

1 Introduction

1.1 Research background

It is probably true for researchers and practitioners everywhere in architecture, urban design, and planning fields: the term ‘space’ has become *the* keyword in their thinking and professional operations. Despite they may associate entirely different sets of concepts with ‘space’ to inform their practices. My acquaintance with this notion began when I got enrolled in the urban planning program at the school of architecture at Tianjin University. Our faculty was known for its pragmatic pedagogical model: design ideas, techniques, and representations from both imperial, communist eras of China and from Western societies since the time of modernism were taught to us without alluding much to their cultural, political context and implications of today’s applications. I understood ‘space’ as merely material, in reference to bounded material entities (a room, an architecture, or an urban neighborhood). The post-modernist, modernist, and traditional-imperial prefixes of space seemed to me, represent objectively the technical and material constitutional principles of purely *historical* interests, the functional and aesthetic evaluation criteria coined at *specific times*. When doing internships in China, I observed practitioners deciding on the forms of spatial constitutions mostly by referring to *objective* indicators like temporal or financial efficiency or the architects’ and users’ subjective aesthetic preferences. I was convinced that the substantive significances of those spatial defining notions are deflated in our time.

For a long time, I treat my positivist universalistic understanding of space with no skepticism. In my limited planning and design experiences, I was encouraged to draw on ideas, styles, and forms from various times and places and make eclectic use of them. In everyday life, I use ‘concrete’ spatial names (e.g., Beijing, outer ring, my office) denotatively to refer to particular locations, directions, objects, and material arrangements. No confusion arises as my interlocutors also acquaint with these empirical references. The ‘abstract’ spatial terms only become problematic when I try to communicate them to an epistemic other. For instance, Shenzhen is undoubtedly a young and energetic ‘city’ to me, planned, and built up a little over 40 years. Despite Shenzhen has a nominal GDP and is inhabited by more than 12

million people (mostly migrants), calling it a ‘city’ is strange to my European colleagues. For them, ‘economic zone’ is a better fit to grasp Shenzhen’s spacing mechanism and spatial attributes. In their conceptual system, such a term corresponds better to Shenzhen: a functionally planned area unassociated with historicity, cultural diversity, and shared identity among its inhabitants.

Unequivocally, for researchers in urban sociology, human geography, and other social-spatial disciplines who aim to explain spatial formation and transformation in particular social contexts, the conceptual framework of *space* shall relate to social practices, relations, and meanings to be understood in empirical events. This advocacy has, of course, already been generally called forth by pioneering scholars since the 1960s. It is famously coined by Henri Lefebvre that “(social) space is a *social production*” (1991 [1974], 30). However, how to relate a general conceptual form to the particularities is not yet thoroughly discussed. In my reading, philosophers and social scientists have also spent a lot of energy and effort conceiving and disputing over variegated conceptual definitions but too little on reflecting on the methodological approaches for engaging them meaningfully in understanding and transforming particular local realities.

Suppose our *raison d’être* is to produce context-sensitive knowledge of space constitution and thereby inform the local transformative processes. In that case, some critical methodological questions are left poorly answered. Then, given the causal agents and boundary-setting criteria proposed in diverse spatial conceptualizations, how shall a researcher select the one(s) that is most revealing for a particular research subject? Secondly, when we depart from one particular (social) spatial conceptualization, what counts as *context-specific knowledge*? Thirdly, what constitutes a good explanation? This book aims to do justice to these concerns.

1.1.1 Traveling spatial conceptualizations and philosophical vigilance

In today’s global academia, the dominant majority of sociological and geographical studies on urban China have either discarded theory-guided analysis or adapted western social-spatial models and theories to Chinese reality in pragmatic yet ambiguous manners. Both methodological approaches induce risks of producing context-insensitive, inconsistent, and unsystematic knowledge. The causes are generally attributed to the domination of specific hegemonic epistemic norms, including the north-, male-, market-, and state centrism, which hinders the production and validation of particular/local/subaltern knowledge in the domestic or global fields of knowledge production. Meanwhile, individual researchers are blamed for their succumb or commitment to reproducing such unequal knowledge-producing structures (see, e.g., Ma and Wu 2005b; Chen 2018; Wang and Liu 2015; Roulleau-Berger and Li 2016, 38–43). Nevertheless, few studies have addressed this problem from an *epistemic* point of view, elucidating the patterned epistemic gaps mani-

fested in the selection, misinterpretation, and appropriation of specific conceptual knowledge of space. The philosophical, among other things, epistemic vigilance, is vital in explaining how traveling theories are comprehended and excised by researchers from one social and cultural context to another. Just as Hammersley puts it:

There is no escape from philosophical assumptions for researchers. Whether we like it or not, and whether we are aware of them or not, we cannot avoid such assumptions. And, sometimes, the assumptions that we make lead us into error. (Hammersley 1992, 43)

The first section of this book (chapter one to four) aims to expound on how attending to distinct Sino-Euro epistemic frames of space would help us understand the prevailing practices of comprehending, selecting, and applying space conceptualizations in researching urban China. It also aims to uncover the implications such underlying assumptions have on the resultant knowledge being produced. Therefore, it will start by revisiting and elucidating various conceptualizations of (social) space in their historical-philosophical contexts. To gain a critical distance from these traveling conceptualizations – to reveal how underlying epistemic assumptions legitimate certain widely influential explanations – I will elucidate them according to their constituting epistemic forms, causal agents, and level of analysis. In the subsequent chapter, I will compare the necessary epistemic assumptions derived from European spatial conceptualizations with those from traditional Chinese thinking. Here, a quick overview shall show why I start the methodological explorations by addressing the distinct epistemic (philosophical) presuppositions/prepositions underlying space conceptualizations in Europe and China.

In Europe, a conceptual genealogy of 'space' is well documented. Bertrand Russell once asserted that some of the problems and paradoxes associated with the ideas around space were set out by Zeno of Elea (fl. 450 BC). He argued, "in some form, (Zeno's ideas) have afforded grounds for almost all the theories of space and time and infinity which have been constructed from his day to our own." (2009 [1914], 143) If Russell were correct, then all trials of conceptualizing space after Zeno until his time are driven by the inquiries about how 'movement' or 'geometrical and physical change' is possible. In one of Zeno's most famous paradoxes – of Achilles – space is characterized as a composition of 'infinitely divisible points,' and time as 'instants,' both exhibiting a structure of mathematical continuum. The paradox occurred as Zeno applied rational deductive logic to add up the sequences, concluding thereby that the fleet-footed Achilles shall never be able to surpass the slow-paced tortoise. A vital proposition is drawn to endorse the inferences: the nature of space is permanent and unchanging, whereas changes occur only in the sensible world. Space and materiality are endorsed with different ontological status and, consequently, represent an epistemic divide. By following the coherent principle of

truth, Zeno presupposed 'space' to be static and infinitely divisible, 'materiality' is thereby movable, plural, and discrete. 'Motion' and 'division' – in their engagements with the material, can only exist phenomenologically in perception.

Following this thread, one notices how a presumed *epistemological dualism* between the 'real' and the 'perceptual' is carried on in later created spatial notions. Such a divide has variegated manifestations when combined with different ontological assumptions of reality. To illustrate, Democritus and Lucretius held a classical materialist conception of space by decoupling perception of motion with the reality constituted by atom – some independent and unchanging units. Plato presumed the distinct mechanisms in the world of 'Form (non-substantial, permanent)' and 'bodies (sensible, changing)' world. Such an epistemic divide ascertain sensible bodies can, at best, *represent (copy)* the transcendental substances. In correspondence with 'form' and 'matter,' Aristotle introduced the dualistic notions of 'potentiality' and 'actuality' to mitigate the presumed friction between the 'real' and 'phenomenal.' We can thereby infer, long before Descartes, Newton, and Leibniz, various version of dualistic epistemic presupposition regarding the mental and physical dimensions of the world were established in European philosophies. In line with these presuppositions, various conceptual dyads – such as 'appearances and essence,' 'sense and rationality' – were developed to resolve the problem of "change." They give accounts of and reconcile the contradiction between the eternal, static, and immutable and the sensible, changing world dimensions.

In light of such philosophical grounding, the commonality and distinction between the three fundamental concepts of space – absolute, relative, and relational space – commonly used by scholars in social and geographical sciences can be better illuminated. They are adopted and accommodated into different social theoretical paradigms to describe and explain the spatial configuration and re-configuration of social-spatial events. Usually, different conceptual lens gets chosen according to the extent of mobility and plurality these events manifest. Many claims that the idea of 'absolute space' seems so basic that it still widely shapes people's shared understanding of build-up space, i.e., as a container-like material backdrop for societal changes to occur. The build-up environment is deemed a homogenous and isotropic territory, which can be measured by classical (Euclidean/Cartesian) mathematics. The geometrical measurement is deemed universally valid, irrespective of the forms of associated societal activities. Such a static idea of build-up space is challenged by the arrival of the information and global trade era: more and more situated material entities, social bodies, and their movements are perceived in connection with each other. Like countries' physical borders, some fixed boundaries become meaningless and fade out of people's perceptions. Space is conceived increasingly complex and *relative*, more as constructed than given. Typological notions of space such as "space of flows" (see Castells 1999, 294), conjoining the social practices of shared meaning or functions arise. In this context, space

is demarcated and measured by the perceived dynamics and intensity of cohering activities. Most recently, thinking of space relationally (this book's subject matter) becomes scholars' new mantra of thinking. It is conceived to capture the multiplicity, juxtaposition, and unceasing change of space (see, e.g., Yeung 2005; Merriman et al. 2012; Massey 2005). The trends seem to be, new conceptual lenses of space are more accommodating to new cross-boundary social-spatial events and their manifestations. Chapter two of this book would demonstrate how dualistic epistemological presuppositions shape the causal agents and level of analysis entailed in relational spatial conceptualizations traveling from Europe.

