved travel time on additional travel.⁸ It illustrates that the commodity "time" in transport is not actual time as it might seem but instead a proxy for accessibility. And as has been discussed in section 2, while there is a temporal

⁷ The accessibility is consequently seen as a proxy for economic growth since the "saved" time can spent productively, such as on additional work.

⁸ The argument is that time savings are problematic as a measure of benefits of transport investment since they do not sufficiently take changes in land use into account (Metz 2017).

component of accessibility – you need time to take advantage of accessibility – few accessibility measures include this component. I find this somewhat problematic. Whether we actually travel less in the long run is disputed. But arguably, a transport intervention might make it possible for some to be able to spend less time commuting. Shouldn't the temporal circumstances of these travellers matter? And shouldn't it matter what gets done with the extra time? Furthermore, while it is the case that large infrastructure projects indeed take a lot of time and people change during the build, other interventions are not as time-consuming. Such interventions can also concern qualitative aspects of time. The distribution of such interventions seemingly should be included in a justice framework for transport. Given how essential time allocation is in everyday life and significant impact of the transportation network on the urban environment, connecting these aspects is both relevant and needed.

It could be argued that using willingness to pay as it is done in practice in transportation economics will reflect a time scarcity or even poverty. If you have very little free time, you would be willing to pay more for shorter travel time. Theoretically, the value of a travel time "saving" depends on the opportunity value of time, meaning the value that could be attained if the travel time was used for some other activity. The less available time one has, the higher the opportunity value. In turn, the direct value of travel time depends on the comfort, productivity or enjoyment of the trip. It is measured compared to the value of being at the destination. This should cover the qualitative aspect of time: if the travel time is productive or, enjoyed, one is willing to spend less money to shorten it. For example, in Swedish data, the value of travel time is higher for those that are employed and those that have children; assumingly, they have less free time (Börjesson and Eliasson 2014). But in practice, these potential differences are not reflected in the appraisal process, for obvious reasons. After all, the goal is a stable, long-term rate of substitution between time and money. While willingness to pay theoretically can reflect time-poverty at a particular point, the intention is to attain a substitution rate free from such influence. But such an intention might not give us the proper tools to analyse how and if the benefits of an investment are unequally divided between those that have more time and those that have less. Additionally, it can be questioned whether aspects of time can ever be meaningfully unconnected with the social context within which they exist (Hjorthol 2001).

The same study as referenced above found no gendered differences in the value of time (Börjesson and Eliasson 2014) even though there is empirical evidence of gendered differences in travel patterns and in time use as such. This could indicate that there are elements of time, time-scarcity and time-use that are not reflected by a willingness to pay measure. In that case, it seems relevant

to ask what these elements are and if they are significant from the perspective of justice.

Lastly, there is the matter of time and status. Who we make wait matters. For example, who gets priority at a signal crossing clearly indicates who is important (Hjorthol 2001). Having to wait for the bus can be experienced and thus understood as status degradation, especially since the passenger has very little control over the wait, both from the perspective of duration and environment. ITC solutions that indicate the time until the transport service arrives can give a (arguably false) sense of control and put the part of the responsibility on the traveler. If you know that the bus will arrive in 7 minutes, you can use the waiting time more efficiently. Perhaps some information is better than no information at all but it does not guarantee that the bus will actually arrive in 7 minutes, nor does it allow the traveler to spend the time however s/he wants due to constraints on the “commodity” time. In transport economics, the burden of waiting is somewhat reflected in waiting time being valued higher than travel time. So, shortening waiting time should yield higher societal benefits than shortening travel time. But again, this does not necessarily provide the right tools to analyse who is made to wait. Citizens with resources can avoid queues by buying themselves free and letting others do the waiting. This is the case for “pay-as-you-go” speedways and, to a certain extent, congestion charges, which are increasingly popular interventions in congestion-heavy cities. Either you pay and are granted smoother travel with less congestion and consequently, less travel time, or you cannot afford the charge and are left with a cheaper but slower alternative. You are made to wait. The wait can be seen to reflect the status of the traveller. As Hjorthol (2001) argues, having the economic resources to choose one’s means of transport results in gaining more temporal and spatial flexibility. In a sense, this also implies greater autonomy.

6 Implications of considering Time in an Urban Justice Framework

In the previous section it is argued that from a philosophical standpoint, an accessibility-based metric of justice is insufficient. Although there are person based measures of accessibility that can account for individuals’ temporal constraints, such measures are rarely used in transport economics. Additional consequences of including a temporal component in a justice framework are developed in this section.

6.1 Further Advantages

There are additional advantages of considering temporal circumstances besides the reasons considered in section 5. Assume that there are two types of transport-related interventions: one that leads to shorter travel times and consequently so-called time reductions and one that improves the conditions of travel without making it shorter. The second type of intervention does arguably not impact the accessibility of the traveller. Technically, if the time is perceived to be less burdensome, which it could be with improved conditions, the willingness to pay to spend less time in such conditions would be lower.⁹ So, the improvement is measurable given the established practices. However, it is unclear to which extent such an improvement would contribute to economic growth if no time is freed for other value-creating activities. If no measurable increase in accessibility is observed, there is no impact on transport justice considered solely based on accessibility. A justice metric encompassing the aspect of time would, on the other hand, enable us to consider the justice of the distribution of such improvements. Additional advantages of including some operationalisation of time as part of a transport justice framework are discussed below.

As noted above, a metric based on time would allow for a measure of both duration and quality of time. Research indicates that the qualitative side of transport, especially public transport, is significant: “[t]he positive VTAT for public transport is a strong indication for the importance of travel conditions, in turn suggesting that improvements in travel conditions of public transport might be as important as investing in shorter travel times” (Hössinger et al. 2020). The actual duration could be discounted based on various characteristics, such as if the journey is safe, quiet, if the mode is well ventilated and so on. Aspects of noise, pollution and risk can be incorporated into the notion of transport justice in a way that is more intuitive than in an accessibility-based framework.

While the value of time is understood to encompass whether or not it can be spent productively since this is something willingness-to-pay would reflect, no consideration is usually given to how travel time impacts the time available for activities that cannot be done while travelling. Such activities include work that cannot be done remotely, as well as unpaid labour such as childcare and cooking. Some leisure activities also cannot be carried out remotely, such as playing tennis or the piano. Usually, time allocation outside of travel does not impact the value of travel time savings since how the saved time is actually spent is not seen as

⁹ In this case, it might also impact accessibility. If the trip conditions enable the traveller to spend the time more productively and thus “save” time, the saved time can be seen as an increase in accessibility. However, most measures of accessibility would not account for such a change.

relevant. However, a metric that included time could potentially be more holistic and leave room to consider such aspects temporal justice.

One perspective is that the benefit of shorter travel time for someone who can work remotely and can spend the commuting time on work, for example by travelling by train or even bus, is arguably less than for someone who is not able to spend the travel time productively. Though technology (if it is accessible and affordable) enables most to do “something” with one’s travel time, there are tasks that cannot be performed while travelling. Many of these tasks are so-called care work or unpaid labour, for example, child-care and household tasks. You cannot cook or clean on your way to work. Notably, a shift to self-driving cars might enable those who commute by car and can work remotely to re-allocate work time to the commute and thus be less at the workplace. However, most care-work will by its nature not be affected by the “automated vehicles revolution.” Also, when the time is saved matters. For example, if my trip consists of two parts with a transfer in-between. Reducing travel time is only beneficial if it is in the beginning or end of the journey. If it only affects one leg of the journey and results in longer waiting time while transferring – it’s probably worthless (or worse, since waiting time is valued higher than regular travel time, so a journey with shorter travel time and longer waiting time has a higher generalised cost). Since time cannot be accumulated and has various other characteristics that make it less fungible, “saved” time must be re-allocated to other activities immediately. The particular characteristics of time are also the reason why certain tasks do not only require time; they also require one to be at a particular location, such as many care-work tasks do (you cannot cook dinner without being in the kitchen). So, “where” the saved time is matters and as well as the length of it. Small time savings are reasonably worth less because they are more difficult to re-allocate to tasks that require larger chunks of time.

6.2 Disadvantages

Not all implications of considering time as a component of a justice metric for transport are beneficial, there are also possible disadvantages. The first disadvantage is a practical one, namely the difficulty of operationalisation of a metric with a temporal component. To consider potential time savings as a result of a particular transportation intervention, it is in transport economics assumed to be enough to know the length of the saved time, the number of travellers that benefit from the saving, the mode they travel by and the purpose of their trip (whether the travel is for work, commute or leisure). If the time saving is to be valued differently based on whether it benefits those that are time-poor or if the saved time is put toward

particular use, more has to be known about those affected by the intervention. Assuming we will never pinpoint the exact individuals affected by the intervention, estimates and generalisations have to be made. For example, the difficulty in valuing small time savings lower than longer ones arises from not knowing the full door-to-door journey of a passenger on a particular leg of a trip. If part of a road is widened,¹⁰ it will benefit both those for whom it is part of a quick journey and those that travel significantly longer. As it is phrased in transport economics, the argument is that we cannot know the total length of the journey for each traveller. The composition of travellers on a particular link changes each day. Hence, we cannot know if the saving is significant in relation to their total journey or not. This argument is similar to the argument that we cannot know if the individuals that eventually benefit from the intervention are time-poor or what they use their saved time on.

The second disadvantage is that if observed travel time is considered and time is seen as a resource, we cannot know if the way the time is spent is due to personal preferences or external circumstances. Simply put, we do not know whether the observed travel time is due to taste or need. While it has been found that women tend to travel more by public transport and reduce their car travel more than men, even when they have easy access to a car, we do not know if the gendered differences in travel behaviour are due to taste or external circumstances. Mechanisms that could explain a difference in behaviour include prevalent ecological norms and sustainability goals as well as women's less ingrained car habits (Matthies et al. 2002). Distinguishing between choice and can be a challenge: "[w]hile differences in activity and trip patterns (e.g., trip chain complexity, trip distances) may explain mode choice, the reverse may also play a role, i.e., differences in mode choice may help explain variance in activity and trip patterns" (Scheiner and Holz-Rau 2012).

However, the same challenge (i.e., distinguishing between choice and must) can arise when using other person-based measures of accessibility. After all, the primary factor that affects accessibility is one's place of residence. By choosing place of living, I also choose the level of access I find acceptable (mind the caveats here: assuming I even have a choice and the levels of access do not drastically change by factors outside of my control, such as closings of public transport services). But reasonably, even if I count on certain services to be available when moving to a suburban, I make some sort of choice regarding accessibility compared to if I chose to live in the middle of a busy city center.

¹⁰ Assume for argument's sake that widening the road leads to less congestion and thus quicker journeys, although this mechanism has been contested due to the induced traffic generated by such an improvement.

7 Conclusions

Many aspects of urban life are connected through travel. It is both expected and accepted that city living means spending time on travel. In a sense, transportation needs result from a strive for efficiency, with a concentration of services seemingly more efficient. From the perspective of a city planner, it can be seen as more cost-efficient, with fewer yet larger playgrounds than many smaller ones. However, this results in longer times for families to get to a playground since not everyone can live next to one of the large ones. The small, local shops have been replaced by supermarkets and malls where we efficiently can do all our shopping at once. Still, any errand requires a substantial drive from the residential area. This mismatch can be traced back to seeing speed instead of proximity and connectivity as means to achieve accessibility. On the one hand, transport projects that lead to shorter travel time seem to build on the assumption that is less necessary travel time is good. The same assumption can be found in the literature on free and discretionary time. On the other hand, time savings in transportation economics only serve as a proxy for expected economic growth. Whether travellers actually spend less time travelling (or just if their travel time improves) is not considered. Nor are the temporal circumstances of those affected considered. Furthermore, the prevailing metric of justice, i.e., accessibility, does not leave room for analysis to highlight the temporal aspects of justice. What you can theoretically access is quite different from what you have time to access, especially if you are a time-pressed single parent. Thus, the time the travel time has on everyday life should not go unnoticed. Urban planning could look differently if considering citizens' distinct claims to time. At the very least, it is time to put time higher on the planning and policy agenda.

