

## Nature-culture divide: urban parks and autophobia

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Nature does not divide culture, but is sometimes divided or categorized by humans. Humans also need nature. Perhaps we sometimes impose the division between nature and culture just to better cross it to feel more connected and better about our society and ourselves. How can we accept that traffic jams, air pollution, and war are part of nature? That would deprive us of our last hope of a brighter future, where things are in their “natural state” – peaceful, calm, and full of love (which is not true if we apply the same standard with which we criticize our own society). Such places are not to be discovered geographically. Even the two poles are now heavily affected by humans, even those who have never set foot on those lands. Instead, such places are to be created and felt and they could be everywhere, even in polluted places.

E. O. Wilson, the man who coined the word biodiversity, wrote a book called *Biophilia* arguing that humans have a tendency to be attracted and attached to nonhumans (“nature and other life forms”, Rogers, 2010). Under the hypothesis of biophilia, there is a mental connection between people and “nature”. In reality, we can observe the connection geographically everywhere but debates surrounding the nature-culture divide still exist. Green et al. (2005) brought forth a famous debate on two land management strategies, land sharing versus land sparing. Land sharing encourages mixed land use such that both agriculture and biodiversity conservation can happen on the same land whereas land sparing recommends allocating lands for food production and conservation separately. The debate represents the competing needs for food and commodity production versus conservation. Almost two decades into the debate, we observe effective conservation practices following both strategies. Following land sparing, national parks are designated with restrictions on development to conserve habitats for large mammals and critical ecosystems that are vulnerable to human modifications. For land sharing, urban parks and community gardens have no explicit boundaries, blending nature into people’s everyday life, and practices such as agroforestry emerge where co-benefits of biodiversity and food provision can happen. I argue that both strategies transcend the nature-culture divide. For example, the delineation and creation of National Parks reflect our own judgments on what and where should be preserved, sometimes accompany population displacement and migrations, and change how people view the environment (West et al., 2006). To this day, there are still many national parks with people living within. Boundaries of national parks also do not necessarily ward off social unrest or anything that happens in our human society such as the pandemic or infectious disease among species. These are all extremely important, but in the first part of this essay, I want to argue against the nature-culture divide not as a geographer or a conservation researcher, but as a person through talking about my favorite parks, which are all in cities.

The idea was triggered by a song called *London in the Spring* by Passenger. It starts with 25 seconds of guitar and follows by the lyrics –

*Oh London in the Spring  
Makes me feel so lucky I'm alive*

*I've got love to give  
I've got my whole life to live*

*Walking through the park  
Sunshine pours like honey  
Through the trees  
I believe I'm coming home*

...

It is just the guitar at the beginning. Then the vocals. This first part reminds me of the short walk before getting to a park, simple, calm, and quiet. I sometimes do not get excited about going to parks and just go there for a change of mood. Then the cello comes in – now I am contemplating on my way. I, as a human being, have so many things to worry about. This is like modern *Homo Sapiens* 101. Then a brass instrument and the violin flow in – it is calling me to forget about these things and just embrace the sunshine! Nothing more. No abrupt changes, but I can feel the emotion evolve and it just feels like sunshine pouring on me.

Although I have never been to London, I resonated with the melody and lyrics the moment I heard it. I remember feeling lucky to be alive in walks and sojourns at urban parks. Although national parks are great, somehow my favorite parks are all in cities. It is better if they are within walking distances. Having spent most of my life living in cities, I am not surprised by this preference, and I never felt far from nature.

### **Honglingjin Park, Beijing**

I grew up in Beijing in a place within 5 mins' walking distance to Honglingjin park (Figure 1 & 2). Autumn is the true golden season in Beijing, the best time of the year, and also when it fits perfectly the description of “sunshine pours like honey through the trees”. Transient – it usually ends in a week or two – but immortally beautiful. I heal my mental wounds here after a fight with my parents, from stress at work, when suffering from insecurity, the list could go on. Honglingjin park is usually a popular place with large crowds of people. On an average weekend morning, there could be three or four choirs and bands singing and playing different songs. On an average evening, there could be five or more dancing squads, all of different types. It is also home to many animals. I remember seeing two spotted doves fight ferociously against each other and night herons standing in front of reeds like guards. Volunteers from Friends of Nature have also been doing bird census regularly in the park for more than a decade. People from nearby communities sometimes feed the ducks and stray cats in the park (like my parents) and I thank the ducks for cheering my parents up when I am far away from home, although I am not 100% supportive of the feeding.



Figure 1. Sunshine pouring like honey through the trees. Honglingjin park, Beijing, China.