On the other side of the globe, a cosmological view originated from Chinese antiquity seems to start from an opposite stance: the leading Chinese philosophers regard 'change' to be the fundamental nature of reality. As the title of the first Chinese classic *Yi Jing*¹ (Book of Changes) implies, "production and reproduction mean *Yi* (Change)²" ("Xi Ci" n.d.). In this book, two distinct yet dependent generative forces were conceptualized as *yin* and *yang*. Their interactions were deemed to give rise to further variations of *yin-yang* (patterns of changes) –the underlying mechanisms that give rise to a myriad of things and social beings. These propositions seem to have shaped the analytical lens that Chinese philosophers have utilized ever since. The *yin-yang* causal account stands in contrast to a single generative force identified by the early European philosophers mentioned previously. It includes the '*unmoved mover*' famously put by Aristotle, who gives a linear account of how things become –actualize one's potential. Works of ancient Chinese philosophy (here I refer only to Taoism and Confucianism) conceive *being* to be structured under binary (*yin-yang*) forces than inherent qualities or transcendental essences. The patterns of changes emerge from and demonstrate in interactions, imply an ontology of change and process³ (see Graham 1986; Hall and Ames 1987; Chen 2005).

Concerning knowledge, comparative philosophers also argue that, instead of an ideal form or true meaning, 'knowledge' in ancient Chinese philosophy is closely tied to experience gained and warranted in context. To *know* means "generating an emergent world contingent upon the conditions and capacities of the specific persons engaged in the dynamics of enacting reality" (Hall and Ames 1987, 195). The validity of knowledge is deemed contextual-dependent, finite, and negotiable

1 Yijing (易经).

2 In Chinese: 生生之谓易.

3 I have chosen to isolate the temporal and spatial dimensions in my comparative discussions. In traditional Chinese thought, change is usually perceived as circular changes, occurring repetitively in a circular structure of time rather than an evolving linear structure of time. I admit such a reduction can be a critical oversight for this work, and a pending question to be answered for future works.

than *a priori*. For Chinese philosophers, a presupposed dualistic differentiation between the knowledge acquired by a God-like impartial observer and a partial and biased mundane person does not exist. Nevertheless, a divide is often associated with the social-political legitimation held by the knowledge producer. Concerning such distinct philosophical tradition, Lewis argues that ‘space’ in early China is not conceived as naturally given, but as a whole united in the practice of perceiving subjects, more specifically, “united in the one person who rules it” (2006, 4).

Nevertheless, the conceptual genealogy of space in Europe and China shows some ostensible signs of confluence at a relational framework. To illustrate, I will cite a paragraph from *Tao De Jing*, which was muralled on the facade of my old faculty of architecture at Tianjin University. The quote goes:

[...] Clay is thrown to shape a vase, and make of void and form a pair, and a vessel’s put to use. Door and window vent a room, and make of void and form a pair, and a room is put to use. Thus, the value of what depends for use on what is not⁴ (Lao Zi 2001 [n.d.], 51)

When I was a student, I see it as a mere recount of common sense and fail to grasp this excerpt’s conceptual significance. Many years later, only when I put it in juxtaposition with relational spatial concepts I read and learn in Europe, have I realized their resemblances and deep-rooted divergences to be a critical topic for further investigation. As we can see, space conceived by Lao Tsu is constituted by material entities, the immaterial *in-betweenness*, and the meaning (utility, value) assigned by engaging subjects. Through operating and assigning meaning to the material and immaterial constituents of space as a whole, people construct conceptual form to name it. It echoes with Leibniz’s conception of space, which goes that:

(space is) something merely relative, as time is. Time is an order of successions. Space denotes, in terms of possibility, an order to things which exist at the same time. ... I do not say that matter and space are the same things. I only say, there is no space where there is no matter, and that space in itself is not an absolute reality. (G. VII. 363 (D. 243), cite in Russell 2005 [1900], 301)

Leibniz and Lao Tsu’s excerpts suggest: they have both addressed the interdependence and relational constitution of material and immaterial entities in their definition of space. One can also detect, Leibniz’s thesis is more analytically and objectively formulated, indicating no sensitivity to particular subjects nor contexts. Lao Tsu did not mobilize any abstractions and definitions but illustrated his idea by referring to everyday objects and general social subjects’ shared experiences. A locus of subject-centric perception is embedded in his definition.

4 In Chinese: 埴埴以为器,其无,有器之用; 凿户牖以为室,当其无,有室之用。故有之以为利,无之以为用。

Unfortunately, unlike Leibniz, whose relational conception of space gets rediscovered, re-contextualized, and further developed by intellectuals across the globe, Lao Tzu and his followers' ideas of space are subjected to much fewer serious theoretical discussions and developments by researchers interested in understanding spatial phenomena situated in urban China.

Let me assume a hypothetical situation. If ancient China's spatial thinking remained intact, the philosophical preliminaries for conceiving space in the Chinese context today would divert significantly from the substantial ontology and naturalistic epistemologies entailed in positivism or Marxist dialectical materialism. Fruitful attempts to theorize would depart from anti-essentialism philosophies (e.g., Whitehead, Deleuze), and locally sensitive conceptual frameworks shall be closer to the relational, dynamic terms. At this point, I would not jump to any hasty claim about the feasibility of such thinking. Especially admitting that, since the 20th century, China's intellectual and political history is marked by cultural meandering and fracturing (Goldman and Li 2012). This brief philosophical excavation here, first of all, serves as a reminder for keeping a vigilant attitude towards the epistemic presumptions, the attributed properties of the pre-conceived notions upon which traveling social scientific knowledge is constructed.

Nevertheless, when well elucidated and carefully employed, the relational framework serves as the reference point to distinguish the myriad of spatial concepts. Through comparative deconstruction, discern where their analytical and explanatory powers lie and to what extent they help with analyzing a social-spatial phenomenon in contemporary urban China.

1.1.2 Social theoretical perspectives, methodological implications, and forms of spatiality

To explicate the analytical purchase of traveling social-spatial conceptualizations, another angle is to attend to their underwriting social science traditions or paradigms. It is a commonplace that most researchers succumb to three main paradigms in social science – the positivist, the historical materialistic, and the interpretive – in describing and explaining social-spatial reality. The paradigms prescribe conceptual and technical principles of coding the targeted subject, object, and their relations, affect thereby distinctively how social-spatial phenomenon is cased, analyzed, and explained. Furthermore, the issue of 'perspective,' namely, the cognitive and sub-cognitive gap between the researcher as the 'knowing subject' and that of actors as the 'subject-to-be-known' (as well as the perspectival differences among the various subjects-to-be-known), are addressed varyingly across paradigms. How the issue of perspective is addressed can be different even within one paradigm, i.e., constructionism. The adopted perspective or 'criteria of differentiation' would further affect the definition of the valid unit of study.

While reviewing existing studies on spatial (trans)formation in China (in Chapter 4.2 and 4.3), I come to notice an under reflected issue: the role theory plays in informing the research. In these studies, the 'scientific validity' is often achieved by first admitting the prescribed attributes of variables (i.e., an individual's rational agency, or space as territory measured by size), doctrines of causalities unproblematic. The prescribed observables would then be permitted into the analytical framework when observations of their attributes collapsed to the pre-defined ones. Contextual particularities of observable local events often get ruled out as anomalies. In the following paragraphs, I briefly discuss three dominant theoretical perspectives applied in examining social-spatial space formation and transformation in the contemporary Chinese urban context to illustrate the *epistemic fallacy* I wish to address in this book.

The first strand of research addresses the 'mode of production' as the principal structure in arranging social and material bodies. The conceptual models from classical economic geography (e.g., location theory from Walter Christaller and August Lösch), new economic geography (e.g., the economy of scale and agglomeration from Masahisa Fujita and Paul Krugman), among others, are well received by Chinese urban planners and geographers. Scholars mostly embark on such neo-classical economic models or neo-institutional political and economic theories to decode the rapid urban transformations in the post-reform era. They are applied in instructing planning functional zonings in the city and assessing the economic performance of them. The neoclassical perspective presumes the researchers to be impartial and rational. The target social subjects are presumed to hold a substantial-economic rationale and an awareness of Euclidean geometric principles. Despite a collective outlook, it advocates an *individualism* methodology, i.e., regarding social actors to be discrete rational individuals aiming for maximum personal gain. As a result, the valid unit of analysis is derived from the principle of equilibrium *ex-post*, the constraining size for optimized economic activities. When employing the theory deductively, most likely, there is nothing much new that can be found about space from the empirical world beyond identifying an empirical content of the *boundary*.