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How Has the Pandemic Situation Changed Our Perception of Space?

The phenomenology of space in the light of COVID-19 restrictions

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ABSTRACT | The vast majority of people in countries affected by COVID-19 felt the radical change the pandemic brought about in almost all aspects of life. Social interactions were cut to a minimum and all cultural activities were banned. In this paper, I evaluate the following question: how did the pandemic situation change our perception of space? I assess what this situation offered us, and how the restrictions imposed due to COVID-19 changed our perception of urban and public space. In order to dig deeper into these questions, I use the ideas of three philosophers who work with a conception of space emphasizing its perception. Through the chosen theories, I introduce public space as something beyond a simple materialistic interpretation. On the one hand, I use Henri Lefebvre's spatial triad to establish different layers of space. On the other, I argue that the material layer of public space could provide us with valuable experience, according to the phenomenological approach advocated by Maurice Merleau-Ponty and Michel de Certeau. Much of the argument in this paper is based on my own observations during the eight-month lockdown period in the Czech Republic during the spring of 2021.

KEYWORDS | Everyday Life; COVID-19; Perception; Public Space; Spatial Layers; Behavior

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There is a beautiful cycle path outside my house, lined with benches and old trees. It usually serves as a meeting point where a lot of social interactions take place. I often see teenagers hanging around with their friends, parents with kids enjoying the ice cream from a nearby kiosk, or construction workers having a smoke break. These scenes from everyday life started to change, and eventually disappeared, as the restrictions related to the COVID-19 pandemic were put in place. Social interactions were cut to a minimum and all cultural activities were banned. What remained were the objects that typically fill public space in cities. Benches still lined the path and the linden trees were not trimmed, but they were orphaned from social gatherings and public activities. One particular bench became an object of study for me, as I was able to see it from my work desk and could observe it for hours each day. After a few days of staying at home, local residents started to use this bench in a different way and it gained a new importance. It began to be occupied by people from different social groups, and their doings were not connected with any particular activity – quite the contrary. People would sit and watch the street and, according to my observation, live in the moment. Some of them stayed for a couple of minutes, others for more than an hour. They wrapped their arms over the backrest. There were no other activities to distract them from the concentrated perception of space. This observation made me think about what this situation offered us, and how the COVID-19 restrictions changed our perception of the town or city.

The crucial point here is to understand the role space plays in our lives. Most of our activities are connected to spatial dispositions. It does not matter if we live in the rush of a city center or in the suburbs of a town; we enter public space nearly every day, on our way to work or when meeting our friends. We use squares for public gatherings, while parks serve as settings for cultural events or leisure pursuits. The structure or placement of various objects in public space, which I call the “material layer,” creates the basis for our cultural and social activities. In this paper, I will examine what we lost during the pandemic in terms of public space, and what we gained. Although we might think primarily about the time we lost due to lockdowns, I would argue that this period was a chance to experience a different perception of space. This paper could be thus outlined as a philosophical reflection on the things we lose versus the things we (could) gain in uncertain times.

For the purpose of this discussion, I will draw on the ideas of Henri Lefebvre and Michel de Certeau. Both philosophers, who were also sociologists and Marxists, focused on the practices of everyday life and their connection with spatial activities. Additionally, I discuss the ideas of phenomenologist Maurice Merleau-Ponty, who was concerned with how we perceive the world. What I consider a

crucial point is the connection between Lefebvre and de Certeau in relation to the material essence of space. From there, I will move towards the conditioned relations between our behavior and representation as advocated by de Certeau. And finally, the linking point will be to apply these concepts to a particular case: my own observation of the bench as a part of public space. This bench, I will claim, gained a new importance during the lockdown. My assumption is that the material layer of a town (the built environment) is taken for granted and does not receive sufficient attention from the inhabitants. I therefore argue for its importance as the base layer on which we build our other activities.

(Nadolny 2015) clarifies Lefebvre's perspective toward the town and reveals his consideration of space in general. Lefebvre assigns a great role to citizens as creators of space. His work relies on an active role and the participation of a creative class. He sees public spaces and towns as opportunities, as places where human life could be made to flourish. The role of the inhabitants is to create new products – public spaces. In other words, he puts citizens into the role of creators, not just consumers, of public spaces. This is a crucial point for the application of our right to the city:

People who use the city – who live, trade, walk there – create it themselves, both at the mental and material levels. The city, he [Lefebvre] believes, serves only as a starting point triggering spatial situations which transform and create the diversity we need so much. It is this diversity which makes the philosopher believe that the modern city is a form open to changes brought about by modern times, even if he is critical of its consumptionism. (Nadolny 2015, p. 33)

However, in order to get to the idea of a town as a whole, it is necessary to dig deeper into Lefebvre's theory, in which he explores the different layers of space. Lefebvre's central interest is the conceptualization of the notion of space. To clarify, the notion of "space" features prominently in Lefebvre's work, for example the statement "in philosophical terms, space is neither subject nor object" (Lefebvre 1991, p. 92) or his claim that space "is at once a precondition and a result of social superstructures." (Lefebvre 1991, p. 85) This broad definition, which sees space as a process, enables him to divide the notion of space into different categories. One should see the city not as a mere material structure but as a larger network that also includes the life within and the mutual relations and the syntheses of different phenomena.

This paper limits the observation of space to the city itself, whereas the city, and the life within it, also exists in space. This, according to Lefebvre, consists

of the synthesis of three different layers. I draw here from (Bertuzzo and Günter 2009), who describe Lefebvre's spatial triad as follows. The first layer that deserves our attention is the physical and material aspects of space. This includes houses, infrastructure and actions connected with daily routines. One could label this "perceived space," a space that one can explore through the senses. In contrast to this, the second layer could be called "conceived, abstract space," and is related to culture and formed by religion and rituals. It contains our perception of space that is occupied with theories, visions and ideas. The third layer is the social field, in which all interactions take place. This is the lived space created by the social interactions of the inhabitants. To relate Lefebvre's categories to my example, perceived space is the material essence of the bench—the wooden armrests and the iron legs. Conceived space relates to social and political practice, in this case certain urbanistic or municipal plans or visions for the bench. Lived space includes the interactions of inhabitants that take place on this particular bench.

These layers are mutually related and, according to Lefebvre, should be equal and balanced in order to maintain a good life. "The space" is understood by Lefebvre as the sum total of the intermingled phenomena and production processes that interact to create the city and the urban environment. To characterize the city, one does not merely describe a concrete shape, or list the traffic lights and the lengths of the streets. Mostly, one speaks about life in the city and all the interactions that take place there; for example, this is the place where I first fell off my bike, or this town is beautiful but a lot of young people leave for the capital to go to university, etc. It is a mix of our perceptions, memories, interactions, activities, and material dispositions. In other words, the essence of a good life within the city is linked to all these layers, which should not be perceived as separate elements but more like a kaleidoscope of constantly overflowing elements. Elisa T. Bertuzzo and Günter Nest aptly point out that we have a lot of experts (for example, architects, ecologists), but all of them focus on their specific field, whereas the city works as a system that must be evaluated from a multidisciplinary standpoint. What makes us citizens is the basic fact that we are capable of participation, which is, according to Lefebvre, nothing special. Quite the contrary, it is a natural part of living in society. However, this also raises the point that to become a full-fledged citizen, it is necessary to go beyond the material construction of a space, to the abstract and social sphere.

Lefebvre's theory introduces "the space" as a process consisting of various mutually conditioned parts, which enables the inhabitants to participate in its creation. However, during the pandemic this complete picture of what it is to be a citizen became fragmented. Social interactions were cut to a minimum. The

role of abstract space was diminished, since all political and power relations were focused on how to manage the pandemic.

In these difficult times, what we were left with was the material layer of space. And, in most cases, we were allowed to use only our immediate surroundings, since government restrictions strictly determined where we could go. As a result, benches were orphaned from social gatherings, though their material essence remained the same. The observation of the bench from my window became a small island of reassurance not only for me as a spectator but also for other local residents, as actors. This poses some new questions. How can we enjoy space without cultural activities, social contacts and abstract visions? Is there any way to benefit from this situation?

Our results-oriented society drives us to live so fast that we hardly notice the shape of the bench in front of our house, or the view we could enjoy from it. However, the pandemic has forced us to implement new ways of perceiving the town through personal engagement. This personal way of using space is projected onto a wide range of activities, such as the focused observation of architecture, the exploration of unknown places, or the use of our sensory perceptions to delve into our surroundings. The situation engages our awareness of spatial usage, which is present within the everyday practices as described by (De Certeau 1984).

De Certeau advocates a highly poetical framework for the perception of space. His background lies in cultural studies and philosophy, as well as in linguistic metaphors. In *The Practice of Everyday Life* he discusses the role of our everyday activities in relation to the imposed system in which we live. While de Certeau focuses on the different forms of our resistance to following prescribed paths, he also highlights the material and the visible layer of space. In this regard, his research question could be put like this: What do we, as citizens, do with given things, such as streets, squares. etc.? (De Certeau 1984)

The central point for (De Certeau 1984) is that different material layers evoke different kinds of behavior. He illustrates this by using the example of a TV broadcast: the images are a representation, something that is given to us, whereas the time spent in front of a television is a behavior. He asks how the images we receive condition our behavior. For the purpose of this paper, I ask: How does structure, that is, the material layer of a town, condition our behavior and thus shape our identities? Here it is worth emphasizing de Certeau's terminology. He asks what we do with the things that are given to us, and suggests that we take some things for granted. Some things around us exist as an inevitable truth, as a mere fact. Who wonders, during their morning jog in the park, why this bench is there, or who made this ridiculous pathway so narrow? What draws our attention is the sight of people having a picnic nearby, the fact that we are late for work, or what

we will have for lunch. But during the pandemic, most of those elements distracting us from a pure perception of space disappeared. And this fact opened up our capacity for a different kind of spatial awareness, forcing people to implement a mechanism of personal engagement and exploration of the conditioned relation between the structure of a town and our behavior. This raises the question of the role that space plays in our life. At this point, I would argue, people started to develop their relationship with the material layer of the town. The bench itself became our partner during the endless days, providing its visitors with new stimuli. It ceased to be only a place for other activities; sitting on the bench became a primary activity in itself.

(De Certeau 1984) considers the shape of a town, or a park, to be a representation – an image that we receive. And the way we deal with those images leads to certain behaviors. For example, if I see a street I have several options on how to behave. I could go straight on, I could jump on one leg, or I could start to dance. However, what is important is that this one image can elicit different moods and feelings, and evoke different kinds of behavior. During a pandemic situation, the opportunity to experience space in its material layers opens up and offers the possibility to perceive “anthropological space,” a term de Certeau borrows from Merleau-Ponty. Merleau-Ponty sees space as something that offers “the spatial experience that an obviously interested subject might acquire of the world or the perceptual field itself.” (Liu 2009, p. 137) This phenomenological approach leads one toward different ways of exploration. One could follow one’s senses and acquire direct contact with a city, which, I argue, is something that usually lags behind the social and cultural layers. It parallels Merleau-Ponty’s claim that perceived space is usually hidden under all the abstract layers that we use and consume in the first place.