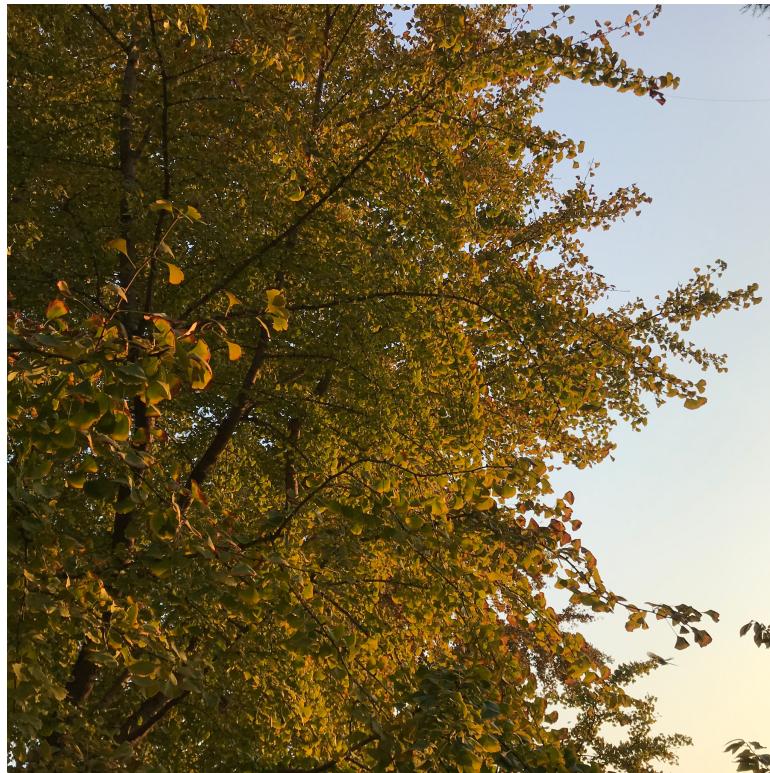


Figure 2. Ginkgo trees in Honglingjin park in Beijing, China. *Ginkgo biloba* is an endemic tree species in China.

**Rittenhouse Square, Philadelphia**

Rittenhouse Square, if I quote from “Visit Philadelphia”, is “the one-square-block park that gives the neighborhood its name, is more popular with sunbathers, readers, families, artists, and even dogs than city founder William Penn ever could have imagined.” I first came by it on a lovely winter morning. I had my first carrot cake at a farmers market here. Something was definitely changing the moment I stepped in the park. In Rittenhouse Square, trees are tall enough to block our views of the buildings but not too enclosed. The park is not big but has many crossroads within, every single one inviting and welcoming to every passerby. It is one of the many lovely “oases” or small “green islands” in the concrete jungle of Philadelphia. We practice proper breathing whenever coming across one.



Figure 3. Another example of sunshine pouring like honey through the trees. Rittenhouse Square in Philadelphia, USA.

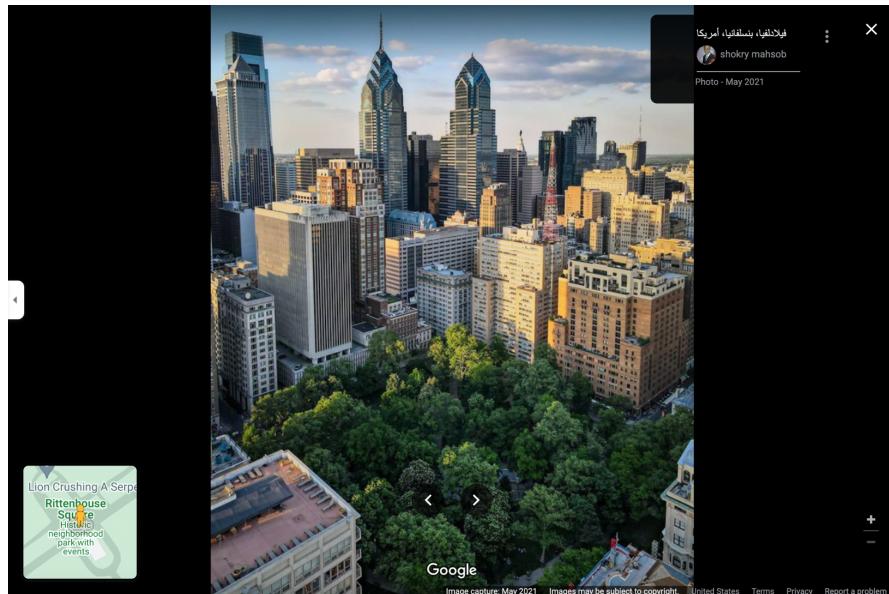


Figure 4. A bird's-eye view of Rittenhouse Square found in Google.