Alternatively, scholars following neo-institutionalism principles attend institutional economic imperatives and the state's political agency in relation to space production. The ways in which the political-economic agencies are distributed and materialized at various administrative levels are the underlying causes affecting the production and transformation of material spatial structure in China. Consequently, the social-spatial unit is conceived as a 'capital or power container,' which corresponds to the territorialized capital accumulation and jurisdictions (Ma and Wu 2005a; Friedmann 2006, 441). With the emphasis solely on state institutions' agency, neo-institutionalism followers impart a *collective* outlook to define subjects' attributes. They equalize spatial restructuring to the restructuring of the mate-

rialized state-agency. In both cases, the prescribed causal agent in theories is employed to inform coding, formulating predictions, and explanations. The studies endorsing such perspectives are convinced that state-dominant capitalism as the political-ideology and meta-narratives underwrite the formation of multifarious institutional forms and developmental tendencies in post-reform Chinese society. It is not surprising that, in these studies, disanalogies appear between predictions and observable empirical events. The prescribed causal claims thereby often get rectified by necessary patches such as “Capitalism with Chinese characteristics” (Huang, Stein, and Sekula 2010 [2008]), “Capitalism without Democracy” (Tsai 2007), and “Neoliberalism with Chinese characteristics” (Harvey 2005). At stake here is that they fail to elucidate the *bridge-laws* from theory to empirics and the *criteria of adequacy* carried out under such theoretical frameworks in their work.

Among the scholars who choose to turn against strong reductive approaches and embrace a weak pluralist methodological approach, Harvey’s perspective is representative. From the onset, he sees the logic of mobilizing power held by urban administrators, the fierce domestic inter-city competition, the act of integration to the global financial system, and the logic of over-accumulation and spatial expansion in China to be in line with that of a global neoliberal framework. Hence, he equalizes social actors’ subjectivities to their productive capacities, endorses the dialectic relation between the fixed material form of space on the one hand, and frictionless spaces of flows – accelerating mobilities of liquid forms of capital on the other. The cities and regions are taken as legitimate units in understanding spatial formation in China. On that level of reduction, the capital accumulating agency can be calibrated by each municipality’s productive power. Like many other supporters of a *globalism* outlook, Harvey is not hesitant to admit that the neoliberal framework does not work as a pristine doctrine but as a strong program that can substantially absorb inherited institutions and historical particularize. It means that “inside China, it seems a mixture of the old empire, the modern nation-state, and also many other things, you do not know what” (2017, 266). In other words, the ‘context’ is deemed to cause contingencies, not necessities.

A few scholars have opted for more comprehensive theoretical reconstructions. For example, Ulrich Beck defines the ideal types of Chinese historical-constellation of modernity in mixed terms, including “state-regulated capitalism; post-traditional authoritarian government; truncated institutionalized individualization and plural-religious society” (cite in Hansen and Svarverud 2010, xvi). In *China Construct Capitalism* (2014), Keith et al. have overhauled the sub-concepts under the neo-classical and neo-institutional frameworks. They argue that the Chinese economy stands opposed to neoclassical economics and its notion of dis-embedded actors. Instead, they employ concepts from Chinese philosophy and cultural norms, such as *guanxi*, *wuwei*, relational property ownership, to illuminate the empirical objects overshadowed by concepts in the classical capitalist framework. They ar-

gue that the Chinese development model is characterized as “one country, many systems” (Keith et al. 2014, 109). In contrast to classic modern approaches following a strong integral program, I find descriptions and empirical explanations from these pragmatic, mixed approaches more persuasive. However, one can hardly tell if the hybrid epistemic forms being employed are consistent or coherent enough in a metaphysical and semantic sense.

The third prevailing angle of looking at spatial dynamism in contemporary urban China addresses the role of consumption. The concept of space, in this case, derives from post-modern consumerism theory, where social-spatial reality is often reduced to ‘symbolic representation.’ The idea is that the emergence of new and fragmented forms of space (representational space) in Chinese cities is caused by globalizing consumers’ – the elite class – behavioral preferences. This approach admitted the observable pastiche and assimilation, stylistic diversity, and heterogeneity of materiality and their representations as subject matter. It assumes concepts to have lost their referents in normative subjects’ perception. By addressing the normative subject, social actors’ perceptions are reduced to that of the urban elites only, as the result of “the death of the subject” (Jameson 2003 [1991], 173). This consumerism reading echoes with Chang’s thesis of compressed modernity characterized by the “dynamic co-existence of mutually disparate historical and social elements” (Chang 2010, 444). In this train of thought, the modern architectures, featuring glass, concrete, and steel, in most of the first and second-tier Chinese cities – whose style denies locational differentiation and overrides cultural particularism – are produced by urban administrators’ consuming preferences. The “urban image construction” is motivated by “selling the city” (Broudehoux 2004, 38). At a glance, this argument is well purported by the observable changes in Chinese cities’-built environment, especially in those ubiquitous modernism buildings found in real estate and public infrastructure projects in large Chinese cities. Moreover, the phenomenon of architectural projects duplicating exotic European traditional styles (the Dutch town, Thames Town in Shanghai, Small Paris in Hangzhou etc.) or copying traditional Chinese styles from disjointed times and locations (e.g., Xintiandi in Shanghai, and Wangfujing in Beijing), are also widely accommodated by this perspective (see Bao 2008; Gaubatz 2008; Wu 2010). In such interpretations, economic and social value is attributed to particular symbolisms. The European names and styles in the urban landscape, for example, is deemed associated with preferred social and status for globalized consumers. However, how they come about to be preferred by such globalized consumers are often left unexplained. We cannot wait but also notice the thick meaning/values of the symbolism in the original context and that constructed from a new local context are deflated and conflated.

Our glimpse at the commonly applied methodological approaches studying the social-spatial phenomenon in contemporary urban China shows that social-spatial activities are mostly reduced to, and interpreted as, economic activities in most re-

search practices. The accumulation, or realization of economic value, is adopted as *a priori* causal rationale in explanations. Further, these dominant theoretical lenses at work have also presupposed a distinct *unit of analysis* considered valid. They also prescribe the dimension of social-spatial relations (material-geometrical, representational, topological) to be examined as *empirical content*. Most critically, why and how they employ and re-contextualize certain theories into a different empirical context and how specific concepts inform insightful explanations are under-reflected.

1.1.3 A Multi-situated artworld: open system and partial connections

When I first discovered Caochangdi, which later became my focal point for observing space constitution in the artworld, I found it challenging to settle on *one* analytical framework, to employ *one* unit to demarcate the ‘relevant’ social actors, material entities, symbols, norms at play, and to grasp how they entangle and evolve. Some snapshots of my observations would illuminate this issue. On Baidu maps, Caochangdi sits in Chaoyang district at the intersection of the fifth ring road and the airport expressway. Its location counts as suburban for Beijing as it is barely accessible by public metro. According to the written history, Caochangdi came about as a territorial community⁵ since the Qing dynasty. For a long time, the village members engage in farming on the definite village territory until the artist community started to settle there in the late 1990s. A renowned artist named Ai Weiwei firstly relocated his studio to Caochangdi and set up an art organization called China Art Archives & Warehouse. Gradually, informal housing and services flourish in Caochangdi, and this area became culturally, socially, and materially heterogeneous. Like many ordinary villages, its day-to-day administration is run by a locally elected political body, consisting primarily of representatives from the two local villagers’ kinship lineages: the Zhang and Sun family. For art fanatics and dealers, Caochangdi is Beijing’s most important locus of galleries and artist studios, secondary only to an art institution agglomeration called 798-art district state – a creative industrial park acknowledged by the state. But, once one enters Caochangdi, going into its shallow, deep lanes and alleys, one realizes immediately that this place cannot be subsumed under the notion of an ‘art village.’ Otherwise, too easily, readers will associate it with gentrification processes, the creative class, SOHO and so on.

When asking different actors in Caochangdi, they will refer to this area with different names. It is seen as one of the countless un-planned ‘villages-in-the-city’ (cheng-zhong-cun⁵) in suburban Beijing by urban planners and regulators; as an under-regulated ‘creative industrial zone’ located on a tiny and unfavorable piece of

5 Cheng-zhong-cun (城中村).

land by municipal governors; as a 'rural village' called Caochangdi by the local villagers who have their homes and community build up there, and so forth. It is also one of the few affordable and 'liveable places' in the capital city Beijing in which migrant workers – taxi-drivers, restaurant chefs, installation workers, delivery men – can stay and make a living. It is also known as 'Cao-Cun,' a meeting point for the local and global art community, where the art insiders extend their professional or business networks. The names mentioned here hinted at a lack of coherent *normative system* ruling the social-spatial development of Caochangdi. Across these social communities, one can observe some normative relations. For instance, the registered villagers of Caochangdi are also landlords to the art communities due to their membership in the village collective. The political membership endorses them with a share of the collectively-owned land and the ownership of their private homes. However, more transient relations emerge and evaporate in Caochangdi, awaits to be uncovered and explained.

