NATURE-WATCHING AND AFFECTIVE ENCOUNTERS WITH MORE-THAN-HUMAN BEINGS IN POST-REFORM BEIJING



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Abstract

Cities as purely social spaces have long held sway over dominant understandings of cities. This thesis sets out to make visible the many ways that more-than-human beings permeate urban life to unsettle the deeply ingrained assumption of "anti-nature" cities. To do so, It scrutinises a variety of visual practices to engage with an array of living beings in Beijing that I refer to as "nature-watching" (*ziran guancha* 自然观察). I argue that nature-watching practices create a condition of affective and intense encounters with more-than-beings, and foster the flourishing of cross-species relatedness in the city. By drawing on a mixture of ethnographic methods including participant observation, visual methods and crucially my participant learning experience, it seeks to unveil how Beijing nature-watchers are enabled to learn to sense, know, open up to, care for and build civic solidarity with more-than-human beings in new ways. This thesis suggests a research agenda to conceive cities anew as more-than-human spaces, and to call for attention to the caring and relational potentials of visual practices.

Keywords: More-than-human ethnography. Urban nature. Affect. Cross-species relatedness.

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When I first went bird-watching in the Beijing Botanical Garden in June 2018, I did not expect that this was the beginning of an ethnographic journey with more-than-human beings in Beijing. My first debt of gratitude is to all the encounters—humans and more-than-humans alike—that have kept me going along this journey. I thank them for the insights that have been granted to me in this endeavour.

I am indebted to all nature-watchers who I have the fortune to meet and work with, for their openness, trust, and generosity. By kindly taking me into their world, they showed me another world in Beijing that I have never imagined to exist. They are valuable sources of inspiration that have compelled me to think about what it means to live in conviviality with more-than-human beings in everyday urban living. The deep curiosity and care with which they engage with more-than-human beings in Beijing is infectious, and I wish to express my gratitude to them for teaching me the same sense of wonder and attentive care. I dedicate this thesis to them.

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Notes on Chinese terms and translation

My policy in this thesis is to avoid excessive use of romanised terms, which may put a burden on readers unfamiliar with Chinese. Each indigenous Chinese word is first presented in English translation followed by *pinyin* romanisation, which translates the Chinese characters into the Mandarin pronunciation. Chinese characters and *pinyin* representation are put into the bracket in the following style: English translation (*pinyin* signals, Chinese characters). Exceptions are terms that cannot find one-to-one translation in English, such as *suzhi* and *huayou*; they are left untranslated in the text.

This thesis contains specialised terms of animals and plants. When referring to a term of living being, I first present its common name in English, and then introduce its binomial name and at lase give its official name in Chinese. Again, binomial name and Chinese name are bracketed in the following style: Beijing swift (*Apus apus pekinensis*，北京雨燕). Where a species does not have a common name in English, I present its binomial name first and then introduce its name in Chinese.

Unless otherwise indicated, all translations from Chinese are my own.

List of Abbreviations

BWRRC: Beijing Wildlife Rescue and Rehabilitation Centre

CBS: China Bird-watching Society

CCTV: China Central Television

CNR: China National Radio

CVH: Chinese Virtual Herbarium

EE: Environment Education

FOC: Flora of China

FRPS: Flora Republicae Popularis Sinicae (*zhongguo zhiwuzhi* 中国植物志)

NE: Nature Education

WBS: Wild Bird Society

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Introduction

1.1. A swift capital

There is a small city called Humaitá in Brazil—a country that champions the world in terms of biodiversity and not just soccer. Etymologically speaking, the word is derived from the indigenous Tupi language *mbaitá* for a small parrot. Locally called *maitaca* or *maritaca*, the lime-green, white-eyed parakeet (*Aratinga leucophthalma*) is a common sight in the neighbourhood, flying across the area at the beginning and the end of the day; hence the name Humaitá: the place of the *maitacas* (Martin 2013).

Today Beijing is the capital of the People's Republic of China. Although its history[1] has been punctuated with turmoil and magnificence, it has been the capital city of about 800 years of six ancient dynasties, including the empires of the Yuan (1271-1368), Ming (1368-1644), and Qing (1644-1911). Beijing has been given many names, one of which is *yanjing* (燕京). The two-character word means "the capital of Yan". Formerly called the city of Ji, Beijing became later known as *yandu* (燕都), or simply *yan* (燕), during the Warring States period (475–256 BC) of the Zhou dynasty (1046–256 BC) when the city was made the capital of the Kingdom of Yan (*yanguo* 燕国).

In the earliest surviving Chinese dictionary *Shuowen Jiezi* (说文解字) complied around 100CE by Xu Shen 许慎 (c. 58-c. 148 CE), one finds that the Chinese character *yan* (燕) referred to "black bird" or "dark bird" (*xuanniao* 玄鸟也). The mentioning of *xuanniao* can be found in a poem with the same title in the *Eulogy of Shang* of the *Book of Poems* (*shijing-shangsong* 诗经-商颂): "Mandated by Heaven the dark bird/ Alighted to bear Shang" (天命玄鸟，降而生商) (translation in Klein 2018: 92). Despite the consensus of the bird totemism of the tribe of Shang and the Shang civilisation, the identity of the "dark bird" has been debated (e.g., Zhi 1999). One theory attributes the "dark bird" to swallow (*yanzi* 燕子), and in particular it might refer to the Beijing swift (*Apus Apus pekinensis*) (北京雨燕) (Figure 1.1), the subspecies of Common swift (*Apus apus*) (普通雨燕). Some believe that the Beijing swift has been interweaving with the fabric of the transforming Beijing landscape for thousands of years, as the city has risen and fallen. Loyal to their nesting places in Beijing, these birds religiously return to where they were born in Beijing for breeding from spring to summer every year.

[1] The earliest human settlement of Peking men (*Homo erectus pekinensis*) in the present city of Beijing dated back to 770,000 years ago.



Figure 1.1. A Beijing swift in flight
This photo was taken by a volunteer of the Swift Monitoring Project Zhang Xiaolian, at the Summer Palace in Beijing. Used with permission.

We may find a fascinating association between Humaitá vis-à-vis Beijing: the naming of both cities renders the view that "people are the true city" (Farquhar and Zhang 2012: 100) somewhat insufficient. Indeed, bird-watchers know it well. Zhong Jia, the current leader of China Bird-watching Association and an experienced bird-watcher herself, re-enchants the city of Beijing in this way:

> From the perspective of bird-watching, Beijing, the capital city, is surprisingly a pre-eminent place. There has never been a shortage of cities embraced by mountains and rivers. However, Beijing, where mountains multiply and streams double back (*shanchong shuifu* 山重水复), is abundant with a wide variety of landscapes…As topographic diversity corresponds to diversity in species, Beijing boasts of records of more than 400[2] species of birds, making it a truly

[2] According to the latest "Beijing Terrestrial Wildlife List—Bird" published by the Beijing Municipal Bureau of Landscape and Forestry (BMBLF) in 2021, a total of 503 species of birds in 22 orders, 75 families has been recorded in Beijing, accounting for more than 1/3 of the total bird species in China.

unparallel place among all North cities in China… (Zhong 2008).

It is the story of multispecies entanglement of Beijing urban nature-watchers and more-than-human beings[3] that I want to tell in this thesis.

1.2. The key argument

This thesis scrutinises various ways of visually engaging with an array of living beings in urban spaces. I refer to these activities with the umbrella term "nature-watching" (*ziran guancha* 自然观察). Bird-watchers (观鸟人) who enjoy bird-watching and Friends of Flowers (*hauyou* 花友) who are passionate about observing local floras are two prominent groups of nature-watchers.

My main argument is that *ziran guancha* has increasingly emerged as a performative and affective visual practice that leads to the flourishing of cross-species relatedness in the city. I wish to show that Beijing urbanites, through participation in nature-watching practices, are enabled to learn to recognise and open up to (chapter 3A&B) the presences of more-than-human beings in the city with new skilled vision, to be-with plants in day-to-day lives through repetitive observations of them in urban parks so as to produce in-person knowledge about them (chapter 4A&B), to care for urban birds by getting close to but also keep a reasonable distance from them (chapter 5B), and to form a public, civic collective (chapter 6A&B) with more-than-human beings such as Beijing swifts to safeguard their right to the city.

This thesis aims to problematise the taken-for-granted assumption of an 'anti-nature' city devoid of more-than-human beings—a corollary of the persistence of "Nature Lost" thesis (Jerolmack 2013). Rather, it showcases that the city is not at all about the non-space of supermodernity (Auge 1995), but

[3] I adopt the term "more-than-human" to specifically refer to other-than-human organisms throughout this thesis. Some scholars cited below prefer to use the label "nonhuman", possibly following a tradition within ANT, to encompass both other-than-human organisms and inanimate objects. For a reflection on the problematic implications of "nonhuman" see Jöns (2006).

it can be a vigorous space that affords a rich assemblage of different lifeworlds of humans and more-than-humans. As such, one of my core interests in this thesis is to understand what capacities urbanites' bodies may have for relations with more-than-human bodies in Beijing.

It concerns three interrelated concepts, namely, vision and visuality, affective encounters between humans and more-than-humans, as well as cross-species relatedness.

First, the term "nature-watching" underscores a wide-ranging of ways of visually engaging with more-than-human beings — spotting species occurrence, repetitive observations, identifying, photographing, drawing—grounded in trained looking and collectively cultivated seeing. I query the 'natural' as given, as it usually arises when one takes a perspectival point of view on the 'other'. Experiencing and living in the city as nature-watching lovers make the idea of the 'natural' as a given obsolete.

In this thesis, I will employ a practical ontology to study what is termed the 'natural world' (*ziran shijie* 自然世界) in the city by my interlocutors. However, my ontological approach to articulating the more-than-human city differs from studies of multispecies relational ontologies epitomised by accounts of Amerindian ontological perspectivism championed by, e.g., Viverios de Castro. While depictions of multispecies ontologies in other cultural contexts critically debunk human exceptionalism, as does Tsing (2015: 292), most scholars in this tradition assume the human culture and cosmologies as the underlying domain uniting nonhumans, highlighting how beings may perceive themselves as humans. Tsing's own research on mushrooms (2015) that centres on "world-making projects" in a comparative way turns away from ontological perspectivism towards more practical activities as opposed to cosmologies. By practical activities, she put forward the radical claim that other creatures can make worlds in different rhythms and temporal patterns. Humans have no special status; rather, their world-making has always overlapped with multispecies world-making.

Similar to Tsing, I will build on Annemarie Mol's orientation of "ontology-in-practice" (Mol 2002: 150) in which neither humans nor more-than-humans are treated as pre-existent. Rather, I pay attention

to the unfolding, complex relations whereby the humans and nonhumans involved are enacted through multiple relational practices of nature-watching. From the perspective of this practical ontology, it makes little sense to perpetuate the 'social' and the 'natural' as distinct categories.

In his innovative research on geographies of nature, Hinchliffe reminds us that "we clearly do not need general statements on the state of nature…The point… is to suggest and emphasize the practical point that spaces for nature can exist" (2007: 74). To him, spaces for nature are multiple because they are formed through multiple practices and from assemblages, and they are never pre-given. Similarly, rather than contemplating what urban nature really is conceptually, what matters to me is to flesh out the ontological politics that enacts urban nature anew. My theoretical interest in ontology allows me to focus on all the works of making more-than-humans visible, present and matter in urban spaces. Put differently, this thesis is concerned with the doing of urban nature, of its co-fabrication that involves all manners of relational work by humans and more-than-human beings.

What struck me during my fieldwork is Beijing urbanites' increasing recognition and celebration of the lively presence of more-than-human beings in the city — the "green soul of the concrete jungle" (McDonald et al. 2018). More and more urbanites[4] are engaging in spotting and recording living beings in the city. Nature education programmes have been flourishing in which learners are taught to observe more-than-human beings even at the heart of the city—from the tiny garden of one's residential community

Box.1.1. The implication of "more-than-human beings"

I employ the term "more-than-human beings" to designate an array of living beings encountered by nature-watchers throughout this thesis. I acknowledge that this term may appear problematic for the assumption that rigidly sets humans apart from other living beings. In so doing, I may be at risk of reinforcing the domination of humans. The privileging of human beings as above the natural world and distinct from other living beings is arguably associated with a specific Western view of the world, a humancentric view that may be unintelligible to certain groups of people. As anthropologists working with ethnographies of indigenous societies (e.g., Viverios de Castro 1998; Willersley 2007a; 2007b; Nadasdy 2007; Descola 2013) have richly illustrated, for many people, the social life is "completely saturated with personhood" (Viverios de Castro 2012: 31) of all beings and as such no real discrimination can be established between humans and nonhumans. That said, I prefer the term "more-than-human beings" for two reasons.

First, I need this term to enable a radical rethinking of human exceptionalism when thinking about the city. The idea of "more-than-human beings" in a more-than-human city sensitises us to the fact that urban life and spaces are replete with animate, sentient beings beyond humans. I am inspired by Kohn's agenda of an "anthropology beyond human" in which "that which lies 'beyond' human" (2013: 221) can tell us something. For Kohn, it is about understanding how animals "sustain[s] us and make[s] us the beings we are and those we might become" (ibid). For me, the term affords critical reimagination of the city as a living landscape for considering more-than-human assemblages of entangled ways of life.

Second, I use this term to espouse the anthropological commitment to taking seriously what people think. Although my interlocutors generally acknowledge the diversity of living beings with intelligent and emotional capacity as rightful co-inhabitants of the city, they nevertheless maintain the ontological difference between humans and nonhuman living beings. Their understandings of animals and plants are influenced by biology, ornithology, and botany.

Moreover, my usage of "more-than-human beings" is intended to differentiate from "non-human beings". Some scholars cited prefer to use the label "nonhuman", following a tradition within ANT, to evoke a flattening-out ontology whereby other-than-human organisms and inanimate objects (artefacts etc) are lumped together as nonhuman actants. I follow Kohn to insist on the distinction between objects and non-human living things, for more-than-human beings, unlike objects, are "selves, that is, being with a point of view" (2013: 132).

[4] For example, according to a nationwide survey of bird-watchers (a group of nature-watchers par excellence), the population of bird-watchers has been estimated to grow from around 600 to 20,000 in 2010, see Ma et al. (2013).

to sprawling public urban parks. Nature-watchers spoke of and related to animals and plants, but through their nature-watching practices, they simultaneously transformed the city into a new terrain which urbanites and a multiplicity of living beings share.

Second, this thesis is mostly about the story of affective cross-species encounters in everyday urban living in post-reform Beijing. Affect is a key concept for me to investigate multispecies encounters in the context of nature-watching. As Clough (2007: 3) puts it, starting from affect allows us "to grasp the changes that constitute the social and to explore them as changes in ourselves, circulating through our bodies, our subjectivities, yet irreducible to the individual, the personal and the psychological". A central argument I make in this thesis is that cross-species relationality names a capacity integral to what Spinoza terms the "body's power". Nature-watchers' relational capacity, namely the capacity to enter into cross-species relationships is enhanced by affective catalysts that circulate cross-species encounters through nature-watching practices. In other words, it is a matter of affect and being affected to strengthen "the motivational energy" (Bennett 2010: xi) in visual encounters that move nature-watchers to be able to establish alternative modes of relating to more-than-human beings.

These visually motivated cross-species encounters are not only embodied and sensory experiences but also crucially mediated by an obscure yet pervasive force that is understood to have transformative potential, namely, affect. As Pile suggests, encounters are inseparable from affect; affect emerges in encounters between multiple bodies (Pile 2010: 9). The idea about affective encounters moves away from a conceptualisation of encounter as an "empty referent" (Wilson 2017) to simply refer to the meeting of bodies, while orienting inquiry about the generative and transformative capacities of encounters through which something new might be produced. Significantly, by qualifying these encounters as imbued with affective intensities, I focus on the in-between, to address what happens through the coming-together of urbanites and bodies of multiple species.

This thesis directly aligns itself with the Spinoza-Deleuze lineage[5] of affect to further put encounters in reference with becomings of bodies when coming to interaction with other bodies. It is important to note that central to this interpretation of affect is that affect is not something in itself (Anderson 2014: 13) but can only be grasped and registered by its effects in the changes of what bodies do.

Brian Massumi has long defined affect as basically the body's "ability to affect and be affected" by other bodies (2002; 2015), drawing on Spinoza's philosophy. It is important to note that an ability to affect and to open oneself up for being affected always go together; they are the two sides of the same coin. It is about an openness to interaction in a world that is always emergent. Indeed, Massumi suggests that affect in Spinoza's reading is basically about "ways of connecting, to others and to other situations". (2015: 6). Massumi's reading orients inquiry towards understanding affect as the underlying energy needed to form alliance or assemblage with other bodies.

Spinoza's definition of affect concerns an alteration of the power of the body, for better or worse. In *Ethics* part three, Spinoza states that: "By affect [affectum] I understand affections [affectiones] of the body by which the body's power of acting is increased or diminished, aided, or restrained, and at the same time, the ideas of these affections" (Spinoza 2001[1677]: 98). By Spinoza, Deleuze defines affect in terms of "force of existing" or "power of acting" (1978: no pagination; cited in Anderson 2014: 79) that may vary as encounters emerge and change. In Massumi's reading, this is to think affect from the perspective of "the change in capacity" (Massumi 2015: 4); an affect only occurs when there is a change in the body's capacity, that is, when the body "moves from one power of existence to another" (ibid: 48) through encounters with manifold things, so the body is disposed to act in certain ways.

DeLanda draws on Deleuze, who in turn takes the idea from Spinoza, to maintain that from a characterised set of "definite properties", individuals also display "an indefinite number of capacities

[5] Thrift (2004) surveys extensive scholarships on affect and delineates four "translations" of affect of which the Spinoza-Deleuze reading is a major approach to affect.

to affect and be affected by other individuals" (2013: 65). He emphasises complex capacities of forming possible interactions. We know nothing about a body in advance, and its capacities, says DeLanda, until we have "observed it in interaction with other individuals (ibid: 66). The theory of affect thus gives us a new understanding of the body, but not in terms of its properties. Rather, it highlights the body's capacities to enter into composition with affect of other bodies.

In Spinoza and Deleuze's interpretation, affective bodies are not specified as human bodies. Nevertheless, key scholars who particularly articulate affect by taking into consideration affect of non-human bodies are Jane Bennet, Vincianne Despret[6], Bruno Latour (taking inspiration from Despret), whose study (2004) in turn gives inspiration for a group of geographers[7] (in particular Hinchliffe and Lorimer, see section 1.3.4).

In the preface to *Vibrant Matter* (Bennett 2010), Jane Bennett acknowledges a shift of attention from the ethical relevance of human affect such as enchantment with the everyday world—the key subject of her previous work *The Enchantment of Modern Life* (2001)—towards an affect as it exists in non-human bodies and it is central to politics and ethics. She draws on Spinoza's notion of affect to refer to "the capacity of any body for activity and responsiveness" (2010: xii). With attentiveness to things and their affects as part of her methodology, Bennett emphasises even more the agency of things, otherwise known as "material vibrancy", that produces an effect on humans and other bodies. At the heart of her analysis of political events, e.g., a power black-out, is her careful analysis to sketch out how political analysis can be better accounted for when taking more seriously the ontologically diverse lively things and their affects.

As I will propose, the renewed way of seeing the world of Beijing urbanites implicates the working of affect, in that an individual's capacity of interacting with more-than-human individuals is augmented

[6] I will expand on Despret and Latour's idea of "learning to affect be affected" in more detail in chapter three.
[7] The Spinoza-Deleuze notion of affect has risen to prominence within geography; it is rigorously discussed in pertinence to concepts crucial to geography, particularly by geographers working with the non-representational theory of space, including Ben Anderson, Derick McCormack, Nigel Thrift, to name a few.

and enhanced. In other words, not only do urban nature-watchers have a new world in front of their eyes, but they may also be pushed into motion to nurture new relations with the world and the myriad of living beings that become personally meaningful to them.

Accordingly, this thesis is driven by the central question of how affective encounters enhance capacities that urbanites' bodies may have for relations with more-than-human bodies in Beijing. What is new about nature-watching is that urbanites now can derive great pleasure and satisfaction from visually engaging with a range of living beings from a distance. Nature-watching becomes more solidified as a recognised urban leisure activity with specific observation techniques, specialised equipment, and a code of ethics. A community of networked nature-watchers, as well as various organisations and associations dedicated to nature-watching has also arisen. As I will show, instead of negating the possibility of relationships between humans and more-than-humans, as proponents of anti-ocularcentrism would have it, nature-watching "capacitates" urbanites to open up to, attune to and entangle with living beings in the city in more caring ways.

The final concern of this thesis is cross-species relationships. It is worthwhile to point out that nature-watching enables nature-watchers to negotiate relationships with more-than-human beings observed in a subtle way. The predominantly visual mode of being-with entails a 'light-touch' form of interaction that celebrates co-presence while simultaneously maintaining separateness and detachment. For example, in Chapter 5B, I document that bird-watching incorporates a paradigmatic shift in urbanites' relationship with birds which involves a complex ethical consideration. This is to intentionally cultivate distance and detachment within relationships to develop a "relational detachment" (Candea 2010). By "relational detachment", Candea means that the cultivation of detachment is integrated into the volunteers' relationality with meerkats such that relational detachment is not a negation of relationships. This new form of relatedness to urban birds that takes distance and detachment at heart is contrasted and often found to conflict with the century-old leisure activity of keeping caged birds and the emergent leisure practice of amateur bird photography.

To understand these forms of cross-species relationships, I suggest that it is vital to take their spatial grounding into consideration. Most nature-watching activities occur at sites outside the household's boundaries, e.g., in urban public parks and semi-public parks within one's residential community (*xiaoqu* 小区). These urban spaces are not simply locations for nature-watching practices to unfold. Rather, just as urban parks in Beijing significantly configure emergent "activity-oriented friendship", which blurs the line between acquaintances and intimate friends among elderly park users (Richaud 2018), urban sites of nature-watching activities (e.g., their lay-out, openness, size etc.) likewise actively configure the interaction between nature-watchers and more-than-human beings.

To be sure, these relationships are distinct from the close-knitted, quasi-kinship with companion species to form "post-human families" (e.g., Haraway 2003; Fox 2006; Power 2008; Charles 2016) or the cultivation of plants (e.g., Hitchings 2003; Degnen 2009 Archambault 2016) closely tied to the domestic territories of private gardens[8]. Meanwhile, the conventional view of encounters between living beings who are basically strangers to each other as unpredictable in public spaces (Sennett 1977) does not fit with cross-species encounters in nature-watching either. Nor do these encounters constitute a transitory" form of city living (Thrift and Amin 2002: 26). Although nature-watchers do celebrate the spontaneous encounters with previously unknown, once-in-a-life species (this is particularly the case with some bird-watchers who are eager to seek to add new sightings to their bird-watching records), they find equal, if not more, charm in recurring embodied encounters (e.g., through long-term, repetitive observations) with known species in specific spaces.

Nature-watching enhances the capacities of humans and more-than-human beings to engage in a slowly evolving form of relatedness. In this way, nature-watchers are able to establish a processual, "dwelt form of relationship" (Johnson 2018), a being-with more-than-human beings in day-to-day life

[8] I should mention that a secluded house with a garden appeals directly to middle-class consumers and has featured widely in the advertisement of high-end residential compounds that target the urban privileged, as documented by Pow's ethnography (2009) of gated communities in Shanghai. Ordinary urban residents, despite being unable to afford a garden of one's own, have found creative ways to develop their passion for horticulture by raising home plants indoors or creating balcony gardens. There are also emergent forms of community gardens for local residents to work on in several Chinese cities such as Beijing and Shanghai.

Ingold associates with hunters and herdsmen (2000). The difference is that nature-watchers develop day-to-day relationships with more-than-human beings for pleasure and leisure, compared to a diversity of other reasons for which people make it their business to attend to more-than-human beings such as for food.

In short, the cross-species relationships that arise in the context of nature-watching are complex whereby the line between distance and proximity, attachment and detachment, the public and private, personal knowledge and objective knowledge, the domesticated and wild may become blurred. It is these messy gradations of cross-species relationships that my situated ethnographic account attempt to articulate.

By engaging speculatively with Beijing urbanites' visual engagement and with their affective encounters with more-than-human beings, I hope to make two main contributions. First, scrutinising nature-watching practices provides a fresh and valuable avenue to unveil how more-than-human beings permeate urban life in Beijing and advance our understandings of urban living in contemporary Beijing as more-than-human affairs. In so doing, this thesis seeks to disrupt the prominent hegemony of the anthropocentric concepts of cities as well as city lives.

At the same time, an ethnography of nature-watching will reveal that the recognition of a more-than-human city, and by extension, a sense of relatedness, is fundamentally predicated on their various affectively visual encounters with local living beings. As such, this thesis holds a compelling promise—against the primacy of detached, oppressive and indifferent vision—to rethink the rich possibilities of visual practices outside what has been termed the "evil empire of the gaze" (Jay 1993a: 592). It aims to enrich the relational and ethical potential of vision and visuality in a way that invites readers to consider the act of seeing as a "matter of caring" (de la Bellacasa 2017) and wide-ranging ways of relating in cross-species encounters of which detachment and intersubjective intimacy are only two poles.

1.3. Theoretical framework

1.3.1. Cultural analysis of vision and visuality

This thesis aims to enrich previous studies on the cultural history of visuality in China by bringing into discussion the cultural diversity of visual encounters with more-than-human beings in contemporary Beijing. Crucially, I highlight the rich ways of cross-species relatedness afforded by visual practices of nature-watching.

Existing literature on vision and visuality, from fields such as aesthetics (Foster 1988), history (Clark 2007), philosophy (Jay 1993), and anthropology (Grasseni 2007a), provides the starting point for my research; these works strive to denaturalise vision. In Clark's precise words, they rightfully recognise that "visual experience, like its linguistic equivalent, can only mean something in relation to pre-existing cultural and social formations" (2007: 6). The scholarship on visuality emerges precisely to enquire into the provenance of the visual, paying attention to how ways of seeing are "historically, geographically, culturally and socially specific" (Rose 2016: 22). Accordingly, what this thesis aims to achieve, primarily, is to provide a thickened ethnography of the different forms of vision and visuality, to unsettle "how we see, how we are able, allowed, or made to see, and how we see this seeing or the unseen therein" (Foster 1988: ix).

A few works have addressed the subject of vision and visuality in the Chinese context, highlighting its significance for religious adepts (Robinet 1989), medical practitioners (Kuriyama 1995), artists (Burkus-Chasson 1996), naturalists (Nappi 2009), literati connoisseurs (Clunas 1997) and art and philosophy (Ye 2019) alike in China.

Clunas's art historian investigation of pictures and visuality in ancient China is salient in that it problematises the acts of visually engaging with paintings in the Ming period (1368-1644), drawing attention to the existence of a cultural history of visuality in China. From the methodological point of view, he resorts to a linguistic mapping of terms without assuming that the semantic fields of these

Chinese words can be mapped unproblematically onto the modern English language. In particular, he disentangles various terms operating "in the semantic area of 'representation' as well as the terminology of corresponding verbs that designated the act of regarding" (Clunas 1997: 102).

On the one side, there existed rich terminologies of representations in visual forms, including "figure" (*xiang* 相), "picture/diagram" (*tu* 图), painting (*hua* 画) in Ming usage. On the other side, and more pertinent to my thesis, what it meant to "look at a picture" understood in the Ming period was no less complex than the different terms deployed for the idea of a "picture" itself—"to contemplate" (*guan* 观), "look at" (*kan* 看), "read" (*du* 读) all connoted different but relevant acts of engaging visually with a painting. Consider, for example, the act of *guan hua* (观画), to contemplate a painting, versus that of *kan hua* (看画), to simply look at a painting. To contemplate a painting implies learned skills and performed act and was stratified by class as a more elite practice of appreciating artworks appropriate to refined scholars, whereas the main concerns to look at a picture for unsophisticated common folks "remain at the level of 'resemblances" (ibid).

Clunas' analysis of various terms to represent ways of seeing inspires later works on visualisation in historical contexts. For instance, in her investigation of Li Shizhen's naturalist writing in *Bencao*, Nappi points out four different terms (2009: 37-41) to refer to ways to observe a text or a natural object. These include *jian* (to see, 见), *shi* (to look from a particular special perspective 视), *kan* (to observe 看) and *guan* (reasoned, observation-based comparison, 观).

Inspired by these approaches to problematise ways of seeing in the Chinese context, I attempt to investigate various ways of visually engaging with natural beings in the city that could be categorised under the umbrella term nature-watching. In what follows, I will start by contextualising nature-watching practices within the culturally specific ways of visually engaging with living things, drawing attention to the aesthetic and affective dimension of watching the natural world embedded in the notion of *shang*. I then propose a critical rethinking of the ubiquity of the denunciation of vision, as the issue

is contested by scholars such as Martin Jay and Tim Ingold. If the assumed equivalence between vision (which is more often identified as the reigning visual model valorised in modern Western culture) and the abstract coldness and objectifying speculation could be disputed, we may be in a better position to grasp how visual practices can also nurture a sense of relatedness. A key argument central to this thesis is cross-species relatedness is a capacity involving bodies of humans and more-than-humans alike being affected and affect each other. Visual engagement with more-than-human beings in the context of nature-watching, as I will show, strengthens rather than curtails urbanites' capacity to be open to and connect with more-than-human beings sighted. By attending to particular forms of cross-species relationships predicated in nature-watching, I wish to raise a salient point about the ethical and caring potentials of visually engaging with more-than-human beings.

Existing case studies that trace the historical origins of ecological practices of observing nature in an urbanised environment in several European cities underscore the rich heritage of local natural history. Scholars suggest that the exploration of urban flora and fauna in, e.g., post-war Germany (Lachmund 2013), was a collective enterprise of both experts from ecology, biology, botany, etc. and amateur naturalists. These activities capitalised on the local naturalist practices that have already existed in the cities where they flourished around local universities and naturalist societies.

In the Chinese context, a few recent works characterise the emergence of bird-watching activities in China as a process of indigenisation in response to the globalisation of western models of environmental conservation and views of nature (Keck 2015 following Weller 2006). However, none of these works has set the agenda to address the distinctive culturally-specific visual experience of the natural world in China, problematising the diverse and sometimes competing ways of looking at natural beings in the Chinese context. While bird-watching specifically is understood as an imported leisure activity that was first introduced by foreigners who visited China for bird-watching, the idea of watching nature for pleasure and appreciation is found to tie to the Chinese contemplation of nature,

which is explicitly non-interferent as expressed in Chinese literature (Kubin 1990 see below).

Without disregarding the relevance of western views of nature and related visual practices of field observation appropriated, I suggest that the culturally specific notion of *shang* (赏, to appreciate) is important to a more coherent understanding of nature-watching activities.

The word *shang* first denotes the act of visually appreciating nature for its own sake (*guanshang ziran* 观赏自然), which refers to emotionally charged intimate visual engagement with natural beings. According to Kubin's survey of the evolving "views of nature" ((Naturanschauung) in the history of Chinese literature, this mode of *shang* (to appreciate 赏) signified a new disposition of looking at the natural world that first appeared in the transition to the Liu-Song dynasty (420-479), when previously, the verb *shang* only applied to persons but not to things, natural or not (Kubin 1990: 146).

The emphasis on the aesthetic sensibility conveyed in the act of appreciating the natural world seems, at first sight, antithetical to the taxonomy-guided visual identification and observation. Nevertheless, there are overlapping between these two modes of visual experience, as more and more urban nature-watchers reveal that refined experience and appreciation of nature's beauty may similarly derive from scientifically informed watching. In both cases, the power of sight in the context of engaging with the natural world is appreciated such that to watch nature is to love and care for it.

In addition, *shang* also connotes the connoisseurly discrimination by the trained eyes. I maintain that nature-watchers' ways of looking at living beings also relate to or indeed compete with the tradition of the local pastime of connoisseurship of a wide range of plants and animals as hobby species—those appreciated for sports, gambling or beauty, a tradition that is very much alive in ordinary Beijing residents' public life. Further evidence from my fieldwork indicates the tensions between these different ways of visually engaging with natural beings adopted by Beijing urbanites.

For instance, the term "looking at fishes"[9] (*guanyu* 观鱼), when appeared in *Treatise on*

[9] The act of looking at fishes has a distinctive Daoist connotation. In one of the most frequently rehearsed anecdotes concluding the "Autumn Floods" chapter of the canonical text *Zhuangzi*, Zhuangzi and Huizi were

Superfluous Things 长物志 for connoisseurs by Wen Zhenheng in the early 17th century, may invoke the idea of connoisseurly appreciating fishes (variety of goldfishes) raised in a porcelain bowl in one's private garden, with the focus on their beautiful colours and odd shapes. In comparison, when discussed in the context of nature-watching for modern Beijing urbanites, the same term most likely indicates analytic, taxonomy-oriented observation in the field. As such, a fish is enacted differently in correspondence to varied acts of vision: as an object of connoisseur that requires daily caring within the household versus a 'wild' city co-inhabitant, or indeed an animal neighbour whose material liveliness is engaged via scientifically informed ways of observation in the public spaces of, for instance, urban parks. This is just one example of considering how particular visual interaction enacts what more-than-human beings may become, and at the same time gives birth to a new formation of urban nature-watchers who are becoming with them.

Importantly, this thesis seeks to confront the dominant critique of vision as objectifying, monolithic and disembodied, as the above discussion on the Chinese concept of *shang ziran*—the experience of appreciative, visual encounters with nature that may lead to deep attachment to nature—has already hinted at. Instead, I suggest rehabilitating vision as a sensorial, cognitive and affective medium for nature-watchers to appreciate, relate to and care for natural beings in the city. To this end, I draw on Jay and Ingold's sophisticated expositions, as well as Willerslev's ethnography of vision as the precondition of cross-species sociality.

In a monumental monograph (1993a), Martin Jay exposes the historical root of an ocularcentric discourse in the Western culture, particularly the French intellectual history that has been consistently met with anti-ocularcentric teachings. The sweeping denunciation of vision is also potently felt in

strolling across the bridge over the Hao river, looking at the fish swimming in the river at their ease. This led to what is now referred to as the "Happy Fish Debate' between Zhuangzi and Huizi that left open the question about the possibility of making claims about the fish's happiness relative to an intrinsically human experience of the world. For the prominent role the fish plays in the passage "the joy of fish" (*yu zhi le* 鱼之乐) and in Zhuangzi's philosophy in general, see Ames and Nakajima (2015).

anthropology, starting with Joanne Fabien's poignant critique of the objectivist paradigm generated by the cultural, ideological bias towards "vision as the noblest sense". Fabien considers the dominance of the visual positions anthropology in the role of authoritative observers in relation to cultural others as submissive before the power of the gaze. Fabian's critique, according to Grasseni's observation, seems to bring about a general embarrassment about the centrality of vision and loss of confidence of vision among anthropologists: in a "post-Fabian critical era" (2007b: 5), as she notes, anthropologists respond by avoiding the topic of vision tout courts, despite the growing interest in visual research methods (Pink 2004) and the flourishing of visual anthropology. Stoller (1989), for instance, purports a clear distancing of visualism of the West, arguing instead for a non-visual sensual approach of ethnographic understandings of people from different cultures. This line of thought is resonant within the "anthropology of senses" whose advocates such as Classen (1993; 1997; 2005) and Howes (1991;2003;2005) urge ethnographers to engage the full range of sensorial modalities, while cautioning against the sustained ocularcentric bias.

Indeed, the sensual turn in the anthropological scholarship has been partly a reaction to the pronounced Eurocentric visual bias, which has resulted in the relative disregard of non-visual senses. In this regard, for instance, Classen critiques the prominence of vision which is equal to a monolithic, power-laden, rationalist and aggressive gaze: "In many contemporary academic works, sight is so endlessly analysed, and the other senses so consistently ignored, that the five senses would seem to consist of the colonial/patriarchal gaze, the scientific gaze, the erotic gaze, the capitalist gaze and the subversive glance" (1998: 143).

Ingold has provided one of the most trenchant challenges of the contemporary critique of ocularcentrism. Two points have particular relevance to my agenda to loosen the hold of the tendency to discard vision.

The first point regards Ingold's attempt to replace an assumed orthodox, objectivist notion of vision with a "participatory and existential" one. He does so by first practising philosophical

ruminations on vision by three thinkers: Hans Jonas, James Gibson and Maurice Merleau-Ponty. He summaries his review that vision theorised by these three thinkers is presented "as a mode of speculation, to one of vision as a mode of participation, and finally to one of vision as a mode of being" (2000: 265).

Second, he deconstructs the naturalisation of properties of seeing by unpacking how vision is made a scapegoat of a particular "cognitive style" and thus cannot be held accountable for the objectification of the world. As a way of critiquing some of the presumptions by the anthropology of senses, Ingold points out that it is not the nature of vision to work as a detaching speculative mode of perception; rather, he calls into question the underlying cognitive style fully committed to the Cartesian mind/body dualism that divides the bodily sensation, whether predominantly visual or not, from mental representation of the world. As a result, lived, sensory experience is left behind in the search for what it represents. It is through its assimilation to this representationalist conception of the world that vision has come to be characterised as a sensory modality specialised in objectifying the world. This line of thought is resonant with the precedent philosophical re-examination of the ocularcentrism of the dominant philosophical thought, finding support from the works of Hegal (Houlgate 1993) and Merleau-Ponty (Jay 1993b).

Willerslev (2007b)'s ethnography of Yukaghir hunters in Siberia highlights the intersubjectivity of vision, instead of assuming vision as inherently objectifying. Successful hunting rests on the "double perspectives" of seeing and being seen. The hunter relies on becoming sensorily immersed in the lifeworld of his prey. It involves seeing himself as an elk as his prey does, as well as seeing the elk as his prey as does a human hunter. Seeing rests on the right proportion of distance and proximity and works as a defence mechanism to avoid the dissolution of the self when entertaining the viewpoint of other beings. As a result, it is this lack of proximity in the act of seeing that allows hunters and the elk to be hunted to "exchange one another's perspectives" (ibid: 42), thus making social relations possible.

In a detailed endnote, Willerslev contrasts Satre and Merleau-Ponty's conceptualisations of vision.

Sartre maintains that being seen and seeing are inherently conflicted, and being at the receiving end of a look makes us an object in the project of the other. In contrast, Merleau-Ponty believes that seeing and being seen are intertwined but the seer and the seen do not merge with each other because of the built-in distance of vision. Moreover, this distance afforded by vision does not lead to objectification, but it is the "sociality's precondition".

To reiterate, I argue throughout the thesis that the acts of looking in the context of nature-watching are fundamentally relational practices that entail a paradigmatic shift in the mode of relationship between urbanites and more-than-human beings whereby it may involve complex ethical consideration to cultivate distance and detachment within a relationship. It is not a productive heuristic to automatically assume detachment of the viewer and the viewed when thinking about vision. Rather, we may need to suspend the ocularcentric critique for a moment, but to consider how visual practices complicate the "delicate balance" (Candea 2010: 251) of distance and proximity in our relations with others, and the ethical implication it may have on being-with more-than human beings.

1.3.2. Public leisure activities in post-reform China

How should we situate the emergence of nature-watching practices enjoyed by an increasing number of urbanites against the profound transformation of China towards a new existential, political, economic, social, moral reality? Importantly, to what extent the cross-species relationships embedded in nature-watching are different from those featured in existing transspecies practices for leisure in Beijing?

Although this thesis is perhaps the first one devoted to nature-watching, a number of works (Lin 2006; Han 2008; Ma et al. 2013; Keck 2015; Walther and White 2018; Yan et al. 2020) by both Chinese and foreign scholars have paid attention to the burgeoning of bird-watching in China, a nature-watching practice par excellence. As they have revealed and also my interlocutors have confirmed,

bird-watching understood as a "mass leisure activity" (*dazhong xiuxian huodong* 大众休闲活动) is a recent phenomenon in mainland China[10] that germinated around the 1980s when the concept was imported from foreign visitors who came to China for bird-watching. One of the earliest bird-watching societies in mainland China, The Wildlife Group (*yeniao zu* 野鸟组) affiliated with the environmental organisation Friends of Nature was founded on 5 October, 1996 in Beijing. And on the same day, they organised the first public bird-watching activity at Jiu Mountain National Forest Park (*jiufeng senlin gongyuan* 鹫峰森林公园). My interlocutors widely accepted that the year 1996 marked the official beginning of bird-watching in mainland China. Still in its infancy today compared to the achievements of its British and American counterparts, bird-watching in China has nevertheless kept flouring over the past decades, and its popularity is testified by, e.g., the proliferation of bird-watching societies from only 4 in 2000 to 36 in 2010.

Among all scholarly works surveyed here, only Lin Jing's master dissertation (2012) adopted a qualitative method of participant observation of public bird-watching activities organised by CBS and interviews with bird-watchers. The quantitative method of questionaries seems to be a standard technique. For instance, two major works by Ma et al. (2013) and Walther and White (2018) use data collected from online questionnaires to give a panoramic view of Chinese bird-watching societies and bird-watchers. Outside academia, anthologies containing interviews of key figures to promote bird-watching in China (Liang 2017)—ornithologists, authors of field guides and so on, and autobiographies and memoirs by bird-watchers (e.g., Zhong 2015; Wang 2019) offer further insights into Chinese bird-watchers.

[10]In Hong Kong, the emergence of bird-watching was much earlier—the Hong Kong Bird-Watching Society, the first one of its kind, was established in 1957 by British officers. In both Hong Kong and Taiwan, bird-watching has undergone a process of "indigenisation" of different colonial heritage from British models of environmental governance in Hong Kong and from Japanese and American models in Taiwan. For a comparative account of the growth of bird-watching in Hong Kong and Taiwan, see Keck (2015).
Also, in the present discussion, bird-watching is qualified as a mass participation leisure activity for pleasure which also has an implication for environmental protection and conservation. This qualification of bird-watching follows Moss 2004's understanding of "bird-watching in its modern sense". Thus I will not engage studies on e.g., missionary-naturalists' practices of observing bird species in China (see e.g., Fan 2004).

A shared question that both quantitative works grapple with is what social conditions need to be met to seed the growth of bird-watching. Ma et al. indicate two factors, including economic growth and the promotion from Hong Kong Bird-watching Society and conservation NGOs such as WWF. Their study is nevertheless more oriented to unpack the welcoming effects of the popularisation of bird-watching in terms of promoting more conservation efforts. Comparatively, in the supplement material to the original essay, Walther and White's research has a wider scope to discuss, albeit in a brief manner, three socio-political enabling conditions for the emergence of bird-watching: political tolerance, leisure time, and urbanisation (see Appendix S6).

These hypotheses encourage me to investigate bird-watching and, more generally, nature-watching activities in post-reform China. However, I often find their account wanting in nuance. Instead, I would like to complicate nature-watching as an urban leisure[11] activity with the broader motions of the state in post-socialist China in mind.

I wish to spell out three implications of characterising nature-watching as an emergent urban leisure activity in this section. First, I suggest that bird-watching and nature-watching emerged against the backdrop of not only economic growth but also a shifting notion of what constitutes an "adequate life" (*chongyu shenghuo* 充裕生活). Second, it would be naïve to suggest that post-reform China delivers genuine freedom to allow people personal autonomy to enjoy leisure activities. Rather, a new mode of power or governmentality appears to be involved with the production and management of freedom (*ziyou* 自由). Lastly, I wish to extend Ma et al.' study (2013) on the implications of bird-watching for conservation to further comment on how watching birds for pleasure and leisure has transformed the relationship between urbanites and birds.

To start with, examining nature-watching as a new leisure activity may hint at urbanites' aspirations of an adequate and good life in contemporary China. Collectively, studies on bird-watching

[11]For fascinating research on the meaning of leisure (*xian* 闲) for Chinese literati in the pre-modern era, see Su (2013).

activities in China correlate the growth of bird-watchers with the fast expansion of economic boom since the economic reform (*gaige kaifang* 改革开放) in 1978. For instance, Walther and White (2018) display the positive association of the emergence of bird-watching and more economically developed areas in China, which exclude a large region in West China. Moreover, in terms of the demographics of bird-watchers, Walther and White have found out by surveys that the majority of bird-watchers are aged below 45 years old (77.3%). Predominant of them are the university-educated. More than half of the people interviewed reported an annual household income of more than 60,000 RMB[12]. The picture of mainstream Chinese bird-watchers would appear to correspond to the highly educated, well-off, middle-class, urban middle-aged population.

In my fieldwork, an easy answer for the boom of bird-watching, as explained by many of my interlocutors, adeptly citing a well-rehearsed Marxist theory, was that "the economic Structural Base decides the superstructure" (*jingji jichu jueding shangceng jianzhu* 经济基础决定上层建筑). The point they were trying to make was that bird-watching, which is certainly at the top of Marlow's pyramid of needs (another theoretical concept that is widely accepted and circulated in China), only becomes a matter of concern after survival is achieved. Bird-watching, in other words, embodies an "elevation from merely living a life to living a better life" (Zhang 2011: 8).

It is not hard to regard the leisure and pleasure of bird-watching and nature-watching as belonging to the realm of an adequate life. Reported benefits of nature-watching—enhancing mental and physical fitness, connecting with like-minded persons, appreciating beautified sceneries, enjoying new sorts of connections with 'nature', developing new skills, seeking fun and pleasure and so on—all denote various facets of a better life. However, as earlier studies have demonstrated, post-reform China constitutes a new political reality in which ordinary people's wealth, health, well-being and value are ultimately central to the "legitimising framework for governing" (Kleimman 2011: xiv) by the state-

[12]Annual household disposable income of between RMB60,000 is the lower cut-off point to define middle-class.

party. I now wish to turn to these shifting techniques of governing (what Ong and Zhang term "socialism from afar" (2010) or the "neo-socialist governmentality" as Palmer and Winiger (2019) name it) to entice the desire of Chinese people for a life of adequacy and flourishing.

By "political tolerance", Walter and White attribute the development of bird-watching to the freedom to pursue one's interests without negative political ramifications (2018, Appendix S6). They draw on Wang's survey (1995) of the changing leisure patterns in urban China to refer to the very low point of the leisure culture during the Maoist era when leisure pursuits were heavily politicised. The disposable amount of leisure time, content and form of leisure activities were all regulated. People had little choice about leisure activities, and there were even dangers of choosing the wrong type of leisure activities and thus being accused of indulging in "bourgeois frivolities" (ibid). Friedman further indicates that the "supra-individual system of revolutionary communism had subsumed anything that might still be called 'private' until there was nothing left that was not also of concern to the party-state" (Friedman 2005:78). The centralised power of the party-state in Maoist China is also overwhelmingly reflected in the urbanism grounded in the distinctive spatial form of the "work unit"[13](*danwei* 单位) where private life was suppressed and prescribed by one's workplace (Friedman 2005). In terms of leisure activities, their provision was usually undertaken through the governing work-unit system and thus strictly censored and restricted by the 'omnipresent' state-party.

Subsequently, the reform era since the late 1970s has witnessed an astonishing expansion of the "personal space of autonomous choice" (Friedman 2005: 78). A space for a more autonomous life and a private sphere has resulted from economic expansion, growth of free time and the prevalence of private housing. With respect to leisure activities, some studies have documented the "revival of public leisure"[14] (Orum et al. 2009; Qian 2014;) whereby the repertoire of activities is more diverse than in

[13] However, to cast the work unit as a repressive institute of state control may miss the point of the comprehensive urban effects of the work-unit-based urbanism related to, e.g., "community, security, equality, women's rights, employees' rights, welfare and environmental sustainability" (Lu 2006: 67).

[14] But rather than embodying the revival of the self and personal autonomy, both Orum and Qian consider the "public man" (Orum et al. 2009) and public leisure activities such as group dancing at urban public spaces as an avenue to keep alive participants' collective identities that appeal to the Chinese cultural heritage.

the Maoist era.

However, their argument risks giving the impression that public leisure activities in post-socialist China go beyond the reach of the state. Nothing could be further from the truth. Here I follow a body of anthropological studies of public leisure activities such as on popular mahjong (Festa 2006), collective activities in parks (Farquhar 2009) and writing on the ground (Zito 2014) to argue public leisure activities as a site for political contestation.

For Festa, the party-state since the 1990s has operated a mode of governing she terms as "moral regulation" to appropriate and regulate the leisure activity of mahjong to build the nation and the consumer economy simultaneously. The key insight of his study is to unveil how the normative strategy of moral regulation "ties personal conduct to social structures and state power within a context of diminishing authoritarian domination and rising personal autonomy" (ibid: 12). In this way, he counters the argument that the market affords personal and community autonomy following the "retreat of the state" in the post-reform era.

In a similar vein, I suggest that the burgeoning of leisure bird-watching and nature-watching opens a window to view how the party-state disciplines mass leisure without suppressing the diversity of personal interest and desire. In chapter 5A&B, I unpack a key discourse, namely the concept of *suzhi* (素质 roughly translates into "quality") through which the state seeks to realise the articulation of the personal in relation to the nation-state. Specifically, the official endorsement and promotion of bird-watching entail essentially the development of a certain type of citizen who can contribute positively to state development. To reiterate, the growing popularity of bird-watching and nature-watching is not simply resulting from "political tolerance" to allow personal freedom. Rather, it is mobilised within a particular configuration at the intersection of the power of the self with the power of the one-party state. The post-socialist state-party aims to both enhance the space of personal autonomy and to restrain and guide it.

Above I have discussed nature-watching as part of an overarching vision of an adequate life in

post-reform China, and it is increasingly assimilated into the jurisdiction of the state-party to govern and discipline. Significantly, new transspecies practices for leisure also generate new modes of cross-species relatedness. My last point of this section is precisely that the framing of bird-watching and nature-watching as a leisure activity to engage with living beings for pleasure has a bearing on cross-species relatedness in the city. A comparative analysis of old and new modes of cross-species relationships as they are embedded in various leisure practices may shed new light on the development of relationships between nature-watchers and more-than-human beings in a different way than before.

Bird-watching, as it originated in the UK and later developed in the US and elsewhere, is normatively constructed through leisure and relaxation. According to Moss's historical survey of "bird-watching in its modern sense" (2004: 9), the development of a pastime of watching birds (as opposed to simply watching birds) reveals a critical shift in our relationship with birds into "a new, more equal relationship of observation and appreciation" (ibid: 10). This transformation of the human-avian relationship is likewise found among bird-watchers in Beijing.

For instance, in his discussion of Gilbert White (1720-1793)'s naturalist achievement, Moss claims that White's way of looking at birds, and by extension the natural world, was not only scientific, but also he saw nature as something to enjoy with no other motive—one only needs to consider that the earliest reference to "birding" appeared in Shakespeare's *The Merry Wives of Windsor* in which the word referred to the practice of fowling, namely, the sport of hunting birds. Citing ornithologist James Fisher's praise of White (ibid: 14), Moss argues that White was ahead of his time since for whom the distinction between an accurate observation of nature and a genuine love for birds collapsed. Moss thus credits White as the father of bird-watching in a modern sense, that is, to watch birds purely for pleasure and enjoyment.

Ma and her colleagues are correct to relate the growing efforts of the public to join conservation initiatives concerned birds to the development of bird-watching. Many bird-watching societies have associations with environmental organisations and bird-watching in general is considered as a part of

a wider 'green' culture that is on the way in China (Walther and White 2018 supplement). However, what is missing is how shifting human-avian relationships as embedded in bird-watching shape bird-watchers' participation in conservation in a specific way.

The thing about Beijing is that the residents of this city are renowned for urban transspecies practices (e.g., Li et al. 2019). Keeping animals such as dogs and cats as pets and raising more unconventional animals such as goldfish, crickets, songbirds for connoisseurship were historically regarded as a privilege for the ruling elites. Nowadays, however, these cross-species practices have become gradually democratised, and some of them, notably keeping caged songbirds, are regarded as a long-treasured heritage of quintessential old Beijing urbanites.

It is noted that even when China was deep into a post-socialist revolution in the 1980s, pet-keeping was stubbornly tarnished in official discourse, e.g., as "the product of a sick capitalist society"[15] (Serpall 1986: 45). That said, cross-species practices for leisurely purpose have kept diversifying in post-Maoist China. Old and new leisure activities that engage a multiplicity of natural beings—fishing, plants-appreciation, building natural vivarium (造生态缸 *zao shengtaigang*), pigeon-racing (Boswell 1986), forest-bathing, butterfly observation, star-gazing, cloud-watching, keeping pets dogs and cats to the more bizarre type such as amphibians—have sprung up for Beijing urbanites to enjoy. Given the habitus of urban transspecies practices for leisure, it is worthwhile to embark on a comparative analysis of how multispecies relatedness, constantly negotiated through shifting turns to love, care, avoid, and detachment in nature-watching is different from other cross-species leisure activities.

1.3.3. More-than-human dimension of urban life

The view of modernity that conceives nature as antithetical to the urban world has been dominated

[15] This is how keeping dogs as companions was accused in magazine articles in 1982 when it happened to be the Year of Dog. See chapter three on pet-keeping in China of Serpall's monograph (1986). Serpall also offers a fascinating example of the extreme banishment of dogs in 1983 by the authorities of Beijing. The canine population (specifically referred here to pet dogs) of almost 400,000 was banned for the strong association of keeping dogs as pets with the Bourgeoisie ideology.

both academic and our everyday imaginations.

Although anthropology has a valued tradition to debunk the nature-culture dualism, it is unfortunately silent regarding the specific urban-nature dichotomy. It may be attributed to the fact that the city is a relatively new field site accepted as 'proper' socio-cultural anthropology in the mainstream discipline (Pardo and Prato 2012).

Even today, as an abundance of anthropological literature on the city has been published and assiduously reviewed (e.g., Low 1996; Gareth and Rodgers 2006), it remains debatable what is gained from carving out a distinct sub-field of urban anthropology within the discipline. It is still a thorny issue whether urban anthropology should be intended as "anthropology in the city", in which the urban is taken as the locus of individual research (Hannerz 1980), or "anthropology of the city" (e.g., Fox 1977; Jackson 1985) in which the distinctiveness of the city is taken as a new theoretical object in itself.

In the Chinese context, the long tradition of historical enquiries of Chinese cities tends to eclipse the recent emergence of urban anthropology[16]. Instead of an anthropology/sociology in cities, Liu (2002) argues that what is needed is an "anthropology/sociology of the urban" in which the central urban question is the production of new spatial forms and social relations in Chinese cities. In a full-bodied review (Smart and Zhang 2006) of the anthropological research on Chinese urbanism, it is nevertheless noted that among the seven thematic areas about urban research they have raised, they have little to say about cities beyond the bounds of humans[17].

In line with the anthropology *of* the city, and building on its heritage, I seek to take on the conceptual richness of the city to critically engage, theoretically and methodologically, with the urban-

[16] According to Guildin (1990), urban anthropology in China was officially solidified when the First International Urban Anthropology Conference was held in Beijing on December 28, 1989. However, Smart and Zhang (2006) note that anthropological studies of Chinese cities and towns existed prior to 1949.

[17] There are however anthropological works of zoonotic epidemics that unsettle human-animal relations in the city. Studies have investigated people's entanglements with live animals at wet markets in various Chinese cities in light of the outbreak of, e.g., avian influenza (Keck 2020) and SARS (severe acute respiratory syndrome) (e.g. Lynteris 2016).

nature divide. Previous attempts in anthropology, which have either assumed an anthropocentric concept of the city or sustained a focus on animals, plants and other living beings in the city as constitutive of social experience and life, are equally wrong-headed. As my examination of Jerolmack's ethnography of urban pigeons will show below, despite his intention to bring animals back into his investigation of urban dwellers' social world and their experience of the city (2013), he nevertheless perpetuates the urban-nature dichotomy.

In a critical essay on urban China, Davis and his co-authors (1995) have advocated that the study of the urban must be interdisciplinary. In the second part of this section, I thereby draw on the body of scholarship on urban nature and the animal question in the city in geography. Geography, particularly the sub-field of urban geography and animal geography, holds promise to move the theorisation of cities forward to allow them to be conceived as spaces of entangled more-than-human life worlds (Whatmore 2002).

Jerolmack's study (2013) of the "city bird", i.e., pigeons, is an important exception as one of the first urban anthropological accounts to defy the conventional vision of urban spaces as a human-only, concrete jungle. Narrating several episodes of urban dwellers' interactions and engagement with pigeons—pigeon-feeding in urban public areas, pigeon-raising, pigeon-racing and fancying in multiple cities including London, New York, Berlin, this work argues for the active role of animals and cross-species encounters in shaping and enriching peoples' urban experience.

His ethnography is explicitly indebted to the insights of human-animal relations by Levi-Strauss and Durkheim (ibid: 14) to stress that animals pervade and actively structure social facts, i.e., institutions and collective intentions. As such, he arrives at a reiteration of the roles of animals as "routinely woven into people's *social* worlds" (ibid; original emphasis).

Whatever insights Jerolmack's ethnography has offered to acknowledge the social significance of cross-species encounters in urban worlds, two theoretical problems loom large. First, his consideration of urban cross-species encounters as both social and "asocial" reinforces a dichotomous imagination

of human-animal relations. To borrow geographers Castree and MacMillan's words, Jerolmack's endeavour to bring nature within the domain of society "simply shifts the casual and ontological arrows from one 'side' of the social-natural dichotomy to the other" (2001: 210). It is actually a way of making the human-nature divide more permeable by arguing against the desire to bond with nature while claiming nature is social through and through. Despite the promise of his argument to draw attention to nature in the city, it nonetheless leaves the nature-culture binary intact.

Second, one ramification of such epistemological position is that pigeons in his depiction become defined primarily by human social practice, but rarely, if ever, as fleshy, agentic animals. The privileging of the human side of human-animal relation leaves pigeons in the all-too-easy collective and abstract categorisation as organised by how they configure people's sense of self and their relations to society.

His interest in the social conception of nature is notably resonant with the scholarship that upholds the social constructionist arguments about nature[18]. In anthropology, the overwhelming privileging of endless ethno-epistemologies of nature (especially those influenced by the textualist approach by Geertz), though presenting us with rich accounts of some ecological sensitive knowledge system, may fall prey to the social construction of nature. Descola and Paulson discuss the "difficult challenge" it can present to anthropological inquiry (2004: 215). One of the crucial questions they have raised is whether it is possible or meaningful to replace emic views of nature with a universalised model. In this thesis, as I have discussed above, I cut through this theoretical minefield by adopting a practical ontology orientation.

As the above discussion has pointed out, the urban-nature divide within anthropology is

[18] Geographers are also preoccupied with the social constructionist conception of nature (Castree 2001; 2005; 2014). This scholarship, in brevity, maintains that "nature is nothing if it is not social" (Smith 1984: 30). Castree and MacMillian (2001: 209) delineate two versions of the social construction of nature thesis. The first claims that nature is not knowable as it really is, but rather the effect of discursive and signifying practices. Consequently, the very idea of nature is always already predicated on particular cultural ways of understanding it. The second version of social constructionism of nature focuses more on the "production of nature" (Smith 1984) in a more physical way, namely human fabrication and alternation of biophysical properties of natural entities such as the GM organisms.

understudied; even for anthropological works concerned with the urban, more-than-human beings tend to be left out. The city is generally considered a human-only space. Even when animals and other more-than-human beings are mentioned, they are often served as prompt to yield insights into the social experience of urban residents.

What I have found more inspiring to counter this sustained focus on humans comes from the body of scholarship on "urban nature" within geography. The following section is devoted to fleshing out three areas in geographical literature with which I closely engage to develop my thesis. I will start with how a new generation of urban geographers has challenged the long-standing view to consider cities as anti-nature and demanding equal ecological attention to urban spaces. However, one problem of these works may be their tendency to reify and reduce nature to the flow of raw materials to construct cities. Next, I will move on to the literature concerned with the "animal question" in the city. This literature helps me move closer to animals as subjective and agentic beings, to consider co-presence and relational becoming of urbanites and living beings that may confound the wild-domesticated divide. I conclude this section by indicating two further directions to "re-animate" Beijing as a hybrid, living landscape for encounters with bodies—human and more-than-human alike. The first approach is to emphasise nature-watching practices and natural spaces associated with the everyday business of city living. Moreover, it is necessary to give nuanced accounts of more-than-human beings as subjective selves. And this will lead me to the next section about multispecies ethnographic endeavours in both anthropology and geography.

Instead of bringing 'nature' into cities and then freezing cities as either social or natural phenomena, the idea of urban nature often works towards an "ecological unbounding" (Braun 2005: 637) of cities. Many works draw on the theoretical tradition of Actor-Network-Theory championed by Latour (1996; 2005), Law (Law et al. 1999; Law 2009) and others, to consider cities as hybrid spaces (Whatmore 2002), as a process of a complex assemblage that includes both human and crucially non-human actants.

In this way, the scholarship on urban nature contributes not only to draw in a discussion of 'nature' that lies outside the traditional limits of urban research, but also further confounds the urban-nature dualism by reimagining cities as more-than-human, living landscapes.

Largely two strands of geographical studies of urban nature are identified according to Braun's review essay (2005). The first category of research concerns the urbanisation of nature, or "metropolitan nature"[19], in, e.g., New York (Gandy 2002), Guayaquil in Ecuador (Swyngedouw 2004), Athens (Kaika 2005), Los Angeles (Wolch et al. 2002) in which the production of urban nature shapes the metabolism of cities. A detailed exegesis (Wolch et al. 2002) of the ecological orientation to urban nature and urbanisation (that is associated with the group of scholars of the "L.A School") showcases a broad range of theoretical themes quintessential of the body of urban nature research. These range from the urban appropriation of natural resources and its politics to the correlation of natural hazards with urbanisation to, crucially, how animals and people negotiate the nature-culture borderlands in Southern California (ibid: 371).

Within this scholarship, there is arguably inconsistency about the understandings of nature. As Braun critiques, "it is often unclear what nonhuman nature adds to these accounts except the presence of a static stock of 'things' that are necessarily mobilized in the urbanization process" (645). Indeed, works within this category sometimes tend to assume 'nature' matter-of-factly as biophysical fuel for urbanisation and that the city exists as a result of metabolising natural 'raw materials'.

The question of human-animal relation in the city presents another direction of urban nature scholarship, and this thesis heavily draws on this group of works. By bringing the lively and affective materiality of more-than-human beings back, this scholarship requires serious attention to understanding the city as replete with animate, sentient more-than-human beings (Wolch 2002).

The interest in the "animal question" was revived with Jennifer Wolch and Jacque Emel 's call (1995) to "bring[ing] the animal back in", leading to a modern re-incarnation of animal geography

[19] However, the idea of metropolitan nature in Gandy's usage encompasses wider connotations beyond the urbanisation process. See Braun's comment (2005: 641).

(Wolch and Emel 1998; Emel et al. 2002; Lorimer and Srinivasan 2013) since the 1990s. Wolch and Emel's pioneering essay was followed by a specific proposal (Wolch et al. 1995) to put forward a "transspecies urban theory" as a fruitful avenue to explore for the new generation of animal geographers. Coincidently, Chris Philo, another figurehead in animal geography, started to turn attention to the urban to consider the "inclusion and exclusion" (1995) of a certain animal population. These studies within animal geography are at the forefront to foreground a reimagining of urban living and spatialities that cut across the human-animal divide. Invigorating concepts such as "zoopolis" (Wolch 1996), "beastly place" (Philo and Wilbert 2004), "anima urbis" (Wolch 2002) encourage refreshing conceptualisation of the city as a "contact zone" (Haraway 2008) to foster cross-species encounters and a place in which people and animals coexist. This involves re-imaging "the breath, life, soul and spirit of the city as being embodied in its animal life", to repeat Wolch (2002: 722).

The new scholarship of animal geography in relation to the urban context has accounted for various ways more-than-human lives continuously circulate in and through the city. Meanwhile, it has also given nuanced accounts of urban animals and plants to contest the dualistic category of pests or pets, wild or domesticated. In this regard, anthropologists[20] too have problematised the idea of the authentic wilderness untouched by humans. This is achieved through fascinating ethnographic accounts of culturally specific ideas of the wild as expressed in comparative contexts (e.g., Hell 2004; Descola 2004; 2013) and ethnographies on 'wild' spaces such as national parks in various contemporary societies (Weller 2006; West et al. 2006; Walley 2004). Nevertheless, rarely[21] have these rigorous attempts of problematisation been extended to the research of urban cities.

Geographical works have taken cues from ecological research to considers cities seriously as a novel ecosystem (e.g., Kowarik and Korner 2005) and investigate living things that inhabit urban

[20]The idea of the wilderness as it is used in the dualistic paradigm of the wild and domesticated is, of course, a huge topic in anthropology. See, for example, essays in the edited volume by Mullin and Cassidy (2007).

[21] An exception is Fuetne's study of urban temple macaques in Bali. Fuentes (2007) makes the case of unsettling the dichotomy of the wild and the captive in the context of human-monkey relationships in the urban context. According to him, macaques living in temples belong to the category of "in-between" in that no simple category of wildlife or the domesticate can effectively characterise human relationships with them.

ecologies. Lorimer, for instance, proposes an alternative ontology of wildlife. First, with examples of "cosmopolitan species assemblages" (164), Lorimer revives the wild at the heart of the mundane and vernacular of contemporary urban life. According to him, our encounters with urban wildlife are "sites of 'everyday environmentalism'" (ibid: 165) in which many urbanites relate to the more-than-human world. Moreover, he adopts a processual approach to wilderness as "ecologies of becomings" by drawing attention to how living beings become urban, adapting to, and flourishing within sites with regular disturbance from humans.

Geographers with a specific interest in spatial practices of urban animals in relation to urbanisation have documented their relational becoming that may cut across the wild-domesticated, pest-pet divide. In a similar vein, I problematise these boundaries while acknowledging the specificity of relationships between nature-watchers and more-than-human beings as distinct from, e.g., urbanites' intimate connection to companion species. I will eschew the label "wild" or "*yesheng"* (野生) in Mandarin Chinese, but turn to unpack how more-than-human beings may improvise new ways to articulate themselves in mutual encounters with nature-watchers in the shared urban environment.

How do we apply an urban theory to examine Beijing that "takes nonhuman seriously" (Wolch 1998) so as to "re-animate" (Wolch 2002) it, that is, to capture Beijing as a living landscape? One way forward is to evoke the city by dissolving dualism between the "in here" of the polis versus the "out there" of nature. As we shall see, nature-watching practices perform various urban spaces from populated urban parks to little, marginal areas such as wastewater ponds, configuring them as distinctive sites of occurrence and encounters with living beings. In this way, they endow urban spaces with new meanings as natural entities.

At the same time, I also intend to depart from the geographical studies on urban nature to sort of romanticise urban nature as the new wonderland. Although there has been more nuanced urban analysis which starts to bring nature into the foreground as opposed to a background of urbanity, I feel reserved about the tendency of studies on urban nature to put more weight on the interstitial and anomalous

spaces of nature— "marginal nature", "ruderal ecology" (Stoetze 2008), and "urban wasteland" (Gandy 2013), to name a few—as the ecologically marvellous sites that escape, or are out of place with the urban landscape of banality. It is not to deny the rich affordance of industrial ruins (Edensor 2018) to disrupt the over-smooth and regulated fabric of the city. However, the tendency of 'exoticising' urban natural landscapes may fall prey to a de-humanised vision of nature based on a rejection of everyday urban living, e.g., embedded within the "back-to-nature escapism" in Poland as documented in White's study (2014).

In contrast, nature-watching in Beijing focuses heavily on the ordinary sites and practices of everyday life. A repeated motif that emerged from my fieldwork is the somewhat baffled concepts of "nature at the doorstep" (*jiamenkou de ziran* 家门口的自然) or "nature nearby" (身边的自然 a literal translation would be "nature that surrounds the body"). These ideas carry a spatial implication to denote a distinct form of space of nature that is probably small-scale, and situates in the vicinity of one's living world within the city. In this light, my discussion on urban nature will follow Hinchliffe and Whatmore's call (2006; 2010) to draw attention to "vernacular ecologies" as embedded within the mundane spaces and practices associated with everyday city life. Urbanites are in fact accomplished to be with more-than-human beings in their day-to-day living in the city.