Before the pandemic, the bench was used for various kinds of activities, such as social gatherings, which were disconnected from the perception of the bench itself. The new situation encouraged people to explore the material of the bench, the position of the armrest, etc. Some went further and lay down, while others spent several minutes trying to find the most comfortable position. Others adopted the bench as their daily ritual, and I saw that some people actually appeared at the same time each day.

What Merleau-Ponty suggests is that this certain “form of perception” (p. 138) plays a central role in our understanding of the world. De Certeau advocates something similar, and is concerned about our alienation from space itself (the built environment) in favor of mere consumption. The effect of consumption, de Certeau argues, is that we come to take spatial dispositions for granted. The alienation of people from their dwelling space leads to a disconnection from the world, in which

the material layer of space “works as a fundamental dimension of our being and acting in the world.” (Turner and Davenport 2005, p. 221) De Certeau’s argument in favor of better understanding and personal engagement with the material layer of space is aligned with our better understanding of the world.

All the philosophers discussed in this paper have different attitudes toward space. However, they all strongly argue for the role of space, in the sense of the built environment. For Lefebvre, space is a process consisting of a synthesis of different layers. However, on the account of perception, Lefebvre agrees with Merleau-Ponty when he claims that space consists of different materials, such as stones, wood, etc., and that people experience space through the senses. Both Lefebvre and Merleau-Ponty consider this to be crucial for getting to know the city and developing the feeling of belonging in it.

(Lefebvre 1991, p. 40) considers perceived space to be “the practical basis of the perception of the outside world.” As examples of direct contact, Lefebvre uses everyday activities such as sitting on a bench or exploring architecture, which involve interaction not only between human beings but also between oneself and perceived space. Without the ability to perceive our surroundings with a certain sensibility, continues Lefebvre, space will come to play a less important role in the context of human life. I argue that previously marginal everyday activities, such as going outside and sitting on a bench, became the highlight of the day during the lockdown. This implies a personal engagement with the bench itself – touching it and feeling its material and structure, thinking about its shape and spatial orientation. A similar kind of experience comes from directing our attention to architecture. Once, during the lockdown, I spotted a couple admiring a small statue that decorated the entrance to their house. Their conversation expressed amazement: “Wow, this is the first time I’ve noticed this facade. Isn’t it beautiful?” Things that were usually overlooked gained a new importance as objects of our observation.

These facts, which may seem like small details, can play a crucial role in our perception of the town and the space in which we live, especially when restrictions on social interaction and cultural events increase our capacity to perceive a city in its material sense. And that is something, as de Certeau points out, that plays an important role in shaping our identity and influencing our behavior. The structure of a town thus plays the role of a foundation stone on which other abstract layers balance. What I see as really important is this: If we diminish the symbolic use of objects, we could come to focus on their essence, which would help us to develop their potential for better use. And sometimes simplifying things to their bare essence helps us to understand better the next layers we build on them.

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Confronting the Spatiality of Women's Fear, and Why It Matters

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ABSTRACT | This work deals with the problem of women's fear and its spatial dimension. Women's fear in and of the urban space may only be properly discussed with a return to their everyday lives and experiences as women. Looking more closely into women's lives, we find that their fear issues from the conditions that surround their embodiment. Building on the work of Gill Valentine, Leslie Kern, Iris Marion Young and Simone de Beauvoir, this paper seeks to prove that the mechanisms which objectify women in their experience as embodied are precisely what drive them to a state of fear. In turn, such fear also holds the power to shape women's space, thereby accounting for how the feeling of not-belonging in the city persists in women. To address women's fear and to build more inclusive spaces, therefore, requires that our recognition of women's oppression take on a spatial dimension, and our construction of the city seriously consider the women who inhabit it.

KEYWORDS | City; Women; Fear; Embodiment; Objectification

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In 2018, Twitter profile “feminist next door” posed this hypothetical question: “Women, imagine that for 24 hours, there were no men in the world... What would, or could you do that day?” (feminist next door (@emrazz) 2018) Years later, the tweet was replicated across different online platforms, and in 2020, the same question blew up on TikTok. And while there were occasional variations in the responses, the one response that stood out as the most common one was: “to walk around freely at night” (Writers 2020).

These results make us ask why men’s presence is a concern in relation to women’s activity and mobility. Perhaps, the underside of this discovery that may be drawn from this is that, because men are present, women cannot walk around freely at night. However, to immediately blame men’s being present for women’s insecurity—fear—in relation to spatiality, would be taking the easy way out. The approach that this paper chooses to take is to give an account of women’s fear by tying it to their experience of embodiment, treating of it as a consequence of the conditions surrounding women’s embodiment. That is to say, women are afraid in and of space because of the objectification that women, in their embodiment, have had to endure over the years.

Following Leslie Kern and other feminist philosophers on both the body and the city, this work builds on the insight that our embodiment directly impacts our navigation and occupation of space. However, since the conditions surrounding our embodiment also bear the codes of prevailing social and power relations, then the ways by which we navigate and occupy the urban space are not neutral. As Valentine (1989, p. 389) shows, there is a geography to women’s fear of space. According to Valentine, women’s use of space which manifests itself in inhibition and restraint, is simply patriarchy, expressed in spatial terms.

Taking Valentine further, this paper seeks to show that women’s inhibited use of space which stems from their fear is one that begins in women’s embodiment as the site of objectification. Young (2005) offers an account of what it means for embodiment to be an important factor in the experience of space and shows how this dynamic plays out particularly in women’s lives. Analyzing how women become aware of their space on account of how they are made aware of their bodies, Young shows how women’s consciousness of their space as limited owes itself to the way women have been raised to use and make use of their bodies as sites of limitation and constriction, as well.

Young suggests that women’s experience of their bodies and, by extension, space, is itself a consequence of the mechanisms of objectification that women suffer at the hands of patriarchally defined relations and institutions. Taking Young’s analysis even further, we build on Simone de Beauvoir’s discussion of how women come to be objectified (Beauvoir 2011) – as subjects stripped of their subjectivity,

as subjects who rely on men for definition and fulfillment, as subjects who are othered. It is therefore in this othering of women that we find an exhaustive account for women's objectification.

From these mechanisms, from being treated as both sites of objectification, women are introduced and socialized into the world in such a way as to make them internalize the objectification. The mechanisms of objectification thereby create the fearful woman, the one who carries in her body the script that she is endangered because she is a woman. According to Koskela (1999, p. 111), when women's fear of violence is realized, it takes the form of spatial exclusion. As women come to internalize the idea that they are in constant danger in the urban space on account of their being women, this also translates into their avoidance of the space, or, at the very least, their being careful within that space.

By this, we then see how the account of women's fear comes full circle: women are afraid because the mechanisms of objectification imposed upon them have made many of them believe that fear is their only recourse; conversely, that women are afraid and stay afraid reconfigures their space, with their spatial inferiority seeping into the into their interactions and engagements. Women's fear in relation to space serves a special function in the service of patriarchy – for as long as the objectifying mechanisms are in place to make women believe that their fear is synonymous with survival, then the construction of a more just urban space shall remain to be difficult, if not altogether illusory.

1 Women's Fear, Embodiment, and Objectification

This paper takes together the concepts of embodiment, spatiality, and the urban space, because in the context of the work the understanding of one concept is dependent on the other two. We understand embodiment as it is fleshed out in space, and conversely, we understand space as it is configured, reconfigured, built, rebuilt, in the countless number of ways that we express our embodiment within it.

The way we negotiate our engagement in and with space is made possible because we are embodied. To extend this further, the way we negotiate our engagement in and of space is mediated by our being embodied, an embodiment, which, in turn, has been heavily influenced by the countless involvements and structures that legitimize and codify our existence. Hence, the discussion of how embodiment is to be understood must be done in relation to the discussion of how space is constructed and reconstructed. In the context of this work, embodiment is taken to mean both our physical, material existence as well as the interpretations that

govern the way we perceive our materiality. With this account of embodiment, we find that human bodies are not neutral. The material emerges simultaneous with interpretation, which means that our understanding of who we are as embodied is always tied up with the meanings that are attached to it. We are never without the context, the space within which we interpret ourselves and are being interpreted by others.

In the same way, the way cities are constructed is not a neutral process, either. To speak of a city's construction is to conceptualize such construction on at least two levels (Gieryn 2000, pp. 464–465) – the physical and the interpretive or what I call the symbolic. The physical construction of the city corresponds to the urban space that emerges from various ways by which governments and urban planners allocate space, determine how it is to be utilized, by whom, for how long, to what extent. It corresponds to the physical rendering of urban planning (or lack thereof), including zone assignments, city clusters, and the requirements that come with these zones and clusters. Viewed symbolically, the construction of cities is reflective of social relations. Because human interactions always take place in time, these interactions also come to reconfigure a city's shapes, landscapes, streets, corners, and buildings. These relations become fleshed out in space.

However, social relations themselves reflect prevailing power dynamics, which means that the construction of cities heavily relies on this question of power, of how positions of privilege are set in place, and of who occupies these positions. Cities, thus, are constructed doubly. As Martina Löw discusses in *The Sociology of Space*, a sociological analysis of space must always include an account of its material substrate, which is composed of human beings and their relations with one another (Löw 2016, p. 41). The same argument holds for the city or the urban space. One can provide an account of the city as a space only if one also provides an account of the relations that take place in it and the social arrangements that operate and prevail within it.

The urban space, therefore, is not neutral, if by neutral we mean devoid of human intervention. This space is not neutral, if by neutral we mean that it can be successfully severed from human affairs. The urban space, or more precisely our experience of it, is connected to human life, and one's experience of this space is hinged on prevailing values and social relationships, including unjust practices and structures. Existing inequalities and injustices come to take spatial form in the city.

Gender is one of the most prominent features of social relations that is closely tied with inequality. The way gender is constructed at a given period also determines one's rights and privileges; and because rights and privileges are always

lived in relation to space and time, gender then contributes to the question of how much 'place' one can afford within that period.

Given that the ways of life of the city's inhabitants are significantly shaped by their gender identities, then the city, too, takes on a gendered character. *The city is gendered* (Beebeejaun 2017, p. 323) which means that the many ways human beings interact and relate with each other (including the many ways that they cannot, or refuse to), take the form of place, or are also set in place.

As articulated by Massey (1994, pp. 147–148):

The degree to which we can move between countries, or walk about the streets at night, or venture out of hotels in foreign cities, is not just influenced by 'capital'. Survey after survey has shown how women's mobility, for instance, is restricted – in a thousand different ways, from physical violence to being ogled at or made to feel quite simply 'out of place' – not by 'capital', but by men.

However, if we are to give an account of women's fear of the urban space precisely as it plays out in the urban space, we cannot rest on up-in-the-air analyses of the persistence of gender inequalities in cities. Because fear is felt on the level of everyday life, because fear is lived, not as a concept, but as a real state of being with real implications for women and their lives, then a more meaningful account of women's fear must return to women's real lives. We ought, then, to look more closely into women's experience of embodiment, or more precisely, how women have been made to experience their embodiment, and its effects on their consciousness of space.

I remember, when I was still about 8 or 9 years old, I was in a jeepney with my mama and papa. We lived on the outskirts of the city, and we were on our way to the city center. Inside that cramped jeepney, I was sandwiched in between Mama and an old man. I took notice of the old man, who began looking at me with a look that I could not understand. All I knew was that the look made me uncomfortable. My mother quickly came to my rescue, telling my father to switch places with me, telling him, *Kaning tigulang sige'g tan-aw sa imong anak* [This old man keeps looking at your daughter].