In Caochangdi, an explicit system of *visual codes* is also absent. The constellation of architectures in Caochangdi forms a pastiche in the highly compact area of approximately one square kilometer: the self-built multi-story and low-budget brick and concrete compounds are close neighbors, extending their volume – through vertical stories, external staircases, advertising boards, temporary parking, and so forth – in all possible dimensions, dismissing regulatory norms and unitary aesthetic standards. The ground floor shopfronts along the two sides of the lanes are filled with living places, exhibition places, bistros, DHL offices, bicycle repair stations, dental clinic extensions and so forth. Social activities such as vending and shopping, chatting, and commuting takes place both indoors and outdoors. On the street, the public-private boundary is frayed and continuously being negotiated. The confluence is especially noticeable in the evenings, when various social bodies flow out of their working or residential places, meet on central business streets in the north of the village, where the restaurants and shops agglomerate. It's the time when some (i.e., blue-collar workers) return to their rented homes in the village from elsewhere, some (i.e., art dealers and managers) leaving for their homes elsewhere. Some (artists, local villagers, etc.) stay put in the village but move their social/private lives to indoor/outdoor dinner tables, playgrounds, tea houses, and so forth.

On regular days, one can regularly witness encounters among different social bodies embodying distinct lifestyles on the streets, forming a fluctuating village-scape of the northern Caochangdi. There are two central gallery agglomerations in the village and a group of grey-bricked studios standing in separation from the dense self-built housing compounds, designed by artist Ai Weiwei. Other art spaces scatter around and dovetail tightly with the neighboring self-built housing in the lanes. Looking from afar, these designed art spaces blend into the background, as they are made of the same-colored bricks and are of similar engineering

structure and scale. Only on closer inspection can one spot the art spaces' modernist style and tell them apart from their surroundings. In total, I have counted twenty-one galleries, seven off-spaces, over thirty artist studios, and over forty art-related start-ups scattered around the village in the year 2016. Such physical arrangements of Caochangdi exhibit a hybrid, filiated, mixing and crossing of ideas and forms from diverse times and distant places.

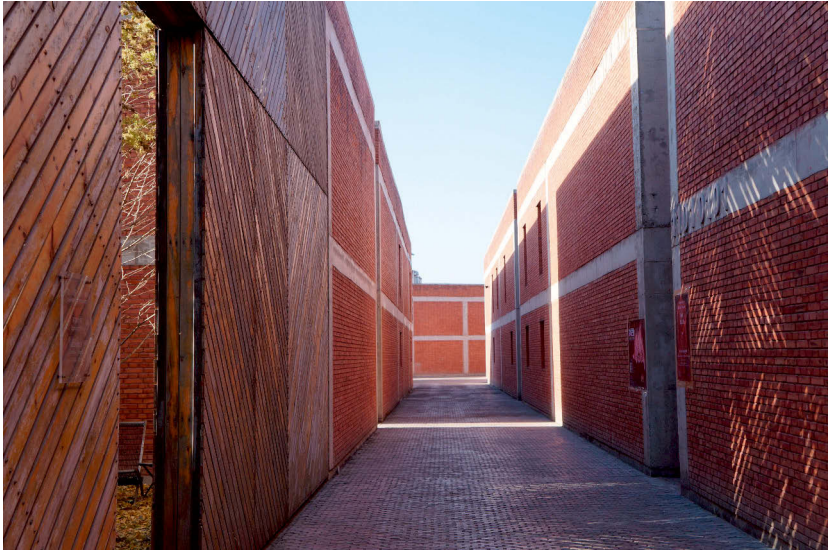
Meanwhile, the social, material bodies constituting Caochangdi are highly mobile, subject to changes at different rates. According to several long-term residents, rumors of impending destruction have been circulating since Ai Weiwei chose Caochangdi as the site for his studio in 1999. Between 2013 to 2017, I have personally witnessed many openings of new art spaces, exhibitions by artists from all continents, and the renovation of the village police station, many residential buildings, and bistros. Furthermore, turnovers of physical spaces, shop fronts, and signs are also visible. Some art events program took place in Caochangdi and disappeared into obscurity in the next week, month, season, or year.

Figure 1 Street view in Caochangdi. On the left side, the mixed-use residential area; On the right side, the gallery compound named "the red courtyard no.1." (Photo by Xiaoxue Gao, November 2013, Caochangdi, Beijing, China)



During my field trips, I have communicated the most with the artist community, whom I met in Caochangdi. Some work there, some live there, some have their work exhibited there, some party there. Caochangdi is a hub where many di-

Figure 2 View from within the “the Red Courtyard No.1.” (Photo by Xiaoxue Gao, November 2013, Caochangdi, Beijing, China)



mensions of their lives unfold and extend. Some daily needs of artist communities rely on the village services (laundry, food markets, copy shops, illegal taxi services, etc.) offered by the migrant workers, as well as the local villagers who are landlords and sometimes also art patrons to the art spaces... *Partial connections* take place in regular, accidental, formal, and banal ways. I am convinced that these heterogeneous bodies and their relations shall not be subsumed under the mere notion of ‘artworld,’ nor does the artworld fully unfold in Caochangdi.

Moreover, having art as a keyword in mind when designing and carrying out my field trips, I have discovered art-related practices beyond particular and fixed institutional boundaries (i.e., museum, gallery, academy, auction house). The generally considered, integral practices of the artworld might include studying and creating art, curating, installing exhibitions, dealing, trading, transporting artworks, documenting, reviewing, and critiquing artworks and the art system. They conjure up heterogeneous social relations among artists, curators, dealers, gallery technicians, landlords, politicians, celebrities, editors, real estate developers, party caters, taxi drivers, delivery men, and so on. Some less frequently occurred events and forms of relations are proved to be of critical significance to the *sustenance* of the artworld. For example, none of my interviewees would refute the importance of having a

reliable landlord (rental relationship) for the sake of materializing an art project, despite their seemingly unrelated role in the artworld.

Having connected with some of the representative and active actors from the artworld, I got linked to many more places: to 798 Art District for numerous exhibition openings, workshops, and artist talks, to Heiqiao village (a nearby artist village further towards Beijing's outskirts) for studio-visits and interviews, to countless restaurants and bars in Wangjing neighborhood, to Chinese Academy of Fine Arts (CAFA) for conferences and workshops, to Chinese Museum of Art (NAMOC) for interviews, to the Guardian auction house, to the K11 shopping mall in Shanghai for social meet-ups, to Kassel Documenta, to Berlin and Cannes for art biennials/fairs/festivals and parties. The art communities I know share overwhelmingly cosmopolitan lifestyles and outlooks. Departing from Caochangdi, following the notion of art, the Artworld-relevant actors, artifacts, and relationality are multi-situated in the world.

My field experiences allude to an artworld driven by multi-linear structural and procedural drivers. As a passionate flaneur who has lived in several large Chinese cities, the 'sense of place' (Relph 1976, 20) I noticed in Caochangdi – amidst material, semantic and aesthetic hybrids, the co-existence of cross-historical and trans-local entities and ways of life, the immediate and transient norms, and the provisional and approximate practices – was nothing but familiar. As a rule, the social phenomenon is rarely unambiguous. In my eyes, Caochangdi precisely exemplifies a typical spatial phenomenon that occurs in post-reform Chinese society, where the fragmented structural changes occur in an extremely condensed manner in respect to both time and space, prompt heterogeneous bodies to adapt and react. Many bodies get carried along in a particular wave and held together in proximity, forming more or less enduring and visible assemblages in urban spaces like Caochangdi. I thus held back from employing hypotheses merely from one conceptual framework of social-space. The epistemological-methodological link principle in the singular form may hinder the discovery of the particular causal mechanisms critical for introducing cross-sectorial changes. Thus, to understand the way in which these particular bodies get held together, the parallel processes of stabilizing or destabilizing, I shall explore approaches for systematic employment of mixed theories and methods.

1.2 Research question

My above-described preliminary reflections lead to further inquiries on the relationship between *epistemic assumptions* about the nature of social-spatial constituents embedded in the *conceptualizations of (social) space* hold by the *knowledge*

producer and *empirical events*. The question of this research is thereby a methodological one, which could be summed up as follows:

- How can one best employ a (relational) social-spatial theory to inform a context-sensitive study of particular situated social-spatial phenomenon?

When I draw my targeted empirical subject matter (the spatial constitution and transformation of the artworld in Beijing) into concern, this question can be elaborate as:

- How can I gauge and bridge the epistemic distance between the traveling social-spatial theories (conceptual tools) and the contextual knowledge held and enacted by the situated research subjects?
- What are the methodological steps needed to avoid the epistemic fallacy and ensure the finding of generative mechanisms underlying the timed and spaced events?