Moreover, as geographers advocate, it is important to go beyond the collective or abstract categorisations of species, but rather to account for more-than-human beings in the city as embodied individuals living entangled with humans and wider urban environment (Taylor 2012: 40). I accordingly seek to show the immediacy of different lifeworlds in Beijing, to tell stories of humans in entanglements with embodied non-human inhabitants.

While the approach of ANT is ingenious to configure a performative more-than-human network against the conventional anthropocentric fixation of a human-dominated city, it has been met with several critiques from scholars in animal geography (e.g., Buller 2015). For instance, in a review of Whatmore's work (2002), Philo remarks that the living qualities of animals are somewhat limited,

leaving living animals as "shadowy presence" (2005: 829). As Buller (2015) further suggests, the shortcoming of ANT within animal geography can be remedied through ethnographic approaches. I will now turn to the final theoretical repertoire that guides this thesis, namely, multispecies ethnography within anthropology as well as the invention of more-than-human geography within geography.

1.3.4. Multispecies ethnography and more-than-human geography

With the emphasis on multispecies agencies as a relational capacity that unfolds through the doing of nature-watching activities, this thesis is rooted in the trend of multispecies ethnography in anthropology (e.g., Kirksey and Helmreich 2010; Hamilton and Placas 2011; Kirksey 2014; Van Dooren and Rose 2016; Govindrajan 2018), as well as more-than-human geography (e.g., Braun 2005; Dowling et al. 2017; Lorimer 2010). It starts from the premise of the recognition of the lifeworlds of agentic animals and plants in the city, to consider "how sentient creatures negotiate and learn to inhabit complex, dynamic environments, apprehending them according to their knowledge, speeds and rhythms, with or against the grain of urban design" (Barua and Sinha 2018: 2). I will adopt innovative theoretical and methodological endeavours from both anthropology and geography to address and remedy the 'deadening' of more-than-human beings in accounts of cross-species encounters.

This section consists of two main parts, addressing the need for a theoretically nuanced analysis of the full spectrum of cross-species relatedness, as well as the methodological challenge of rendering more-than-human beings as ethnographic subjects respectively. Theoretically speaking, thanks to multispecies ethnographies by scholars including Candea, Govindrajan, Marvin, Reinart, van Dooren, I have come to truly appreciate the ambiguities of human-animal relationships, which can disrupt the dialectic between detachment and engagement, distance and proximity, love and harm. They highlight the importance of mapping out the specificity of cross-species relatedness in situated contexts in a subtle way. In the second part, I turn to survey recent methodological approaches in anthropology and

geography that move beyond an emphasis on the human side of human-animal relations and the human-directed methodologies. They offer inspiring ways to engage ethnographically with more-than-human beings as agentic, subjective selves and co-participants in cross-species entanglement, which should be conceived as a multispecies, relational achievement.

In anthropology, multiple species have been a reference point to develop a broader understanding of social life in cross-cultural contexts. Animal and plants have served as repositories of a wide range of social institutions (Evans-Pritchard 1969) from structural order (Levi-Strauss 1968) to the production of ethno-ecological knowledge (Ellen 2006; Anderson et al. 2011).

Nevertheless, what are grouped under the rubric of multispecies ethnography reflects an epistemic shift from these studies of humans and more-than-human beings. In a recent review of multispecies ethnographies, Ogden et al. (2013) define "multispecies ethnography" as "ethnographic research and writing that is attuned to life's emergence within a shifting assemblage of agentive beings" (ibid: 6). This definition brings out nicely a central theoretical concern of this literature. By "life's emergence within a shifting assemblage", they argue that multispecies ethnography writes life as it is ever-emergent at the intersections of multiple beings and things instead of as biocultural given. Studies in this tradition nod to Haraway's now famous formulation to "become with" (2008) each other. Integrated to multispecies ethnographies is the study of the relational nature of the process of becomings that is encapsulated by the idea of "biosocial becoming" (Ingold and Palsson 2013).

It would be beyond the remit of the present discussion to examine this body of literature fully. Among the extensive works I have surveyed, what has been particularly thought-provoking from this literature is the need for situated analysis of cross-species relatedness that might take the unexpected form other than the simple gesture of affection, as well as the importance to revere creatures other than human as subjects who have their "biographical and political lives" (Kirksey and Helmreich 2010: 545).

First, ethnographies of relationships between humans and a wide-ranging of animals—Lesser White-fronted Goose (Reinert 2013), reindeers (Reinert 2014), meerkats (Candea 2010), crows (van Dooren 2016), Whopping Crane (van Dooren 2014), foxes (Marvin 2005), goats (Govindrajan 2018), to name a few—have interrogated the complexity and ambivalence of human-animal relationships that unfold with love and violence, distance and proximity, detachment and attachment. Collectively, these works highlight, as Candea poignantly puts it, that "scholars need to make some space with the concept of 'relationships'" (2010: 244), to ethnographically examine the wide-ranging forms of relatedness that fall between on one hand intersubjectivity, and absence of connection on the other.

Epitomised of this scholarship are Candea (2010) and Reinert's debunking (2013; 2014) of the normative distinction between detachment and attachment in human-animal relationships, which are a major source of inspiration for my discussion of the emergent urbanite-avian relationship embedded in bird-watching. They both focus on a "relational detachment" (Candea 2010) or what Reinert (2014: 22) terms an "engagement that approximates absence". Candea's ethnography of volunteers' relationship with meerkats maps out a subtle ethical practice embedded in the middle ground between intersubjectivity and the total absence of interaction.

Reinert's ethnography of Sámi Reindeer pastoralism likewise problematises the automatic association between distance with the objectification of animals interacted. In contrast to the axiomatic thinking in non-human studies that equals the increasing distance to "impersonality, de-personification, a de-subjectivation of the non-proximate Other" (2014: 54), he shows that an effort to respect the distance and involve neglect can be reframed as an ethic of care of "semi-domesticated" reindeers.

Govindrajan similarly makes a case of cross-species relatedness in the mountains of Himalaya as always constituting a "partial connection between beings who come to their relationship as unpredictable, unknowable and unequal entities" (2018: 25). Similar to Candea and Reinert, Govindrajan is concerned with the unexpected form of cross-species mutuality and care, i.e., the paradoxical interplay of, in her case, love and violence at work in the sacrificial ritual of killing hand-

raised goats. But unlike them, Govindrajan approaches cross-species relatedness from a different direction by carefully attending to how animals shape cross-species relatedness as subjects with agency, intention, and capacity for emotion.

Her study thus corresponds to a broader interest in multispecies ethnographies to investigate the diversity of lived experiences and subjectivities of more-than-human beings. For some works within the tradition of multispecies ethnographies, there is notably hesitation to address intentionality and agency of animals——with humans and otherwise (e.g., Lien 2015; Archambault 2016). For Lien, for example, the challenge is attributed to the lack of appropriate methodology. In her study of the making of salmons, she acknowledges that human ethnographers are not currently equipped with a methodological toolkit to "pay equal attention to humans and animals" (2015:16). Consequently, she resorts to the conventional ethnographic toolkit to tell stories of salmons by following cues from her human interlocutors on the salmon farms.

In contrast, in this thesis, I have experimented with some novel methodologies (I have more to say on methodology momentarily) to render more-than-human beings in my study as "subjects-in-interaction" (Buller 2015: 4), having shared and entangled biographies. Since I take affective, cross-species encounters as one of my core interests, which implicates working from the "in-between" to investigate how nature-watchers and more-than-human beings are affected and affect each other, I believe that it would be an incomplete depiction without attempting to render more-than-humans as co-participants in shaping encounters. In this sense, I depart from Archambault's study of affective human-plant encounters in which she brackets accounts of plants as ethnographic subjects. But still, her analysis of affective encounters with plants as grounded in everyday, mundane human-plant interactions and her acknowledgement of affect as a multi-layer phenomenon that is socially, politically, and culturally produced are enlightening.

I prefer to align myself with a recent body of ethnographies on affective, more-than-human atmospheres related to falconry (Schroer 2018), listening to bird-songs (Whitehouse 2018) and

aquarium design (Schmitt 2018). Instead of simply being an atmospheric entity of weather, the atmosphere here designates the affective-aesthetic qualities of spatial-temporal situations of encounters that stem from our "affective engagement with the world" (Schroer and Schmitt 2018: 1). It is a sort of force-field that gathers a diversity of elements, including crucially "moods and practices of living beings", the forces of weather, light, water, and air, architecture, sound and so on (ibid: 6). For instance, as Schroer's study on more-than-human atmospheres produced in falconry reveals, central to the affective milieu is the openness and attunement to the perceptive and sensorial world of other non-human beings, namely raptors. In brief, these studies point to the significance to grasp the subjective worlds of more-than-human beings when thinking about affective encounters.

On the point about methodologies to address more-than-humans as agentic, ethnographic subjects, I wish to propose, as opposed to Lien's observation, that anthropologists have recently developed innovative ways of engaging with more-than-human beings in ethnographies. I am deeply inspired by Tsing's proposal (2015) of an alliance of natural history and ethnography to tell "a rush of stories" of multispecies world-making. Tsing's ethnography illustrates how other creatures can make worlds in different rhythms and temporal patterns and how multispecies world-making projects overlap, intersect, and shape each other. Furthermore, Govindrajan's analysis of non-human ethnographic subjects moves "from entire species to particular classes to singular animals and back again" (2018: 21) with the effect of bringing out variations between and within multiple species as they are entangled with people. Finally, van Dooren and Rose's approach of telling "storied worlds" of more-than-human beings, that is, meaningful narratives about the places they dwell in make it possible to consider narrative as no longer the mere preserve of humans.

Moreover, I also take inspiration from the innovative methodological endeavours in more-than-human geography. The more-than-human geography has also deployed a full gamut of critical theories from Haraway, Latour to Deleuze to contribute to sophisticated more-than-human scholarship.

Drawing on the intellectual invention of non-representational theory (e.g., Anderson and Harrison

2010; Dewsbury 2003; McCormack 2003; 2013; Thrift 2008), attention is devoted to documenting the sensual, affective dimension of human-animal interaction. Researchers have thereupon reflected on becoming or learning to be affected by more-than-human beings (e.g., Hinchliffe and Whatmore 2006; Hinchliffe 2007; Lorimer 2006; 2008) and techniques for sensing the world differently through the bodies of others. It has an implication of enabling "human–more-than-human collaborative research relationships" (Dowling et al. 2017: 824), for instance, in knowledge production (Hinchliffe 2007; see also chapter 3A&B and 6A&B of this thesis).

In animal geography, a range of embodied and performative techniques are being developed that borrow field skills, techniques and instruments from disciplines of animal sciences. The purpose of mobilising "ethno-ethology" (Lestel et al. 2006) or ethological-geographical approach (Barua and Sinha 2013) is to facilitate a "rebalancing" of the research agenda to articulate the lived experiences of more-than-humans in shared lives (Hodgetts and Lorimer 2015: 292). For example, Hodgetts and Lorimer's essay has pointed out three areas—monitoring and tracing the spatiality of animal culture informed by ethology, technological, artistic and techniques of inter- and intra-species communication, and genetic analyses for considering novel bio-geographical methods. As Buller claims, these interdisciplinary approaches are meaningful endeavours that suggest "what matters, or what might matter, to animals as subjective selves" (Buller 2015:7), revealing their dynamic manifestations of form and relations—with humans and otherwise.

1.4. Thesis structure

Immediately following this lengthy theoretical discussion, I turn to reflect on some methodological issues regarding field working about visual encounters with more-than-human beings in a more-than-human city. I present thereafter four ethnographic chapters.

Chapter 3A&B focus on the enskillment (Ingold 2000; 2001) of nature-watchers. Nature-watching practices, as I will argue, are trained visual skills as opposed to mere general acts of seeing. The visual

skills of *kannian*, namely being aware of and attentive to more-than-human beings, and *guancha*, i.e., identification of more-than-human beings through comparative observations, constitute two pillars of nature-watching skills to learn. My discussion, nonetheless, has a different agenda on dual learning. Learning for nature-watchers constitutes the fine-tuning of the perceptual toolkits (in my case, the vision) as well as the stimulation of affective energy of the encounters with more-than-human beings.

With this dual focus on trained visions and affect education, these two chapters will analyse the concrete process of training skilled visions and learning to affect and be affected for nature-watchers. I aim to tease out how attention is guided to nurture new capacities for Beijing nature-watchers in the sense of a new way of observing, and new ways of opening up to more-than-human beings in the city. I will discuss three educational settings in which an affective pedagogy is adopted and fused with the training of two visual skills of *kanjian* (chapter 3A) and *guancha* (chapter 3B). They are: public guided bird-watching activities organised by bird-watching societies in Beijing, nature educational programmes provided by Gaia Nature School (GNS), as well as a series of advanced botanical courses for Beijing plant lovers.

In chapter 4A&B, I seek to investigate the shared sociality of nature-watchers and more-than human-beings with productive, epistemic implications. As nature-watchers have allowed themselves to be drawn near and into the lifeworld of more-than human-beings in everyday urban living, knowledge of living beings emerge as richer. I will show how habituated and sustained observations of more-than-human beings, which should be conceived as everyday practices of cross-species relatedness, lead to knowing practice I term as in-person knowing and knowledge of a specific kind I call proximate knowledge. The main ethnographic example discussed is a unique observational activity called *shua yuanzi* enjoyed by Beijing *huayou*.

Chapter 5A&B explore new ideas of multispecies care and relatedness that emerge from nature-watching; they are notably found to challenge existing practices of care. In particular, I show that bird-watchers increasingly disassociate themselves from bird-keepers and bird photographers based on

different ways of visually engaging with birds and modes of care and cross-species relatedness implicated. This new ordering of different forms of care for urban birds is crystallised with a state-led notion of *suzhi*. I will propose that *suzhi* not only valorise bird-watching and bird-watchers as high *suzhi* associated with civility, modernisation, and public morality, but also legitimates certain types of care for birds and human-avian relatedness. Notably, the *suzhi*-based evaluative process hierarchises bird-watchers' care for birds built on detachment and maintaining distance, while delegitimises keeping caged birds as the wrong form of care and bird photography as non-care.

The final two related chapters 6A&B consider the emergence of an array of "citizen science" projects that constitute collective forms of observing and monitoring living beings by the public in collaboration with scientists. Instead of employing the concept of "citizen science", I will situate these projects within a broader, more encompassing image of public participation. My argument is that the conjoined action of nature-watching emerges as a new sensing and participatory paradigm that generates a collective ethos with civic impulses, fostering the making of urban solidarity with more-than-human beings. I will call this collective mode of nature-watching "participatory watching".

The main section constitutes a close-up examination of an exemplary participatory watching project to monitor an endemic species Beijing swift (*Apus apus pekinensis* 北京雨燕). At the heart of my account is to articulate how an ontologically heterogeneous "public"—as beyond the exclusive preoccupation of the intentionality of human participating subjects—coalesces around the livelihood of Beijing swifts. As such, participation embedded in the notion of participatory watching refers to an affective multispecies achievement that is unfolding between urbanites, animals, technological bodies, ornithological experts, the local government, environmental conditions, architecture, and other agents which perform in and through a multiplicity of urban spaces.

2

Chapter 2. Fieldworking in more-than-human Beijing

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This thesis was carried out over a period of 13 months from August 2018 to September 2019, with a subsequent revisit to the field in September 2020. I have encountered a wide range of nature-watching activities—bird-watching, plant observation, cloud-watching, star-gazing, butterfly observation.

The term "nature-watching" emerged in the field when I discovered that some people were self-identified as "nature-watching lovers" (*ziran guancha aihaozhe* 自然观察爱好者). In a book release meeting of the publication of Nature-watching Journals of Tsinghua University (清华自然观察笔记) on 28 September, 2018, the author Bu Gua introduced himself to the audience as a "nature-watching lover" at the very beginning of his talk. According to Bu Gua, as for many other nature-watchers I came across, various ways of watching are "the primary method to approach and get to know the

natural world".

I made the decision to give priority to two categories of nature-watching, namely bird-watching and plants observation, during the process of analysing and writing up ethnographies. For one thing, these two activities are quintessential nature-watching activities: they were thus selected for their representativeness. For another, I have encountered and interacted with considerably more interlocutors who were primarily self-identified as bird-watchers and *huayou*. Having acquired a substantial amount of data on these two types of activities, I considered them much more manageable topics within the timeframe.

I have employed a mixture of methods, including exploring nature-watchers' interactions on social media such as WeChat (2.2), participant observation and doing ethnography at home (2.3), visual research methods (2.4) and ethnographic interviews (2.5), all of which led me to develop the "arts of noticing" (2.6 after Tsing 2015): to take notice of how my interlocutors have acquired an attentive intersubjectivity in the city and to learn to master affective techniques of nature-watching as a novice-researcher myself.

Although this thesis is not intended as an online ethnography of nature-watchers, the social media WeChat (*weixin* 微信)—one of the most frequently used all-in-one communications mobile phone applications in China—was an effective tool for me to enter the field and conduct research. My fieldwork involved long-term observation and participation in several WeChat group chats, and I made it a daily routine to take thirty minutes to an hour daily to check hundreds of messages on WeChat throughout the entire fieldwork.

Fieldwork was conducted in multiple sites in Beijing where the ethnographer, as a native Beijinger, was equipped with the language skills and an established personal network to carry out the research.

Visual methods were critical to my fieldwork, and I have collected a vast number of photographs and other visual materials such as richly illustrated nature journals. These methods involved photo-elicitation complemented by spoken narratives (Banks 2001), collaborative photography with nature-

watchers (Banks 1995; 2001; 2007; Pink 2001), participation in frequent visual practices of observing and photographing birds and plants in the company with nature-watchers, as well as nature journaling (*ziran biji* 自然笔记) as a new way to evoke visual encounters with more-than-human beings.

I joined formal, collective bird-watching activities organised by at least two out of three major bird-watching organisations in Beijing—the China Bird-Watching Society (*zhongguo guanniaohui* 中国观鸟会 henceforth CBS), the Wild Bird Society (*yenioa hui* 野鸟会 henceforth WBS) and Flight Feather (*feiyu* 飞羽) every week in addition to twenty or so informal bird-watching trips invited by bird-watchers. Among these, in about five trips, I was led to unique urban biotopes such as the brownfield land near the untended urban waterway of Sha river along with bird-watchers.

As for observations of plants, I had around eighty informal visits with *huayou* to various urban parks and other plant-rich sites at the city's fringe. It was also with *huayou* that I was introduced to a new way of depicting and recording plants sighted, namely nature journals. Five *huayou* kindly let me borrow their entire sketchbooks, immersing me with their gorgeous journals containing exquisite sketches and fascinating personal observations of plants. I gradually learnt nature journaling by participating in weekly meet-ups with a group of eight nature-journal enthusiasts in Beijing Olympic Forest Park where we spent three or four hours observing and sketching plants together. By the end of my fieldwork, I had accomplished sketches of ten plants based on continuous observations of them, and both my own sketch and sketches from my interlocutors were incorporated in this thesis (see Chapter 4A). At the same time, I have been involved in the Beijing Swift Monitoring Programme as a volunteer swift observer in which I learnt to practice scientific methods of observing and counting Beijing swifts. From March to August 2019, I conducted weekly observations of Beijing swifts at the Kuoru Pavilion in the Summer Palace, and at the same time, I was invited to join volunteers based in Beihai Park to observe swifts together with them about five times.

Lastly, I completed face-to-face, semi-structured interviews with fifty-five nature-watchers with diverse demographic characteristics.

It could be said that my fieldwork finished up with me undergoing a 'dual apprenticeship': I became a more skilled ethnographer as well as a genuine nature-watcher myself.

The following section starts with how participation in formal and informal bird-watching and plant-observation activities afforded me initial and constant access to nature-watchers and their practices.

2.1. Entering into the field through bird-watching

My foray into the field was through participation in a public bird-watching activity organised by WBS in the Temple of Heaven Park on August 13, 2018. I have immensely benefited from the fact that despite being recognised as a "niche hobby" (*xiaozhong aihao* 小众爱好) that is participated by people in a relatively small sociological niche, bird-watching genuinely welcomed new participants rather than restricted participation to a limited community of people.

The information and arrangement about the activity were derived from searching online with the keywords "bird-watching in Beijing". A post with details about this event popped out, as WBS routinely advertises their upcoming bird-watching activities on several social media platforms. I registered by texting the assigned guide (*lingdui* 领队).

In my first-ever bird-watching trip, together we observed more than thirty species of marvellous bird species. I was fascinated by the charm of bird-watching, and became more thrilled and less unsure about pursuing this research into visual engagement with the natural world at the heart of Beijing. In retrospect, I recognised that entering the 'field' was unexpectedly easy for me. Sometimes it takes one to participate in bird-watching activity only once to develop a more serious interest in bird-watching (a process in bird-watching parlance, as "enter into the pit" , or *rukeng* 入坑), and become 'initiated' into the community of Beijing bird-watchers.

In order to document bird-watchers' cross-species encounters, I committed to attending as many bird-watching activities as possible. While WBS organised activities on weekdays and weekends, CBS

and Flight Feather only arranged activities on weekends. Locations of bird-watching activities organised by the three societies also overlapped. Consequently, I normally attended weekday activities by WBS every week, and on weekends, I would need to choose between organisations. I normally jotted down keywords and phrases on my phone throughout each activity and wrote fieldnotes afterwards.

After an initial, ice-breaking phase, I became more familiar with the routines—when, where and how public bird-watching activities were conducted. I gained continuous, repeated access to a community of bird-watchers by regularly attending activities. Nevertheless, my friendship with bird-watchers acquainted from bird-watching activities including guides as well as frequent participants markedly grew by socialising with them, e.g., having post-activity meals (usually at restaurants in proximity to urban parks where bird-watching activities took place) with them and attending self-organised bird-watching trips with a few bird-watchers. Some of these bird-watchers later became my key interlocutors for ethnographic interviewing.

During the course of each public bird-watching activity, I observed participants interacting with each other. I asked for clarification as I saw appropriate or simply engaged in conversations when they sought my opinions. I also tried to initiate informal chats with participants. And it was through a delightful conversation about plants observed en route with Jingzhi, in a bird-watching activity at the Beijing Botanical Garden (one month after I started my fieldwork), that I was connected to a whole new community of nature-watchers, that is, enthusiasts passionate about observing plants who called themselves *huayou*.

In early September 2018, I attended a lecture on botanical illustrations where I met a lady whose knowledge of plants truly amazed me. I discovered afterwards that she was an architect without formal training in botany or biology, but she had taken an one-year curriculum called “botanical courses for *huayou*” (花友植物课). She informed me that she was a member of an online WeChat group called “Beijing *huayou* Group” (北京花友群) and anyone enthusiastic about plants was welcome to join the

group-chat. Thus I was invited by her to join the online group consisting of 483 members.

My initial interactions with *huayou* took place only in virtual space. Jingzhi was in fact the first *huayou* I met offline. Jingzhi and I immediately felt the rapport. She took a genuine interest in my research about exploring the hidden natural world in Beijing. And the way her eyes sparkled every time she noticed and recognised a plant struck the chord of my heartstrings. We added each other as a friend on WeChat before we came to the shared realisation that we already belonged to the same WeChat group for Beijing *huayou*.

It was through Jingzhi and her personal network that I got to meet more *huayou*. Among them, Xiaoqing and Lele (the current owner of the WeChat group-char), two avid *huayou* and close friends with Jingzhi, became my key interlocutors (I told their stories at length in Chapter 4A&B).

Because there were no regularly organised activities for me to have repeated access with *huayou*, I maximised my interactions with them by accompanying them in frequent visits to botanical gardens, attending botanical courses with them, and going to botanically interesting exhibitions together, and so on. A large part of my fieldwork with *huayou* involved learning with them as their classmates in various outdoor and indoor locations, including an elegantly designed conference room at a teahouse (to serve as a classroom), botanical gardens and several urban parks.

Lucky for me, none of these training courses restricted access to the public. From September 2018 to June 2019, I enrolled in and finished a series of courses. These included nature educational programme called “Getting To Know Plants in Beijing for Adults” (教你认识北京的植物成人课) provided by Gaia Nature School (GNS) (the course lasted throughout four seasons from autumn 2018 to summer 2019), as well as advanced botanical courses for Beijing *huayou* consisting of twenty weekly lectures and fieldtrips. I considered it a good idea to observe and interact with known interlocutors and widen the research population by attending various training programmes that appealed to nature-watchers. Information about relevant courses was sourced either directly from individual interlocutors or through searching the internet for information.

In short, participation in formal and informal bird-watching activities and plant-observing trips together with nature-watchers afforded me initial and constant access to the community of nature-watchers. It was simultaneously complemented by my observation and participation in the online community of nature-watchers on the social media WeChat, which I will now turn.

2.2. Making use of WeChat

My fieldwork involved observing and participating in the online community of nature-watchers on WeChat (*weixin* 微信). Not long after my fieldwork commenced, I was welcomed to several (roughly 20 groups) WeChat group-chats (*qunliao* 群聊) where different circles of nature-watchers gathered—bird-watching, plants appreciation, cloud-watching, butterfly-observation, and so on. WeChat then became the most essential and convenient tool for negotiating meetings and contacts with my interlocutors, and brought me closer to a network of interlocutors. Even after the fieldwork was completed in August 2019, I did not completely withdraw from the online community, and group membership and solidarity persisted. My continuous participation within the online community complemented my offline follow-up visits to the field during 2020, which contributed significantly to formulating my ethnography during the writing-up phase.

Nonetheless, I do not consider this thesis an online ethnography per se (e.g., Kozinets 2010; Hine 2015; Pink et al. 2016; Miller et al. 2016), since doing fieldwork in the online community only complemented and can only be assessed in relation to my research of the offline community. In this sense, my observation of the WeChat groups seems resonant with the view of Facebook of Miller's interlocutors that Facebook is used to balance out the intensive sociality within a close-knit village rather than to substitute the offline community.

That said, online research on social media was beneficial to my research in two ways. First, it generated great potential to widen the research population, affording me instant access to a network of potential interlocutors through WeChat, in contrast to snowballing from only one or two key

interlocutors in the traditional research setting. Second, immersion in the online communities of nature-watchers maximised my interaction with interlocutors. One disadvantage of doing fieldwork in urban settings is the difficulty[22] of establishing co-presence with interlocutors on a day-to-day basis by co-inhabiting with them for a long term. Many of my interlocutors lived scattered throughout the city. And given the enormous size of Beijing, some of my initial face-to-face encounters with them were only momentary social events. WeChat made it easier to sustain interactions between interlocutors beyond limited face-to-face communication. I took active participation in the group-chats, checking hundreds of messages daily to observe the flow of discussion. As long as my interlocutors and I remained "friended" on WeChat, I was able to read and comment on their posts on their Moment (an equivalence of the "Timeline" on Facebook). In this manner, I could not only stay informed about their viewpoints regarding social issues of interests, but also have more opportunities to maintain interpersonal interactions with interlocutors.

To sum up, researching on WeChat complemented and deepened my offline interaction with nature-watchers, thus assisting me to generate desired 'thick' data.

2.3. A note on place: doing more-than-human ethnography at home

My fieldwork took place in Beijing, where the common anthropological distinction between the "field" and "home" collapses. Although growing interest in nature-watching has been noted in several major cities of China such as Beijing, Guangzhou, Shanghai and Chongqing, Beijing—where I was born and raised—has attracted my attention for several reasons. I decided to conduct ethnography at home not

[22] Though there are parallels between urban ethnographies of urban neighbourhoods, for instance, and ethnographies in traditional rural settings in which an ethnographer becomes a resident of the community under study. For examples in the context of urban China, see Pow's study (2009) on gated communities in Shanghai and Zhang's work (2001) on Zhengjiangcun in Beijing.

simply because the fluency in the local dialect and established personal network offer me an obvious advantage to ease my entry into the field. Moreover, I became aware that many of my interlocutors conceived the capital city as a sine-qua-non place where nature-watching activities were first emerged and popularised. And more importantly, I believe that my ethnography at home exemplifies the merit of critically engaging with the culturally familiar that we tend to take for granted.

Beijing was considered by my interlocutors as the first city where bird-watching, a hallmark nature-watching activity, was introduced to the Chinese public. A significant advance in bird-watching has been made in Beijing, more than in any other area in China. Three major bird-watching societies, WBS, CBS and Flight Feather (which were all founded in Beijing), were particularly recognised for their national impact and rich history of development. As for other categories of nature-watching activities, informal gatherings of enthusiasts—both online and offline—have been proliferating in Beijing. For example, one of the first amateur associations dedicated to studying clouds and other atmospheric phenomena (e.g., solar halo and circumzenithal arc) was formed in Beijing.

Furthermore, Beijing was often regarded as the cradle of urban nature education (*dushi ziran jiaoyu* 都市自然教育). The director of one of the oldest nature education institutes observed that prospective job-seekers found Beijing an unbeatable place to pursue a career in nature education. Meanwhile, learners expressed to me how Beijingers were privileged with so many great nature education programmes to choose. In a word, when it comes to documenting the emergent urban culture of nature-watching, Beijing is second-to-none.

Another reason I was interested in Beijing as my field site is predominantly due to its fascinating dynamics as China's cultural and political capital. Faquhar and Zhang (2012) have summarised ordinary life in China as "full of political concerns". Wondering about the particular convergence of biopolitics of the Chinese nation-state and daily life, they have turned their attention to none other than the capital city. Since my thesis relates nature-watching to the new political reality in post-reform China, Beijing is thus a perfect option to examine the deeply felt political agenda that inhabits even in

nature-watching's new public leisure activity.

Lastly, it is worth explaining why my positionality as a native Beijinger is relevant. Some advantages of doing ethnography at home are more obvious. I shared with many of my interlocutors in Beijing a lingua franca, the local dialect known as *Beijing hua* (北京话 Beijing dialect). Though the Beijing dialect sounds very similar to Mandarin Chinese (the official language of China), some vocabularies are entirely missing in Mandarin. Thus adept in the local dialect, I hoped to gain some fresh insights about my interlocutors by attending to the specific colloquialism and idioms they used (see chapter 5A&B).

And more importantly, I have incorporated a strategy of translation from the familiar to the strange for telling the story about more-than-human urban living in Beijing. This is the strategy deployed by Lien to tell her story of the making of salmons in multiple sites. Rather than delve into the unknown, the kind of journey that is the hallmark of anthropological fieldwork, Lien did the opposite thing to take her departure from the familiar. "The concepts and assumptions that we all share and took for granted", she underscores, "would be the most significant and important to unpack" (2015: 20). Thus concepts like "nature" and "salmon" are more analytically important to examine than the vernacular specifics to the Norwegian west coast.

In a similar vein, I chose to conduct fieldwork closer to my home was to question precisely those seemingly self-evident truths such as the conventional ontological divide between the urban and the natural in a familiar context. As with several urban ethnographies, constant interaction with interlocutors necessarily took me out of any seemingly bounded neighbourhood that constituted my multi-sited ethnographic research. Many of these sites were not unfamiliar to me as a native Beijinger, but I have never conceived them as places for multispecies encounters or what Haraway terms "contact zones".

These "contact zones" encompassed several urban parks[23], reframed in the eyes of nature-watchers

[23] Given my regular visits and prolonged presences in these parks to observe and interact with nature-

as fascinating sites for encountering a multiplicity of flora and faunas. For *huayou,* two botanical gardens, namely the Beijing Botanical Garden and the Botanical Garden of the Institute of Botany of the Chinese Academy of Sciences (IBCAS) were frequently visited (see chapter 4A). As for bird-watching, urban parks, where weekly public bird-watching activities took place, became widely accepted as perfect sites for multispecies encounters. Currently, WBS partners with eight urban parks (Figure 2.1) to conduct bird-watching activities. These included the Beijing Botanical Garden, the Temple of Heaven Park (Tiantan), the Beijing Olympic Forest Park, Honglingjin Park, the Old Summer Palace (Yuanmingyuan), Liuyin Park, Yuyuantan Park, and Tongminghu Park.

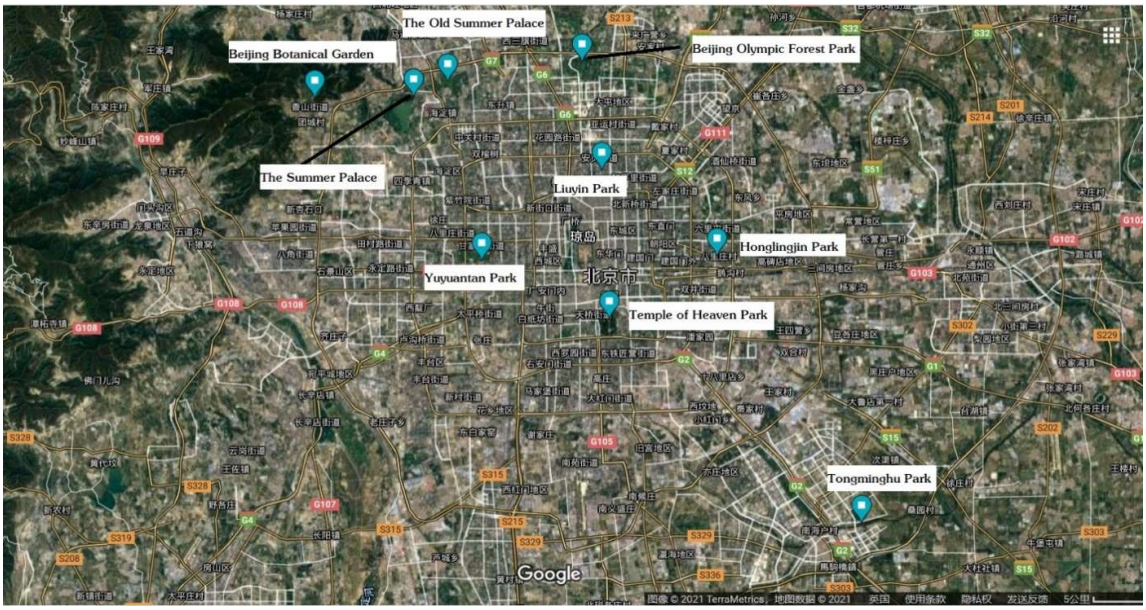

Figure 2.1 Eight urban parks where public bird-watching activities are routinely organised by WBS

In addition to park-visiting, I also followed my interlocutors to the urban fringe areas, or what Gandy names "urban wastelands" of the urban landscape—a vacant lot, sewage pond, unattained green spaces, untended urban waterways, derelict brownfield lands—to spot species of plants, birds and insects that

watchers, my research falls into the category of a small body of ethnographic studies of "park activities" in various Chinese cities, examining a range of public leisure activities taking place in urban parks. Examples include Zito (2004) Farquhar (2009), Richaud (2016), just to name a few.

were flourishing there. As my relationships with some key interlocutors kept blossoming, I was invited to step into some secret corners discovered and treasured by my interlocutors to savour and observe their more-than-human neighbours. These areas were usually closed to where my interlocutors lived and thus exemplified "nature at the doorstep".

My fieldwork at home city drastically interrupted the received assumptions I had about cities and Beijing in particular. By the time I finished my fieldwork, I was showering in a revitalised feeling of wonder about the land I inhabited, fascinated by the diversity of more-than-human beings who live by our side in the city but remain invisible unless one starts to unsettle which is taken for granted.

2.4. Visual research methods—working with photographs in the field

As this thesis is critically concerned with vision and visuality, visual methods are particularly suited to carry out my research. As touched on above, I have adopted several visual research methods in the field. I will explore some of them, such as participation in visual practices of nature-watching and nature journaling, in ethnographic chapters in more detail. In this section, I would like to say a few words on my usage of photographs taken by myself and my interlocutors as part of my ethnographic research. In particular, the methods of photo-elicitation and collaborative photography have produced much richer materials that complemented and inspired new narratives and responses of my interlocutors. Photographs, like nature journals, were not solely a means of data collection, but rather a meaningful way of producing data involving myself and my interlocutors.

Photography was a key visualising practice for nature-watchers as a preferred method of recording their observations. I thus paid particular attention to interlocutors' engagement with the visual media of photography and how this engagement informed their more-than-human urban experience.

I adopted the method of photo-elicitation (Pink 2001; Banks 2001; 2007; Rose 2014) with the alteration from the conventional usage. Normally photo-elicitation entails the researcher using photos

to invoke "comments, memory and discussion" during interviews (Banks 2007: 65). Comparatively, I had ample opportunities to witness how nature-watchers took photos in collective nature-watching activities. Therefore I took advantage of such occasions to try to elicit their comments (sometimes they naturally made remarks about the photos taken) about the characteristics of photographic images they created—why they took pictures of a particular living being or why they framed the subject in a particular way—immediately after they snapped a picture. Photos were useful prompts to further insights into nature-watchers' photographic culture. And I found them useful for opening a conversation with amateur bird photographers (see Chapter 5A&B). As we will see, the level of the corporation was surprisingly high.

Also, I would occasionally ask for nature-watchers' advice, as I saw desirable, on how to best capture certain living beings in the way they normally did. It may find parallel with Banks' approach of doing collaborative photography informed by both him and his interlocutors' knowledge (Banks 2001; 2007; Pink 2001: 61). This experience of me producing images as guided by interlocutors and discussing images thus became revealing ethnographic knowledge. Mrs Li's guidance on photographing a wild buckwheat (*Fagopyrum esculentum* 荞麦）along an urban waterway is a salient example. As I was prepared to shoot the plant from above, barely bending my body, Mrs Li suggested another point of view. She quickly crouched on the ground, her phone pointing slightly upward at the plant to take a low-angle shot. I will never forget what she said to me. "You need to lower your body to shoot the grass so that it looks more magnificent (*xiaocao kanqilai gengweida* 小草看起来更伟大）."

Furthermore, similar to many ethnographers, I took abundant pictures during my fieldwork. These photographs were more than mere recording of fieldwork, however. Rather, photography became an effective tool for me to engage with more-than-human beings encountered. For instance, I incorporated "time-lapse imagery"[24], i.e., a series of photos repeatedly taken to display variation. Inspired by my

[24] The method is well-used to document the phenology of organisms. See for example Boyer 2010.

interlocutors, I had several groups of pictures of select plants continuously taken whenever I visited them. These pictures revealed compellingly the constant transformation of plants, which Pitt regards as a valuable tool to make the agency of plants more perceptible (2014: 5).

In short, photographic content, the narrations photographs tend to evoke, and collaborative practices of creating photos with interlocutors have provided me with a valuable route to understand what and how nature-watchers saw or understood more-than-human beings encountered. Moreover, I learnt from my interlocutors to employ a series of time-lapse photos of specific living beings during constant observations.

My adoption of visual methods and, in particular, those involved photographs came to reinforce and inspire new spoken narratives. Another key method to elicit interlocutors' narratives that I employed is ethnographic interviewing. This will be our next topic.

2.5. Ethnographic interviews

I conducted semi-structured interviews with fifty-five nature-watchers with diverse demographic characteristics. The semi-structured interview was a particularly powerful research tool to elicit in-depth personal stories of my interlocutors.

According to Heyl, ethnographic interviewing differs from other types of interview projects by a "genuine exchange of views and enough time and openness in the interviews" (2007: 369) for interviewees to become more empowered to shape the questions being asked in their own world-views. A key characteristic of my interviewing that falls into the ethnographic tradition is that it was only conducted later in my fieldwork when I had a high level of rapport with some interlocutors.

What's more, some of the interviews could be characterised as life-history interviews with a specific focus on people's life experiences and circumstances they deemed important to bring out in our interviews. Interviews were all conducted in places chosen by my interlocutors. Interestingly, several interviewees chose an outdoor area where they had done nature-watching, e.g., a quiet spot at

an urban park. It was quite a novel experience to interview with the interlude of observation of natural beings in the surroundings.

2.6. Arts of noticing

All methods discussed above led me to learn to master the "arts of noticing", a beautiful concept and method proposed by Anna Tsing (2015), which I further developed in combination with Hsu' earlier proposal of "participant experience" (Hsu 1999; 2006). This leads me to characterise my fieldwork as essentially a participant experience of learning to notice at an affective level. To live up to the ethnographic promise to enliven more-than-human beings encountered in Beijing, the methodological strategy of "arts of noticing", distinct from the classic participant observation technique, is crucial in my research.

To Tsing, anthropologists are accomplished at noticing—fieldwork is all about noticing and learning from what they have noticed (Lassila and Tsing 2017: 28). But the challenge for anthropologists, as she proposes, is to give attention to other organisms which are part of our lives and yet are often beneath the notice of people because they are different or peripheral to the current political agenda. Noticing, Tsing suggests, is needed to appreciate the juxtaposition of multiple temporal rhythms and different world-making projects, human and not human.

This thesis addresses this neglect by enabling a sympathetic analysis of more-than-human beings and, in particular, the affective and felt dimension of cross-species engagement, entanglement, and co-becoming. The method of arts of noticing was revealing to my research in mainly two aspects. First, the method grounded in an interdisciplinary alliance allowed me to draw on methods of field-based observation from other disciplines, e.g., ornithology, botany, ecology and natural history. And significantly, since I was largely indebted to my interlocutors to show and teach me these new ways of observing more-than-human beings, my adoption of the arts of noticing could be said to reconfigure my fieldwork method as participant experience of learning (instead of simply doing participant observation). In this way, I transformed myself into a novice-researcher.

Second, in a similar manner as Tsing traces intertwined world-making projects within an open-ended assemblage of humans and nonhumans, I practiced the arts of noticing to attend to affectively

imbued encounters between urbanites and more-than-human beings. To appreciate specifically how more-than-humans and nature-watchers were caught in and made each other act differently within interspecies relationships shed light on affect.

To start with, at the heart of Tsing's idea of the arts of noticing is a new way to inspire collaborative ways of observation. In her matsutake project, she refers to the arts of noticing as an alliance of natural history and ethnography. Human-disturbed landscapes are perfect sites for "humanist and naturalist noticing" (2015: 216) such that the coming-together of histories of nonhuman participants and those of humans made in these places become known. In the ongoing Aarhus University Research program on the Anthropocene led by Tsing, both biologists and anthropologists go to the ruined landscapes at central Jutland, sharing notes on the method of the arts of noticing. The dynamic of these ruined, weedy landscapes, as she proposes, epitomises the kind of problem anthropologists and natural scientists might think about together. Here the arts of noticing appear to echo the conjoined method of ethnography and ethnology (specifically the writings of the 19th-century animal ethologist Jacob von Uexkull and his concept of umwelt) in geography to enable time-deepened accounts of animals in its social, ecological and material circumstances (e.g., H. Lorimer 2006; Hodgetts and Lorimer 2015).

For most days in the field, I readily took the position as the receiving end of the guidance of my interlocutors, which constituted my fieldwork as a form of participant experience of learning. Hsu's idea of "participant experience" (1999; 2006) is an earnest attempt to modify the unbalanced and potentially power-laden relationship between the researcher and people with whom she/he works. The idea was developed during her fieldwork on Chinese medicine in Kunming, where she worked as not only an ethnographer and participant observer, but also someone who wish to learn specific, technical knowledge and practice. As she mentions, "my position as student, follower, and disciple placed the doctors and healers I interacted with in the position of 'teacher' (*laoshi* 老师), 'mentor' (*xiansheng* 先生), or 'master' (*shifu* 师父)" (1999: 15). I was in a similar situation in my fieldwork, assuming the dual roles of an ethnographer and a novice new to nature-watching prior to fieldwork.

My interlocutors were all-devoting when it came to sharing their own methods of observing more-than-human beings, as I, the researcher-novice, was constantly shown around the rich more-than-human lifeworlds by my interlocutors. Most of them aligned their methods of observing plants and animals as amateurish (*yeyu* 业余) and naturalist (*bowushi de* 博物式的) instead of professional and

purely ‘scientific’. Nevertheless, in the process of learning to conduct observations, they received no less instruction from, e.g., ornithologists, ecologists, botanists, entomologists, to name a few. As my interaction with nature-watching deepened and my skills in nature-watching developed, I even experienced a shift in roles from a novice bird-watcher to a guide in public bird-watching activities who helped newcomers grasp bird-watching techniques and learn basic knowledge about local bird species. It was common for most nature-watchers to undergo a transformation in forms of participation and membership to the community of nature-watching practice——from entrance as a novice to a point when newcomers transform into old-timers (Lave and Wenger 1991: 56).

I was indebted to my interlocutors for their guidance to fine-tune my attention to more-than-human beings in the city. They have offered me immense guidance on what, when, where and how to observe more-than-human beings in Beijing. I wish to emphasise two aspects that I have learnt from interlocutors and deployed to practice arts of noticing of more-than-human beings in my fieldwork.

First, I was impressed by how my interlocutors were adept at multi-scalar observations, moving from entire species, to particular swarm or flock, to individual animal or plant. It was in particular from *huayou* that I leant to move away from understanding plants as species types to acknowledge their individualities through repetitive attending to individual plant’s being-in-the-city. And in so doing, they taught me that plants have individual feelings, intention, and intelligent competence (chapter 4A&B).

This form of guided noticing of individual more-than-human beings also had an impact on how I depicted more-than-human beings. Chapter 4A&B will introduce a modern rendering of classic naturalist writing based on long-term continuous observations of individual more-than-human beings, namely natural journaling.

Second, I attempted to cultivate a “precise inattention” in the fieldwork following my interlocutors. I have met and worked with many nature-watchers who were constantly concerned about what was happening to more-than-human beings in the city whenever they went. The mode of “inattention” refers to an immersive sense of feeling enmeshed in the diverse company of living beings that contrasts with a purposeful discovery form of observation.

I also aimed for this kind of openness toward more-than-human beings in the urban world, immersing myself in the lively and transformative encounters with a multiplicity of more-than-human

beings as my interlocutors did. I attended to and looked closely at a wealth of living beings encountered, pondering over how they have been predicated in the city's wider historical development and political dynamics. In this sense, my method of immersive observation finds resonance with Gandy's methodological approach of "attentive observation" (Erwien 2019) to study small spaces of nature within the urban area.

The method of arts of noticing at the same time helped me grapple with what forms of cross-species relationships and more-than-human agencies might arise through affective encounters. We have to bear in mind that affect works in both directions, that is, both humans and more-than-human beings can affect and be affected in these reciprocal interactions. As such, while my ethnography tended to be provoked by more-than-human ways of living, the focus on affective encounters necessarily drew nature-watcher into the frame. To this end, coupled with sustained ethnographic attention to more-than-human beings in my day-to-day urban living, I simultaneously employed the conventional ethnographic method to document how more-than-human beings became capable of affecting, displacing, and transforming human bodies and conduct before and after encounters.

As Tsing (2015) powerfully reminds us, noticing is necessary to track "transformative encounters" between lifeways. In the spirit of noticing transformations, I conducted participant observation of nature-watchers' activities, paying close attention to how their bodies, feelings, routines, skills, and so on were displaced or made different through visual encounters with more-than-human beings. This is not only to understand nature-watchers' practices, but also can be read from the affective roles of more-than-humans in encounters with nature-watchers. By focusing on transformations, I hope to render intelligible new agencies of both urbanites and more-than-human beings gained.

Nevertheless, my ethnography may be critiqued as limiting to bring about the more-than-human forms of agency, their lived experience and lifeworlds in the city. Despite acknowledging that affect and being affected as two sides of the same coin, I, unfortunately, have less to say about how more-than-human beings are affected by nature-watchers, and how they see humans. People loom large in my ethnography. I would acknowledge this limit but nevertheless take it as a productive challenge to rethink new methods to afford "a more sustained and material engagement with nonhuman lifeworlds and animal cultures" (Hodgetts and Lorimer 2015: 286) than the mediated, human-centric ethnographic techniques. Meanwhile, this limit to knowledgeability can prompt us to a new style of

knowledge-making when engaging with more-than-human beings, so that we may develop a theory of relating that starts "not with secure…knowledge of other beings, but with…provisional guess…" (Kohn 2013: 86).

2.7. Delving into the forest of ethnographic happenings

The volume of data collected encompasses 55 interviews with an average duration of an hour and a half, about 180 observations, some 60 documents, raw field notes of nearly 600 pages, analytic reports and memos of 300 pages, and a broad collection of visual materials (see section 2.4) of nearly 1300 pictures and 50 entries of natural journals.

Instead of using specialised software to process qualitative data, I relied on Evernote, an online note-taking app to create, store, manipulate, organise, share, and search a broad collection of written materials, including my field jotting, field notes, analytic memos, interview transcripts and so on. The app allowed me to create notes that were automatically synced on my phone and laptop. Significantly, the app served as an online database to maintain the data corpus of all written materials I have generated and collected throughout the research.

I employed the strategy of more selective open coding when dealing with interview transcripts. It is not to deny the analytical value of interviews. Instead, I decided not to make full transcription because first, transcripts of 55 semi-structured interviews tend to contain a vast amount of data than necessary, which makes complete coding an extremely time-consuming task. Moreover, thanks to a powerful voice recorder designed to support automatic voice-to-text conversion (with each speaker individually separated), I was able to accumulate a collection of reasonably converted text as soon as I finished interviews. All I needed to do was skim through these raw texts, select relevant paragraphs, and re-transcribe relevant paragraphs myself. I indexed and summarised much of transcribed texts, transcribing only what seemed essential. I then coded the selected sections of transcripts.

In addition to fieldnotes and interview transcripts, I collected documentary data, including official reports, news, census data of, e.g., bird-watchers and bird-watching organisations, published first-hand accounts of bird-watchers and *huayou*, and historical documents. I employed content analysis to examine these documents. Analysing these materials opened up new avenues for thinking, and served to complement and validate other sources of data.

I followed the wise counsel of my supervisor so that my analysis of empirical materials was conducted concurrently with data collection. As a result, I generated analytic memos fieldwork reports and other forms of analytic writings every week to keep my analyses updated with the data collected. Interim reports about preliminary findings were then shared with my supervisor for her to comment on every month.

The core technique I employed to find my way through the forest of a wide array of data was analytic coding. I adopted the approach of coding ethnographic data in two phases: the first cycle of open coding and the second cycle of focused coding (Emerson et al. 2011).

In open coding, I turned the gear to sift through, sort and condense the many pages of fieldnotes and other materials and assigned them to diverse categories to entertain all analytic possibilities. My very first task concentrated on close reading of fieldnotes as a complete corpus with fresh eyes. I was submerged in the entire record of field experience as it evolved over the time.

I read my fieldnotes and interview transcripts line by line, writing specific coding as side comments. During this stage, I benefited greatly from the leads and insights from analytic memos produced earlier to conceptualise and reflect on analytic categories and open new thoughts. I consolidated all similar examples of segments of fieldnotes identified with the same code into one document, and entitled the file with the corresponding code.

My first plunge into many written accounts in open coding yielded 58 codes, with paragraphs of fieldnotes and transcripts now labelled and coded. As some codes started to appear repeatedly, I also turned to keyword search to sort and select relevant chunks of data to avoid partial selective sampling of events and examples. One advantage of using an all-in-one note organiser was that I could search for keywords comprehensively in all files. The fact that such searches were virtually instantaneous facilitated a more thorough examination of the data to search for patterns in the initial data analysis process.

Re-reading labelled and coded fieldnotes and transcripts, I started to identify a discernible theme. The list of examples grouped under the code “transformation” seemed significantly longer than other lists. As I searched for the code “transformation” to double-check, I found many references to transformative accounts in the field notes that established a clear pattern in my data. Various interlocutors disclosed before-and-after effects through participating in nature-watching activities in

multiple settings. For example, many interlocutors' accounts contained comparative contents to indicate how they had changed in terms of their bodies, health, social relationships, views of the city, urban lives, relation to the natural world and so on, since they took part in nature-watching activities. "I used to…but now I…" was a recurring phrase. I also noticed that one 'indigenous' way in which nature-watcher organised themselves was on the basis of their constantly shifting positions from a novice to a master practitioner. Put differently, nature-watchers tended to characterise themselves as avid lifelong learners with the constantly felt transition towards sighting and learning new things about various living beings in Beijing.

The recurring theme of transformation through nature-watching with the promise of new experience bore ethnographic reliability. I thus identified "transformation" as the master code in open coding to indicate various transformative processes nature-watchers underwent.

After identifying the master code for further analysis, I sorted fieldnotes again, broke down the corpus of fieldnotes into smaller sets and collected all pieces relevant to the emerging themes. I was able to make a connection between the master code with other codes, including new visual skills, a sense of newness and well-being, making and learning new knowledge about more-than-human beings, perceiving and inhabiting the city anew, discovering unexpected species in urban lives, varied modes of care for urban birds, "green citizenship", seeking justice on behalf of "animal/plant neighbours". These were identified as subcodes pertaining to transformation.

After completing initial open coding and sorting the fieldnotes based on emerging core themes, I turned to focused coding that involved fine-grained reading and analysis of selected notes. By breaking down fieldnotes more finely into subthemes or subtopics, this process generated new topics and led to new ways of connecting different themes. I sifted further through identified subcodes related to transformation, reorganising, comparing, and linking together codes. I found a more coherent way for telling a story about the transformative encounters in nature-watching, which consisted of the following analytical themes: transformed ways of understanding and experiencing of urban spaces, enhanced skills for sensing more-than-human beings, new urban citizenry concern for more-than-human inhabitants, new knowledge and knowledge-making practices of multiple urban species, and alternative modes of multispecies care. By now, I was afforded a fresh insight into the transformative events in nature-watching. Underlying all aspects of the transformation of nature-watchers mentioned

is this sense of transformed cross-species relatedness. In other words, at the heart of nature-watchers' felt transformation is the becoming of their relational capacities to enter into connections with multiple more-than-human beings in unprecedented and more intensive ways.

At this stage of analysis, I became more involved in developing progressively theory-driven analysis. A central puzzle I grappled with was in what ways nature-watching practices produce such transformative effects to enhance cross-species relatedness? This became a key theoretical question to which I was responding. A crucial feature of nature-watching that I took for granted in earlier coding re-emerged as significant. I documented an in-vivo comment, a quote that several interlocutors cited to me not long after I started fieldwork. The quote went: "only if we see, will we understand; only if we understand, will we protect". I wrote analytic comments about this quote in my memos, but it was only rendered meaningful to me when I started to ponder on the theme of transformative cross-species relatedness. It made me aware of the visual experience of nature-watching and its potential to direct attention and action and transform urbanites relationships with multiple species sighted. A flash of insight occurred to me that the perspective of affect—a concept that primarily concerns "relations in encounters" (Massumi 201: x)—may hold promise to make sense of visual encounters in nature-watching and its distinctive, transformative potentials to foster cross-species relatedness.

Prior to this research, I conducted a research project on human-plant interaction from the perspective of affective more-than-human atmosphere. My previous analytical commitment to affective atmosphere and the concept of affect, plus my knowledge of the literature of affective encounters where multispecies are concerned (in particular Despret 2004; 2013) kicked in.

The recurring quote implicated the behaviour change from seeing to protecting in responding to more-than-human beings; theoretically, this suggested to me the working of affect in the acts of sighting more-than-human beings, so new actions may occur. Affect only occurs when there is a change in the body's capacity, through the coming together of many things. I thus proposed a preliminary explanation that nature-watching creates a condition for intense and affectively charged visual encounters with more-than-human beings. These encounters open up a relational milieu with rich affective tonality where urbanites are disposed to act in certain new ways, as manifested in the recurrent theme of transformation. Critically, their capacity to connect with multiple species is actualised and augmented.

I put my initial propositions to test for consistency, as I worked on drafting thematic narratives. I wrote Chapter 3A&B on visual training and learning to affect and be affected first. This is because first, I identified the learning experience of nature-watchers as a key event, a crucial pre-condition for the becoming of nature-watchers in the phase of open coding. Second, it was from writing these two chapters that I became more convinced about the key role of affect to theorise the relational potentials of visual encounters with more-than-human beings in nature-watching. Both chapters capture the affective and relational dimension of visual experience in nature-watching compellingly.

The visual training I have examined in Chapter 3A&B goes beyond the "one-way directedness toward the world" (Willerslev 2007: 30). Rather, sighting incorporates a gesture of mutuality and responsiveness. The notion of affect allows me to uncover nature-watching as a relational event that connects nature-watchers and more-than-human beings sighted in specific ways. There is an affective logic embedded in the visual experience of engaging with the presence of more-than-human beings. From the part of nature-watchers, their capacity to see and identify some animals or plants can be said to result from affecting and being affected. A person who sees more-than-human beings must become more sensitive and attentive to the many others in the world; she/he must make her/himself available to be moved and affected by others and simultaneously affect others. Correspondingly, from the part of the living beings seen, it is also a matter of affect when they make their presence felt and make a difference to how nature-watchers act. In this way, I further condensed and theorised the master code of transformation as the change in capacities—of both humans and more-than-humans—to connect with each other, which is activated by affective encounters in nature-watching practices.

From there, I reorganised my data corpus again and continued to investigate ethnographic experience from excerpts of fieldnotes. During this process of analysis, I also contemplated rival explanations, running empirical materials through alternative perspectives. As I kept reviewing my materials, the hypothesis of affective visual encounters with transformative potentials to strengthen cross-species relatedness got increasingly compelling, as more, stronger, and more varied examples emerged.

I was explicit and self-aware that the inevitable biases existed. Therefore, I embraced several techniques to enhance the validity of my analysis. For instance, I employed data-source triangulation, that is, using and comparing different sources and types of data. Moreover, as I reframed my role as

both an ethnographer and a novice nature-watcher learning from my interlocutors (see the previous section), I took advantage of the technique of self-observation in certain places, to further check the plausibility of arguments. This technique finds parallel to Anderson' s notion of "analytic autoethnography" (2006). The purpose is to develop and confirm analytic insights of affect as a full member of the research setting, rather than putting myself before the thoughts of my interlocutors in a self-indulgent manner. For instance, I turned to self-reflections on processes of becoming affected by more-than-human beings at some points of theorising (see Section 3B.5 of Chapter 3 on auto-affection). Meanwhile, I sought informal "respondent validation" (e.g., Bloor 1978) by giving a few key interlocutors pieces of the draft thesis and analytic writings in Chinese to solicit their comments and feedback. Some interlocutors endorsed my inferences, and they were even helpful in supplying additional contextual information to further support my interpretation. Others found the idea of affect murky and hard to understand. Even so, they generally agreed with the proposed effects of nature-watching on how they interacted with and developed new relationships with more-than-human beings sighted in the city.

3

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Chapter 3A. Training a nature-watcher's eyes

On October 29, 2019, China Central Television (CCTV) premiered a new documentary series entitled *Our Animal Neighbours* (*women de dongwulinju* 我们的动物邻居). It sparked wide viewing and discussion among my interlocutors; all of a sudden, it became a hot topic extensively

discussed within several online WeChat groups of nature-watchers.

The excitement for the documentary series was widely shared: not only because some people themselves debuted and were filmed in some episodes (e.g., bird-watchers who participated in the citizen scientist programme of monitoring the Beijing swift). More importantly, watching the opening montage of a diverse range of animals appearing in the city landscape—red squirrels in *hutong* alleys, town pigeons soaring to the sky, eastern magpies roosting on a large pagoda tree, a flock of large-billed crows overseeing the busy ring road—reminded these nature-watchers of the amazement of finding themselves entangled with a rich diversity of species.

The director of the series left a thought-provoking mediation in a post blog: "As long as we take notice [of our animal neighbours in Beijing], they appear; when we ignore them, they suddenly seem to vanish into thin air" (Figure 3.1). How should we understand the play of visibility and invisibility of more-than-human neighbours conveyed in this remark? How do we "acquire" eyes (Latour 2004) to really see those patches of the natural world that are folded into the cityscape of Beijing? What does it mean to see anyway? These are the questions addressed in this chapter.



Figure.3.1 A screenshot of the blog written by the production team
The caption reads: “You cannot see me whilst I can see you”.
Source: https://mp.weixin.qq.com/s/SZuisJ4Qj562ev6H6DAzbw

The following two interlaced chapters are preoccupied with learning and education. My discussion aims to expand the idea of education beyond an explicitly didactic context. Learning, as will be discussed in this chapter, constitutes the fine-tuning of the perceptual toolkits, which are, in my case, skilled ways of looking. Furthermore, in chapter 3B, I shall investigate the affective dimension of learning to induce new capacities of nature-watchers via modulating the affective energy of encounters with more-than-human beings.

I argue that encounters with more-than-human beings in the city are not a straightforward matter of humans registering their presence. Rather, it is a progressive enterprise requiring an education of skilled ways of looking. The visual training I characterise goes beyond the "one-way directedness toward the world" (Willerslev 2007: 30). It is best captured, perhaps, as a gesture of "response" (Griffero 2014). As will be highlighted, response is evoked in the sense of being "respons(e)-able" (Barad 2007; Haraway 2008; 2016), that is, to not only respond but also to be able to feel one's response. I will argue in chapter 3B that an "affective pedagogy" (Staunæs and Raffnsøe 2019) has been incorporated in the visual education for nature-watchers. It trains the capacities of nature-watchers to develop new ways of being affected by and of affecting more-than-human bodies.

With this dual focus on trained visions and affect education, the following two chapters 3A and 3B intend to explore the concrete process of visual education for nature-watchers in association with learning to affect and be affected. I wish to discuss three educational activities in which the education of two visual skills essential to nature-watchers, namely *kanjian* (看见) meaning "to see", and *guancha* (观察) meaning to identify, are coupled with learning to affect and be affected by more-than-human beings. The three settings consist of (1) public guided bird-

watching tours organised by several bird-watching societies in Beijing, (2) nature educational programmes provided by the Gaia Nature School (GNS) and (3) a series of advanced botanical courses for Beijing plant lovers known as *huayou*.

In chapter 3A, I analyse the dual learning of *kanjian*, concentrating on guided bird-watching and nature education programmes to teach adults local plant species. I aim to investigate how attention is guided and expanded to nurture new capacities for Beijing nature-watchers to *kanjian*, in the sense of enhanced visual sensitivity to the presence of more-than-human beings.

3A.1. Nature-watching as a learned visual skill

Nature-watching consists of more than mere sight; rather, it points to varied ways of looking that are learnt and mastered through learning. My understanding of nature-watching as a learned skill is inspired by an edited volume by Grasseni (2007) who, along with all contributors of this volume, has brought the notion of skilled visions to the fore. The idea of skilled visions helps shed light on nature-watching in two aspects: (1) the coexistence of different visual practices and (2) nature-watching as a learned skill.

First, Grasseni's notion of skilled visions redefines visions in terms of skilled capacity—something that involves learning or an "education of attention" (Ingold 2000; 2001). Grasseni characterises vision in an Ingoldian sense of "enskilment". As Ingold powerfully argues, ways of seeing cannot be separated from one's active involvement in the world. He highlights the need to contextualise skilled visions, and view them as, e.g., the result of apprenticeship.

Nature-watching can be viewed as a form of skilled vision. It is not a natural physiological

act but a learned skill. Indeed, many of my interlocutors have gone through training of some sort before participating in nature-watching activities on their own. For bird-watchers, a common form of visual education started when people joined public bird-watching activities known as "guided bird-watching" (*guanniao daoshang* 观鸟导赏) organised by bird-watching societies. By the time I completed my fieldwork, there were mainly three bird-watching organisations in Beijing that offered this kind of guided bird-watching tours to the public, including the Wild Birds Society (WBS), the China Bird-watching Society (CBS) and Feiyu (飞羽 means "flight feather") volunteer group.

For people interested in observing plants, more learning options were available. An increasing numbers of experience-based nature educational programmes called *ziran jiaoyu* (自然教育) were on offer that targeted adults and children alike. Moreover, professional botanists began to organise advanced botanical courses for learners who aspired to more systematic botanical knowledge.

Second, Grasseni uses visions in the plural precisely to underscore the plurality of styles of vision as local and situated practices (Grasseni 2007a: 5). Seeing differs from person to person and profession to profession. Thus policemen (Goodwin 1994), cattle breeders (Grasseni 2004; 2007c), naturalists (Bleichimar 2007), drag queens (Ronzon 2007), practitioners of Brazilian martial art (Downey 2007) all have different ways of seeing that yield different ways of knowing (2007b: 216).

Similarly, in nature-watching, varied ways of watching more-than-human beings coexisted. Two of them were conceived as more important than all kinds of training: one needed to learn visual skills of *kanjian* and *guancha*. In English, different terms are used to express distinctive ways of seeing, e.g., to look versus to see versus to examine. In parallel, the Chinese terms *kanjian*

and *guancha* hardly refer to simple visual experience. They rather convey different ways of considering the power of sight in relating and opening up to more-than-human beings.

The two-character word *kanjian* is distinct from the term *kan* (看 to see) in a subtle way. While *kan* often denotes the general act of seeing (instead of "looking" or "observing"), *kanjian* in the context of nature-watching embodies a sense of attending to, a visual sensitivity to things. It is this sense of the active performance of being aware that is crucial to the activity of *kanjian*. In nature-watching, *kanjian*, namely the cultivated visual sensitivity to the presence of more-than-human beings, is the precondition for any further visual engagement with more-than-human beings. In what follows, I will elaborate on the training of *kanjian* in two educational settings, including guided bird-watching and nature education programmes.

3A.2. Learning to *kanjian* more-than-human beings in Beijing

3A.2.1. Guided bird-watching and education of attention

Guided bird-watching activities were open to the public free of charge. Guided watching finds parallel with the "education of attention" as Ingold proposes (2000; 2001), with the effect of facilitating a more attentive body and an active engagement with avian beings in the city. Education, in other words, entails a sensitising technique to expand urbanites' attention to "think anew" the city living as entangled with more-than-human inhabitants, especially avian beings.

Here I want to focus on Feiyu for two main reasons. First, Feiyu's unique vocabulary of guided bird-watching activities as "guided viewing" (*daoshang* 导赏) makes it a valuable example to grasp the guidance of attention. Second, during my participation in Feiyu, I experienced a shift of

roles from a participant in bird-watching activities to a guide (*lingdui* 领队). This offers me additional insights into how guides focused the attention of participants on certain features of the environment, which they may miss previously.

Founded in 2011 in Guangzhou, Feiyu is a college-student-only bird-watching organisation with sponsorship from the renowned optical manufacture Swarovski Optik[25]. Later in 2013, the delegate from Swarovski Mr G, a liaison officer from Swarovski Optik, who was also in charge of the business of Feiyu, decided to establish a new branch of Feiyu in Beijing. He contacted a group of college students from different universities in Beijing with a shared interest in bird-watching and who, by that time, had formed a loosely organised society called Society of Bird-watching Students (*guannioa xuesheng bang* 观鸟学生帮). These students became the first generation of Beijing Feiyu members.

Every year Feiyu brings in some new blood, accepting about 30 new members across a variety of universities or colleges in Beijing. The admission criteria come down to three points: 1). candidates must be a college student in Beijing (including undergraduates and graduates); 2). no previous background in bird-watching is required but candidates should demonstrate a passion for nature; 3). Candidates need to show a volunteering spirit.

Feiyu is self-defined first and foremost as a student volunteer society. All members of Feiyu are expected to commit themselves to offering voluntary service mainly in the form of "guided watching" to the public. Its long-term mission is to "enhance the public's awareness of environmental protection through promoting nature observation and appreciation activities".

After attending two guided bird-watching tours provided by Feiyu, I applied to join Feiyu.

[25] The cooperation with Swarovski Optik had come to an end in 2019. And since then, Feiyu successfully obtained exclusive sponsorship from a local optical supplier Bosma based in Shenzhen.

And in September 2018, my role was officially transformed from a participant (participants were called "tourists", (*youke* 游客) to a proud member of the 6th generation of Feiyu. For the duration of my fieldwork, Feiyu offered two guided bird-watching activities weekly during the term time: the Saturday activity in the Olympic Forest Park, and the Sunday activity in the Summer Palace. Advertisement for the activity was posted online to all who subscribed to the Feiyu WeChat account on Wednesday, and sign-up was done via an online form. For each activity, there were four Feiyu guides (*daoshang yuan* 导赏员) with usually no more than 15 participants.

I officially took the role of a guide who led bird-watching tours at the Summer Place in late October 2018. One of the three guides I worked with that day, Haidiao, was a member of the 3rd generation of Feiyu. Haidiao was known for his wide bird-watching experience within Feiyu. We had thirteen participants in total, four children who came with their parents, one silver-haired nanny and one middle-aged male who wore luxurious Zeiss binoculars around his neck. It seemed that Feiyu activities tended to attract more school-age children compared to activities organised by the WBS and the CBS. In terms of the level of bird-watching experience, the majority of participants were more likely to be novices with little experience. In this respect, Feiyu was distinct from both WBS and CBS, as participants of whose activities tended to vary in terms of experiences.