When I was 16 years old, I once decided, quite spontaneously and at about 3 in the afternoon, to walk from one mall to the next, the distance of which was about a kilometer. In that kilometer-walk, I was catcalled three times, by men who were in jeepneys and working on construction sites.

While neither of these experiences made me stop wanting to get around whether by public transportation or walking, both did make me believe painful things: easy

mobility was not meant for me, and the city did not feel like home. Especially not if I wanted to avoid being ogled or harassed.

Thus, if I were to be asked to pinpoint one specific experience that made me afraid of being in the city, I would be unable to offer one answer. My fear is made up of a thousand experiences that brought me to the conclusion that the city was not a place for me. It was in the way that old man looked at me, even as a child, on public transportation. It was in the way I was catcalled as a high school student who simply wanted to see more of the city by myself. I felt it in the way my elders would remind me to be mindful of what I was wearing, to be careful to preserve my modesty. Or in how the standing rule for me until I graduated from college was to be home by 6 o'clock in the evening, because that was the respectable time for girls to be home.

Needless to say, I am not the only one with this story. Available data on violence against women and girls (VAWG) show that my fear is, in truth, shared by many, if not most, women, and that it is a fear we have all been made to feel since childhood. In Cuenca, Spain, ninety percent of the women who resided in urban areas reported that they had experienced some form of sexual harassment (Women 2020, p. 7). In Guatemala, women identified public service infrastructure such as "public transportation, closed alleys, roads/walkways, parks, open spaces and bus stops" as the areas where they felt most unsafe (p. 13).

In response to this fear, women have learned to cope. Valentine (1989, pp. 385–386) presents several responses that women rely on in relation to this state of fear. Some have learned to function according to a mental map of safe and unsafe spaces, which also vary according to the times of the day. The mental map serves several purposes. For one, it serves as women's first line of defense against their perception of dangerous spaces, seemingly effective at telling women which spaces to avoid altogether and which ones to approach with caution. The mental map also serves an educational purpose, as it is a tool that is eventually taught by adults to girls. In time, adolescent girls are made to confront the established "fact" that some spaces are simply not for them.

As Kern (2019, pp. 1440–145) so deftly puts it, in the attempt to account for the female fear:

... This is when the volume turns up on the message that girls and women are vulnerable due to our gender and that sexual development is going to make that danger real. Instructions about appropriate behavior (how you sit, speak, walk, hold yourself, etc.) take on a sense of urgency that indicates they're not just about polite social behavior. Some women can pinpoint the exact moment they became aware

that something was different. Maybe it was the day mom told you to start cinching your robe around your nightdress, or the night when your playful use of mom's makeup and high heels went from cute to inappropriate. For many of us, however, the message comes in like an IV drip, building up in our systems so gradually that once we become aware of it, it's fully dissolved in the bloodstream. It's already natural, common sense, inherent.

Kern raises important points. First, she makes clear that the rules surrounding the rearing of girls make them believe that they are in danger because they are girls. Kern also shows how the rules make girls believe that the situation gets worse once they grow up into women. The lives of girls, therefore, generally become stories of learning how to become and be careful. Girlhood becomes synonymous with vulnerability, and the good girl is one who follows the rules so that the danger does not become real.

If the lives of girls become centered on stories that paint them as damsels in distress, and if, with education and training, the choices they make spring from this place of constantly needing protection, then it does not come off as surprising that for women, their fear in relation to space takes on the status of instinct. Hence, it is important that we provide an account for this fear, precisely because it is not irrational or baseless. Fear, particularly women's fear as it plays out in the urban space, is not without justification, not without logos, not unreasonable. This fear is a learned response from generations of internalized objectification, where, through time, we come to believe the scripts they give us. This fear, as shall be shown in this paper, stems from the many ways that women, as embodied human beings, have been treated as objects, and have been made to believe that they should be treated as objects.

Our experience of space is not neutral. Our experience of space is tied to our embodiment. It is through our embodiment that space becomes a physical encounter. Our bodies bear the codes into which we were born, and these codes, be they genetic or societal or both, help to determine how much space we may occupy, how much space we are *allowed* to occupy. Bodies exist in a particular position in time; bodies are historical.

Gatens (1999, p. 228) emphasizes the historical nature of the body. The body cannot and never will be separate from the environment to which it belongs. Within this environment, there are expected ways of being that are imposed on the body, and in turn give the body its particular shape, inform it, so to speak.

Young (2005), in *Throwing Like a Girl*, discusses how this connection between embodiment and the experience of space is very real for women. According to

Young, women have been raised and socialized such that they come to acquire a conception of the space they occupy that is vastly different from men's idea of the space they occupy.

In order to illustrate her point, Young uses the imagery of the way women accomplish tasks and achieve goals. Taking off from Merleau-Ponty, Young stresses that what defines our relation to the world is primarily the fact that our bodies are purpose-oriented; as embodied beings, we identify tasks for ourselves and then direct ourselves towards the doing and the eventual completion of the said tasks.

Young uses the concepts of motility and spatiality to elaborate. According to Young, women's experience of motility is shown in three modalities. First, woman experiences her body as an ambiguous transcendence. On one hand, woman does see that her body is the only way by which she can engage with the world; her body is the only way by which she can live, perform tasks, and pursue ends. And yet, on the other hand, woman also experiences her body as perpetually rooted in immanence at the same time (Young 2005, p. 35). Second, woman experiences her body as an inhibited intentionality. Merleau-Ponty grounds intentionality in motility, where a person who declares for himself, "I can", necessarily concretizes this assertion by moving out to achieve that goal. For woman, however, the assertion of "I can" is simultaneous with the assertion "I cannot" (p. 38). Whatever belief she may have in her own capacities is always paired with self-doubt; hence, woman's intentionality is inhibited intentionality, where the inhibition springs from woman's lack of confidence in her own self, with respect to the performance of bodily tasks. In many instances, we may even observe that women are often surprised at their own achievements. Many of them cannot believe that 'they actually did it', and yet they did. Third, woman's body is experienced as a discontinued unity with the rest of its surroundings. Woman has a difficulty in seeing her body as a unified whole, and in the same way, cannot see her body and the rest of the world as existing in harmony (p. 38). There always seems to be a disconnect between and among woman's body parts, as well as between woman and the world.

These three modalities of motility reveal the second dimension to be discussed, which is spatiality. According to Young, still following Merleau-Ponty, it is motility that gives us the insight of space – the extent of our motility shows how much space we think we move in, how much space we think we occupy (p. 39). First, woman experiences herself as moving around in an enclosed space. As enclosed, woman's body posits an enclosure that limits her movement, meaning, the space that is physically available for woman is much wider than the space within which she allows herself to move around, the space which she permits herself to use. Second, she experiences this space as taking on a dual structure – the space "here" and the space "yonder", (pp. 40-41), where here means the space where

she can move, use, and actualize her bodily possibilities, and yonder means the space where there are more possibilities that others may achieve, a space where others can move, but not her. Woman's experience of her own space is one that is characterized by a discontinuity between where she is and where she can be, but the 'where she can be' is also at the same time experienced as a practical impossibility. And third, she experiences this space as something that puts and keeps her in her position. As positioned, woman feels that there seem to be invisible spatial coordinates that help to determine her position, and the experience of these coordinates are what keep woman "in her place". Thus, woman experiences herself as rooted in a position, moving in more closed and inhibited terms.

Young's analysis is more than just a closer look into how girls throw. It is an attempt to offer an explanation for how girls and eventually women live their motility with respect to their consciousness of spatiality. To put it simply, Young is giving an account of the way women move in response to how much space they think they occupy.

The space that is allotted for women's place necessarily carries with it some understanding of what it means to be a woman, what tasks are proper to one who is called woman, and the characteristics that one must possess if they are at all to be considered a woman. However, women are forced to confront a bigger problem because they are made to believe that the power to occupy space is not as readily available for them as it is for men. The conditions that surround womanhood as well as the meanings that have been ascribed to it across generations and institutions have largely served to give birth to women who develop a sense of fear towards space. Dwelling on the point that women are conditioned and defined then leads us to the connection between women's fear and women's space: women's objectification.

Beauvoir (2011) provides a powerful account of women's objectification. Beauvoir begins her introduction to *The Second Sex* by posing the question: What is a woman (p. 28)? In response to the question, Beauvoir develops the thesis that to be "woman" is to be a subject, but she is a subject who is at the same time an object (p. 27). Such objectification is the position in which woman finds herself, one which she finds difficult to overcome. Woman is subject, in the sense that as a human being, she, too, is free to choose and pursue her own ends. And yet, at the same time, woman is object, as she is forced to take the unenviable position of being the Other of Man, othered by men, thus resulting in the difficulty in resisting her position.

In her analysis of woman as subject, Beauvoir emphasizes that to be a subject, to be a human being means to be a person of freedom and liberty, capable of making choices which then set the direction for one's life, or life-projects (p. 27).

Now, insofar as woman is a human being, she, too, is capable of making choices which determine her life and worth. She, too, is capable of going beyond what is given her, if only to truly make something of herself without being dependent on or constrained by external conditions. This is what Beauvoir would call the capacity of the human being to transcend their limiting circumstances, which all human beings share, precisely because they are human beings.

However, women's situation makes transcendence difficult. The difficulty lies in the fact that woman has been unduly classified by man as his Other, and as Other, is defective, incomplete, always only relative to him (Beauvoir 2011, p. 29). While man posits himself as the Absolute Sovereign Subject, never needing to define or explain himself on the basis of being man, he relegates woman and binds her to her sex, making her believe that by virtue of her being woman, by some sort of default setting, she is barred from attaining fulfillment.

Thus, we see that this domination over woman as Other permeates all of human life – we see men enjoying privileges which are impossible for women, in terms of owning property, getting higher salaries, qualifying for job promotions, availing of “proper” education, and many others. Many women on the other hand, are limited, so to speak, to the kind of existence that is to have none of the above privileges. They are doomed to the kind of existence that may never claim equality with men, may never enjoy enough liberty to aspire for projects to fully define herself. Women are forcefully doomed to immanence (p. 29).

Such objectification of women, however, has spatial implications. In the same way that the values we uphold are immortalized in the construction of our cities, the many ways by which patriarchal institutions enforce control over women show up in how women come to know and understand their place in the world. The objectification of women, then, is something that takes place.

Young, following Beauvoir, links women's experience of spatiality to objectification and shows that the objectification of women accounts for how they experience their space. According to Young, while “growing up as a girl” may seem to give a good explanation, she goes on to show that the deeper reason for woman's experience of her own spatiality as such is due to the fact that she is conditioned to regard herself as mere object to be looked at and evaluated (Young 2005, p. 44).

First, it is her being defined as an object that leads her to experience space as enclosed. This is because in being defined as an object, woman is forced to limit herself according to other people's perception, or according to how she would anticipate others' perception of her, and to act accordingly.

Second, it is her being defined as an object that leads her to experience a disconnect between the here and yonder. The disconnect is due to the fact that objectification dooms her to say that her achievement is limited only to this par-

ticular space here, and not for yonder. Being objectified leads her to see herself as always subject to other people's evaluation.

Third, it is also her being defined as an object that positions woman and keeps her in her place. What keeps her in her place is the perpetual threat of the gaze and the greater threat of the invasion of her space, the most extreme form of which is rape. Thus, we have women who allow themselves to be ordered around when it comes to all sorts of things – what time to go home, what to wear, what to say, how to sit, and many others – because by permitting herself to be kept in her place, she is also assured of protection, ironically by the ones who objectify her.