1.3 Preliminary methodological concerns

1.3.1 Post-modern reflections, thinking of space relationally, relativism and the local context

The issue of ‘validity challenge’ embedded in applying traveling social scientific concepts, models, and theories originated from Anglo Sachsen academia to analyze or explain the phenomenon in other historical and social contexts or on a global scale is not novel. So far, many scholars have declared their skepticism against the claims of universal truth and the cross-cultural validity of applying social theoretical tools. Lyotard has famously pointed out that modern scientific knowledge systems are organized around a particular set of grand narratives, including “the dialectics of spirit, the hermeneutics of meaning, the emancipation of the rational or working subject, or the creation of wealth” (1984, 1). According to Lyotard, these meta-narratives have referred to enlightenment narratives, which constitute the historical backdrop against which modern scientific knowledge is legitimated and promulgated. In other words, the universal claims underpinning the enlightenment narratives are taken as undertones in modern scientific practices. Giddens has also asserted that modernity, along with its affiliated grand narratives, “has its roots in specific characteristics of European history ... [with] few parallels in prior periods or other cultural settings” (2013, 174).

In our time, universal claims have, to a great extent, been dismissed. More specifically, knowledge production within the sociological sphere is also deemed

rooted. As Urry has once noted, “a specific academic practice, was the product of the particular moment, of emergent industrial capitalism in western Europe and North America” (2012, 10). Regardless, the social-political impact of the very concept of modernity, and the widespread deployment of the social theories building on its particular conceptual frame, endure (see Bhambra 2007; Wallerstein 2006). Especially in the globalized media and academic arena, Eurocentric or Western-centric political perspectives or the so-called sociological gaze from Global North are still widely deployed in interpreting the occurrences of social-spatial formation in the Global South. As a result, such scientific or public knowledge referencing Global South reality further contribute to reproducing the north-south power structure (Connell 2007).

One rectification plan presented by ‘northern’ intellectual communities is to introduce comparative perspectives and advocate for the pluralism of voices. The discourse of “multiple modernities” (Eisenstadt 2003), for instance, has made major attempts to recognize and justify the differences between civilizations. It encourages scholars to rethink the embedded character of social-spatial events and be sensitive to the overt and covert differences in the frames of meaning that prevailed in the global periphery. Such reflections have inextricably prompted the emergence of various forms of *relativism-localism* (i.e., nationalism, regionalism, place-localism). These forms of “judgmental relativism” have thereby generated paradoxes. According to Giddens, “each makes the circle in which all knowledge moves – always involving presuppositions but being able to illuminate such presuppositions through knowledge built upon them – into a vicious rather a fruitful one.” (2001, 152). The knowledge produced along this *relativism-localism* line is self-referencing or even self-petrified.

The other proposal to overcome epistemological universalism is to take a realistic view of the empirical *interconnectedness* – the relations, the movements, and the transnational structures – of social reality. Ulrich Beck, for instance, has reified such an orientation through coining a ‘cosmopolitanization vision.’ It rests on an understanding of reality as “a non-linear, dialectical process in which the universal and the particular, the similar and the dissimilar, the global and the local are to be conceived, not as cultural polarities, but as interconnected and reciprocally interpenetrating principles” (2006, 72–73). Methodologically speaking, this cosmopolitanism orientation has been reified into several concrete approaches. They include replacing the *either/or* oppositional typology between ‘nations,’ ‘streams,’ ‘networks’ and ‘scapes’ with *both/and*, applying multiple perspectives to read and interpret every single phenomenon of study; making inquiries into the congruence or lack of congruence between actor and observer perspectives, rather than taking a fixed perspective for granted (ibid., 81). Meanwhile, many scholars from the Asian countries and other late-mover regions have been aware of the shackles in the northern narrative, hence addressing the interconnectedness in the locally observable phe-

nomenon and putting forward multiple (time-space and theoretical) interpretive narratives (see, Chen 2010; Mizoguchi 2011 [1989]; Zhou 2010).

Behind all these efforts in search of post-modern resolutions, a shared acknowledgment is that frames of meaning being employed by actors to-be-known at a given time-space are very likely to be plural and dynamic. Local subjects might deploy incongruent or inconsistent frames of meaning unrelated to the ones researchers have adopted. However, while acknowledging and embracing conceptual multiplicity and empirical connections, most approaches fail to offer a criterion for rational evaluating or comparing different explanations' validity. It is logically evident that a Sino-centric perspective is by no means better/worse than a Euro-centric perspective in analyzing and understanding this interconnected, continually transforming social-spatial occurrences. Regardless, a full-fledged Sino-centric social scientific realm⁶ does not exist. Thus, questions remain: how can researchers who aim to conduct context-sensitive studies in a post-plural world work with theories that offer the most accurate analytical purchase to their subject matter? How can they get there, methodologically? This book undertakes such methodological questions, particularly engaging with the 'conceptualizations of space (theoretical),' and 'the formation of the artworld in Beijing (empirical).'

The concept of space in the social sense is, of course, extremely polyvalent. Notably, from the 1960s onwards, through the incessant efforts made by French philosophers and subsequent sociologists, the analytical constituents of 'space' extend from static representation, materiality, and geometry to social entities, relations practices in the process. The shift to 'thinking (space) relationally,' for many scholars, is already a logical answer to the post-modern challenge. It insists upon "an overarching theoretical approach and ontology that emphasizes the interactional constitution of social units, processes, and practices across space" (Go 2013, 31). However, the relational turn in the social scientific realm concerning the conceptualization of 'space' is not yet theoretically coherent, i.e., the analytical frames are constructed upon various ontological-epistemological assumptions genuinely alternative and incompatible with each other. Some scholars (e.g., Jessop, Brenner) have opted for mixing one relational framework with epistemically 'othered' ones in virtue of grasping the multidimensional nature of social-spatial relations. They find such a pragmatic approach justified as it avoids "ontologically privilege a single dimension, presenting it as the essential feature of a (current or historical) socio-spatial landscape" (Jessop, Brenner, and Jones 2008, 391). In other cases, conceptual collage takes place on the epistemological level. For instance, Yeung advocates

6 Regarding the (lack of) sinicization of sociology in China, Chen's (2018) book has offered a thorough chronological documentation on relevant historical incidences and discussions addressing the evolution of the sociological discipline in China from early 20th century.

integrating a 'relational concept of power' into the neo-institutional economic, geographical analytical frame. In doing so, he hopes to reconcile the institutionalism analytical framework by selectively embracing relationality, particularly in "power relations and actor-specific practice" (Yeung 2005, 37).

On the other hand, scholars such as Jeff Malpas and Martina Löw propose to build the concept of relational space on coherent epistemic foundations. They hope to ensure the empirical data is gathered coherently and interpretations hold together on all analytical levels and perspectives. For example, Malpas holds that common multi-perspective approaches or eclectic approaches (i.e., one employs varying terms like territory, place, scale, and network in the study) committing to different ontologies (realism-substantial and idealism-relational) to be problematic. He states that "many spatial concepts simply give accounts of various phenomena of space only rather than conceptualizing space as such, lacking concerns for other spatial concepts rooted in philosophical topology" (Malpas 2012, 226). By pointing out that a spatial concept is based on "phenomena of boundedness, openness, emergence and relational to place and time," he proposes re-embed geographical thinking into the domain of philosophical topography.

Having this divergent *modus operandi* in mind, I will briefly introduce Critical Realism in the following section. I find the distinct meta philosophical topology it offers will shed light on a new methodological path, upon which we can resolve the conflicts between the plurality of (Northern) concepts, post-plural social reality, and context-sensitive research without sacrificing the ontological-methodological coherency.

1.3.2 Critical realism and research strategy

As described above, in the post-modern era, awareness is widely shared among social scientists to avoid making totalizing claims on the level of meaning. It is also clear that relational thinking, although representing a core feature in the intellectual movement against totalizing theories, is not yet coherently theorized. They rest on different epistemic programs. Meanwhile, methodologists argue that if a consistent connection between ontology and methodology is missing, the employment of methods will be, "if not wrong, less fruitful" (Danermark, Ekström, and Karlsson Jan Ch. 2005 [1997], 175). Besides, when taking a trans-locally configured social field as subject matter (i.e., the artworld, whose material and symbolic constituents crisscross several social fields, situated only partially in China's social-institutional context), I am aware that it would be partial, if not arbitrary, to recourse to one theoretical program for explanations. Thanks to the insights entailed in the Critical Realism framework, I am convinced that it is both possible and necessary to employ multiple spatial theoretical frames with methodological rigor. Which ones to employ and how they are applied shall not be an *ad hoc* decision but the central

concern of the research. My goal is that, through employing theory(s), I give consistent and manifold accounts of the partially related social-spatial occurrences and explanations for the inconsistencies observed from the social-spatial phenomenon.