Honglingjin park and Rittenhouse Square are just two examples of many amazing urban parks where nature and culture unite. I remember feeling extremely tempted to sit on a bench in the

park of little Italy in Montreal, which is located right in front of Mila Institute where I spent an intensive week for a summer school, and just observe the dogs and people. I remember being amazed by how artistic and creative the Squirrel Census in central park is (Figure 5). It was founded by a Lab-Aussie canine named Sophie. I am also a big fan of the racoon dog census in Shanghai City in China (Figure 6), carried out by Shanshui Nature Conservation where I used to work.



Figure 5. A report (top) and arts created by the Squirrel Census. It is interesting that the picture for the report accompanies a cup of coffee. Their website is amazing: <https://www.thesquirrelcensus.com/>.

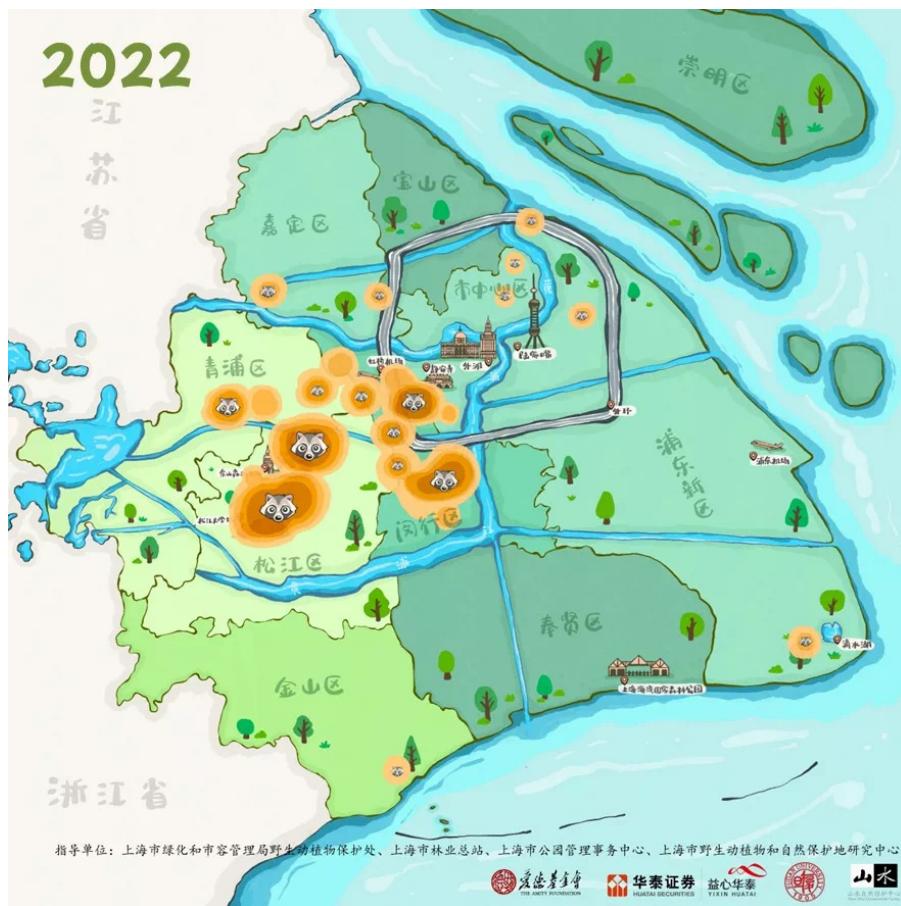


Figure 6. A map of the distribution of raccoon dogs in Shanghai City in 2022.

Returning to my identity as a conservation researcher, while it is easy to enjoy urban parks, it is far more difficult to make “good” urban parks, or more generally speaking, “good” decisions on how to maintain our relationship and distance with nature in the anthropocene. Robbins and Moore (2013) wrote about anthropophobia and autophobia in the era, where anthropophobia refers to the fear that we humans have altered earth too much and autophobia refers to the fear that we make decisions based on our values too much (or “the inherent influence of normative human values within one’s own science”). Although both are psychological issues, autophobia seems to me to be far more difficult to solve because we are in an urgent state to take actions to combat climate change and stop the biodiversity decline while in reality, we have surprisingly little idea about what we should do, and I have even less idea because I am still learning what is already there.