After a short self-introduction of all four guides, we started by first handing out binoculars to participants who came without their own devices. Out of the three bird-watching groups, only Feiyu activities provided five binoculars to use during guided-watching, thanks to the generous sponsorship from an optical supplier. As I learnt in induction sessions for new guides, it was a routine to start each activity with helping participants learn how to use binoculars.

Spotting and tracking birds through these devices are more difficult than it first appears; using

binoculars too, like bird-watching, is skilled and requires practising. The challenge lies in altering the visual field—a shift of the wider field of view of the naked eyes to the highly detailed and closed binocular vision and back and forth—which needs some exercises to get used to. Haidiao, who were more experienced than the rest of us, led the training session on how to use binoculars. He demonstrated, in addition to verbal explanation, how once eyes locked into the target, one should instantly bring the binoculars up to the eyes without moving the eyes from the spot.

This process of aligning the binoculars with the view cannot work well if one has difficulty locating birds. A rule of thumb is to start with a broader focus on the environment with naked eyes. Consequently, an important job for guides was to assist participants to "locate birds" (*zhaoniao* 找鸟) by training them to shift or enlarge their perspective. This was precisely what guides did to instruct participants to locate and attune to birds by expanding and shifting their attention.

We passed a row of Chinese ash trees (*Fraxinus chinensis* 白蜡). The trees bore many fruits in Autumn and attracted a number of light vented bulbuls[26] (*Pycnonotus sinensis* 白头鹎) to feed. Two birds were perching at the top of a tree, as is the habit of this bird. Two children from our group were frustrated about not being able to find birds among the many trees. One of the Feiyu guides, Shujie, came to the children. She lowered her body so that her vision was aligned with that of the children. She guided the children's viewing: "Do you see the bunch of tall trees over there? There is something odd with the silhouette of one tree. Other trees standing near it all show a smooth and round shape, right? Only the shape of this tree bulges around the top. Let's take a look at the odd shape using the binoculars, shall we?" By directing the children to start with the wider focus of the trees and then to trace the odd shape of one tree, she accomplished guidance of

[26] The light vented bulbuls is one of the most common resident species in Beijing.

attention, shifting the children's attention from trees to birds.

When we took a turn to walk on a sidewalk in an area populated by tourists, Haidiao suddenly called out everyone's attention to look at the sky, exclaiming, "Everyone looks up!" People responded to his call-out and all focused their attention on the sky. There was a black dot with vaguely shaped wings gliding past the cloudless sky. The black figure was too small to see with naked eyes, so some of our participants called for guides' help to locate it with binoculars. After ensuring that most of the participants had seen the Eurasian sparrowhawk (*Accipiter nisus* 雀鷹) through binoculars, Haidiao took out his field guide of birds in Beijing and turned to the page with an entry of sparrowhawk, showing it to our excited participants. He then explained, in more detail, some key points about how to visually identify the sparrowhawk, including reddish cheeks, rounded wings and long tails and so on. Everyone was thrilled to meet a bird of prey, and one participant thanked Haidiao for bringing attention to the sky otherwise he would certainly have missed this marvellous bird. A child from our team kept looking at the sky from time to time for the duration of the activity, when prior to this encounter with the sparrowhawk, few participants and not even some of our novice guides felt the need to lift eyes a bit.

This account of a typical Feiyu guided bird-watching activity yields some insights into the training for participants to *kanjian* birds. First, as an educational activity, guided bird-watching features a unique sociality between guides and participants distinct from the conventional teacher-student dyad. In fact, I rarely heard any participants calling Feiyu guides as "teacher" throughout the entire journey. Children in the group were encouraged by their accompanying parents to communicate with guides (students from celebrated higher-education institutions were considered as perfect role models for their children in the eyes of parents) by addressing them with kinship

terms such as “old brother” or “old sister” (*gege jiejie* 哥哥姐姐). The elderly nanny once addressed Feiyu members as “student”[27].

From the perspective of Feiyu members, they revealed to me that they never considered their role as a “teacher”. One Feiyu member, S, a CS-major undergraduate, once indicated that the task of guided watching was more like “watching and learning with guests, or hanging out together with friends”. It was because many members, especially new members, believed that their relative lack of bird-watching experience did not qualify them to assume the role of an instructor.

Sometimes Feiyu guides’ un-teacherly characteristics and inexperience indeed jeopardised the guests’ trust in the guides’ credentials for the job. For instance, in a guided bird-watching at the Summer Palace, before we gathered all guests to enter through the North Gate of the park, a middle-aged couple asked our team of guides: “Which one of you is the lead teacher here?” The husband had a luxurious camera while the wife came with her own Swarovski binoculars; both gave off a professional vibe. A guide replied: “There is no teacher among us; the four of us are all guides.” “Then who is the most experienced bird-watcher among you?” The awkwardness was in the air, as one of the guides had to confess that all of us were new members of Feiyu who only started bird-watching not long ago. Later during the activity, the couple walked ahead of the group before wandering away midpoint of our planned journey.

In addition to the rather novel form of the guides’ and participants’ relationships, guided watching also entails a visual training of watching birds (analogous to the Ingoldian idea of education of attention). An education of attention starts already in teaching novices how to refocus

[27] In Chinese, “student” (*tongxue* 同学) and “teacher” *(laoshi* 老师) can work as a personal rank like “Dr”. So as a college student, I can be addressed as “student Yishan” (*yishan tongxue*) or “student Wang” (wang *tongxue*).

their attention via the help of optic technologies. The training to *kanjian* or be attentive to birds, involves learning to get used to binoculars as an extension of the naked eye. Nevertheless, optical devices like binoculars work not simply as prosthetic devices. Rather, they could be conceived as technologies of attention that, to paraphrase Hinchliffe's remark about field guides, make birds "more rather than less real for those who started to use them" (2007: 132).

Shujie's guidance for participants was to locate the presence of birds (*zhaoniao* 找鸟). It highlights the guide's important role to help participants insensitive to avian presence start to take notice of birds. In this way, guided bird watching serves to fine-tune participants' perceptions and strengthen their sensitivity to birds. Comparatively, Haidiao's task centred on alerting participants to the (likely) presence of birds before elaborating on a more detailed discussion about birds' names, characters, identifications and so on. It corresponded to how Wanghong, the current and the seventh president (*da zongguan* 大总管) of Feiyu, interpreted Feiyu's education agenda to offer guided watching.

In an interview I held with Wanghong on June 13, 2019, she mentioned that the primary goal of guided watching was "to guide them to step across the doorway" (*xian yijinmen* 先引进门); Feiyu worked at the "first step" of education, which made it sort of like a "nursery", to guide and introduce 'toddlers' (i.e., people with few to none experience of bird-watching) to the world of birds in Beijing. It was nonetheless not the duty of Feiyu to offer ornithological knowledge. As Wanghong believed, once a participant's initial interest in birds was ignited, he/she was expected to seek ways to deepen his/her knowledge of birds by, e.g., referring to field guides or joining more seasoned bird-watchers.

What drove me to join Feiyu was exactly to figure out this idea of guided viewing[28], which, as I increasingly understood, formed the core of Feiyu's business. I remembered that in the online advertisement that targeted would-be members, under the section of "What does Feiyu do?", there was a paragraph on "guided bird-watching" (*guannioa daoshang* 观鸟导赏) that caught my attention. The paragraph reads:

> After completing training, Feiyu volunteers will offer free, guided activities of nature-watching for the public. The mission is to enhance the public's appreciation of the beauty of birds, and cultivate public awareness and enthusiasm for conserving birds.

This understanding of guided viewing was made more intelligible to me during the training session for new members. During the in-classroom training, the founder of Feiyu Mr G pointed out a prominent distinction between guided bird-watching versus an ordinary guided tour. He shared a trick of his own to offer better service of guided watching, that is, to avoid telling tourists the names of birds directly, but to 'guide' them to observe on their own, and encourage them to compare their observation with a field guide. A guided watching conducted in this way, as Mr G believed, could deepen tourists' sense of participation and be conducive to nurturing their interests in nature observation.

It was clear from Mr G's idea that guided bird-watching, the benchmark activity of Feiyu,

[28] The idea of guided watching invoked here runs parallel to "nature interpretation" (*ziran jieshuo* 自然解说). This activity of *ziran jieshuo* was first developed in the US, popularised in Taiwan, and from there transported to mainland China. As an important nature education activity, nature interpretation seeks to 'interpret' the beauty and marvel of the natural world to the public by guiding and showing them in the natural environment, and in this way to initiate the general public's interest in the natural world.

was educational. It is not simply about the transmission of ornithological knowledge in a pre-formed cognitive system. Rather, it is to inspire an embodied form of enskilment by drawing participants' attention to the specific features of the surrounding environment, thus allowing them to explore and engage with the environment and avian presence in an attentive way. As such, Feiyu activities aim to unveil the ordinary environment as teeming with birds, enabling participants to rediscover a rich variety of birds living in their immediate surroundings.

Insofar as the mission of Feiyu is to "enhance the public's awareness of environmental protection though promoting nature observation and appreciation activities", guided bird-watching activities could be conceived as a form of nature education. However, a significant difference between Feiyu's activities with nature education programmes is that the formers are not concerned with making a profit at all. Feiyu members in Beijing found the idea of, e.g., charging participants a fee for showing people what the marvellous natural world has to offer distasting. They upheld a rather purified view of the civic and voluntary nature of Feiyu activities as a social good for the public and society. Consequently, they were willing to safeguard what they did as free service for the public, and drew the line of resisting the presumably consumerist regime of educational programmes.

That said, nature education programmes increasingly constituted a key site for training urbanites to *kanjian* a multiplicity of more-than-human beings in the city. This will be our next topic in the following section.

3A.2.2. Cultivating an awareness of plants through nature education

On a sunny Tuesday morning, a group of 18 adults, all dressed in rugged outdoor clothing, stood

in a circle. It was typical for each class provided by Gaia Nature School to warm up learners with an engaging game. Participants were listening attentively to instructions of an ensuing activity given by a woman with a pink basketball cap. As the woman finished talking, a younger man standing next to her took out a stack of laminated A4 photographs of various plants from a used mail envelop. He then started to disseminate the pictures among the group. Each person of the group received a picture of one plant they did not know, as the picture was attached to his/her back. People started moving, exchanging questions with one other player to guess his/her plant. Now and then, people burst into laughter. This lively gathering had certainly attracted attention from onlookers. An elderly lady, who came to do some morning exercises judging from the *taiji* sword in her carrying bag, was interested enough to film this merry gathering with her mobile phone.

What were they doing on a workday morning in an empty lot in the less-populated north park of the Olympic Forest Park in Beijing? I was there, among 18 participants of whom 16 were students (or "companions" 伙伴 to each other in the school's parlance) and the women with the pink cap and the young men who circulated photos were known as tutors (akin to "guide" 引导员 in guided bird-watching tours by Feiyu). What we were doing was an opening activity of the first lesson of "Getting To Know Plants in Beijing for Adults" (教你认识北京的植物成人课) for 2019, a popular curriculum designed by Gaia Nature School (henceforth GNS). Affiliated with the Friends of Nature (FON), GNS is one of the most pioneering nature education institutions nationwide. This course series showcased the flourishing development of nature education (*ziran jiaoyu* 自然教育, see Appendix 1) in Beijing.

GNS courses incorporated the scope to boost intensive 'nature experience' by involving learners' whole bodily senses (they described it as "opening up five senses" of sight, smell, sound,

taste, touch). Nevertheless, my participant experience in the courses of "Getting to Know Plants in Beijing for Adults" afforded me an insight into the education for learners *to kanjian* plants as an important way of cultivating a heightened sense of noticing and opening up to plants.

I enrolled in the course series "Getting to Know Plants in Beijing for Adults" for about ten months, from autumn 2018 to summer 2019. This course series accepted exclusively adult learners. Mrs Xu (her "nature name" is Ostrich), who designed the courses, explained that when the courses were first designed by her and advertised to the public in 2015, they were meant to target families with children aged six to ten. She then received many positive feedbacks from parent learners, and enquiries from prospective adult learners beyond existent GNS clients. It thus occurred to her that adults also had the need to learn about plants commonly found in their living environment and in this process to "heal themselves" (*liaoyu ziji* 疗愈自己) in the natural environment, even just for a few hours.

Box 3.1. Nature name or *ziran ming* 自然名

The adoption of nature-related nicknames or "nature names" is a remarkable ritual that nowadays seems to be widely accepted by nature educators and learners beyond GNS. It was unclear how the ritual came into being; one educator attributed the origin of the ritual to the nature education programmes provided by The Society of Wilderness (*huanye xiehui* 荒野协会 SOW), a leading NGO for nature education and conservation in Taiwan established in 1996 by Mr. Xu Renxiu (he was praised as the 'guru' of nature education in Taiwan). In 2000, FON invited SOW to mainland China to share its experience.

Every new learner of GNS courses was asked to give himself/herself a new name related to nature. It could be a ready-made name of a living being or natural phenomenon (e.g., my nature name is "one mountain" 一山, which happens to be homonymous with my real name) or a self-made name that contains a natural entity (e.g., Magpie Nanny 喜鹊婆婆).

I propose that the GNS nature education courses constitute a form of visual education to teach learners to *kanjian*, i.e., to notice the presence of plants. Learners are expected to transform from being unnoticed to curiously noticing plants. After sketching out a profile of learners of the

botanical courses, I go on to discuss a few in-class activities to elucidate how they cultivate an enhancing visual skill of noticing plants in learners' everyday living environment. Consequently, learners become capable of relating to plants in new ways as more animated beings.

Ostrich categorised adult learners in her class into three types with overlaps, including stay-at-home mothers, prospective nature education practitioners, and 'pure' plant lovers. The first group was stay-at-home mothers. Speaking from her experience as a stay-home-mother (that is, before she started to work in GNS), Ostrich revealed that the courses served dual purposes for them: to kill time, especially for those whose caring responsibilities were not heavy, and to take the courses as part of their parental education to learn to be a good role model for their children. With these stay-at-home mothers' schedules in mind (mostly free between sending children to school in the early morning and picking up children in the afternoon), the courses were thus arranged to take place on Tuesday from 8.am to 12.am fortnightly. My observation of my classmates confirmed that at least half of my classmates belonged to this category.

The second group consisted of people interested in nature education as a potential career or who had already started their own nature education organisation. Their purpose was to learn from GNS educators in terms of pedagogy and delivery of classes and so on. Some stay-at-home mothers also fell into this category. Nature education seemed to be an increasingly popular career option for some stay-at-home moms in Beijing. For instance, Ostrich quit her job as an engineer after she gave birth to her child Little Rabbit (*xiao baitu* 小白兔). When her girl turned three years old, she found it challenging in parental engagement. She felt especially at a loss as to how to play and interact with her child.

At her time of dismay, her sister, a certificated nature experiencer known as Hedgehog (*ciwei*

刺猬) encouraged her to attend the GNS training programme for nature experiencers, to get some new ideas about parental practices and techniques. And ever since then, she embarked on a career as a nature experiencer in GNS. She believed that her job in GNS was not only flexible and rewarding, but also helped her better connect with her child.

The third group of learners were plant lovers or people who had a general interest in plants and wanted to know more about them; they enrolled on the course for "personal enrichment" (*ziwo chongshi* 自我充实). For example, my classmate Liquorice (*gancao* 甘草) told me that he was thrilled to finally discover a course like this to enable him to explore and learn plants nearby with guidance. Liquorice was a 30-year-old full-time employer at a local NGO. To attend courses on Tuesday morning meant that he had to make the effort of taking a half-day off from work. However, he never missed a class for the whole term and often commented on how he felt 'charged' after each class.

As suggested here, the visual training in GNS nature education courses promotes the skill of *kanjian*. It teaches learners to cultivate a new awareness in the form of getting interested by noticing plants. To start with, an attentiveness grounded in the learned skill of noticing is a key aspect of GNS's teaching. This transformation from unawareness to attention lays the foundation of all nature education activities. As my classmate Lychee, a nature educator herself, mentioned: "nature education has to boil down to the change in attention". Nature attended to in the context of GNS education is an awareness of "nature nearby" (*shenbian de ziran* 身边的自然); it comes strongly as a way of "queering of the ordinary way of dealing with the world" (Staunæs and Raffnsøe 2019: 61) as opposed to a "transfer to an unknown desolate wilderness".

For instance, the venues of the ten courses spread in four urban parks in Beijing. All of them

were easily accessible sites via public transport or private vehicles: the campus of Beijing Forestry University, the South botanical garden of the Institute of Botany, Chinese Academy of Sciences, as well as the South and North park of the Beijing Olympics Forest Park. Based on the changing venues, this series of courses was simply known as the "study tour model" (*youxue ban* 游学班). Once completed these ten courses, a learner became eligible to enrol in the more advanced "stay-put version" (*dingdian ban* 定点班) of the courses, which all took place in the north park of the Olympics Forest Park. I enrolled in both versions of the courses.

Ostrich explained to me her choices of the venues. First, these places should be rich in plant species, especially native species. "Local plants—they are what I call beauty that surrounds us (*shenbian de mei* 身边的美)", Ostrich reminded me. Second, they should be accessible places. This was more than a logistic concern, however; her aim was to "make people aware that there is a whole different world just near them" and this she believed "echoes the teaching goal of the courses". Lastly, the venues should not be too varied, as learners needed to be able to frequent these places to witness changes and the transformation of plants all year round. I asked her whether there had been complaints about the choices of urban parks as not 'wild' or 'natural' enough. "Not to my knowledge", she answered proudly:

> In fact, some learners commented that despite living next to the Olympics Forest Park, they have never been aware of a north park to start with, let alone imagine that they could observe nature there! It has never occurred to them before that these beautiful plants really exist. I am happy to hear that kind of comment, as it means my teaching goal has been achieved, that is, to let learners rediscover the extraordinariness of their ordinary living environment (interview

on May 12, 2019).

What impressed me most about observing as a way of noticing was the activity called “observing within one-meter square” (*yimi guancha* 一米观察) (Figure 3.2) we did in the first lesson in the North park of Olympic Forest Park.



Figure 3.2 Engaging with observing plants within one-meter square

We were all divided into several groups, and Ostrich offered each group a long white manila rope.

We stood in the middle of a large land decorated with a spontaneous growth of ruderal plants as

opposed to being covered with the manicured turf. The idea was for every group to enclose a small piece of land of the size of about one-meter square, and then to observe and differentiate as many plants as we could within the enclosed area.

It was still in early spring when the transition from winter to spring was not fully in place. We did not expect many plants to have germinated to let themselves "catch the breezy air" (Wordsworth). From a glance, our piece of the encircled land was only sparsely dotted with green leafy weeds, but mostly covered with brown pine needles shed in winter. With the land enclosed and marked with the white rope, our eyes were guided to become more concentrated on the marked land in front of us. The marked enclosure can be conceived as an affective technique that creates a condition of "intensive bodily encounters" (Erwein and Matthey 2018) with plants, to encourage attention on an easily dismissible 'wasteland'.

The narrowing of the breadth of our vision propelled us to lower our bodies to a squatting position, as if to zoom in and to get a close look. The bodily movement went along with the magnification of our visions; what seemed to be a bare and 'wasteland' a moment ago was gradually noticed as inhabited with exuberant greenery. This mode of noticing evokes a seeing "respons-ably" in which "all together the players evoke, trigger, and call forth what—and who—exists" (Haraway 2016: 16). As such, an empty piece of land became 'available' and animated to us, full of rich variety of plants capable of affecting and being affected by us.

Most of the members in my group were at the beginning level in terms of their plant literacy. However, not knowing names augmented instead of diminishing our interests in these nameless green miracles. That was why prior to doing this activity, Ostrich advised against using any plant-identification app to search for plant names. She considered that knowing plant names may hinder

beginners' interest to explore further.

By activating one's sensitivity to plants, *kanjian* becomes the main way for learners to relate to these plants as different entities. We distinguished plants with eyes moving constantly among each plant, comparing their physical features, especially their leaf shapes as we were taught earlier in class. It would be impossible to see the variety of leaves as toothed, fish-bone-like, lobed with three points with a swift glance, as these features only made sense to the trained eyes when spending time observing and basking in the plants' tiny yet intricately structured presence.

Moreover, the act of *kanjian* was embedded in multi-sensory experiences. We touched the earth gently, and were surprised to feel different textures: pine needles, earthworm castings, angular rocks and plants. There were small patches of impressive basal growth of dandelions in the form of rosette whose base leaves tickled our palms with their hairs. To our astonishment, we counted eight different plants in various stages of their life history within our enclosed area: some were just tiny little seedlings while others had sprouted impressively.

Liquorice was in another group, and he found in their groups' enclosed area a sorrel (there was none in my group's area), an herbaceous plant that was curiously larger than other plants in its surrounding. "Now that's a treasure you've found there; you might want to keep your eyes on it, for it would surprise you with the speed it grows," Ostrich explained to the group cryptically. Two weeks later, after we were back for another class in the same park. Liquorice stopped at the spot of their enclosed area, trying to locate the sorrel. It was not difficult to locate the said plant—indeed it grew up impressively and now reached almost the height of his knees. He called out for us to take a look at its impressive growth, clearly in an affective state of amazement.

In this case, a transformation from being unnoticed to curiously noticing occurred. A trained

skill of *kaijian* that moves plants from the background to the foreground allows for an encounter in which opening-up of a new world to the eyes goes hand in hand with new ways of relating (as the word "inter-rest" implies) with plant others. With training like this exercise, a smooth and empty space becomes more textured to the eyes of learners. My classmate Clover (*sanye cao* 三叶草) had a beautiful way of describing this experience in an after-class chat:

> I have learnt some things from every lesson; I could now see plants around me in different granularity (*keli du* 颗粒度) (as from large to small granular, from blurring to highly focused): first, I could only see a blurring of yellowness of nameless yellow flowers, and then I see them as winter jasmine (*Jasminum nudiflorum Lindl* 迎春花). And following the movement of the bees, I now realise that even with such a tiny flower, it has nectar and the bees show me where it is stored.

Seeing through different levels of granularity, to Xiao Cheqian, was deemed the "capacity to see through" (*kanjian de nengli* 看见的能力*)*. And this capacity was trained by "having things shown to us" (Ingold 2000: 20), when the role of the educator "to show" means to instruct learners to "attend particularly to this or that aspect of what can be seen…so as to get the 'feel' of it for him- or herself" (Ingold 2001). This may be contrasted with the fleeting glimpse. When learners could see the space getting more textured as tinctured with exuberant living things, their eyes linger and "roam[s] among things" (Ingold 2011: 132), instead of shooting "visual arrows" that pass things straightaway. That lingering moment of curious noticing gives birth to an encounter in which awareness of and a sincere interest in more-than-human beings may happen. As another classmate

of mine Clover commented in a chat:

> Actually many plants I have encountered in the courses grow in the green space of my residential community; it's just I didn't notice them before. But now, as I'm able to see these plants, I feel like the whole environment comes to life, especially when I could observe the transformation of these plants. I only became aware of a patch of *Lagopsis supina (xiazhi cao*[29]夏至草) in the neighbourhood green area after I learnt about them in the courses. A few days ago, I saw that the same area was overgrown with unknown weeds. It only occurred to me later that the weeds are *xiazhi cao*, as their lives came to an end with the arrival of summer, transforming from green vibrant to wilting and lifeless.

Responses from learners like this make it possible to consider how the disposition of taking notice trained in GNS courses helps urbanites overcome "plant blindness". According to Wandersee and Schussler (2001), plant blindness indicates, among others, a condition of "failing to see, take notice of, or focus attention on the plants in one's daily life" (2001: 3). Therefore, plant blindness is first and foremost about an insensitivity about plants in the everyday living environment rather than simply botanical illiteracy *per se*. Accordingly, the potential benefits of GNS courses reported from learners are more in the sense of activating and enhancing sensitivity about plants in their surroundings.

[29] The Chinese official name for *Lagopsis supina* means "summer solstice grass"; one can assume that the naming of this plant was born out of the namer's acute observation of its withering in mid-summer.

3A.3. Discussion

In this chapter, I have reiterated that nature-watching is a learned skill that is practised and mastered through specific forms of visual education. At the centre of the visual training for nature-watchers entails an essential visual skill that I have termed *kanjian.* There are points of convergence of guided bird-watching tours and GNS courses. First, both feature an unconventional guide-participant relationship that challenges the teach-student interaction. In both educational contexts, visual education constitutes a form of guiding primarily. Interestingly, this notion of education mirrors the etymology of the word "education", which combines "the Latin compound *ex* (out) plus *ducere* (to lead)" (Ingold 2017).

What's more, in both educational settings, Beijing urbanites are offered opportunities to improve their visual sensitivity to the presence of birds and plants in the city. In guided bird-watching tours, participants receive an "education of attention" whereby they are guided to expand and shift their attention so as to attend to the avian presence. In GNS courses, learners are encouraged to take notice of plants in everyday living environment, with the effect of combating "plant blindness". Again, in both cases, as participants/learners become more skilled to *kanjian*, new forms of cross-species relatedness and refreshing understanding of urban spaces ensue. As such, the visual education of *kanjian* calls forth what Ingold terms the "rediscovery of the world" to disrupt embodied experience and think the familiar urban spaces anew.

From the above discussion, it should be clear that learning to *kanjian* does not simply take place at the level of improving the strength of the eyes, but rather involves enhancing participants' capacity to attend to and attune to the presence of more-than human-beings in the city. This brings us to another layer of education, namely affective learning I shall discuss at more length in the

following chapter 3B.

Chapter 3B. The visual training to *guancha*

This chapter is intimately related to chapter 3A. I continue to examine the training of a nature-watcher's eyes by investigating the education of another visual skill critical to nature-watchers that I call *guancha* (观察). In advanced botanical education for plant lovers known as *huayou* (花友, see section 2.1), I propose that learning to *guancha* infuses a training to identify plants through comparative observations with that to become affected and articulated by differences of plants.

3B.1. Learning to affect and be affected in the visual education

The gist of the idea of skilled visions proposed by Grasseni is that if one learns to see in a specific way, the world in front of his/her eyes will present differently as it might appear through another way of seeing. If we start from Gibson's hypothesis (1979) to consider vision as embedded within an active perceptual system of information pick-up, we can see that the world appears differently since the seer, after training, is now able to notice, derive, and respond to new kinds of information from the environment.

Nevertheless, there might be another interpretation of an affective learning, as I am pursuing in this section. In this chapter, I wish to discuss how an advanced form of botanical education centred on training learners to *guancha* plants adopts an affective pedagogy. I argue that within each module of the courses, the training of a capable botanical eye involves an affective aspect. A capable observer, therefore, becomes an articulate person who learns to be affected by differences

(Latour 2004) within and between species. In this context, learning to be affected coincides with the education of visual skills of identifying plants by comparisons. As such, the courses introduce a methodology of careful comparative observation for *huayou* to appreciate plants and their living environment in a livelier and more articulated way.

Today in social science, the idea of learning to affect and be affected is often attributed to Despret (2004). Although she does not explicitly refer to Spinoza's work, we nonetheless find in her works a deep resonance with Spinoza's understanding of affect to think of "embodied relational becoming" (Massumi 2015: 51). The centrepiece of her essay is her analysis of several "anthropo-zoo-genesis practices", practices that "construct[s] animal and human" (Despret 2004: 122), be they human questioners with an intellectual horse, students with laboratory rats, an ethologist with a jackdaw.

For instance, she discusses Hans the horse whose genius to solve complex math problems fascinated the world. Starting from "the middle realm", i.e., "a horse-with-human (ibid), Despret focuses on the meeting of the human and horse bodies which she believes enabled a new experience of "becoming-together" (ibid). On the one hand, Hans affected his human observes to allow them to "perform a body" that Hans could read, thus "acquiring a horse-sensibility" (ibid). On the other hand, Hans was affected by human questioners who, through unintentional movement expressive of their own expectations, gave the answers to the questions posed to Hans in a way he could understand. In summary, Despret shows that an ability to affect and be affected can be learnt, so that we make ourselves available to be affected by other bodies, and learn from the manner how others are affected by and learning from us.

Despret's theory thus interlaces affect, enhanced sensitivity to the world, and opening-up to

other bodies (inorganic and organic) together. Over a decade later, Staunæs and Raffnsøe (2019), drawing on Desprest's notion, started to speak of an "affective pedagogy" to convey alternative ways of "perceiving, experiencing, inhabiting, addressing and relating to the world and to other creatures of the world" (ibid: 60). An example is Staunæs and Raffnsøe's auto-ethnography of the affective pedagogy of an equine-assisted leadership course, which according to them, fosters a new understanding of leadership in the sense of "power to" as opposed to "power over".

Accordingly, the experience of seeing the world anew by learning to *kanjian* can also be conceived as a result of affective education. Affective learning is incorporated in the visual training to induce new capacities of the body via modulating the body to become more attuned to more-than-human bodies. In guided bird-watching I have discussed above, for instance, affective education for the participants lies in the "showing" of certain features of birds he attuned to and picked up, so as to sensitise participants to see for themselves. From the perspective of affect, the rationale of guided bird-watching is precisely to strengthen the affective energy of bird species to public participants by guiding their ways of watching and paying attention to the avian bodies in the surroundings. It is a way of nurturing participants' attention rather than mere information transmission. Indeed, the schooling of skilled vision and learning to be affected coincide with the guided watching that focuses participants' attention in new ways.

In a similar vein, nature-education courses to impart to learners the sensitivity of *kanjian* are embedded with an affective pedagogy. The courses enable one to gain a shared experience of "being-with" (Despret 2004) in which he/she becomes an observer-with-plant-and-its-lifeworld by observing and relating to a plant. And at the same time, we may say a plant is related to an observer's seeing by showing or communicating something new and different about itself. This kind of learning to observe plants thus permits an affective education of learning to affect and be affected, actualising something new about "what a body can do" for both human observers and plants.

Box 3B.1 Affect and the presence of more-than-humans

The point about affect in association with the sensitivity to more-than-human presences echoes previous studies of detectability of non-human beings. For instance, in the context of UK biodiversity conservation projects, Lorimer specifies "detectability" as the properties of a species that "conditions its relative awareness to human perception and subsequent evaluation" (2006: 549). In other words, the ease with which a species is identified for the conservationists to "tune in" relates to the agency of affect of the species.

The notion of detectability is chimed with Hinchcliffe's emphasis on the presence of animals in the context of conservation (Hinchliffe et al 2005; Hinchliffe 2007). Hinchcliffe, who tells the story of conserving Birmingham's water voles, makes a strong point that conservation cannot be about presenting the presence and then rendering the presence eternally present. Rather, conservation practices work with "natures that are being reconstituted" as conservationists and animals affect and are affected by "their fields of becoming" (Hinchliffe 2007: 143). Presence, therefore, is not simply the opposite of absence, but emerges from the collaboration of practices of conservationists and the performances of the organism. (Braun 2008:672). Braun, commenting on Hinchliffe's insights, drives home the point that "things may 'not show up', either because they don't afford themselves to our witnessing, or because we have not learned to be affected by them" (ibid).

In both education activities for nature-watcher, the visual training to *kanjian* implicates double meanings of training of the eyes and an affective learning to attend to and notice embodied presence of more-than-human beings. In other words, presence is not simply the opposite of absence but emerges from mutual reciprocity of learning to affect and be affected.

The focus of the present discussion is the trained visual skill of *guancha*. The term *guancha*

(观察) or simply *guan* (观) has the sense of visual identification (*jianbie* 鉴别). The common translation of *guancha* in English is observation. However, I suggest that *guancha* in nature-watching carries the specific meaning of a process that combines closed observation and comparison to discern living beings observed into categories. Insofar as it stresses observation as learned intellectual discrimination of things, *guancha* comes closer to the meaning of *guan* in the Ming physician Li Shizhen's epistemology that conveyed a kind of "reasoned, observation-based comparison" (Nappi 2009: 40) of natural objects. *guancha* forms the core of nature-watching practices and a key aspect of training for nature-watchers.

In addition to Despret's thought-provoking interpretation of affective learning with animals, Latour points to another meaning of affective education found in the visual education I call learning to *guancha*. Directly nodding to Despret's study, Latour likewise directs attention from "what a body is" to raise the similar question of "what the body makes (us) (others) do" (2004: 125). Latour argues that the body is "what leaves a dynamic trajectory by which we learn to register and become sensitive to what the world is made of" (ibid: 206). To define what learning to be affected means, he draws on Teil's account (1998) of the use of odour kit in order to train the nose of perfume industry workers.

The odour kit consists of a variety of distinct pure perfume chemicals that are arranged in the order to showcase the sharpest contrast to the slightest one. By the end of the training, a trainee ends up being a nose, that is, someone who is capable to distinguish the more subtle difference of odours even when they are mixed. One can find a parallel between Latour's account of the training of the nose between Grasseni's concept of skilled visions. Insofar as a learner cultivates a more refined "sensory medium", he/she also inhabits a more sensitive, e.g., a more "richly differentiated

odoriferous" (2004: 207) world.

For Latour, we cannot understand affect without considering what he terms "articulation". Articulation is defined as "being affected by differences" (ibid: 210). Through training of one's nose, a learner can be said to transform from an inarticulate subject who is indifferent to differences of the world, to an "articulated subject" who "resonates with others, is effected, moved, put into motion by new entities whose differences are registered in new and unexpected way" (ibid). And this sense of going through a transition in bodily capacity through a formation of relations echoes the classic definition of affect by Spinoza. The result of learning to be affected thus is: the more you learn, the more articulated you become, the more differences of the world exist (ibid: 213).

Latour's essay sheds light on how the education of the senses can be read from the perspective of learning to be affected. Borrowing Latour's insight, I now wish to analyse the course series of advanced botanical learning for Beijing *huayou* to learn to *guancha* plants from the perspective of learning to affect and be affected.

3B.2. Learning to *guancha* plants with advanced botanical education

The botanical training for our present discussion is called "Botany Courses for *huayou*" (*huayou*[30] *zhiwuke* 花友植物课). The courses started in March 2019 and consisted of 20 weekly courses with a cost of 1400 RMB. During the 20-week class, learners studied three modules: botanical morphology (5 lessons), botanical taxonomy based on the latest APG (Angiosperm Phylogeny Group) IV system (9 lessons), as well as 6 botanical field trips in various locations in Beijing (6

[30] For a discussion of Beijing *huayou*, please refer to the Introduction of this thesis.

trips). The venue of the lecture was an award-winning stunningly designed tea house in Dongcheng District.

Three professionals taught classes, with each of them responsible for one module: Dr Wang Kang (Taxonomy), Miss Chen (Field-trips) and Mrs Huang (Morphology). Dr Wang was a middle-aged botanist but not the sort of laboratory-based botanist living in the ivory tower. As the current head of the Education Centre of Beijing Botanical Garden. Dr Wang was keen on reaching the public by blogging on fun facts and exciting research in plant science. He was one of the "botanical masters" (*dashen* 大神) among other botanists admired by many plant lovers I have met. Miss Chen, Wang's colleague, and the current deputy head of the Education Centre, had an even closer association with friends of flowers; it was she who first created several WeChat groups for *huayou* to communicate. Mrs Huang was a retired and professionally trained teacher of botany who used to work at Beijing Botanical Garden for Teaching (*jiaoxue zhiwuyuan* 教学植物园). She was experienced in delivering botanical courses to learners of all levels.

I first discovered about the courses from the "WeChat group for Beijing *huayou*" (*Beijing huayouqun* 北京花友群). Lele, the current administrator or "group host" (*qunzhu* 群主) of the group chat, shared a post about the course series. The courses were about to recruit new learners in January 2019. I then realised that some advanced *huayou* I knew whose botanical knowledge I so admired had enrolled in these courses before. In light of this information, the courses started to impress me as a sort of 'rite of passage' necessary for the upgrading of a "beginner plant lover" (*zhiwu xiaobai* 植物小白). From the perspective of change in capacity, this 'upgrading' should be understood not only as an advancement in botanical knowledge and observation skills, but also an enhancement of the body's ability to affect and be affected by plants, which was characterised

by a “passing a threshold” (Massumi 2017: 4).

The course coordinator Dr Wang Kang indeed characterised the course series as intended for *huayou* who were already botanically literate to a degree but demanded more systematic botanical knowledge and a higher level of plant identification skills. According to Dr Wang, the courses were not intended for middle school or high school students, as some content may be too abstruse to “nib their interest for plants in the bud”; nor were they meant for botany-major college students, as they may find the syllabus too elementary. The courses were designed to provide “personalised service of scientific education” (*gexinghua kepu fuwu* 个性化科普服务) based on “division of targeted participants” (*shouzhong xihua yu fencing* 受众细化与分层). As an education programme coordinator in the Beijing Botanical Garden, Dr Wang met and interacted with many plants lovers who had gone beyond the level of only appreciating the beauty of stunning blooms, but rather showed great interest in more specialised botanical knowledge to enrich their plant-loving activities.

Nevertheless, plant aficionados are still not professionals. As made clear in the course advertisement, Dr Wang indicated that the courses were intended to encourage learners to rethink their daily lives ‘botanically’, and examples would be discussed in class were those plants used or encountered in everyday life. In the first morphology lesson, Mrs Huang also considered the courses “more specialised than botanical education to the public, but more simplified than botanical training for professionals”. The topic of that class was about morphology and anatomy of plant roots and stems. Mrs Huang encouraged questions like “which part of the potato do we eat?” (the answer is the underground tuber of a potato which is in fact a thickened stem called “stolon” *kuaijing* 块茎). She told the class that some knowledge about plant morphology just

"give you more fun when cooking and eating". Remarks like this clearly showed her attempt to embed specialised botanical knowledge within *huayou*'s daily living.

3B.3. Plant morphology: learning to articulate a plant

The courses started with plant morphology in order to prepare learners with specialised visual and verbal vocabulary and ways of describing, or indeed articulating, plants observed in morphological terms:

1. morphology lessons served to direct attention to more features of traits of plants to achieve a more comprehensive observation of plants.

2. They prepared learners for taxonomy lessons and a comparative form of observation.

3. This training in morphology was supposed to establish the groundwork for understanding how plants were articulated in field guides and databases of plants.

Mrs Huang instructed us that "you only learn to identify a plant when you learn to give basic descriptions about a plant". Botanical glossary of plant morphology became an attention-directing device that pointed learners toward possible traits to observe when studying a plant. With the introduction of new terminology, a new angle of observing, and indeed being affected by plants was added to existing ones. In Huang's class, we had ample opportunities to practice describing a plant from varied perspectives using botanical terminology.

Based on the organ or structure in focus, one could describe the same plant in completely different ways. For instance, in the lesson about leaves, we had exercises to describe the peach tree (*Prunus persica* 桃树), focusing on its leaf shape, arrangement, edge and venation patterns. Accordingly, a peach tree could be described as a plant whose leaf is oblong-lanceolate or elliptic-

lanceolate, with serrated edges and arranged in an alternate pattern.

Two weeks later, when we came to study structures of flowers, Mrs Huang let us describe peach again, this time based on the classification of the shapes of receptacles. A peach flower then can be re-articulated as a flower with a cup-shaped hypanthium which forms a bulge on the rim of the receptacle. And Mrs Huang also mentioned that this feature of the receptacle is shared by many plants belonging to the Rosa family, such as the Chinese rose (*Rosa Chinensis* 月季). Knowing this feature, according to her, could offer us a "new perspective when you appreciate the peach blossom next time".

In this sense, the receptacle, basically 'non-existent' and unseen before I was introduced to this concept, now became a minute yet valid angle that could be applied to observe plants in general and identify plants from the Rosa family specifically. Description practices using botanical nomenclature are thus connected to observing by pointing to all possible directions of looking, so that one may be able to articulate what a plant is in a morphological sense. My classmate Shen, a retired accountant whose fascination with plants grew with her love for gardening, expressed this idea vividly. She considered one of the biggest rewards from the course series was that her appreciation of plants became more encompassing to include structures other than flowers alone. She said: "Flower-appreciation (*shanghua* 赏花) to me no longer means to focus on the flower only; the beauty of the root, stem, leaf, flower should equally be appreciated".

Second, knowledge about plant structures and forms was necessary for a specialised way of observing in which plants were "always seen against one another", a comparative model of observing plants that might be traced back to Linnaean botany (Bleichmar 2007: 173). It was also in this sense that the first module of the courses was complementary to Dr Wang's teaching on

taxonomy. It was indeed very common for Dr Wang to engage us in describing the distinguishing traits of a certain plant using morphological terminology learned from Mrs Huang. Dr Wang also liked to tease us when we could not recall or use the correct morphological terms taught by Mrs Huang. “Mrs Huang would definitely cry to see you throw what she has taught you back to her (*ba zhishi huangei ta* 把知识还给她) so quickly”, he would say.

Third, learning to describe plants’ morphological features was linked to the skills of referring to the botanical description as found in field guides. It was expected from Mrs Huang that by the end of the courses, we should be familiar with plant structure enough to write a decent description of any plant according to six major organ systems of the plant body (including root, stem, leaf, flower and fruit and seed). What she had in mind about a plant description was the first paragraph one could find in any entry of a plant in the Flora Republicae Popularis Sinicae (FRPS) (*zhongguo zhiwuzhi* 中国植物志) or Flora of China (FOC) in its English version, a scientific publication aimed at describing all plants native to China.

Bleichmar argues that Linnaeus’s *Systema Natura*, as well as *Philosophia Botanica* were dedicated to training a botanist as an “observer and classifier” (ibid: 172) by giving them visual and verbal instructions. In this sense, he suggests that both works were not meant for reading but for use. Indeed, the training to refer to FRPS or other databases as an identification tool was a key part of the training in fieldtrips. However, the point is that, as with Bleichmar’s interpretation of Linnaean botanical works, FRPS was introduced to learners as a heuristic tool for plant identification in the field, rather than as reading material for acquiring botanical knowledge *per se.*

3B.4.Taxonomic education: comparative observation and learning to be affected by differences

Now I would like to discuss Dr Wang's classes on taxonomy. In our last lesson on August 14, Dr Wang began the class by stating, in a high-spirited tone: "the plant groups (*zhiwu leiqun* 植物类群) you have learnt in my class have far exceed, possibly doubled, what they are taught for biology undergraduate at Capital Normal University. Meanwhile, it only takes them five or six courses to learn angiosperm species (*beizi zhiwu* 被子植物), but we had nine lessons". He continued to say: "I have taught you more than you need in terms of content, but I would like to encourage everyone to focus more on the method—our 50-hour classes are for you to master a taxonomic method".

As mentioned above, taxonomic approaches to botany, inherited from Linnaeus, reinforce a comparative viewing based on successive visual examination to identify a plant. Dr Wang's teaching of the taxonomic method was highly visual. Learners were trained to tell subtle differences and commonalities, a further step toward recognising a "richly articulated" plant world. I argue that this form of taxonomic education underscores a comparative mode of observation. From the perspective of affect, this visual training corresponds to what Latour conceptualises as "learning to be affected" when layers of differences are recognised and registered in new and more articulated ways (Latour 2004: 210).

We can see the schooling of comparative observation in the layout of his PowerPoint slides for each lesson. For a 120-minute lesson, Dr Wang usually prepared as many as 150 to 180 slides. These slides contained succinct textual descriptions truncated from the description as found in FPRS. They were also amply adorned with photos of plants, the majority of which seemed to be downloaded directly from the Chinese Virtual Herbarium (CVH).

The slides for the lessons on plants from the clade of Campanulids (*jiegenglei zhiwu* 桔梗类植物) were formatted so that the very first slide, as a routine, was this same cladogram (Figure 3.3) showing all clades of plants to be covered for the whole courses. We then zoomed in along the taxonomic order with this next slide (Figure 3.4), demonstrating what specific clade, orders and families we were about to learn. Here families coloured red were the key families to learn.

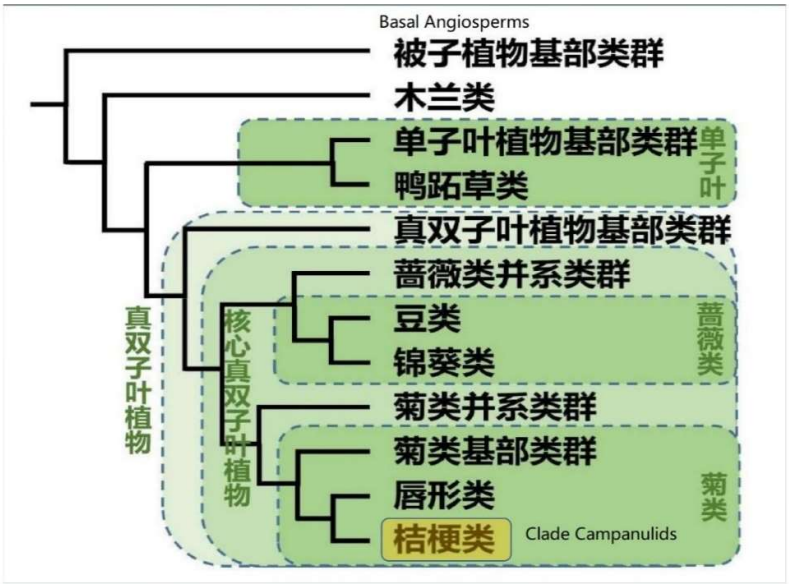

Figure 3.3 a slide to illustrate the cladogram



Figure 3.4 A slide listing the taxonomy order of Campanulids

Moving on to the Araliaceae family *(wujia ke* 五加科) in the order of Apiales (*sanxing mu* 伞形目), for instance, the first plant introduced was ginseng (Figure 3.5). The text was directly copied and shortened from FPRS's description. And despite being condensed, this description was comprehensive, which included a line of explanation for focusing on different organs of the plant: root, stem, leaf, flower, and fruit. The slide next showed a picture of ginseng from another angle (Figure 3.6). The point of using this picture was not for aesthetic appreciation of the alarmingly red berries; rather, it was meant to direct learners' attention to the shape and arrangement of its leaves. Leaves were one of the defining visual clues to tell plants from Panax genus apart from those in other genera from the same family. Wang highlighted here that "the most important feature of plants from Panax genus is they have whorled compound leaves（*fuye lunsheng* 复叶轮生)".



Figure 3.5 Wang's slide about ginseng



Figure 3.6 Another slide about ginseng from a different angle

Next, we had a few pictures of plants representative of five genera including Eleutherococcus (*wujia shu* 五加属), Kalopanax (*ciqiu shu* 刺楸属) and so on. The pictures of these plants were specially chosen for highlighting their leaf arrangement and shape. These pictures thus functioned

as diagrams that concentrated on the defining traits an observer should recognise. And it was based on observation of these traits that the commonality and comparison could be established.

Meanwhile, Wang's accompanying commentaries usually discussed traits comparatively. "The leaf of the Siberian ginseng (*Eleutherococcus senticosus* 刺五加) is alternate, palmately compound with little spikes underneath". When speaking of the castor aralis (*Kalopanax septemlobus* 刺楸) later, he described the leaf as "toothed and palmate, but not palmately compound like the Siberian ginseng". Before proceeding to the next family, there was always a slide with a rhymed summary of the common and contrasting traits of the already learned family, which served a mnemonic purpose. In summary, Wang's slides, in tandem with his verbal instructions, imbued learners with a comparative view of plants.

To be sure, it was not an easy task to see comparatively, especially when the differences were so subtle to untrained eyes. Therefore a significant aspect of training from Dr Wang's lectures involved increasing learners' capacity to scrutinise these minute and usually imperceptible variations between plants from different taxa in fine detail. The technique he adopted was to amply adorn his slides with extreme close-ups of the anatomy of a certain plant. Figure 3.7 is a slide showing the cluster of tiny flowers of a poinsettia to prompt learners to note this easily missed feature of a poinsettia. As mentioned earlier, these pictures were not simply realistic renderings of plants; more importantly, they functioned as diagrams to assist learners to note subtle differences in small details. Thus they allow learners to register plants in a new and more articulated way, and gain a different botanical sensibility.



Figure 3.7 A slide with a close-up picture of the inflorescence of Poinsettia

Dr Wang also encouraged us to maintain this sensitivity to minute visual details whenever we observe plants. I noticed that some *huayou*, after completing the courses, started to get into the habit of bringing fine point tweezers with them. The pointed head of tweezers is apparently a very handy tool to work with tiny parts (to probe, pick up, point to specific parts) of a plant to make more stand out more to the eyes.

3B.5. Becoming a more articulated *huayou* in field trips

Finally, we turn to field trips[31], the third module of the course series. As in-class instructions only provided a guideline, it was necessary to go on field trips to put what we had learnt into good use. Learning terminology, taxonomic method and field-trips formed a triangularity in which learners

[31] Field trips usually took place on Saturday morning from 9.am to 12.am. I was only able to attend three trips: one in the Beijing Botanic Garden for Teaching led by Mrs Huang's colleague Miss Shi and two more trips in the Beijing Botanic Garden supervised by Miss Chen.

went back and forth. Learners started to render morphological terminology intelligible by establishing a correspondence between terms (which we learnt from Mrs Huang's classes) and real plants, as well as applying Dr Wang's teachings of the comparative method of taxonomy into an observation of various plants by grouping and discerning.

I suggest that field trips also foster affective learning with plants. Here I would like to discuss two scenes of affective visual training in the field. It is in the actual process of training to identify plants in the field, that a more "articulated" plant lover emerges, as she/he is in some way affected by the difference in and between plants-in-their-environment.

The first scenario seeks to reveal my classmate Shiso's experience of being affected by a *Viola philippica Cavanilles* (紫花地丁). Following Miss Chen and other classmates, Shiso and I were walking together in the Rose Garden of the Beijing Botanical Garden. Shiso (she adopted this nature name thanks to her friendship with several GNS nature experiencer from our class) was a graduate in History and passionate about photographing and writing dainty proses about plants in a poetic language. She was of the same age as me. And as the two youngest learners in the class, we instantly got along very well.

She told me her enthusiasm for plants evolved during the past decade. It all started when she was in middle school; plants, or rather, beautiful flowers captivated her. "At that time, simply knowing the names and appreciating the beauty of those flowers would satisfy me". She later bought a camera just for the sake of "photographing flowers" (*paihua* 拍花). With a camera-mediated vision, some hidden features of flowers started to present before her eyes: how petals were arranged, how many pistils a flower had—these features piqued her interest. Nevertheless, she did not know any terminology to describe them. Now equipped with a bunch of botanical

glossaries and basic taxonomic knowledge grasped from the course series, Shiso was thrilled to notice how her observation of plants became more meticulous and thorough.

Miss Chen suddenly came to a halt, pointing toward a blanket of purplish wild flowers on the freshly trimmed lawn. Miss Chen took this opportunity to engage us to practice distinguishing two commonly mistaken species—*Viola philippica* (紫花地丁) and *Viola prionantba* (早开堇菜) — using the *Field Guide to Wild Plants of China (Beijing Volume)*, which is praised as the ultimate 'bible' for Beijing plant lovers. At this time of the year, both species approached the end of their florescence and had borne fruits.

Gaze caught by a perfect three-pointed-star shaped fruit of a *Viola philippica,* Shiso blurted out: " See? This fruit is tri-locular! (*san xinpi* 三心皮) (Figure 3.8)." I was amazed, as she was, at her adept use of morphological terminology. "This feels nice", she reflected happily on her mastery of botanical glossary: "If I were in the past, I could only come up with words to describe these fruits as abundant and vigorous". She was happy not just about remembering a term correctly, but seeing something more about the plant in a completely new way. Compared to the term she would have used in the past, the botanical term she articulated showed the deepening of her observational skills. With this term as a pointer, she not only saw a fruit, but also was encouraged to make further observations—how the ovary was split into three locules and possibly how those minuscule seeds were enveloped in each locule.



Figure 3.8 The fruit of a *Viola philippica*
The fruit splits into three 'chambers' and its seeds have all been dispersed (ejected with high pressure), leaving the shell empty.

Her "feeling of the change in capacity" (Massumi 2015: 4) is an instance of "stepping over a threshold", that is, an experience of being affected and affect that goes with an intensification of relatedness to a plant. It seems that both Shiso and the *Viola philippica* were enveloped in an affective atmosphere in which they both "come differently together" (Massumi 2011: 5). The plant becomes more intricately structured with its tri-locular ovary to Shiso, while Shiso becomes a more articulated plant lover whose capacity of observing is enhanced thanks to the affectively visual training she received from the course series.

In the second scenario, I wish to show an instance of myself experiencing an "auto-affection"

after being in the moment of education of attention by an expert. The second field trip I attended was in the Beijing Botanical Garden for Teaching. As avid botanic garden goers, many friends of flowers in my class were eager to 'check-in' this botanic garden which is only open to school trips by pre-booking.

The garden itself was much smaller compared to the Beijing Botanical Garden. Nevertheless, its compactness did not compromise the diversity of its display. The team leader for the field-trip was Miss Shi, a botanist who worked in the garden as an educator. According to her, the garden exhibited more than 1500 plants arranged in taxonomic order.

Overwhelmed by such a diverse variety of flora, everyone was following Miss Shi closely so that they did not miss her introduction of plants in terms of morphology and taxonomy. Ms Shi was also found to introduce plants in comparison to their sibling species that could be morphologically indistinguishable. For example, when she gave us the basic botanical information of a few liliac oxalises (*Oxalis corymbosa* 红花酢浆草), she compared it to a very similar species pink sorrel (*Oxalis articulate* 关节酢浆草). She highlighted that their main difference was reflected in the different colours of the corolla throat: the former was pink while the latter was light green. This description instantly made us squat down, turning the flowerhead toward our eyes, paying attention to the corella throat.

While listening attentively to Miss Shi's explanations, we were also very busy with our eyes, examining the details of a plant meticulously in accordance with botanical knowledge established from the courses or given by Miss Shi on site. To see the minuscule details often relied on the help from the magnifying lens of a camera. For instance, I was attracted by a bunch of *Malva sinensis* (锦葵). What attracted me was the colourful striped blooms, and I was not even noticing its other

physical features such as its stamens or leaves. When I held my mobile phone and just about to snap a picture of these lovely blooms, I heard Miss Shi said: “We can see here that the flower has an interesting feature called staminal column (*danti xiongruizhu* 单体雄蕊柱)…” I immediately looked at the centre of the flower on my iPhone screen, dragging the magnification slider to zoom in. And, there, in front of my eyes, was indeed a pale mauve tube—that was not featured in my vision a few seconds ago—rising from the centre. I was impressed with the intricate structure, and this was the picture I ended up taking (Figure 3.9).



Figure 3.9 The picture of a *Malva sinensis Cavan* I took with a focus on the feature of the staminal column

Rather than capturing all the blooms I saw as I initially planned to do, I focused instead on the close-up of the staminal column. The viewpoint from which I shot the picture changed as a result of having this feature shown to me by an expert, as if "to lift a veil off some aspect or component of the environment" for me to apprehend directly (Ingold 2000: 21). It embodies an affective experience of "education of attention", when more knowledge about this plant is disclosed to me with my visually perceptual engagement with it in the environment.

Moreover, like Shiso, in the moment of changing my viewpoint than what I might have focused the moment before, I experienced a "passing of a threshold" (Massumi 2015:4), albeit in a slight way. This experience is reminiscent of what Massumi calls "microshocks" (Massumi ibid: 53). It is not a coincidence that Massumi illustrates microshocks with an example of a visual event: "a change in focus, or a rustle at the periphery of vision that draws the gaze towards it" (ibid). "A change in focus" may only be registered consciously in its effect, and in my case, I only realised the alteration after I took the picture and reviewed it. The moment of the shift of my attention evokes the feeling of interruption, a "felt transition" (ibid: 54) in bodily capacity. Furthermore, my experience is also characterised by an "auto-affection", a renewed awareness of myself as if I receive an affective hit. It is a circular movement of an auto-affection, as it allows for "turning oneself towards oneself, but in an awareness of oneself as one is affected by others and affected by being affected" (Staunæs and Raffnsøe 2019: 79 after Clough 2000).

3B.6. Conclusion

This chapter has investigated the learning and education for Beijing nature-watchers to *guancha* in the context of a series of botanical courses for Beijing *huayou*. Similar to the education of *kanjian*, learning to *guancha* facilitates a change of capacity in a dual sense. First, it induces a new visual skill of identification of more-than-human beings through careful, comparative observations. More importantly, thinking with affect by following Latour's lead allows me to tease out how the advanced botanical courses have cultivated more articulated plant observers who become more sensitive, moved, and indeed affected by the differences of the rich plant world. In

short, this chapter has shed light on a dual learning process of the visual education of *guancha* convergent with learning to be affected by and affect more-than-human beings.

4

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Chapter 4A. Everyday nature-watching in the city: the example of *shua yuanzi*

January 11, 2019.

The South Park of Olympic Forest Park.

Mostly sunny.

The buds of magnolia flowers are adorably furry. Why do they have furry coverings? Magnolia buds are set to open very early on in the spring. The covering works as a furry blanket to keep each magnolia blossom warm so that the bud is open to a beautiful blossom in early spring.

In today's watching, I discovered that a bursting bud of the Yulan magnolia (one that I have tagged with a red cotton thread for easy tracking and observation) was about to split open. It would be wonderful to document the transformative process of the 'furry ball' to full blossom through continuous observations.

P.s. After I was back home, looking through the photos of the Yulan magnolia, I had an exciting discovery: next to the large furry bud was a small bud 'naked' without the furry covering. Would it be a bud of a leaf instead of a flower? It looked firm. Have to touch it next time.

Yishan Wang, a nature journal of January 11, 2019

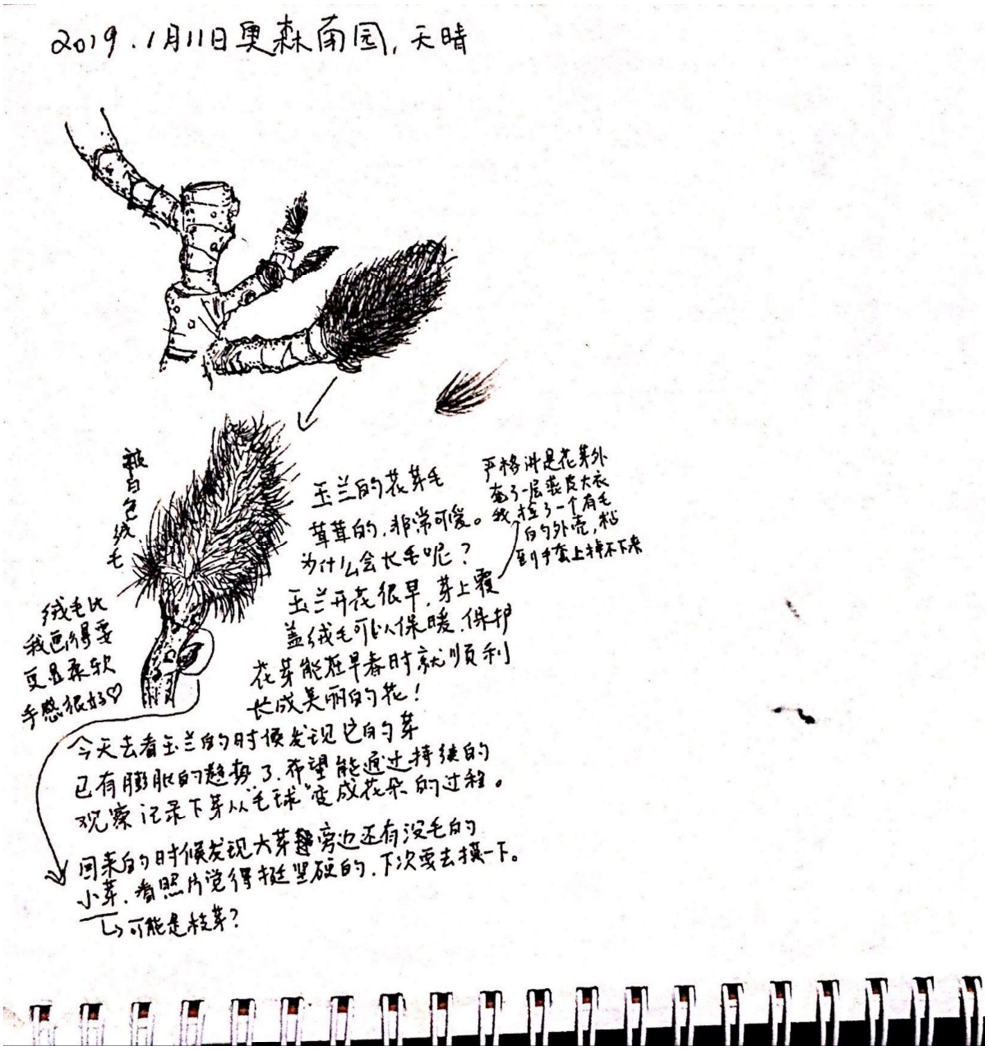

Figure 4.1 An entry of my nature journals

One day in early April of 2006, I was cycling to Desheng Guanxiang[32]. On the east side of the street, two magpies in the fray suddenly caught my attention. Parking my bike, I watched the wrestling pair moving to the west. One of them who scarpered off from the brawl was flying at the height of a street light pole. It suddenly slumped in the middle of a flight, hitting the ground in front of my eyes. For a moment, I feared that it would fall on me. With no intention of ceasing fire, the other magpie kept chasing after the fallen magpie before landing next to it, chittering

[32] It is an area located in the Xicheng or West City District that occupies a large proportion of central Beijing.

loudly with complacency. It was soon joined by another smaller magpie, whom I assumed was its mate, chorusing with the winner magpie. You may have encountered similar scenes in your life. However, a snippet like this is not sufficient to string together a complete life history of an animal. For most of us, it remains far from transparent how real-life animals lead their real lives.

Zhang Yu[33], May 8, 2020

The above two pieces of writing are both recordings of nature-watching encounters in Beijing. The first one is an excerpt of my nature journals (*ziran biji* 自然笔记) devoted to documenting the dynamic presence of some plants in the south park of the Olympic Forest Park. I had continuously observed these plants for nine months. Every Saturday, I joined a group of five to eight friends with shared interests in nature journaling, to document the changing natural world of the park through consecutive observations.

The second writing is a fascinating account of a nature-watching episode in an everyday setting by Zhang Yu. A prolific illustrator of a popular magazine called *Bowu* (natural history 博物) with expertise in nature illustrations, Zhang is known for his extensive experience of observing common urban wildlife in Beijing and gripping accounts of his nature-watching activities. Two essential techniques he proposes for nature-watching encompass: 1). nearness, that is, focusing on day-to-day

[33] "Can the story of magpies' nesting be another episode with an unexpected twist?", 8 May, *Shanshui Conservation Centre WeChat official account*, *WeChat*, https://mp.weixin.qq.com/s/R6J_Rpe9mkS7K-fHBZEtcA.

encounters with easy-to-sight animals living in the immediate vicinity; 2). slowness, namely, the careful and time-deepened observations on a regular basis to flesh out these animals' "familial affairs and neighbourhood gossips" (*jiachang liduan* 家长里短), or their daily lives in the city.

Notably, both pieces of recordings of observations necessarily go beyond, in style and content, species catalogues or inventories nature-watchers also enthusiastically create. In the preface of a celebrated natural journal of plants observed in Beijing (which is perhaps the first publication of this kind in the market), the author Nian Gao (2017: 3) mentions:

> These recordings in the form of natural journals are effortless to make and very realistic. Nevertheless, when these journals pile up, what you have accumulated is not merely knowledge of the names (*ming* 名) of birds and beasts, plants and trees (*huacao niaoshou* 花草鸟兽); instead, you are empowered to discover more stories of nature.

"Stories of nature" point to another style of observation-based knowing of living beings that relate to, but simultaneously cannot be reduced to knowledge centred on correct identification of certain species. Zhang Yu, too, makes a similar distinction. According to him, a one-time visual encounter with the magpies is far from knowing "how real-life animals lead their real lives". Here he seems to suggest that a more profound personal involvement of an observer is needed to produce knowledge of a specific kind of living beings. However, what he means to know about "a complete life history about an animal" is hardly self-evident.

This chapter intends to conceptualise nature-watching as habituated practices conducted consistently in urbanites' immediate surroundings. Theoretically speaking, my aim is to rehabilitate

nature-watching as a practical stance of everyday engagement with living beings in the immediacy of their material liveliness. Nature-watching, especially the mode of continuous observations, is meaningful for generating knowledge about more-than-human beings, which will be scrutinised in the this and the following chapters.

I consider nature-watching as an example of urban "park practice" (Farquhar 2009) within the day-to-day lives of urban residents. Nature-watching practices often involve a processual, recurring, and time-deepening mode of observing living beings in motion and transformation at public or semi-public urban green spaces. Key ethnographic findings centre on Beijing *huayou*'s signature activity of *shua yuanzi* (刷园子). *shua yuanzi* is characterised by habituated observations of plants conducted in *huayou*'s day-to-day urban lives. It enables sustained encounters with plants with the effect to nourish human-plant intimacy. Specifically, in section 4A.2, I organise *shua yuanzi* into two categories, including *huayou*'s enthusiasm to *shua* several botanical gardens in Beijing, and *huayou*'s daily observations of plants living in their immediate surroundings, which I consider a more quotidian version of *shu yuanzi*. The mundane urban practices of nature-watching exemplified by *shua yuanzi*, as I will argue, carry a profound implication for the development of what I refer to as in-person knowing of living beings based on unique cross-species intimacies.

4A.1. Knowledge practices in everyday urban living

The habituated nature-watching practices of intimately engaging with more-than-human beings need to be contextualised within the day-to-day lives of urban residents. I propose that nature-watching can

be regarded as an urban practice, not just because most of these activities take place within the confinement of the urban environment. More importantly, urban practices in everyday living such as excursions, hiking, park-visiting provide a great resource to create knowledge of local living beings.

My argument resonates with the proposal of a continuum of, instead of intrinsic difference from mundane urban practices and scientific practices (Dierig et al 2003). Dierig et al.'s thesis invigorates an urban theory of scientific practice and knowledge-making to bring the role of everyday city life to the fore. Urban leisure activities such as regular visits to the marketplace (Fan 2003) or excursions to the countryside (Phillip 2003), according to them, shape the formation and exchange of scientific knowledge.

For instance, in a fascinating historical study, Fan (2003) elucidates the pertinence of urban practices of everyday living to the production of scientific knowledge. She reveals how shopping around Canton's markets, curiosities shops, and plant nurseries was transformed into powerful techniques for British trader-naturalists' scientific investigation of natural beings in the 18th and early 19th centuries. In parallel, nature-watching activities are often made during the daily routine and in the immediate living environment of an individual. The emphasis on everyday contexts of watching puts forward the claim for the inseparability of knowing and doing, and highlights the significance of the daily, urban context of knowledge production.

Several ethnographic studies have scrutinised the regular activities of Beijing residents in public parks (e.g., Farquhar 2009; Farquhar and Zhang 2012; Zito 2014; Richaud 2016). For instance, Farquhar (2009) discusses the regular "park practices" of especially Beijing retirees who, through possessing a park pass[34], exercise to nurture their lives (*yangsheng* 养生) and pursue hobbies (folk

[34] As park regulars, it is no coincidence that many *huayou* are holders of a park pass *(gongyuan nianpiao* 公

dancing, singing, crocheting etc.) in public parks on a daily basis.

Nature-watching can be seen as what Farquhar characterises as "park practice", insofar as we are discussing ordinary city residents, who, unlike one-time visitors, visit parks as a routinised activity. Living near urban parks with rich species is often considered a particular asset to be envied for, as far as nature-watchers are concerned. For instance, *huayou* Jingzhi, a 56-year-old former teacher of Russian and one of my closest friends in the field, moved with her family to a residential community within walking distance from Tiantan Park (Temple of Heaven, 天坛公园). It gave her the privilege to visit Tiantan Park, and witness the transformation of many plants as often as she liked. After she retired in 2015, she developed the habit of taking a stroll around Tiantan Park daily.

Tiantan Park was one of Jingzhi's favourite parks, as she commented in our interview conducted in Tiantan on May 4, 2019:

> Despite being an urban park, I do not see Tiantan as an artificial place (*rengong* 人工); it keeps the wild stuff alive…the tender seedlings of Chinese violet cress (*Orychophragmus violaceus* 二月兰)—nobody destroys them; and there are patches of self-heals *(Prunella vulgaris* 夏枯草)…all these wild plants grow freely.