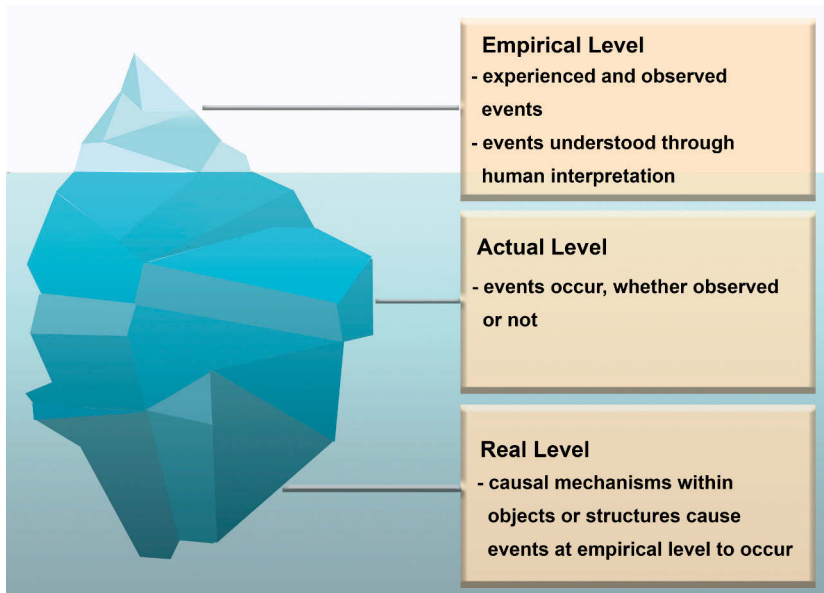
To answer my research question, the first barrier is to clarify the epidemic constituents and assumptions underlying the traveling theories of space. Straightaway, the sociology of knowledge (SK) approach has offered methods for teasing out epistemic entities and inherent inferential relations. It also leads to examine social (institutional and communicative) rules and resources regulating knowledge production, circulation and legitimation, and epistemic positionality subjects. Thus, I will draw on the sociology of knowledge toolkit to deconstruct and elucidate the given relational conceptualizations of space with relation to their underlying epistemic assumptions and attributed causal mechanisms. The meta-philosophical framework in Critical Realism (CR) is insightful in overcoming the second barrier: to locate the competing relational-causal claims on different analytical levels and link them effectively to my empirical analyses. The Critical realism ontology offers strong arguments on the nature of social reality and social scientific knowledge. It introduces abduction and retrodution as warranted inferencing modalities and a mechanism-based and effect-driven notion of causality. They are necessary for evaluating the strength and validity of the selected theoretical thesis in interpreting the targeted empirical phenomenon. I will explain why I engage critical realism as the metaphysical base, and how retrodution, generative mechanism, and effect-driven causality fulfill the goal of this research.

1.3.3 Critical realism and its metaphysical assumptions

Critical realism is constructed to solve the epistemic fallacy, which is at issue in inducing cross-cultural theoretical-empirical inconsistencies. The '*epistemic fallacy*' refers to the problematic reduction of ontology-statements about being (i.e., what exists) to epistemology, or the limitation of reducing "reality" to what can be empirically known or experienced (Archer et al. 1998, 27). To be more specific, in light of CR, both constructivist and positivist research approaches are victims of this fallacy. Despite the ostensibly oppositional truth conditions these two approaches entail, both have reduced reality to empirically accessible human knowledge: the former reduces reality to experiment results. At the same time, the latter diminishes it to the meaning entailed in commonsensical discourses. In other words, CR is against both the naive realist view prevalent in natural sciences and against the soft epistemological-interpretive view of reality, insisting that the human consciousness constructs meanings but has no direct access to reality. It also criticizes social scientists following empiricist epistemology. It is when one researcher (the knowing subject) perceives oneself to be "an impartial observer and the other to be subject to the observer's gaze" (Savage 2000, 328). In this circumstance, the

real mechanisms and dynamics of the phenomenon are dictated by and reduced to the knowing subject's epistemic frame. In sum, CR is against reducing reality to a matter of different perspectives dictated by corresponding epistemic frames: presupposed conceptual categories and causal mechanisms.

Figure 3 An Iceberg Metaphor for CR ontology. (Adapted from Amber J. Fletcher (2016), Applying critical realism in qualitative research: methodology meets method, International Journal of Social Research Methodology, 20:2, 181-194, fig. 1)



Then, what is CR's account of social reality? The account Bhaskar proposes is to categorically distinguish between the "transitive" and the "intransitive objects of science" (1978 [1975], 36–38), between our categories, theories, and conceptual frameworks on the one hand, and the real entities, mechanisms, structures, and relations that make up the natural and the social world on the other. Hence, CR treats (social) reality as theory-laden but not theory-determined. For Bhaskar, the reality is both 'intransitive' (exists independently of humans) and 'stratified,' i.e., hierarchically ordered – known as the domains of the 'real,' the 'actual,' and the 'empirical' (fig.3). Such an account of reality is commonly illustrated in the form of an iceberg. The real domain contains mechanisms and structures with enduring properties. The actual domain consists of events that occur, although they are not necessarily observable to the perceiving subjects. The empirical domain contains those events that are observed, experienced, or understood by human interpre-

tations. The stratified and differentiated understanding of reality in CR provides an ontology that accommodates plural epistemologies for researching the targeted social subject.

According to Bhaskar (2005 [1979]), such a stratified ontology commits to the particular nature of the social world in terms of:

1. Social structures, unlike natural structures, do not exist independently of the activities they govern.
2. Social structures, unlike natural structures, do not exist independently of the agents' conceptions of what they are doing in their activity.
3. Social structures, unlike natural structures, may be only relatively enduring (so that the tendencies they are grounded in may not be universal in the sense of space-time invariant)⁷ (ibid., 42).

Here, the first claim about the nature of the social structure is close to that in the phenomenological-constructivism approach, associating social structure closely with experiencing subjects' perceptions and practices. The second and the third claims, plus Bhaskar's claim about intransitive objects, demonstrate their core differences: the social structure is deemed a result, not a cause of social practices, being both spaced and timed. CR regards social beings not reducible to their symbolic dimension (meaning), and meanings as an effect resulting from social activities. It also suggests that all theorizations of reality can be treated as fallible, but some knowledge is closer to capturing reality than others. The following example from philosopher Ian Hacking can well-illustrate such a relationship between concept (theory), social structure and observable empirical events:

I do not necessarily mean that *hyperactive children*, as individuals, on their own, become aware of how they are classified and thus react to the classification. Of course, they may, but the interaction occurs in the larger matrix of institutions and practices surrounding this classification. There was a time when children described as hyperactive were placed in 'stimuli-free' classrooms: classrooms in which stimuli were minimized so that children would have no occasion for excess

7 The meaning of space and time is not clearly defined in Bhaskar's theory. At times, Bhaskar's formulation comes close to a Leibnizian idealist relational concept of spacetime, describing it as "set of relations" and a "potentially emergent property either of new relata of an existing system of material things, or relata of a new emergent system of material things" (Bhaskar 2008 [1993], 68). The relative space-time locations in materiality, or in his own words, the "site or space-time duration of certain geo-historically specific and internally related ensembles of structures, powers and tendencies," are also drawn upon as spacetime (Bhaskar 2005 [1979], 193). The main difference that I identify is that, for Bhaskar, it is the new relations (*sui generis*) induce possible causal powers rather than the pre-existing law-like social structure.

activity. Desks were far apart. The walls had no decoration. The windows were curtained. The teacher wore a plain black dress with no ornaments. The walls were designed for minimum noise reflection. The classification hyperactive did not interact with the children simply because individual children had heard the word and changed accordingly. It interacted with those who were so described in institutions and practices that were predicated upon classifying children that way! (Hacking 1999, 103)

In this example, Hacking has demonstrated, when one departs from the norm-related event of 'hyperactive children,' can one reveal a few stratified layers of social realities and how they interact. Children's *hyperactive practices* towards stimuli are observable in the empirical domain. The generalization of such observations has resulted in a *scientific notion* of 'hyperactive children.' The *scientific notion* is deployed as a *social structure* and manifested in the laying out the classroom and the dressing codes for the relevant teachers. It becomes one layer of social reality, subsists even in the absence of any noticeably 'hyperactive practices.' The effects of this social structure are timed and spaced. It does not apply to arranging 'normal' classrooms. It will be replaced when Children continue reacting hyperactive. It is also evident that children's *hyperactive properties* are neither fully triggered nor manifested in such a school environment when the 'hyperactive children' *social structure* is at play. Thus, it has also illustrated another aspect of CR social ontology that social entities' existence is partly independent of the conceptions we have of them.

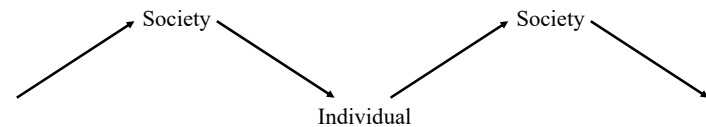
According to Mingers, CR epistemology entails four characteristics, which include: "1) social systems are inherently interactive and open; 2) the possibilities of measurement are minimal since intrinsically the phenomena are meaningful, and meanings cannot properly be measured and compared, only understood and described; 3) social science is itself a social practice and is, therefore, inherently self-referential; 4) social theories must be self-consistent in not contradicting their own premises since they are part of their own domain" (Mingers 2014, 2.3.3).

