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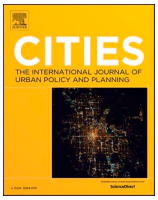

Viewpoint: Two more lamps. Augmenting urban planning for biodiversity

Benedict E. Singleton

Department of Global Political Studies, Malmö University, Sweden

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ABSTRACT

Parris et al.'s seven lamps (principles) of planning for biodiversity in the city (2018) provides a framework for achieving two objectives. Firstly, to alter the normative basis on which urban planning is predicated by integrating a concern for nonhuman inhabitants. Secondly, it argues for the greater enrolment of ecologists and the field of ecology within environmental planning. It seeks to encourage a paradigm-shift to reorient society on a more sustainable path by demonstrating that planning for more-than-human cities does not require a conceptual leap, rather it resonates with extant planning concerns. It thus takes a pragmatic approach to radical change. However, I argue that this framework as originally stated insufficiently considers the diversity of society or the field of ecology and entails an anthropocentric worldview. This undermines the lamps framework's radical agenda. I argue that this issue could be ameliorated by developing two further principles, *Justice* and *Contact*. Integrating these concerns into the lamps framework will strengthen its ability to contribute to efforts to transition society into a sustainable state.

1. Introduction

Five years ago (at time of writing) Kirsten M. Parris and collaborators published an article in *Cities* outlining seven "lamps" (principles) providing guidance for planning urban environments (Parris et al., 2018). It takes a "steppingstone approach" to transitioning cities (and society) towards a different (and ideally sustainable) direction (Eckersley, 2021). It highlights that incorporating more-than-human inhabitants in urban planning "does not require a conceptual leap" (Parris et al., 2018: 44). The lamps framework thus contributes by providing a clear checklist for urban planners. However, for all its strengths, the lamps framework does not address two linked aspects of sustainability transitions. Firstly, it does not consider social justice, discussing biodiversity protection in largely apolitical, technocratic terms. Secondly, the lamps framework does not discuss the nature of human environmental relations within contemporary urban societies. With these lacunae, the lamps framework resembles other ecomodernist efforts to deal with environmental crises. Such efforts have been criticised in the past as favouring technocratic approaches to addressing sustainability issues – a form of "weak" sustainability favouring reform over revolution (Hinton, 2015). Thus, they ultimately reiterate paradigmatic concerns like continued economic growth (Turnhout et al., 2014); effectively promoting an unfeasible "win-win" that contemporary society can be both sustainable but relatively unchanged (e.g., Eversberg et al., 2023). The concern is with this it that arguably conceals a path-dependent trajectory leading towards slow-onset environmental degradation and disaster (Murphy, 2015).

In the next section, I briefly describe the lamps framework (Table 1). I then explore how "the problem" of biodiversity protection in urban planning is represented (Bacchi & Eveline, 2010); elaborating several criticisms drawing on social scientific literature. I then conclude by arguing that the lamps framework could be augmented by developing two further principles (Table 2). I call these principles *Justice* and *Contact*. In doing this I argue that biodiversity protection for urban planning should consider its linkage to environmental justice. I also argue that urban planners should consider the types of nature contact planning and its results engender. In making these arguments, I draw on literature on environmental justice, intersectionality and nature-based pedagogy. By incorporating such insight, urban planning stands a better chance of positively contributing to sustainability transitions.

2. Parris et al.'s lamps framework

In their original article, Parris et al., drawing on architect John Ruskin, identify seven "lamps" or principles which provide a character and principle to guide urban planning practice around biodiversity. The lamps are described in Table 1.

These principles, written in an accessible manner are intended to allow urban "planning for the more-than-human" to move beyond the abstract and be integrated into contemporary practice (Parris et al.,

E-mail address: benedict.singleton@mau.se.

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Table 1
The seven lamps of planning for biodiversity in the city.

Lamps	Description
Protection	"[I]dentify and protect areas of high biodiversity (both current and potential) in and around cities" (Parris et al., 2018:45).
Connectivity	"[M]aintain or re-establish connectivity between areas of habitat to allow the movement of animals and the propagules of fungi and plants … across the urban landscape" (Parris et al., 2018:46).
Construction	"[C]onstruct ecological features that can provide habitat for a range of plant and animal species" (Parris et al., 2018:46).
Cycles	Ecosystem services and biodiversity are codependent on water, nutrient and energy cycling (Parris et al., 2018:46).
Interactions	Local biodiversity is shaped by complex biological interactions (e.g., pollination or predation) (Parris et al., 2018:46).
Benevolence	Urban infrastructure should avoid adverse effects on biodiversity (e.g., increased mortality through wildlife collisions with vehicles or windows). (Parris et al., 2018:46).
Novelty	Urban areas create new ecologies and these need to be considered. "Novel ecological communities and novel ecosystems are characterized by the presence of new combinations of native and exotic species, without historical analogue" (Parris et al., 2018:48).