Young (2005, p. 44) then enriches Beauvoir's analysis of objectification by giving it its much-needed spatial dimension. We see how the objectification of women does not end with women or their bodies. The objectification of women permeates the very ways by which they view themselves in relation to the world and vice versa. The understanding that their space is enclosed, that there is a divide between where they are and that space which they no longer have a right to occupy, and that there are mechanisms to keep them in their place, when taken together, bring women to an experience of space that is menacing, as not-for-them. Conversely, this understanding brings women to an awareness of themselves as constantly out of place, as not-belonging. This felt disconnect between self and space place women in a constant state of insecurity. It is objectification, then, that creates the fearful subject.

With the picture that Beauvoir and Young provide for us, we see then that women's fear of the urban space is a learned response, stemming from the fact that patriarchy has assigned to women the definition of inferiority, and with it the limitedness of space within which they may move and act. Owing to how their embodiment has been defined as womb, women were made to accept the reproductive and domestic functions as their own, and as a consequence, their consciousness of their space has been limited to where these functions could operate best: the home, the 'private' sphere. At the same time, to men have been assigned roles that call for greater authority and mobility, roles that also allow them more space for domination. What begins in women as a feeling of not belonging to the public space festers and is reinforced to develop into a full-blown fear with every cat-call, or mocking comment about their presence, or even the warning to not wear anything provocative, masked as a show of concern.

2 Fear and Its Spatial Implications

Women's fear of the urban space, therefore, is a consequence of their objectification. Because of the way women have been made to feel about space and the act of occupying it, women are left with an awareness of space as foreign, and the act of occupying space as a transgression. There are areas where women are reminded that they are not supposed to be there, and the reminders come in various forms: as catcalls, as lewd stares, as comments on what they are wearing, as rules that they should get home before dark, or sometimes even as the strange but welcome suggestion that should the situation call for it, they can very well use their umbrella as a weapon. These constant reminders serve to render permanent women's awareness of space as hostile to them. Women become convinced that out in the open, they need to anticipate danger and protect themselves from it. These self-protective measures affect women's choices in life: dictating upon their mobility, determining their freedom of access, thereby also reconfiguring their space in turn.

According to Valentine (1989, p. 389):

Women's fear of male violence does not therefore just take place in space but is tied up with the way public space is used, occupied, and controlled by different groups at different times. There is a vicious circle in operation. The majority of women still adopt a traditional gender role, and as a consequence are pressurized into a temporarily segregated use of space...

Valentine (1989) is pointing out that women's fear of space owes itself to several reasons. First, women's fear of violence is born of experiences and stories of male aggression and domination. But then underlying this is the limitedness of women's options in terms of life-choices; many women still take on the traditional gender roles which push them to the confines of domesticity. Hence, it is not just because many women have experienced being harassed by men in public that they fear the spaces within which this harassment occurs. It is also because they have been raised to know their place, which, for a long time, has meant the domestic sphere. Outside of this space is the unfamiliar and menacing domain of men, one that women have learned to fear.

Taking Valentine further, this also shows that the fear emerges as a result of women's embodiment as being defined for them. The taking on and assignment of gender roles (often implicit and sinister) stem from long-held assumptions on and definitions of women and their bodies. For instance, that society "assumes"

women will take on the role of childbearing, and eventually child-rearing, owes itself to the fact that governments, religions, and cultural traditions have held fast to the idea that to be woman is to be womb (Beauvoir 2011, p. 26). The assignment of woman as womb then leads to a limiting of women's life-choices, and spatially speaking, the limiting also of spaces available and accessible to them.

Women's fear affects their mobility in the urban space. This mobility, while very much referring to physical mobility in the sense that women are not as physically free as men in terms of accessing certain spaces, it also refers to the dimensions of mobility that are not strictly physical, such as employment, ownership of property, and women's invisibility in the city. Women struggle with mobility, therefore, because they are barred from accessing certain spaces in the urban space. Accessing certain spaces becomes a sort of misstep on the part of women, a misstep for which they are often made to suffer consequences.

Should a woman transgress, the enforcement of these consequences is accomplished in ways that are sometimes overtly violent, and at other times implicit and sinister. To put it concretely, human interactions have come to classify some spaces as "no place for a respectable woman." One may perhaps imagine the dark alleys and poorly lit streets, especially when night comes. These places are not for women because, according to media-fed stories and scenarios, these places are where women usually get sexually assaulted or harassed. These spaces are usually the places where women are harmed, and women being women, they are also not expected to be able to defend themselves against their attackers, especially since these attackers in the dark usually come in numbers. That women learn to avoid these spaces and teach girls to do the same then no longer comes as a surprise.

On the other hand, women may also be barred in the form of less obvious control mechanisms. These mechanisms force women to learn the painful lesson that there simply are places that are not for them, even before any act of transgression can be possible. Examples such as a lack of public restrooms for women, or the way city governments decide to build more roads instead of proper walkways when most of the pedestrians are women, or even in the way baby strollers does not seem to fit the streetcar (Kern 2019, p. 15), show how women have long learned avoidance as a means of survival. Fear becomes the emotional response to the risk of transgression and to the determination to avoid transgression.

Kern (2019, p. 28) writes:

Just as workplace harassment chases women out of positions of power and erases their contributions to science, politics, art, and culture, the spectre of urban violence limits women's choices, power, and economic opportunities. Just as industry norms are structured to

permit harassment, protect abusers, and punish victims, urban environments are structured to support patriarchal family forms, gender-segregated labor markets, and traditional gender roles. And even though we like to believe society has evolved beyond the strict confines of things like gender roles, women and other marginalized groups continue to find their lives limited by the kinds of social norms that have been built into our cities.

Following Kern, we see how the more obvious forms of violence and the less obvious ones serve the same purpose – to preserve the patriarchally defined positions of privilege. Ensuring that women are barred from accessing public space is the same as ensuring that they stay home where they belong – these are simply two sides of a single coin.

Koskela (1999, p. 11) establishes the necessary connection between fear and its shaping power. On one hand, she acknowledges that woman's fear of violence is due to her being positioned as an inferior. This fear is therefore a product and a result of the injustice that has been done to woman. And yet, Koskela also points out that this fear has the power to change woman's relations to space, as well as construct certain spaces in view of what she fears or would like to keep from happening. According to Koskela, the urban space is constructed by gendered power relations, and, by the same token, the construction of urban space is reinforced by the everyday interactions that also reflect those gendered power relations.

We discover, then, not only how fear is a consequence of what has been done to women, but also fear's corresponding capacity, once internalized, to re-configure woman's physical space. It considers and provides a background for the real feeling and experience of fear, revealing it to be a result of gendered power relations. The analysis of fear is also taken one step further because we also come to understand why and how fear can alter woman's treatment of space and construction of it.

Women's fear, then, serves a very special purpose with respect to the patriarchal agenda: as long as women are afraid and stay afraid, then there is a better chance that they will be unable to claim their own spaces in public life. As long as the necessary mechanisms of objectification, of exclusion, of oppression are set in place to make sure that women are afraid and are kept afraid, then there is a good chance for our structures – both physical and non-physical – to remain as spaces for objectification, exclusion, and oppression. The result, hence, are cities that are not for women.¹

¹ This is also captured by Gerda Wekerle's articulation: cities are still planned by men for men, as one of the claims in her article entitled "A Woman's Place is In the City" (Wekerle 2006, p. 11).

3 Conclusion

To ask women what they would do if men did not exist for 24 hours may at first seem to be some sort of clickbait tweet. But the implications of women's most common answer have served to shed light on existing problems: women's fear of the city, on one hand, and the city space as hostile to women, on the other.

The key to addressing the problem lies in acknowledging that they are interconnected. In the same way that cities cannot be severed from human affairs, women's fear of space cannot be addressed separately from the space within which it operates. Responses to women's fear that run along the lines of undermining it or dismissing it as baseless miss the point: the fear is real, and the mechanisms that keep the fear in place are real. In the same way, addressing the problem of an unsafe urban space through methods that are not in themselves rooted in an honest return to the lives of those who are most at risk also ends up missing the point: simply constructing more walkways will not do. Simply providing more streetcars will not do.

Women and allies of women need to confront the spatial implications of their objectification and their fear. Gender-based injustices always take place, which means that an adequate response to these injustices must also be able to account for their spatial dimension. In the same way, urban planners and those committed to the construction of a just urban space must recognize that spaces are reconstructed and reconfigured by the very lives of those who inhabit them. The construction of just spaces, therefore, presupposes the commitment to install justice in interpersonal and social relations.

We began with the question of what women would do if men were absent for 24 hours, to which women responded that they would walk around freely at night. In view of the above discussion, it is not so strange an answer, after all. In fact, until the situation changes on both the interpersonal and the spatial levels, then walking around freely at night with no men around will still be a liberating thing to imagine, at least for us women. Liberating, yes, but also imaginary.

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A Conversation on a Paradise on Earth in Eight Frames

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ABSTRACT | Once known as the city of silk, Suzhou 苏州 has become the centre of wedding dress production, selling paradise on earth for one day, including copies of the last royal wedding dress, out of shops at the foot of mythic Tiger Hill. Suzhou is also the host of what is known as the Silicon Valley of the East. It has attracted millions of migrants searching for a better future; millions of tourists visit every year to experience the past, strolling through the gardens and courtyards of its Old

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Town. The contrasts could hardly be more apparent. Slow time, and fast time, and the time of the in-between, are woven into the city's complex spatial fabric. This is a conversation by eight authors in eight frames on a city that connects them.

KEYWORDS | City; Philosophy; China, Suzhou; Classical Gardens

Once called paradise on earth, famous for its gardens and its exquisite silk garments, historic Suzhou is kept alive in poetry and painting. Famous examples include the 18th-century scroll *Prosperous Suzhou* originally entitled *Burgeoning Life in a Resplendent Age*. The painting, commissioned by the Qianlong Emperor 乾隆帝, records life crossing the threshold into the modern age, in a traditional Chinese style that incorporates the Western perspective.



Figure 1: *Prosperous Suzhou* 姑苏繁华图 [Gūsū Fānhuá Tú], clipping, by Xu Yang 徐扬, 1759. Handscroll, ink and colors on silk, 35.8 x 1225 cm; Liaoning Provincial Museum, Shenyang.

Today, Suzhou is one of China's most dynamic and rapidly developing cities. Suzhou is part of the Yangtze River Delta megalopolis, which accounts for a fifth of China's GDP. Once known as the city of silk it has become the centre of wedding dress production, selling paradise on earth for one day, including copies of the last royal wedding dress, out of shops at the foot of mythic Tiger Hill 虎丘 [Hǔqiū]. Suzhou is also the host of what is known as the Silicon Valley of the East. It has attracted millions of migrants searching for a better future; millions of tourists visit every year to experience

the past, strolling through the gardens and courtyards of its Old Town. The contrasts could hardly be more apparent. Slow time, and fast time, and the time of the in-between, are woven into the city's complex spatial fabric.



Figure 2: *Suzhou Old Town*, photograph by Glen Wash Ivanovic.

Three of us are on site. Two have been locked out for a year. Two have never been there. Two have left. Each of us embodies a real/virtual pandemic position in relation to Suzhou. At the same time, there, not there, never there, no longer there. While speaking from a position there, in the real/virtual city that is Suzhou past/present/future.

This is a dialogue on a city that connects us.

From the extra-large (planetary urbanisation) to the small (the garden).

From the real to the imagined, and back again.