These four insights are crucial for re-envisioning how context-sensitive research could be done. The first point suggests that the constituents and their relations in social reality are conceived as constantly interacting, evolving, and knowledge-laden, opposing the controllable, close, and passive lab environment. Social knowledge (generalized from describing and explaining certain social phenomena) is the transitive objects evolving from the social reality, which can affect other constituents in the social reality and perhaps change them. This point resonates with Giddens's concern about the 'double hermeneutics.' Giddens argues that in comparison to nature scientific domains, where conceptualization represents a "single hermeneutic," social science conceptualization involves a "double hermeneutic": the social conceptual schema "enter and grasp the frames of meaning involved in the production of social life by lay actors, and reconstitute these

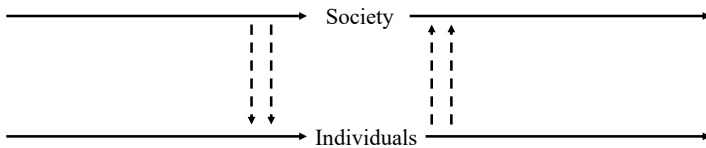
within the new frames of meaning involved in technical, conceptual schemes” (Giddens 2001, 86). The second point has addressed the distinct attributes of social meaning, which can hardly be measured by a unitary scalar. The third and fourth points suggest that social scientific theories and concepts are deemed in themselves products of social practice. The timed and spaced epistemic structures from one’s domain condition their production.

Regarding the origin of knowledge, CR shares with SK tradition (see, e.g., Berger and Luckmann; Schutz), in that they both acknowledge commonsensical knowledge to have a social origin. They are socially distributed and legitimated. Even more so, it echoes with the Science and Technology Studies (STS) tradition on acknowledging the mutual influence between scientific knowledge and their social rootedness (see Cetina 2009 [1999]). They both regard natural scientific knowledge production to be a process of selection, translation, and construction of information through ‘epistemic machinery’ validated in the epistemic culture. They also both emphasize the plurality of epistemic frames, which are socially embedded and constructed. Distinctively, CR epistemology holds that entities in social reality (e.g., observable social practice) interact with our conceptual knowledge of them and other intransitive social structures, which are not necessarily determined by them. Social structure and practices do not relate dialectically because they “do not constitute two moments of the same process” (Bhaskar 2005 [1979], 36). The below-illustrated model from Bhaskar showcases such a core difference.

Figure 4 Bhaskar’s illustration on the distinction between constructivism and the transformational models of Society/Person Connection. (Bhaskar, Roy. The possibility of naturalism: A philosophical critique of the contemporary human sciences. Routledge, 2014., 35-40)



Model III: The ‘Dialectical’ conception ‘Illicit Identification’



Model IV: The Transformational Model of the Society/Person Connection

Furthermore, CR epistemology does not argue that the theories, models, and classifications we use to study social reality are ‘objectively’ wrong for any targeted research subjects. Instead, it argues, the way they reduce the real to the conceptual may accommodate only the manifested discursive order of reality. It is then unlikely to reveal the intransitive real and the underlying generative mechanisms that induce events to occur. For this reason, according to Bhaskar, one must “avoid any commitment to the content of specific theories and recognize the conditional nature of all its results” (ibid., 5). He also proposed, presumed causal laws must be analyzed as “tendencies,” and initial theories must be treated only as “initial theories” (ibid., 50).

It occurs to me that, for conducting context-sensitive research, one shall 1) capture the plural, interacting generative mechanism underlying the locally observable empirical events; 2) engage with interpretive research methods to excavate subjective meanings; 3) avoiding reproducing the linear causality prescribed in given theories; 4) engage with plural interpretive frameworks systematically by conforming to the ontological, methodological link.

Thinking of space: epistemic frames and the social context of knowing

It is a commonplace that spatial concepts (e.g., place, network, territory, space) developed in the social science domain in the European context are directly or indirectly built from the absolute, relative, and relational conceptualizations of space embedded in modern philosophy-physics. It is to say that the epistemic entities and rules from particular modern science-philosophy traditions are employed in reconstructing the concept of (social) space when it is reasserted in the social domain. In this process, some epistemic forms are refashioned to embrace a wide variety of social entities. Following CR, I take several methodologically sound and widely influential relational conceptualizations of space as initial theories. I dissect and elucidate their inherent epistemic frame and rules in Chapter 2. By *epistemic frame*, I mean, the necessary knowledge elements, structures, and strategies that guide knowledge production and scientific inquiry, as a combination of *epistemic forms* (abstract forms of knowledge or schemata appropriate to the discipline) and *epistemic games* (rules for the manipulation of these forms) (Collins and Ferguson 1993). In the scientific domain, non-convergent epistemic schemes are separated by the well-discussed concepts of ‘knowing that’ and ‘knowing how’ – the declarative and procedural knowledge, or what Wittgenstein calls ‘bedrock’ and ‘hinge’ propositions:

...the questions that we raise, and our doubts depend upon the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn. That is to say, it belongs to the logic of our scientific investigations that certain things are indeed not doubted... But it isn't that the situation is like this: We just cannot investigate everything, and for that reason, we are forced to rest content with assumptions. If I want the door to turn, the hinges must stay put. (Wittgenstein 1969, 341–43)

Moreover, I stress the role of manipulating rules like communicative rules in shaping the knowledge produced. I thereby look at the “(argumentative) legitimating elements (for example, scientific, moralistic, and voluntarist patterns of legitimization), subject positions, and discourse generated model practices as components of phenomenal structures” (Keller 2005, 57).

Conceptual thinking of space is at once epistemic, personal, and social. I do not want to endorse the argument that, *empirically*, the way social actors *think and sense* are pre-structured by an existing palette of epistemic schemes. This is partly because the contextual epistemic environment in which social actors are situated is increasingly dynamic and condensed than linear, static, and highly institutionalized. I find van Dijk's concept of ‘mental context’ cogent in identifying the *epistemic frames actors actively employed* in a particular concrete context. Van Dijk argues that social situations do not directly condition knowledge. Neither can a researcher tell a priori-ly which aspects of the situation are relevant in explaining the produced knowledge-discourse. He proposes to address the interface at the cognitive level, the “mental constructs of relevant aspects of social situations,” to reveal the way participants understand, select and represent the social situation that constitutes their actual knowledge structures (van Dijk 2006, 165). Besides, the *emergent properties* arise on the interface of one's interaction with the contextual factors, shape how people feel, think and act. Both only become observable when they cause *consequences* on discourse and practice.

The scope of epistemic frames in the theoretical knowledge of space, correspond more closely with that of the scientific paradigm (cf. Kuhn 2012 [1962]). The term paradigm refers also to the set of presuppositions about the nature of beings and what is knowable and legitimating modalities of generalization and inference (deduction, induction, abduction, and re-troduction), the criteria for true knowledge (consistency, correspondence). Many methodologists have addressed that most scientific questions have different answers depending on which theoretical paradigm is presupposed. Nevertheless, I opt for the epistemic frame as the analytical tool for this research. It addresses the constituents of epistemic schemata more lucidly and connotes less inexorable self-containment and thorough coherency. The epistemic frames can be appropriated, always subject to change in cross-disciplinary or trans-contextual knowledge transfer. It can

also be unsystematic, like the scheme social actors use to understand events in everyday life. It reflects the context-specific and domain-specific practices. For example, when traveling conceptualizations of space are learned and deployed to explain empirical phenomena situated in the Chinese context, likely, the original epistemic frame does not stay as epistemically and hermetically sealed. From the perspective of a non-Western social scientist, focusing on the epistemic frame enables me to address the creative interaction between 'here' and 'there,' an aspect that is less addressed, or black-boxed, by the sociology of knowledge approach.

The abduction, retroduction, and generative causality: research strategy under Critical Realism

As I have indicated earlier, meta social theoretical paradigms originating from Chinese discursive field – in line with traditional Chinese epistemic assumptions – do not yet exist. Theoretical knowledge developed through in-depth, systematic, and grounded empirical approaches is also rare. The traveling conceptualization of social space originating in the West is often applied in the Chinese context in under-reflective, deductive, or *de facto* abductive manners. As I will show in chapter four, studies often reproduce the presupposed theoretical claims without thoroughly examining the correspondence between the concepts and the observable empirical data they intend to represent. On the other hand, many scholars have admitted an epistemic distance between the West and China on core ideas such as truth, liberty, equality (Peng and Nisbett 1999). Regarding the epistemic rules for truth, Smith (1980) claims that the Chinese focus on what is appropriate in the situation rather than what is objectively true. Julien (2000) asserts that the Chinese language is known to be indirect and context-dependent. Based on these insights, I am alerted that relating the traveling theoretical frames to the particular empirical phenomenon is challenging. Also, in doing so, the risk of reproducing the theoretical hypothesis's prediction is high.