I am perplexed first and foremost because there is not a near satisfactory way to unify how we should view and address this biodiversity crisis. This is not saying that we should have a single way of viewing and doing things, but a craving for guidance on what best suits which situation. It is easy to describe changes but much harder to derive conclusions and make arguments for why, when, and what to do. For example, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report (2018) lists three general ways of defining baseline scenarios when measuring degradation: 1) the pre-modern state (before human

settlement), 2) what it would be like had there not been human influence (counterfactual), and 3) the historical state (e.g., compared with the state 20 years ago). The current Sustainable Development Goal framework for measuring degradation further complicates it in that it looks at both the baseline and current state as relative states of a period of time, which means that if we want to compare land status in 2020 to that in 2010, we cannot just compare changes of the two time steps. We need to compare 2010 to 2000 first to determine whether the land was already degrading in the past such that even if we observe no changes in land status in 2020 from what it was in 2010, it could still be degrading.

Concepts become complicated and layered up and we are talking about different things when we are trying to talk about the same thing. In ecology, we use connectivity to proxy how well the landscape can facilitate species movement for survival, but we are not so clear about the differences between species occurrence, species dispersal, and connectivity per se, which have all been used to represent connectivity in different literature. As Beger et al. (2022) point out, connectivity operates at different scales and organizational levels, including flows and movements of both species, genes, and energy fluxes. Then how are we going to use a single metric to represent all of these? Let alone connectivity is not always beneficial to species survival – they could also create a good environment for the spread of disease or hazards such as wildfire. But then again, why are wildfires bad for “nature”? The ecosystems will proceed on their journey of succession anyways.

Trade-offs and oxymorons are everywhere. Look at ecosystem services and biodiversity. They do not always come hand in hand, and one has to choose one over another sometimes. Even species that contribute equally to biodiversity need compromises and do not receive the same amount of attention. Also, conserving protected areas is promoted for conserving species but it does not always mean more species or high phylogenetic diversity (Figure 7). Indicators always have limitations and cannot represent the true picture holistically. In these circumstances, choosing one literally means abandoning all other possibilities. It is the trolley problem in action. Isn’t it awful? Do we decide on which species to survive and just leave the others on their own? To be fair, this is what we have been doing all the time.

I panic at the thought of these. These perplexities remind me of how limited science, or at least science in the current state, can be. Will better models and algorithms help us out? Maybe but maybe not. On the other hand, having limitations is not necessarily the end of the world. If we do believe in the power of human to alter much of the world (anthrophobia), then we should also believe that even if we make decisions based on our limited and biased knowledge now (autophobia), we will be able to find a way to improve things when we have better theories and knowledge. The important thing is perhaps to keep trying. Meanwhile, if science in one discipline is limited, we could use help from “non-sciences” or other disciplines. In an example in the Northern Andes of Peru given by Marisol (2015), a local indigenous group fought against drying a lagoon for a reservoir of larger water holding capacity. By the framework of ecosystem services, the latter could provide much bigger ecosystem services (water provision) whereas the culture services the lagoon could bring are difficult to be quantified. Through more communication with local stakeholders, there is the possibility to integrate various knowledge

systems to co-design solutions. Transdisciplinary fields such as landscape sustainability science have started recognizing the importance of utilizing different methods and theories from different fields integratively to approach real world sustainable problems. Although development in each individual field is still critical and such integration does not solve all my perplexities now, the entanglement of knowledge and disciplines might actually find us a way out.