It is hardly conceivable for a one-time tourist in his/her first visit to Tiantan Park, to develop this kind of profound ecological understanding and attachment that is only viable through regular, time-deepened engagement with the site in everyday living.

园年票). At the cost of 100 RMB and renewable annually, the park pass grants its holder unlimited visits to 20 parks—including historical gardens such as the Summer Palace and Tiantan, as well as specialised parks such as the Beijing Botanical Garden—which otherwise charge an entrance fee.

In what follows, I provide an in-depth analysis of an ordinary urban activity enjoyed by Beijing nature-watchers called *shua yuanzi* (刷园子), which I loosely translate into "binge-visiting gardens and parks". My intention is to shed light on the daily park-visiting of city residents, daily visits and leisurely strolls around parks (*liuwan* 遛弯) as an investigative practice that conditions a recurring, habituated mode of observations and an intimate multispecies sociality.

4A.2. *shua yuanzi* as a mundane urban park practice

Before we proceed, it needs to be highlighted that *shu yuanzi* was conducted by nature-watchers across a diversity of interests for watching, e.g., butterfly enthusiasts, bird-watchers, cloud-spotters and so on. Indeed, I witnessed sustained observations of both bird-watchers and butterfly lovers at several public parks[35] and accompanied some in their frequent visits. Nevertheless, the very term of *shua yuanzi* is a colloquial term first popularised and frequently used among Beijing *huayou*; it may sometimes sound confusing to outsiders. It is crucial for understanding this particular type of recursive watching of plants, and by extension, the production of proximate knowledge of them.

The verb *shua* is in a very unusual way collocated with *yuanzi* that generally refers to a "park", an enclosed place covered with some forms of vegetation. From a different cultural context, Ogilve describes parks and gardens—both private pleasure parks and public parks—as the new sites of observations for Renaissance naturalists interested in botany to gain first-hand knowledge of the natural world—parks allowed them to repeat their observations (2006: 150).

[35]There were overlaps between *huayou*'s preferred places for observations and those for other groups of nature-watchers. Examples include public parks with "good environment" (环境好 i.e., ecologically rich area) such as the botanical gardens (both the south and north gardens), Tiantan Park (which boasts exceptional forest coverage) and the Old Summer Palace (which is surprisingly rich in wild plants) and so on.

In parallel, Beijing nature-watchers conducted repetitive observations of plants in parks. The continuous nature of observational practices is exactly encapsulated with the word *shua*.

shua is a verb with an original meaning "to brush" as in the phrase *shua ya* (刷牙) meaning "to brush teeth". A fresh usage of *shua* is found in cyber neologism, such as *shua ju* meaning "binge-viewing tv-series" in which *shua* takes the meaning of "doing something excessively" albeit without the connotation of unhealthiness. I propose that *shua* in the context of *shua yuanzi* conveys precisely the high frequency of *huayou*'s visits to various parks.

Box.4.1. *yuanzi, gongyuan and yuanlin*

The subtle difference between *yuanzi* (园子) and *gongyuan* (公园 which is the common translation of "park" in Mandarin) merits some attention. For Beijingers, the oral vocabulary *yuanzi* is more likely to evoke the idea of a private garden, specifically referring to the number of imperial gardens or *yuanlin* (园林 garden groves) which were turned into public parks for common people to relax during the late Qing and early republican reforms of the late 19th century. In China, as in Europe, most parks with lavishly decorated green spaces were originally restricted to use by royalty and nobles. The *Beijing Annals-Volume on Urban Landscaping and Greening* (Beijing Annals Editor Board 2000) categorises citywide parks into two broader groups: historical gardens to which imperial-gardens-turned-public-parks belong, as well as contemporary gardens which include pocket gardens in residential areas. Since former imperial gardens are usually endowed with vast green spaces, they accordingly become some of the most popular sites favoured for nature-watching activities. For the public park movement and transformations of imperial gardens, see Shi (1998) and Lin (2020. For a detailed study of Chinese imperial gardens in the Ming dynasty, please refer to Clunas (1996).

At the same time, we cannot simply assume an idea of a "plants-full park". Cunningham (1996) for instance offers a historical insight that it was not until the 17th century that plant gardens through the establishment of botanical garden came into beings in Europe. Even toward the end of the 16th century, the more important ornamentation of a garden was classical sculptures when plants and flowers were deemed unimportant. In Beijing, however, the "plantfullness" has been an established tradition and feature of parks ranging from well-preserved imperial landscape gardens to neighbourhood parks, and not to mention the recently constructed parks with "ecological characters" (*shengtai tese* 生态特色). Within the framework of the urban green planning, parks full of plants without doubt constitute key urban green spaces.

shua yuanzi could be a solitary activity or a rendezvous enjoyed among three or five *huayou*. In specific times of the year, e.g., in early spring with an abundance of spring blossom or in mid-autumn to appreciate the beauty of fall foliage, there were also large organised gatherings of *huayou*s (normally

around twenty or thirty people) to *shua yuanzi* together. In that case, *shua yuanzi* was similar to the organised bird-watching activity in which one or two experienced *huayou* led the group to walk around the parks and gardens.

For *huayou*, *shua yuanzi* as intimately contained within everyday urban living was often contrasted with the conventional, touristy endeavours of *shuashan* (binge-visit mountains 刷山). Apparently, what plants one could *shua,* or binge-view in the urban green spaces were different in the mountain areas. Beijing is located in a plain surrounded by mountains on three sides, with rich native botanical resources, particularly in high altitudes. Many *huayou* would flock to the outskirts of Beijing for a hike to enjoy the views of some of the rarest mountain plants. The mountains in Fangshan and Mentougou districts, e.g., were popular sites to savour the blossoming of three rare and endemic species to Beijing known as "three treasures that grow on steep cliffs" (*juebi sanbao* 绝壁三宝) in early spring: *Oresitrophe rupifraga Bunge* (独根草), *Corydalis fangshanensis* (房山紫堇), and *Clematis acerifolia Maxim(*槭叶铁线莲).

The exhilaration of *shuashan* came to a larger degree from the encounters with the rare, unique and 'other-worldly' plant species. Though enthusiastic about *shuashan*, some *huayou* expressed the liminality of this activity. For some *huayou* like Lele, a full-time editor and a mother of two boys, her tight working schedule and caring responsibility made it simply impossible to have time to venture out frequently. For others, the limit of *shuashan* resided in the shallowness of the manner of observation based on an instant and hurried mode of travelling and encountering. For instance, *huayou* Xiaoqing commented:

I am able to derive a sense of newness from *shuashan*, yes; *jiaxin* (加新 adding new species)

> is more about seeing as many things as possible, isn't it? But you can't really have an in-depth knowledge of [what you've seen]…This is only a form of sweeping past places and examining briefly (*zouma guanhua* 走马观花 which literally translates into "to view the flowers on horseback) (interview on April 7, 2019).

Frequencies of visits to botanical gardens varied from person to person and also from season to season. For instance, a 70-year-old *huayou* Yunshan told me she usually visited both South and North botanical gardens every week in spring, which counted more than a dozen visits in total. The number of her visit was about the average frequency. *huayou* Huan once told me, with a palpable tone of envy, that her friend *huayou* Mengmeng (a full-time housewife who had more free time at her disposal) had visited the South and North botanical gardens almost every day for the spring in 2019. Curiously, the repetition of these activities in the same urban settings does not yield a sense of boredom but sustains *huayou'*s fascination with possibilities of discovering "something new" about plants. What is the charm of observing the 'same-old' plants at the same sites weekly or even daily?

Central to *shua yuanzi* is the continuous visits to urban green spaces to conduct a repetitive mode of observing plants in the city. In what follows, I will elaborate Beijing *huayou*'s signature activity of *shua yuanzi* at length with more ethnographic detail. I break down *shu yuanzi* into two categories: one is *huayou*'s enthusiasm to *shua* botanical gardens, while the other is a more quotidian version of *shu yuanzi* incorporated into *huayou*'s day-to-day urban lives.

4A.2.1. To *shua* botanical gardens

Let me start with *huayou*'s experience to *shua* botanical gardens. The *yuanzi* or parks in this phrase by

default refers to two botanical gardens in Beijing[36]: the Beijing Botanical Garden (BBG 北京植物园) and the botanical garden affiliated with the Institute Of Botany, The Chinese Academy Of Sciences (IBCAS 中科院-北京植物园).

Located at the foothills of the famous tourist attraction of the Fragrant Hills (*xiangshan* 香山)—across a main road facing each other, the two botanical gardens are known to the public as the "North Botanical Garden" (*beizhi* 北植=BBG) and the "South Botanical Garden" (*nanzhi* 南植=botanical garden of IBCAS) respectively. The North and South Gardens are different in terms of history, occupied area, number of visitors, plants species grown and demonstrated.

Their function and the nature of their appeal to visitors is perhaps the most noteworthy distinction. The Beijing Botanical Garden was generally viewed as a popular urban park that balances thriving tourism and scientific research. As such, it was equipped with many tourist-friendly features such as clearly marked tourist routes, interactive display plant labels, designated resting areas with tables and benches, sufficient public toilets—all these facilities made it clear that the North Garden was laid out with the visitors as tourists in mind.

It was not really the case with the South Garden, however. To be frank, despite regular visits to the Beijing Botanical Garden since childhood, I did not know the existence of a "south botanic garden" until I started to mingle with *huayou*. On my first visit to the South Garden for a *huayou* gathering, I struggled to find the visitor entrance. This entrance was in fact situated in direct opposition to the North Garden across a road. Still, the appearance was totally different: not only does the opening of the North

[36] There are currently four botanical gardens in Beijing. In addition to the aforementioned two botanical gardens, there are also the Beijing Botanical Garden of Medicinal Plants (北京药用植物园) as well as the Beijing Botanical Garden for Teaching (北京教学植物园). The former remained in a state of renovation during fieldwork and consequently was closed to visitors, while the access to the latter was restricted to student groups by appointments only. As mentioned above, by virtue of enrolling in botanical courses, many *huayou* were given the opportunity to visit the Beijing Botanical Garden for Teaching for the first time.

Garden have a conspicuous ticket office, it also had a beautiful floral decoration that changed seasonally to appeal to visitors. The entrance through which I was led into the South Garden is surrounded by three office buildings of IBCAS, making it more like a campus than a public park.

The South Garden lacked the leisurely tourist atmosphere compared to the North Garden. *huayou* Huan commented on her experience of the South Garden in this way: "Visiting the South Garden is like a trip of discovery; there are few plant labels and you get to see something different at every turn as you walk randomly around the garden." The South Garden indeed contains less organised and 'manicured' landscapes but is dotted with a more spontaneous growth of weedy plants—"it's wilder" was the consensual impression of the South Garden among many *huayou.* If the North Garden resembles a checkboard of floral beauties, the South Garden is more akin to a labyrinth of plants where one easily feels disoriented when navigating around the garden.

When *shua-ing* botanical gardens, rather than being mutually exclusive modes, two forms of watching were adopted sequentially: quick identification-oriented species-spotting and recursive watching of identified species. However, both visual activities were deployed for the same agenda of building up familiarity with plants so that the I-see-you-once encounter of identification was turned into a blossom of deeper multispecies entanglement.

The first thing about *huayou* that struck me was their comprehensive knowledge of plants in the gardens, including both those plants that were exhibited as well as those that grew spontaneously. Even staff and researchers working in both gardens acknowledged *huayou*'s enthusiasm about identifying plants in the gardens. For instance, Ms Chen (the deputy head of the centre of Scientific Education here at the North Garden) admitted that she could not achieve what *huayou* could do—to be exceptionally familiar with plants in both gardens "as if to enumerate one's family treasures" (*rushu*

jiazhen 如数家珍). This was an apt Chinese idiom meaning knowing something like the back of one's hand.

Considering the extraordinarily extensive collection of plants housed in the botanic gardens, this was no mean feat for amateurs. Their knowledge about plants in the gardens, grounded in the identification of plants, was accumulated over habituated visits over the years. Moreover, their intimate understandings of the botanical collection in the gardens were spatially extended, manifested in their astonishing capacity of pointing to the correct location of a specific plant.

As mentioned before, while the North Garden is more ordered with clearly signposted pedestrian routes and themed gardens, the South Garden appears very much like a labyrinth for a new visitor. But many *huayou* I knew could navigate the landscape of the South Garden without any navigational aid as if they 'grew up' there. In particular, their navigation method involved a keen screening of the environment, taking guidance from plants *en route* as landmarks rather than resorting to a map.

A straightforward strategy that *huayou* adopted to separate the like-minded plant enthusiasts from other leisure visitors to enjoy the scenery was to see whether the person showed any interest identify plants. On a splendid spring morning, I accompanied four *huayou* to *shua* the North Garden, when it swarmed with visitors who came to appreciate a diverse variety of peach blossoms during the annual peach blossom festival (*taohua jie* 桃花节). The explosion of spring blossoms of different shades attracted visitors to take pictures with the splendid blooms. An elderly lady dressed in a flowery dress with an exuberant red chiffon scarf around her neck asked me to help her take a picture. She particularly reminded me to keep a "peach tree" in the background. *huayou* Xiuxiu said with a sigh: "It seems that we are the minority here, aren't' we? Most of them (visitors) only come here to snap pretty pictures without interest to know what they are photographing." She recognised that the "peach tree" the old

lady insisted on keeping in her photo was in fact an *Armeniaca sibirica var. pleniflora* (辽梅山杏), an apricot variety. Xiuxiu identified the apricot immediately, as she was in the habit of checking out the small name label tied to every plant.

Most plants in the North Garden have labels with succinct information about their official Chinese names, scientific names, place of birth, distribution etc. Nevertheless, in reality, visitors rarely bothered with the names of plants, as Xiuxiu lamented. In contrast, one goal of recurring visits for *huayou* was to identify as many plants as possible and to be able to call them by their correct categorical names. In the case when plants were not labelled, *huayous* relied on their learned taxonomy-based observation skills to analyse and differentiate plants. It also involved the adoption of plant identification apps on their mobile phones.

According to Code (1993), although knowledge involved in the paradigm of knowing by acquittance does not exclude the standard propositional knowledge or knowing 'facts', it is different and more than the propositional parts (1993:34). Similarly, knowing facts (e.g., official names of plants in Chinese or plant morphology) for identification is part of the process of in-person knowing. Let us take *huayou*'s concern with the correct identification of plants as an example.

Their concern with names alludes to a process of knowing in which familiarity is preceded by knowing each other on a first-name basis. The *huayous*' reasons for why learning names mattered were varied. For some, adept and correct use of official plant names (or even Latin binomial names) marked one's cultural and intellectual capital and educational level in a "knowledge society" (*zhishi shehui* 知识社会 in which "knowledge" is by default scientific knowledge). From a practical perspective, others believed that a good grasp of standardised plant names was necessary for communication within the community of *huayou*. Also, there were *huayou* making similar point to Tsing's argument about

categorical names of species. According to Tsing, names function as a "useful heuristic" (2005: 293) device to introduce oneself and others to an organism and alert initial attention. And illuminating for my discussion is how getting to know plant names constitutes the seminal starting point where an intimate relationship with plants begins to grow—the name is a distinguished mark of a plant's identity.

Nature educator and botanist Chu Haijia (2019) introduced an intriguing metaphor of "incantation" for names of plants: "An incantation is powerful to affect humans and the natural world while by analogy, the name of a plant could be called a form of incantation[37]; calling the name of a plant thus is to give rise to all memories about it". Plant names not only convey identities of plants defined by classificatory knowledge, but also embody past experiences of personal encounters with plants without the completeness of classification. Tsing makes a valid point that getting the names right is not an end in itself, but serves as a starting point for a preliminary engagement with distinctive ways of living-in-the-world of living beings that may burst categories and identities.

It was precisely why, in addition to inventory activities of acquiring classificatory knowledge of plants, the *huayou*'s practices also incorporate a dimension of in-person knowing of plants. It is predicated on relatedness with plants during sustained, attentive watching. The project of surveying plants centred on identifying plants by name was usually conducted at the initial stage of *shua yuanzi*. However, as the *huayou*'s experience of *shua yuanzi* grew, a shift of attention for knowing occurred to what the *huayou* Lele called the "lifetime of a plant". This mode of knowing involves witnessing the "animic way of living" (Ingold 2011: chapter 5) of identified plants, an enfolding of their lives into the lifeworld.

[37] For an examination of the Buddhist incantation practice in late Medieval China, see Copp (2018).

DaYuer[38] was a *huayou* renowned for her extensive experience of visiting both botanical gardens and her comprehensive knowledge of the wide variety of plants there. She was a middle-aged full-time housewife whose child had reached the age of seventeen in 2019 and thus did not require much of her attention. It left her plenty of time to pursue her botanical interests. Although she had an affinity for plants since her childhood, it was not until she took part in Dr Wang's botanical courses, as she told me in an interview, that she started to pursue a learned way of how to observe a plant.

Since 2017, she has frequently been visiting both botanical gardens. It became her habit to write a 'floral journals' illustrated with photos she took of all plants she observed on that day after each visit. She would then upload her journals to her WeChat subscription account so that her followers could read them. Many *huayou* subscribed to her account and praised her floral journals as informative, up-to-date and rich in detail that yielded from her ongoing observations.

The earlier entries of her floral journals were represented more in the form of a species list or a catalogue of plants observed. For instance, in an entry titled "Appreciating flowers in Beijing-flowers at the Beijing Botanical Garden" published in spring of 2017[39], there were only a few lines of text listing what she saw on this trip (including wintersweet 腊梅 *lamei*, winter jasmine 迎春 *yingchun*, David's peach 山桃 *shantao*, magnolia 玉兰 *yulan*, weeping forsythia 连翘 *lianqiao*) and a few more lines to express how beautiful these flowers were. The texts were accompanied by twenty or so pictures of spring sceneries of the North Garden and some plants mentioned. These pictures (Figure 4.2) were framed to present the beauty of flowers against the background of charming sceneries predominately,

[38] "Da Yuer" is a pseudonymised username she uses in the online community of Beijing *huayou*. When *huayous* met up for offline gatherings in real life, it was common for *huayou* to call each other by their internet usernames adopted in the online community rather than real names. Notably elder *huayous* were more likely to insist on using their real names for online communication.

[39] DaYuer, "Appreciating flower is Beijing—hundreds of flowers in the Beijing Botanical Garden", March 27, 2017, *WeChat*, https://mp.weixin.qq.com/s/19dxrKI1lZ_zHLvcRpDvXw.

but they lacked specific attention to any other organs or botanically interesting details.



Figure 4.2 A picture of a blossoming Yulan magnolia
Used with permission of the author.

As her floral journals piled up over the years, her writings displayed a shift of focus to document different stages of a plant's life, i.e., its full cycle of transformation, instead of merely cataloguing plant species identified. In an entry published a year later in the spring of 2018, that is, when she was in the middle of taking botanical courses with Dr Wang, her journal contained significantly more textual descriptions, and her words were much more scientific botanically informed.

In this entry[40], she not only demonstrated more professionally botanical knowledge but also incorporated a more dynamic perspective of the "happening" of flowers, paying attention to different stages of growth: some flowers were in full blossom, while others were half-open. For instance, with

[40] DaYuer, "2018-3-31 Magnolias in the South Garden". April 1, 2018, *WeChat,* https://mp.weixin.qq.com/s/sOyXhDptCZvvWVe2uQmR3A.

these three pictures displayed together, she documented the range of transformation of flowers of a hybrid magnolia known as saucer magnolia (*Magnolia* × *soulangeana* 二乔玉兰) from budding to blooming (which coincided with the emergence of leaves) (Figure 4.3a; 4.3b; 4.3c). These pictorial representations notably differed from the distant vista of the blooming Yulan magnolia against the backdrop of fine mountains shown in the picture above. Apart from flowers, she also paid attention to and recorded other features such as buds, stamens, and pistils, and remaining cylindric fruits.

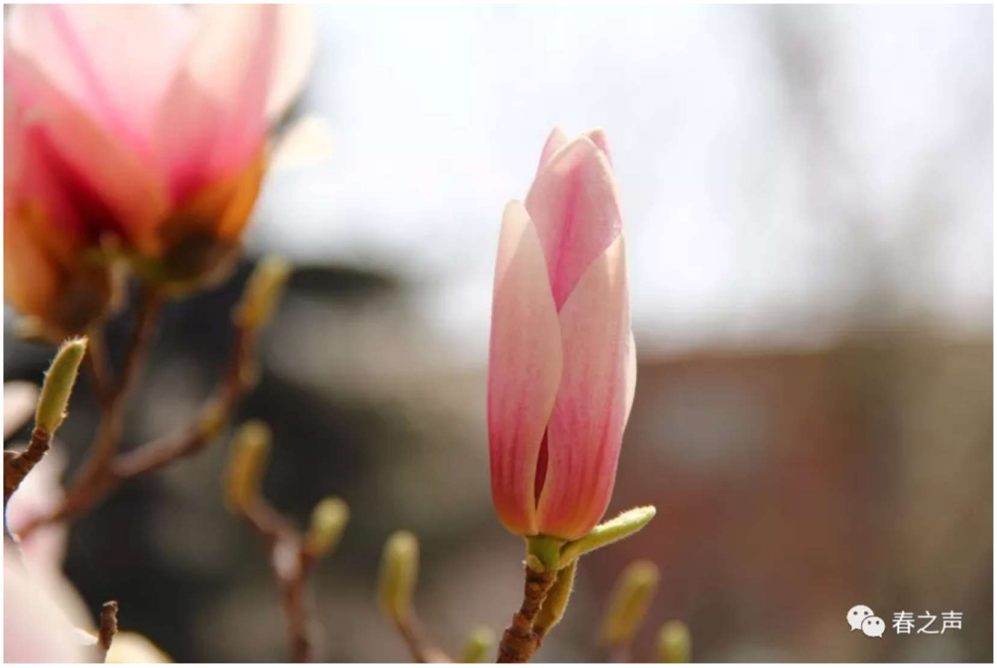

Figure 4.3a A flower bud of a saucer magnolia
Used with permission of the author.

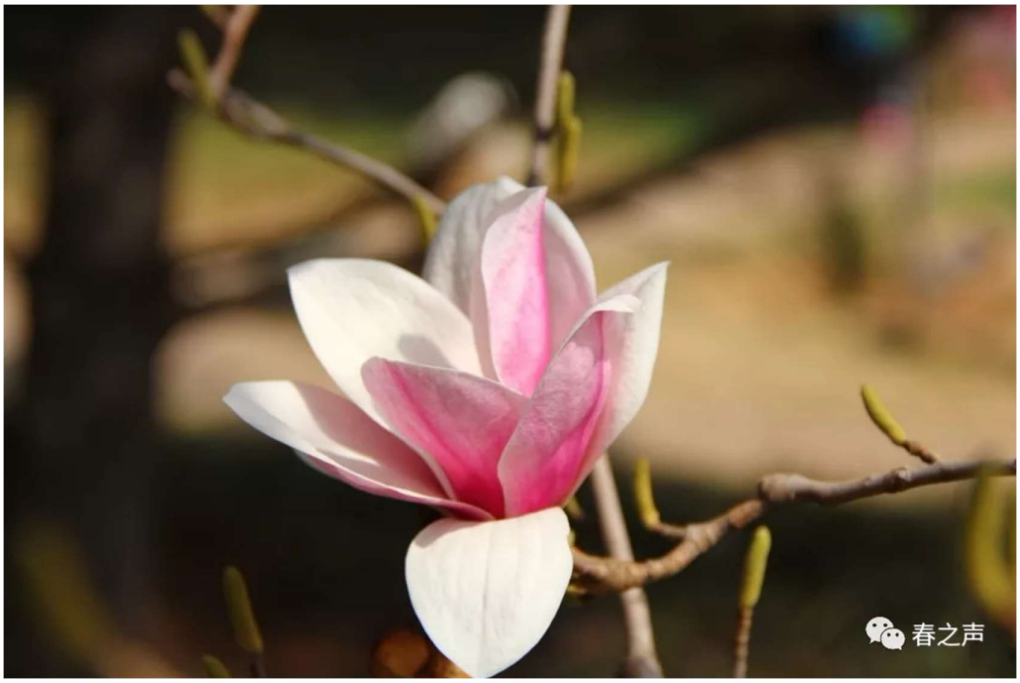

Figure 4.3b. A blooming flower of a saucer magnolia
Used with permission of the author.

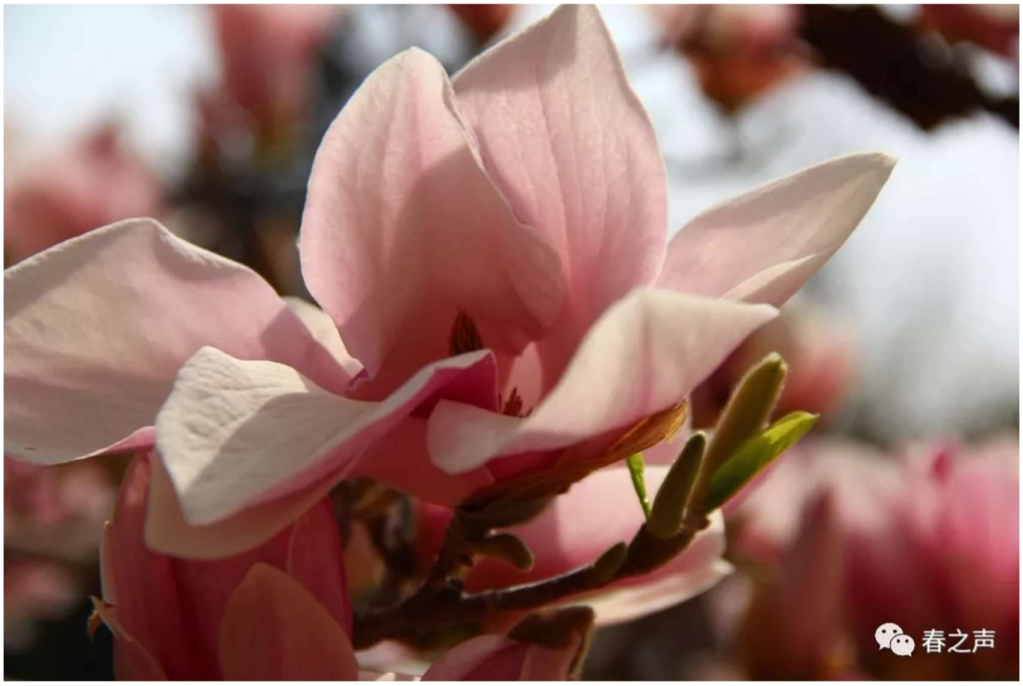

Figure 4.3c A full blossom of a saucer magnolia tree
Used with permission of the author.

Her high frequency in visiting botanical gardens, i.e., to *shua yuanzi*, facilitates her capacity to capture

manifestations of "different stages of life" (*shengming de butong jieduan* 生命的不同阶段). As revealed in the content of her floral logs, her interest presumably goes beyond the observation for the sake of identification. Rather, the recurring observation and attentiveness enable a form of in-person knowing predicated on recognising plants as emergent, transforming, embodied ways of "being alive" (Ingold 2011). To borrow her own words in a summary of recordings of plants observed in the South Garden[41]:

> In the past, only plants with beautiful appearances would attract my attention. However, I now discover that trunks, leaf buds, flower buds, even remaining calyx (of withering flowers) and nutshells have their own charm worth appreciation. It is my wish to make recordings of every discovery, and to continuously observe and grow with plants to savour their transforming beauty as the season changes.

I accompanied her to *shua* botanical gardens twice. She was not simply familiar with plants grown in the garden—either cultivated or wild, but she knew these plants based on the unfolding of their whole life cycles. For example, in a late-spring outing to *shua* the South Garden with DaYuer, Huan and a few other *huayou*, we saw a jetbead (*Rhodotypos scandens* 鸡麻) in prime bloom. Huan asked which one of us wanted to see the Chinese dogwood (*Cornus kousa var. chinensis* 四照花). It turned out to be *huayou* Mujin. Huan added that "if the jetbead has bloomed, then the small deciduous tree should be expected flowering soon".

DaYuer replied that the Chinese dogwood had indeed flowered, as she observed a few days ago.

[41] DaYuer, "Recordings of plants in the South Garden (2), March 25, 2019, *WeChat*, https://mp.weixin.qq.com/s/VPT2Tj66vEdingWwrhxk1g.

We all followed her to arrive at where a few bushes of Chinese dogwood grew. The plant looked rather peculiar, with clusters of flowers surrounded by green bracts that were easily mistaken for petals to untrained eyes. After a careful examination, Mujin threw a question to us. She noticed that the tips of its leaves were red, which somehow corresponded to the colour of tips of bracts. She wondered, as we all started to think, how the correspondence happened—did they change colour at the same time or not? Although DaYuer did not have a confirmed answer, she found it an interesting question worth further exploration. DaYuer said she had been documenting the entire life cycle—its seasonal and interannual variations—of this particular plant for a while, and should have photographed the in-between stages of its growth she could share with us later.

DaYuer's frequent visits to botanical gardens incorporate a recurring mode of observational practices to achieve familiarity of individual plants, instead of merely identifying them. Whereas species identification implies unfamiliarity, and often denotes taxonomy-based, analytic visual discrimination in the context of nature-watching, familiarity suggests a time-deepening attentiveness of the unfolding of plants' lives that arrives through repetitive encounters with plants. Familiarity, nonetheless, does not lead to the absence of curiosity but rather kindles ongoing curiosity. This sense of curiosity complements the feelings of amazement and fascination yielded in her recurring observational practice.

In DaYuer's writings, I found that the expression of "delightful surprise" (*jingxi* 惊喜) constantly appeared—"Flowers and grasses always bring us delightful surprises", as I quote from her. What usually surprised her in a manner that gave her joy was not simply knowledge about new plant species; rather, she was enchanted by the discovery of something new revealed to her in the long-term watching and enjoying plants in the beauty and singularity of their lives. It may be encapsulated as an

enchantment of finding out "something new" in the distinctive way of being alive of a plant, regardless of repetitive events of its growing and greening.

DaYuer's blog on 3 March, 2019[42] offered a revealing description of the thrill of witnessing a new feature about a plant that she knew well and observed before. She observed the leaves of wild daffodils (*Narcissus pseudonarcissus* 洋水仙), autumn crocuses (*Colchicum autumnale* 秋水仙) and red spider lilies (*Lycoris radiata* 石蒜) for the first time at the garden of perennial plants in the South Garden:

> What I saw in the garden of perennial plants brought me the first surprise for the day—the yellow-and-green leaves of wild daffodils, orange-and-green leaves of autumn crocuses and green leaves of red spider lilies. To my knowledge, it is the rule for the red spider lily and autumn crocus that their leaves and flowers never meet each other (*huaye buxiangjian* 花叶不相见, i.e., the plant flowers and grows leaves at different time intervals), and I have never seen their leaves before. I was more than thrilled to be able to witness the leaves this time.

We now have a glimpse of the charm of habituated visits to the same botanical gardens to carry out a continuous regime of observations. The allure of *shua yuanzi* resides in capturing something different in each stage of a plant's entire life history; it is about finding newness in a plant's becoming. Just like *huayou* Huan reminded me: "Observing a plant is like witnessing a child to grow up; you can't simply observe its youth and dismiss its growing aged." Examples of attempts to animate plants actively observed have also been found, if not more prevalent, in a more day-to-day version of *shua yuanzi*. It

[42] DaYuer, "Gathering of *huayou* on March 2 & a trip of searching for spring in the South Garden", *WeChat*, 3 March, 2019.

notably combines the daily stroll around accessible, nearby green spaces with recurring observations of plants in one's immediate surroundings. And this will be our topic next.

4A.2.2. Friendship with individual plants through everyday *shua yuanzi*

Huan's use of a simile in the quote cited above, "Observing a plant is like witnessing a child to grow up", curiously drew on the parallel of a plant's life cycle to a human's course of life. It was not idiosyncratic but a commonly applauded view among many *huayou*. In my interviews with several *huayou*, the notion of plants observed repeatedly as significant and animated, individualised beings was naturally expressed.

Considering *huayou* Maidong's view of getting to know a plant:

> In the beginning, what attracts my attention to a plant may be its eye-catching, lovely blossom. But at this stage, I have no ideas what it looks like when it bears fruits or before it is in full bloom. I then pay more attention to these features in further observations—watching a plant as it is not in its most beautiful moment, which I reckon, can yield more thorough understandings. Here is what I thought: to know a plant is like getting to know a friend; you start with a nodding acquaintance that might lead towards deep knowing on a more personal level…and you get to see the complete appearance of its life cycle (*shengming de zhengge mianmao* 生命的整个面貌) across years (Interview on August 2, 2019).

Maidong likened the process of knowing plants to the formation of friendship with a person. The way she brought the concept of friendship into the discussion is thought-provoking. Her comment alludes

to a sort of maturation of relatedness with plants—one starts from an initial acquaintance growing into a flourishing of a more anchored relationship with increasing recognition of the 'biography' of a plant.

Here this whole process of knowing hinges on a recurring cross-species sociality. The idea of friendship highlights a continuous and durable mode of interaction through which a slowly evolving relationship could sustain. As such, friendship is never a one-time encounter but arises out of continuous observations incorporated in the daily practices of *shua yuanzi*. On the note of sociality, my analysis of *huayou'*s repetitive observational practices in public parks corresponds to previous anthropological studies of Beijing park regulars (e.g., Farquhar and Zhang 2012; Zito 2014; Richaud 2016). Scholars have revealed findings of a new friendship and "particular form of civil sociality" (Farquhar and Zhang 2012: 77) derived from routinised group activities such as choir singing.

Readers are reminded that this is a community of plant enthusiasts who prefer to call themselves *huayou*; it means exactly that—friends[43] of flowers, to invoke a friendship with plants that matures in an ongoing mutual interaction. It is interesting to note how a way of knowing integral to interpersonal relationships also works in situations where more-than-humans are involved.

I argue that through the quotidian practice of *shua yuanzi,* plants related to as 'friends' by the *huayou* are observed with individual visibility, attended to at an individual level indicative of a more intimate level of relatedness. This is another dimension of in-person knowing that I wish to elaborate on further. I wish to make two points. First, the *yuanzi* where the *huayou* visit and observe plants constitutes sites not far from urbanites' daily living sites. Second, by characterising plants observed

[43] For a fascinating articulation of the idea of "friend" as a multi-dimensional network in pre-modern China, see Clunas (2004). Based on an innovative reading of the life and work and especially the social obligations and gift-exchange activities of the artist Wen Zhengming (1470-1559), Clunas points out the essentially fluid nature of "friendship". What we would now consider as patronages , teachers/masters, and clients were subsumed under the broader category of *you* (friends 友) in the Ming period.

daily as friends, the *huayou* manage to overturn the position between themselves and more-than-human beings observed, as salient companions, and indeed friends in knowledge-production. Thus a plant becomes knowable when a *huayou* is ready to recognise, observe, and becomes emotionally attached to it as individualised being.

To begin with, the human-plant friendship embedded in this daily version of *shua yuanzi* is spatially extended, taking place mainly in public or semi-public green areas close to where *huayou* live and work. The idea of friendship here stands outside of kinship bonding[44] that is often invoked in human-pet interactions, in the perception of pets as surrogate family members (e.g., Podberscek et al. 2005). While the human-pet relationship usually implies an inclusive intimacy grounded in co-habitation forged within the relatively bounded space of the household, friendship points to a form of convivial nearness to plants in the openness of parks that *huayou* can visit frequently.

One prominent feature of this daily form of *shua yuanzi* is the convivial proximity of plants and the attentive care of their presence in a shared place in almost daily visits. The rationale to conduct observation of plants in nearby green spaces was captured by *huayou* Xiaoqing:

> My idea is that the observation of flowers and grass (*guanhua guancao* 观花观草) in fact should be done in one's surrounding, such as the nearby green spaces. I usually go to the small park in my residential community. We are familiar with the saying: 'Life is not merely about compromise and survival, but also poetry and distant lands (生活不仅有苟且，还有诗和远方).' What is a 'distant land' anyway? It's where you cannot reach. But your distant land could be other's doorstep and vice versa…When there are so many things unknown at your doorstep

[44] It is not my intention here to reify a separation between kinship and friendship as mutually exclusive types of relations. For a more nuanced approach to friendship in relation to kinship see Desai and Killick (2000).

> which you haven't figured out yet, it makes no sense to keep thinking about exploring far afield—time constraints and financial situations may stop you from going afield whenever you like. I think it would be very good if we could understand well the 'distant land' as the area at our doorstep.

Unlike *shua*-ing specialised botanical gardens, this daily form of *shua yuanzi* is associated with places that are not sites of particular interest to be made the occasion for a separate visit. In this sense, these sites resemble what Lavadinho and Winkin (2008) discuss "proximity amenities" that are near to urban dwellers' daily agendas—a pocket garden, a bench, or a bridge—those little places people appropriate as their own to relax, enjoy life, take stock and so on. They are simply ordinary sites on the paths people take on their daily walks around their homes and workplaces.

Accordingly, options of locations favoured by *huayous* ranged from semi-public neighbourhood gardens within one's enclosed residential communities (*xiaoqu* 小区 which literally means "small neighbourhood"), green spaces near one's workplace, or accessible public parks nearby. All *huayous* I knew were urban residents in Beijing living in urban housing units known as the residential community (*xiaoqu* 小区). The green space within one's residential community thus became a popular site for daily observations of plants. Rather than offering an assessment of the quality of the designed greeneries in *xiaoqu* in Beijing, my concern here is how daily engagement via attentive observation of plants as found in proximity to one's living quarters (e.g., in the green space downstairs) is a means to produce valuable proximate knowledge of plants.

A *xiaoqu*, which is nowadays the dominant residential order of the Chinese cities, is a walled compound comprising several multi-storey buildings. While gated communities have been taken as a

manifestation of a dominating urban form emanating from the United States (e.g., Dick and Rimmer 2003), scholars have maintained that *xiaoqu* that appeared across major cities in China needs to be analysed within the context of a historically constituted "work-unit-based urbanism" (e.g., Lu 2006).

Unprecedented spatial transformations in Chinese cities have been undergoing against the backdrop of the continual national building projects since the founding of the PRC (Liu 2002). The most salient transformation in terms of spatial production in contemporary China was the construction of work units (*danwei* 单位) that dominated the built environment under Maoist China (1949-1976). Initially planned as a unit of production, a work unit was walled enclosure that gradually integrated workplace, residence, and social services. Larger work units even resembled a city in miniature where members' social lives were largely restrained within the boundary of the work unit while physically and socially separated from the rest of the city. Already in the work-unit schema, we see examples of the planning of open recreational spaces such as parks in the vicinity of the living quarters and for the exclusive use for the unit members.

New residential orders emerged with economic reforms since 1978. Reforms targeting housing commodification gained momentum and facilitated the decline of work-unit type communities. Housing reforms have made available more alternative housing options, as better-off urban residents are encouraged to move out from their old apartments provided by the work unit and purchase commodity housing (*shangpin fang* 商品房).

More relevant to our discussion is that the availability and quality of green spaces vary across different residential forms. For example, Pow (2009) implies that a highly privileged lifestyle is exemplified by high greenery percentage (*lvhua lv* 绿化率). Moreover, the benefit of being "close to nature" (*qinjin ziran* 亲近自然) is often deployed in advertisements of luxurious gated communities

to appeal the middle-class buyers.

Zhang (2008) categorises *xiaoqu* in Kunming into three categories: the luxury, mid-level and low-income neighbourhoods. She suggests alike that some low-incoming housing compounds particularly lack planned green areas. By greening area, Zhang refers to the greening infrastructure of a residential community. Greening infrastructure corresponds to a specific "regime of urban green planning" (Lachmund 2013: chapter 1). As such, the aesthetic orientation to beautify the landscape through horticulture as well as recreational value are prioritised, whilst the concern for meaningful encounters with lively presences of individualised plants is basically non-existent within this framework.

To be sure, the material conditions of the neighbourhood gardens in terms of species diversity could impact the *huayou*'s experience of *shua yuanzi*. For example, Xiaoqing preferred to observe plants in the small garden in her *xiaoqu*, which she gave a nickname of "the garden of a hundred herbs" (*baicai yuan* 百草园). Xiaoqing lived in a residential compound for military members and their families, called "military large yard" (*jundui dayuan* 军队大院) at a prime city-centre location. She felt very proud and extremely lucky to find a wide variety of plants in her residential area-species like Chinaberry trees (*Melia azedarach* 楝树) and yellowhorns (*Xanthoceras sorbifolium* 文冠果) that were hard to see elsewhere. She had even found a rare variety of the Chinese redbud (*Cercis chinensis* 紫荆) with white flowers—"the only one in Beijing" she claimed. Xiaoqing believed that the person responsible for the greening design of her residential community must have consulted experts in ecology or botany; otherwise, the garden would not have shown such amazing diversity of plant species.

In comparison, Lele lived in an old residential compound built around twenty years ago. In terms of landscape and plants management, low intensive management translates into a mix of manicured flowerbeds of less species diversity and an abundance of ruderal species growing everywhere. What

was normally regarded as a weedy nuisance for others was valued by Lele as an unexpected treasure. Lele told me that she was over the moon to discover a small colony of *Androsace umbellate* (点地梅) in the garden, for the plant normally only lives in mountain areas. This exciting discovery "enhanced my attachment to my residential community", she said.

It would be fulfilling if the nearby garden a *huayou* can visit daily is endowed with an abundance of plant species and even better, rare species. A *huayou* nonetheless can also derive immense happiness from observing commonly-seen species found in the vicinity. As Lele reminded me: "As long as one has the awareness to take notice of what plants live around you, everywhere one goes can be investigated as a botanical garden".

Lele indeed practised what she preached. Let me take an example of an exhausting four-hour trip to *shua* the Temple of Moon park (*yuetan gongyuan* 月坛公园) with a few *huayou* including Lele. A few winter jasmines suddenly attracted Lele. The winter jasmine was a very common landscaping plant that was appreciated for its early blooming and used here as a hedge to line a walkway. It was in late spring when the exuberant yellow flowers had already withered. The flowerless shrub no longer made a presupposing sight, which left it easily missed by passers-by. What drew Lele's attention, however, was a few tiny pearl-like fruits (Figure 4.4). The *huayou* were more than thrilled with this discovery, as it occurred to them (me included) for the first time that winter jasmine produced fruits. This encounter with winter jasmines' fruits then sparked a heated discussion about the difficulty for the winter jasmine to bear fruit. The small urban park of about 8 hectares (in comparison to Tiantan with a total area of 273 hectares) was thus transformed into a site where the *huayou* gained immense pleasure for botanical investigation, learning and intimate interaction with plants—not unlike a botanical garden.

Lele's point about "taking notice" suggests not only a finely-tuned sensibility about the presence of plants—exotic or common—wherever one goes; in this sense, *shua yuanzi* orients *huayou* to take as much (if not more) interest in commonplace and ordinary species. At the same time, it points to the applicability of *shua yuanzi* to any urban vegetation-covered spaces. This technique conjoins the identification of plants with recurring observations of individual plants.



Figure 4.4 A fruit of winter jasmine
Note that next to this ripe fruit is a persistent flower of which only the sepal remains, but the flower shows no sight of a fruit.

Moreover, as mentioned in the opening paragraphs, it was typical for *huayou* to liken plants observed on a daily basis as "friends" or *pengyou* (朋友).This personified characterisation of plants should not be regarded as either imposition of anthropocentric views or attempts to instil life or spirit into these plants. Rather, I suggest that it is epistemically meaningful to "brings us to the liveliness of beings experienced as subjects" (Tsing 2015: 244), as partners in actions rather than objects. Plants in this

mode of in-person knowing are often regarded like, to borrow *huayou* Lele's word, "a living-being with real emotions" (有真实感情的生命).

Being with plants, as Ingold indicates, is not "to be set over against them, as in the image of the vis-à-vis, but to be enveloped in the intense, intersubjective intimacy of eye-to-eye contact" (2000: 278). The plants have no eyes, but the point for *huayou* is to stress the possibility of mutual 'seeing' and acknowledgement. Let me illustrate two *huayou*'s stories of how the daily practice of *shua yuanzi* enabled Xiaoqing and Lele to envelope their day-to-day urban living in an intense, affective intimacy with individual plants within their *xiaoqu*.

As argued in the previous chapter, nature-watching is an issue of skilled vision and the trained capacity of being affected and affect. Whether people can attune to and be affected by the distinctiveness and meaningfulness of plants living in proximity matter. Without the capacity of being affected and affect by plants, people can turn blind eyes to the fact that we are "in the midst of things"—lots of them (Bingham 2006: 496).

Xiaoqing's emotionally-charged, affective relationships with an individualised wintersweet (腊梅 *Chimonanthus praecox*) is a good example. Her intimacy with this plant was forged in the course of her recurring observations at her neighbourhood garden:

> For me, I see this plant as an individual person, my good friend. I have it in my mind (*wo hui dianji ta* 我会惦记它) and keep thinking about when it would begin to bloom. When the rest of the wintersweets in my *xiaoqu* had flowered in March, I was worried for its sake: why had you not bloomed yet? I got pretty anxious and worried about it, so I had to observe it even more frequently. I feel like I have some emotions towards it (*dui ta youganqing* 对它有感情).

"To have emotions" or "to have feelings" (*you ganqing* 有感情), according to Hsu's observation, may be taken as the "defining aspect of Chinese personhood" (2007: 203). Notably, Hsu notes that Chinese emotionality is an intrinsic constituent of Chinese sociality, often referred to in a morally sanctioned and appropriate way (ibid: 204) and reflects social responsibilities rather than romantic impulsations. In Xiaoqing's remark, we can see how Xiaoqing extended the mode of *you ganqing* in social interactions to depict a form of recurring sociality with a particular wintersweet.

Xiaoqing was deeply affected by the plant she related to as a "good friend". Here affect is conveyed in a dual meaning as a particular emotional expression and as "a distinctive variation in one's willingness or capacity to act in response to that state" (Duff 2008: 882). Their friendship is thus better characterised as "a certain quality of being open to and with others" (Binghanm 2006: 489). She was anxious about the presumably late event of flowering of the wintersweet, and her anxiousness compelled her to visit and attend to the condition of the plant more frequently through *shua yuanzi*. Xiaoqing felt distressed because she understood flowering as a cardinal matter of life or death for this plant; there was a shift of perspective from a human-centred view of plants' bloom in aesthetic terms to acknowledging the event of flowering as key to a plant's living.

If the observer qua knower here is embodied, in an affectionate rapport with the observed, the observed, in turn, is not abstracted as an inert object but reveals itself in an articulated presence. Insofar as the plant is bodily present in a certain way that puts Xiaoqing in a mood of worriedness, both Xiaoqing and the wintersweet are enveloped in what Boehme conceptualises as an "affective atmosphere" (2017). It is this "in-betweenness", by means of which this particular plant and the observer are personally related, that contributes to the in-person knowing of the plant in terms of its

specificity of life.

Xiaoqing tended to illustrate her observations with evocative narratives of her encounters with individual plants observed in her garden. Growing up in a household where there were always some pots of "flowers and grasses" (*huahua caocao* 花花草草), Xiaoqing mentioned that there had been a "deepening of understanding" (*shenru liaojie* 深入了解) of plants since she joined the community of *huayou*: from the aesthetic appreciation of a flower's beauty, to an interest in various organs of a plant, to "plant intelligence" (*zhiwu de zhihui* 植物的智慧), that is "how they survive in the environment". She gave an example of a Benghal dayflower (*Commelina bengalensis* 饭包草), a herbaceous, weedy plant she had been observing in her garden.

What was amazing about this small plant, as she told me, was its remarkable structures. The plant is known to grow fertile and infertile flowers (with three infertile stamens and a degenerated pistil) whose only function is to attract visits of pollinating insects and guide pollinators to land on the right place for pollination. It also develops an incredible form of flower called "cleistogamous flower" (*bisuo hua* 闭锁花), which grows underneath the soil and can self-fertilize without opening (hence in Chinese it is called the "locked flower", *bisuo*). Xiaoqing commented: "Just think about it: even such a tiny little thing can come up with some many ways to strive to reproduce; I consider it much stronger than human beings."

Xiaoqing's daily observation of the plant valorises the 'intelligence' of this single weedy flower. It also enables an intimate understanding of the "ethos" of this plant (Rose and van Dooren 2017), namely, its embodied, particular mode of living in the world that distinguishes it from other species, and even from other plants of the same species. Her appreciation for this banal plant's 'intelligence' was well condensed in this beautiful work she made. The pencil sketch highlighted three amazing

features (the fertile flower, infertile flower and cleistogamous flower) of the Benghal dayflower Xiaoqing discovered and continuously observed. The sketch and the accompanying text constitute a unique form of recording of her observation known as nature journaling (*ziran biji* 自然笔记) (Figure 4.5).



Figure 4.5 Xiaoqing's nature journal about the Benghal dayflower
It was awarded a prize in a competition on natural journals and exhibited to the public in the North Garden. I took this picture at the exhibition and used with permission of Xiaoqing.

Notably, nature journaling is not meant to merely represent a natural entity in its abstract, objective form. Rather it enacts a version, a reality of the living being with text and illustration, documenting the author's close, personal interaction with it. In this sense, it echoes Siebert's notion of "text animals" found in a genre of specialised monographs on natural studies called *pulu* (谱录, meaning treatises and lists). According to Siebert, *pulu* is a form of narration in which the author's direct, practice engagement with animals in real life is subsequently resolved in textual portrayal, and thus "rejuvenating their existence as text-animals" (2019: 159). Text animals are distinguished from "remote animals" or "animal texts", which Siebert characterises as representations of animals constructed from hearsay and other texts from a remote, philosophical perspective. Likewise, I take Xiaoqing's nature journal as a material embodiment of a 'text plant'. Her writings enact a reality about this particular plant in the here-and-now of encounters through the recurring, engaging, attentive mode of watching.

Box 4.2. *biji and riji*

Biji, or notebook (literally "random jotting") holds a special space in the history of Chinese literature as a literary genre that reached the apex of popularity in the late 8th and 9th centuries (Wei 2010). Hargette (2001) has noted the difficulty, if not impossibility to define *biji* texts in precise terms, for the highly heterogenous nature of its style and content. Fu (2007: 103) divided *biji* texts into three general categories: 1) a voluminous book which collect short stories, anecdotes, or biographies; 2) "miscellany" (*za shu* 杂书) that discusses a wide range of topics; 3) highly specialised *biji* that is entirely on a single subject and may read like catalogues.

Another related literary genre to consider is *riji* (literally, "daily account", 日记), or diary. Equally intended to be all-encompassing and sometimes indistinguishable from *biji*, the dairy texts turn the author's eyewitness sketches of miscellaneous topics in everyday living into readable literary forms. The overlapping of *biji* and *riji* makes sense in the case of nature journaling. As one participant of a local nature journaling group informed me, nature journaling is indeed a way of "writing dairies for the natural world" (*wei ziran jiriji* 为自然记日记).

Let us now turn to what *huayou* Lele had to offer. Lele reiterated that knowing was to be intimately with plants in daily lives by virtue of regular observing and attending to their presence. And since building up a friendship with plants was not an instant matter but rather took time, sustained engagement predicated on habituated daily observing was underscored by Lele. Like Yuer, she also

kept journals about plants observed every day in her surroundings, mainly in the neighbourhood garden or the small park near her workplace. She told me about her aspiration to publish her journals someday, and the title of her book she had in mind was "observing flowers on my doorstep" (*jiamenkou kanhua* 家门口看花).

> Every plant I have written about is based on personal observation, yes, continuous observations. I rarely make a deliberate visit to observe a plant simply because I want to write about it on a whim. These plants I have documented are all found nearby. I may take a few pictures of the bloom this year, and then photograph the fruit next year and I may have the picture of the tender leaves taken some time before—observation and recording of a given plant take time, a few years perhaps (interview on June 4, 2019).

And to her, this form of knowing grounded in daily attending to and observation of plants saw no limit, constantly drawing her attention to the being-alive of individualised plants in new ways:

> I have been photographing a Chinese parasol tree[45] (*Firmiana simplex* 梧桐) in my *xiaoqu* for a few years. However, I never really noticed its flowering. This year the timing was just right for me to have the opportunity to observe and record the growth of its flowers and fruits. Its

[45] The Chinese parasol tree (*wutong* 梧桐) holds special meaning in the Chinese culture for its connection with the mythological bird phoenix (*fenghuang* 凤凰). It is believed that *wutong* is the preferred perch of the phoenix. The idea of phoenix perching on a *wutong* is widely known even today. One day I accompanied two fellow participants of the Beijing Swift Monitoring Project (see chapter six) to the Summer Palace where we came across three *wutong* trees near the North entrance. It did not take me much effort to identify them as *wutong* for their unusual smooth green trunk. My companies naturally responded, when she realised these trees were *wutong* by exclaiming:" so these are the legendary trees where a phoenix perches."

male flowers bloomed first, followed by female flowers; the most amazing thing was to observe the germinating fruits that looked like claws with five digits. It was like the discovery of the new land (*xin dalu* 新大陆)! And I also felt that the tree must have felt my passion and love for it, and it responded by producing the fruit to let me observe it at last. I think it was a matter of *yuanfen* (缘分)[46] that I and the flowers of this tree were destined to meet.

Lele's new insight about the tree, is not lodged in its interior, but emergent from the unfolding of its animic living in a relational field. Lele's new knowledge is drawn from her engagement with the tree in the long process of attending to and observing it, as the plant responds to her attention by revealing something new about itself. The way she brought the notion of *yuanfen* into discussion merits some contemplation. Lele used *yuanfen* to characterise a mode of knowing that advocated encounter by spontaneousness—alluding to the literal meaning of *ziran* (nature 自然) in Chinese as "so of it"—and avoided imposing a response from the plant. Moreover, despite Lele's desire to see the flowers and fruits of the tree, she nevertheless adopted a non-rushing attitude rooted in attunement to its temporal rhythm through the seasonal pulse of growth and reproduction. It corresponds to an instance of actively sharing and "matching of the vitality form" (Stern 2010: 40).

In a similar vein, this idea of knowing by *yuanfen* was also found among bird-watchers, in particular a group of bird-watchers who identified themselves as "*zen* bird-watchers" (*foxi guanniao ren* 佛系观鸟人). They were bird-watchers who resisted the idea of forcing encounters with birds for

[46] The notion of *yuan* or *yuanfen* (simply translated here as the "binding force"), is a Buddhist-related Chinese concept that dictates a person's relationships and encounters such as the affinity between lovers. In common usage, the term can be defined as the "binding force" that links two persons together in any relationship but mostly romantic entanglement. Yang and Ho's study closely trace the evolving meanings of *yuanfen* and concludes that this idea is well alive in contemporary China and applied in a wide range of contexts beyond interpersonal relationships to encompass "relationships with animals, objects and events" (Yang and Ho 1988:279).

the sake of obtaining higher count numbers of species, but were more comfortable with watching whatever birds that was shown to them.

4A.3 Conclusion

In this chapter, I have introduced and sketched *shua yuanzi* as a form of continuous urban practice with the possibility of generating knowledge of urban living beings. I propose that both versions of *shua yuanzi*—habituated visits of botanical gardens and day-to-day activity to *shua* urban green spaces in *huayou*'s immediate surroundings—afford an intimate sociality with plants. It is particularly the case with the quotidian version of *shua yuanzi* in which *huayou* repeatedly refer to individual plants observed daily as friends (*you* 友).

I now turn to analyse *shua yuanzi* at length. I wish to delve deeper into the epistemic implication of *shua yuanzi* and the human-plant intimacy it affords. I seek to elucidate how nature-watching with the productive consequence of establishing cross-species intimacy may nurture a form of in-person knowing of living beings in the city.

Chapter 4B. Recursive nature-watching and in-personal knowing of living beings

Theoretically, this chapter renegotiates the relationship between observations and knowledge-making. Knowledge about more-than-human beings in the city has been increasingly generated by urban natural watchers, as we have seen in *huayou*'s activities of *shua yuanzi*. I wish to suggest that, in the context of urban nature-watching, observations are not views from nowhere performed by neutral spectators disconnected from everyday circumstances and detached from the entities to be known. Nor are

knowledge-making practices disinterested pursuits of observational information gathering. Specifically, I argue that nature-watching constitutes observational practices that afford a specific sense of knowing more-than-human beings. I will refer to this knowledge-making process as in-person knowing and knowledge thus produced as proximate knowledge.

This chapter is divided into three sections to elucidate in-person knowing in nature-watching. I start with the significance of observations to establish personal presence of the knower to the known. Observations are given epistemic weight not just because they provide data on which propositional knowledge is formulated and verified. Rather, as my respondents' nature-watching experience implies, observations are incarnate, leading to first-hand, concrete nearness to 'real-life' plants and animals.

Second, I argue that repetitive observations of nature-watchers as exemplified by the practice of *shua yuanzi* afford a specific mode of in-person knowing and the generation of proximate knowledge of more-than-human beings. Proximate knowledge implicates not only physical nearness to more-than-human beings in everyday urban living, but also and more importantly, a sense of togetherness with them. In-person knowing thus derives from an intimate cross-species relatedness whereby repetitive encounters with living beings are turned into the intersubjective familiarity of individual species' singularity of life.

A discussion of the liminality of in-person knowing that embraces contingencies follows. This chapter is concluded with a further reflection of how a sense of wellbeing may derive from an ongoing sense of wonder of how natural beings can manifest in new and surprising ways.

4B.1. In-person observations

From the nature-watchers' point of view, observation is an incarnate activity that re-embeds vision

within its primary context of people's actual perceptual engagement with the world around them. It requires us to rethink visual perception as "the mode in which one is bodily present with something", so that "the perceiving subject is actual in participating in the presence of things and the perceived object is actual in the perceiving presence of the subject" (Böhme 2017: 92). In short, rather than reinscribing our separateness with the world, nature-watching practices point to embodied visual encounters and an aspect of knowing as a mode of drawing people nearer to the world of more-than-human others.

Ding, one of my close friends in Feiyu, was a sophomore studying archelogy and already an accomplished nature-watcher for his age. In addition to his passion for bird-watching, he was equally enthralled, if not more, by the winged wonders of local butterflies and moths. Starting his butterfly-watching journey in childhood, he regarded insects as the ultimate living proof of human-wildlife coexistence in the city: "Hummingbird hawk-moths (长喙小豆天蛾 *Macroglossum stellatarum*), small cabbage white butterflies (菜粉蝶 *Pieris rapae*)—these are among the most common species of Lepidoptera in Beijing. People get to see them flapping around, but, alas, they rarely give them any attention; insect phobia seems overwhelming."

After a satiating trip around the Beijing Botanical Garden (it yielded first-time encounters with several species of butterflies and moths for me), Ding and I walked to the nearest McDonald to take a rest. I was greatly fascinated by his incredibly thorough understanding of butterflies, munching on a cheeseburger. I asked about how he acquired his butterfly knowledge. "That's not so hard as it sounds. It is important to go outside and to observe them in the natural environment as often as you can." He answered and then added: "Don't count on the Butterfly Valley (an indoor butterfly menagerie that charged an entry fee for visitors). There was one in Beijing and I'm glad it was closed several years

ago. I hated how living butterflies were exhibited and displayed like commodities there. For me, observing butterflies in their natural habitats is much more knowledge-enhancing (*zhang zhishi* 长知识) . I cannot help but wonder: "But what do you mean by knowledge?". He answered: "I mean understandings that are acquired through in-person observations with my own eyes." (*tongguo qinshen guancha, qinyan kanguo huode dezhishi* 通过亲身观察，亲眼看过获得的知识)

Within the paradigm of representational knowledge, the separation and disengagement of the knower and the known is presupposed and plausible. In this sense, "my beliefs about the moon can be held, even actualized in my present thinking, even if the moon isn't now visible" (Taylor 2003: 163). In contrast, nature-watchers' paradigmatic way of in-person knowing, as Ding hinted, purports that one's grasp of understandings of living beings cannot be actualised in the absence of them. Put differently, knowledge derived from nature-watching arises from the intimate, first-hand observations of living beings that are not out there, but very much co-present with nature-watchers in the environment. In this context, as I argue, first-hand nature observations need to be reframed as a practical orientation towards the world, while the first-handiness of such observational practices is undergirded by a "presence-based relationship" (Gumbrecht 2007) with living beings.

Historians of science have shown that "first-hand" and "observation" were rarely coupled together in the Middle Age. According to Pomata (2011), the fact that *autopsia*, the Latinised translation of the Greek word was a neologism that appeared in the late 16th-century medicine, points to a new awareness of first-hand experience. As the meaning of "observation" kept expanding and sharpened, the late 17th century bore witness to how "observation" was increasingly qualified with *autopsia*, direct visual experience with one's own eyes, in contrast to accounts of one's observations or hypothesis.

It was not the first instance that my respondents used expressions of "in-person observation"

(*qinshen guancha* 亲身观察), similar to Ding, to qualify their observations. To bird-watchers, the directness of personal rapport with birds via first-hand observation mattered. Many bird-watchers called on the contrast between personal observation in the sense of 'being-there', with reading books or watching natural documentaries.

For instance, in the context of adding sighting of new bird species on one's bird-watching list (*jiaxin* 加新), the concern for the directness of first-hand visual experience was pushed to a next level: to see certain bird species for oneself was not enough; one had to see the new bird species before anyone else without assistance from other people to properly 'own' the record of the sighting. This was encapsulated by the differentiation between two types of sightings of new species: first-hand sighting (*yishou jiaxin* 一手加新) and second-hand sighting (*ershou jiaxin* 二手加新). Second-hand sighting means to watch birds pointed to a bird-watcher, instead of initiating this visual intimacy with birds on his/her own. Moreover, it was sometimes denigrated by some bird-watchers as simply unprofessional and lazy.

It is not a coincidence that *huayou*—DaYuer, Xiaoqing, and Lele whom I mentioned in the previous chapter were all in the habit of making nature journals of plants observed. To them, nature journaling is not merely a simple method of recording their observations. Rather, a successful piece of nature journals depends on the author's sustained, in-person observations of living beings, when personal observations valorise direct, incarnate visual intimacy with living beings in opposition to the assumed detached and dis-relationship of the observer from the observed.

Personal observations nourish what Boehme characterises as an "aesthetic relationship to nature" that consists of "entering into the physiognomy of things, in being told something by them" (Boehme and Thibaud 2017: 152). Ren Zhong, a leading figure in an emerging nature journaling movement in

China, once commented: “Personal observation is the foundation for getting along with the real-life natural world”. Indeed, nature-watchers’ ongoing observational practices open up a state of “shared actuality” (ibid: 141) of nature-watchers and living beings. It is in this sense of intimate knowing that I understand the importance of first-hand visual encounters with more-than-human beings to which nature-watchers attach.

4B.2. Recursive watching and in-person knowing

A new observational habit of nature-watchers crucial for our discussion is a repetitive mode of observations of living beings in the city. The high frequency of *huayou*’s observations of plants, which is perfectly crystalised by the verb of *shua* in both versions of *shua yuanzi,* is a case in point. How should we make sense of the repetition of observations?

Existing scholarship on scientific observation has historised the regime of repetitive observations for scientists. Daston, for instance, indicates that within astronomy, the “most ancient observational science”, it was not until the late 16th to 17th century that astronomers developed a new observational practice: “the systematic repetition of the same observation night after night, over years and decades” (2011: 94), as opposed to observations of singular or rare phenomena. From the perspective of the Danish astronomer Tycho Brahe, continuous observations were recommended and institutionalised to draw astronomers’ attention to the possibility or the inevitability of error. Within the discipline of natural history in the 18th century, comparatively, replicated observations were justified for stabilising the phenomenon of the natural world to extract the typical from natural particulars (Datson and Galison 2007: 235).

Practices of continuous and sustained observations were similarly foregrounded by nature-watchers in Beijing today, but advocated on different grounds. I propose two perspectives to shed light on the importance of repetitive observations to nature-watching. First, habituated observational practices are celebrated as a form of urban activity that can be done with ease within the current of everyday urban living. In this sense, nature-watching practices in more accessible, day-to-day settings fall into the category of what Govindrajan (2018) terms "everyday practice[s] of relatedness" through which a dwelt form of relationship with natural beings living in the vicinity may be nurtured. Second, habituated, repetitive seeing is considered the royal road to deepened personal familiarity with more-than-human beings observed.

Importantly, repetitive observations in everyday living afford a type of proximate knowledge of living beings, and a specific knowledge-making process I call in-person knowing. Multispecies intimacy forms a crucial element of in-person knowing in which direct encounters with anonymous species are slowly turned into the intersubjective familiarity of individualised species' living, as observations are consecutively conducted.

Before we proceed, it is essential to clear the theoretical ground a bit. Readers may find that my phrasing of "in-person knowing" is reminiscent of the concept of "personal knowledge" developed by scholars like Michael Polanyi (2005[1958]) or Lorraine Code (1993). There is both inheritance and difference from their projects of establishing an alternative ideal of knowledge, to displace any "mistaken ideal of objectivity" (Polanyi 2005[1958]: 6) within the dominant Western epistemological tradition since Descartes.

Despite adopting the same terminology, Polanyi and Code's theories grow from different theoretical soil respectively. I do not have enough space to elaborate on the full spectrum of Polanyi's

trademark theory of personal knowledge. Here I want to draw on his reflection of knowing as shifting from a "non-committal orientation" grounded in the disjunction of the subject and the object towards a "committal orientation". In this way, the essential role of "personal judgement" of the knower to the act of knowing should be underscored, even in the "most exact operations of science" (ibid: 20).

In the preface of the corrected edition, Polanyi further inaugurates personal participation with a Heideggerian[47] notion of "indwelling" that "all understanding", he proclaims, is based upon our indwelling, or "participation of ours in the existence of that which we comprehend" (Polanyi 1964: x-xi; cited in Yu 2010). He entitled his book "personal knowledge" precisely to bring this element of "passionate, personal human appraisals of theories" (Polanyi 2005[1958]: 16) infused with the intellectual commitment to "claiming universal validity" (ibid: iv) to the fore. The exact science is usually attributed with complete objectivity in terms of establishing precise rules to which all truth and error can be ascribed. It is nevertheless delusional, as Polanyi indicates, for rules are never self-applying but rather involve an "art of knowing" or "connoisseurship" (ibid: 56-7). A "personal coefficient" of personal participation is applied in a knower's original way and depends on the personal power of appraisal and judgement. For instance, the personal judgement of theories is at work in applying a formula of even the most exact operations of science that cannot be definitively prescribed by a set of rules. Effectively, the philosophy of personal knowledge is an account to accredit the agency and commitment of the knower engaged in a quest for meanings.

Aligned with the feminist agenda of challenging the privileged status given to the propositional knowledge justified as *the* knowledge, Code attempts to recover the rich epistemic lives, of which propositional knowledge governs only a "minuscule" part (1993: 37). Her proposal is that the paradigm

[47] For the intersection between Polanyi's theories with the phenomenological traditions also see Yu 2008.

of knowing other people, a knowing in a 'thicker' sense, is an "exemplary way of knowing". She argues that within this paradigm of knowing, "subjectivity has always to be taken into account in making and assessing knowledge claim of any complexity" (ibid:39). It has two implications. First, the subjectivity of the knower—mood and emotional character as well as her/his social-, cultural- or personal-historical situations—plays a positive role in making knowledge. This emphasis on the subjectivity of the knower is in stark contrast with the "annihilation of the self" and the will as legalised within the knowledge paradigm striving for objectivity (Daston and Galison 2007: 231).

Second, the paradigm of knowing other people can be applied to situations where 'objects' of knowledge are seemingly inanimate, such as rock (the line between the animate and inanimate is fuzzy, as Code recognises). The point is to promote a recognition that "rocks, cells and scientists are located in multiple elations to one another", such that the position between the knower and the known is always, in principle, open to negotiation (ibid: 38). It, therefore, makes no sense to single out the asymmetrical knower-known relation.