2018:45). To do this, Parris et al. look for analogic imperatives within contemporary urban planning practice. Thus, "Benevolence" resonates with the principle of "universal design", making cities welcoming to different groups such as those who drive, walk or have impaired mobility (Parris et al., 2018:47). The framework thus provides a shared vocabulary for the variety of professionals involved in urban planning to conceptualise and "metaphorically bridge the human and the more-than-human in cities". This language is intended to enlist urban planning professionals in a "paradigm shift" that will increase the biodiversity and cities without a "conceptual leap" (Parris et al., 2018:44). Thus, the lamps stated aims represent a pragmatic attempt to encourage more radical sustainability transformations (Hamilton & Ramcilovic-Suominen, 2023). From these seven principles, ten practical actions are outlined to increase urban biodiversity. Collectively, these actions "turn on" the lamps of biodiversity, providing diverse benefits across the urban landscape (Parris et al., 2018:48). Parris et al. conclude arguing that urban planning should embrace biodiversity as an integral concern – the urban is a site with untapped potential to contribute to biodiversity protection. They argue that ecologists should be incorporated to a greater degree in planning to provide a voice for biodiversity alongside defenders of other values.

3. Critical discussion

A first observation about the lamps framework is that it presents urban human populations as undifferentiated. There are hints that there are differences within the human population, for instance around mobilities (Parris et al., 2018:46, 47) or in terms of wealth (49). However, much of this is implicit and there is no discussion of how environmental problems and benefits are distributed among and between urban communities. However, it is well known that urban development constructs, contributes to and perpetuates social iniquities and that this has an environmental dimension (e.g., Bullard et al., 2008). Thus, a first point to consider is the possibility that integrating biodiversity into urban planning should incorporate the insight that "different social groups are differentiated in their access to resources, power, privilege, and opportunities" (Timmons Roberts et al., 2018:235). Indeed, the fact that greening areas often makes them more desirable can lead to complex social effects such as gentrification (cf. McCabe, 2016), which may favour particular social groups (Sandberg, 2014). This is important in no small part due to the strength of the argument that the only truly sustainable society is also a just society (Agyeman, 2010). Thus, for example, evidence from Sweden highlights how a positive relationship exists between gender awareness within municipalities and the quality of their climate change awareness and progress (Dymén et al., 2013). There is thus scope for connecting the lamps framework to the linked fields of environmental justice, political ecology and intersectionality theory (e.g., Malin et al., 2019).

A second observation relates to the framing of knowledge within the lamps framework. Knowledge is considered compartmentalised within urban planning, with different expert knowledge holders holding particular purviews. Involving ecologists in planning processes is considered one way to mainstream ecological knowledge. By contrast, the general population in contrast is considered something to be manipulated and improved; to be nudged, with "carrots and sticks", to encourage biodiversity-friendly behaviour. In terms of knowledge production, the wider population has the possibility of enlisting in data gathering through citizen science (Parris et al., 2018:49).

There are several upshots from this enactment of knowledge politics. Firstly, there is a risk that the diversity of worldviews among ecologists is obscured (Swedlow, 2017). Integrating ecologists into decision-making settings makes a great deal of sense, however, care must be taken to ensure the ecologists selected do not simply share dominant extant viewpoints (cf. Holmgren & Arora-Jonsson, 2015). Secondly, this construction of the lay-expert divide risks marginalising relevant local environmental knowledge. This is a persistent flashpoint issue between scientists and indigenous people in many parts of the world but by no means limited to such places. Indeed, ecology as a discipline has a long historical relationship with racism and colonialism (Miriti et al., 2023). One can thus consider linking the lamps framework to the various moves

Table 2
Nine lamps of planning for biodiversity in the city.