As indicated, following the CR principles, the social reality is deemed an open system. People's experience of the real world is deemed theory-laden, and that social scientific practices are deemed self-referential in nature. To me, conducting context-sensitive analyses on situated social-spatial phenomenon shall involve sampling transitive data sources in the empirical domain and revealing the intransitive knowledge at the actual and real ontological domains of reality. It is thereby necessary to excavate the prototypical modes of contextual thinking and treat them as potential initial theories. In Chapter three, I put the discourses referring to the conceptual constituents of space in traditional Chinese normative thoughts under scrutiny, as they yield potentially to the prototypical epistemic forms and rules deployed by Chinese scholars, administrators, and subjects in the artworld, in constituting the social reality. Then, in chapter four, I attend to the main 'traveling

spatial conceptualizations' being employed by urban planners and geographers in studying spatial phenomena in contemporary urban China. These materials help to triangulate the epistemic frames at work in studying and constituting the urban spatial phenomenon in China. My focus lies not in discussing the empirical content of these pieces of knowledge *per se* but uncovering the underlying epistemic and social structures that allow them to be learned and re-contextualized, i.e., selected, anchored, adapted, and transformed.

In this research, following the principle of the ontological-methodological link under CR, I recourse to *retroduction* as the guiding methodological strategy to analyze the data mentioned above. The term 'retroduction' is often used interchangeably with 'abduction.' Both processes allow researchers to engage with theories on creative and imaginative bases than fully committing to linear inferring orders. Suppose the direction of inferential movement in 'deduction' moves from hypothetical premises to empirics and finally validation. To 'induce' is to move from empirical observables to theoretical hypotheses and examine if the hypothesized mechanisms correspond with further observable data. Retroduction is then a strategy designed to avoid naive reproduction of predications and allow the act of moving from something to arrive at something else. As a methodological strategy, it is more than just methods.

For those who differentiate abduction from retroduction, the former begins with theoretical frameworks but does not present logical rigor like deduction, nor does it forge empirical generalization like induction (Collins 1984). In the book *Explaining Society* (2005 [1997]), Danermark et al. have clarified, the initial objects of inquiry for abduction are theories, i.e., rules describing a general pattern, and differing from deduction in that the conclusion is not intended to be logically given in the premise. Through empirical observations, one does through abduction to re-describe or re-contextualize the theory, i.e., using a set of concepts from an existing theory to describe, interpret, and explain something in a new context, yet remain skeptical towards the predicated causalities between the concepts. On the other hand, retroduction begins with unexpected empirical observations, then moves to the possible cause to arrive at an explanatory hypothesis. The notion of the unexpected, however, is relative to the existing theoretical claims that one plans to use as a reference. The core of retroduction, according to Danermark et al., is transcendental argumentation, which seeks to clarify "the basic prerequisites or conditions," i.e., the circumstances without which an event cannot occur, in social relationships, people's actions, reasoning, and knowledge (ibid., 96). The relationship between the retroduction and induction modalities lies in that induction does not rely on existing theory as a conceptual reference. In contrast, retroduction relies on a conceptualization as a reference to construct and test its explanations.

Table 1 Deduction, Induction and Abduction – the informal structures of inference (Adapted from Danermark, Berth, Mats Ekström, and Karlsson Jan Ch. 2005 [1997]. Explaining Society: Critical Realism in the Social Sciences. Critical realism: interventions. London, New York: Routledge, 90, table 3)

Deduction	Induction	Abduction
Rule: All beans from this sack are white	Case: These beans are from this sack	Rule: All beans from this sack are white
Case: These beans are from this sack	Result: These beans are white	Result: These beans are white
Result: These beans are white	Rule: All beans from this sack are white	Case: These beans are from this sack

Furthermore, in CR, a distinction is drawn between *real* and *actual* causation. Real causation concerns the powers and tendencies that complex systems have to *affect* the world, regardless of whether they are actually realized on any particular occasion or observed by anyone. The mechanisms do not necessarily manifest as the experience or as the entire visible aspects of events. Therefore, the empirical regularities are deemed pieces in the jigsaw puzzle leading to uncovering generative mechanisms, than arbiters *per se*. Both the abduction and the retroduction strategy reinforce CR's principle of the ontology-methodology link. They enable the researcher to perceive social reality as a stratified and open system, where the experiences, events, and generative mechanisms are mutually interactive but not reducible to one another.

Both inferential strategies support researchers to employ theory as tendencies and dismiss absolute logical rigor. They enable the researchers to leap from manifested phenomena to generative mechanisms. This leap is endorsed by the CR ontology, as mechanisms, not the empirical regularities, is the base of the social scientific research. Thus, I do not differentiate the two strategies and deem both particularly suited for uncovering plural deep structures from the empirics in the context of compressed modernity. *If* the hypothesized theoretical claim (in form of causal agent) is valid, it will help code the tendencies observed in the empirical domain (Alvesson and Sköldberg 2000).

Finally, how can one make sure that one mechanism (presumed in one conceptualization of space) is more suitable to explain the targeted phenomenon than the others? One solution lies in Bhaskar's definition of *generative causality* – as contingently effective, ontologically deep, and generative mechanisms or powers. I

repeat, here again, CR holds that reality is stratified, events occur (despite their observability) on the actual domain, and the real is the domain of mechanisms that generate the events through their interactions. It contrasts with positivism or empiricism approaches, where causation is defined based on regular successions of events or a correlational assessment of event regularities. The CR causality is, “contra Hume, that causal relations are relations of natural or metaphysical necessity, rather than of contingent sequences” (Groff 2007, 2). Thus, one may take any hypothesized causal agents to code the tendencies of events and compare them with what is observed in an open world, to determine their effectivity.

Concretely, Bhaskar has proposed a set of methods to identify and validate the structure that generates the events, abbreviated as DREIC. It includes procedures of description, retroduction, elimination, identification, and correction (DREIC):

Description of some patterns of events or phenomenon; *Retroduction* is applied – putative causal mechanism(s) are hypothesized which, if they were real, would account for the phenomenon or pattern in question; *Elimination* of those which do not apply in this case; The causally efficacious generative mechanism or structure is *Identified*; *iterative Correction* are made to existing theories in light of this identification. (Bhaskar 2016, 2.4)

In line with CR principles, manifold re-descriptions and interpretations of a situated social-spatial phenomenon can be made. If any epistemic frame applied is not causally effective, the outcome of this examination would still contribute to the elimination or change of the chosen hypothesized causal agent. Nevertheless, following retroduction to a full account – examine the explanatory powers and liabilities of various epistemic frames possibly confer to the empirical phenomenon – may prove to be extremely complex, if even possible. One may also encounter transcending levels of explanations in this process.

CR and its ontology and epistemological principles are in line with seeing theorizations in social science as a product of social practice, which is inherently self-referential to the pre-existent epistemic frames. Thus, as previously stated, I start with deconstructing the variegated conceptualizations of space and revealing their underlying epistemic frames. Conceptual deconstruction and elucidation constitute a necessary step for pre-selecting epistemically relevant ‘initial theories.’ These operations can be found in the first section of this book, from chapter two to four. The spatial conceptualizations that commit to a relational epistemology, addressing different analytical levels are taken as initial theories for empirical examinations in the second part of this book, in chapter five. By following DREIC procedures, the shackles from disciplinary boundaries and conceptual incommensurability become irrelevant. The initial theories are then eliminated or reworked according to empirical tendencies found in Beijing’s artworld

1.4 Research map and chapter contours

I draw the constitutive parts of this book in the chart below. The texts on the side will illuminate the inferential relations between these parts following CR principles.

Section One: Thinking of space relationally: epistemic frames and local context of knowing and doing	
Chapter 2	How to differentiate the traveling theories of space? i.e., What epistemic forms, rules, and causality-mechanisms are postulated in the conceptualizations?
Chapter 3	How are the corresponding epistemic forms, causal agents, inferential relations and level of analysis conceived in traditional Chinese thoughts? What epistemic forms and causal agents about space constitution can be derived from traditional Chinese thought? What unique features regarding thinking of space relationally can be found?
Chapter 4	What are the features of the spatial turn in the Chinese discursive field? What epistemic, communicative and normative rules are at play in the Chinese discursive field, shaping the spatial knowledge produced?
Section Two: The retrodictive empirical research on the spatial constitution of Beijing's artworld	
Chapter 5	To apply three initial theories to case, code/redescribe and interpret the empirical phenomenon in the artworld; identify the demi-regularities from the empirical reality. To examine how the prescribed causal agents correspond to the demi-regular tendencies found in the artworld. To summarize empirical findings and evaluate causal efficacy of the particular theory of selection and propose modified/complementary causes.
Conclusion	The role of critical realism in informing the context-sensitive studies of complex social-spatial phenomenon in contemporary Chinese urban context. Reflections on 'thinking of space relationally' in the local context, with regard to spatial phenomena in China under compressed modernity.