My intention to couple "in-person" with "knowing" is shared with Polanyi and Code, as they both, in different ways, to call into question the disinterested and 'faceless' knower qua observer as enshrined within the epistemic paradigm of propositional knowledge. Nevertheless, the personal component in my theorising of in-person knowing is also meant to valorise the first-hand, passionate, intersubjective being-with[48] in producing knowledge of living beings. This is where I depart from both Polanyi and

[48] For an engaging ethnographic account of in-person knowing in the context of acquiring Chinese medical knowledge and concepts, see Hsu (1999). Hsu's work underlines the relevance of different ways of learning to the production of different styles of knowing (in her case, three modes of transmission are singled out including "secret", "personal", and "standardised"). In particular, the personal mode of transmission which Hsu has identified out of her learning experience with a "senior Chinese doctor" (*lao zhongyi* 老中医) Zhang, is grounded in the social aspects of the relationship between mentor and follower, e.g., whether the mutual trust could be established between mentor and follower, or whether their personalities would clash. Her discussion of the social interaction in the mode of personal transmission of Chinese medicine alludes to the intersubjective feature of in-person knowing that I am discussing here.

Code. I wish to advocate the intimate interrelatedness, in perception and action, between the observer and the observed in a specific environmental context in knowledge-making practice. In brief, at the centre of in-person knowing is this intimate *being-with* more-than-human beings.

I suggest that proximate knowledge about plants arises out of the *huayou*'s sustained attending to plants' transformation in their day-to-day observational practice rooted in the urban activity of *shua yuanzi*. I understand the idea of proximate knowledge in relation to *shua yuanzi* in two interrelating senses. The first sense of proximity implicates the immediacy of personal, visual engagement with living-in-the-world of real-life creatures. Another sense of proximate knowledge conveys knowledge generated in the day-to-day being-with individual plants in the shared urban green spaces of conviviality, as exemplified in the more quotidian version of *shua yuanzi.* Proximate knowledge in both senses is acquired from the process of in-person knowing that anchors in an actual relationship of familiarity, a passionate, intimate, multispecies togetherness.

Let me explain. First, it is noteworthy from the story of DaYuer's that the *huayous*' repetitive observations of the life cycle of plants throughout the year are less an interest in recurring natural events than an interest in the processual, animated ways of "being alive" (Ingold 2011) of living beings. When a *huayou* sees that a plant is flowering, her/his curious attentiveness will prompt her/him to wonder what the plant looks like before and after blossoming. If a *huayou* happens to miss the seedling/germination/flowering/fruiting of a plant this year, she/he would feel the need to pay much attention to what has been missed for the next year.

From an Ingoldian perspective, the biological term "life history" (*shengming shi* 生命史) that fascinates many nature-watchers to observe conveys a new meaning. It can be read into a conceptualisation of a processual ontology of nonhuman beings, which attribute them with a certain

personhood and “permits them to dwell in the world in the same processual manner as humans” (Johnson 2008: 642). It is thereby not enough to grasp the scientific binominal nomenclature or Chinese official names (*zhengshi ming* 正式名) of living beings, for we need names not as nouns but as “name-in-motion” (Tsing 2015: 293), as instantiations of ways of being alive. To know is thus to be familiar with living beings “not as containing life, or expressing it, but as emergent within the life process itself" (Ingold 2000: 89) through repetitive, personal observations in the current of everyday urban living.

Second, the example of the more quotidian version of *shua yuanzi* illustrates that a type of proximate knowledge about plants—their ways of reproducing, their sensibilities—is garnered precisely from being-with plants that combines the daily stroll around nearby green spaces with ongoing observations of plants in one’s immediate surroundings. I find this knowing well resonant with what Johnson terms “responsible anthropomorphism”. It refers to a way of knowing about and knowing with plants based on “our actual relationships, our day-to-day living and working” (2008: 646).

Notably, plants observed in day-to-day *shua yuanzi* become knowable as “friends”, as articulated, individual beings with whom *huayou* become gradually connected in the unfolding of continuous, personal observations. Xiaoqing’s daily observations of the wintersweet bring into view this crucial feature of in-person knowing. The wintersweet in her account was recognised and interacted with at the individual level, so that the plant was no longer an anonymous embodiment of the species *Chimonanthus praecox,* but rather whose living experience was attended to as an individual plant.

In our interview, Xiaoqing introduced this wintersweet to me as one of “a number of plants I’m fond of in my garden”. “There are two wintersweet shrubs”, she told me, “One of them grew plenty of

buds, but none of its buds had grown into flowers in spring" when "it fruited abundantly last year". It is undoubtedly more convenient to know a plant at the individual level, to move it from the margin, through continuous observations in accessible nearby parks than in botanical gardens. And in Xiaoqing's case, a recurring sociality with the individual wintersweet is promoted through Xiaoqing's repetitive observation and a genuine ongoing concern for how this particular wintersweet had been performing.

Xiaoqing was deeply affected by the idiosyncrasies of the wintersweet; its untimely bloom caused her great worries. In a sense, in-person knowing in this more day-to-day version of *shua yuanzi* turns encounters with faceless plants into an engaging personal relationship with an individual plant with which one feels deeply connected. Similarly, when Lele conceived her observation of the Chinese parasol tree as a matter of *yuanfen*, she stressed the individualised agency of the plant in knowledge-production, in the sense of how it presented or revealed itself to the human observer bit by bit. As such, Lele evoked a more reciprocal knower-known relationship distinct from the polarised subject-object relation.

4B.3. The liminality of knowing, sense of wonder and well-being

I now wish to draw attention to a noteworthy feature of this practice of in-person knowing, namely, what I shall refer to as "the liminality of knowing". And curiously enough, the reported feelings of well-being and liveliness among Beijing nature-watchers may derive from an orientation of not-understanding-yet that it is often associated with a sense of wonder.

My characterising of the liminality of knowing takes inspiration from the personal-knowledge

paradigm (Code 1993). Crucially, one feature of this mode of knowing other people is ongoing and provisional, responding to contingencies and negotiations between the knower and the known, so that any "fixity" claimed for having known a person will be a "fixity in flux" (ibid: 34). One intriguing thing about the mode of knowing other people, which is epistemically instructive, is that "even knowing all the facts about someone does not count as knowing her as the person she is" (ibid:38).

I have argued that in-person knowing is grounded in intersubjective familiarity; one's knowledge of living beings depends on how thorough his/her relatedness to them in correspondence to the degree of his/her intimate being-with them. Enhanced familiarity improves the depth of knowledge, but crucially it never exhausts it. The analogy is found in the ways of knowing other people that are often conducted in an ongoing interpretation and re-interpretation of the known persons without assuming complete familiarity. At the same time, the knower is also found in a continuous state of transforming and 'growing' in the unfolding of her/his relations with the known. As such, I suggest that built up into the mode of in-person knowing is the resistance of premature satisfaction and closure of knowing, and constant responsiveness to the becoming of living beings capable of presenting themselves in new and different ways. The liminality of knowing is therefore an intrinsic feature of in-person knowing of nature-watchers.

Among the *huayou*, there seems to be a consensus that observing plants in the long run provides "inexhaustible sources of enjoyment" (*wuqiong de kuail*e 无穷的快乐). It is because plants are entities in the state of metamorphosising—"if you eternally look it, it looks eternally new" (*changkan changxin* 常看常新), as *huayou* tended to put it. In fact, in the previous section, we heard about Yuer's account of getting delightfully surprised, as she was able to discover something new about plants in her ongoing observation constantly.

This mode of recurring observations in everyday living attempts to capture the living beings' distinctive ways of being alive rather than being preoccupied with fixed attributes. In Ingold's words, this way of knowing is "perpetually 'under construction' within the field of relation" (2011: 159) through an ongoing engagement with sentient beings in an environmental context. A novice bird-watcher Hui, once disclosed a feeling of knowing partially, in her engagement with birds: "Since I started bird-watching, I have been constantly subjected to the feeling that I have a question mark in my heart" (*xinzhong zongyou wenhao* 心中总有问号). Hui has offered us a felicitous expression to summarise the impossibility of certain knowledge in the mood of intimately attending to the being-in-the-world of natural beings.

The liminality of knowing can breed a sense of wonder. According to Fisher (1998), wonder is primarily an experience of not-understanding, curiously witnessing the world and things in becoming. Fisher maintains that wonder entails a "local intelligibility"; it is a form of curious openness, attentiveness to others' lives in new and consequential ways. The 'localness', that is, the liminality of knowing, is opposite to the assurance of "certain knowledge". People who wonder and wander may be subject to the condition of uncertainty that we do not have mastery. Nevertheless, in this case, contingencies in knowing also fertilise feelings of wonder that "neither we nor the world is dis-enchanted" (Bennett 2001: 34).

Let me cite an example from an experienced bird-watcher. 60-year-old Oasis (*Oasis* 绿洲 is her nature name) was among the first generation of Chinese bird-watchers and an active volunteer in WBS since its foundation. Even with more than twenty-year's experience of bird-watching, Oasis believed that "there is always something new to be discovered", especially when a bird-watcher allows her/himself to pay attention to how birds behave and the relations of birds with their surroundings.

I interviewed her at a café in the Old Summer Palace on June 25. 2019. Before our interview, she invited me to take a bird-watching walk with her around the park. It was a humid summer day—not a particularly good day for bird-watchers and birds alike. Oasis and I met two grey-capped green woodpeckers, one of the three species of woodpeckers commonly found in Beijing. Both had a red spot on their greyish-green heads, a sign that marked them as male. However, there was something odd, as Oasis acutely pointed out (and I only noticed that there was something odd until she mentioned it), about the location of the red spot of one woodpecker. Normally the red mark of a male woodpecker appears on the back of its head, but this one had a red spot on its forehead. This peculiarity baffled us.

Oasis responded later in our interview that she had no idea if the different location of the red spot indicated the bird's immaturity, or it was simply a matter of individual variation. The question had never occurred to her until that day. "It is in fact a good thing", she added, "that you would constantly find your own limitation of knowledge in continual observation—there will always be new questions." Oasis's comment and her experience of being inspired with endless new questions—shared by many nature-watchers—capture the disposition of wonder-at-the-world nicely. It is an epistemic orientation associated with local intelligibility such that "we will not even know that we have reached certain knowledge when and if we have" (Massumi 2015: 3).

The sense of wonder experienced by nature-watchers as not-understanding-yet brings about a mood of plenitude and liveliness as "something more, a more to come, a life overspilling as it gathers itself up to move on" (ibid: 8). And the lived intensity of plenitude can be self-affirming (ibid: 45). I argue that it is in this sense of an uplifting ontological condition of becoming alive to the world that we are able to make intelligible the reported feelings of well-being from Beijing nature-watchers. *huayou* Yunshan made a valid point:

> When I go out to observe plants, it makes me very happy if I happen to know what I see. That said, if there are plants that I have not known yet, this is even better, as it affords me the chance of learning new things. For me, it is a source of immense joy to learn new knowledge every day. And I believe it is beneficial to my health and longevity (interview conducted at the Summer Palace on June 29, 2019).

Yunshan was a 70-year-old whose interest in plants developed after her retirement from a large state-owned enterprise in Beijing. In her remark, the embrace of newness—the potentials of encounters with new things and learning new knowledge—contributed to a happy life in old age. This view may echo a content life theorised by Bennett that entails "cultivated capacity of wonder at the invisible complexity of the most ordinary" (2001: 87). In this light, the feeling of well-being should not be reduced to an individual psychological state. Rather, as people engage with living beings as "fascinating array of lively and mobile morphings" (ibid), it endows people with a sense of liveliness that comes from responding to the richness of the new.

My approach to well-being is inspired by Anderson's analysis (2006) of the antithesis of well-being, i.e., boredom. From the perspective of affect, he articulates boredom as an index of finitude; it happens exactly when an imperceptible extra, the 'more', does not occur under a condition of reiterative 'bare' repetition" (ibid: 746). Indeed, life can be enveloped in an atmosphere of boredom (Wellgraf 2007), and as the quote below suggests, Heliu experienced a life that was overflowed with boredom before becoming carried away by bird-watching:

> I used to be lost about what I should do to spend my time. I had to work overtime at weekends, but it was boring. Sometimes it took me a whole morning to finish some simple work that could be done within half an hour…When I had a day off, I usually spent it on sleeping—getting up at 11.am, eating lunch at a restaurant or cooking something at home, taking a nap at 1.pm or 2, getting up again at 5.pm and spending the rest of the day watching tv-series or playing games on my mobile phone. Sometimes I could even spend a whole day playing video games at home. It was absolutely tedious (*hen meiyisi* 很没意思) (interview on July 3 2019).

Heliu's description painted a rather bleak picture of boredom taking place in a life "involved less meaning, less interest, less difference" (Anderson 2004: 746). Boredom in his case is not simply an absence of meaning but rather a plenty of meaningless activities that filled his life. As such, he was nonchalant about squandering his time.

On the contrary, he conceived bird-watching as animating his dull life:

> Bird-watching is different. I go out, and I watch some nice birds—it feels good and also gives me something to boast about in front of my wife. It is a feeling of aspiring to something (*you bentou* 有奔头), and it is nothing like playing games, which lacks an element that makes you aspire to.

I invited him to elaborate on what he "aspire to" in bird-watching, he responded: "meeting novel species (*xinzhong* 新种)—that's needless to say. But in situations where there are no new species, it will do nicely to watch new behaviours of familiar species that I have watched."

Heliu's changing life experience from boredom to active involvement with more-than-humans showcases how bird-watching results in lessening of boredom via the reanimation of a "body-becoming-active" (Anderson 2006: 747). First, it summons a transformation of a lethargic and sedentary body into a moving body in the literal sense. In Heliu's case, the aspiration to get to see and know more in bird-watching encourages him to leave the confinement of his home and venture out to explore the city. In addition, his body-becoming-active entails the intensification of the body's potential of being affected by something new to him, such as the sighting of new bird species, new facets of birds' being-in-the-world or even a feeling of newness that he did not register consciously. The x-element to which Heliu aspired denotes pure open-endedness, a coming-to-be, accentuating the liminality of knowing. In a word, it is this sense of not-understanding-yet grounded in the contingency and surprise of his encounters with more-than-human beings that instils his life with a renewed sense of liveliness.

4B.4. Conclusion

The observational practices of nature-watching offer evidence of first-hand and concrete nearness to more-than-human beings in their everyday urban living. Knowledge-making for nature-watchers, as I have argued, arises from intimate cross-species relatedness. Departing from there, I develop a way of thinking about knowing practices afresh as in-person knowing, and I term the knowledge produced as proximate knowledge.

The main body of this chapter concerns the epistemic implication of s*hua yuanzi,* a signature practice of Beijing *huayou* that has been first introduced and depicted in chapter 4A. Specifically, I first discuss the significance of in-person observations that allow nature-watchers to be drawn near to

the world of living beings in the city. I then move on to examine how recursive, personal observations lead to in-person knowing and produce proximate knowledge about living beings in two interrelated senses. First, I show with the example of *huayou*'s experience to *shua* botanical gardens that repetitive personal observations enable nature-watchers to generate proximate knowledge of the enfoldment of more-than-human being' "being-alive", their transformations throughout seasons. I then highlight another layer of meaning of proximate knowledge that derives from intimate being-with plants on a personal level by analysing the quotidian version of *shua yuanzi*. Within this version of *shua yuanzi, huayou*'s proximate knowledge anchors on an intense, affective intimacy with individual plant 'friends' through ongoing observations in daily life. Finally, I explore the reported feelings of vitality and liveliness nature-watchers associated with personal knowing practices in nature-watching. As I have pointed out, positive feelings of vitality hinge on an orientation of not-understanding-yet and a sense of wonder incorporated within in-person knowing.

5

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Chapter 5A. Hierarchising bird-related leisure activities with the discourse of *suzhi*

7 a.m. I arrived at the Qingshi Bookstore outside the South Entrance (the traditional meeting place for participants) of the Old Summer Palace, rain-soaked through my hat and jacket. Part of my half-awake brain had high hopes that the bird-watching activity would be cancelled—could urban birds ride out the storm anyway?

Mr Wang and Mrs Cao came to greet me. Wang was one of the long-term team leaders of WBS-arranged bird-watching activities at the Old Summer Palace, and Mrs Cao was an avid volunteer and participant of WBS since her retirement. We were expecting a few more participants. Looking at a bolt of lightning crossing over the sky, Wang determined that the activity needed to be called off if we did not see the clear sky in the next fifteenth minutes. As luck would have it, it was a short-lived thunderstorm. Participants kept showing up and were welcomed into the group. Mrs Cao gave everyone a jujube-stuffed *zongzi*[49] (粽子), as an early gift for the upcoming Dragon Boat Festival.

It was quite an unusually eventful trip. Not long after the activity began, an eight-year-old child in our group burst into tears. Her wailing and weeping ended up startling a group of birds. Her parents immediately came to calm her with snacks. The rest of the participants shot the family with a mixture of sympathy and disapproval. The amiable atmosphere that arose out of Mrs Cao's gifted foods was on the brink of breaking up.

When the kid disrupted the otherwise quiet movement of the bird-watching group for the third time (this time by throwing a tantrum), Mrs Cao, who seemed to have dealt with similar situations

[49] *Zongzi* refers to a stuffed sticky rice dumpling wrapped in reed leaves. It is a traditional food for celebrating Dragon Boat Festival (*duanwu jie* 端午节) on the 5th day of the fifth month according to the Chinese lunar calendar, which usually is in May.

before, confronted the family and requested them to leave the bird-watching group. She did not mince her words and told the family, in a blunt manner, that they had not abide by the Birdwatching Guidelines: neither neck-cringing noise nor outfits in neon colours would be tolerated in bird-watching activities. Having been participating in WBS bird-watching activities several times, it was the first time I got to see participants being expelled.

The family apologised one more time before leaving the group. A middle-aged woman openly complained to the rest of the group: "Well, it was apparent they were here for park-visiting (*guang gongyuan* 逛公园) instead of bird-watching". There was truth in her complaint. Most of the time, the kid's parents were busy socialising with other participants, engaging others with random chats and sharing homemade food on the way. Also, despite being equipped with a pair of binoculars and a field guide, the kid and her parents seemed hardly interested in birds at all.

As we were approaching the end of our walk, Mr Wang took us to a row of benches by the river to take a rest. Across the river, there was an old couple with a boy. The grandpa was trying to scoop up something (baby fishes?) from the water with a self-made nest, while the grandma was clapping her hands to draw a line of mandarin ducks (*Aix galericulata* 鸳鸯) swimming across the river closer to entertain her grandkid.

Upon witnessing this scene, Mr Wang plunked his water bottle down and confronted the grandma by shouting: "Why on earth are you disturbing the mandarin ducks!" Mrs Cao, who happened to rest near where the couple stood, also came to the grandma, exhorting her not to clap her hands. The grandma was slightly startled, having basically no idea about who these camera/binocular-wearing people were or what was heaven-forbidden-ly wrong with her clapping her hands to attract the mandarin ducks. The episode nevertheless ended with the old couple heeding the bird-watchers'

admonition, to avoid escalating the conflict.

The conflict with visitors put Mr Wang in a self-appreciative mood of making claims of the virtue of bird-watchers, while he was denouncing the unacceptable behaviours of some park visitors. He said to the group proudly: "I'll tell you—none of the bird-watchers I've met has such low *suzhi*." The use of *suzhi*—a "highly fluid idea" that will be elaborated below—embodied a consciousness of differential that put bird-watchers at a higher level of *suzhi* or "quality" than others.

According to him, bird-watchers' higher *suzhi* became manifest in mainly two aspects. First, one could hardly find "uncivilised behaviours" (*buwenming xingwei* 不文明行为) on a bird-watcher. He specifically referred to what the grandma did to disturb the mandarin ducks and the chaotically loud congregation of photographers blocking the way, as an uncivilised, low-*suzhi* antithesis to the bird-watchers' conduct.

Second, he made an explicit association of bird-watchers' higher *suzhi* with their higher educational background. From what I knew about Mr Wang, he was probably well-positioned to speak as a quintessential well-educated bird-watcher. After graduating from the prestigious Peking University in the 1980s, he stayed in his alma mater, working in the logistics department. In my several encounters with him during bird-watching activities, he tended to maintain a persona of a man of considerable culture by flaunting his familiarity with traditional Chinese poems (particularly bird-themed ones) in front of other bird-watchers. In today's trip, Wang kept chatting with a couple who seemed to be newcomers in bird-watching activities at the Old Summer Palace. It was later occurred to me, through striking up with a conversation with the couple myself, that Mrs Guo was the daughter of a distinguished Chinese poet. And she recently retired from her post as Renmin University's Professor of Translation. Dressed in an out-fashioned boxy jacket and a pair of worn-out sneakers, Mrs

Guo kept a very low profile throughout the whole trip. Instead, it was her husband who could not resist the urge to introduce her illustrious background to other participants. Mr Wang was very impressed by Mrs Guo's scholarly profile, which resembled his own, and seemed to feel even more proud and privileged to be a member of the same community to which people like Mrs Guo also belong to.

By invoking the term *suzhi*, Mr. Wang readily classified people into high-*suzhi* and low-*suzhi* clusters. In the context in which he discussed the concept, the line of division was crosscut by people's more established social status, e.g., among highly educated urban residents. Also and more importantly, as a member of the self-proclaimed high-*suzhi* community, Wang expressed a sense of superiority by establishing boundaries between a civilised, high-*suzhi* way of interacting with birds (e.g., bird-watching), and uncivilised, low-*suzhi* conducts of disturbing birds in multiple manners (grandma clapping her hands, see above, and bird photography, see below).

In this chapter, I am particularly concerned with the discourse of *suzhi* as a window to grapple with the subjective experience of bird-watchers in regard of social and moral distinction. The notion of *suzhi* sets bird-watching apart from other avian avocations that are enjoyed by Beijing urbanites—the emblematic old Beijing tradition of bird-keeping as well as amateur bird photography in particular. I argue that the notion of *suzhi*—often discussed in terms of a low-high dyad—locates bird-watching and bird-watchers at the high level quality associated with civility, modernisation, politeness, and public morality. Chapter 5A accordingly seeks to contemplate the making of low-*suzhi* others, including bird-keepers and bird photographers, with the rhetoric of backwardness and public incivility. Furthermore, central to the *suzhi*-based evaluation is to legitimate certain types of care for birds and human-avian relationships. In chapter 5B, I continue my ongoing discussion of the suzhi-based evaluation. Chapter 5B is concerned with the *suzhi*-distinction centred on multispecies care and

relatedness.

This chapter 5A spreads into three sections. After a brief review of the scholarship on *suzhi*, I go on to introduce three coexisting avian avocations — bird-keeping, bird photography and bird-watching—as pursued by Beijing urbanites. I then discuss them along the high-low *suzhi* axis. In particular, this chapter first shows how bird-keepers and bird photographers are characterised as low-*suzhi* by deploying the rhetoric of backwardness and public incivility.

5A.1. *suzhi*: a keyword approach to social distinction

suzhi has been a buzzword for the scholarship[50] on post-socialist China. Roughly translated as "quality" (physical, psychological, moral, intellectual etc.), *suzhi* is nevertheless a complex term with meanings somewhat lost in the translation into the English equivalent, "quality". It is a compound word made up of two characters: *su* (素), meaning plain, and *zhi* (质), meaning quality, or here, innate character.

According to Kipnis' linguistic survey (2006), the meanings of *suzhi* have undergone three significant changes in the recent editions of *Ci Hai* (辞海), one of the most authoritative Chinese dictionaries. First, the term no longer connotes the in-built qualities of individuals but rather glosses over the nature/nurture dichotomy. As Liu further suggests, a development theory is embedded in *suzhi* such that individual *suzhi* is correctable and can always be perfected through learning and practising while taking the state for guidance (Liu 2016: 7). Second, the term is exclusively used to describe embodied human qualities, when the term *zhiliang* 质量 is reserved to discuss non-human entities or

[50] I simply do not have the space to elaborate on the full spectrum of the vigorous debates about this overwhelmingly complex term *suzhi*. Key scholars who have made a major contribution to the scholarship include Ann Anagnost, Andrew Kipnis, Børge Bakken, Edwin Winckler, Gary Sigley, Luigi Tomba, Rachel Murphy, Susan Greenhalgh, Tamara Jacka, Terry Woronov. Yan Hairong and so on.

institutions like the military. Lastly, *suzhi* now marks a hierarchical and moral distinction; the dichotomy of high-low *suzhi* is used more prevalently to characterise differentials. Kipnis (2006) maintains that "English lacks a term like suzhi", since the term is so encompassing, with a remarkable ability to refer to specific qualities (e.g., bodily, moral, cultural *suzhi*) and an overall judgement of an individual based on her/his overarching "Quality", which Kipnis spells with a capital Q.

The transformations of *suzhi,* as Kipnis reveals, have been inextricable from the socioeconomic reforms taking place over two main political campaigns: the top-down, birth-planning campaign One Child Policy (1979-late 2005) for the promotion of the quality of the whole population, and the "education for quality" (*suzhi jiaoyu* 素质教育) policy (officially endorsed from 1993 onwards) to raise "quality children" who are expected to enact the power of the nation in the world stage.

A sizable *suzhi* scholarship has adopted established theories such as the Foucauldian perspectives of "biopower", "biopolitics", "technology of the self" or "governmentality" and concepts related to neoliberal rationality of governing. Andrew Kipnis (2006) posits *suzhi* as a "keyword" for understanding the governmentality of the neoliberal regime, or "neo-socialist" governmentality in China. Anagnost (1997; 2004), one of the first scholars to theorise *suzhi,* argues that *suzhi* is central to neoliberal economic rationality. The gap of *suzhi* between bodies of the middle-class and migrant labourers is channelled towards capital accumulation. Operating as a value coding for human bodies, the *suzhi* discourse qualifies neoliberal subjects, such that the actualisation of the latent potentiality of the body becomes an expression of the value of the body (Anagnost 2004). The body and the labour of the migrant workers are undervalued as having low quality. Brutal exploitation of surplus value for capital accumulation is thus naturalised from the migrant body. And the undervaluation of the migrant body is contrasted with the material efforts (e.g., feeding nutritional supplements and offering high-

quality education) of middle-class parents who seek to produce embodied values in their children.

In a similar vein, Yan Hairong underscores the role of *suzhi* as a measurement and value-articulation of human subjectivity. According to her, the notion of *suzhi* establishes a "transvaluation between human subjectivity, culture, and consciousness on the one hand, and the rate of Development on the other hand" (Yan 2013: 498).

In addition to the context of governmentality, the *suzhi* discourse also animates discussions in relation to a wide array of issues ranging from modernity and civilisation (Anagnost 1997), education (Woronove 2003; Murphy 2004), rural migrant workers (Jacka 2006), rural women, population planning (Sigley 2009), middle-class community-building (Tomba 2009) organisational management (Zhang 2019).

Several scholars have pointed out that central to the meanings of *suzhi* is that "it is mostly stated in terms of differential" (Yan 2003: 496). *suzhi* is a "floating signifier, or the holding of differential" (Anagnost 2004: 197) that is often worked through the "figure of antithesis (the difference between good or bad, rich or poor, lacking or having quality, being civilized or uncivilized)" (ibid: 195). As such, a key focus of the *suzhi* scholarship is how *suzhi* encompasses social distinctions.

Jacka 's study of rural migrant workers is an excellent example to illustrate the power of *suzhi* to represent a differential. When asked about the difference between rural and urban people, her interlocutors predominantly refer to characterisations in relation to notions of civility and *suzhi* (2006: 236). Also, *suzhi* sets out to articulate class stratification when the new middle-class in post-socialist China is much more fluid and ambiguous, lacking the clear institutional recognition as in the Maoist days.

Enlightened by the vigorous debate around the concept of *suzhi*, this chapter aims to unpack how

suzhi encompasses a hierarchical distinction defining bird-watchers of high *suzhi* vis-a-vis other avian avocations in Beijing. By referring to the more encompassing concept of social distinction, I have in mind Farquhar's analysis of her friend's use of *suzhi* to highlight her distinction from her neighbours. Farquhar observes that *suzhi* for her friend "makes sometimes invidious distinctions, though these cannot be easily mapped onto class in any literal sociological sense" (2009: 572).

From the above discussion of the *suzhi* literature, I show that the term is ambiguously defined but pervasively used in politics and governance to denote a social control mechanism, as it is in the daily lives of the Chinese people to articulate the whole self, e.g., his/her eligibility to a certain community. *suzhi* is clearly implicated in identity-making, to produce distinction through which people recognize their positions within the larger social order. In what follows, I investigate how *suzhi* enables a new valuation of subjectivity for bird-watchers to make them disassociate with pursuers of other bird-related leisure activities.

5A.2. The coexistence of bird-related leisure activities in Beijing

This section serves to introduce three coexisting bird-related leisure activities in Beijing that are taken up by Beijing urbanites. In the present-day Beijing, "bird man" (鸟人 *niaoren*) can apply to three groups of pursuers of bird-related leisure activities: cage-carrying old Beijing bird keepers, binocular-wearing bird-watchers and camera-holding amateur bird photographers. Although these groups of bird enthusiasts may cross paths in, e.g., public parks, the boundaries between each community are often reified and clear-cut. I will first investigate bird-keeping as it is depicted in mainly historical literature. I then move on to sketch out the emerging group of amateur bird photographers in Beijing.

5A.2.1. Bird-keeping as an old Beijing cultural way of urban pleasure

This section offers a historical and cultural examination of the pastime of bird-keeping by Beijingers, drawing on historical recordings and a few encounters with bird-keepers in my fieldwork. Since bird-watching and bird-keeping are both early morning activities, there were occasions for me to cross paths with bird-keepers in the process of participating in organised bird-watching trips. Once associated with venues like the bird markets and teahouses, bird-keeping nowadays is more likely to take place in the open air of urban public parks where bird-keepers may find themselves accompanied by bird-watchers and bird photographers.

Bird-keeping was a part of the old Beijing urban culture. First, I will argue that bird keeping was considered one way of having fun (*zhaole* 找乐) that was closely influenced by the Manchu's preoccupation with seeking fun. When the Manchu took over the Chinese imperial throne, they also brought with them the bird-raising customs deeply rooted in their spartan lifestyle**.** The custom of seeking fun by keeping caged birds was later adopted among Han people in the capital city**.**

Bird-keepers were adept at "playing with birds", or *wan'r niao* (玩儿鸟), which is how bird-keepers alternatively called bird-keeping. In Beijing dialect, *wan* (玩 pronounces wan'er) carries the meanings of "to play" or "to do", but sometimes also conveys a depreciative tone, as in expressions such as *wan'r huahuo* (玩儿花活 play dirty) or *wan'r yinde* (玩儿阴的 do a dirty trick on someone) (Barme 1992:35). Bird-keepers, with their extensive interest in keeping birds for amusement, are masters of playing (*wanzhu* 玩主), which at the same time makes pet birds their "playthings" *(wanwu* 玩物).

If asked where to see birds, a Beijing urbanite living in the late Qing dynasty (1644-1910) would have responded by pointing toward two places: bird markets and teahouses. According to Fucha

Dunchong's depiction of Beijing folklore (Fucha [1906] 1981), written during the reign of the Emperor Guangxu (1875-1904), birds were a popular commodity at the "East-West temple fair" (*dongxi miaohui* 东西庙会), namely periodic market fairs at Longfu Temple and Huguo Temple[51] respectively. One could find a dazzling variety of goods at the temple fairs and these included "flowers, birds, fishes and insects" (ibid: 52). In addition to regularly held temple fairs, historical photos of old Beijing were hardly short of depictions of street scenes of vendors carrying a row of caged birds for sale on a shoulder pole.

These temple fairs preceded a modern form of a more specialised market that is aptly called "Flower Bird Fish and Insect Market" (*huaniao yuchong shichang* 花鸟鱼虫市场). Flowers, birds, fishes, and insects were known to represent the "four playthings" (*si dawan* 四大玩) well-loved by native Beijingers (*lao Beijingren* 老北京人). These markets all over the city were the paragon of the urban culture of playing (*wan wenhua* 玩文化) or "having fun" for Beijingers. In their heydays, up to 30 markets were frequented by Beijing urbanites.

An even more specialised type of Beijing bird market was recorded in ornithological research (e.g., Wilder and Hubbard 1924). The bird market remained a source of fascination for foreign travellers to Beijing. As Dr Travnicek from America recommended to his fellow countrymen interested in the "aviculture in China" (Travnicek 1986), the bird market should be the focal point to seek out information of birds of any kind. He visited five major cities in China in 1983 and was astonished to see that "in every city birds were seen repeatedly in captivity" (ibid: 30). The bird market off Yenan road in Shanghai, for instance, clearly left him with a deep impression where "hundreds if not

[51] For a discussion of temple fairs in Republican Beijing see Dong (2003). Focusing on Beijing urban life in the imperial period from the perspective of temples, Naquin mentions that some Beijing temples by the Ming-Qing period became the sites for hosting monthly and annual markets fairs. For the versatile role of temples for shaping public culture and community-building in imperial Beijing see Naquin (2000).

thousands of birds from the common budgie to kingfishers for sale" (ibid: 31).

Indeed, foreign ornithologists' earlier studies of birds in China valued bird markets as prime locations to conduct a census of Chinese bird species (e.g., Wilder and Hubert 1924; Boswell 1986). More recently, Boswell visited the largest bird market Guanyuan Market in Beijing in 1986, three years after his first visit to the same market, and there he counted 431 birds of 39 species. Here is what he saw in the market (1986: 127):

> Most birds were displayed in cages, usually pretty small, sometimes very crowded. A few individuals (often hawfinches) had string halters and were tethered to a stick. One stall-holder had tied together with a piece of string the wings of each of his birds. The knot was across the tips of the primaries. Another had taped the beaks of several hawfinches.

In addition to the flourishing of selling and buying at bird markets, teahouses played a key role in sustaining and popularising bird activities of Beijingers. The description below, as found in *Miscellaneous Records of Peking* written around 1790 to 1820, testifies to the role of teahouse to sustain the distinctive Beijing bird culture:

> Bird-raising is common among people of Peking. On the street, one can encounter leisurely walkers who hold hawks on their arms, who carried birds with hundred tongues (*baishe niao*[52]) in cages, who brought a small stick to which a bird is tethered. These people, in their idleness,

[52] *baishe niao* 百舌鸟 is the common name for common blackbirds (*Turdus merula mandarinus* 普通黑鸟); the bird is thus named for its remarkable skill to mimic the tweeting of other birds.

could not go out without their birds. At every teahouse there were several poles fixed outside the fence (to hang bird cages); some birds on display were worth a few dozens of golds. (Duan 1986: 110)

Teahouse in Beijing was more than bird-friendly place to enjoy a sip of freshly brewed tea, of course. The teahouse culture in China has been a focus of research for historians (e.g., Rowe 1984; Shao 1998). Anthropologists too have done brilliant work to document the rise, fall and revival of teahouse culture in Chengdu (Wang 2018) and Guangzhou (Klein 2004) in response to the sea change of Chinese society. During the time I was conducting fieldwork, I was left with the impression that the old-style teahouses which Laoshe (1899-1966)—the "most eminent literary spokesperson for Old Beijing" (Dong 2003: 2)—described in his monumental drama *Teahouse* (Laoshe 1957) were no longer an important element of lifestyle for local Beijingers. Old teahouses were replaced by well-decorated, luxurious tea balconies featuring the performance of tea ceremonies and tea arts by female staff dressed in body-hugging cheongsam (*qipao* 旗袍). This was contrasted with the flourishing of rustic street-corner teahouses in Chengdu as "happy oasis for urban commoners" (Takeuchi 2006; cited in wang 2018: 126).

Nevertheless, if we rewind time to the 19th century through the early 20th century, teahouses in Beijing were not unlike their counterparts in other parts of the country. They were multifaced public institutions appreciated as "one of the most affordable of public social spaces" (Shao 1998:1018) for leisure, commerce, and gossip for different social groups of men. And most relevant to our discussion of bird-keeping, teahouses in Beijing were favourable meeting places for bird-keepers to socialise with fellow bird-keepers and exhibit their pet birds. Common cagebirds such as the Chinese starling (*bage*[53]

[53] Here I refer to how birds are called in Beijing bird-keepers' parlance (instead of the official name of species in Chinese) in brackets.

八哥 *Acridotheres cristatellus*), the Chinese hwamei (*huamei* 画眉 *Garrulax canorus*), the Siberian rubythroat (*hong dianke'r* 红点颏儿 *Calliope calliope*), bluethroat (*landianke'r* 蓝点颏儿 *Luscinia svecica*), the Eurasian siskin (*huangqiao'r* 黄雀儿 *Carduelis spinus*), the Japanese tit (*zizihei* 呲呲黑 *Parus minor*) and an array of other species were housed in finely crafted bird cages made of bamboo and other expensive wood such as Chinese black wood (*zitan* 紫檀).

Wang Ling (2005) makes an interesting discovery that teahouse owners were also involved in logistical roles to assist bird-keepers to organise parties. These parties allowed participants to appreciate both tea and birds (they were hence called "tea and bird party" or *chaniao hui* 茶鸟会) through which teahouses would reap extra profit. Indeed, to drop by at a teahouse was part of the morning routine of bird-keepers who were in the habit of "walking their birds", or *liu niao* (遛鸟) in the fresh air of the early morning. The primary purpose of taking their birds on a walk was to train a bird to imitate various sounds. This process was known as *ya niao* (压鸟) in the bird-keepers' parlance; the idea is that if birds were not walked enough to get used to living in cages around people, they would refuse to make any sound. To wrap up a morning exercise with one's birds, bird-keepers usually ended up in a teahouse, which was a perfect place to *hui niao* (会鸟), namely to chat with other bird-keepers and exchange experiences of *ya niao* with others over a cup of steaming hot jasmine tea, a never-fading love of Beijingers.

One needs not to go further to find a vivid illustration of an avid bird-keeper besotted with his pet bird than reading the famous modern play *Teahouse* (1957) by Laoshe. The play brings to life the story of a teahouse in Beijing throughout the late Qing and Republican eras. Consider this scene in Act 2 in which the audience first meets one of the leading characters, the pitiful and bird-loving Second Master

Song, who would rather starve than let his pet oriole bird go hungry. As a Manchu bannerman[54] (*qiren* 旗人), Song lost his subsidy after the fall of the dynasty and regarded his pet bird as the sole source of comfort in his improvised life. The character makes his entry to the teahouse dressed in shabby clothes but "still carries a birdcage". When the play was premiered in Beijing in 1958, the director Jiao Juyin encouraged the actor who played the role of Second Master Song to empathise Song's passion for his bird by practising "how to carry the birdcage, hang it up on the pillar in the teahouse, and then take it down carefully so as not to disturb the bird" (Yu 2013: 103).

The tradition of bird-keeping activities of Beijingers was attributed to the Manchus, the founders of the Qing dynasty (1644-1911). The bird-raising custom as part of their "Manchu way of living" (Elliot 2001) was deeply rooted in their spartan lifestyle and had a profound effect on the Han Chinese in Beijing. The legacy of the Manchu's bird activities for Beijingers can be specified into three categories: raising caged birds, pigeon racing and fancy, as well as falconry called "playing hawks" (*wan'r ying* 玩儿鹰), pursuits that have been legally prohibited but are still practised in Beijing nowadays.

Bannermen's preoccupation with seeking fun from bird-keeping largely resulted from their privileged living endowed by the bannerman institution. As military service became 'irrelevant' to the bannerman's life, they were left with few military duties and instead with plenty of time and ample imperial largess to squander away. As a result, they passed their time with a wide range of pastimes, obsessed with "carrying birdcages and keeping birds on perches (*tilong jianiao* 提笼架鸟), bringing falcons and hunting rabbits, fighting cricket in autumn, and raising grasshoppers in winter" (Liu 2016:

[54] The "Eight Banners" (*baqi* 八旗) system was an effective institution to organise soldiers and their households of the Qing empire invented in 1601. A bannerman was a form of nobility. For the role of the Eight Banner system to maintain the Manchu identity, and the Manchurian ethnic sovereignty, see Elliot (2001) and Liu (2016).

568). The privileged nature of the bannerman life and the indolence it embodied were usually subjected to criticism by commentators in the late 19th and early 20th centuries. In this context, we get to understand how even today, a typical bannerman pastime such as bird-keeping is still coloured by these earlier impressions of bannermen in idleness and usually cast in a negative light as frivolous pursuits for idle rich (*youqian youxian de ren* 有钱有闲的人)

Nowadays teahouses with their characteristic semi-outdoor spaces gradually lost their role as the hub for bird-keepers in Beijing. Instead, public parks become the new site where bird-keepers either enjoy fresh air in company with their birds or socialise with other bird-keepers. We can get a glimpse of the bustling early morning gathering of bird-keepers in the parks in the 1980s from Travnicek's account (1986: 31):

> These bird lovers hold court early in the morning (5:30 a.m. until 8:00 a.m., or so) in the local parks to sun their birds in a somewhat ritualistic way, with the same people going to the same parks on a daily basis. These are mostly old, retired men and some boys who seem to be in the learning process. They socialize much as we do in our bird show activities. They display their birds, almost exclusively soft bills (large thrushes, even a medium sized owl), all in small ornate wooden cages with covers for transportation to and from the parks each day.

Unfortunately for me, I did not have opportunities to conduct extensive ongoing observations of bird-keepers. Based on my limited and usually brief encounters with bird-keepers, I wish to highlight two points in correspondence to Travnicek's description. First, the gatherings of bird-keepers were instances for owners to socialise with each other, and for interactions among birds. Bird-keepers

traditionally took their bamboo-caged birds for walks, hanging the cages from tree branches in parks so birds could socialize. In a bird-keepers' gathering, it is common to see that up above, birds chirp in their cages, hanging from trees. Down below, their owners chatter, possibly exchanging rules of thumb on training their pet birds.

In Tiantan Park, I witnessed once an elderly bird-keeper doing his morning work-out by stretching his leg on a tree branch while listening attentively to the chirping of his Siberian rubythroat. Listening carefully, I noticed that the rubythroat was singing to imitate the sound of wild birds around it, performing melodic echo singing. The owner then lifted the blue cotton cover of the cage, perhaps with the intention to facilitate his bird's 'curriculum' to mimic other birds, a training technique known as *xuekou*[55] (学口).

The second point worth mentioning is bird-keeping was a male-dominated, if not an exclusively male leisure activity. Never have I seen or read about it in written materials that a woman is involved in bird-keeping. For instance, one interviewee, a Beijing bird-keeper and a *laotou* (老头 elderly man) whom the author Laura Kyle met at the Worker's Stadium readily admitted that "women don't have enough free time to care for birds" (Kyle 2008: 667). Further, the merry gatherings of male bird-keepers in various parks mainly consisted of silver-haired elderly men, making bird-keeping a favourite pastime enjoyed mostly by male retirees. The gender specificity, and to some degree, age specificity of bird-keeping is somewhat akin to the social profile of amateur bird photographers but sharply different from bird-watchers.

If bird-watching is a visually dominated practice, visual appreciation of birds is only part of the

[55]*xuekou* literally means "learning different mouths", with *kou* "mouth" referring to the sound lines or melodies a trained bird can imitate. Essayist Wang Zengqi 汪曾祺 mentions that a trained Hwamei bird can imitate up to fourteen *kou,* including the sound of magpie, futian cicada, cats and other animals. See Wang (2016).

charm of bird-keeping, as it also emphasises the acquired pleasures of listening to bird songs. Bird-keeping is an exquisite connoisseur culture with kept birds falling into three main categories (Zhengyangmen Administration Department 1995: 46): birds raised for visual preferences, auditory enjoyment and amusement. First, budgerigars (*hupi yingwu* 虎皮鹦鹉 Melopsittacus undulatus), "pearl bird" or zebra finch (*zhenzhu niao* 珍珠鸟 *Taeniopygia guttata*) and the likes are raised for their eye-pleasing appearance. Second, the quintessential fun of bird-keeping is to enjoy beautiful bird sounds as a treat to the ears by training birds to do various vocal tricks—songbirds such as the Chinese hwamei, Eurasian siskin and larks of the Alaudidae family are best options in this regard. The last group of birds are raised for "amusement" (*wan'er* 玩儿) (Figure 5.1). Including *wutong* (Japanese grosbeak 梧桐 *Eophona personata*), crossbills (birds of the loxia family such as 红交嘴雀 *Loxia curvirostra*) and bumbling (燕雀 *Fringilla montifringilla*). What they lack in the talent of singing is compensated by their remarkable skills to perform tricks. Anthony Galsworthy offers this lively depiction of a Japanese grosbeak (or Japanese hawfinch) doing a catch-and-fetch trick in a Beijing bird market in 1983 (cited in Boswell 1986: 134)

> He (the owner) had about three of the Japanese (or Masked) Hawfinches, all males, tied with strings around their breasts, with clips. He released one bird onto his hand, then with the other hand threw a small white ball high in the air, simultaneously throwing the bird in the air. As the bird flew up to catch the first ball he threw the second after it. The bird on each occasion I watched, caught both and returned to his hand, depositing the balls in his palm.



Figure 5.1 The crowned birds perched on the branch should be Japanese waxwings (*shier hong* 十二红 *Bombycilla japonica*) or Bohemian waxwings (*shier huang* 十二黄 *Bombycilla garrulus*) with the main difference being the colour of their tail feather, which the photo does not show.
Source: Zhengyangmen Administration Department (1995): 89.

In today's Beijing, bird-keeping is a living urban leisure activity that Beijing urbanites s still enjoy and appreciate. However, nowadays it is hard for bird-keepers to discuss and display their enthusiasm for caged birds openly with pride, as the practice becomes increasingly sanctioned culturally and legally. As touched on above, the cultural disapproval of bird-keeping is coloured by the sustaining view of bannerman's preoccupation with birds as a frivolous hobby that is fit only for the idle rich. Moreover, this sort of artful activity and the pleasures taken from it, is alienating, even painful, to a 21st-century reader in contemporary China and Europe, and it comes as no surprise that it is classified as low *suzhi*. Further, as more conventional caged bird species are increasingly protected by amended Wildlife

Protection Law and by extension, making the captivity of these species illegal (see section 5A.3.1), I even heard about stories of bird-keepers quitting their bird-keeping hobby but expanding their interest in photographing birds. The emerging group of bird photographers is our topic next.

5A.2.2. Bird photography, or to "shoot birds" with the camera

Bird photographers (*painiao ren* 拍鸟人) is another group of urban hobbyists with enthusiasm for photographing birds. Unlike bird-keeping that lives on the heritage of an urban tradition of having fun, bird photography was recent leisure pursued by Beijing urbanites. It was hard to pin down when bird photography emerged and was taken up as a hobby; it was most likely related to the availability and popularisation of digital cameras in China over the last couple of decades.

Bird photography as a specialised form of wildlife photography is predicated on a visual culture that alters the way people think and relate to animals. Curiously, bird photography is called "shooting birds" (*daniao* 打鸟) in bird photographers' jargons, even though the activity does not contain the intentional killing of birds. Much like hunting, it similarly consists of 'loading', 'aiming' and 'shooting'.

The "shooting", embodied by the action of pressing the shutter, is the ultimate source of thrill (*kuaigan* 快感) of *daniao*. A photographer I acquittanced in Tiantan Park, Laoyu, conveyed precisely this point: "The fun of photographing birds ultimately lies at the moment of snapping the shutter button, and the sound it makes— that's a real experience of excitement."

Another point to consider the image of shooting birds with a camera is by looking at the photographing equipment. A camera with changeable lenses of different lengths is called a "long and

short gun" (*changqiang duanpao* 长枪短炮). On a bird-watching trip to see new-born long-eared owls at the Old Summer Palace, I encountered a middle-aged female photographer who politely reminded me to mind her camera on a tripod as I was walking. As a way of apologising for her bluntness, she said to me: "This is my weapon (*wuqi* 武器), not to mention it costs nearly ten thousand *yuan* (about nine thousand pounds); I simply cannot bear anyone to come near my weapon for if it is broken, I' have no way to have my fun." Her remark wonderfully summarised the weight of the equipment on a photographer.

The parallel between hunting and wildlife photography is, in fact, not specific to the Chinese context. Writers on photography have pointed out that in Western society, the camera comes to stand in for 'sublimation of the gun' (Sontag 1979:14–15). The process of this "sublimation" is not a new phenomenon in the present society but underpinned practices of Victorian and Edwardian big-game hunting (Ryne 2002: 208). "Hunting with camera", the title of Ryne's article, is an apt expression that sheds light on the practice of *da niao* in present Beijing.

Seasoned photographers informed me that one of the earliest bird photographers started to participate in bird photographing activities in early 2000 when bird photography was still a novel thing. While photography in general is a popular mass leisure activity in cities, bird photography gradually gains independent relevance, following the bourgeoning of bird-watching and, together with it, flourishing of interests in bird species. A 60-year-old photographer who started his photographic career in 2009 was eager to share his knowledge of the trajectory of bird-photography with me: "*painiao ren* was still a minority in 2012 and 2013 and then the following year, all of a sudden, saw a surge of people. And when more people flood in, there are consequently more rule-breakers" (*bushou guiju de jiu duole* 不守规矩的就多了), he said with an audible sigh, seemingly lamenting the good old days.

Indeed, similar to bird-keepers, the public image of bird photographers has not been cast in a positive light, as we shall see momentarily. Rule-breaking is only one factor that fuels their negative image among the public in general, and among the bird-watchers in particular. *painiao daye* (bird-photographing old men 拍鸟大爷), instead of the more neutral form of address as *painiao ren* (bird photographer 拍鸟人), becomes a more common term to refer to bird photographers. In the case of bird-photography, *daye* or "uncle", (大爷[56]) is used veering toward the pejorative, even though there are also female bird photographers[57]. Calling bird photographers *daye* can be said to constitute a form of urban masculinity entirely opposed to what Hird (2016) describes as the paragon of urbane masculinity, the white-collar men (*bailing nanren* 白领男人) in post-socialist China: retired, well-to-do but uncivilised, loafing around and killing time with morally and ethically problematic leisure activities, versus prosperous, well-educated, civilised, and high-quality white-collared men. Bird-keepers and bird photographers, as a matter of fact, are regarded as *daye* par excellence and are called as such in everyday language, which usually carries a whiff of disapproval.

5A.3. Making low-*suzhi* others with the rhetoric of backwardness and public incivility

5A.3.1. *wan'r niao*: an obsolete urban pastime

Beijing bird-keepers is the first group of low *suzhi* 'other' against which bird-watchers construct and display their high *suzhi*. To disapprove bird-keepers and their practices as low-*suzhi* first rests on

[56] *daye* is originally a kinship term to refer to one's father's elderly brother. In everyday conversations, *daye* is a general term to address elderly men or to men who are far older than you but do not count as "elderly".

[57] The equivalent term for the other gender is *dama*, 大妈 or auntie. Unlike the male-exclusive bird-keeping activities, the gender ratio for bird photographers is more balanced, but women are still relatively underrepresented. One of the most impressive female bird photographers I had encountered in the field was an 80-year-old lady in the Beijing Zoo. She had cataracts in both eyes but this did not affect her enthusiasm for photographing at all. I saw her standing in the bone-chilling wind for three hours just to capture a robin (a vagrant visitor to Beijing in the winter of 2018) before leaving to pick up her grandson from school.

rhetoric of backwardness embedded within a developmental telos of modernisation. Correspondingly, bird-watching is elevated to a more advanced stage, and bird-keeping is deemed the backward stage of human-bird relations representative of an obsolete urban culture of old Beijing.

suzhi derives part of its saliency through its reinforcement of pertinent evaluation systems that are already within the Chinese development discourse, and in this case, modernised versus backward. In other words, the evaluation of bird-keepers and their practices as low-*suzhi* is cradled within the broader modernist regimes of urban renewal that redefines the role of Beijing beyond that of an "ancient capital city" (*gudu* 古都).

The narrow imagination of Beijing's past, alongside its emerging modernity, is advertised and sold as assets to appeal to international visitors and foreign entrepreneurs. Naquin (2000) makes this point already regarding the time period between the 1910s to 1930s, where the city and the urban life in Beijing were said to turn into a sentimental emblem of the venerable and enduring antiquity of the country. Indeed, Broudehaux's examination (2004) of the urban image construction of Beijing shows that in the state's quest for modernity—that is usually measured against the yardstick of 'Western' achievement— Beijing is immortalised as an "ancient capital". Beijing's long association with tradition is paradoxically sustained and exploited. Unlike treaty port cities such as Shanghai and Tianjin, head-on confrontation with the West and modernity hardly dominated Beijing as it was "sheltered from the eroding forces of time and forever frozen in the past" (ibid: 16).

To render the city's old urban customs an obstacle to progress is paradoxically juxtaposed with rediscovering "old Beijing" (*lao Beijing* 老北京). The double efforts are found in the ways how bird-keeping is conceptualised. Bird-keeping as a part of the charming "folk culture" (*mingjian wenhua* 民间文化) of *lao Beijing*, is promoted.

Materials for tourist consumption abound with the introduction of bird-keeping culture. The presence and representations of old Beijing bird-keepers are also seen in the city landscape. For instance, walking out of the C2 exit of Xiyuan subway station, the closest subway station to the Summer Palace, one can easily find a few life-size brass statues depicting a series of snippets of old Beijing lives in verisimilitude. One of them is a man dressed in typical male attire of the early Republican era, including a "watermelon hat" (*guapi mao* 瓜皮帽) and a mandarin jacket over a gown (*changshan magua* 长衫马褂). He has a bird in a cage in his left hand, his head tilted to the right side to look at his birds with an ear-to-ear grin. Installed near the bustling subway station where both foreign and local tourists come and go, these statues, it seems, construct a romantic representation of the city's rich cultural heritage. It appears to appeal to tourists primarily.

For bird-keepers themselves, the historically rich habit of bird-keeping embodies nostalgia for the small feature of the city's former everyday life of an "old Beijinger"—who devoted their time to their pet birds, cricket fights, home-plants, and goldfishes. Dong observes that turning to the value of "old Beijing" becomes the "often adopted means of commenting of many changes occurring in the city today" (2003: 3), when people are in search for "an identity for the city different from that of the socialist capital" (ibid: 2). In particular, as Dong stresses, the old Beijing towards which people feel nostalgic is not imperial Beijing, but rather the historically more recent republican Beijing (1911-1949).

Bird-keeping is thus a prime example of enacting the powerful historical legacy of republican Beijing, which Beijingers recycle to forge and assert an identity of an authentic Beijinger. When retired Beijing bird-keepers stroll around the urban park in a carefree way, with a sophisticatedly crafted cage in one hand and a pair of incredibly smooth walnuts constantly rotated in another hand, I would argue that they are in fact performing a recycled form of masculinity specific to elite Beijing men that only makes sense in the context of old Beijing culture, namely, the *ye* (lord, 爷) of old Beijing. The bird-loving noble bannerman from the *Teahouse* may be argued to represent the identity of a *ye* par excellence.

Box.5.1 Rubbing walnut

Walnut-rubbing (*rou hetao* 揉核桃) is a hobby of middle-aged and elderly Beijing men. During the Qing period, rubbed walnut became a symbol of the prestige of noblemen, as attested by an old saying: "The noble prince (*beile* in Manchu and Mandarin) has three treasure in his palms: thumb ring, walnuts and birds in cage" (*beileiye shouzhou yousanbao: banzhi hetao longzhongniao* 贝勒爷手中有三宝：扳指,核桃,笼中鸟). The hobby itself is simple and all one need is two normal walnuts (the edible type) to rub and swirl in the palm. The longer the walnuts are played with, the smoother their shells become. Well-rubbed walnuts can be extremely valuable whose price can compete with fine antiques. Hsieh drawing on German sinologist Corde's travelblog of Beijing, indicates that the walnut-rubbing hobby is claimed to be beneficial to body and the mind. For more information on Beijing men's hobby of walnut-rubbing, see Hsieh (2015).

Meanwhile, the impression of bird-keeping is often coloured by the 20th-century portrayal of idle bannermen in Beijing. Consequently, bird-keeping tends to be cast in a negative light as a "bad habit of old Beijing" (*lao Beijing louxi* 老北京陋习) in the views of some modern Beijing residents. Leading an impoverished life and yet parasitic depending on the court subsidiary, the bannermen's bird-raising habit epitomised the frivolous pursuits of old Beijing men in idleness—a portrayal that lingers today. While those who self-identified as *ye* consider their bird-keeping practices part of the venerable heritage of old Beijing culture, they are simultaneously condemned for its backwardness, a stain on the city's hard-striving mission to achieve an ecological civilisation (see section 5B.4).

The cultural reform to launch a crackdown on bird-keeping as backwards and indeed low-*suzhi*

has gained momentum with the parallel development of legislative measures to safeguard wild birds. In short, bird-watching is now legally and culturally delegitimised as an ill-timed practice for urban citizens of a modern, forward-looking, civilised city. Bird protection has been recognised as a key area on the national and municipal government's ecological and environmental protection agenda. The Beijing government responded to the call by nominating the first week of every April as "Bird Love Week" (*ainiao zhou* 爱鸟周) (Han 1989) in 1982. One of the key tasks is about "pro-bird propaganda" (ibid: 32) through the mass media and public lecturing and other reach-out activities during the one-week time.

A 60-year-old bird-watcher Little Bird has been actively participating in annual awareness-raising campaigns during Bird Love Week since 2005. These campaigns were mostly organised by bird-watching organisations. She recalled that a huge effort was made to publicise the harm of bird-keeping by handing out flyers to passers-by in several public parks. The distribution of flyers became a well-established tradition that continues even today. For instance, in the "open letter to Beijing bird-keepers" (致北京养鸟者的公开信) sent out during the Bird Love Week in 2019, in Tiantan Park, the central message was to call on bird-keepers to "change the adverse habits of bird-keeping".

An article published on *Xi'an Evening Paper* in 2005 drove the backwardness of bird-keeping home, as the author turned to how bird-keeping practices are treated in presumably 'advanced' Western countries:

> Keeping caged birds is currently prohibited in several countries. The qualification is an important one, since keeping birds is allowed in these countries but what is curbed is raising birds in the cage…In Canada, people keep birds in artificial nests near their homes, allowing wild birds to move in and out freely. Let's think about it: isn't this mode of human-bird

relationship a better symbol of harmony and civilisation? We should all realise that raising wild birds in cage is illegal.

Drawing on how wild birds are treated in different countries, the author characterised the Chinese hobby of keeping caged birds uncivilised, culturally antithetical to the human-bird relationship that grants more autonomy and freedom to wild birds in Western countries. Also, as the author reiterated, in addition to the ideological guidance, new legislative measures promulgated by the government have been established to protect wild bird species that made bird-keeping difficult, if not impossible, to sustain.

Indeed, in 2021, vital amendments to the National List of Protected Wild Animals in The Wildlife Protection Law have been announced. In terms of wild bird species, a total of 163 species has been either newly added or upgraded to a higher level of protection. This legislative progress will have a vital impact on how bird-keeping is defined. Many of bird-keepers' favourite caged bird species, e.g., Chinese Hwamei, red-billed leiothrix, skylark, yellow-bellied tit and many others, are now classified by the list under Class 1 or Class 2 protection. Since most of the common caged bird species cannot be bred and thus are often illegally sourced wild animals, hunting, selling and raising these wild species will face harsher legal punishment.

In response to the wider national movement to prioritise the value of wildlife species, the Beijing municipal government has been striving to curb wildlife crimes, among which bird-keeping is deemed one. The government undertook initiatives to make Beijing a green capital of biodiversity through urban ecological restoration. Millions of RMB have been invested in various "bird-attracting projects" (*zhaoniao gongcheng* 招鸟工程). Wild birds, among other living beings, were hence granted special roles to be welcomed within urban areas for the purpose to build an inhabitable place where literally

"birds sing and flowers are fragrant" (*niaoyu huaxiang* 鸟语花香). This process of ecological modernisation serves to privilege the great variety of wild animal species as part of a new urban image—in this case promoting wild bird populations as free-living, honoured non-human inhabitants of the city. Conversely, relations with caged birds comes to embody the obsolete urban culture of old Beijing. The backwardness and low-*suzhi* of bird-keeping have hence been reified.

5A.3.2. low public *suzhi* and public incivility of bird photographers

The photographers are often subjected to the charges of "incivility" (*bu wenming* 不文明) or "having no *suzhi*" (*mei suzhi* 没素质). In this case, low *suzhi* has more to do with their low level of public *suzhi* (*gonggong suzhi* 公共素质) or public civility (*gonggong wenming* 公共文明), namely a public display of etiquette. *suzhi* and *wenming* are intimately linked and, in some cases, used interchangeably. One cannot understand the branding of bird photographers as having low *suzhi* due to their "uncivilised behaviours of photographing birds" (*buwenming painiao xingwen* 不文明拍鸟行为) without referring to the codes of conduct related to the discourse of *wenming* (civilised) park-visiting.

Underlying the pervasive concern for *suzhi* and *wenming* is "civilizing and cultivating citizens for socialist nation building" (Lin 2009: 85). Lin insightfully draws attention to the association of *wenming* and *suzhi* as civilising ideologies dominated in post-Mao China. Similar to *suzhi, wenming* is a complex word encompassing a broad range of things—"modernity, westernisation, as well as civilisation as an advanced stage of historical development" (Anagnost 1997: 71). In addition, the discourse of *wenming* also denotes orderly behaviours in public spaces, appropriating the notions of "civility" and "civil behaviours". Hence an importance extension of *wenming* in usage is "public

civility".

Indeed, the rhetoric of *wenming* is found in government's official documents and speech and pervasive in the city landscape. My field experience correlates with Moreno's observation (2018) that major Chinese cities were "covered with banners, pamphlets, advertisements and clips on how to behave properly" and in civilising manners in public spaces. Although the usage of *wenming* may seem vague, its different layers of meanings derive from place-specific contexts.

Consider this "Letter of proposal for civilising park-visiting" (*wenming youyuan changyishu* 文明游园倡议书) (Figure5.2) and the "List of uncivilised behaviours" (*beijingshi buwenming youyuan qingdan* 北京市不文明游园清单) (Figure 5.3) displayed at the entrance of Beijing Olympic Forest Park for every park-visitor to read. The implementation of "civilised park-visiting" has been a part of the more extensive campaign of cultivating "spiritual civilisation" *(jingshen wenming* 精神文明) since the 1980s. These codes of conduct themselves are, in fact, not an invention. Still, they bear an uncanny resemblance to, e.g., the New Life Movement (Friedman 2002), which was proposed by modernisers in nationalist reforms to advocate an orderly public environment in the early twentieth century.

Toward the end of the letter of proposal, it preaches that "let's start from now, from ourselves, to cultivate good habits and *wenming* etiquettes, for the sake of "building up a top-class capital city of harmony and liveability". This phrasing marries the behaviour discipline of park visitors to the construction of a strong, world-leading nation-state. The historical legacy of the previous political apparatus of *wenming* programme is deeply felt.

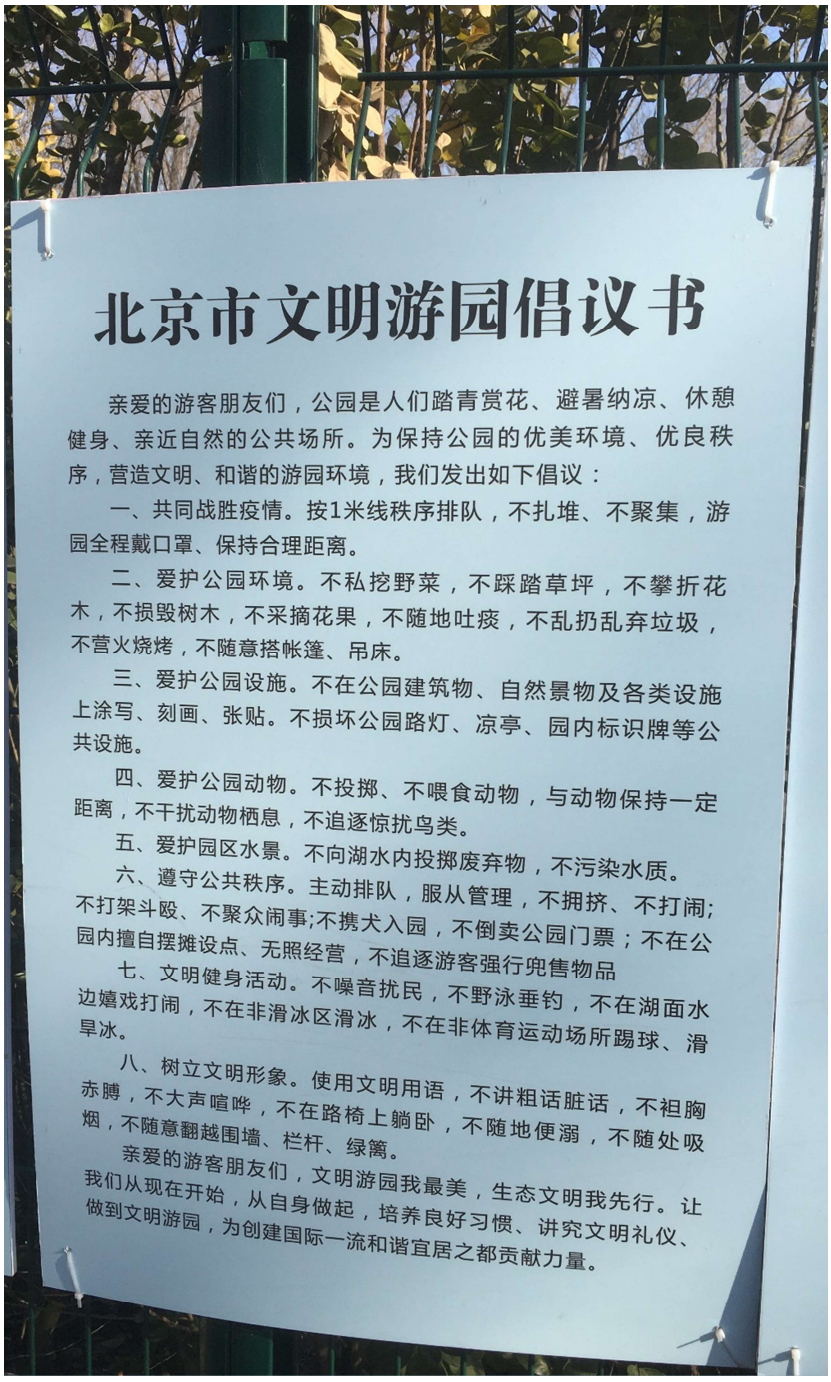

Figure 5.2 The letter of proposal for civilising park-visiting

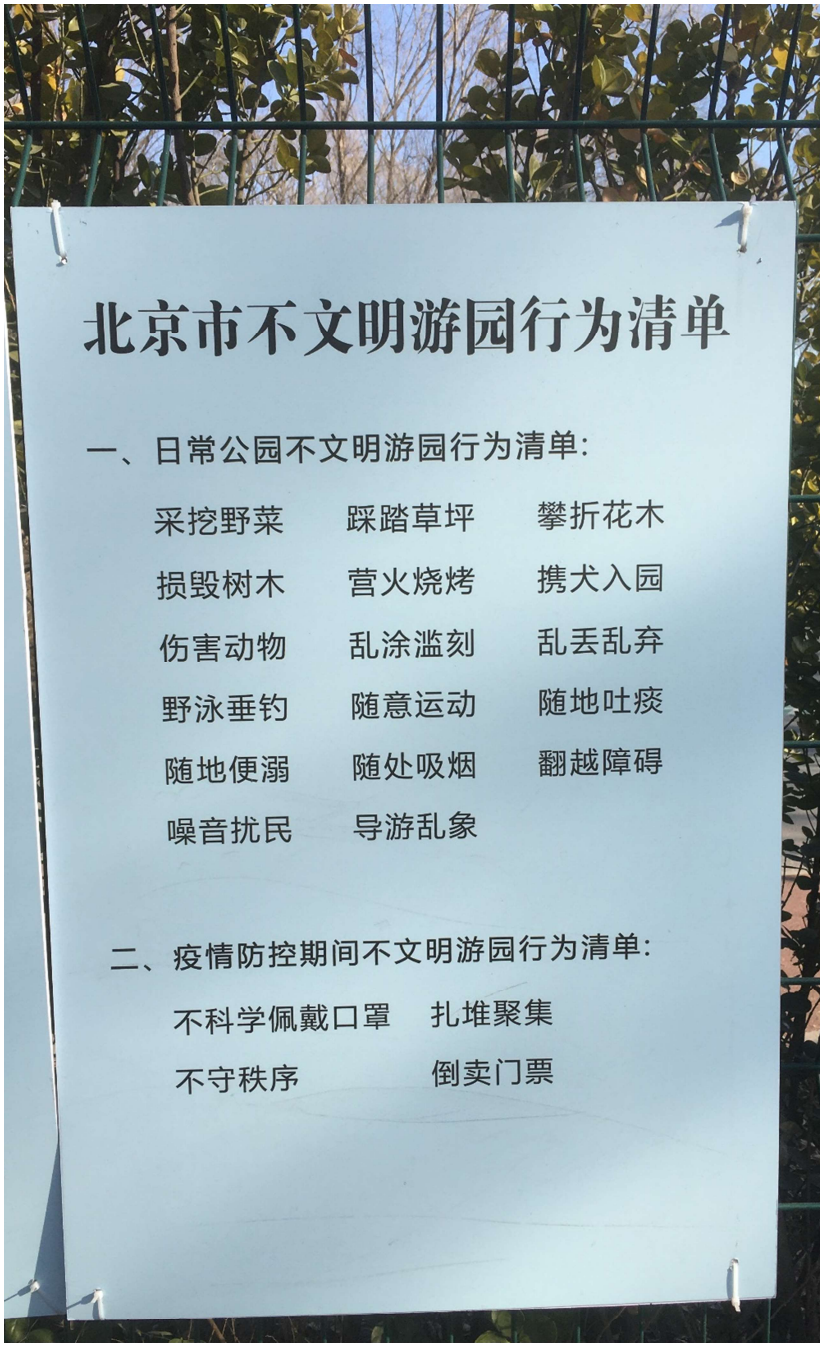

Figure 5.3 The list of uncivilised behaviours

Stylised advertisements to advocate codes of *wenming* conduct in public parks were displayed in almost all public parks in Beijing, regardless of the park' size. These encompassing codes of conduct established the parameter for a set of yes-and-no behaviours—a mixture of ecological concerns ("do

not pluck flowers" or "do not chase after wild animals"), public decorum ("do not swear and use *wenming* language") and hygienic considerations ("do not spit")—appropriate to public parks. The *wenming* forms of conduct comprise "a complex ideological system that simultaneously seeks for both functionality and classification" (Moreno 2018: 30). Indeed, in what follows, I suggest that the rhetoric of distinction has a spatial logic specific to the public space. Bird photographers are increasingly conceived as a quintessence of low-*suzhi* park visitors who lack the "public *suzhi*" (*gonggong suzhi* 公共素质) of "public morality" (*gongde* 公德).