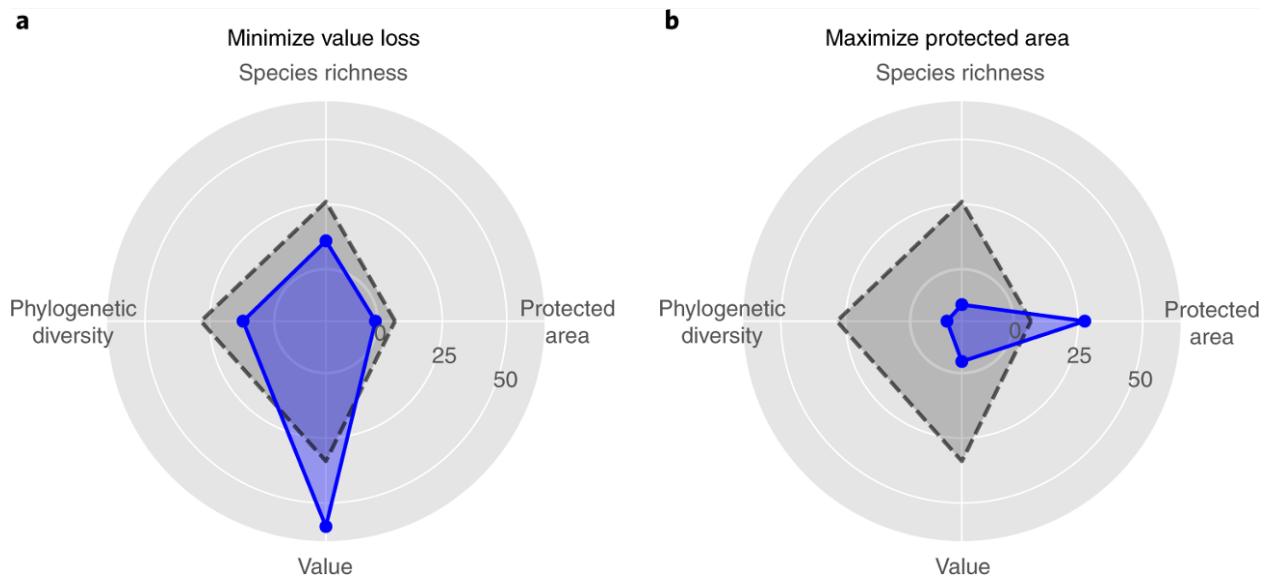


Figure 7. Conservation outcomes from two potential policy scenarios (the blue polygon) compared with a baseline scenario (the gray polygon) (Silvestro et al., 2022). (a) minimizes loss in socioeconomic value, and b) maximizes protected areas.

#### Afterword – after I finished writing the essay

It surprised and moved me when I saw a new paper just published that provided a partial answer to some of my questions above. Hendry (2023) goes over definitions of prediction in ecology and evolution in this paper. He first acknowledges that people are indeed talking about different things when they use the word in the field. He then suggests that we should view the concept in a hierarchical manner and draws the following conclusions after a thorough look at the various definitions: “Prediction is not a monolithic and invariant concept, especially in ecology and evolution. Perhaps this variation should be viewed as a problem, and we should work toward a single unified way of defining and applying predictions. Or perhaps this variation is a strength. Perhaps, the basic idea of prediction is a general one, and that general idea can be leveraged into several specific approaches that are useful in different contexts. I espouse this latter viewpoint because it provides an overarching aspirational goal that reflects our ability to understand how the world works while allowing flexibility and diversity in how we achieve that goal... Regardless of how our predictions ultimately succeed or fail, whether in whole or in part, we have a responsibility to try them – and to try in new ways and with improved clarity.”

## Reference

- Hendry, A. P. 2023. Prediction in ecology and evolution. *BioScience*, 2023, 0, 1-15, <https://doi.org/10.1093/biosci/biad083>
- Rogers, K. 2010. Biophilia hypothesis | Description, Nature, & Human Behavior. Encyclopedia Britannica. <https://www.britannica.com/science/biophilia-hypothesis>
- Green, R. E., Cornell, S. J., Scharlemann, J. P. W., & Balmford, A. 2005. Farming and the fate of wild nature. *Science*, 307(5709), 550–555. <https://doi.org/10.1126/science.1106049>
- Robbins, P., & Moore, S. A. 2013. Ecological anxiety disorder: diagnosing the politics of the Anthropocene. *Cultural Geographies*, 20(1), 3–19. <https://doi.org/10.1177/1474474012469887>
- Marisol de la Cadena, 2015. Uncommoning Nature. e-flux. <https://www.e-flux.com/journal/65/336365/uncommoning-nature/>
- IPBES. The IPBES assessment report on land degradation and restoration. 2018. Montanarella, L., Scholes, R., and Brainich, A. (eds.). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 744 pages.
- Beger, M., Metaxas, A., Balbar, A.C., McGowan, J.A., Daigle, R., Kuempel, C.D., Treml, E.A., Possingham, H.P., 2022. Demystifying ecological connectivity for actionable spatial conservation planning. *Trends Ecol. Evol.* S0169534722002221. <https://doi.org/10.1016/j.tree.2022.09.002>
- Silvestro, D., Goria, S., Sterner, T., Antonelli, A., 2022. Improving biodiversity protection through artificial intelligence. *Nat. Sustain.* 5, 415–424. <https://doi.org/10.1038/s41893-022-00851-6>
- West, P., Igoe, J., Brockington, D., 2006. Parks and Peoples: The Social Impact of Protected Areas. *Annu. Rev. Anthropol.* 35, 251–277. <https://doi.org/10.1146/annurev.anthro.35.081705.123308>