1 The Water Location

Voice 01, speaking from London, UTC +1

Situated in the centre of the Yangtze Delta region in the southwest of Jiangsu Province, Suzhou lies south of the Yangtze River to the west of one of China's largest freshwater lakes, Lake Tai. The city lies at a central point of the World Heritage-listed Grand Canal (established 581–618 C.E.) that flows from Hangzhou in the South to Beijing in the North and to the West of Suzhou's ancient city. This water location, on three mighty waters, meant that between the 13th and 19th centuries Suzhou was at the centre of water transportation in China. The ancient city is connected to Lake Tai via a river moat that surrounds the old city forming a fortified islet. The water enters the city through eight water gates into an orthogonally designed water grid. Suzhou is surrounded on all sides by a crisscross of canals and lakes. Philip Ball wrote in *The Water Kingdom: A Secret History of China* that the area "is so dense with waterways and small lakes that the map looks more like a cross-section through a sponge" (Ball 2017).

The waterways in the old city were designed with parallel streets with courtyard houses between the two. The traditional courtyard houses have a line of halls and courtyards that connect the street to the water's edge and floating markets would deliver directly to the houses. As China shifted from water to surface transportation, some of the canals were filled in but the water below ground is ever-present. In the second XJTLU Suzhou International Workshop (Feb. 2017) a group of participants walked around the northwest corner of the old city and counted fourteen water wells within a short distance, some inside the courtyard houses and some in the streets creating "water spots" or mini public spaces for outdoor cooking, mini gardens and public washing. Suzhou's water landscape of rivers, canals, water streets and lakes enters the famous walled gardens which are mostly formed around a central body of water.



Figure 3: Map from 1920 of the Yangtze River Delta with Suzhou to the east of Lake Tai. Virtual Shanghai image collection ID 233.



Figure 4: View of Suzhou's Sheng Jia Dai 盛家埭, through the old town and towards the New District, photograph by Glen Wash.

The gardens recreate natural Chinese landscapes in miniature, mountains and water 山水 [shān shuǐ], the general term for landscape. Diverting the waters and stacking stones were techniques that became essential to the construction of the Suzhou garden. Describing the Lingering Garden 留园 [Liú Yuán] (1593), Ron Henderson defines the lake as the heart of the garden fed by small waterfalls flowing out of the rockeries (Henderson 2013). The Humble Administrator's Garden 拙政园 [Zhuōzhèng Yuán] (1513-1529) is a strolling garden gathered around a body of water with

paths and bridges circumventing the water, the still lake reflecting the buildings, rockeries and plants. The water flows from the Humble Administrator's Garden under a wall to form a central water court of the neighbouring Suzhou Museum by I.M. Pei (2006), where it reflects the modern geometric forms of Pei's architecture. In "The Tangible and Intangible Value of the Suzhou Classical Gardens," Yi Xueling, Director of Suzhou Gardens and Landscaping Administration Bureau, explains the meaning of paradise:

天人合一 (Tiān rén hé yī) [...] the nature and the human are in harmony. If we understand the nature as ideal as Tian (heaven), and understand the urban life as Ren (human), then the ideal environment including natural tangibles in the city is the Paradise. (Yi 2008)

Suzhou's waterfront development continues on a large scale – the Jinji Lake waterfront development in the new Suzhou Industrial Park is a modern-day city equivalent of the ancient city moat and marks China's changing attitude to public space. The large open spaces designed to encourage gatherings and celebrations create a contrast to the city's walled gardens and narrow waterways. Suzhou's new water spaces play a key role in transforming the city into a 21st-century city, but are they also reinforcing the ancient idea of paradise in the water city?

2 Reflecting on the Seams

Voice 02, speaking from Suzhou, UTC +8

Emphasizing that China is undertaking the largest and fastest urbanization process in history has become a statement that does not necessarily explain unforeseen issues which are unique and complex to elucidate. We might be witnessing a moment of post-urbanization in which, while the “before” and “after” are more or less defined, the in-between appears to be veiled or ignored. We can all witness the magnitude of the transformation, yet the gaps generated by such a jump are more difficult to define. For instance, the separation between urban and rural is often cited. Yet, in China, the boundary between urban and rural has become diffused when trying to define this contrast through a duality that disintegrates and does not hold much meaning anymore (Bolchover and Lin 2013).

The same can be said about concepts like “tradition” and “modernity.” They are often used for categorizing and unifying extremely vast and complex periods. Everything that happened before the establishment of the People’s Republic of China seems to be labelled “traditional.” We could argue that modernity is not a way of looking but a way of being, i.e., it is not found in appearances. China can look incredibly modern, yet how would one define Chinese modernity?

Suzhou can exemplify this absence of an in-between. We focus on the uniqueness and tradition of the old town (even though just a few canal streets remain) or new developments like Suzhou Industrial Park or Suzhou New District, which are far larger (and perhaps more visited) than the old town. The half-demolished in-between is ignored; an anomaly that becomes unavoidable when we go through it, yet we forget once we reach the idealized tradition or the promising modernity. These are not spaces of transition; they are not the passage between two different urban conditions. What we have then is a new urban phenomenon: the fringe is no longer at the outskirts of the city. The fringe is now shattered and dispersed within the city. Vestiges that have no place, yet they are there. Vast fragments inviting to be assimilated and integrated are instead entirely absorbed and replaced.

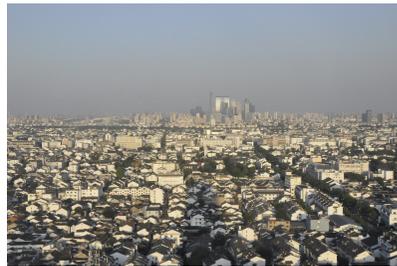


Figure 5: *Multiple versions of modernities exemplified by Suzhou’s Old Town and the city’s new districts, photograph by Jiawen Han.*

The question that appears then is: can a city change so fast and so much that it does not remain itself? What are the characteristics which define the idea of a city? Evidently, cities do grow and transform, expanding and evolving. This process is imprinted in its streets, buildings and citizens. When there are elements of urban consistency, this process is legible, evidencing a continuity that, no matter how dim, retains the city. If this continuity is completely ignored, can the city itself disappear? While an old citizen may not be able to recognize the city anymore, a young citizen is discovering it. Memory is both flexible and categorical because it is individual, not universal. The same applies to the idea of a city. The elements and events that enact it can be universal, but the idea of it is individual.

The invitation then is to look at the seams between Suzhou's urban parts and recognize them as possible retainers of continuity. These seams are not edges; they are not what defines nor divides the urban space. Instead, they become remnants, leftovers of the collisions between parts, and it is in these collisions that memory remains. These urban seams are the ones holding the different parts together while quietly defining them. They are the last refuges for the idea of a city. They cannot go away because we all know that without seams, there is no outfit.

3 Urbanisation, Planning and Spontaneity

Voice 03, speaking from Suzhou, UTC +8

Opening the long handscroll *Along the River During the Qingming Festival* 清明上河图 [Qīngmíng shànghé tú] by Qiu Ying 仇英, it is fascinating to compare the urban space and its associated scenarios in the Ming dynasty (1368–1644) with those of current Suzhou, as one can find similarities and differences across history. In ancient Chinese tradition, the city wall normally indicates the boundary of the city, dividing the inside and outside of the city both physically and symbolically. The painting clearly depicts a considerable market space outside the city wall as lively as that on the inside. However, it should be noted that these spaces are generated under different mechanisms. The painting portrays clear contrasts between the places inside and outside the city: the market space outside the city wall contains denser crowds and is formed and defined by various activities in relation to transportation, commerce, and entertainment, which shows more spontaneity compared to the space inside the city wall. Inside the city, the architecture and streets are more regular, planned, and designed with purpose.

If we continue to make comparisons across history, Suzhou's Industrial Park, which is a new district located outside the old city wall, could be regarded as a modern equivalent of the urban space inside the city wall during the Ming dynasty

in terms of the relationship between people's activities and space, although the Industrial Park exhibits much greater regularity than its historic counterpart. The Old Town of Suzhou, which has largely inherited its morphology from history, accommodates more spontaneous activities today. Temporary events occupy spaces flexibly and naturally in the current Old Town, which corresponds to the use of the main bridge and riverbank outside of the city wall in the painting. The spontaneous track of urbanization outside the city played an important role in linking urban and rural areas during the Ming dynasty in Suzhou, and such areas have played an important role in linking urban and new districts as well as rural areas in many other contemporary cities across China. However, there was no spontaneous urbanism outside the city wall after the 1990s in Suzhou. The new development zones, including Suzhou Industrial Park and Suzhou New District, were purposefully established next to the Old Town as two wings, with the aim of preventing squatter settlements, illegal markets, and informal work. Today we generally see tradition and modernity as exemplified by Suzhou's Old Town and the city's new districts, respectively. Therefore, I am compelled to ask: does the dislocation of spontaneous and regulated spaces indicate the dislocation of the modern and the traditional inside and outside the boundary of the city from the past to the present?

The intuition to reflect the dislocation of the modern and the traditional by identifying different spatial characteristics indicates a common lens: research studies have always analysed Suzhou in a framework of old versus new, tradition versus modernity, which also becomes the foundation for understanding and analysing Suzhou. However, there is no consensus regarding modernity and its meaning in Suzhou's modern history, nor any conceptual coherence of tradition in the radical societal transformation of Suzhou, which results in little attention paid to the relationship between tradition and modernity. Consequently, very few observers have questioned when Suzhou began to strive toward the modern. Looking back in time to the painting *Along the River During the Qingming Festival*, which depicts Suzhou's prosperity through lively scenes during Ming dynasty, we see numerous houses, shops, drama platforms, parade grounds, boats and merchant barges; the city seems never to rest. Economic growth stimulated the growth of Suzhou as



Figure 6: Suzhou, courtyard of the Shadow Garden, photograph by Claudia Westermann.

a city, in which peddlers, women, and the literati all sought and attempted to adopt new modes of conduct to make their way in the new world. Scheid (2017, p. 33) notes that Ye Tianshi's 叶天士 (1667–1747) oeuvre of medical innovation in the Yangtze Delta, with Suzhou a particularly important centre during the seventeenth century, can deepen our understanding of early modernity in China in relation to a more global early modernity. “The reopening of the Grand Canal effectively shunted Nanjing to secondary status and ensured that the Suzhou region would prosper as a nexus of interregional integration” (Brook 1998, p. 75). Examining Suzhou in Ming/Qing transition, Marmé (2007) confirmed that Suzhou was a major centre for the construction and repair of ocean-going ships in the early Qing period (1644–1911) embedded in an emerging East Asian, indeed global, system. In terms of space, Suzhou as an interregional and even global trading hub in the Ming and Qing dynasties significantly transformed its space to be kind of modern space: the Grand Canal flows through the western part of Suzhou city with a background of increased consumption, production, and specialisation in manufacturing. The production of the inner port terminal areas for cargo loading and unloading, trade transactions, feeding and supplementing etc. more closely resembles the operation of modern, efficient terminals. Therefore, if the reordering of Suzhou's space shown in *Along the River During the Qingming Festival* represents part of the early search for the modern from the perspective of global history, the Old Town of present-day Suzhou should not be seen only as traditional. It can be seen as the continued effort or alternative version of the pursuit of modernity in the contemporary context.