In May 2020, a short video of staff from the Beijing Botanic Garden castigating a group of bird photographers was uploaded to the website Tencent Video. The video was shared in several WeChat groups of bird-watchers where most bird-watchers applauded the staff. The group of photographers—all male retirees—were caught up on the spot when they were kicking a trunk to flush out an owl so they could capture it in flight. The staff gave them a five-minute reprimand in which he listed "three sins of bird-photographing" (*painiao sanzongzui* 拍鸟三宗罪): littering cigarette butts, congregation amidst the Covid-19 pandemic, and luring birds with baits for photography. All these conducts broke the rules of civilising park-visiting. The photographers were, in the end, asked to leave the park by security guards.

Lacking public etiquette is one of the common manifestations of bird photographers' low *suzhi*. I gathered from interviews with administrative staff from several parks that bird photographers must be among the least 'favourite' type of public park users. For instance, Mr Jin was responsible for organising science reach-out activities in Tiantan Park. He worked at the Base for Ecological Education and Science Reach-Out, an enclosed plant nursery situated at the northwest corner of the park. Coincidentally, his workplace constituted an active bird-watching hotspot and worshipped by both

bird-watchers and bird photographers as an incredible "miraculous forest" (*mo shulin* 魔树林, i.e., a bird-rich location).

Sharing his workplace with bird-watchers and bird photographers daily, Jin's comment for bird photographers was hardly benevolent. Spitting, littering, swearing, talking in a loud voice, congregating in a massive crowd—Jin identified bird photographers almost as a nuisance who "cause trouble" (*daoluan* 捣乱) and disturbance to the environment and order of the park. "I prefer to think that what their real businesses are smoking and shooting the breeze[58]". Jin's listing of 'sins' of photographers was sanctioned by the rhetoric of civilised park-visiting that seemed to be internalised by Jin and other park visitors.

From my observations of bird photographers in public parks, some of their major transgressions of the ordering regimes of public parks consisted of public space occupation, and making an unreasonably loud noise in noise-sensitive areas where birds moved around. My findings suggest that the source of both problems is determined by the nature and organisational form of bird-photographing.

Instead of a solo activity, the most typical form of photographing involved many photographers surrounding the target bird; this was known in their jargon as "enclosed shooting" (*weipai* 围拍). The number of photographers participating in enclosed shooting correlated with the popularity and rarity of the bird. Nevertheless, even the smallest gathering usually consisted of at least ten photographers. Mainly driven by the movement of target birds, the crowd of bird photographers, each with their bulky camera bag containing photographing accessory could end up occupying a large public area that was also frequently used by other visitors, e.g., the pedestrian lane. They even ventured into areas restricted to public entry.

[58] *kan dashan* (侃大山, to shoot the breeze), is a Beijing dialect meaning to chatter away for a long time.

Moreover, bird-photographing can be extremely time-consuming. Sometimes it took a long time and great patience to get that special shot. If we continue the metaphor of hunting, bird-photographing is essentially a waiting game that entails sitting all day. I once heard an elderly male photographer complaining to his companion that his family disapproved of his photographing hobby, for it was a very sedentary activity that they worried it would ruin his health.

Many photographers resolved the tediousness of sitting down for long hours in the outdoor environment by striking conversations with fellow photographers. The hurly burly or "hot and noisy" (*renao* 热闹) gathering was often the desirable sociality of bird-keepers. This was sharply distinct from the quiet and almost soundless bird-watchers. Steinmuller (2011: 263) describes *renao* as "social heat", a kind of "social effervescence" that is valorised as a positive state for ritual and public events. However, Steinmuller also notes that *renao* is positively desired as long as it remains "within certain boundaries" (ibid). It seems that *nao* (闹, to stir up) in *renao* that connotates the rumbustious atmosphere is hardly in accordance with the regulation of keeping loud noise at bay within the regulated fabric of urban space (Edensor 2008).

The most impressively large-scale enclosed shooting that I have ever witnessed was when a massive crowd of photographers were trying to capture a European robin, a rare vagrant bird and sought-after target—in Beijing Zoo in the winter of 2018. The single red-breast robin was found moving around the bushes outside the tiger enclosure. There were approximately a hundred photographers on site, forming the rough shape of concentric semicircles. Ambitious photographers who had timely information for the exact location of the robin took the prime "positions for shooting" (*jiwei* 机位) situating closer to the location of the target. In contrast, late-comers could only sit at the periphery, trying to squeeze into the inside loop. People congregated and sat together (on their prepared

stools or portable folded chairs) with acquaintances and friends; during the intervals waiting for the bird to come into sight, they engaged in lively conversations, boisterous and loud.

When the bird did peep out from its hiding and stood in front of photographers, the chaotic, continuous shutter sounds interweaving with shouting for people to avoid blocking the camera stifled any sound made by the bird. The hot and noisy gathering was vastly different from the quietly moving bird-watchers. Instead of worrying about the potential impact of loud noise on the bird, one photographer who stood next to me turned to remark on the robin's boldness and how it did not shy away from the mass and camera flashes— "It must have seen much of the world (*jianguo dashimian* 见过大世面) to be so poised", he exclaimed.

On the surface, *mei suzhi* conveys disapproval of some bird photographers' transgressive behaviours in the public area, and their boisterousness and noise are instantly reminiscent of the lively atmosphere in a traditional teahouse. Underlying the emphasis on etiquette is the considerations of the feelings of others, the essence of public virtue. Photographers' low *suzhi*, as will become more evident in the second section of chapter 5B, indeed manifest in how they hardly care for the well-being of avian "others" in their pursuits of desired photos.

5A.4. Conclusion

I have started this chapter with how the state-led discourse of *suzhi* operates as a value articulation of Bejingers' subjectivities for bird-watchers. *suzhi* becomes an encompassing discourse for bird-watchers to disassociate themselves from the low-*suzhi* others, including bird-keepers and bird photographers in particular. In this chapter, we first get to see that operating as a placeholder of differentials and distinction, the *suzhi* discourse delineates boundaries between and even hierarchises

different avian avocations. A chain of disdain (*bishi lian* 鄙视链) is acknowledged but debated among bird-watchers along a *suzhi* hierarchy. Bird-watchers at the presumably exalted status of *suzhi* despise bird-keepers for backwardness of their practices, and disapprove bird photographers for their lack of public civility.

In chapter 5B, I will continue my examination of *suzhi* distinction by discussing a key aspect of the *suzhi*-based hierarchy of three avian avocations. I do so by drawing on my extensive ethnographic investigations. In particular, I seek out to explore how different practices of care or lack thereof become incorporated within a *suzhi* evaluative system.

Chapter 5B. The *suzhi*-based evaluation of urbanites-avian relatedness and care

This chapter argues that forms of human-bird relatedness and care implicated in these leisure activities are at the heart of the *suzhi* assessment. Different ways of caring for birds are hence stratified by the discourse of *suzhi*. As we will see, according to the *suzhi* discourse, the distanced visual engagement in bird-watching is considered a leisure activity with the correct form of care only subjects with higher ecological *suzhi* practice.

Notably, the central element in constructing the *suzhi* difference among bird-watchers, bird-keepers and bird photographers is the conflicted ways of relating and caring[59] for birds. The *suzhi*-based evaluative process specifically valorises the regime of care built on detachment and maintaining distance, while delegitimises bird-keeping as the wrong form of care and bird photography as non-care. Specifically, the presumed low *suzhi* of bird-watchers by bird-watchers is attributed to the

[59] For a summary of theoretical insights of multispecies care, please see particularly section 1.2 and 1.3.4 of Chapter 1 of this thesis.

immorality of the care for caged birds involved in bird-keeping. In comparison, bird photographers are cast as of low *suzhi* ultimately for their predatory, photographic gaze epitomised by non-care for birds and their habitats in pursuit of high-quality photos. Finally, the high *suzhi* of bird-watchers is embodied by their responsible and self-restrained way of watching (the self-disciplined eye) and their acknowledgement of the autonomy of wild birds through active cultivation of detachment (the loving eye).

suzhi facilitates an ordering of nurturing practices into a hierarchy of acceptability. It is an "ethico-political ordering of care" (Chua 2021) further appropriated and sustained by the state in the service of constructing an ecological civilisation. Therefore, in the last section of this chapter, I turn to reflect on how the evaluation of participants in various bird-related leisure activities is implicated within the government's concern for the quality of residents of the capital city. As I will suggest, bird-watcher are made the exemplary model of high-*suzhi* citizens who contribute and stand in the vanguard of the national project of developing an ecological civilisation. The state endorses and sustains the *suzhi*-based hierarchical evaluation of avian avocations and the different practices of care or lack thereof embedded in them.

I will now demonstrate how bird-keepers are considered as having low-*suzhi* due to the problematic form of care and love for birds.

5B.1. Bird-keepers' problematic care for birds

In addition to cultural and legal delegitimising of bird-keeping, the label of low *suzhi* also evokes the rhetoric of a moral distinction that builds on jarring views of care and love for birds. By subjecting bird-keepers to criticism of low *suzhi*, bird-watchers tend to highlight a 'dark side' of their care and

love for their plaything: the violence and destruction in the name of care.

From the view of bird-keepers, love for their birds is indisputable. Pangzi, a bird-loving character from the Beijing-flavoured modern drama *Birdman* (*niaoren* 鸟人) has a fascinating line to make this point. When Manager Sun asks Pangzi what if one wants to keep caged birds but is not allowed to do that at home, Pangzi replies: "The country has nominated a Bird Love Week. How are you supposed to love birds other than by raising them?"

To be sure, bird-keeping involves caring practices that are not unfamiliar to anyone who has raised a child or pet of sorts. Indeed, playing birds is regarded by bird-keepers as a sophisticated art: from bird food to the cage, to feeding utensils and even the piece of cloth to cover[60] the cage—every detail needs to be taken into consideration to provide for a carefree birdy life. Consider the diligent work that goes into making a skylark at home in its cage, as Kuhn (2009) has documented by observing Beijing bird-keepers at Coal Hill Park:

> A lark's cage is immediately identifiable by the sand on its floor, mimicking the bird's habitat on the steppe of Inner Mongolia. While most cages have little porcelain bowls for food and water, the skylark's water bowls are outside to keep the water from muddying the sand.

From a bird-keeper's point of view, it is self-evident that they have nothing but care and love for their pet birds. The exquisitely crafted cage embodies not only the owner's taste, but also his good intention to take care of their birds by offering them a comfortable, albeit man-made, home. However, from a

[60] Cages are normally covered and will only be lifted when a bird-keeper finds a suitable place to hang his cage. An experienced bird-keeper can tell the species of caged bird simply by the colour of the cage covering. For instance, the cage to raise the skylark is usually covered with a blue cloth. The dark blue covering works better to provide a safer environment for this colour and light-sensitive bird. See Lu (2015).

bird-watcher's perspective, it would never be a good life for birds without the freedom in the open wilderness where they belong. Most bird-watchers I met believed that no matter how extravagant the cage was and how dedicated owners were to their playthings, birds kept in the restrictive environment were ruthlessly deprived of their freedom of flying taken from the moment they were captured.

The open acknowledgement of bird-watchers was that all caged birds were captured or raised in captivity in many cases. Consequently, the very fact that bird-keeping could only be made possible through a nexus of detrimental activities of poaching, transporting, and merchandising in the bird market, which necessarily deconstructed any self-avowed love of bird-keepers for birds. Bird-watchers knew the numbers well, as exemplified powerfully by this flyer sent out by bird-watchers:

> Currently, the caged birds Beijing residents raise are all taken from the wild. In typical situations, only 1/20 of birds caught can survive and then are delivered to the hand of bird-keepers. Put differently, a single caged bird is kept at the cost of twenty deaths of its brothers and sisters. Why is the death toll so high? It is said that bird poachers usually net-catch birds and shoot them, which inevitably causes the death of three or four birds in the process. And among the caught birds, juvenile, elderly, disabled, and ill birds are prosecuted. If a songbird such as thrush is caught, only the male ones will be left and female birds will be killed. And during a long time of transportation, more birds are dying in cages and carriers of bird-poachers…To this day, there are over 200,000 bird-keepers in Beijing. Let's suppose that each of them buys one bird per year; the natural world will lose a total of 200 thousand birds!... Wouldn't your consciousness trouble you?

This revelation of the bloody destruction of birds associated with bird-keeping made pet bird ownership immoral. There was no denying that pet-keeping caused fatal and detrimental consequences for wild birds. Those who disregarded this grim reality were therefore cast as unconscionable. Even if

bird-keeping involved care, it would be a "violent care" (van Dooren 2014) that could easily morph into the suffering and death of birds.

For example, Guo Geng, the deputy head of the ecology centre at Beijing Elk Museum, as well as an ambassador and promoter of bird-watching, condensed his view of the 'correct' way to love birds with this rhymed expression: "Do not shoot or imprison birds; please do photograph and watch birds". He even rewrote the lyric of a pop song to reiterate the problematic love in pet bird ownership:

Mama, why do humans keep me in the cage?
Maybe because they love you? They fear that we cannot find worms to feed.
Alas! Alas!

Moreover, captivity and enclosure of wild birds were subjected to moral interrogation. At the heart of the dispute was the "fragile wild" of birds, which bird-watchers endeavoured to carefully safeguard (see section 5B.3.2) while bird-keepers ruthlessly destructed. Bird-watchers often questioned the ethics of keeping birds in a captive breeding environment. "I don't understand. Why do they feel the need to put birds in a cage when they could easily watch and listen to their songs in the wild?", as one bird-watcher Maotao challenged.

Caged bird ownership was cast as the wrong sort of care, delegitimised as unwitting cruelty. From bird-watchers' view, under the veneer of carefully prepared bird foods, water cups and feeding accessories, as well as seemingly nurturing practices such as playing, feeding, bathing, interacting with the caged bird was nevertheless ensnared in a lethal form of cross-species intimacy. As a result, bird-keepers were cast as selfish, keeping their pleasure of playing birds before the freedom and well-being of wild birds. Ultimately, bird-keeping, or indeed, "playing bird" embodied the wrong sort of care that

was translated into low *suzhi* of those who cared for birds as their playthings.

The classed embodiments of relationships between urbanites and birds in the contrasting style of relating to birds by bird-watchers and bird-keepers are also worth mentioning. At the core of bird-watchers' depreciation of bird-keeping was bird-keepers inability to practice a restrained distancing model of human-avian relatedness, which seemed only to matter to bird-watchers from a relatively highly educated background. At the same time, bird-watchers came to explicitly denigrate a more physical, outdated and arguably selfish manner of care for caged birds with all its perils of the gentry class.

5B.2. The uncaring gaze of the camera

As mentioned previously, "shooting birds", the local parlance for bird photography, carries a strong connotation of hunting. Accordingly, a photographic gaze becomes associated with the gaze of the hunter. From a bird-watcher's point of view, anyone who readily accepted and even enjoyed "shooting" birds with a camera or, for that matter, other weapons, cannot in any way hold love and respect for birds. If bird-keeping jeopardises the well-being of wild birds through endorsing illegal poaching, bird photography is equally problematic for the domination and disruption of birds in the process of 'capturing' (pun intended) birds on a photo.

Bird photographers are found in an ethically ambiguous position in their metaphoric role as a "hunter" of some sort toward birds. The problem with the photographic eyes is inextricably attached to the unrestrained desire to meet certain aestheticised conventions at the expense of serious disturbance or stress to birds. In so doing, photography is embroiled in a hardly subtle power play. To

photograph a bird is in some way tantamount to taming and to having power over birds photographed, even if only momentarily, over it.

Nowadays, more refined guidelines for ethical bird-watching have become available and have been implemented among bird-watchers, as we shall see in the next section. Despite the variations between these guidelines, the baseline remains the same: respect the birds and their environment. In contrast, it was precisely the disrespect for birds and their habitats that bird-watchers accused of bird photographers. Bird-keeping and bird-photographing were increasingly stratified by one's *suzhi* on account of their separate visual engagement with birds and the modes of human-bird relatedness entailed: the visual domination through photographing versus visual appreciation and caring through distanced observation.

Bird-watchers' condemnation of the uncaring photographic gaze of bird photographers revolved around two issues: their compulsion for getting too close to birds and their irresponsible behaviours to manipulate birds for photography, including creating sceneries, photography with baiting and set-up photography. In a word, they tended to be accused by bird-keepers of putting their pursuits for a perfect shot before the well-being of birds.

5B.2.1. A compulsion for proximity

The first 'sin' pertains to the photographers' compulsion for physical proximity. A sharp, head-on photo with forward-facing of a bird was particularly sought-after by photographers. As far as a bird photographer was concerned, the yardstick of a perfect shot, contained the following principles. The first was the gold standard of "hair-counting" (*shumao* 数毛). A high-quality image should be clear and sharp to the point that one can even count the hairs of the bird captured. Another rule referred to "twinkle in the eyes" (*you yanshen guang* 有眼神光), meaning that an ideal shot cannot do without

capturing a close-up look of the bird's eyes. The preference for proximity was legitimised for the sake of a top-class picture that satisfied the above criteria. Bird photographers had a well-known slogan, or indeed a creed that many photographers adhered to—"proximity is the absolute principle" (*jin jiushi yingdaoli*[61] 近就是硬道理). The aspiration for proximity drew the line between bird-watchers and bird photographers, and the contrast was especially evident when they were both present at the same site.

Consider this picture of a group of photographers in enclosed photographing that I took at the "mysterious forest" (a.k.a. the plant nursery) in Tiantan Park. The desired 'trophy' for the day was a Siberian blue robin (*Larvivora cyane* 蓝歌鸫). Some photographers arrived in the early morning to camp at the spot, as good shooting positions can be competitive. This picture (Figure 5.4) shows no sign of a bird-watcher but had there been one, he/she would generally stand behind the packed crowd, on the paved pedestrian lane, rather than squeezing into the crowd. From a bird-watcher's view, From a bird-watcher's view, who as government wishes, were following the paved trails, the position photographers took was far beyond the "safe distance" (*anquan juli* 安全距离) to be non-threatening to birds. This double-layered spatial arrangement of bird-watchers standing behind bird photographers was common to see in my fieldwork.

[61] This expression is a playful appropriation of a classic political philosophy "development is the absolute principle" (发展就是硬道理) proposed by Deng Xiaoping, the chief designer of Chinese reform and opening-up from the late 1970s onwards.



Figure 5.4 Enclosed photographing in Tiantan Park
Noted that photographers were attempting to get a shot of a bird hidden under the white-flowering shrub. The distance between their positions and the bird was about 1 to 2 metres at best.

In addition to the aspiration for sharp pictures, in terms of prosthetic technologies, bird-watchers' preference for proximity was also resulted from their camera-mediated engagement with birds. The problem with a camera was that better image sharpness was achieved at the expense of the magnification power. The lesser magnification range of a camera, coupled with the orientation for image sharpness, made it necessary to get closer.

While bird-watchers tended to carry both binoculars and cameras, I had not seen a single bird photographer working with binoculars. Thus a bird photographer could easily identify a man/woman of his own by examining whether one wore a binocular or not. I was subjected to enquiries about my identity by bird photographers on several occasions. Whenever I approached a bird photographer, with binoculars draping on my neck, to ask about what birds he/she was photographing, I tended to get the question "You are a bird-watcher, aren't you?" (*nishi guanniao de ba* 你是观鸟的吧).

Another telling example is a participant I met in a bird-watching activity in Tiantan Park. His gear—a Canon camera attached to a Swarovski telescope mounted on a tripod—looked heavy and

massive. It turned out that as a recently converted bird-watcher, his main interest lay in photography. According to him, his 'conversion', so to speak, was driven by a desire to know the names of birds he had photographed. I find the 'chimera' of camera plus telescope a fascinating encapsulation of his crossing between identities.

One bird-watcher once told me that bird-watching had a "built-in ethical edge" (*tianran de lunli youshi* 天然的伦理优势); in comparison, photographers' dependence on the camera inevitably disposed them to get proximate to the avian subjects. Indeed, even the top-notch "big canon" (*dapao* 大炮), e.g., the longer fixed-length lens of 500mm gives only 10x magnification. This is equivalent to the magnification range of a pair of 10x45 binoculars (lens diameter of 45mm with a zoom range of 10x), one of the commonly used models of binoculars. The shorter useful magnification afforded by a camera thus cannot guarantee that photographs were taken within a safe distance.

5B.2.2. Aestheticising manipulation for a perfect shot

Another controversy around bird photography centred on its aestheticizing tendency in which, according to bird-watchers, the temptation of a perfect shot often outweighed birds' safety and living. My interviews with bird-watchers indicated that the bird photography's mostly accusable aspect was indeed the photographers' fixation for their pictures. "All they care about is good-quality photos as if birds mean nothing to them"—this was the general understanding of the intention of bird photographers, which was almost unanimously adhered to among bird-watchers.

Let me borrow a line from a bird-watcher. He attempted to explain the "original sin" of bird photography by commenting: "When the artistic creation becomes everything, birds are doomed" (*niao jiu wandan le* 鸟就完蛋了). Why the overwhelming charge for an aestheticizing tendency particular

to their endeavour? To understand it, we need to consider what constitutes photographer's artistic practices. I intend to discuss three aspects of artistic manipulation: creating sceneries, photography with baiting and set-up photography.

To start with, there was a vast interest in "creating sceneries" (*bujing* 布景) in bird photography. If as Ryan claims, Victorian wildlife photography and taxidermy drew on each other's codes and conventions in their efforts of staging animal life (Ryan2000: 210), Beijing bird photographers may be said to draw inspiration from the long tradition of flower-and-bird paintings (*huaniao hua* 花鸟画), one of the three main type of "Chinese painting" (*guohua* 国画). Classic flower-and-bird paintings are especially rich in symbolism, with birds and plants attributed with usually auspicious meanings. For example, paintings with a popular schematised depiction of red-crowned cranes with pine trees—both are symbols of longevity—make a good gift for seniors to convey good wishes for long life and health.

Bird photographers were found obsessed with making sceneries containing plants with auspicious meanings to frame their shots of birds. Since urban landscapes were seldom pleasing enough on their own, not to say as background for a good picture of birds, they had to rely on artistic intervention with the embellishment of certain plants. A plant-ful scenery that left me a lasting impression was the one I found in the Olympic Forest Park. At a tourist spot—an exquisite aquatic feature consisting of a small man-made waterfall from which a winding stream flows, there was a chaotic congregation of seated people around the waterfall with an assortment of gears of the camera, tripods, large travel bags with wheels. The waterfall was the favourite site of photographers to shoot the red-billed blue magpies (*Urocissa erythrorhyncha* 红嘴蓝鹊).

The red-billed blue magpie is perhaps the most stunning common bird species in Beijing. This

vividly coloured stunner (dark blue, black, and white plumage, bright scarlet bill and feet, black crown with blueish spots) with its elegant tails rising and falling in flight earn it a nickname “little phoenix” (*xiao fenghuang* 小凤凰). In addition to its eye-catching appearance, the bird is a relative of the magpie, or literally a “bird of joy” (*xique* 喜鹊). It holds a special place in Chinese culture as a symbol of good luck and happiness. Its beauty, the auspicious symbols it carries and the ease with which to sight, make it top the list of bird photographers’ must-shoot birds.

Although the target of this group of photographers was still the magpie, what had changed that day was the scenery: someone put a small patch of artificial turf on the flat plateau from which the waterfall leapt (but it was frozen); above the turf was a bending tree branch and a persimmon wrapped with a thread was tied to the tip of the branch. To make the scene more culturally distinctive, a bright red Chinese knot pendant (*zhongguo jie* 中国结)—a decorative handicraft often used to decorate home during the spring festival—was placed next to the persimmon. The last time I checked the scenery, it was grapes instead of persimmon tied to the branch. *shi zi* (persimmon 柿子), a homophone with “matter” or “thing” (*shi* 事), when paired with *ping guo* (apple 苹果 and it is homophonous with *ping* 平 meaning peace) symbolises the well-hearted wish “may you have peace in all your undertakings” (*shishi pingan* 事事平安). In this sense, framing the bright orange persimmon together with the green turf and the exuberant bird made the picture more colourful, and added symbolic meanings. Moreover, the sweet persimmon made an irresistible bait for a bird who may struggle to find food in bleak winter. In fact, during the short time I stopped to watch the shooting, two red-billed blue magpies swooped down to catch a mouthful of the persimmon, when suddenly all seated and immobile photographers were ‘reanimated’, quickly pressing the shutter to capture a living flower-and-bird picture.

Let us now head south to Tiantan Park for further insight of photographers' crafting of sceneries. The plant nursery of Tiantan Park was my primary field site where I observed bird photographers' activities, joining them in waiting for long hours for their bird target and listening to their conversations (and sometimes chipped in). They never doubted my credential as a student researcher, but I was identified by most of them as a bird-watcher, i.e., an outsider. Inhospitality was not the right word to describe their reaction toward me when they realised I was a bird-watcher; rather, it was a sense of indifference, of knowing that "we do not belong to the same world". I do not doubt that if it were not for my rapport with Old Yu, some photographers would not have much to say to me.

Yu was exceptional among all amateur bird photographers I came across in my field. Yu was in his early 50s, relatively younger than most photographers whose ages average around 60. Moreover, although Yu had not attended any bird-watching activities, he maintained good rapport with bird-watchers in Tiantan Park. He had even been invited by Mr Li, the president of WBS, to join the online chat group exclusively for all participants of Tiantan bird-watching activities by WBS.

In fact, I met Mr Yu on my first bird-watching visit to Tiantan. He was dressed in a loose, faded T-shirt, a pair of multi-pocket trousers and black shoes with cloth soles (the shoes are particularly enjoyed by elderly Beijing men hence getting the name "old men's shoes" , or *laotou xie* 老头鞋). He carried a brass mosquito coil burner on his waist, an essential for staying mosquito-free when one needs to stay outdoors during the summer months in Beijing. Nevertheless, what attracted my attention was his camera attached to a gigantic lens—a 'cannon' indeed.

He and Li were conversing about methods that may be implemented to protect the Chinese sparrowhawk (赤腹鷹 *Accipiter soloensis*) family. They were especially concerned that the newborn chicks currently residing in the plant nursery at Tiantan were in danger of being caught by ill-intended

bird vendors (*niao fanzi* 鸟贩子) or disturbed by non-caring bird photographers. From their conversation, I realised that Yu was the first person to sight the sparrowhawk chicks. I found it hard to pinpoint his relationship with birds. On the one hand, he had been actively involved in making genuine efforts to protect the hawk family. On the other hand, like other bird photographers, he did not find any problem with bating or interfering with birds in his pursuit of snapping high-quality photos.

Woking on a two-on-one-off shift, Yu spent most of his day-off photographing in Tiantan Park, whose south entrance was only 5 minute's walk from where Yu lived. He was usually based in the plant nursery. When the bird-watching team stopped by the plant nursery, and he happened to be there, he would greet the team leader (he knew all three team leaders well) and other acquittances in the team, exchanging information with them about recent bird sightings.

Yu shared with me his experience of bird photography in Tiantan Park. The shared wisdom among photographers went that there were two locations within the enclosed nursery that "miraculous birds" (神鸟 *sheniao,* meaning rare-to-sight species) preferred to rest. These included two steel manholes. Small pits on the textured surface tend to gather watcher from raindrops, making them the perfect water fountain to rehydrate. Two covers were surrounded by dense bushes. At the two sites of manhole covers, old props used by previous photographers—two twisted branches inserted deeply into the earth called "pile" (*zhuang* 桩)—were sometimes recycled, but new decorations were also installed.

Conflicts sometimes occurred due to varied views about how to decorate the scenery, especially when a mass crow was gathered to capture the same bird. One photographer had a vivid comment that brought out the conflicting ideas of staging: "You have one idea; he has another idea—it seems we have several generations of film directors[62] (*jidai daoyan* 几代导演) at the same site."

[62] The expression "generations of film directors" alludes to the common knowledge of Chinese filmmaking history. Since the beginning of Chinese filmmaking in 1905, there has been six generations of filmmakers

Unlike the aesthetic obsession with auspicious symbolism, the usage of a small branch was underpinned by a different aesthetic concern. It was revealed to me in Old Yu' s conversation with his companion Old Han. They stood under the shade of a Siberian elm, discussing how to create a scenery out of the newly-mowed lawn:

> Yu observed: "There, it used to be full of weeds. The workers removed them all". Old Han replied: "We should put a few branches there otherwise the messy background would make the picture look bad. Get a twisted branch and put some mealworms on top to let the bird climb up along the branch. Just think about it: it'll definitely make a pretty shot!."
>
> Yu laughed out loudly, teasing Han with his unrefined phrasing: "If it's for us to say, we can only come up with words as 'getting a small branch and whatnot' (*nongge xiaochuchazi* 弄个小树杈子) . But it's an artistic creation (*yishu chuangzuo* 艺术创作) I say!"

This conversation also shed light on the importance of bait (in this case, mealworm) for a scenery to work out, that it, to stage bird as expected. "Photography through baiting" is known as *youpai* (诱拍). Despite being a controversial issue with consequences of posing dangers to birds, it was a common practice among bird photographers I met and was rarely challenged by them. In their years of photographing with baiting, some photographers had even accumulated wide experiences about the baiting techniques. Old Han, for instance, once complained to Yu about a photographer's wrong way of scattering mealworms to allure a timid female Siberian robin out of the bushes. He said disapprovingly:

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with the latest Seventh Generations of directors (*diqidai daoyan* 第七代导演) emerging since 2000.

This is all wrong. This female bird seems a timid one—you see, it[63] hides in the bushes and is afraid to venture out. The location to scatter worms is not right. He should put the worms in the sunny area outside the dense bushes so that the bird hidden within would come out for a bite. It's also necessary to pinch the head of a worm to leave it blackout; in this way, worms will not crawl around.

The parallel between photography with baiting and hunting over bait is powerfully drawn. The purpose of baiting is to manipulate the behaviour of wildlife to capture it, with a gun or a camera. Lured with baits, birds were sometimes manipulated to appear in sceneries that went beyond the unreasonable point. Even some photographers had criticised the absurdity of some forms of staging. Old Yu, for example, did not have a qualm about photography with baiting *per se* (in fact I saw him using mealworms on-site several times, and he even generously offered the worms he brought to share with other photographers). What Yu disapproved of baiting were certain ways of aesthetic manipulation that went too far.

Consider Yu's conversation with Old Wang, another bird photographer he seemed to have known for a long time. Old Wang shared with Yu what he saw recently at Wanping lake to which many photographers fled, in order to capture a near-threatened species reed parrotbill (*Paradoxornis heudei* 震旦鸦雀 it is also known as the "panda of birds").

[63] The original word he used was *ya* (丫). In Beijing dialect, *ya* is a swear word that can substitute third-person pronouns. For example, one can say *ya shi ge hundan* (丫是个混蛋) to mean "he is such a jerk". *ya* can also be used directly after the second-person pronoun. Old Wang used this word possibly because he was used to swearing a lot (a quintessential feature of *daye*) or he was trying to express his annoyance about the difficulty of capturing the timid bird in a pejorative sense.

Wang said: “They came up with a new trick: to make the bird jump on a lotus.” Yu looked sour and not amused. Wang laughed out loud and continued: “haha someone put a large grasshopper on the lotus. The small bill of the bird was stuffed with an enormous grasshopper. I have seen the picture; it’s on *niaowang* (鸟网 the biggest online platform for bird photographers nationwide to communicate). It’s quite transgressive.”

Yu nodded and commented cynically: “Now you are talking. The person who took the picture knows nothing. How could a reed parrotbill come anywhere near a lotus? The photographer is clearly ignorant about the bird’s habit. He only wants beautiful colours: if it looks pretty, then we are good. I say it’s like spreading stinky fermented bean curd (*chou doufu* 臭豆腐) on something good.”

Wang: “You are right. That’s why I didn’t take any pictures of the bird with the lotus. I would rather have an all-green background. A lotus? Thank you but no.”

At this point, Yu suddenly dropped his objection to the picture by saying: “Nevertheless, it’s fine. It’s good that people can find delight in what they do, to entertain themselves.”

Wang: “I agree. It’s a fun thing to do. They said that the bird also had a cigarette butt in its mouth. Someone threw a cigarette butt and took a quick picture as soon as the bird went to fetch it, haha.”

Yu: “Oh? That’s a way to do it.”

Wang: “Why so?”

Yu: “Because it’s a comical scene, just another idea of executing the scene.”

Yu’s view about photographing the reed parrotbill with baiting was riddled with inconsistencies. However, it should be clear that Yu’s previous critical comment is more of a despise for the low artistic level of the picture to represent the bird, rather than disapproval of the problematic intervention of the bird out of ethical concern. It seems that for Old Yu, the purpose for having fun is readily legitimised

and put before concerns for birds.

The third form of photographic activity in bird photography that tended to earn a bad reputation for bird photographers in the eyes of bird-watchers was known as "set-up photography" (*baipai* 摆拍). When bird-watchers discussed setting personal milestones to sight so-and-so species, bird photographers liked talking about capturing a bird in so-and-so actions: the actions of flying, perching, preying, and nesting were among the most popular themes.

The photographer-turned-bird-watcher, whom we have met in the above section, pithily expressed the different purposes of photography in bird-watching and bird photography in this way: "*guanniao* (bird-watching) is about capturing nouns while *painiao* (bird photography) is all about recording verbs—this is how I understand it. " What he meant is that photography coupled with note-taking is used as a way of recording sighted birds in bird-watching; in comparison, bird photographers are driven by an urge to capture action shots of birds.

This point was reinforced to me in an informal chat with a photographer San Ge whom I encountered in the Olympic Forest Park. Dressed in a multi-pocket camera vest with the characters "Chinese Association of Photographers" (*Zhongguo sheyingjia xiehui* 中国摄影家协会) printed on it, San Ge openly flaunted having a wealth of experience of photographing birds for more than ten years. However, he said that his interest now lay elsewhere. I was curious why he was out of the business of avian photography. He explained: "I have shot almost 40 species of birds in Beijing; scenes like *xiaocui* (小翠 photographers' nickname for the common kingfisher) preying on fishes, mating and many others—I've captured them all. There is really nothing new for me to photograph. "

As a matter of fact, 40 species only constitute a small fraction (about 1/12) of the total species that can be sighted in Beijing. Sometimes a single 4-hour-trip around urban parks like Tiantan Park could

yield sightings of more than 40 species. His diminishing interest in photographing birds thus made me wonder, especially considering that bird-watchers often indicated to me how they had found unexhausted pleasure in watching birds whose "newness is never fading whenever looked upon" (常看常新) (see section 4B.3 of this thesis). To be sure, San Ge did not take it as his goal to shoot as many species as possible (otherwise, he would not end up with only 40 species); rather, there was an evident sense of completion associated with having been able to capture a full set of action shots of birds. And this, as I surmise, may be one reason for his loss of interest in bird photography.

Set-up photos were normally very stylised, as photographers made birds pose for the camera in preferred actions. And this inevitably involved coercing, stressing birds out and other forms of intervention that may put birds in dangerous or even life-threatening situations. Indeed, it was precisely the fever for perfect action shots at the expense of the safety of birds that subjected bird photographers to fulmination. The journalist from *New Weekly* Zhang Jiaming vehemently charged bird photographers: "Bird photographers are powerful destroyers of birds since the end-Cretaceous mass extinction event" (Zhang 2020).

The media coverage of uncivilised behaviours related to bird photography was awash with negative accounts of bird-harassing photographers kicking trees, throwing mineral water bottles, shooting at birds with slingshots, chasing after bird crowd, just for a good shot. What was particularly criticised was the more intrusive type of bird photography of nestlings (nesting was another favourite theme for set-up photography). There were horrific stories of photographers taking nestlings of Asian paradise flycatchers out of their active nest and arranging them on an open perch to get frame-filling photos of parents feeding them. Stories like these had gone viral on social media, outraging the public and particularly distressing bird-watchers. From the above depictions of my encounters with

photographers such as Old Yu and his fellow photographers based in Tiantan Park, SanGe and the group of photographers seeking to capture the red-billed blue magpie in the Olympic Forest park, it becomes clear that the goal to get a perfect shot often outweighed concern for birds' well-being. Therefore such 'predatory' pursuits—creating sceneries, photography with baiting and the set-up photography—became a direct expression of the low *suzhi* of bird photographers as a group.

5B.3. Caring birds through cultivating distance

To understand the construction of the self of bird-watchers as high-*suzhi*, let us scrutinise their practices of watching. As Daston and Gailson argue, observation practices are "genuine technologies of the self" that simultaneously shape and mould the scientific object and the scientific self. Their ambitious project investigates the parallel mutations and manifestations of epistemic ideals in science and scientific selves during the 18th through the 20th centuries in Europe and North America. For instance, they uncover the formative power of the epistemic objectivity of science in the 19th century when the atlases of mechanical objectivity were as new as the scientific self that appealed to self-control. It was the non-intervention and the elimination of every bias imposed from the human will that became crucial to exercise an objective sight (2007: chapter 4).

Following their line of thought, I aim to scrutinise the "double motion" of the self and the sight. I propose that the best observation for bird-watchers constitutes a withdrawal—an engagement with birds but "in a manner that approximates absence" (Reinart 2013: 22). This highly restrained way of watching, conducted self-consciously and expressive of genuine love and care for birds, became the benchmark against which bird-watchers' came to enact their high *suzhi* and to gauge others' *suzhi*.

5B.3.1. Bird-watchers' self-disciplined eye

"They simply didn't care at all", bird-watcher Maotao commented on recent news about bird photographers cutting off tree branches for shooting adult birds feeding nestling, "It's as if they lack the sense of responsibility of an adult. Yes, Irresponsible. They do whatever they want—I just can't relate to them."

To conclude her rant about bird photographers, Maotao gave a half-mile, her angry brow furrow relaxing a bit as she started to share her opinion of bird-watchers

> The majority of bird-watchers have a strong sense of responsibility. They are public-spirited, with strong self-restraint (*dui ziji youyueshu* 对自己有约束) and self-discipline (*zilv* 自律). This is a very good thing about them. And I find that participants of WBS activities in particular show these qualities. The team guides of their activities are responsible so that nobody would do harm to the environment or birds without being challenged. I've heard complaints about guides in other bird-watching activities keeping an open eye about terrible behaviours of harassing birds for a shot. Well, this is one of the reasons why I'm loyal to WBS activities—people have a high self-consciousness (*hen ziju* 很自觉). (interview on July 23, 2019)

Maotao's account sheds light on two aspects regarding the superior *suzhi* of the observational practices of bird-watchers. First, bird-watching is conducted with constraints and a sense of responsibility to prioritise the health and well-being of birds. Bird-watchers' care to avoid disturbance and harm to birds is sharply contrasted with the "irresponsible" conducts of bird photographers who could be said to meddle with birds at their wills selfishly. Second and more importantly, bird-watchers self-consciously

restrain their observations. It is not enough, for example, to keep one's voice down whilst bird-watching; they do so under their own initiative, thus displaying a strong "self-consciousness".

As we have seen in the opening vignette of a string of conflicts in an organised bird-watching activity, bird-watching was subjected to certain rules such that participants' behaviours were restrained by abiding well-established codes of conduct. In general, the rules were effectively implemented, characterised less by the exercise of coercion and punishment than by their disciplinary power in the Foucauldian sense through which people were assessed and assessed themselves and other bird-watchers. The only enforcement was by self-monitoring or by other bird-watchers in the field. The codes of conduct hence actively shaped people's conduct as they became normative and self-evident.

Sigley's study of *suzhi* (2009) reveals the core correspondence between the dichotomy of high-low *suzhi* and the polarised classification of passive (*beidong* 被动) bodies versus bodies that can take the initiative (*zhudong* 主动). Likewise, in Woronove's ethnographic analysis (2003) of *suzhi* education in Beijing, she argues that an important *suzhi* characteristic evaluated through filling out the self-assessment grid in moral education is students' self-consciousness (*zijue* 自觉). As such, it is not enough, e.g., for students to obey traffic laws; "children must do so under their own initiative".

The celebration of bird-watchers' high level of self-consciousness to discipline their behaviours, as we have seen in Maotao's remark, was repeatedly stated by several bird-watchers whom I interviewed. Thus, to paraphrase Woronove's words, the *suzhi* of the bird-watchers evaluated their behaviours (e.g., whether they cause disturbance to wild birds), and the extent to which they were self-conscious and aware of their actions. I suggest that the capacity to control and restrain their conducts self-consciously further crystalised bird-watchers' high *suzhi*.

One disciplinary effect of these rules had been to transform bird-watchers into self-disciplined

subjects with a restrained way of watching, dressing, behaving around birds. For example, bird-watcher Yuhui, one of my closed interlocutors offered me a helpful glimpse into how bird-watchers performed the subjectivity of a self-regulatory bird-watcher. This happened, for instance, through the more quotidian and bodily practices such as dressing oneself.

The first time I met Yuhui at the bird-watching activity in Tiantan Park, she struck me as a fashionable lady in her late 50s. She stood out among bird-watchers in sporty apparel with muted colours by wearing a midi dress and a lace-trimmed sun hat. She took excellent care of her appearance, her skin firm and complexion bright. She also wore extravagant lash extensions to achieve a pretty, feminine look. She joined the team halfway, and some bird-watchers gave her an odd look, possibly due to her ill-fit clothes, but they did not say a word and greeted her.

The next time we met was in a WBS-organised bird-watching outing to the Wild Duck Lake in the Beijing suburb. I was allocated to share a doubled-bed hotel room with her. She brought an overnight bag and started to unpack as soon as we settled in our room. She carefully laid out her exchange clothes all in subdued shades—a camouflage hoodie and two army green, thermal lined trousers with multiple pockets—perfect bird-watching clothing that would help her blend into the surroundings. She was putting on the army green trousers, seeking my opinion: “How do you find my new clothes? I bought them recently just for bird-watching—you know how they talk about how to tell a bird-watcher apart just from a look at his/her clothing. I actually have a number of outdoor clothing good for a long walk, but the colour is too bright to wear for bird-watching. I need a complete wardrobe makeover.” It is illuminating how Yuhui read the identity of a bird-watcher from clothing—whether it was in the right sort of colour as stipulated in the codes of conduct for bird-watching. As Yuhui carefully attended to her clothing, her body was materially refigured while her identity was produced and reproduced in

relation to the established guidelines. `

Through a strong sense of self-policing, recurring bird-watchers presumably internalised these rules. Comparatively, new bird-watchers were deemed in need of training not only on how to see but also on learning the codes of conduct. The family featured in the opening vignette of chapter 5A was asked to leave by the team leader on account of their violation of two important codes of conduct in bird-watching. First, their alarmingly colourful outfits considered inappropriate as bright colours were believed to potentially stress birds. Second, the little girl was considered too boisterous, when she startled birds for the third time.

Given the significance of these bird-watching rules, they were made easily accessible so that anyone interested in participating bird-watching activities could find relevant information. For instance, both WBS and CBS offered a short list of bird-watching guidelines on the website where participants signed for attendance. In addition to "bird-watching facilities and guides", the guidelines in particular highlighted ethical "bird-watching behaviours" ("please keep your movement slow and gentle; avoid loud shouting or chatting; maintain appropriate distance with wild birds to avoid stressing birds out; do not point toward birds with your fingers; absolutely no throwing stones at birds to disturb them").

Taken together, these rules are evidently set up for the ultimate purpose to minimalise the impact bird-watching may have on birds observed. Underlying these rules—maintaining distance, muffling voice, moving slowly, wearing drab clothes—is a conception of wild birds as vulnerable. The fragile wild of birds therefore can only be preserved with strong efforts on the part of bird-watchers to sort of vanish themselves from the presences of birds, blending into the background.

One could find more elaborated "codes of conduct for bird-watching" (*guanniao shouze* 观鸟守则), or "bird-watching morals" (*guanniao daode* 观鸟道德) in mainstream bird-watching guides.

They called attention to respect birds and their habitats, the bird-watching community, other people, public property while doing bird-watching. Moreover, similar rules were extended and implemented even in the online community of bird-watchers to guide their behaviours. For instance, bird-watchers were advised to keep back from nesting and roost areas, especially during the nesting season, as birds can be more vulnerable to disturbance. Correspondingly, in several bird-watching related WeChat groups I joined, members were reminded by the group chat administrator (*qunzhu* 群主) to avoid providing information of nesting sites and not to post photos about nests or nestlings publicly available. These rules were in general embraced and assiduously observed by group members.

The previous discussions of behaviours of the low-*suzhi* 'others', namely bird-keepers and bird photographers, indicate that a dichotomy is deployed to categorise conduct as modernised or backward, civilised or uncivilised, moral or immoral. Bird-watchers' consciously self-restraining conduct further concretised the rhetoric and practices of distinction. This was: to disassociate bird-watchers from bird photographers and bird-keepers by valorising bird-watchers' high level of autonomy.

In this sense, there is a parallel between bird-watchers and the reliable and self-disciplined middle class house owners in Tomba's study (2001). Tomba argues, drawing on Ong's concept of "zoning techniques", that the gated residential community is politically planned to "classify individuals and groups, resulting in different practices of government being applied to different people" (ibid: 599). Through the implementation of "self-government" (*shequ zizhi* 社区自治) at the neighbourhood level, the middle-class residents within these segregated areas enjoy self-administration and "relative autonomy," while at the same time are framed with the expectation to perform social and political responsibility, e.g., to play an exemplary role in maintaining social stability. The outcome is the classification of the population into high-*suzhi* clusters (those who can govern themselves) and low-

suzhi clusters (those who need to be improved and supervised.

Tomba's discovery sheds light on the stratification of bird-watchers and bird photographers and bird-keepers in which different levels of *suzhi* result in delineated regimes of government. Considered lacking in *suzhi* and capacity to restrain their behaviours in cases where "autonomy" cannot be realized, bird-keepers and bird photographers often became the targets of coercive administrative and legislative measures, as we have seen in the previous discussion. In contrast, bird-watchers were regarded as responsible subjects who were hardly subject to *suzhi* supervision other than by other members within their community. They enjoyed relative autonomy without the need for government intervention. Bird-watchers with highly restrained 'disciplined eyes', by virtue of their capacity for self-policing and self-government were hence regarded as high-*suzhi* citizens. Moreover, as we will see in the final section, bird-watchers were even elevated by the state as the exemplary model with high ecological *suzhi*, accentuating their constructive role in the quest for an ecological civilisation for the country.

5B.3.2 The loving eye

As we have seen, the photographic vision of bird photographers was viewed as predatory and sometimes even destructive, a low-*suzhi* sight associated with non-care for birds. Although bird-keeping was not primarily a visually dominated activity, bird-keepers' visual engagement with birds involved nevertheless a connoisseurly eye, passing judgements of their own and other keeper's birds based on their "quality and appearance".

In contrast, bird-watching entailed a "loving eye" (Fryers 1982) built on a deliberate disengagement that may first appear paradoxical or contradictory. It is an unreciprocated gaze that only

makes observers disappear and invisible, as bird-watchers were deeply convinced that detachment and distance should build into the fabric of caring relations with wild birds.

Notably, there was a blanket preference for the wild inherent to bird-watching. In the spring of 2019, the Wild Bird Society, in partnership with Tiantan Park published a booklet *A Hundred Bird Species in Tiantan*. A few hundred portable photographic guides were freely sent out to all participants of WBS bird-watching activities in Tiantan on a first-come-first-served basis, and for a while, it became trendsetting to bring the booklet while watching birds at Tiantan.

Opening the booklet, one was immediately introduced with "knowledge of bird-watching", in which bird-watching activity was defined in this way: "The observation and appreciation of natural behaviours of wild bird population such as calling, roosting and flight in the natural environment with the aid of binocular and other tools. It also involves identification of the sighted birds using field guide".

Indeed, many bird-watchers deemed the observation of wild birds in the freedom of their natural surrounding as the source of what made bird-watching exciting. To be certain, "wild" (*ye* 野) is a value-laden term in the Chinese context. Yet when the notion was evoked by bird-watchers, they in general perpetuated the notion of an unhumanised condition of birds which marked a limit point of human presences.

Bird-watchers' concern with a particular understanding of the wild of birds was reflected in organised bird-watching activities organised by WBS and CBS. In my first participation in the organised bird-watching activity at the Old Summer Place, I was thrilled to sight three black swans near the shore of Fuhai lake. At that time, I was still new to bird-watching, and hence not very skilled at spotting birds. With great excitement, I reported the sighting of black swans to the team leader but only to find out that the black swan did not count in the record of group sightings. "The swans are born

and raised in the park, and we only need to record wild bird species", the team leader explained.

Native to Australia, a small colony of black swans has been thriving in the park since 2008. A pair of black swans, who were assumed to escape from the Beijing Zoo, flew to the Old Summer Palace and settled down. The unexpected feathered visitors received a warm welcome from the park, where they became slowly semi-domesticated; the park assigned staff to take care of swans, feed them and provide them with large nests made of reeds. The group of black swans, scattering around vast Fuhai lake, became one of the tourist attractions of the park. Local residents adored them, and I even encountered a group of regular 'watchers' of these swans who called themselves "friends of swans" (*e you* 鹅友) to visit them almost daily. Swan-lovers visited and gave individual swans cute names; the swans seemed also recognise these "friends of swans", as they would be swimming toward them, tails wagging, as they saw familiar faces (Figure5.5).

In contrast, bird-watchers usually turned a blind eye toward visitors who stood too close with swans, feeding them inappropriate human foodstuffs. It would be unfathomable and wrong, so it seemed, for bird-watchers to remain proximate to the swans. Some bird-watchers felt rather sympathetic toward these swans, considering them basically a spectacle raised by the park to attract visitors. Their wilderness was sacrificed and lost as they showed the 'unnatural' behaviour of begging tourists for food.



Figure 5.5 Feeding black swans in the Old Summer Palace
The lady in the blue hat gave a whole chunk of a bread loaf to the black swans.

Concerned with the adherence to the wild in the form of minimal human involvement, Beijing bird-watchers stood in contrast with *huayou.* It seems that *huayou* did not stick to the dualist orientation that posited anthropogenic involvement as interfering with a plant's 'natural' way of living. Instead, for a *huayou,* the excitement of observing the precious dove tree—introduced from Sichuan province and bred in Beijing Botanical Garden, and the hairy bittercress (*Cardamine hirsuta* 碎米荠)—a common type of wild weed abundantly grown in the gaps of urban infrastructure, was hardly differentiated by whether the plant was wild or domesticated[64]. Moreover, in contrast to bird-watchers' firm opposition to be proximate to wild birds, *huayou* were not held by the "tactile ban"—tactile

[64] It is not my intention to overdraw the line between the wild and domesticated. In botany, the concept of ruderal vegetations perfectly undoes the division of nature and culture. Neither really wild nor domesticated, ruderal vegetations grow in rubble spaces, wastelands, and along the city's infrastructure. See Stoetzer (2018).

sensibility was in fact a good method that *huayou* relied on to identify plants in the field. What mattered and made the observation of plants interesting was an intimacy forged in *huayou*'s attending to the day-to-day lives of plants to observe.

Conversely, birdwatchers' relations with birds rarely resembled the model of intimacy and personal knowing grounded in mutual visual availability. But it was not purely disengagement and indifference either. Richaud (2018) proposes that we need to recognise the wide-ranging modes of sociality that shape urban life in China between the two poles of tight commitment of mutual knowing (face) and complete anonymity (faceless). Understanding the birdwatchers' interaction with birds equally requires a nuanced approach to the "light-touch" form of relatedness, thanks to careful management of distance and proximity, engagement and detachment.

There are several perspectives to explain why bird-watchers naturalise a highly limited form of reciprocity oriented toward invisibility on the part of the observer. First, it is a matter of a professional habitus, an ethos of bird-watching, as a leisure activity intimately associated with disciplines such as ornithology and ethology with strong ties to field science. When studying wildlife in the field:

> The scientist aspires to have the animal behave toward the investigator as if he or she were a socially insignificant part of the environment. This reduces communication between the two to a minimum. Many field workers and some laboratory investigators go to great lengths to either conceal themselves from their subjects with blinds or use remote sensing devices (binoculars, radiotelemetry devices, etc.) (Hestep and Hett 1992 cited in Despret 2016: 139).

It is an expected protocol to vanish the investigator in the presence of the object for study. The goal is

to take complete control of the experimental environment by rigorously eliminating the 'polluting' infection of observers to record objectively animal behaviours without impacting them[65]. However, I propose that bird-watchers' endeavours to conceal themselves in front of birds are less an epistemological concern for observing 'real' natural behaviours objectively. Maintaining distance and self-withdrawal is not in the sense of retreating into distanced and objective perspective. Rather, they invoke an ethic of care enabled by self-withdrawal for the sake of preserving the wild of birds.

Puig de la Bellacasa, for instance, offers speculative rethinking of the ambivalence of considering care as an intensification of proximity and involvement (2017: chapter 3). The haptic is often idealised as the sensorial metaphor that puts reciprocity and proximity at the heart of thinking and living with care. However, she argues that "touch and proximity belong to the conceptual nebula of care, but they are not caring per se" (ibid: 106). In particular, she problematises the idealised engagement of care enacted by the yearning for closeness and embedded relations in 'touch' with concrete materiality. Drawing on the figure of touching vision, that is, "interventions that engage with touch to reclaim vision", she points out that "connected bodily experience is not per se oriented to improving caring, nor does reducing distance necessarily trouble in predominant oppressive configurations" (ibid: 112).

In a similar vein, several studies on human-animal entanglement have scrutinised the careful balance between distance and proximity, intimacy, and detachment as a new politics of care (Martin et al. 2015) in human relations with meerkats (Candea 2010), Sami reindeers (Reinart 2014), crows (van Dooren 2016), whopping goose (van Dooren 2014) and lesser cranes (Reinart 2013). There is a

[65] This protocol has been vigorously challenged. For instance, Hediger mentions that given the unconscious and involuntary influences of animals on human investigators, it is only the hubris of scientists to believe that they are capable of objectively recording a pure animal behaviour. For a detailed engagement with Hediger's theories, see Churlew 2020. Also see Despret's critique (2016: 139-144) of the assumption embedded in the habituation method that reduces the active role animals play to mere "reaction".

commitment to keep a respectful distance in each case, instead of the caring grounded in overwhelming bodily proximity. This provides the space for allowing non-human others to appear in their own time and form.

A fascinating piece of research about this "autonomy within relation" that has inspired my conception of Beijing bird-watchers is Reinert's investigation (2013) of bird-watchers' intensive forms of conservation of the lesser white-fronted geese. According to him, the practices of asymmetrical intimacy and "constitutive withdrawal" through bird-watchers' distanced gaze and other technologies to conceal themselves in front of goose are necessary to successfully and ethically conserve these highly endangered birds. This is because close human contact is dangerous and carries the risk of habituation that may turn geese into trusting docile prey. To bird-watchers engaging with the protection of these geese, the wild of the birds is conceived as "a point where life, a certain form of life is articulated as fragility, as too fragile to touch, too fragile to endure the presence of human bodies" (ibid: 22). Defined through disengagement and detachment, it nevertheless tells a story of love: a love vested in the "impossibility of symmetry or of return" (ibid) that makes reciprocation difficult, with the full knowledge that it can neither be returned.

Bird-watcher Heliu expressed a point that was reminiscent of the "fragile wild" rhetoric:

> I have a feeling of connecting with the natural world from bird-watching. However, this feeling entails a massive consideration of human-related factors (*renwei yinsu* 人为因素), that is, how urban residents have been impacting nature. You start to have a strong concern for birds, for how they live in a world with all sorts of disturbances from humans. I have been overwhelmed by the thought that humans are indeed in charge of the birds' fate, which they themselves have little control over. For example, the birds can thrive in the park, simply because humans want

to conserve this green area and build the park. What if some developers come and say that 'this piece of land has a great environment, and let's demolish the park and build new houses?' Can birds have a saying? I doubt it.

Heliu was rather worried about the diverse human forms of influence on wild birds. All these anthropocentric impacts spoke loudly to him as a human power over birds. In so doing, he was referring to a community of vulnerable urban wildlife who was too fragile to sustain human interferences, thus necessitating a specific form of care via a deliberate engagement of disengagement.

Sometimes even the activity of bird-watching itself, as bird-watchers Yuhui, postulated, could not avoid causing disturbance to birds:

I cannot say this to bird-watchers, but I will share my thought with you: I'm against the idea that bird-watching brings nothing but benefits to birds. I think bird-watching is not without its problem, unlike what other bird-watchers believe. We bird-watchers tend to criticise bird photographers for meddling with birds, but can bird-watching also be a form of disturbance?

A few days ago, I went bird-watching in Tiantan Park. I met an elderly woman who was singing Beijing opera using a microphone. Behind her was a red-billed blue magpie walking peacefully. But when I turned my binoculars aiming at the magpie—mind you, the distance between the bird and me was three times that between the woman and the bird—it saw me and scurried to a tree, quickly vanishing into the density of the canopy.

This incident made me wonder: does our watching, distanced as it is, really have no impact on birds? We talk a lot about "safe distance" but who should make the decision—the birds or us? This is why I propose that we need to be careful with popularising and attracting more people to become bird-watchers. It's quite dangerous to enlarge the team of bird-watchers when most people cannot manage the appropriate safe distance.

Yuhui then went on to state that safe distance should be evaluated case by case, in relation to the reaction of specific birds. In Yuhui's interpretation, bird-watching is a cross-species activity that places significant ethical obligations on participants to maintain a distance to birds. And even experienced bird-watchers themselves could not decide the right distance. A single misstep would easily compromise the delicately maintained moment of observation.

Although the magpie may have fled due to other factors, I found it revealing how Yuhui automatically assumed that her inappropriate observation (in terms of getting too close) was the reason to disturb the bird. The moment when their eyes met, Yuhui, who had accustomed to the unreciprocated gaze, read their eye contact with frustration as a sign of herself causing disturbance to the bird. Her failure to conceal herself was interpreted as crossing the limit point of human power marked by the non-reciprocal gaze.

Crucially here, the distanced gaze grounded in the invisibility of bird-watchers is a limiting case of action with ethical concerns to take responsibility for the well-being of wild bird species. The bird-watchers' eye is not only a disciplined eye, but also a loving eye that enables the letting go of the other, and that is not driven by possessiveness. The value bird-watchers attach to the wild of birds hence also points to autonomy as an emergent condition of possible co-habitation of urban spaces. However, "autonomy" should be understood in a relational sense, made possible through the collective efforts of bird-watchers to build up their relations with birds based on a paradox of engaging cultivation of detachment.

According to feminist scholar Marilyn Fryers, the loving eye:

knows the independence of the other…the loving eye does not make the object of perception

> into something edible, does not try to assimilate it, does not reduce it to the size of the seer's desire, fear and imagination, and hence does not have to simplify. It knows the complexity of the other as something which will forever present new things to be known. (1983: 75-6)

A visually dominated encounter with birds cannot guarantee any certainty, e.g., whether one can sight and see clearly the bird one desires. More often than not, bird-watchers find their endeavours to maintain the "not-being-invaded and not-being-coerced" of birds in tension with their own desire for more closeness. Bird photographers may resort to baiting to ensure encounters with certain birds. However, it is in this light that I come to understand why some bird-watchers called bird-watching a process of "self-cultivation" (*ziwo xiuxing* 自我修行): arduous cultivation of detachment through the restrains of one's desires and conduct.

In a word, bird-watchers tended to naturalise a specific form of care for wild birds grounded in distance and detachment, which were not meant to negate the relation with the wild birds but to foster an "autonomy-within-relationship" (van Dooren 2016). Moreover, the discourse of *suzhi* allowed bird-watchers to place their attachment through detachment in an evaluative framework as superior in cultural moral and ethical terms, in comparison to the wrong sort of care of bird-keepers, and the non-care of bird photographers. Things became more complicated when the state, in a quest for ecological modernisation, made bird-watcher exemplary models. And this normalises bird-watchers' practices of relating and caring as the correct, if not the only correct form of care when urban wildlife is concerned. I will conclude this chapter with a further reflection on the ethico-political ordering of caring practices involved in bird-watching, bird-keeping and bird photography appropriated, endorsed, and sustained by the state.

5B.4. Normalising multispecies care: ecological *suzhi* and ecological civilisation

This section is concerned with the political manoeuvre of the state in endorsing and sustaining the *suzhi*-based hierarchy of different forms of bird-related leisure activities of Beijing urbanites. In tune with the national goal of building up an ecological civilisation (*shengtai wenming* 生态文明), the state legitimised the elevation of bird-watching to edification of a higher *suzhi.* In so doing, it made the cultivation of distance and detachment the normative moral obligation of Beijing urbanites when wildlife was concerned. Subsequently, those who failed to perform this specific form of human-wildlife relatedness may be branded as low-*suzhi*.

The new valuation of different transspecies leisure pursuits and embedded multispecies care based on *suzhi* became prevalent only in the past decades. It confirms, for one thing, the ubiquity and pervasive use of the term in post-reform Beijing. Murphy observes, nodding to the Foucauldian insights, that *suzhi* "shapes the "microphysics" of day-to-day existence of Chinese people: the mundane practices associated with reproduction, childrearing, primary education, technical training and labour" (2004: 5). It seems that we can now add urban avian avocations to the inexhaustive list of "mundane practices".

For another, it further points to the very utility and power of *suzhi*'s elasticity as an empty placeholder of a wide array of authorised ideological and cultural values and practices. Indeed, Lin's examination (2017: chapter 4) of the evolution of *suzhi* in the academic discourse reveals the fast expansion of connotations of *suzhi*. In particular, *suzhi* has been qualified by an "extraordinary number and variety of nouns and adjectives", forming a vast number of qualified *suzhi* compounds (table 5.1). In correspondence to the new focus on human-wildlife relations of urbanites, a new *suzhi* compound "ecological *suzhi*" (*shengtai suzhi*) was deployed in the official discourse.

Table 5.1 The list of *suzhi* compounds. Cited in Lin 2017:76.

Categories	Suzhi *compounds (in order of their SFs)*
Qualified Suzhi (72 compounds)	comprehensive *suzhi* (*zonghe suzhi* 综合素质), psychological/mental *suzhi* (*xinli suzhi* 心理素质), physical *suzhi* (*shenti suzhi* 身体素质), personnel's *suzhi* (*renyuan suzhi* 人员素质), cultural *suzhi* (*wenhua suzhi* 文化素质), teachers' *suzhi* (*jiaoshi suzhi* 教师素质), students' *suzhi* (*xuesheng suzhi* 学生素质), professional *suzhi* (*yewu suzhi* 业务素质), moral *suzhi* (*daode suzhi* 道德素质), political *suzhi* (*zhengzhi suzhi* 政治素质), workers' *suzhi* (*zhigong suzhi* 职工素质), humanities *suzhi* (*renwen suzhi* 人文素质), expertise *suzhi* (*zhuanye suzhi* 专业素质), team's *suzhi* (*duiwu suzhi* 队伍素质), occupational *suzhi* (*zhiye suzhi* 职业素质), qualified personnel's *suzhi* (*rencai suzhi* 人才素质), population's *suzhi* (*renkou suzhi* 人口素质), information *suzhi* (*xinxi suzhi* 信息素质), science *suzhi* (*kexue suzhi* 科学素质), thought *suzhi* (*sixiang suzhi* 思想素质), national subjects/citizens' *suzhi* (*guomin suzhi* 国民素质), human beings' *suzhi* (*ren de suzhi* 人的素质), working people's *suzhi* (*laodong zhe suzhi* 劳动者素质), nationality *suzhi* (*minzu suzhi* 民族素质), creative *suzhi* (*chuangxin suzhi* 创新素质), cadres' *suzhi* (*ganbu suzhi* 干部素质), staff's *suzhi* (*yuangong suzhi* 员工素质), farmers' *suzhi* (*nongmin suzhi* 农民素质), Chinese language *suzhi* (*yuwen suzhi* 语文素质), mathematical *suzhi* (*shuxue suzhi* 数学素质), enterprises' *suzhi* (*qiye suzhi* 企业素质), technology *suzhi* (*jishu suzhi* 技术素质), librarians' *suzhi* (*guanyuan suzhi* 馆员素质), seedlings' *suzhi* (*yangmiao suzhi* 秧苗素质), law *suzhi* (*falü suzhi* 法律素质), music *suzhi* (*yinyue suzhi* 音乐素质), health *suzhi* (*jiankang suzhi* 健康素质), science and technology *suzhi* (*keji suzhi* 科技素质), aesthetics *suzhi* (*shenmei suzhi* 审美素质), strength *suzhi* (*liliang suzhi* 力量素质), physical and mental *suzhi* (*shenxin suzhi* 身心素质), arts *suzhi* (*yishu suzhi* 艺术素质), nurses' *suzhi* (*hushi suzhi* 护士素质), CCP Party members' *suzhi* (*dangyuan suzhi* 党员素质), civilisation *suzhi* (*wenming suzhi* 文明素质), endurance *suzhi* (*naili suzhi* 耐力素质), citizens' *suzhi* (*gongmin suzhi* 公民素质), all-round *suzhi* (*quanmian suzhi* 全面素质), competence *suzhi* (*nengli suzhi* 能力素质), entire population's *suzhi* (*quanmin suzhi* 全民素质), individual's *suzhi* (*geti suzhi* 个体素质), safety *suzhi* (*anquan suzhi* 安全素质), entrepreneurs' *suzhi* (*qiyejia suzhi* 企业家素质), language *suzhi* (*yuyan suzhi* 语言素质), speed *suzhi* (*sudu suzhi* 速度素质), urbanites' *suzhi* (*shimin suzhi* 市民素质), leaders' *suzhi* (*lingdaozhe suzhi* 领导者素质), people's representatives' *suzhi* (*daibiao suzhi* 代表素质), physiological *suzhi* (*shengli suzhi* 生理素质), industry *suzhi* (*chanye suzhi* 产业素质), parents' *suzhi* (*jiazhang suzhi* 家长素质), natural *suzhi* (*ziran suzhi* 自然素质), women's *suzhi* (*funv suzhi* 妇女素质), social *suzhi* (*shehui suzhi* 社会素质), intelligence *suzhi* (*zhili suzhi* 智力素质), accountants' *suzhi* (*kuaiji suzhi* 会计素质), people's *suzhi* (*renmin suzhi*, 人民素质), peasant workers' [migrant workers'] *suzhi* (*nongmingong suzhi* 农民工), non-intellectual *suzhi* (*fei zhili suzhi* 非智力素质), a team's *suzhi* (*tuandui suzhi* 团队素质), agricultural *suzhi* (*nongye suzhi* 农业素质), government officials' *suzhi* (*guanyuan suzhi* 素质), industrial *suzhi* (*gongye suzhi* 工业素质)
Fostering of Suzhi	*Suzhi* education (*suzhi jiaoyu* 素质教育), fostering of *suzhi* (*suzhi peiyang* 素质培养), improving *suzhi* (*tigao suzhi* 提高素质), *suzhi* improvement (*suzhi tigao* 素质提高)
Theorisation of Suzhi	structure of *suzhi* (*suzhi jiegou* 素质结构), theory of *suzhi* (*suzhi lun* 素质论)

A prime example of the usage of ecological *suzhi* was found in this commentary published by China National Radio (CNR) on its website. Entitled "Bird-watching and the necessity of improving

ecological *suzhi*", the gist of the article proposed that "strong ecological awareness should not equate with ecological *suzhi* and there is still a long way ahead in achieving ecological *suzhi*". To make the argument, the author told the story of urbanites' evolving relationships with black-headed gulls (红嘴鸥 *Larus ridibundus*) in the city of Kunming:

> As an old Kunming resident, Mr Li has been focusing on the lives of common black-headed gulls for more than thirty years. According to his recollection, the gulls migrating from West Siberia started to spend the winter in Kunming in the 1980s. In the beginning, there were cases of the captivity of gulls by local people, but nowadays, gulls are under protection by the united efforts of Kunming residents. As tourists flood into Kunming, local residents always warn and stop occasional events that harm the gulls. However, when watching the gulls, tourists and residents feed them large quantities of pieces of breads that cannot be completely consumed by gulls, resulting in the lake water's pollution. On the surface, the human-gull relationship—starting as a casual acquaintance and flourishing into an intimate relation—tells a simple story of human beings with the natural world, but in fact it points to the "growing pains" in constructing an ecological civilisation…From our point of view, it only constitutes the initial stage of ecological *suzhi* to avoid harm and abuse wildlife as well as aspire to become intimate with them; how to achieve further improvement relies on guidance from the relevant sectors.