Lamps (new lamps in italics)	Description
Protection	"[I]dentify and protect areas of high biodiversity (both current and potential) in and around cities" (Parris et al., 2018:45).
Connectivity	"[M]aintain or re-establish connectivity between areas of habitat to allow the movement of animals and the propagules of fungi and plants … across the urban landscape" (Parris et al., 2018:46).
Construction	"[C]onstruct ecological features that can provide habitat for a range of plant and animal species" (Parris et al., 2018:46).
Cycles	Ecosystem services and biodiversity are codependent on water, nutrient and energy cycling (Parris et al., 2018:46).
Interactions	Local biodiversity is shaped by complex biological interactions (e.g., pollination or predation) (Parris et al., 2018:46).
Benevolence	Urban infrastructure should avoid adverse effects on biodiversity (e.g., increased mortality through wildlife collisions with vehicles or windows). (Parris et al., 2018:46).
Novelty	Urban areas create new ecologies and these need to be considered. "Novel ecological communities and novel ecosystems are characterized by the presence of new combinations of native and exotic species, without historical analogue" (Parris et al., 2018:48).
Justice	*Situate urban environmental relationships in social and political contexts. Consider how the benefits and impacts of urban planning for biodiversity are distributed within society and the consequences of this.*
Contact	*Evaluate the types of contact with biodiversity urban life engenders. Explore communal relationships with nature in the urban environment.*

to decolonise science and society (e.g., Cajete, 2020).

A third observation relates to the conceptualisation of human-environment relations within the lamps framework. The framework's point of departure is that "much of planning theory privileges a human-centric view of the world, deepening the eco-social crisis at the heart of the Anthropocene" (Parris et al., 2018:45). Thus, anthropocentrism is identified as a paramount issue for contemporary urban planning. However, within Parris et al.'s text, "nature" and that which comprises it remain largely inert objects. Biodiversity and the conditions for it emerge as things to be engineered, evaluated and improved by urban planners. For example, mixing irrigated and non-irrigated areas of parks supports increased biodiversity (Parris et al., 2018:49).

As such, despite the implicit acknowledgement that engendering alternative, less human-centred worldviews are a desirable part of sustainability transformations the lamps framework does not discuss biodiversity's role in this. The lamps framework takes a largely "paternalistic" view of human-nature relations, rooted in an ontological separation of humanity and nature. This is distinct from a "communalist" view of human-environment relations (Pálsson, 1996). Communal relationships towards nature are categorised by cooperation, closeness, practice, reciprocity and engagement and is considered to hold the potential to provide a source of alternatives to the imperatives dominating contemporary society such as economic growth (Pálsson, 1996:78). Such viewpoints can easily be neglected in urban planning (cf. Gillette & Hurley, 2018). It thus seems relevant to consider whether urban planning for biodiversity can contribute to the creation of communal relationships with the natural world. The growing field of nature pedagogy and communication is fundamentally rooted in the idea that it is possible to encourage ecological mindsets through curated contact with nature and could provide inspiration (e.g., Öhman & Sandell, 2016).

4. Conclusion two more lamps?

The lamps framework presents a pragmatic way to argue for two things. 1) Concern for nonhuman inhabitants in cities resonates with other urban planning objectives. 2) Ecologists should be enlisted in urban planning as biodiversity advocates. It thus presents a global model for improving urban planning for biodiversity protection. It seeks to function as a "steppingstone" towards a sustainable society, founded on different, sustainable normative values (Eckersley, 2021). Ultimately, it is intended to encourage radical (paradigm-shifting) societal transformation. However, this article argues that the lamps framework does not consider the diversity of society or ecologists and is founded on an anthropocentric worldview. Likewise, as elsewhere within sustainability science, rendering issues technical can reduce the space for radically different worldviews on society and nature (Woodcraft, 2016:164). The concern is thus that in its original form the sustainability entailed by the lamps framework is weak in scope. I thus argue that the lamps framework's potential as a steppingstone would improve if it incorporated social scientific insight to address these issues. This would allow urban planners to further contribute to transforming the hegemonic norms upon which unsustainable societies are built (Hamilton & Ramcilovic-Suominen, 2023). A tentative first step to doing this would be to add two more lamps or principles to Parris et al.'s framework - *Justice* and *Contact* (Table 2). Integrating Justice and Contact into the framework contributes to strengthening ecology (and wider sustainability science) as an interdisciplinary field, taking on board insight from political ecology and nature-based pedagogy. By doing this, sustainability sciences will be better placed to contribute to resolving wicked sustainability problems. Thus, by broadening the lamps framework's scope these two extra lamps further light the path towards another form of society.

CRediT authorship contribution statement

Benedict Singleton: Conceptualisation, Investigation, Writing-draft preparation, Writing-reviewing and editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

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