4 Balancing Between “Within” and “Without”

Voice 04, speaking from Copenhagen, UTC +2

The world opens up in unexpected ways from inside a Chinese courtyard space. Located between the halls of a domestic house, it not only opens to the sky above – with the possibility for vertical alignment this invites – but also to an axial progression forward or backward, and thereby either deeper into the house or out of it. Horizontally, along this line, one moves through alternating spaces of darkness and light, openness and closure, passage and diversion, things to do or not. One traverses the stages of entry to the private domain, or one diverts, steps aside, lingers, turns around and walks back and out again. It depends on who you are and what relation to the household you have. Inside a courtyard, distinctions blur, multiple situations emerge, parallel worlds coexist. A Chinese courtyard is far from a simple square space between four walls but manifests qualities that complement

its surroundings. The architect and scholar Li, Xiaodong (2002, p. 99) writes:

One of the most important characters of Chinese architecture is the dualism of *void and solid* in the planning of space. Almost exclusively, every individual building unit, from smallest room to city, is planned to be adjacent to an equally sized open space. This is to achieve the maximum balance between what is 'within' and what is 'without.' This concept of duality is one of Lao Zi's important tenets. He believed that any notion contained within itself its opposite. As a result, the dispersed complex rather than the dense form distinguishes Chinese architectural space.

As the foundation of Daoism, Laozi's 6th century BCE text 道德经 [Dàodé Jīng] is central to Chinese thinking and practice alongside the traditions of Confucianism and Buddhism. It is especially important for the conception of gardens as part of the historical domestic compound, and if courtyards and small garden-like spaces organise everyday life in harmonious coexistence, then a sizeable complementary garden turns the place into a classical Chinese literati residence. Such a garden, occupying nearly half the site and cultivated with exquisite refinement, subsumes the house and gives a place its name. Suzhou is renowned for these historical sites now open to visitors for an experience of the artistic skill and taste of the literati class.

网师园 [Wǎngshī Yuán], or Master of the Nets Garden, is located in the southern part of Suzhou's Old Town within the encircling square moat 外城河 [Wàichéng Hé]. It is a significant Song Dynasty (960–1279) example of the garden/house dynamic with several courtyards mediating between the complementary forces of residence and ritual. The house – with its largely Confucian orientation – is axial, hierarchical and somewhat symmetrical, while the garden is a Daoist space for free and easy wandering. House and garden are like two sides of the same coin – different but connected, complementary yet set apart, never fully revealed to each other. The American author Ursula K. Le Guin renders section 11 of Laozi's text in the following way:



Figure 7: Suzhou, Shadow Garden with the Twin Pagodas in the background, photograph by Claudia Westermann.

THE USES OF NOT

spokes | meet in the hub. | Where the wheel isn't | is where it's useful.
Hollowed out, | clay makes a pot. | Where the pot's not | is where it's useful.

Cut doors and windows | to make a room. | Where the room isn't, | there's room for you.

So the profit in what is | is in the use of what isn't. (Le Guin 1997, p. 14)



Figure 8: *Song of One Year*, calligraphy on folding fan dated 1522, by Tang Yin 唐寅. The Met, Edward Elliott Family Collection, Douglas Dillon Gift, 1988.

The Chinese courtyard – 院 [yuàn] – and by extension garden – 园 [yuán] – are enclosed, walled, yet boundless spaces. From the smallest lightwell to the almost-garden, the courtyards hold the house, if not the whole city, together. They do so through the manifestation of empty spaces pacing life to the rhythm of seasons while mediating the

opposing forces of ceremony and the everyday... among myriad other things with names and without. One notices that the interior part of the character for “garden” is included in the lower right part of the character for “courtyard,” while the pronunciations, added in pinyin, coincide despite having different intonations. Both terms build on the character 完 [wán], which translates into “whole” or “complete,” while the square that frames the character for “garden” is the radical 囗 [wéi or guó] referring to a “(circular) enclosure” (SmartHanzi 2009–2021).

And so it goes. The miniature cosmos of the Chinese courtyard house, with or without a garden, remains a spatial manifestation of a way of living. Here is paradise on earth – quite literally, heaven on earth pulsating from the centre of the garden-courtyard-house. The etymologies of several languages support the claim when the residence enclosed by a perimeter wall aligns with the etymological basis for the old Persian word *pairidaēza* – a compound of *pairi* – meaning “around” and *daeza* meaning “to form out of clay.” This term becomes the Greek *paradeisos*, meaning “royal (enclosed) park,” and later the English *paradise* (Oxford Dictionary of English 2005–2019).

5 Reflections of Landscape

Voice 05, speaking from Marseille, UTC +2

“A quarter of an hour of a spring evening is worth a thousand strings of cash.”

I say “Even with a thousand, you can’t buy it back.”

Excerpt, Song of One Year, Tang Yin 唐寅, 1522, transl. by Alfreda Murck (Barnhart 1983, p. 68).

The poet, calligrapher and painter Tang Yin 唐寅 is generally considered one of the *Four Masters* of the Ming Dynasty. He lived in Suzhou for most of his life. His poem *Song of One Year*, of which an excerpt is cited above, is written in delicate calligraphy on a folding fan. The poem describes the longing for detachment from busy life. It was written when most of the gardens that still exist in Suzhou today were created – in Ming Dynasty. At the time, busy administrators lived the life of dutiful Confucians dedicated to government during the day. Their evenings, however, were dedicated to the reverence for life in nature. The garden was their evening refuge, a “diminutive world” (Hall and Ames 1998, p. 181) which explicated the processes of life.

Gestured language, the basis of both calligraphy and painting, also engendered the garden with its connected courtyards. In fact, one could say that garden design in China began with gestured or embodied poetry. Images or scenes, first created in poetry but experienced through calligraphy, were transferred into painting and subsequently into three-dimensional images of living matter. A particular form of ancestor worship, the garden designers of the Ming Dynasty often relied on famous poems of the past. The images of the poem *Peach Blossom Spring*, written in 421 CE by Tao Yuanming 陶淵明 also known as Tao Qian 陶潛, could be considered the beginning of a garden design language (Barnhart 1983, p. 13). The writing of poems and the painting of landscapes were part of the garden design process, drafting the garden’s composition of scenes. Thus, through a process of transformation from one poetic medium into another, the garden comes into being. It touches all senses. From inside the pavilion on the hill, the afternoon rain sounds like a lullaby. It is the result of sophisticated sound design that considers plants as acoustic surfaces. A drop of water sounds different on small and large leaves, flat and curled leaves – and so does the wind. Leaves are instruments. The weather plays on the leaves a natural symphony.

It is impossible to re-experience Suzhou’s gardens as they were enjoyed in the past. Not only have they been altered many times, but they are also not private anymore. As Suzhou’s most important tourist attraction, they are typically quite

crowded. And yet, Suzhou's gardens still make for small poetic worlds that one can escape into from the busy life on the street. The gestured language that created the gardens is a language of interaction and participation. It is still active today.

It should be noted that western linear perspective entered China only in the 18th century, thus hundreds of years after the Ming Dynasty, during which most of Suzhou's gardens were created. Traditional landscape painting until then did not use the Western so-called *through view* perspective 透视 [tòu shì]. The language of interaction that is active in traditional Chinese painting uses a different technique of depicting three-dimensional objects in a plane. It uses oblique projection with shifting viewpoints, referred to as *near-far* perspective 远近 [yuǎn jìn]. With its view lines pointing outwards and its viewpoints shifting at short intervals, near-far perspective draws the viewers in, from one into the next scene, as they move along the scroll (Westermann 2019).

In 1080 CE, in a famous treatise on painting, entitled *The Lofty Message of Forest and Streams* Guo Xi 郭熙 wrote (Bush and Shih 2012, p. 153):

You see a white path disappearing into the blue and think of traveling on it. You see the glow of setting sun over level waters and dream of gazing on it. You see hermits and mountain dwellers and think of lodging with them. You see cliffs by lucid water or streams over rocks, and long to wander there.

It makes sense that landscape painting is referred to always with a pair of characters, leaving an in-between that indicates space for agency. Mountain(s) water(s) 山水 [shān shuǐ] and mountain(s) river(s) 山川 [shān chuān] are some of the terms used. Wandering through the garden, views open up and close down. The landscape that speaks the voice of a very particular interactive art of poetry and painting turns visitors into participants of the world.

6 The Garden as a Portable World

Voice 06, speaking from Kuala Lumpur, UTC +8

The reach of a person can go beyond an individual's imagination; that imagination permeates into reality; that reality is experienced and shared with others knowingly and unknowingly. The reach of a small group of people with defined and intricate forms of cultural practices and applications, hailing from the coastal provinces around the Yangtze River Delta, have made their journey to a South-East Asian peninsular, Malaysia, creating a lasting impact. The term Sanjiang-ren was collectively used to describe these people of ancestry hailing from Shanghai,

- 1 Front Door [大门 Dà mén]
- 2 Sedan-chair Hall [轿厅 Jiào tīng]
- 3 Reception Hall [大厅 Dà tīng]
- 4 Beauty-within-reach Tower [排秀楼 (花厅) Xié xiù lóu (huātīng)]
- 5 Downstairs Five Peaks' Library [楼下五峰书屋 Lóu xià wūfēng shūwū]
- 6 Cloud Stairway Pavilion [梯云室 Tī yún shì]
- 7 Study of the Ethereal [集虚斋 Jí xū zhāi]
- 8 Veranda of the Slanting Bamboo Twig [竹外一枝轩 Zhú wài yīzhī xuān]
- 9 Watching Pines & Appreciating Paintings Studio [看松读画轩 Kàn sōng dú huà xuān]
- 10 Late Spring Study [殿春移 Diàn chūn yí]
- 11 Pavilion Welcoming the Advent of the Moon and Breezes [月到风来亭 Yuè dào fēng lái tíng]
- 12 Hall of the Sweet Osmanthus Hillock [灌缨水阁 Zhuàn yīng shuǐ gé]
- 13 Tassel-washing Waterside Pavilion [听山点桂轩 Tīng shān diǎn guì xuān]
- 14 Dahoe House [蹈和馆 Dǎo hé guǎn]
- 15 Music Room [琴室 Qín shì]
- 16 Kuo Jia Tou Lane [南家头巷 Kuò jiā tóu xiàng]
- 17 Hall of Peonia Suffruticosa [花房 Huā fāng]

1 2 5 10 m
5 10 20 尺 chī

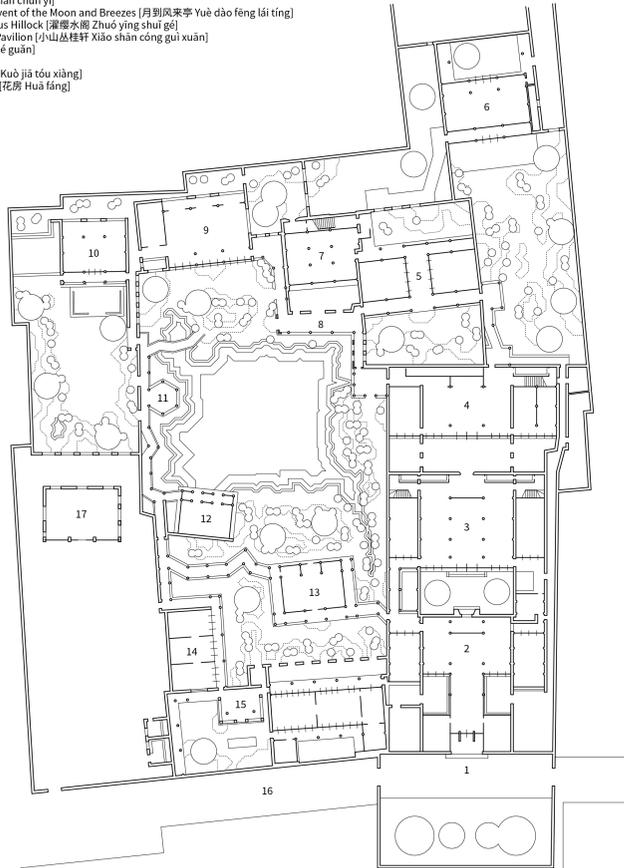


Figure 9: Suzhou, *Garden of the Master of the Nets*, redrawn by Amir Djalali, translated by Gao Huanyue, based on Liu Dunzhen's *Classical Gardens of Suzhou* (Liu 1978, p. 397).