This commentary contains several topics that are particularly relevant to our discussions of the entangled practices of human-bird relatedness, ecological *suzhi* and the state-led project of an ecological civilisation. To start with, it is apparent that the author naturalises a correlation between how one interacts with the gulls and one's *suzhi* qualified here in an ecological sense. Crucially, both the human-gull relationship and ecological *suzhi* are discussed in a developmental sense, which can always be improved and perfected. The human-gull relationship is conceived to involve a process of

gradual transformation from hostility (e.g., residents capturing gulls) veering towards proximity and intimacy.

In parallel, a developmental telos underpins how ecological *suzhi* is theorised as moving from an initial stage towards a more advanced level. The current stage of human-avian intimacy in the form of gull-feeding, notwithstanding its improvement from the captivity of birds, remains correctable and should strive for further advancement. As the author revealed later, the next stage of human-bird relationship, and by extension, higher ecological *suzhi*, refers to bird-watching, which embodies careful management of proximity and distance toward wild birds.

When bird-watchers passed judgement of park visitors' conduct of feeding wild waterfowl as low *suzhi*—which may seem a rather curious criticism to onlookers, it was precisely because they internalised and enacted an evaluative regime that produced and valuated distinction of different ways of interacting with wild birds, using language furnished by the official discourse. In so doing, they actively "participate [in the] Party's framing of the problem even if they have no awareness or interest in how *suzhi* fits into the broader ideological framework" (Palmer and Winiger 2019: 567).

This brings me to my second point regarding the CPR commentary. The author established an association between ecological *suzhi* and the broader political project of an ecological civilisation. Put differently, *suzhi* hence goes beyond self-cultivation but is clearly implicated within and made to the vehicle of state ideologies. As Lin correctly proposes, *suzhi* serves as "a link between what is required of ordinary citizens and the modern socialist nation" (2017: 53). *suzhi* is about the relationship between the state and its citizens. This entails the development of a specific type of citizen who can contribute positively to state development.

The dual process of self-making and being made and mobilised in the state's quest for an

ecological civilisation was revealingly manifested as bird-watchers were made exemplary models of an ecological civilisation. The concept of ecological civilisation was first introduced into the party's ideology in 2007 and concretised as a major framework for China' environmental policies by President Xi Jinping since 2013. It is inaugurated as the vision of "a society characterised by ecologically sustainable modes of resources extraction, production and trade, inhabited by environmentally conscious and responsible citizens" (Hansen and Liu 2018: 196).

Hansen and Liu conceptualise ecological *suzhi* as a state-initiated "sociotechnical imaginary" that couples technological, judicial, and political values and visions of the future with "a much broader moral guide to proper, civil behaviour and attitude" (ibid). Consequently, no longer conceived as an abstract ideal, the official discourse now also constructs illuminating public examples congruent with the values of ecological civilization, and relates them to real-life circumstances such as what an ecologically civilised citizen looks like. The following commentary[66], delivered by China Biodiversity Conservation and Green Development Foundation, touched on the exemplary role of bird-watchers as practitioners of an ecological civilisation.

> The bird-watching culture is a culture or ecology of health. To popularise bird-watching is to benefit the nation and its citizens, oneself, and others. To promote bird-watching is to promote the reform of an ecological civilisation; it is an effective way to practice and publicise President Xi's thought of an ecological civilisation. Bird-watchers exhibit the sense of responsibility of new citizens in the era of an ecological civilisation.

[66] Huang Xiaomao, "Post-Covid era: the most healthy party is bird-watching party", February 21, 2021. *WeChat*. https://mp.weixin.qq.com/s/la7hcbUSsQgHP-m03cAwbw.

The government endorses bird-watching activities (as evidenced by the close bonding between governmental sectors and bird-watching societies), and the construction of a hierarchy of *suzhi* in which bird-watchers, standing in the vanguard of an ecological civilisation, are elevated to an exalted status. The exemplary norms, or what Bakken calls the "structure of simulation" (2000: 423), is a well-established strategy of mobilisation (*dongyuan* 动员) on which the party continues to base its legitimacy. The promotion of bird-watchers' vanguard status is resonant with the implementation of exemplary norms in other party policy initiatives, such as the bestowal of "civilising household" and "five-good family" in *wenming* programmes (Anagnost 1997), and "environmental protection model city" and "green community" designation in the environmental initiative (e.g., Boland and Zhu 2012).

As bird-watchers are designated as having advanced ecologically civilised status and emulative value to provide local models, the line of division is further reinforced between bird-watchers and other citizens whose ecological *suzhi* may require improvement. Similar to how the state legitimates itself in regulating and controlling mahjong through the discourse of civility (Festa 2006), the *suzhi-weming* discourse here operates as a project of national pedagogy (Anagnost 1997). Constructing itself as *suzhi'*s supplement, the state assumes the pedagogical role of guiding people's conduct and raising the quality of the people.

Unfolding within the encompassing political project of an ecological civilisation, the discourse of ecological *suzhi* entails the development of new valuations of citizenry based on transspecies practices. As such, a hierarchy is endorsed that upholds the worth of urbanites who perform human-wildlife relatedness through the maintenance of proximity and detachment, while degrading those who remain in proximity of wildlife (including bringing wildlife into captivity). Ways of interacting with wildlife pertinent to ecological *suzhi* are hence implicated in "a regime of representation through which

subjects recognize their positions within the larger social order" (Anagnost 2004: 193).

Given the deep penetration of *suzhi* in everyday life and talk, as attested by a sizeable literature, how did bird-keepers and bird photographers respond to being labelled as having low *suzhi*? My observation of bird photographers showed that a common reaction was to accept the criticism of the bird photographers community as of low *suzhi*. But in turn, they wielded the *suzhi* discourse to an end to set a new boundary among bird photographers themselves, separating the "periphery" persons (Lin 2017: 67) of low *suzhi* from the remaining photographers who did not deserve to be associated with the low-*suzhi* other.

Photographers were indignant about being labelled as low-*suzhi* because of what others in the community had done called this situation as "a pot of porridge is ruined by a rat dropping[67]" (*yike laoshushi huaile yiguozhou* 一颗老鼠屎坏了一锅粥). The embarrassing presence of the low-*suzhi* few had been subject to fulmination, as photographers were attempting to avoid being seen as a "periphery person". Consider this declaration[68] of bird photographers as a response to the exposure of low-*suzhi* conduct of some photographers who caused injury to a Mugimaki Flycatcher (*Ficedula mugimaki* 鸲姬鹟) in the process of baiting. This declaration addressed both bird photographers and bird-watchers and was widely circulated in several WeChat group chat.

To all bird-watching, bird-photographing and bird-loving friends,

A few days ago, two Mugimaki flycatchers visited the Agricultural Exhibition Centre

[67] It has a similar meaning to the English proverb "a fly in the ointment".

[68] This declaration was posted and shared with all members in a WeChat group chat of predominantly Beijing bird photographers. I was invited to the group chat (and therefore able to document these words) via a relative who was an avid bird photographer.

(*nongzhanguan* 农展馆) and many of you may have watched or photographed them. These two flycatchers are juvenile birds; it is a rare and unique opportunity to see them taking a rest at the Agricultural Exhibition Centre during their migration. Bird-watchers were happy to see them and it was also an exciting moment for the community of Beijing bird photography (*jingcheng painiaoquan* 京城拍鸟圈).

However, in the last moment before the flycatchers' departure, we were astonished to know photographers were baiting them by attaching mealworms to a wire hook. We found this behaviour was horrendous! Our bird photographer community has been exposed several times for such severely low-*suzhi* or even law-breaking acts. Still, we cannot believe that here at the Agricultural Exhibition Centre, a similar event happens again.

We appreciate the current environment for bird photography, value the reputation of Beijing bird photographers, and deeply care for the well-being of birds. We thus call on all bird-loving friends to expose this low-*suzhi* person who has committed this abhorrent behaviour. And let's rid him of the community of bird photographers!

From this declaration, photographers recognised that the *suzhi* label operated in an encompassing way, linking individual *suzhi* to an overall judgement of the community. The embarrassing presence of the low-*suzhi* few were singled out and subjected to fulmination to avoid being seen as a "periphery person". They may not like to be labelled as low-*suzhi,* but they did it to others.

Moreover, this writing conveys a deeply felt sense of anxiety of being associated with the low-*suzhi* individuals and eagerness to reiterate the differentiation between us (who are concerned about birds' well-being) and them (who selfishly endanger birds for the sake of photography). Jacka drives the point about the affective power of *suzhi* home by arguing:

> This (*suzhi*) feeds and answers to new, very powerful desires and anxieties in the populace, for the possibilities of attaining higher levels of *suzhi* for oneself, of competing with others over who has the most *suzhi,* of feeling superior because of one's *suzhi* and looking down with either sympathy or contempt on those who have less, has proved enormously enticing. (Jacka 2006: 41)

An interesting further movement of photographers to delineate oneself from the low-*suzhi* peers was to establish new practices of bird photography called ecological bird-photography. Photographers practising ecological photography were increasingly aligned with codes of conduct of bird-watching, the presumed high-*suzhi* way of engaging with wild birds.

I do not intend to deny that bird-watchers' attachment through detachment is a valuable ethical option of care: at times, not reacting, not intervening, holding back, may be the best responsible action. Nevertheless, the question is whether a particular ethic of care, like that of the bird-watchers, can or should be institutionalised or standardised (Martin et al. 2015). After all, what really matters are the "particular dynamics of diverse forms of human relationship with specific non-human others" (van Dooren 2016: 43).

5B.5. Conclusion

This chapter 5B presents rich ethnographic findings to highlight how *suzhi* hierarchises different bird-related leisure activities based on different modes of care and cross-species relatedness, and also different ways of visual engagement with birds.

Bird-keepers are critiqued for an out-dated connoisseurly eye driven by possessiveness and the wrong type of care that does not honour the freedom of their pet birds. Bird photographers perform a photographic gaze that entails an absence of care for birds in their pursuits for a perfect shot. Bird-

watchers' self-consciously restrained way of watching is a disciplined eye and a loving eye. They allow them to build up their relations with birds based on a paradoxical gesture of care, namely, an attachment through the cultivation of detachment.

The final section examines how the government starts promoting bird-watching and elevating bird-watchers as exemplary models. It is a critical move as part of the state-led project to propel China's development of an ecological civilisation and national honour on the world stage. In so doing, the government reinforces and endorses the *suzhi*-related distinction between bird-watchers, bird-keepers and bird photographers. Furthermore, it at the same time legitimises certain types of care and human-avian relationships to which people feel obliged to live up.

6

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Chapter 6A. Collective observations of Beijing swifts—a participatory watching programme

This chapter 6A and the following chapter 6B investigate a collective form of nature-watching that entails mass observations of an endemic species, the Beijing swift. Every year, hundreds of Beijing residents scattered over geographically distributed locations participate in observing Beijing swifts when the birds migrate to Beijing to stay from March to July. Chapter 6A first attempts to offer a broader and encompassing imagining of participation by putting forward the notion of participatory watching. I then compare two public projects of monitoring and observing Beijing swifts, one organised by the China Bird-watching Society (CBS) and the other by the Beijing Wildlife Rescue and Rehabilitation Centre (BWRRC). While the first project is conventionally conceived as a citizen science project, the other project, as I suggest, embodies a participatory watching project. Built on the previous discussion of participatory sensing, the last section further advances the idea of participatory watching. I do so by opening participation up to consider an emergent multiplicity of endeavouring bodies from a more-than-human perspective. This chapter concludes by highlighting participatory watching of Beijing swifts as a multispecies achievement. After fleshing out the idea of participatory watching, I zoom in to contemplate two fundamental participatory forces that make participatory watching of Beijing swifts possible in chapter 6B: the smartphone and the affective association of Beijing swifts and Beijing urbanites.

First, let me start with a typical scene of watching Beijing swifts together in Beihai Park.

6A.1. Watching Beijing swifts together in Beihai Park

Sandwiched between the Forbidden City and Zhongnanhai (currently the leadership compound for the PRC), Beihai Park is one of the oldest and best-preserved imperial gardens. The earliest construction

work of its lake and surrounding landscape dated to the Liao empire (916-1125), but most of the villas, studios and pavilions surrounding the lake were constructed during the Qing dynasty. The White Tower (*baita* 白塔), a dagoba erected on the highest point of Qionghua Island, remains Beijing's famous landmark. A public park since 1925, it still clings to an air of royal opulence even today. However, it was incredible to think about how the site was and still is a favourite haunt of Beijing swifts, long before the imperial garden was transformed into a public park with open access to the urban residents.

I texted Dami on WeChat to ask if I could tag her to learn how they conduct swift observation at Beihai. Dami was one of the observers of Beijing swifts from the cohort based in the site of Beihai Park. I formatted my request in the name of exchanging experience of observation; Dami accepted my request gladly. Since the Summer Palace and Beihai Park shares some similarities in terms of locations of nests and the scale of gatherings of Beijing swifts, I felt, and so did she, that an exchange visit would benefit observers at both sites.

So there I was, standing in front of the middle and the largest pavilion Longze Pavilion (*longze ting* 龙泽亭) of the Five-Dragon Pavilions (*wulong ting* 五龙亭), a jointed five ornate pavilions over the lake at a Saturday night in July. People crowded together at the pavilions joined by a zigzag corridor (which is claimed to resemble a swimming dragon). Some visitors were taking tourist photos, standing in front of the pavilions facing east. The classic White Pagoda looked mesmerising in the dim and gentle light when the sun was low in the sky. On my left, a group of retired ball-dancers almost took up the space of another pavilion. On my right, a group of chorus singers crowded into a pavilion to sing an energetic melody as a post-dinner relaxation.

However, one distinctive sound seemed to overpower the singing, chatting, waltz music and many others: the piercing, screaming calls of Beijing swifts circulating the lake and the pavilions. It reminded

me of the comment of Banshui, a participant observing at the site of Qianmen Gate. She told me what fascinated her most about Beijing swifts was their high-pitched, loud calls, distinctive to the light chirp made of other birds: “They are screaming so loudly and forcefully in the city, as if to call everyone’s attention to their existence.” She considered the calls of swifts as Beijing swifts’ bold statement of making a claim of the city space.

It took me little effort to locate Dami out of the crowd, her gesture—tilting her head up at nearly 90 degrees, eyes tracing fast-moving ‘black dots’ on the sky through the widescreen of her smartphone—hinted to me that she was a fellow swift observer. Dami lived in a residential community five-minute away from Beihai Park. The easy access to the observation site, in addition to her flexible timetable (she was a full-time mother of a daughter aged 9), made her the most active participant at Beihai site. As an avid participant who joined the project in 2018, she was unofficially nominated as the leader and coordinator for the cohort at Beihai Park site, reaching out to other participants to schedule weekly observations at a time that best suited most participants. When it was difficult to arrange a simultaneous observation involving multiple participants, she would try to observe independently to keep the recurrence of observations.

Dami mentioned the Beihai site was a bit understaffed currently, given the challenge of spotting, photographing, and counting swifts of a large quantity; therefore, a helping hand from other sites was always welcomed. In fact, apart from me, there was another ‘external helper’ (*waiyuan* 外援) Xuefeng, who came to Beihai before finishing his survey near Xihua Gate of the Forbidden City. In addition to Dami and her daughter, Mrs Chen was also a routine member of the squad at the Beihai site.

The methods of observation and counting Beijing swifts were standardised, as all participants new to the project were trained to follow the same guidance at the training session. I was therefore

unexpected to find that Xuefeng, as a long-time participant of the project and certainly adept with the protocols of observation and counting, would act a bit disoriented, not knowing where to start. Xuefeng's reaction reminded me that swift observations were intimately place-bound. Any participant coming to a new site would surely need to get familiar with the specificity of the site and the colony of Beijing swifts it hosts before getting into observational works.

Dami and Mrs Chen showed us around the pavilions to point out some nests of Beijing swifts they had found. It was not difficult to imagine why Beijing swifts favoured the park. Mr Shi once explained at the training session that two issues mattered most to Beijing swifts: food and shelter for hiding. The pavilions over a vast lake happen to satisfy both conditions. For one, Beijing swifts are pure insectivores, consuming massive airborne insects including aphids, mosquitos and hoverflies, most of which need water to breed and live. The lake in Beihai Park thus provides a perfect free cafeteria for Beijing swifts who tend to glide over smooth water to get a mouthful of food.

For another, the high cavities of the intricately structured pavilion—under its eaves or inside the inner ceiling—provide nesting opportunities taken up by Beijing swifts. These beautiful pavilions are characterised by double roofs covered by green glazed tiles, with pointed rooftops and upward eaves extending over the water. With the tenon-and-mortise technology, a structural network of wooden brackets called *dougong* (斗拱 *dou* meaning "blocks" and *gong* meaning "arms") joins the pillars to the frame of the upward turned roof. Seen from outside, one can find that there are gaps (some may be deep enough to form a hollow tunnel) where Beijing swifts prefer to nest between each bracket arm of the *dougong* structure sets.

Dami led us into the Longze pavilion. The ceiling had several layers in round and octagonal shapes from top to bottom. At the central and deepest part of the ceiling was an exquisite woodcarving

in the shape of a coiled dragon looking down. The layered ceiling is known as "caisson celling" (*zaojing* 藻井[69]). According to Dami's observations, the various gaps of the hollow-out dragon were taken as nests of Beijing swifts.

As she explained, a supercharged swift closed its wings and rapidly disappeared into the open space around the dragon's beard, just before our eyes. (Figure 6.1). Traces of white bird droppings looked conspicuous on the dragon's head. Peeping into the gap, we saw two white-cheeked faces and two pairs of large eyes. "It may be a mother returning home to feed her baby", Dami proposed. Xuefeng commented that it was an entirely new experience of getting to observe Beijing swifts, to witness how they entered into nests closely: "At Xihua Gate where I survey, Beijing swifts are 'tower swifts', circulating the tall Xihua gate-tower. From the vantage point I make observation across a pedestrian road, it's impossible to see their nests."

[69] *zao jing* is a classic Chinese architectural structure. *zao* means "an aquatic plant" while *jing* means "a well". As is shown in its name, *zaojing* embodies the element of water. It is believed that the instalment of *zaojing* on wooden architecture serves the function to ward off the threat of fire.



Figure 6.1 The dragon at the centre of the caisson ceiling of the Longze Pavilion
Note that the place circled in red is where the said swift nests.

The day was getting darker, and large swarms of swifts became easier to spot in the lower sky. Gatherings of swifts may not be difficult to observe even with untrained eyes. Nevertheless, generally only participants who have done repetitive observations at the same site—who thus have developed more situated knowledge about swifts in their environment—are able to select the specific angels to photograph gatherings to make a more accurate count.

Dami invited Mrs Chen to show us where and how to best observe and photograph gatherings. A retired biology teacher, Mrs Chen was particularly enthusiastic about counting Beijing swifts. She had professional training in measuring vegetation, e.g., with the quadrat method of sampling, but she had not conducted fieldwork to count animals before. The extremely high mobility of aerial swifts posed a challenge to survey them, but the challenge was precisely what got her interested in the project.

Mrs Chen developed rules of thumb to help her with the counting task. According to her, in

comparison to the digital camera, the embedded camera of the mobile phone was good enough and even had a competitive edge. As swifts gathered and dispersed with the blink of an eye, the lightweight, easy-to-use smartphone enabled one to react and respond more quickly to capture the moment of gathering. Second, taking pictures when swifts swarmed was surely essential. Mrs Chen pointed to several spots where she found swifts tend to gather, e.g., above one upward-turned eave of the pavilion pointing northeast. “Keep an eye constantly on these spots, so you are more likely to capture gatherings”, she taught us. Importantly, Mrs Chen emphasised that pictures of gatherings on a single-shot mode needed to be complemented by pictures taken on a continuous-shot mode to present swifts at a wider angle.

She explained to us carefully, with the good patience of a teacher to her students: “You see, the problem of getting only single shots of gatherings is that there will always be swift left outside the camera lens. To count the total number of swifts based on these pictures alone may produce biased data. A 180-degree panoramic view by piecing together three continuous pictures is necessary to calibrate the count of swifts derived from pictures of gatherings. For example, last week I took several pictures of gatherings. The maximum count of a gathering of swifts was 488. Later, when I counted a group of three continuous pictures, I found that the total number of the first two pictures had already reached 460. Unfortunately, the last picture of this group was a bit blurry, but even so I could say for sure that the maximum count exceeded 488. Therefore I went to Beihai the next day again to conduct an observation. This is just how I do it. I’m retired and have more time to spend, so I can be dedicated to making several observations a week just to make sure the data is relatively accurate.”

Mrs Chen’s dedication to accuracy and quality of data was remarkable. Although Mrs Chen’s continuous photographing method was mainly designed for the situation when there was a single

observation at the site, it became easier to produce a panoramic view with five of us forming a unified eye. We were separated into three groups, each responsible for shooting a picture at 60 degrees facing the lake. To ensure perspectives for shooting were consistent, Mrs Chen showed us three referential objects photos needed to contain: the first picture at a 60-degree angle framed the supertall skyscraper CITIC Tower in the distant view in the right-hand side of the frame (Figure 6.2a); the second picture framed the famous White Tower in the middle (Figure 6.2b); the last one needed to contain one overhanging eave of the pavilion at the upper right corner (Figure 6.2c). During the one-and-a-half-hour observation, we repeated the simultaneous observations and photographing about every twenty minutes and meanwhile, we took several individual pictures of large gatherings of swifts.



Figure 6.2a The first picture of the trio of pictures taken to form a 120-degree panorama
The circled building was the CITIC Tower



Figure 6.2b The second picture of the trio
This picture features the famous White Tower (in the middle).



Figure 6.2c The third picture was taken as the photographer was standing in the pavilion facing south.

With such an abundance of pictures at hand, we started counting the number of swifts shown on the phone together. To count a few hundred black dots on the phone was not easy. Dami joked that doing the counting was like "doing homework": "You need to do it today rather than leaving it for another day." Indeed, the survey was not generally considered finished before the data was collected and submitted. Dami gathered our data and shared the total count with other swift observers in the WeChat group. She also shared a picture of a cloud of swifts gazing down at the red-yellow-green tiles of the Longze pavilion, with a simple caption: "Swifts at Beihai Park today. 468 swifts. The number slightly decreased compared to last week".

The piercing calls of swifts dwindled, as many of them had already returned to their nests. The returning swifts, so it seemed, turned the magnificent pavilions, which was initially built in 1602 for

the emperor and his consorts to go fishing, into a swift apartment.

6A.2. Nature-watching as a recent form of public participation in Beijing

What I have described above about local urbanites contributing observational data to surveys of local species is not a single case. Indeed, observation-based, professionals-led surveys of local species in Beijing have increasingly enrolled ordinary urbanites. Such collaborative works are usually conventionally discussed with reference to the notion of "citizen science" (*gongmin kexue* 公民科学). However, this section reveals that citizen science may be a limiting framework to gloss over a remarkable socio-material collective of human and non-human participants who collectively animate the participatory project. In contrast, I wish to paint a richer picture of mass observations of Beijing swifts as a transformative "associative event" (Braun and Whatmore 2010: xv) in the next section. At the heart of my analysis of participatory watching regarding the ethnographic findings of the Beijing Swift Monitoring Project is to underscore the redistribution of agentic capacities beyond the exclusive focus on the intentionality of participating human subjects.

Whereas the collaboration between amateurs and what we now acknowledge as professional scientists[70] is not new, e.g., the cooperation between amateur naturalists and scientists (Jardine et al. 1996; Farber 1997) in making knowledge, the term "citizen science" was a recent invention. The term first appeared in 1989 (Haklay et al. 2018: 71) to describe the participation of 225 volunteers across

[70] We should however not presume a distinction between the so-called amateurs vis-à-vis professional scientists (Meyer 2008; 2010). Situating citizen science historically, Strasser et al. (2019) maintain that the exclusion of amateurs, and thus the creation of a meaningful category of "amateur", was the result of the professionalisation of science taking place in the late 19th century. Before that, we may say that "science was mostly what one might call a "hobby" today and those spending time producing natural knowledge were all 'amateurs'" (ibid: 58).

the USA in an acid rain awareness-raising campaign to collect rain samples to assist the Audubon Society.

Two scholars are often credited to popularise the term citizen science. The first is the author of *Citizen Science: A Study of People, Expertise and Sustainable Development* (Irwin 1995). In the following year, Rick Bonney (Bonney et al. 1996), the director of the Cornell lab of ornithology, picked up the term to articulate amateurs' contribution to the production of scientific knowledge through which amateurs acquire new scientific skills in return. The term seemed apt to account for the lab's long history of volunteer initiatives built on the cherished tradition of amateur naturalists and particularly bird-watchers in data collection (Busch 2013: 19).

Bonney's proposal of citizen science inspires the current usage of the term today. While there have emerged a variety of terms in recent years, including "community-based research", "open science" and others, they all seem to designate practices that at least partly correspond to what Bonney has termed "citizen science". Citizen science, in short, refers to a range of practices "aiming at including non-professionals in the making of scientific knowledge" (Strasser et al. 2019: 55).

During the past two decades in Beijing, lay urbanites, with visual skills to discriminate between different species and adept use of biological nomenclature, have contributed enormous data from their observations of species occurrence. These activities come close to the model of citizen science. Outside academia, urban residents who possessed such skills came into the picture, thanks to certain forms of visual learning received (see Chapter 3A&B). A well-integrated network of species-spotters consisting of nature-watching urbanites with professionals has been in the making.

In recent years, the gravity of inventory activities seemed to shift further from experts to amateurs, as they became leading observers and contributors of a greater source of information of diverse local

species within the city. An excellent example to consider is the growing availability of a variety of participatory programmes that actually branded themselves as “citizen science”, e.g., research to survey and monitor various local species, e.g., butterflies, Beijing swifts and hedgehogs, in which urbanites were invited to participate in observing, collecting and reporting data.

Notably, the emergence of the network of urbanites as observers in Beijing evolves in a different direction compared to what happened in West Berlin (Lachmund 2013). Lachmund traces the origin of botanical field research—taking stock of species occurrence, ecological surveys of exemplary sites, and large-scale surveys that cover the entire area of the city and zone the city spaces as a mosaic of biotopes—to the rich local tradition of naturalist practices that dated back to the 19th century. The development of urban ecology in West Berlin followed a distinctive trajectory: it began almost exclusively from urban practices of amateur naturalists of spotting species in local areas, followed by the emergence of academic surveys and fieldworks of various sites whereby amateur naturalists were enlisted to work in corporation with leading scholars in biology and ecology. Finally, the gravity of this kind of ecological research further inclined toward scholarly efforts, e.g., from the Institute of Ecology at the Technische Universität.

If we put Beijing on a par with Berlin, the situation in Beijing follows a different pathway. Nevertheless, this is not to say that making scientific knowledge of the local natural beings has no tradition of public participation in the Chinese context. Indeed, the broad-based participation in science in collaboration with scientists is not unprecedented in China. Consider the notion of mass science (*qunzhong kexue* 群众科学) popularised in the Maoist period. Projects of mass science such as the earthquake prediction (Fan 2002) and archaeological research of the Peking man (Schmalzer 2008) offer insights into science in communist China.

For instance, to conclude his fine-grained analysis of the earthquake monitoring and prediction program called "collective monitoring, collective defense", Fan (2002) compares mass science with citizen science and points to two areas of main differences. First, mass participation in Maoist mass science maintained a close tie to the state and the primacy of political function, namely "constant class struggle and revolutionary creativity from the masses". Interwoven with a strong anti-elitism, science in the Maoist era was "de-facto class based" and good science demanded scientists to learn from the people. In comparison, public participation in citizen science is often taken to represent the democratization of science. Still, both notions are inextricable from the micropolitics of the modern state and society (e.g., citizen science fulfilling the political goal of developing scientific literacy as an essential part of modern citizenship). Moreover, while citizen science in general is expected to advocate scientific establishment, mass science drew much from folk knowledge and the participants' everyday experience rather than simply generating data following the guidance of professional science.

The brief introduction of mass science reveals that Beijing urbanites' participation to generate knowledge of local biodiversity is more aligned with the citizen science model than mass science. The framework of citizen science with the focus on public participation of science, offers an initial attempt of redistribution of expertise. It extends room for inclusion and participation of the lay mass instead of incorporating scientists to the mass line. The idea of collaboration frequently brought up in the literature of citizens science thus rejects the rigid boundaries between lay persons and scientists in producing scientific knowledge.

However, given the sheer diversity of activities that are grouped under the uniformity of the banner of "citizen science", we may need to not "let the label obscure, or entirely determine, the meaning of practices" (Strasser et al. 2019: 66). Ready-made concepts of public engagement in scientific projects

need probing. Strasser and his co-authors have made a valid point to urge a departure from "citizen science to participatory research" (ibid: 67). Following his lead, I also concur that citizen science is not a sufficient framework to gloss over the participatory practice of collective observation, as I have described in the opening section.

Rather, my argument is that the conjoined action of nature-watching emerges as a new sensing and participatory paradigm that nurtures the formation of new urban public in solidarity with more-than-humans. I will call this mode of nature-watching "participatory watching". By "participatory watching", I aim to offer a new perspective to consider nature-watching as a form of public participation. This chapter is less an evaluation of Beijing urbanites' participation in monitoring and observing local species against the pre-given model of citizen science, than oriented toward unpacking the many participants, human and nonhuman, in making the participation possible. We need to broaden the scope of public participation by considering "wider participatory arrangements in which a spectrum of organisations, technologies, subjects, knowledge and things are involved and have a stake" (Marres 2015: 139). A unit of analysis here is "neither the individual human nor an exclusively human collective but the (ontologically heterogeneous) 'public' coalescing around a problem" (Bennet 2010: 108), namely the livelihood of Beijing swifts. As such, the notion of participatory watching articulated in this and the following chapter is a multispecies achievement. Participatory watching of Beijing swifts decidedly unfolds between urbanites, animals, technological bodies, ornithological experts, the local government, environmental conditions, architecture, and other agents that perform in and through a multiplicity of places. By "achievement", further, I seek to highlight the unfolding and ongoing characters of the collective as a total spatial-temporal phenomenon that is hardly exhausted by the current constellation in which different parties have been implicated.

6A.3.Citizen science or participatory watching?

In this section, I start by fleshing out what a participatory watching project might look like. I do so mainly by contrasting two public projects to survey Beijing swifts—one initiated by CBS vis-à-vis the Beijing swift project by the Beijing Wildlife Rescue and Rehabilitation Centre (BWRRC). While the former is advocated under the banner of "citizen science", the latter, as I will point out, epitomises a participatory watching programme.

6A.3.1. The CBS project: "a successful case of citizen science"

In the 2019 New Year annual meeting (*nianhui* 年会) for members of CBS, Mrs Fu Jianping, the president of CBS at that time, gave a presentation of Research and Protection of Swallows and Beijing Swifts in Beijing Project (北京城区燕和雨燕的调查和保护), to update members about the latest progress of the project. In one of her slick slides, Mrs Fu commented that "the project reflects the mass participation and operability of citizen science".

First established in 2007, the project has gained fame and is often cited as one of the earliest examples of citizen science in Beijing. It came with little surprise that the project was explicitly branded as "citizen science", given the CBS's passionate conviction of the scientific agenda of bird-watching. Professor Zhao Xinru, a leading ornithologist and one of the main initiators of the citizen science project to monitory Beijing swifts and barn swallows by the CBS, first coined the motto of the CBS "Watching birds scientifically and respecting nature" (*kexue guanniao zunzhong ziran* 科学观

鸟，尊重自然)". To answer my question about the motto in a Q&A session after a public talk, Professor Zhao replied, highlighting the importance of understanding and observing birds in a scientific way:

> By *kexue guanniao*, I want to separate bird-watching activities from understandings of birds from the perspective of the so-called 'bird culture' (*niao wenhua* 鸟文化). Whenever birds are mentioned, what seems to matter are bird totems or mythical figures like the phoenix. I do not refuse the bird culture, but you get to see little from that perspective. To watch birds scientifically, however, is key to interpreting the natural world (*jiedu ziran* 解读自然).

The swift project by CBS attached much more importance to the public participation in branding or ringing birds (*huanzhi* 环志) by highly skilled bird-watchers. Accordingly, *huanzhi* was an activity that was more scientific in essence than the recurrent watching and counting of swifts by common urbanites. The annual ringing of Beijing swifts took place around May at the Kuoru Pavilion in the Summer Palace. Amateur bird-watchers worked in collaboration with ornithology experts in ringing Beijing swifts. Since the beginning of the project in 2007, ringing has remained a significant aspect of the public participation in the project.

In particular, the ringing activity in 2014 and the subsequent recapture in the following year marked a new dawn in the project's collaborative endeavours. A ground-breaking study revealed, for the first time, the Beijing swifts' epic migration route and their wintering grounds in 2015, thanks to the data yielded from the ringing activities in 2014 and 2015. These activities relied on the fruitful cooperation between scientists from Beijing and Guangzhou, Belgium, Sweden and the UK, along with avid bird-watchers from the CBS. The study was part of an ongoing ringing operation by the CBS

in the Summer Palace, but 2014 was the first year when 31 swifts were fitted with tiny light-sensing geolocators[71] as opposed to the regular identifiable metal rings. A group of qualified bird-watchers (Figure 6.3) who after completing training in bird-ringing met bird experts at the Kuoru Pavilion.



Figure 6.3 Bird-watchers from CBC were taking the measurement of a branded Beijing swift Photo taken by Xiao Hong. Source: Huang 2017.

Volunteers were arranged into different groups such as the net-catching group, the media group and so on. They worked under the direction of experts to conduct a series of jobs: carefully disentangling the trapped birds from the enormous finely-meshed nets, lightly holding their fragile bodies in hands to take measurements, fitting them with light-weight 'backpacks' containing geo-locaters on birds, releasing them into the sky, recapturing birds in the next year, downloading data from loggers and

[71] These cutting-edge devices (*guangmin dingweiyi* 光敏定位仪) include data transmitters that could log the position of the Swift by measuring day length and local mid-day from which positions are calculated. The geolocators were manufactured in the UK and cost quite a fortune, equivalent to about 1,300 RMB per unit.

analysing, and then again setting the caught birds free.

13 out of 31 swifts were re-captured at the Kuoru Pavilion in the following year. After downloading and processing the data, researchers were able to chart a map (Figure 6.4) of the migration route of individual birds: swifts headed northwest into Mongolia, then went south through Iran and central Arabia into tropical Africa, before spending three months of the winter in Namibia and the Western Cape. Their incredible round-about migration route covered about 30,000 kilometres across 20 borders.



Figure 6.4 The track of a Beijing swift based on preliminary analysis of the data retrieved from re-capture swifts

The map was made by Lydon Kearsley and Richard Newell and generously shared on the website Birding Beijing by Terry Townsend, a British conservationist living in Beijing and a key participant of the project.

Source: https://birdingbeijing.com/the-beijing-swift-project/

In the media coverage of the ground-breaking scientific discovery of Beijing swifts' migration route, the study was often celebrated as a hallmark citizen science project—"citizens' enthusiasm for participating in science under the guidance of foreign and national scientist is fully revealed" (China Bird-watching 2017). The Beijing swift project by the CBS was potentially open to all with interest in Beijing swifts. However, in reality, particularly concerning the ringing activity, only a selective group of experienced bird-watchers who had received training alongside experienced professionals were permitted to participate.

There was certainly concern about the negative impact on birds due to misconduct by inappropriately trained ringers. Also, ringing is indeed a highly professional scientific expertise. It encompasses the operation of a series of scientific research tools and techniques that may reify the gap between professionals and amateurs. Despite the intention of the project to democratise participation in research about Beijing swifts, the wider inclusion of lay citizens was achieved in practice. For instance, Mr Xiao, a seasoned bird-watcher and the person who shot the above picture (Figure 6.3), mentioned in a chat that he had always wanted to participate in the branding activities. Unfortunately however, he was deemed unqualified to handle swifts, because he had not had the time to finish relevant training on branding. Thus he ended up contributing in another role, as a photographer of the "photograph team" (*paishe zu* 拍摄组) responsible for documenting the ringing activities with his camera.

Judging from the conversations I had with several bird-watchers in the ringing team, being able to join leading experts and handling sophisticated and expansive scientific devices evoked a shared sense of thrill and privilege. Nevertheless, one may also argue that the degree of amateurs' participation in this context was relatively limited, restricted to the traditional model of scientists harnessing citizens

as helpers. It constitutes a "dated model of participation predicated on an instrumental search for efficiency" (Ellis and Waterton 2004: 101), rather than on empowering 'amateurs'.

In addition to ringing Beijing swifts, the CBS swift project involved bird-watchers in monitoring nesting colonies of Beijing swifts at several sites. Notably, the CBS project targeted mainly bird-watchers instead of opening participation to ordinary urbanites, and in this way contrasted with the BWRRC swift project, as we shall see. Ordinary urbanites who did not know or had interest in bird-watching rarely got to know the project, let alone participate. Moreover, the CBS project entailed three or four single surveys every year, normally taking place before and after the incubation period of Beijing swifts. The scope of the CBS project was therefore not widely extended to consider the full range of the livelihood of Beijing swifts during their stay in Beijing from their arrival to departure.

6A.3.2. The swift project by the BWRRC

If the ringing project was only open to a selective category of participants, i.e., involving only a small number of bird-watchers with previous experiences and expertise in bird ringing, the BWRRC had made a small step toward engaging a wider population for participation. In 2017, the centre initiated a pioneering Beijing Swift Monitoring Project (*Beijing yuyan jiance xiangmu* 北京雨燕监测项目). As the director of the centre revealed in our interview, the project was established to measure the actual amount of nesting Beijing swifts and the distribution of their nesting sites in Beijing:

> It has been repeatedly reported that we are losing more and more Beijing swifts each year, but the truth is that the population of Beijing swifts remains a matter of speculation. This is because,

> for one thing, there has never been a census of Beijing swifts on a large geographical scale that include as many sites as possible in Beijing. For another, due to variations of methods, devices, surveying sites and so on, the results of previous studies of Beijing swifts were varied, making it hard to get a fuller picture of Beijing swifts (interview on April 7, 2019).

While there have been several surveys at individual sites made by mainly ornithologists (e.g., Zhang 2003), what was still lacking is the simultaneous observations (*tongbu guancha* 同步观察) of Beijing swifts at as many sites as possible. Given the high mobility of Beijing swifts, the simultaneous observations would not be possible without the concerted efforts of a considerable number of observers in geographically distributed locations. And by accumulating a large quantity of data on Beijing swifts, the centre hoped to make a better effort to conserve Beijing swifts. It was against this background that a first-ever, large-scale survey of Beijing swifts that involved the participation of multiple local observers was put into motion.

When the project was first initiated in 2017, the timing to conduct monitoring was a bit off. The project started too late in July to either recruit many participants or make repeated observations of migrating swifts—some of them had already embarked on their annual journey to Africa. "The project in 2017 lasted for only two weeks before we called it a day, since almost all swifts disappeared, taking their departure from Beijing. In retrospect, I prefer to call 2017 'the year null' for our project", said Mr Shi Yang, who was the primary coordinator of the project at the BWRRC in our interview.

Since 2018, the project developed into a more mature form, lasting for a longer period (16 weeks from March to July) and rearranged to more synchronise with the movement of Beijing swifts covering their stay from their arrival to departure. Notably, participants nearly doubled in comparison to 2017.

The increase in the number of participants recruited relied on more effective publicising to raise awareness of the project to a broader audience across the city. Initially posted on the centre's social media (WeChat), the recruitment plan was more widely circulated. For example, I met a key volunteer Fanli at the Tianningsi Overpass site, who, along with her daughter, started to take part in the project in 2018. According to her, she received the information about the project from an advertisement in a visit to Beijing Nature History Museum.

Meanwhile, the project recruited more participants by leveraging an existing volunteer population. According to a questionnaire I conducted with 47 participants in 2019, more than 60% of them learnt about the project from persons of their trusted social network—family members, colleagues, teachers and so on. In addition to participants, new observation sites where Beijing swifts were spotted to nest were continually discovered, increasing from 21 sites in 2017 to 27 sites in 2019 (Figure 6.5) (in 2021, when the project restarted in March, observation sites reached 30).

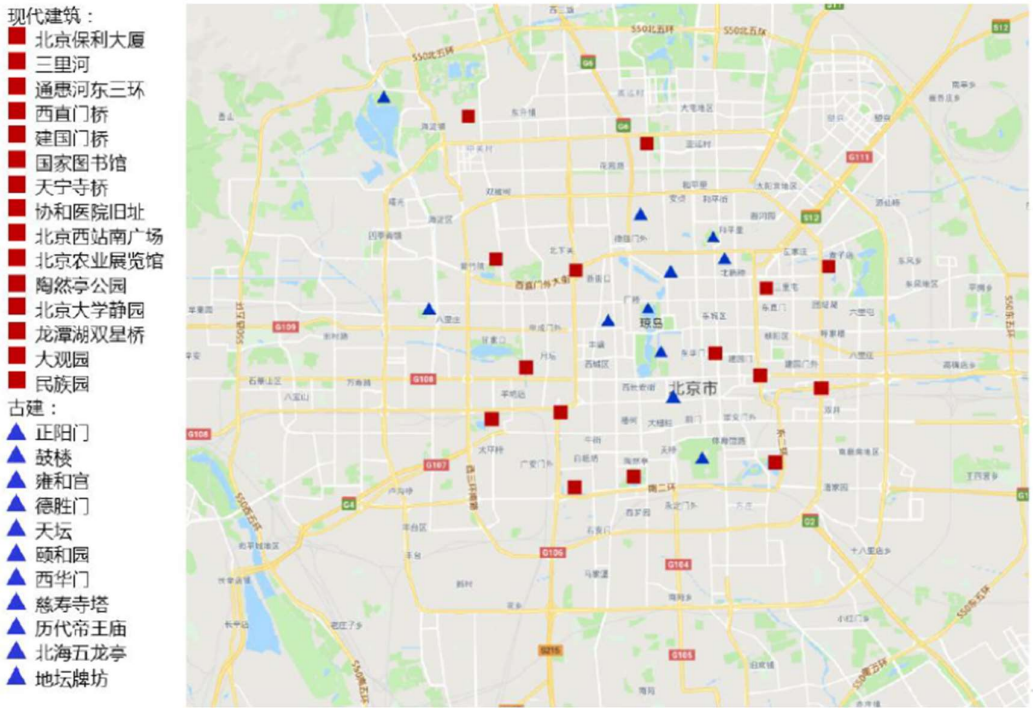

Figure 6.5 The distribution of 27 observation sites in 2019
Red marks are contemporary buildings where swifts nest and blue marks refer to ancient architecture. For a detailed discussion of swifts' nests, see section 6B.2.2.

One distinctive feature of the CBS project was its central attention on the geography of Beijing swifts. The project rallied the convivial relationship of urbanites and Beijing swifts in specific spatial terms. All participants were recruited from widely distributed areas and requested to choose one or more nesting sites—usually within the proximity of their home or workplace—to conduct constant observations for nearly four months. The map (Figure 6.5) of swift nesting sites qua observation sites here was constantly updated and repeatedly shown to participants—at the training session and the annual meeting for participants, for instance. It perfectly encapsulates a multi-spatial, multi-temporal, hybrid geography (Whatmore 2002) of Beijing swifts and urbanites the project ultimately relied on and animated.

I started to participate in the project in 2019, making me a proud member of the "third generation"

(*disan jie* 第三届) of swift observers. A bird-watcher friend shared the volunteer recruitment ad about this project with me on WeChat in early spring of 2019. The advertisement was richly illustrated with HD pictures of Beijing swifts. My attention was immediately attracted by a picture of chaos of swifts dancing in the air above the landmarked Kuoru Pavilion of the Summer Palace. Living near the Summer Palace for more than twenty years (the linear distance from my home to the pavilion is about 800 meters), I have never encountered such a beautiful and eerie flock of Beijing swifts before. Where do swifts nest in the Summer Place? When do they gather? What do they eat—I was driven by an eagerness to know more about Beijing swifts living near me. I was successfully recruited and since then have been involved in the project as a local resident interested in the lives of the colony of Beijing swifts, a trained swift observer, and a fieldworker wishing to document the collective coalescing around the lifeworld of Beijing swifts.

My job as a volunteer observer entailed mainly a weekly survey of Beijing swifts adopting the "point count method of sampling" (*yangdian fa* 样点法) I learnt in the training session. I conducted routine observations of nesting Beijing swifts at the Kuoru Pavilion (Figure 6.6)——a major habitat for Beijing swifts—for two hours before the sunset, when swifts were found to aggregate before returning to nesting or roosting sites at dusk. I mainly observed swifts on my own and sometimes accompanied with other volunteers. It felt rewarding to make a small contribution for people to get nearer to unveil the mysteries around Beijing swifts.



Figure 6.6 The Kuoro Pavilion in the Summer Palace with Beijing swifts flying around
Photo by Zhang Xiaolian. Used with permission.

To sum up, one important way the BWRRC project contrasts the CBS project is by enhancing the association of multiple bodies into a task force. The most obvious dynamic of multiplicity it unlocks is implementing a recruitment policy based on an inclusive principle to welcome a wider range of observers caught in a web of connection with more extensively distributed Beijing swifts. These include people who have the potential to know something about Beijing swifts and their nests through an active engagement with nearby more-than-human inhabitants in their urban living, but who, unlike bird-watchers, may have little knowledge of the rich diversity of bird species in Beijing and have never

produced biological records before.

By primarily characterising itself under the heading of "citizen science", the CBS project is meant to celebrate a redistribution of expertise whereby amateur bird-watchers can contribute to the production of scientific knowledge. The collaboration is promoted nevertheless through appropriation of the collective energy and skills of urbanites in a selective way, i.e., to involve exclusively already skilled and scientifically spirited bird-watchers and their spotting, identification and recording skills.

Accordingly, I propose that the framework of citizen science may only unpack the issues of redistribution of participation in the collective observations of Beijing swifts by Beijing residents slightly. The CBS's narrative of the citizen science project conspicuously lacks in understanding of other agents, in particular Beijing swifts that make up the agentic assemblage of participation, as I tend to see. The BWRRC project, in comparison, offers a broader and encompassing imagining of participation interweaving multiple parties with participatory potentials, open participation up to a more-than-human perspective. This is a model of participation that I will conceptualise as participatory watching

6A.3.3. Towards participatory watching as a conjoined action of humans and non-humans

Specifically, my adoption of the term "participatory watching" is inspired by the existing literature on participatory sensing. There has been a growing literature addressing the novel paradigm of participatory sensing (e.g., Goldman 2009; Loreto et al. 2017). Participatory sensing is alternatively termed "citizen sensing" (Fan and Chen 2020) and community-based sensing in general, and urban sensing, or participatory urbanism (Paulos et al. 2009) more specifically. It is now used to liberally

refer to a wide range of collective crowdsourcing sensing activities to measure environmental factors in the urban area such as air quality, noise level, traffic, water quality, as well as to document phenological changes of a variety of animals and plants among others. Although there may be overlaps between the meanings of citizen science and participatory sensing, my attempt to align participatory watching as a form of participatory sensing project has three purposes.

To start with, the idea of participatory watching is to elaborate on the collective nature of sensing activities. As I mentioned previously, the BWRRC project issues a more open policy of inclusion, rallying the enthusiasms of ordinary urban residents with or without previous bird-watching experiences.

Second, in its original definition, participatory sensing "emphasizes the involvement of ordinary citizens and community groups in the process of sensing and documenting where they live, work, and play" (Goldman 2009: 4). Compared to citizen science, participatory sensing advocates and remains more closely to the everyday experiences of urban participants to make sense of their urban living. It, therefore, makes a more pertinent framework to conceptualise urban nature-watching activities.

Third, as Coulson et al. (2018) indicate, participatory sensing arises from the participatory digital culture. Indeed, the broad proliferation of cellular infrastructure and sensor-rich, Internet-enabled, smart mobile phone usage opens the door for building digital databases and networks at an unprecedented level of coverage in both space and time. One unique feature of participatory sensing is the role networked mobile phones plays as a critical "technology of participation" that empowers ordinary people to collect, report and share data sensed and generated from their mobile phones.

The mundane technology of the mobile phone embedded in people's everyday lives is sharply contrasted with the high-end technoscience that gives scientists epistemic authority such as the

geolocator, the mist nest, banding pliers, wing rulers and so on used in bird-ringing. And in the context of participatory watching, the mobile phone is enacted anew as a personal measurement instrument that affords a "citizen-empowered approach" to sense the environment in which participants inhabit. As I will show, the extensive reliance on the mobile phone was indeed found among Beijing swift watchers for collecting and reporting data.

Meanwhile, my deployment of participatory watching is also meant to depart from the concept of participatory sensing in two aspects. First, the collective in participation is reconfigured as beyond the privilege of mere human participants, including scientific professionals and amateurs. Above I allude to how the BWRRC and its organisational works are held in tension with multiple elements that constitute an emergent participatory collective.

Mr Shi's view of the project in 2017 as a sort of half-baked, project-in-the-making is telling. In 2017, the project of participatory watching was in embryo, whose participatory potential was not unleashed enough due to the "bad timing", despite the intention of the centre to make it work in 2017. The bad timing could be interpreted as a loss of momentum of endeavouring bodies: Beijing swifts who had largely gone and the limited numbers of observers enrolled. I was told by a participant taking part in the 2017 project that the project initially appealed exclusively to local bird-watchers with previous experiences of observing and surveying birds. Both Beijing swifts and people rebelled against the rational plan of the centre, making participation an accomplishment in the making (Chilvers and Kearnes 2016b: 14) at best. As it will be clearer in the next chapter, participatory watching of Beijing swifts becomes possible only when multiple bodies are in place to form a field crowded with endeavouring bodies in the process of emerging and transforming.

The contingent constitution of participation in the BWRRC project brings me to my second point.

My material denotes an understanding of participation that is not easily accommodated within frameworks that presuppose a static, human-centric view of conjoined action of experts and amateurs. Rather, it compels me to adopt a more fluid and permeable vision of participation that is mutually evolving with participants. The problem with adopting a pre-given, normative model of participation such as citizen science is that this presumes a priori public already existing in a natural state, waiting to be mobilized. With the idea of participatory watching, I hope to highlight that participation is continually in the process of crystallizing and contingent, as a swarm of players enters and leaves the assemblage. This is a decisive move away from a constellationist vision of participation as the outcome of the interaction between already existing entities. Rather, I wish to underscore the unfolding and ongoing characters of the collective as a total spatial-temporal phenomenon. The participatory collective is hardly exhausted by the current constellation in which different parties have been implicated.

6A.4. Discussion

This chapter addresses a collective form of watching local living beings I term participatory watching. The term seeks to depart from the conventional view of such collaborative activities of monitoring living beings as public participation in citizen science. Instead, by participatory watching, I aim to offer a more encompassing imagining of participation with the ethnographic example of the project of observing Beijing swifts. Participatory watching, as I propose, provides a fruitful avenue to contemplate participation that constitutes an unfolding of interweaving multiple parties of humans and non-humans.

My discussion of participatory watching has drawn inspiration from a more speculative vein that

emerges out of STS and cognate disciplines. The scholarship has extended fruitful avenues to scrutinise participation to arrive at a broader, more encompassing imaging of public participation. One of the main problems with the literature on citizen science, as Wynn (2007) points out, is to treat the public as a homogeneous, predefined collective that can be mobilized or enrolled into scientific agendas more effectively by improved educational or other deliberative methods.

By contrast, a co-production reading of participation in science, technology, and the environment labours at a dual task to recognise the "contingent construction of both the objects of public participation and the definition of what constitutes 'the public'" (ibid: 37). In other words, the focus is on the "processual nature" (Hawkins 2011: 551) of participation and public formation such that they are co-articulated with its issues.

The second theoretical endeavour of these studies redresses the endemic humanism of theories of participation and the public by recognising that such issues are not exclusively human achievements. From a vitalist-inspired perspective (Bennett 2010; Braun and Whatmore 2010; Greenhough 2010), the participatory project is put into motion as heterogenous participants in reciprocal enfolding come together to catalyst a public of human and nonhuman elements. A primary example in this vein of thinking comes from the materialist studies of participation and public life (Braun and Whatsmore 2010; Marres and Lezaun 2011; Marres 2015). These studies usually start from a post-human premise that foregrounds the expressivity and capacities of material things to "facilitate, inform and organise citizenship and engagement" (Marres 2015: 7).

In what follows, I move on to two specific endeavouring actors that animate participatory watching of Beijing swifts, including the smartphone as a participatory object and the affective force of the entanglement of Beijing swifts and Beijing urbanites.

Chapter 6B. The multispecies achievement of participatory watching

Following the discussion of participatory watching in the previous chapter 6A, this chapter 6B zooms in to investigate two key factors: the smartphone as a participatory object (chapter 6B.2) and the affective association between urban observers and Beijing swifts (chapter 6B.3). My main argument is that the smartphone, Beijing swifts and urbanites, together with other human and non-human bodies put participatory watching into motion and catalyst a new public in a more-than-human sense. In chapter 6B. 2, I focus on the participatory potentials of the smartphone. The multi-tasking smartphone with a bult-in camera enables urbanites to become networked swift spotters and data collectors. The long section of 6B.3 then concerns the affective entanglement of Beijing swifts and Beijing urbanites that puts participatory watching into motion. In so doing, I contest the dichotomy of swifts and urbanites as passive objects of observations and participation vis-à-vis active participating subjects. Instead, I propose that affecting and being affected by each other, both Beijing swifts and urbanites are vital forces to an agentic assemblage that animates transformative actions.

6B.1. The participatory affordance of the smartphone

Using the smartphone to take pictures and edit these photos implicate urbanites in spotting, recording, and analysing the presence of Beijing swifts. From the opening vignette of chapter 5A, the crucial role of the mobile phone was prominently revealed in Mrs Chen's adept and creative use of her phone to engage with Beijing swifts. She documented Beijing swifts with the built-in camera, and relied on a photo-editing application on her phone to translate visual recordings of swifts into the count of swifts. This section accordingly discusses two interrelated practices, namely spotting and counting Beijing swifts, to shed light on the potency of the smartphone in the fabric of participatory watching.

In the context of participatory sensing, the mobile phone, or the sensor-rich, Internet-enabled smartphone such as the Apple iPhone, presents an unprecedented tool and a new sensing paradigm for monitoring and observing events of interest in participants' surrounding environment. Though not built specifically for sensing, smartphones can work as mobile, easy-to-use devices for sensing, thanks to the embedded sensors such as microphones, GPS receivers, cameras and other optical sensors and their processing and transmission capabilities. According to Kohller (2002), the camera, especially the invention of the black-box Kodak, became an important observation instrument for field ecologists around the early 20th century, helping them with the onerous task of note-taking in field investigations. In parallel, nowadays, thanks to the development of more advanced smartphones, they hold new promise for data collection and the possibility of crowdsourcing in environment-centric scenarios, e.g., collecting biological data of species, as well as people-centric applications such as monitoring health-related issues (e.g., Thenuis et al.; Kanhere 2011; Christin 2016).

Chinese mobile phone ownership currently has topped the world, with 1.6 billion mobile phone users as of February 2021 (Statista 2021). According to a report of Chinese consumers of smartphones by Deloitte (2019), China's mobile phone market has nearly saturated segments from thousand-*yuan* smartphones to flagship models. Smartphones with the high configuration at a lower price become the standard.

In my fieldwork, I noted that the usage of internet-enabled smartphones with a large touching screen, excellent camera capacities and many of the features of a personal computer was widespread in all kinds of nature-watching activities. Pictures taken by the smartphone first served as an efficient recording of sightings of species. Meanwhile, they also made identification quickly and easily via a variety of mobile applications for wildlife identification and tagging.

I suggest a mutual transformation of the mobile phone and urbanites in the performance of participatory watching of Beijing swifts. For one thing, the mobile phone is enacted as a personal sensor and 'domesticated' by participants for attending to Beijing swifts and their living environment. For another, the potency of the mobile phone is such that participants are mediated and enabled as networked swift spotters and data collectors. This section seeks to offer a situated account of how the mobile phone and participants form part of a socio-material collective to accomplish participatory watching of Beijing swifts together.

6B.1.1. Becoming networked swift-spotters

To start with, the technological operation of the smartphone allows individual participants to link together as a network of swift spotters. Using the built-in camera to take geo-tagged pictures, facilitated by the proliferation of cellular or wireless infrastructure to share the information, enables the collective act of spotting and attending to Beijing swifts.

Previous studies have given attention to how technological objects mediate public participation, particularly in scientific projects enrolling a network of lay and professional participants. A case in point is Vetter's historical enquiry (2011) of the "field network" constituting lay observers located in diverse regions with the effect of producing meteorological knowledge. The author documents the key role of the telegraph in coordinating and aggregating local observations into more general, regional knowledge. In a similar vein, the extensively networked personal mobile phones link together local participants in widely distributed regions to form a 'collective eye' to observe Beijing swifts.

Individual observers often preferred to use their mobile phones to record their observations of Beijing swifts as they moved around the city. Whereas the digital camera was certainly more useful to

capture sharper images, the advantage of the camera built into the handset was its portability. As an everyday device stashed in the pocket, the smartphone facilitated both stationary and mobile spotting of Beijing swifts in people's daily urban living.

The thing about the Beijing swift is that this species is known for its air prowess, carrying out almost all its activities on the wings. For new participants to get the impression, Mr Shi liked to illustrate the swifts' long-distance, daily commuting with the following example, which I got to know for the first time in the training session for participants in spring 2019. Shi told us one geolocator-carrying swift who was caught at the Summer Palace had been recorded to embark a roundabout journey from the Kuoru Pavilion in the northwest to a location in Yanqing district in the east of Beijing; its one-way commuting daily covered more than 40km across Beijing.

Given the bird's incredible mobility, spotting Beijing swifts was perhaps too labour-intensive for a one-person operation. Collectively, ordinary urbanites using their smartphone could accomplish large-scale observing with unprecedented spatiotemporal coverage than would otherwise be feasible. By 2021, there are currently 30 observation sites that correspond to breeding sites of Beijing swifts discovered, and the number of sites is still increasing as participants keep reporting new sites frequented by swifts.

Individual participants were generally organised and coordinated based on their preferred location to observe Beijing swifts. Thus, when first welcomed into the WeChat group—the exclusive, interactive online community for all participants, everybody was requested to edit his/her WeChat group ID with a clear indication of the site(s) he/she was based. Simply going through each member's ID, one got the impression that participants indeed came from geographically dispersed regions that covered a large area of Beijing.

The first application of the smartphone for collective observing was for individual participants to capture timestamped and geo-tagged pictures of Beijing swifts using their phones. A 'camera eye' was demanded to capture or freeze, so to speak, the moments when fast-moving Beijing swifts gathered in a flock. Pictures captured were considered raw data to be translated into quantitative information of Beijing swifts at particular sites.

Photos of Beijing swifts have little in common with wildlife photographs that prioritise clarity and sharpness of animals captured, nor do they resemble aesthetic landscape photographs. The main purpose of swift photos was to fully capture as many swifts as possible spotted at the site, while documenting the embodied presences of swifts—their appearances or activities in the environment and so on—came only after the task of recording for generating numerical information. For this reason, swift pictures taken by swift observers may look odd, showing a mass of "black dots" (Figure 6.7) spanning over the sky instead of sharp, colourful images of birds, as one may expect from bird photography. The embedded camera alone was able to accommodate the concern with the amount rather than a clear visual representation of Beijing swifts.



Figure 6.7 A typical snapshot of Beijing swifts that captures numerous tiny black dots I took the picture with an iPhone at the Kuoru Pavilion.

The smartphone embedded with more advanced photographing settings allowed participants to switch to the wide-angle mode to get more swifts fit in one shot. Alternatively, taking pictures in continuous high-speed or burst mode let participants capture multiple shots as birds move. It seemed that more participants used the latter shooting mode. By turning one's body when taking continuous photos, a single participant was equally able to click wide-angle photos across 120 to even 180 degrees.

Another way of shooting wide-angle photos required the simultaneous shooting of more than one participant at the same site. For instance, when four participants were at the same site, each would be assigned to take a shot of swifts spotted across 90 degrees simultaneously. As four pictures of swifts were integrated together, a 360-degree panorama of Beijing swifts spotted at a particular time and location emerged. This was a scenario par excellence to consider the incarnation of a collective eye

enabled by the mobile phone.

The pictures taken from dispersed locations were then shared in the online community of swift observers operating on WeChat. Immediately after the BWRRC initiated the project in 2017, it set up a WeChat group to give participants a social media 'home'. To all participants, the WeChat group chat could be read as a "participatory media", the first-stop, consolidated data centre for exchanging, sharing, and storing crowdsourcing data. The implication of deploying WeChat—the most used mobile application in Chinese people's daily lives—as a key node for maintaining observer network and collecting data is significant. It concretely embeds the practice of participatory watching of Beijing swifts into the rhythm of participants' urban living. As such, it also challenges the idea that genuine public participation is disengaged from the socio-material constitution of everyday lives[72].

Meanwhile, WeChat also supported online applications in which non-visual local data was collected and centralised in a standardised way. As a routine, after each observation, participants were invited to share their report via two routes: 1). to fill in an excel form and email it to a coordinator; 2). to input data into an online, collaborative form, via a mini-programme Graphite Document (*shimo wendang* 石墨文档) on WeChat. The form was then available for all participants to view and edit. Some of the key swift-related information shared included the maximum quantity counted, the number of nests spotted (if one can), time of returning nests and others. The form also contained a blank area for participants to take note of their thoughts and discoveries that may be outside the parameter of the standardised quantified data. In short, as observations of swifts at each site were pooled and integrated together in the WeChat group, a comprehensive picture of Beijing swifts that encompassed a large

[72] Materialist studies of participation have attempted trenchant critiques of the agoristic view of public politics and participation in which material engagement is rendered irrelevant to political action. See, e.g., Marres and Lezaun (2011).

territory of Beijing emerged.

6B.1.2. Becoming data collectors

Immediately following taking pictures of swifts, the next step was to count the total number of swifts shown on the picture. The photo editing and drawing apps installed on the mobile phone thus afforded easy and convenient articulation of data to translate observations of swifts into numbers. This task, as part of the overall jobs of observers, was known as "counting black dots" (*shu heidian* 数黑点). Black dots here referred to the photographic representations of Beijing swifts captured by the smartphone's built-in camera. However, the low quality of pictures containing tiny black dots did not bother observers too much, in that observers generally held the view that the ease with which to reveal accurate counting overrode the concern for the aesthetic quality of photos.

On the surface, counting black dots was easy to conduct with basically any type of photo-editing app. All one needed to do was enlarge a picture, encircled all black dots with a brush while doing the counting. Some preferred to transfer pictures into their personal computers and did the count on a larger screen. A more common practice for participants, as I have observed in several observation sites, was to count the number on site.

The rationale for on-site counting was that counting on the mobile phone screen was hardly a disembodied form of summing up context-independent numbers, but rather forming an organic unity with the embodied visual engagement with swifts, including on-site observation and picture-taking. This was the point raised by Meimei in our interview on August 23, 2019. She was a volunteer with a background in statistics who joined the project in 2017. Since then, she has been responsible for

collating and analysing data from participants. Meimei once came up with an idea to relieve observers from the burden of counting black dots by asking participants to leave the counting job to her. However, she soon found out that she lacked the contextual information to make sense of the black dots: "I don't know if some black dots are really swifts or they are in fact other things, say other birds or maybe airplanes!" After communicating with Mrs Chen, Meimei said she agreed with Mrs Chen that "Counting is more precise when coupled with observers' overall estimation of swifts, their scale, movement and distribution on site".

Counting the numbers of Beijing swifts on one's mobile phone could be easier said than done. This was particularly the case for observers based in sites that have historically accommodated a considerable colony of swifts, such as the Five Dragons Pavilion in Beihai Park and the Kuoru Pavilion in the Summer Palace. For instance, the peak number of swifts in Beihai Park normally occurs in mid-June when observers face the task of marking and counting a few hundred "black dots" on a single picture. It would certainly be a test for patience as well as eye-sight.

Three numbers, that is, the three largest total counts of Beijing swifts at three time points for the entire duration of observation were acquired. Participants then edited the information into a standardised excel file, and emailed it to a facilitator who then forwarded data to Meimei. Meimei's job was to translate numbers into detailed analysis, e.g., population, distribution of Beijing swifts and varied rhythms of their migration and reproduction at each site.

In a word, what I seek to accomplish is to go beyond the understanding of the mobile phone as a mere technological infrastructure for observers. Rather, I attend to the performativity of the mobile phone to actualise the participatory assemblage that coheres around Beijing swifts. The mobile phone in the assemblage is a participant with the power of making differences within the collective. As such,

the device enables ordinary urban residents to make a transition to becoming active data collectors and contributors by capturing and doing the count of Beijing swifts observed on the mobile phone.

6B.2. Affective dimension of participation between Beijing swifts and Beijing urbanites

In this section, I turn to the "affective logic" (Lorimer 2010) of participation, foregrounding Beijing swifts as a vital force to affect and foster urbanites' act of participation. As noted previously, the framework of citizen science may be argued to be unproductively centred on human intentionality alone. Instead, the reconfigured notion of participatory watching of Beijing swift is to contest swifts and urbanites as passive objects of observations and participation vis-à-vis active participating subjects in dualist terms. Rather, it is important to acknowledge them as intertwining forces of an agentic assemblage—as mingling bodies affecting and being affected by each other—which can animate transformative actions.