Zhejiang, Jiangxi, Hubei and Jiangsu which includes Suzhou (Penang San Kiang Association, 2020). Compared to other Malaysian Chinese subgroups, this is by far the smallest. Despite the number of this community, the first association was formed in Penang in 1897 and named San Jiang Clansmen Association to preserve their heritage and identity in what was then a new environment.



Figure 10: Suzhou, Twin Pagodas, photograph by Claudia Westermann.

unique styles are broken down into six: Penang Style, Southern Chinese Eclectic Style, Early Straits Eclectic Style, Late Straits Eclectic Style, Art Deco and Early Modern (Zwain and Bahauddin 2019).



Figure 11: *Tiger Hill*, as seen on *The Kangxi Emperor's Southern Inspection Tour*, by Jiao Bingzhen 焦秉贞, ca. 1707. Handscroll, ink and colors on silk, 50.5 x 813 cm (*Catalogue of Chinese Famous Painting in Japan* 1938, p. 294).

Slowly over the years, the influence of the Sanjiang-ren transcended and amalgamated into a mixture of Malaysian Culture. Its architecture experiencing perilous journeys has intercepted into many forms of the collective Malaysian architecture, settling into the tropical region surprisingly well. The vernacular shophouses, with the courtyard ever-present within the planning of the building, represent place and cultural identity with over 7000 units built between the 1790s and the 1970s. Its

The courtyard itself has integrated seamlessly and adapted into the Straits Eclectic style during the prosperous era of Georgetown, Penang, between the 1890s and 1940s. Escaping the sweltering tropical heat, one enters a quiet space that adeptly and gently opens to a courtyard embodying multiple functionalities. The ecological component of skylight and ventilation extends further in the forms of gardens and water features, thereby allowing the courtyard to serve as a communal, meditative and religious space embraced by the local culture and society (Abass, Ismail, and Solla 2016).

Beyond these practical functions, it almost acts as a conduit to an unknown, unnamed, unseen paradise. The courtyard

tucked away in the unique shophouses, creates an ethereal boundary between the inside and outside, taking the form of miniature imitations of the natural world, connecting and celebrating the ephemeral. The space surrounded by a bouquet of tropical plants and a modest body of water creates a fissure in space to another unattainable dimension, yet it is intangibly experienced. The human experience instantly reverses itself to an emblem of cool and calm with the pocketed micro-climate and humid taste of the air, born of a simple architectural feature that is the courtyard. A remnant of Suzhou's architectural past given new meaning and life in a new context in the Peninsular of Malaysia.

7 Heaven on the Ground, as the Heaven in the Sutras

Voice 07, speaking from Shanghai, UTC +8

Tiger Hill Pagoda 云岩寺塔 [Yún yán sì tǎ], Ruiguang Pagoda 瑞光塔 [Rùi guāng tǎ], Twin Pagodas 双塔 [Shuāng tǎ], Beisi Pagodas 北寺塔 [běi sì tǎ], and other ancient landmarks continue to stand out and act like needles interweaving the fabric of the canals, streets, and courtyard houses of the ancient city. The pagodas of Suzhou have dominated the skyline of the central city until the 1980s. As multi-story buildings dedicated to Buddhism, they were the skyscrapers of the 10th-12th centuries while the monasteries represented Heaven in the Buddhist Sutra.

The garden with its artificial mountains, rock steps, flower windows, lotus ponds, layered corridors acted as reminders, metaphors, connections for the ancient scholars to bridge life in the courtyard to the remote landscape, mentally and physically.

The spiritual connection to the gardens goes back a long time. The Chinese name for traditional garden, 园林 [yuánlín], originates from a legendary story from the Buddhist Sutras, could be simply as a piece of a paved *courtyard* 园 [yuán] with a *forest* 林 [lín] behind it, in this Jetavana Vihara 祇树给孤独园 monastery where Buddha discusses the Dharmas, the philosophy in Buddhism. Famous monasteries always have their gardens. Buddhism not only philosophically influenced the local garden construction, but also the programme. Spaces were designed for intellectuals to debate, meditate, and reflect from within the *forest and courtyard*.

During the festivals, the ancient temples became public spaces for everyone, while gardens in the backyards of monasteries were the most visited landscape sites. The surrounding areas turned into a prosperous community of markets and residences, and the city's wealth is depicted in these places' elegant architectural design and craftsmanship.

The private gardens in Suzhou started in the 4th to 5th Century when schol-

ars began to develop Buddhist philosophies during the Disunity period. Hermits and travelers depicted the natural landscape in poetry and painting, while private gardens were constructed for them to experience artistic features in three-dimensional space.



Figure 12: *Bamboo, Rock, and Tall Tree* 筠石乔柯, c. 1300s, by Ni Zan (倪瓒 (1301–1374), Yuan Dynasty. Hanging scroll, ink on paper; 67.3 x 36.8 cm. The Cleveland Museum of Art, Leonard C. Hanna, Jr. Fund 1978.65.

The height of the private Suzhou gardens' popularity came in the late 16th and early 17th Centuries due to growing economic prosperity in the Jiangnan region (Yangtze Delta area in South China). Word of Suzhou's exquisite gardens spread throughout China, and Emperors from Beijing often visited Jiangnan, particularly Suzhou, for inspiration for their own gardens. The design of Imperial gardens in Beijing, for example, was influenced by the private gardens in Suzhou, particularly with the interest of the Emperors of Kangxi and Qianlong during their southern inspections in Suzhou.

According to literature and gazettes, at one point, more than 250 private gardens were recorded in the late 18th Century.

However, as a result of the wars since the 1860s, most of them have deteriorated. Around the 1950s, the majority of the remaining private gardens of Suzhou were turned into public assets. Currently, there are only 108 listed gardens in Suzhou, with more than 80 under public or semi-public usage.

The four most well-known gardens – Humble Administrator's Garden 拙政园 [Zhuōzhèng yuán], Lingering Garden 留园 [Liúyuán], Garden of Master of Nets 网师园 [Wǎngshī yuán], and Huanxiu Villa 环秀山庄 [Huánxiù Shānzhuāng] (Mountain Villa with Embracing Beauty) – were recognised as World Heritage Sites in 1997. An additional five, which demonstrate a broader spectrum of the Gardens from the 12th to 19th Century (Song-Yuan-Ming-Qing Dynasties) in the different historical

periods in Suzhou were added in 2000. More private gardens have been restored recently and opened for the public, allowing Suzhou to be rebranded as the City of Gardens.

8 Painting as a Portable Garden

Voice 08, speaking from Bologna, UTC +2

At a conference held at the University of Beijing in 1993, philosopher and linguist Umberto Eco described two ways in which the encounter between distant cultures might occur. On the one hand, our incapacity to explain the Other could lead to a “hermetic glorification,” attributing to its culture an occult significance when seeing it as the depository of a mysterious and higher wisdom, which is no longer accessible to us. Instead, when Marco Polo saw a rhinoceros in Java, he identified it with a unicorn – but he was disappointed to see that actual unicorns were not as graceful as those described in fantastic chronicles and medieval bestiaries. Marco Polo compared what he saw to a framework of reference which was already known to him, leading to what Eco called “false identification” (Eco 1995).

When approaching Chinese aesthetics and architecture, a person trained in Western art history would be tempted to read it through the lens of the 20th century artistic avantgardes. Chinese aesthetics seem to share many of the procedures which were introduced by Dada and Surrealism. Techniques such as ready-made, collage, fake copies, *cadavrexquis*, analogy and *détournement* seem to describe well the way in which Chinese gardens and landscape paintings were realised.

Chinese paintings often employed the technique of the exquisite corpse. They were enriched over time by poems, notes, comments, seals and stamps from connoisseurs, literati, poets and critics. Painters left white space on their scenes to allow for these additions over time. As Han (2017) points out, a signature on a painting is not an authorial act that seals off the artwork by declaring it finished but something that opens the work for further development as a form of dialogue. Paintings were copied several times, even adapting them over time to different styles and tastes. However, copies were not considered fake but were actually seen as “originals.” Even if they were not made by the hands of the master, they would be seen as this person’s genuine work. Chinese paintings were often collective, participatory works. They were not meant to be sealed off in a museum or private collection but meant to be exchanged and reproduced to reach a wider audience across space and time.

A painting is a portable garden. (They are literally portable since they are

made on silk scrolls, never meant to be framed or hung). There is no difference between a painting and the landscape that it is meant to represent. Like a painting, a garden is also a palimpsest, a collective work of art that changes and is enriched over time. A garden is also a copy: Suzhou private gardens are small copies of the large emperor's hunting estates. Gardens reproduce in small-scale mountains and rivers. Their pavilions reproduce ancient architecture and buildings from faraway lands. So, if a painting is a portable garden, a garden is a domestic version of the world (Bosker 2013). It is a mnemotechnic device, a theatre of the world, a time-travelling machine, a paranoid-critical device to ward off the anxiety of living. A garden is a scientific tool for self-secluded knowledge workers, for the study and the observation of the world in a controlled environment.



Figure 13: *The Humble Administrator's Garden*, photograph by Yiping Dong.

Establishing an anachronistic parallel between Chinese aesthetics with avantgarde practices might seem to be an example of false identification. However, these resemblances might testify to a more or less explicit network of exchanges and influences between the East and the West. After all, early twentieth-century European artistic culture was heavily influenced by Eastern art and philosophy. The artist Tristan Tzara did not hide his interest in the irreverent philosophy of the *Zhuangzi*, one of the foundational texts of Daoism (Wo 1977). Since the 19th century, artistic avantgardes were directly influenced by Chinese painting, contributing to shifting Western perceptive habits—first and foremost, by getting rid of linear perspective (Scolari 2015).

Moreover, when looking at a foreign city and its images, one could hardly escape from attaching personal and collective memories and knowledges to its spaces by establishing hidden correspondences and analogies between artifacts and ideas, spaces and memories often distant in time and space. This, however, not only relates to the way in which the city is perceived, but also to the way in which it is built, as a juxtaposition of fragments linked to distant places, ideas, images and meanings.

9 Epilogue

The dialogue on the city of Suzhou from eight different positions and framed points of view becomes an imagined, remembered and experienced collective construction. The city emerges as a complex patchwork of entangled insights and ideas exploring the notion of paradise.

Paradise on earth, as in the historical Chinese city, is a space collectively re-created in shifting media and translated over time to eventually become inhabitable. Its countless projections inspire new ways of designing the city and, today, conceptions of paradise can be instrumental in this process. If in the city of Suzhou, tradition has been linked to the pursuit of modernity, then the making of paradise as part of this process expresses a vision of the future.

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Each of the six articles of the Topical Issue presents a relevant contemporary approach to philosophy of the city. The array of themes range from justice issues to digitalization and smart city development and the gendered use of urban space to the implications of the Covid-19 pandemic. The concepts presented and used represent current themes in Philosophy of the City and also areas of interest for further transcultural study of the links between philosophical approaches and urban topics. The styles and objectives of the contributions vary and one can find more traditional philosophical research articles joined by more poetic style. This also reflects the broad range of the contemporary Philosophy of the City.

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