The term "agentic assemblage" is directly inspired by Vinciane Despret's theoretical commitment to unsettling the meaning of agency. A decisive move here is to unearth the concept from its root of human exceptionalism by resisting the conventional understanding of agency as intentional, rational, and self-moving. Despret powerfully argues that "there is no agency that is not interagency" and "without agencement" (2013: 44). She reframes agency as "agencement", that is, as a "relational verb" (ibid). In so doing, she not only highlights that agency springs only when being connected with "companion agents", i.e., beings of different species, contexts, or things. More importantly, "agency seems to be much more extensively shared in the living world". Her examples, e.g., cattle resisting their breeders, make salient specifically the manifestation of agencies past the human that depends upon the co-involvement of many creatures, humans and non-humans engaging one another.

In a recent study of the agency of plants, Brice (2014) similarly makes a valid point to interrogate how the established recognition of agency as autonomy is intrinsic to plants as self-governed organisms removed from human influence. By critiquing the assertion that the agency of plants only exists in wild plants living without the contamination of human impact, he renders perceptible the agency of crop plants that are fundamentally animated in human-plant cohabitation in agricultural practices. For him, grapevines become particularly agentic when they make their presence felt in the involvement of the time-reckoning practices employed by cultivators in Australian viticulture work.

In a similar vein, I argue that the agency of the Beijing swifts is more forcefully exercised in the apparatus of participatory watching. Put differently, the participatory practice of watching swifts constitutes a vital field of a specific socio-material setting, in which Beijing swifts are enacted with a specific mode of power of engagement. They are capable of intensively affecting urbanites—to hone urbanites' sensitivity to the perceptive and sensorial lifeworld of Beijing swifts, particularly in the sense of their place-making practices across species and beyond a generation. Furthermore, indebted to Despret' reconfiguration of agency as a relational achievement of "agencement", I wish to pay attention to the ongoing characters of participatory watching as it unfolds with the flux of the affective assemblage spun between Beijing swifts and Beijing urbanites.

I will make my argument in three steps. First, I start with the affective charisma of Beijing swifts, which can draw Beijing urbanites to attend to them, thus producing momentum to enable the participatory watching project. Second, I scrutinise how human-swift affective relation is intensified in participatory watching, as urbanites become more intensively involved in swifts' affective worlds. In particular, the heightened awareness of swifts' individual and intergenerational place-making—their philopatric way of dwelling in a transforming, hybrid urban landscape—affords both urbanites and

swifts new agencies. Beijing swifts become genuine co-inhabitants whose "lifeway" intertwines with the fabric of the city. Lastly, I conclude by accounting for the new direction in which the urbanites-swifts association further evolves. I suggest that new civic activism of swift observers has emerged from participatory watching in which Beijing swifts are increasingly accommodated in the fabric of the social life of Beijing urbanites. Deeply affected by swifts' vital connection to their natal nests in Beijing, urbanites are increasingly caught in the responsibility of questioning anthropocentric urban planning practices and safeguarding swifts' claim on their 'home' in the city.

6B.2.1. In the name of Beijing: the affective charisma of Beijing swifts in "swift capital"

Why does the Beijing swift project have such a broad mass base to rally the enthusiasm of a considerable number of Beijing urbanites? I wish to draw attention to the role of affect as a vital motivating force that impels people to participate in the project. Specifically, the affective dimension this section attempts to articulate is the potential of the affective charisma (Lorimer 2007) of Beijing swifts.

Lorimer's research of nonhuman charisma (2007) illuminates my understanding of an affective urbanites-swifts relationship. In the field of ecological conservation, the notion of charismatic species commonly refers to the familiar, aesthetic organisms, which, by inspiring public affection, are harnessed to raise public awareness about conservation. While the discussion on charismatic species often narrowly focuses on an essentialised understanding of the innate properties of species, e.g., the visual appearance of species, Lorimer makes a crucial contribution to adopting a relational approach to nonhuman charisma. Nonhuman charisma, as he conceptualises, is a relational property, emerging

in relation to the perceivers who are "technologically enabled, but still corporeally constrained" (ibid: 915), and the specificity of cultural contexts in which cross-species encounters occur.

He proposes a typology of three overlapping charisma, namely ecological charism, aesthetic charisma, and corporal charisma. I will draw on specifically the ecological charism and the corporal charism in the following analysis.

6B.2.1.1. Ecological charism

Lorimer defines ecological charism as the "ecological affordance" in terms of anatomical, geographical, temporal properties that configure the detectability of an organism and the ease with which a human perceiver is able to tune in to its behaviour. Beijing swifts are indeed a species with strong ecological charisma. As a result, some swift observers, particularly those who have spent most of their lives in Beijing, are imbued with a subtle sensitivity of the affective presences of Beijing swifts, even though they may be unable to identify the birds taxonomically as Beijing swifts.

For one thing, unlike the arduous process of careful piecing together of multiple clues of water vole presences, as documented by Hinchliffe, spotting highly-visible Beijing swifts in the city is a rather straightforward task.

The only time Beijing swifts land for a considerable period is when they arrive in Beijing to breed[73]. As such, the swifts' seasonal migration patterns thus afford Beijing urbanites rare opportunities to have intimate encounters with them for about four months every year. At the same time, it configures swift-watching as a seasonal social activity.

Box 6.1. **The aerial feat of Beijing swifts**

At first glance, the aerial feat of Beijing swifts poses a challenge to detect and attune to them by human observers who live in an earthborn umwelt. Indeed, in European folklore, the common swift was nicknamed "the devil's bird" precisely due to its aerial existence that makes it vastly remote from humankind. The Beijing swift likewise is famous for its aerial life—it eats, sleeps and even mates on its wings.

The bird has evolved several remarkable aerodynamically efficient features. First, the adult bird weighs only between 35 to 40 grams. Second, its torpedo-shaped body and the scythe-shaped wings combined with heavy wing loading and rapid wing beats, making it an excellent flyer. In addition to its wings, the bird has a distinctively shaped tail—its deeply forked tail allows it to make sharp turn in flight, which is an incredibly important feature to allow it to capture insects while flying. The Beijing swift has been nominated as the new record holder of the recorder of the longest uninterrupted flight capable of being airborne for 10 months during the non-breeding season (Skibba 2016). From the moment a young swift leaf its nest, it spends almost all their lifetime in the air in non-breeding season.

And there are more factors to consider the ecological charisma of Beijing swifts. Beijing swifts are conspicuous animals who rarely shy away from urban residents, thus allowing a rather easy spotting. First, Beijing swifts prefer to aggregate in an enormous swarm, evocative of the magnificent murmuration of starlings in Europe. For instance, at the Kuoru Pavilion, the estimated population of Beijing swifts was recorded to peak at 342[74] in early July 2019. As I have observed in several observation sites, the flock of massive Beijing swifts could easily instil awe of passers-by, even if they may not identify them.

Second, Beijing swifts are known to perform flight in flocks with a presumable socialising function called "screaming parties" (Henningsson et al. 2010; Doktor et al. 2012) near breeding sites

[73] Non-breeding yearlings without the mission to breed are also known to migrate to the breeding site, slightly later than breeders (thus known as "rearguard"), to roost at previous nests (Tigges 2006).

[74] Due to the limit of observation and recording method, observers acknowledged that the real population size of the colony of swifts must exceed the estimated number.

at dusk. Thus unlike some quiet breeders (e.g., the black redstart described in Hinchliffe s study), they can be very vocal, especially during the breeding season. As a result, despite the high noise level in the city, their squealing makes it easy to discern them.

Lastly, the lifeworld of Beijing swifts is intimately tied to the urban living of Beijing residents, incorporating into the density of human habitation. It is easy to recognise and spot swifts in places such as gaps of architecture at tourist hotspots and holes of wall air conditioners.

6B.2.1.2. Corporal charisma

By corporal charisma, Lorimer is interested in the visceral feelings involved "in tuning in to an organism over a longer period of time" (ibid: 918). One aspect of the affective charisma of Beijing swifts is precisely stemmed from the rich history of Beijing swifts making a world for themselves in Beijing. The Beijing swift was first described as distinct from the nominate common swift, by English consul and naturalist Robert Swinhoe back in 1870. It was classified as a subspecies of the common swift and named after the city of Beijing as Beijing swift or *Apus apus pekinensis*, making it the only species that carries the name of "Beijing" (Peking).

The bird has been inhabiting Beijing, living in the city's tall nooks and crannies for centuries. To many old Beijingers, the large flocks of blackish-brown swifts screaming and circling the city's historical places such as the Summer Palace and the Forbidden City[75] become etched into their childhood memories of the hot summer days. Native Beijingers call them "building swift" (*lou yan'er* 楼燕儿), notably for their habit of breeding at eaves and gaps at the high points of historical buildings

[75]One of the earliest recordings of Beijing swifts population was conducted by ornithologist Zheng Guangmei in June 1965. He travelled by bike along the moat (*hucheng he* 护城河) that encircled the Forbidden City. His survey yielded a total counting of almost 400 Beijing swifts in the area. See Zhou (2017).

such as city gatehouses, temples, pagodas at royal palaces.

Notwithstanding Beijngers' general fondness of the iconic Beijing swift, the name "building swift" may also carry a slight sense of disapproval. A native Beijing *daye* revealed to me in a random chat when I was monitoring Beijing swifts at the Kuoru Pavilion:

> My mom used to tell me that the birds are called 'building swift' because they are snobbishly (*shili* 势利) picky about where they live. They prefer to nest only at high-profile, lofty imperial buildings symbolising the royal power rather than living under the eaves of commoners' hutong alleyway housing.

Certainly, we now know that to call the Beijing swift snobbish is an unfair judgment. One particularly distinctive feature about the swift is its minute, slightly curved feet, hence giving its scientific name *apus*, a derivation of the Greek *apous* meaning "without feet". With all four toes pointing forward, the Beijing swift has two incredible, grasping feet that are well-suited to clinging to a vertical surface such as cliffs and rock faces but useless to perch horizontally.

Originally cave and cliff nester, in the process of colonising the city space, the bird remained to roost and nest at some of the tallest buildings that were only found in imperial palaces and ancient building complexes for centuries. Indeed, old Beijing had an exceptionally low skyline. As Aldrich puts it, "Before the 1980s, Old Peking was a capital city without a skyline" (2006: 3). The royal buildings in the Forbidden City and other imperial complexes occasionally rose to multiply storeys, so did pavilions and temples erected. They were hence favoured by Beijing swifts.

It is likely that many Beijing residents have encountered Beijing swifts in their lives, but whether

they are able to register that encounter is a matter of being affected by swift bodies, namely their corporal charism. Among swift observers, several participants reported previous encounters with Beijing swifts which left them a lasting impression.

Mrs Chen, a self-claimed old Beijinger, told me her first encounter with Beijing swifts long preceded her participation in the project. For a long time, she was curious and rather nettled by a high-pitched sound that kept waking her out of slumber in summer mornings. At first, she thought it was the squealing sound of the bike braking and felt quite crossed with the early-rising biker. One day, she stood on her balcony when she was greeted with a swarm of brownish-black birds surfing in the air. It was not until that moment that she realised that the sound disturbed her in the morning was made by what the Beijing elderly would call "building swift".

Dami also encountered Beijing swifts before—a memorable experience of rescuing a Beijing swift. However, at the moment of that encounter, she had no idea what exactly she had helped rescue. It only occurred to Dami later through the training session for all new swift observers that what she had saved was a Beijing swift. Due to the structure of its feet, it is difficult for Beijing swift to take off when it is grounded. If not only for Dami's assistance, the swift was almost impossible to fly away on its own.

Interestingly, Dami's entanglement with Beijing swifts was more profound. It was as if she was meant to become a 'swift guardian' by fate. In 2019 spring, she and her daughter, along with Mrs Chen and two other volunteers, rescued a nearly-drowned young swift when conducting on-site observation of Beijing swifts in Beihai Park. The bird seemed to have fallen from its nest. It was a juvenile bird judging by its wings marked by white edges near the tips. They named it "Little Five" (*xiaowu* 小五) after the Five Dragon Pavilions. After spending a week at the BWRRC to convalesce, fully recovered Little Five was set free at the Longze Pavilion when swift observers from other sites met together to

bid it adieu.

This vague sense of sensitivity living together with Beijing swifts in the city—a clue of being affected by the charism of Beijing swifts—is a crucial force that produces momentum to bind people together to participate in the participatory project of watching Beijing swifts. The affective charisma of Beijing swifts manifested in people's encounters with them constitutes a latent form of affected public out of which a new collective of Beijing swifts and Beijing urbanites might emerge.

My interpretation is inspired by Hawking's notion of "infrapublic". An infrapublic, or pre-public, is a "virtual space for a potential" (Hawking 2011: 551) to engage in political and other participatory practices. Specifically, the idea speculatively pursues a pre-public of "affective and visceral registers of subjectivity and intersubjectivity" that undergirds the potential out of which unforeseen publics might emerge (with their issues). It can be argued that the affective energy of the charisma of Beijing swifts serves as a sort of virtuality to be actualised and intensified within the apparatus of the swift monitoring project.

In what follows, I attend to how participatory watching of Beijing swifts keeps stimulating the affective energy of the charisma of Beijing swifts. In so doing, the participatory watching project pulls together bodies of urban residents and Beijing swifts together to engage in further participatory practices.

6B.2.2. The multiplication of affect by attending to swifts' place-making in Beijing

I propose that the participatory watching project creates a situation in which the affective relation between Beijing urbanites and Beijing swifts are enhanced and multiplied. In particular, the situated spatial practices of locating and observing swift's nests allow observers to be affected by swift' vital

connection with particular places in Beijing. As a result, participatory watching of Beijing swifts enhances urbanites' attentiveness to these shared places of urban living that are rendered meaningful by both humans and swifts, as a relational achievement.

Beijing swifts can engage participants in a range of ways and accordingly could call into being different publics. In other words, their power of engagement is not fully determined but evokes a subtle repertoire of capacities for action, a consequence of the specific arrangement of settings, things, actors involved in particular cases. I suggest that the participatory watching project assembles a distinctive set of relations among regulatory bodies, participants, devices and, in so doing, enacts new agency of Beijing swifts as genuine co-habitants of Beijing.

We could turn to a brief comparison of three fields of action in which the Beijing swift is elicited, but its capacities for engagement need to be accounted for in different ways. The first context is how the Beijing government presents the Beijing swift as a 'living fossil' of Beijing culture. The attempt was most prominent in the effort of making the figure of the Beijing swift one of the five mascots of Beijing 2008 Olympic Games. The five mascots, known collectively as *fuwa* (福娃, or Friendlies), symbolised the Olympic rings' five colours and the traditional five elements. The figures of four mascots took inspiration from four endemic animals in China, and only Nini, who represented the iconic Beijing swift, explicitly alluded to the culture of Beijing.

In this case, the Beijing swift was inaugurated as embodying an ecological value and a profound cultural significance in the official discourse. A comment in an article published by *Guangming Daily*, one of the leading state-backed newspapers, imbued the Beijing swift with cultural importance in this way (Zhou 2017):

Beijing swifts, just as their name displays, have always been the living culture flourishing on the Central Axis of Beijing (*Beijing zhongzhouxian*[76] 北京中轴线). Taking residence in the grandiose royal palaces, the birds overlook the city as they have survived massive historical shifts over thousands of years.

A further move in government's representational practices of cementing the symbolic ties of Beijing swift with the capital city was found in associating the bird with the Belt and Road Initiative (*yidai yilu* 一带一路), a global infrastructure project initiated by the Chinese government in 2013. For example, in a 2018 exhibition themed on the Beijing swift, curated by researchers at Zhengyang Gate in collaboration with Tianjin Museum, the bird was rendered a potent symbol and ambassador of indeed BRI. A large part of the richly illustrated exhibition centred on tracing the historical entanglement of the city and the bird dating back to about three thousand years ago when what is now modern Beijing was called *yandu*, the "Swift Capital" (*yandu* 燕都).

Nevertheless, the exhibition also powerfully called forth a new symbolic meaning of the bird. Since the migratory bird whose migratory route aligns with one of the overland trade routes outlined by BRI, linking China with Central Asia, and the Gulf and Africa, the exhibition conveyed a clear message. It highlighted, perhaps for the first time, the role of the Beijing swift to embody a national political vision with an outlook on economic and ecological cooperation on regional and global scales.

Rather than being engaged with as an actant, the official discourse nonetheless was marked by a

[76] The Beijing Central Axis refers to the core area of the old city that stretches 7.8 kilometres starting in the south from the Yongding Gate, running across a series of historical buildings including Zhengyang Gate, Tian'an men Square, the Forbidden City, the Jingshan Hill, and ends in the north with the Drum Tower and Bell Tower. Acknowledged as a fundamental principle of Beijing's urban spatial pattern and capital planning in China, it is also revered as the backbone of the culture of Beijing with a history of more than 800 years as a capital city of China.

notable lack of attention to the bird's performative role in engaging and affecting the everyday lives of Beijing urban residents. Meanwhile, it ascribed a higher value to the meaning and historical master narrative of the bird than to its material presence.

The second scenario to consider is the scientific approach to attending to the bird, for instance, in ringing activities of the CBS project. The banding was a performance that assembled a set of relations between people, Beijing swifts, the majestic Kuoru Pavilion, and a range of things from technological devices such as geolocators to a ruler to take body measurements. The Beijing swift was implicated in enlivening a collective into being, a collective which was responded to the agency of the bird as a scientific marvel whose incredible migration prompted ongoing scientific curiosity.

In comparison, a new form of agency of the Beijing swift became perceptible in participatory watching project, capable of "affecting, displacing, and transforming human bodies and conduct" (Brice 2014: 944) in a new way. Specifically, urbanites become affected by not only swifts' charisma but also their strong attachment to specific urban places in Beijing. Participatory watching adds a new force to transform affective urbanites-swifts encounters such that Beijing swifts emerge as active geographical actors who build a multispecies world for themselves in the city.

The Beijing swift has been known to exhibit strong "site fidelity". In biology, the term refers to "the tendency to return each season to the same nest site or breeding colony" (Ehrlich et al. 1988). Local people adore the bird for its loyalty to its natal place. A widely circulated nursery rhyme on which the toddlers of my age grew up in Beijing depicts a swallow-like bird[77] as a harbinger of the approach of spring. The lyric goes:

[77] For people without specific training of bird identification, the Beijing swift and the barn swallow, another common species that tends to co-inhabit with people, e.g., nest under the roof of houses, may be called by local residents interchangeably as *yanzi* (燕子 swift or swallow).

The little swallow, brightly dressed,

Comes every spring to visit us.

I ask the swallow: "Why do you come here?"

She replies: "Spring is most beautiful here!"

Despite the likely variation among individual birds in breeding and site philopatry, in general terms when it comes to breed in spring, most Beijing swifts find their way back to colony sites in which they were hatched, following an incredible long distanced journey from Africa. Beijing swift's repeated use of a breeding site is often spatially specific. It repeatedly returns not only to the same general territory, but often to the same nest every year. Recent ringing studies at the Kuoru Pavilion led by CBS have confirmed a high degree of site fidelity of this colony of swifts. In particular, the retuning colony consists of summer breeders who return to the established breeding site for reproduction, and non-breeding yearlings who are likewise driven by a pull to return to a natal site.

One of the most vital factors that impact site fidelity is the physical stability of the established nest site. Prime examples are cliff nesters, including cliff-nesting Black-legged Kittiwakes, other gulls, and many alcids who are known to demonstrate prominent site fidelity, in that the cliff tends to be there year after year. It is thus not hard to imagine the preference of the originally cliff-nesting Beijing swift for the eaves of some of the tallest majestic imperial buildings to burrow when they first moved to the city.

We simply do not know how long Beijing swifts have been returning to their various nesting sites in urban Beijing. The Kuoru Pavilion, for instance, was built in 1752 under the reign of Emperor

Qianlong (1736-1796) and a colony of Beijing swifts has been found to nest there even today. The visible traces of dried bird droppings (Figure 6.8) on the beams that support the intricate eaves narrate the established presence of Beijing swifts for generations, far exceeding the life expectancies of individual birds. The pavilion here emerges as a storied landscape “remembered, reinterpreted, and imbued with a changing value and significance” (van Dooren 2014: 72) through the course of a swift's life.



Figure 6.8 The beam in the middle is covered with white bird droppings
Three established nests of Beijing swifts are circled in red.

On the surface, participatory watching involved simply marking the presence of Beijing swifts which were then translated into data in the form of the total count. However, as I have touched on in the opening vignette, the tasks of swift-spotting and data collection often relied on localised skills to find out nesting or roosting sites of Beijing swifts. In a sense, participatory watching is crucially a situated

spatial practice of attending to "beastly places" (Philo and Wilbert 2014) of Beijing swifts, particularly how they make themselves at home in specific places against or within the grain of urban architectural design. From the perspective of taking more seriously more-than-human beings as "narrating subject", it means being told stories of places expressed by them.

Van Dooren ingeniously articulates the idea of "storied-places" (van Dooren 2014; van Dooren and Rose 2012) as multispecies achievements. She recognises that many animals are agentic to render their experiences of the world into a meaningful sequence so as to form narratives. At the core of her account of multispecies storying is how more-than-human species may develop place attachment, that is, to interact with places as personally significant and meaningful.

A prime example in her study is the Little Penguin of Manly in Australia, whose high site fidelity strikingly resembles Beijing swifts. Every year the little penguin returns to the same general area, and often to the exact same nest or burrow. The significance of penguins' relationships to these places is such that penguins "inhabit 'experiential worlds' in which a burrow might meaningfully be understood as a 'home' (van Dooren 2014: 80)". Moreover, these storied-places carry the culminative experiences of penguins' forebears, passed down between generations through their vital connection to a specific site to nest. Penguins and their places cannot be easily split apart, as these storied nesting places are "a key part of the inheritance that makes the ongoing life of the colony and the species possible at all" (ibid: 82). As such, van Dooren warns that destroying these places may lead to not simply the loss of several individuals but efface the continuity of generations.

The concept of storied-place provides a fruitful avenue to rethink the Beijing swifts' strong relationships with specific places. However, I rarely heard participants discussing swifts' impulse to return to the same nesting site with the specialist's terminology "site fidelity" or "philopatry". Rather,

participants tended to call Beijing swifts “home-loving” (*lianjia* 恋家).

In the participatory watching project, urbanites were enrolled into participation to engage routinely with the city landscape co-inhabited by swifts. It involved reading the landscape and disclosing signs of Beijing swift dwelling places via their day-to-day knowledge of these sites. In this process, urbanites became affected by not only swifts’ charisma, but specifically by swifts’ making “storied places” that shaped and was shaped by the city landscape.

As mentioned before, participants were arranged and organised in spatial terms, grouped based on particular sites where they chose to make observations. Observation sites were loosely categorised into three groups according to specific architectural designs of buildings with established swift nests: sites with ancient architecture (*gu jianzhu* 古建筑), pseudo-classic architecture (*fanggu jianzhu* 仿古建筑) and contemporary architecture (*xiandai jianzhu* 现代建筑). Even for ancient architecture known for the long-established presence of Beijing swifts, it is far from clear where exactly Beijing swifts make their nests. Local urbanites, therefore, can make valuable contributions, deploying their intimacy with the site forged through routine embodied practices of watching swifts and walking around the area.

As shown in the opening vignette, when Xuefeng first visited Dami at the site of Beihai Park, he felt a sense of disorientation even though he was a seasoned swift observer familiar enough with all the protocols to conduct on-site observations. The sense of disorientation presumably stemmed from the unfamiliarity of the landscape and swifts’ relationships with their nesting places at this site. In contrast, Dami and Mrs Chen demonstrated exceptional intimacy with the landscape and swift places. Their knowledge of ‘swift home’ was generally considered essential for carrying out on-site observations.

Their familiarity with the swift nests and the landscape of Five Dragons Pavilions was hardly

about the historical or cultural background of this historical site; rather, it derived from their intimately inhabiting the landscape in the city living. Mrs Chen visited the site weekly to watch the swifts, while Dami, who lived five minutes away from the park, preferred taking an evening walk in the park almost daily. It is precisely this kind of routinised bodily involvement of walking and watching that enfold Dami and Mrs Chen and Beijing swifts into relations of affecting and being affected.

Dami knew well almost all nooks and crannies where swifts nested at the pavilions by reading the traces of swifts' presences. Similar to the Kuoru Pavilion in the Summer Palace, the beams and the caisson ceiling of Fiver Dragon Pavilions are covered with visible white marks of dried bird droppings, staining the exquisite paintings on the beams. Dami also had a mini collection of nesting materials she had picked up in the process of observations. Moreover, her understanding of the landscape involves closely following swift movements to see where they ended up going.

If locating swift nests on ancient architecture is relatively easy by reading the long-established signs of bird droppings, it takes an extra effort from observers based in sites of contemporary buildings to discover the nests of swifts. Take the Tianningsi Bridge site (Figure 6.9) as an example. Tianningsi Bridge is a multi-layered overpass that sits on the 2nd Ring Road. It connects roads and crosses a river called South Moat (*nan huchenghe* 南护城河), a part of the former moat surrounding the inner city. Tianningsi Bridge is well-known as one of the earliest large colonies of Beijing swifts discovered in contemporary architecture. According to observation data in 2019, the colony at the Tianningsi Bridge with 663 counted swifts was the largest in Beijing. It was a mesmerising sight to witness a flock of Beijing swifts dancing in the air, overlooking the overpass that bridges several lanes with high-density and fast-driving traffic in an area surrounded by skyscrapers and green trees. And yet, little do people (perhaps apart from the team of swift observers at the site) know where these swifts nest and roost in

this area.



Figure 6.9 Beijing swifts spotted at Tiangningsi Bridge site

The main participants of the team consisted of four mothers plus their children. Among them, Yuangfang, the current team leader of the team, was the oldest participant at this site since 2017. Except for Yuanfang, the rest of the team had no previous experience of bird-watching at all. Nevertheless, they shared one thing in common: they were all residents living near the site.

Lina and her daughter were the latest addition to the team in 2019. She first met Yuanfang on a pedestrian bridge near her residential community. She was flying a kite with her daughter when she noticed Yuanfang, who was also staring at something in the sky but with binoculars. She approached Yuanfang with interest to know what she was watching, and it turned out that the pedestrian bridge (figure 6.9) was the no.1. spot (*yihao dian* 一号点) to observe Beijing swifts. Yuanfang introduced

the swift project to Lina, who happily accepted the offer to join the team simply as an interested resident.



Figure 6.10 The view from the no.1 observation spot at Tianningsi Bridge site
The man standing next to the blue vehicle is a vendor selling kites to passers-by.

The observation sites at Tianningsi Bridge were more spatially extensive and complex, constituting a vast, urbanised landscape of a series of bridges, footpaths, and a river called West Moat (Figure 6.11). Observers found that swifts tended to move along the West Moat. Attending to swifts' movements and place-making practices, they set up four sub-sites for better observation; at the centre of each site was a pedestrian bridge crossing a river. Beneath the bridges and on both sides of the river were two footpaths. Thus observers could stand on the bridge to observe swift gathering in the air as well as to observe swifts returning to nests when walking on the footbath beneath the bridge. Observers spread into four sub-sites to make observations simultaneously. Because of the affinity with bridges, the colony of Beijing swifts living here was nicknamed "swifts of the bridge" (*qiaoyan* 桥燕) by

observers at Tianningsi Bridge.



Figure 6.11 The landscape of Tianningsi Bridge site
Standing on the red rubberised pedestrian lane, observers could have a good view of how Beijing swifts make their nests in the holes beneath the bridge deck.

Indeed, the discovery of swift nesting sites is derived from observers' sensitivity and appreciation of the place-making of swifts in their routine watching in the shared landscape. Yuanfang was the first person to find out swifts nesting in the drainage holes for the bridge at the no.1 observation spot where she was normally based. Yuanfang was aware that swifts are in the habit of forming swarms near their breeding sites when the sun sets. She paid particular attention to the movement of swifts as they flew and gathered below the bridge. Tracing fast-moving individual swifts could be a daunting task that requires both patience and learning to be affected by swifts—their presences, rhythms and activities. Finally, Yuanfang was able to locate some drainage holes where she saw swifts taking up residence in the long-term of watching them.

The Tiangningsi Bridge and the colony of swifts spotted there have recently received much attention and emerged in media stories as a 'land of hope' that heralded Beijing swifts' successful

adaptation to an increasingly urbanised landscape. However, local swift observers held a somewhat different view. They did not deny that Beijing swifts were indeed remarkable creatures that continue to "become-with" (Haraway 2008) others including human others, just like when they first moved into Beijing and learnt a new way of taking residence at imperial buildings. However, as Fanli, an active observer at Tianningsi Bridge commented, even as a contemporary building constructed in 1991, the bridge may still shelter the continuity of generations of swift who return every year to these sites. She said to me when accompanying me in a walk through the footpath near the 2nd sub-site (where she conducted observation of swifts):

> Do you know this river is in fact part of the former moat surrounding the inner city wall of old Beijing? We simply do not know what the landscape used to be like, as Beijing boasts such a long history and has been undergoing vast transformation. I have recommended to Mr Shi that our participants need to get more historical knowledge about Beijing's urban spatial developments, in order to understand the transformation of Beijing swifts' lives in the city. I think it's highly likely that there may have been ancient buildings occupied by Beijing swifts on the ground where we are standing. Maybe that's the reason why these birds continue to reside in the area. They are simply returning to the natal home of their ancestors only to find the buildings have long been demolished. But luckily, the drainage holes work fine."

I take Fanli's expression as a sign of her being affected by the agency of swifts in the sense of swifts rendering specific places in the city as "home". In Fanli's view, swifts' tendency to repetitively return to the same nesting site was not read as something 'retained' and inherited across evolutionary time

frames. Nor did she understand these nesting sites as simply what we mean by suitable habitats that meet specific ecological and biological characteristics for a particular species. To borrow van Dooren's beautiful words, Fanli would no doubt agree that for Beijing swifts, so as for little penguins, "any piece of land that meets these requirements (of a suitable habitat) is not just as good as any other. Only one colony is 'home'…" (2014: 80). Fanli, as with many other volunteers in the project, increasingly made full acknowledgement of how swifts valued their breeding places as historically meaningful, as indeed 'home' deeply entangled in the history of the specific colony of swifts.

6B.2.3. Safeguarding swifts' places: participatory watching with a civic gesture

As we have discussed, the affective connection between Beijing residents and Beijing swifts intensified as people became deeply moved and affected by swifts' place attachment in participatory watching project. This final section turns to consider how this intensified affective swift-urbanite entanglement in turn further empowers the participatory assemblage, unfolding participatory practice in the new direction to respond to the proposition of Beijing swifts. Congealing out of participatory watching of Beijing swifts, a civic impulse to make discursive and material spaces for swifts in the city emerged.

In April 2021, an observer based at the Yonghe Gong (雍和宫) Lama Temple reported to the group chat that Pavilion of Eternal Happiness (*wanfu ge* 万福阁), the main hall in the temple, was under construction. The building was covered in green debris netting from head to toe. According to his ongoing observation, the pavilion happened to be a popular site where swifts preferred to nest. In the picture (Figure 6.12) he took, a few Beijing swifts flew above and encircled the pavilion under renovation, but clearly, the debris nest left no gap large enough for swifts to access to their nests. He

posted the information to the group chat for ideas about any action that may be taken. Responses from observers at other sites followed quickyly. There was a palpable sense of anxiety and indignation among members of the online community of swift observers.



Figure 6.12 Pavilion of Eternal Happiness under construction
Swifts (circled in red) were discovered being prevented from accessing their nests.

Collectively, the concerned swift observers articulated a strong recognition that the meaningful entanglement of the swifts with their nesting sites at the pavilion was such that they rendered these sites meaningful as home. As a result, what made them particularly outrageous was how the construction team so blithely evicted the swifts from their home that has been intimately inhabited by

maintained and passed down between generations. To make things even worse, the construction work took place between mid-March to July, approximating the main breeding season of Beijing swifts. It went without saying that working within this period run a greater risk of destroying active nests and causing significant disturbance to birds.

Rage and resentment aside, observers stepped first to let "the very cry of the nonhuman" (Johnston, 2008: 636) heard by translating swifts' storying of their homes in a language that consisted of valid numbers accompanied with pictures. Drawing on results yielded from almost a hundred observations in four years since 2017, swift observers endeavoured to piece together a short excerpt of the epic narrative of the birds' unique ties to their nests. Moreover, representatives of the construction team and the administrative staff from the Lama Temple were welcomed and invited to join swift observers in the weekly observations to get a first-hand impression of swift's fidelity to the sites—how they stubbornly lingered, circulating the tower. Swift observers were eager to point to some signs of the urban realities of the messy entanglement of swifts and the tower: traces of dried and fresh bird droppings, nest materials fell on the ground and so on. In addition, some observers also suggested to went directly to raise questions and register complaints via the 12345 hotline—the public service hotline known as the Mayor's Mailbox (*shizhang xinxiang* 市长信箱), or to email their complaint to authorities of relevant urban management government sectors. The result of swift observers' activism remained ambivalent. At this stage, nevertheless, observers were glad that thanks to the concerted effort, they could at least bring a negotiation with stakeholders on the table.

This nascent form of grassroots activism to seek urban multispecies justice was unprecedented in the history of swifts' entanglement with the city. Since the 1970s, many established swift colonies have been documented as lost when the estimated population of Beijing swifts plummeted from 50,000 to

a few thousand[78]. The large-scale demolition of ancient architecture mainly caused the loss of Beijing swifts as part of the broader urban renovation project, so did the installation of anti-nesting devices to protect pre-modern buildings. And yet rarely have urbanites found voice to strive against indifferent urban planning decisions that disregarded the lively multispecies lifeworlds. In this sense, swift observers' activism was a precursor towards confronting anthropocentric spatial ordering and promoting "more-than-human right to the city" (Shingne 2020).

In short, out of participatory watching of Beijing swifts generates a civic impulse. It is animated through affective more-than-human relations, as swift observers confronted the human-centric narrative embedded in the uncaring building work that amplified the human control of the city landscapes while belittling the swifts' claims to the places they call home. The specific example of the civic gesture to safeguard swifts' home points to how an emergent collective in a more-than-human sense gathers political force. It is evocative of Jane Bennet's vital materialist vision of "political ecology". She draws upon Dewey's work *The Public and Its Problem*, to whom a political action constitutes a kind of ecology, a conjoint action that may not originate in humans alone. As Bennett surmises, human intentionality can be "agentic only if accompanied by a vast entourage of nonhumans" (ibid: 108). With rich discussions of the power of things, including the electric power grid, edible matters, metal, worms and so on, Bennett foregrounds the force of nonhumans in social and political life. Drawing on her insight, the enmeshment of humans with vibrant non-human agencies, in particular Beijing swifts, as I have discussed, is critical for making an 'ecology' of political participation.

[78] According to the latest result of the swift monitoring project, it is estimated that the population of Beijing swifts can reach 5000 in the pre-breeding period and top 10,000 after breeding in Beijing.

6B.3. Discussion

This chapter 6B specifically accounts for two endeavouring non-human bodies—the mobile phone and Beijing swifts—which constitute the conjoined action of participatory watching. With respect to the role of the mobile phone, in section 6B.2, I attend to the human-phone hybrid in the context of participatory watching of Beijing swifts. The participatory watching project has actualised a novel capacity of the mobile phone to perform the role of personal sensory technology. Importantly, the mobile phone affords participants the capacity to spot and count Beijing swifts. And as such, participants are transformed into swift-spotters and data collectors in relation to their phones in watching swifts.

Section 6B.3 then centres on the significance of the affective presence of Beijing swifts in the participatory watching project I understand as essentially a multispecies achievement. Specifically, the affective charisma of Beijing swifts, their easy detectability and historical entanglement with the city and its people constitutes a vital force to propel urbanites to participate and thus enabling the participatory project. Second, I have traced how participation, in turn, enhances the affective connection between urbanites and Beijing swifts. Urbanites' attention is increasingly drawn to care for not only the existence of Beijing swifts, but also their place-making practices and their philopatric way of dwelling in the city. Lastly, I discuss the intensified force of the people-swift collective that has unfolded the participatory practice in a new direction. A nascent form of grassroots activism to protect swift' nests is emergent from the participatory watching project. To sum up, chapter 6A and 6B put forward an analysis of participatory watching. As with previous chapters in this thesis, they intend to propose an alternative narrative of urban visual practices involving more-than-human beings: the collective nature-watching can be emotive, affective and civic.

I would like to conclude with a comment on a departure my analysis of participatory watching has taken from the network metaphor. Some studies stubbornly attach to the metaphor in their depiction of public participatory practices. The network metaphor of ANT, for instance, is valuable to diversify the actors and actants through which participation is enabled. However, it may also evoke a narrow vision of a rather static associative configuration[79] in which things remain consistent in their current arrangement. Through a lack of attention unfolding in a temporal sense, the relational ontology of hybridity that the perspective of ANT tends to celebrate may become yet another "ontological fixture" (Dricel 2008: 606) in conflict with the notion of becoming.

One distinction I seek to make here is between metaphors of mixings, to one of multispecies achievement, to give an account of the dynamic unfolding of participation. In this sense, the concept of achievement becomes more attractive to articulate the active process of coming together of different forces with an ongoing character and an openness.

I have examined how actors of participatory watching—mobile phones, urbanites and Beijing swifts—are in the process of transformation as participation unfolds. They all start to look very different as participation continues. In particular, urbanites' participation in monitoring and observing Beijing swifts essentially demands attunement with the movement and place-making practices of Beijing swifts in the ongoing process of participatory watching. The highly mobile swifts with strong site fidelity and urbanites are folded together in a dynamic way in participatory watching, as swifts continue to adapt to the urban world and urbanites watch swifts in emerging swift places in the city.

[79] I am indebted to my supervisor to reinforce this point. In an earlier medical anthropological study (Hsu 2017), she drew inspiration from ANT to make a critical theoretical manoeuvre to reframe the patient-practitioner dyad into a triangular relation including pots. Pots here refer to the material expressivity of things that constitutes clinical encounters rather than working merely as "a metonymic extension" (ibid: 6) of doctors. Although her configuration of the patient-physician-pot triad is a meaningful movement toward acknowledging the thingy aspect of medical encounters, the networked relation implies a static picture of association in given configurations nevertheless.

Conclusion

This thesis has attempted to accomplish three tasks. First, I complicate the overwhelming critique of visual experience as objectifying, detaching, and depersonalising. Instead, I argue for the intersubjective and affective potential of visual practices with ethnographic findings of nature-watching, or *ziran guancha* (自然观察) in Beijing. The hope Martin Jay (c.f., 1993a) expresses to overcome anti-ocularcentrism warrants redress. In this thesis, I maintain that the stories of the eye which need to be a "polyphonic—or rather, polyscopic narrative" (Jay 1993a: 592) merit a second look.

The word "regard", as Jay observes, has an alternative meaning: in both English and French, it means to "look at", but also to "care for someone else". This thesis is inspired precisely by this hope to articulate how visual practices and experience of nature-watching can nourish, instead of curtailing, interactive and affective ties to more-than-human beings in the city. I always felt overwhelmed whenever I heard this heartstring-tug saying that nature-watchers liked to cite: "Only if we see, will we understand. Only if we understand, will we care. Only if we care, will we help". It is telling that Beijing nature-watchers found the power of the simple act of watching so compelling that they misquoted Dr Jane Goodall to stress the critical role of seeing (which is not included in the original quote).

Second, I have made it one of my goals to capture Beijing as a vigorous living landscape that affords a rich assemblage of different multispecies lifeworlds. Indeed, this thesis sets out to unveil that more-than-human beings are closer to us, geographically, affectively and epistemically than we have been expected. Urbanites' lives are so enmeshed with them that it becomes almost ridiculous to regard

the city as a human-only space to accommodate the full scope of nothing but human activities and needs.

Nevertheless, what is gained by adding more-than-human beings to my account of urban living in Beijing is not simply to make present "a static stock" (Braun 2005) of living beings who circulate in and through Beijing. Rather, these cross-species, visual encounters have distinctive, generative effects with transformative potentials to enable nature-watchers to act in new ways. The key argument of this thesis proposes that nature-watching needs to be recognised as a variety of performative visual practices that lead to the flourishing of cross-species relatedness in the city.

The theoretical foundation for advancing my main argument lies in the concept of affect. Following the pedigree of Spinoza, Deleuze and Massumi, I employ affect to refer to the body's capacity, or what Spinoza names "the body's power", to act in the heart of encounters with multiple bodies, which present certain newness. Starting from affect is an invitation to contemplate relational possibilities. By focusing on the affective dimension of cross-species encounters in nature-watching, I have unpacked nature-watchers' embodied, relational becomings from the ways they come to connect with various more-than-human beings. Specifically, four ethnographic chapters scrutinise different aspects of how nature-watchers' capacities to form cross-species relatedness are enhanced and transformed.

Chapter 3A&B consider how nature-watchers, through education of visual skills of particularly *kanjian* and *guancha* and affective learning, are encouraged to cultivate a new capacity of being aware and opening up to more-than-human beings in the city.

Chapter 4A&B shed light on the epistemological convergence between knowing and affecting and being affected. It first rehabilitates nature-watching as a practical stance of everyday engagement with

living beings in the immediacy of their material liveliness. Second, instead of assuming the cold detachment of the viewer from the view, these two chapters highlight the affective and epistemic intimacy afforded by visual practices of nature-watching. Recursive observations of more-than-human beings habitually done in everyday urban living as we have seen in the example of *shua yuanzi* forge cross-species intimacy. This intimate and affective more-than-human sociality provides vital point to more-than-human knowledgeability.

Chapter 5A&B account for different forms of multispecies care and relatedness in a hierarchy of acceptability facilitated by the state-led discourse of *suzhi*. In the context of bird-watching, a specific form of care for urban birds emerges that paradoxically values distance and detachment.

Chapter 6A&B show a collective nature-watching activity (e.g., the Beijing Swift Monitoring and Observing Programme) I term participatory watching. It constitutes a new sensing and participatory paradigm that generates a collective ethos with civic impulses, fostering the making of urban solidarity with more-than-human beings.

Lastly, this thesis explores the specificity of urbanites' relationships with more-then-human beings fostered in nature-watching practices. I have addressed the subtle gradations of cross-species relationships between intimacy, acquaintanceship, and detachment. This point is mostly discussed in chapter 4A and chapter 5B on cross-species relationships of *huayou* and bird-watchers respectively. In chapter 4A, we have met *huayou* such as Xiaoqing, Lele and Maidong who cultivate cross-species friendship with plants. For *huayou*, plants are friends known individually through long-term, constant observations to *shu yuanzi*; it is a slow-building relationship that takes place in urban public and semi-public spaces. As such, it constitutes cross-species sociality distinct from the intimate bonding with home plants that develops in domestic settings.

In chapter 5B, I have joined scholars who recognise the heuristic value of complicating the widespread assumption that conflates proximity with a moral attribute of responsibility and distance with alienation and impersonality. For bird-watchers in my research, a genuine gesture of care must involve a dimension of detachment preserved through self-conscious cultivation of distance when watching birds. The story of bird-watchers perfectly brings into view an ethical gesture of closing *and* distancing. Bird-watching boasts a detaching form of relatedness to birds in contrast to other bird-related leisure activities such as bird-keeping and bird photography. Bird-watchers indeed tend to distinguish themselves from the supposedly low-*suzhi* others: bird-keepers who are accused of the destruction of wild birds' freedom in the name of care, and bird photographers who are disapproved for their disruptive and even hazard presences to birds to get their perfect shots.

In brief, this thesis sheds light on spatially multiple cross-species relatedness in situations where body-to-body intimacy with more-than-human beings is hard to achieve nor desired. Nature-watchers' relationships with more-than-human beings are rarely about face-to-face co-presence. The predominantly visual mode of being-with entails a 'light-touch' and slowly evolving form of relatedness whereby the line between distance and proximity, attachment and detachment, the public and private, personal knowledge and objective knowledge, the domesticated and wild may become blurred.

Certainly, Beijing has a long way to go to truly acknowledges the city as a shared, more-than-human space. In order to cultivate the positive image of Beijing as a biodiverse city, several initiatives of 'greening' Beijing have been implemented to create a livable (*yiju* 宜居), sustainable (*ke chixu* 可持续) urban environment. However, contrary to nature-watchers' engagement with more-than-human beings, underlying these initiatives was often a reductive framework that treated animals and plants as

a means to pre-set human ends.

On the one hand, more-than-human beings may constitute ecologies too unstable and inaesthetic to be wiped out to sanitise the city. On the other hand, certain species were also privileged and featured prominently in the city's campaigns to "spectacularise" (Ren 2012) the ecological features of the city and to beautify the urban landscape. Either way, more-than-human beings were to be regulated and executed to serve specific needs that amplify a "control of nature" ideology. The agentive potential of more-than-human beings, their subjectivities were downplayed, with the effects of negating the sense of building a relationship with more-than-human beings.

Nevertheless, I would like to end this thesis with a positive note. From what I have observed, more-than-human values, knowledge and spatial practices have been considered in most recent appeals for a more-than-human city. A shift in green politics is undergoing towards embedding wildlife interests into decision-making instead of treating them as political short-cuts. Meanwhile, the proliferation of nature-watching leads to a redistribution of expertise so that it includes urban nature-watchers' day-to-day knowledge of species. The government increasingly acknowledges the roles of nature-watchers and other city residents, as they have been invited to engage in new endeavours to build a more liveable city for humans and more-than-humans alike.

Policy-makers also start to value the detail of the lives of more-than-human beings. For instance, thanks to lobbying efforts of bird-watchers, conservation NGOs and urban ecologists, several urban parks have implemented new schedules of tree, hedgerow, and reed management to avoid the sensitive period of bird nesting. Moreover, a reengaged green politics has done in a way responsive to the possibility of and openness to more-than-humans. A prime example is the mounting of Benjes hedges[80]

[80] A Benjes hedge derives its name from brothers Hermann and Heinrich Benjes, who brought this technique with the idea of restoring natural habitats for wildlife. Creating a Benjes hedge starts with stacking a pile of

(*benjieshi dui* 本杰士堆) consisting of dead woods and twigs around the city. Over the years, a Benjes hedge can transform itself into a thriving habitat for animals and incredible biodiversity reservoir, attracting birds, small mammals, amphibians, reptiles, and insects.

A Benjes hedge is markedly distinct from previous approaches to urban biodiversity in that it constitutes a repository of "likely presence" (Hinchliffe and Whatmore 2006) of more-than-human beings. New initiatives such as building Benjes hedges are oriented toward a more experimental and open politics of living together that appreciates the co-fabrication of a living city by human and more-than-human inhabitants. According to the spokesman of the Beijing Bureau of Landscaping and Greening, we may expect "more attempts from the perspective of making animals living better in Beijing" (Wang 2019).

The stories of urban nature-watchers' entanglements with more-than-human beings in Beijing compel us to rethink what a good city might be from a more-than-human frame. It is my hope that this thesis has illuminated small paths. At the very least, it should be clear by now that an account of a good city is incomplete without contesting the deeply ingrained divide between humans and non-humans. To raise the call as Braun (2005) does, appreciating and accommodating more-than-human beings allow cities to be conceived anew, as ethical, political space to nurture cross-species relatedness in more ways than before.

cut branches, dead wood, twigs in layers on a mound of soil to form the core.

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Appendix 1. The burgeoning industry of nature education in China

Weller's ethnography explores the process of globalisation of the North American and western European view of nature into China where it has been embraced and resisted. In particular, he points out that specifically Western ways of conceptualizing nature as an autonomous value, i.e., "nature for its own sake", that underly the environmental conservation efforts such as national park system were imported into China and grew influential in the 1980s (2006: 56). In parallel, it might be possible to understand the emergence of nature education (NE *ziran jiaoyu* 自然教育) in the Chinese vocabulary as an effect of the globalisation process, drawing inspiration from America, Japan, Germany and Taiwan models[81], and at the same time leading to new creative new forms. While the American model of environmental education (EE *huanjing jiaoyu* 环境教育) provides great inspiration for NE in China, NE instead of EE becomes the commonly adopted vocabulary to designate a range of educational and training activities.

According to the US Environmental Protection Agency (EPA), EE is defined as "a process that allows individuals to explore environmental issues, engage in problem-solving, and take action to improve the environment". It is clear from this definition that EE is a sub-product of the major products from the environmental revolution since the 1970s (Zhang 2017) in which the desired result is to develop an individual's "awareness and sensitivity", "knowledge and understanding", "attitudes", "skills" as well as "participation"[82] in order to resolve the increasing environmental challenges.

It seems that EE in China is reserved to discuss environment-related education within the formal education system. For instance, in 2003, the Chinese Ministry of Education approved National Environment Education Guidelines, which effected a significant change in the education policy. For the first time, EE oriented toward sustainability and development of knowledge, skills and awareness was incorporated within the formal national curriculum for primary and middle school students in

[81] Although the concept, structure and activities of nature education are heavily influenced by the foreign models, nowadays it is not uncommon to see Chinese nature education organisations to mix repertoire of traditional Chinese philosophical thoughts on human-environment relationship to strengthen validity of nature educational activities. But based on my observation, the Gaia Nature School has eschewed this trend.

[82] These five categories are taken from five environmental education objectives established in the Tbilisi Declaration (UNESCO-UNEP 1978) on the world's first intergovernmental conference on environmental education in 1977.

China of around 197 million children in total (WWF 2003). In comparison, NE in China is more oriented toward informal, out-of-school, experience-based education that complements the in-school education. Unrestrained by the in-school pedagogical settings, the educational activities under the umbrella term of NE are varied, ranging from immersion-based, outdoor activities in local green spaces, short-term field-trips, hand-on activities such as building an edible garden, overseas eco-trips or "natural history trips" (*bowu lvxing* 博物旅行), to indoor lectures on topics related to animals, plants, minerals etc.

In addition, the mainstream NE institutes and organisations show a distinctively urban ethos, whereas EE is normally understood in a more de-contexutalised way. Wang Ximin, an early NE activist who has been trained in EE in Wisconsin, believes that 2010 was a critical point for the consolidation of NE in China when two key events took place (Wang 2018). The first is the educator exchange programme by the effort of an NGO called Japan-China Civil Society Network (*zhongri gongyi huoban* 中日公益伙伴). Since 2013 it facilitated a Japanese nature school training project in which Chinese nature educators were offered the opportunity to be trained in pioneer nature schools in Japan (Efird 2018).

Wang was selected along with two other participants to spend a short term in one nature school. Moreover, the significance of this training project involved bringing over Japanese experts in China to share experience such as how to establish nature education facilities with Chinese educators. By virtue of these meetings, NE educators scattered across China were able to link together to establish a network (ibid 2018: 690). It seemed that this early network set a precedent for the nationwide platform for Chinese nature education institutes and professionals to facilitate intra-group communication and sharing recourses; an example would be China Nature Education Forum (*quanguo ziran jiaoyu luntan* 全国自然教育论坛) whose main activity is to organise the annual meet-up of nature education facilities in the form of the China Nature Education Conference (*zhongguo ziran jiaoyu dahui* 中国自然教育大会).

The second event key to the growth of Chinese NE was the translation of American educationist Richard Louv's monumental monography *Last Child in the Woods* (2005) by Wang in partnership with FON. The publication of this book not only popularised the vocabulary of nature education, but also

contributed to the urban character of NE in China.

The thesis of Louv's book can be encapsulated by the buzzword "nature-deficit syndrome" (*ziran queshizheng* 自然缺失症). It provokes alarm to the insalubrious psychological, physical, and cognitive costs for urban children due to alienation from the natural environment in relation to intensive urbanisation. The introduction of this concept into China has ignited heated discussion of the need for an innovative form of education to address the problem and "to [re]connect urban children with nature" (*yu ziran chongjian lianxi* 与自然重建联系). The need for nature immersion experiences is reflected in the immersion-based approach of NE that stresses the direct and meaningful experiences in the natural environment; this perspective thus characterises NE as an encompassing education "in nature, about nature, and ultimately for nature". Nature in this context is expressed as the lively embodied natural beings. Accordingly, connectiveness with nature, the core agenda of NE, is grounded in the embodied and affective interactions with the concrete immediacy of natural beings that may lead to care and other emotional ties, rather than in some abstract concepts of the natural world. Comparatively, EE is more understood as straightforwardly oriented toward the "for-nature" part, i.e., the environmentalist advocacy of conservation action to protect the environment.

As such, the urban ethos of NE can be viewed in three aspects. First, NE is unevenly targeting urban learners, especially children and adolescents trapped in the concrete jungle, as they are conceived at the most risk of lacking outdoor activities and the connection with the natural world. Ideally, NE is meant to engage urban residents of every age: kids, youth, adults and even senior citizens. However, according to the Annual Industry Report of Nature Education in China released in 2018, among 389 institutes who have participated the survey, the majority of their target population consisted of primary school students (alone without parents 30%) and parent-children families (亲子家庭 29%).

Second, activities are often planned with the goal to foster "nature connectedness" (自然联结) within urban settings. Nowadays, it becomes increasingly acknowledged that cities not only have ecological significance as embedded in the growing attention to urban nature, but also they can be classrooms (Leou and Kalaitsidaki 2017), that is, critical places for fostering knowledge about nature, ecological literacy and sustainability. It is noted that the main governmental body that currently takes the responsibility to support and promote NE is the Forestry and Grassland Administration (*linye he*

caoyuan ju 林业和草原局) at the national, provincial or municipal level, in collaboration with the Administration of Education.

At the 6th Nature Education Forum held in Wuhan from November 1st to 3rd, 2019, the Director of Hubei Forestry and Grassland Administration announced the "Wuhan Consensus for Nature Education" (*ziran jiaoyu wuhan gongshi* 自然教育武汉共识). The 7th clause of the consensus specifies that "It is required to mobilise the educational values of various nature reserves, urban parks, suburban parks… to design high-quality curriculum… " (Nature Education Forum 2019). Hence NE educators are encouraged to design programmes in local urban spaces and to take advantage of the city spaces to experiment. A good example is the Wuhan model (*wuhan moshi* 武汉模式) in which the urban green spaces near learners' surroundings were praised and utilised as the "nearby classroom" (*shenbian ketang* 身边课堂). This model of NE based on localised urban biodiversity resources cannot be accomplished without a parallel development of accessible green spaces near residents' surroundings. It echoed the attempt of the Wuhan administration of Landscape and Forestry (*yuanlin he linye ju* 园林和绿化局) with the projects like "one step toward nature" (*yibu ziran* 一步自然) or the construction of pocket gardens.

Lastly, according to the annual nation-wide surveys of NE institutions in China conducted since 2015, the geographical distribution was unevenly presented with higher concentration found in major urban cities such as Beijing, Guangzhou, Shanghai, Wuhan, Yunnan and other more economically developed areas in south-eastern China. Sichuan is perhaps an exception among cities in south-western China which has historically received national and international attention on nature conservation and thus equally witnesses the development of NE centres early on.

In a word, there is both overlapping and distinctions between NE and EE, but nowadays, NE has become the preferred terminology for learners and education providers, including NGOs, education centres based in urban parks, special interest clubs, commercial companies, and national and municipal government sectors. As the senior EE programme manager at WWF Miss Weng Yi comments: "Nature education in modern China is an evolving stage of environment education to adjust to the rapid development and urbanisation of Chinese society and environmental issues; it is a brand-new form with Chinese characters and fashioned by the times" (Yong 2019).

The topic of the development of NE in China is simply too vast to merit a completely new thesis; I will briefly introduce the exemplary nature education facility known as GNS, to give some further insights about institutionalised educational programmes available to Beijing urban residents.

GNS was founded in 2014 by four "core volunteers" (*hexin zhiyuanzhe* 核心志愿者) in FON, as a registered for-profit social enterprise to provide a variety of activities that may attract a wider range of people. However, one could even argue that the main targeted clients are mostly middle-class urban families who are willing to pay for 2000rmb (equivalent to 250 pounds) for 10 game-based extracurricular activities.

GNS is standing in the vanguard in the industry thanks to its more developed pedagogy, more advanced educator training system and more diversified teaching resources.

With respect to the training system for educators, all educators at GNS need to complete a series of training courses to become a certified "nature experiencer" (*ziran tiyanshi* 自然体验师) which is ranked into three tiers: junior, intermediate and senior. Trainees are all expected to conduct a NE lesson by the end of their training courses in order to attain a certificate. The training programme is also open to nature education professionals from other facilities, college students, parents conscious about children's development, or anyone with interest in nature education in general.

Some common rules run through all GNS's courses including the educator training courses. First, in GNS classes, as with the bird-watching activities, the teacher-student hierarchy is significantly deemphasised; the 'teacher' is called "guide" (*yindao yuan* 引导员) while the 'student' is called "companion" (*huoban* 伙伴). On the idea of redefined role of the teacher in GNS education, the leading guide and designer of the plant courses Ms Xu（nature name: Ostrich), who was also one of the core educators of GNS, gave a wonderful explanation:

> What is education? Education means to guide a person to grow; it thus negates the idea that 'I need to teach something' but rather to guide you to become yourself and to feel the passion for all lives. We call ourselves "guide" because it's all about guidance! And we prefer not to call ourselves "teacher"—only nature is the real teacher. We are only a guide qua companion qua designer (of these lessons)…As a companion, it is not our job to tell you where you should go but only to keep

you company in your journey of exploration.

Second, the adoption of nature-related nicknames or "nature names" (*ziran ming* 自然名) is a remarkable ritual that now seems to be widely accepted by nature educators and learners beyond GNS. A rule of thumb to create a proper nature name is that one has to choose a natural entity that one has a gut feeling for which encourages feelings of connectedness with natural beings. For instance, Ms Xu chose Ostrich as her nature name when she was encouraged to do so in her first nature experiencer class. She told me that an image of ostrich suddenly emerged in her mind-an enormous bird with a tiny head, a plump body and a pair of muscular legs, who looks very strong yet with a timid heart. She said that she just felt related to the strong yet timid ostrich at that awkward moment of standing among strangers. Every learner in my class seemed to find the idea of nature name quite refreshing. So by the end of that day's first opening activity, I had 15 classmates like Swift (雨燕 who is fascinated with the iconic Beijing swift) , Lychee (荔枝 who falls for the sweetness of the fruit), Sea Bird (海鸟 who admires the freedom of a bird flying across the vast sea) and so on.

Third, as I mentioned earlier, GNS is known for its more developed and clear vision of NE, which can be understood revolving around two concepts: three relations (三大关系) and four elements (四大元素). These are the core concepts that will be introduced and reinforced in the training courses of GNS nature experiencers.

Relations (*guanxi* 关系) and connectedness are at the heart of GNS educational thoughts. According to Winter Wheat, GNS was named Gaia not after the mythological earth mother; rather it was inspired by the Gaia hypothesis by Lovelock in the 1970s that considers the biosphere and physical components of the Earth as an interacting system.

"Three relations" consist of relations between humans and nature, humans and other humans, humans and themselves. Immersion in the natural environment is conceptualised to enhance all three aspects of a relationship. Concerning the human-human relationship, parental relationship is the key focus for GNS, which translates into a unique arrangement of "co-education for parent-child" (*qinzi gongyu* 亲子共育). For the majority of GSN courses, parents' presences are required; however, their

roles in class are more than companies for their children, but rather participatory learners themselves.

"Four elements" refer to awareness (*yishi* 意识), emotion (*qinggan* 情感), knowledge (*zhishi* 知识) and action (*xingdong* 行动) (strictly in this order). It all begins with awareness, awareness of the embeddedness of nature or natural beings in the familiar surroundings. Emotion is aroused with long-term experiential activities of being in nature and interacting with living organisms such as plants and birds; a process also accompanies the production of personal knowledge about nature. A change of action to be more kind to nature is expected to ensue.

Appendix 2. List of Chinese characters

This list contains all occurrence of *pinyin* representation in the text.

ainiao zhou 爱鸟周

anquan juli 安全距离

baicao yuan 百草园

bailing nanren 白领男人

baipai 摆拍

baita 白塔

baqi 八旗

ba zhishi huangei ta 把知识还给她

beidong 被动

Beijing hua 北京话

Beijing huayouqun 北京花友群

Beijing yuyan jiance xiangmu 北京雨燕监测项目

Beijing zhongzhouxian 北京中轴线

beizi zhiwu 被子植物

biji 笔记

bishi lian 鄙视链

bisuo hua 闭锁花

bowu 博物

bujing 布景

bu wenming 不文明

buwenming xingwei 不文明行为

buwenming painiao xingwen 不文明拍鸟行为

chaniao hui 茶鸟会

changkan changxin 常看常新

changqiang duanpao 长枪短炮

changshan magua 长衫马褂

chongyu shenghuo 充裕生活

chou doufu 臭豆腐

ciwei 刺猬

daniao 打鸟

dama 大妈

danti xiongruizhu 单体雄蕊柱

daoshang 导赏

daoshang yuan 导赏员

dapao 大炮

daoluan 捣乱

danwei 单位

dashen 大神

daye 大爷

da zongguan 大总管

dingdian ban 定点班

disan jie 第三届

dongxi miaohui 东西庙会

dougong 斗拱

du 读

duanwu jie 端午节

dui ta youganqing 对它有感情

dui ziji youyueshu 对自己有约束

dushi ziran 都市自然

dushi ziran jiaoyu 都市自然教育

e you 鹅友

ershou jiaxin 二手加新

fanggu jianzhu 仿古建筑

feiyu 飞羽

foxi guanniao ren 佛系观鸟人

fuye lunsheng 复叶轮生

gaige kaifang 改革开放

gancao 甘草

gege jiejie 哥哥姐姐

gexinghua kepu fuwu 个性化科普服务

gongde 公德

gonggong suzhi 公共素质

gonggong wenming 公共文明

gongmin kexue 公民科学

gongyuan 公园

gongyuan nianpiao 公园年票

gudu 古都

guancha 观察

guanniao ren 观鸟人

guanniao shouze 观鸟守则

guanniao daode 观鸟道德

guanniao daoshang 观鸟导赏

guannioa xuesheng bang 观鸟学生帮

guanshang ziran 观赏自然

guanyu 观鱼

guapi mao 瓜皮帽

guanhua guancao 观花观草

guang gongyuan 逛公园

guangmin dingweiyi 光敏定位仪

gu jianzhu 古建筑

guohua 国画

hen meiyisi 很没意思

hen ziju 很自觉

hua 画

huacao niaoshou 花草鸟兽

huahua caocao 花花草草

huaniao yuchong shichang 花鸟鱼虫市场

huayou 花友

huanzhi 环志

huaniao hua 花鸟画

huaye buxiangjian 花叶不相见

huayou zhiwuke 花友植物课

hucheng he 护城河

huoban 伙伴

jiaxin 加新

jian 见

jiachang liduan 家长里短

jiamenkou kanhua 家门口看花

jianbie 鉴别

jianguo dashimian 见过大世面

jiwei 机位

jin jiushi yingdaoli 近就是硬道理

jingxi 惊喜

jidai daoyan 几代导演

jiedu ziran 解读自然

jingcheng painiaoquan 京城拍鸟圈

jingshen wenming 精神文明

jundui dayuan 军队大院

kan 看

kan dashan 侃大山

kanhua 看画

kanjian 看见

kanjian de nengli 看见的能力

keli du 颗粒度

kexue guanniao zunzhong ziran 科学观鸟，尊重自然

kuaigan 快感

lao Beijingren 老北京人

lao Beijing louxi 老北京陋习

laoshi 老师

laotou 老头

laotou xie 老头鞋

lianjia 恋家

liaoyu ziji 疗愈自己

liuniao 遛鸟

liuwan 遛弯

longze ting 龙泽亭

lou yan'er 楼燕儿

lvhua lv 绿化率

ming 名

mingjian wenhua 民间文化

mei suzhi 没素质

mo shulin 魔树林

nan huchenghe 南护城河

nianhui 年会

niaowang 鸟网

niao fanzi 鸟贩子

niao jiu wandan le 鸟就完蛋了

niao wenhua 鸟文化

niaoyu huaxiang 鸟语花香

nongge xiaochuchazi 弄个小树杈子

paihua 拍花

painiao ren 拍鸟人

painiao sanzongzui 拍鸟三宗罪

paishe zu 拍摄组

pengyou 朋友

pingguo 苹果

pulu 譜录

qinjin ziran 亲近自然

qinshen guancha 亲身观察

qipao 旗袍

qiren 旗人

qunzhong kexue 公众科学

qunliao 群聊

qunzhu 群主

renao 热闹

rengong 人工

renwei yinsu 人为因素

riji 日记

rou hetao 揉核桃

rukeng 入坑

rushu jiazhen 如数家珍

shanchong shuifu 山重水复

san xinpi 三心皮

sanye cao 三叶草

shang 赏

shangpin fang 商品房

shanghua 赏花

shenbian de ziran 身边的自然

shenbian de mei 身边的美

sheniao 神鸟

shengming de butong jieduan 生命的不同阶段

shengming de zhengge mianmao 生命的整个面貌

shengtai wenming 生态文明

shenru liaojie 深入了解

shequ zizhi 社区自治

shi 事

shi 视

shifu 师父

shili 势利

shishi pingan 事事平安

shizi 柿子

shimo wendang 石墨文档

shizhang xinxiang 市长信箱

shouzhong xihua yu fencing 受众细化与分层

shu heidian 数黑点

shu mao 数毛

shuaju 刷剧

shua yuanzi 刷园子

shuashan 刷山

shuaya 刷牙

si dawan 四大玩

suzhi 素质

suzhi jiaoyu 素质教育

taohua jie 桃花节

tianran de lunli youshi 天然的伦理优势

tilong jianiao 提笼架鸟

tongbu guancha 同步观察

tongxue 同学

tuoniao 鸵鸟

tu 图

waiyuan 外援

wanfu ge 万福阁

wan'r 玩儿

wan'r huahuo 玩儿花活

wan'r yinde 玩儿阴的

wan'r ying 玩儿鹰

wan'r niao 玩儿鸟

wan wenhua 玩文化

wanwu 玩物

wanzhu 玩主

weipai 围拍

weixin 微信

wo hui dianji ta 我会惦记它

wulong ting 五龙亭

wuqi 武器

*wuqiong de kuail*e 无穷的快乐

xiandai jianzhu 现代建筑

xiao baitu 小白兔

xiaocao kanqilai gengweida 小草看起来更伟大

xiao fenghuang 小凤凰

xiaoqu 小区

xiaowu 小五

xiaozhong aihao 小众爱好

xian 闲

xiang 相

xiansheng 先生

xian yijinmen 先引进门

xin dalu 新大陆

xinzhong 新种

xinzhong zongyou wenhao 心中总有问号

xuekou 学口

ya 丫

ya shige hundan 丫是个混蛋

yaniao 压鸟

yangdian fa 样点法

yangsheng 养生

yandu 燕都

yanguo 燕国

yanjing 燕京

yanzi 燕子

ye 爷

ye 野

yeyu 业余

yidai yilu 一带一路

yihao dian 一号点

yike lsoshushi huaile yiguozhou 一颗老鼠屎坏了一锅粥

yimi guancha 一米观察

yindao yuan 引导员

yishou jiaxin 一手加新

yishu chuangzuo 艺术创作

you 友

you bentou 有奔头

youke 游客

youpai 诱拍

youqian youxian de ren 有钱有闲的人

you yanshen guang 有眼神光

youxue ban 游学班

yuanfen 缘分

yuanlin 园林

yuanzi 园子

zaojing 藻井

zao shengtaigang 造生态缸

zashu 杂书

zhaoniao 找鸟

zhaoniao gongcheng 招鸟工程

zhengshi ming 正式名

zhishi shehui 知识社会

zhiwu de zhihui 植物的智慧

zhiwu leiqun 植物类群

zhiwu xiaobai 植物小白

zhongguo jie 中国结

zhongguo sheyingjia xiehui 中国摄影家协会

zhuang 桩

zhudong 主动

zilv 自律

zijue 自觉

ziran 自然

ziran biji 自然笔记

ziran guancha 自然观察

ziran guancha aihaozhe 自然观察爱好者

ziran jiaoyu 自然教育

ziran jieshuo 自然解说

ziran ming 自然名

ziran shijie 自然世界

ziwo chongshi 自我充实

ziwo xiuxin 自我修行

ziyou 自由

zongzi 粽子

zouma guanhua 走马观花