

Elia Apostolopoulou, *Nature Swapped and Nature Lost: Biodiversity Offsetting, Urbanization, and Social Justice*, London: Palgrave Macmillan, 2020. ISBN: 978-3-030-46787-6 (cloth); ISBN: 978-3-030-46790-6 (paper); ISBN: 978-3-030-46788-3 (ebook)

Recent high-profile research assessments have shed light on stark and rapid declines in biological diversity at a global scale (e.g. IPBES 2019). As these reports make clear, intense land-use change, ecosystem loss, and habitat fragmentation have profoundly transformed terrestrial biotas. But while scientists opine on whether current declines in species have reached a point to warrant the classification of “mass extinction” (see Ceballos et al. 2017), policy makers the world over have been busy experimenting with the idea that culprits of ecological degradation can effectively become agents for biodiversity protection and enhancement. Over the last decade, there’s been something of an international explosion of state-mandated and voluntary environmental compensation schemes – known as “biodiversity offsetting” – where private firms compensate for damages tied to economic activity by funding additional environmental protection and/or restoration actions. Although “offsets” are frequently framed as capable of delivering “no net loss” to biodiversity through “ecologically equivalent” gains, Elia Apostolopoulou’s recent book cautions against a “win-win” rhetoric propelling their dispersion.

In *Nature Swapped and Nature Lost: Biodiversity Offsetting, Urbanization, and Social Justice*, Apostolopoulou provides a theoretically and empirically driven long-form critique of the practice of biodiversity offsetting, drawing heavily on her own fieldwork exploring the roll out of such a scheme in England (between 2014 and 2019) and building on previous output on this topic (e.g. Apostolopoulou 2020; Apostolopoulou and Adams 2019). Deploying historical materialist thinkers, such as Karl Marx, Neil Smith, and Henri Lefebvre, Apostolopoulou deftly links the recent upsurge of offsetting to the political economy of capital accumulation in the wake of the North Atlantic financial crisis of 2008. In doing so, the book demonstrates how an analytical focus on “the production of equivalent natures”

(p.199) helps to connect seemingly disparate processes of “planetary urbanisation” with rural political ecologies of conservation in an era of “zombie”(?) neoliberalism.

Early in the book, offsets are discussed in relation to the well-established field of “neoliberal natures” – no doubt familiar to many *Antipode* readers – which has, for two decades now, explored a profound neoliberal turn in environmental policymaking circles. As the author notes, offsetting exemplifies this trend owing to a reliance on processes of privatisation, marketisation, and the de- or re-regulation of environments in favour of capital circulation. Following a blueprint first established in the United States, such schemes are often premised on the creation of markets that enable landowners to sell “units” (representative of biodiversity gains) to firms seeking to comply with regulatory demands, as well as those hoping to voluntarily “green” their operations. In introducing the process of offsetting, Apostolopoulou draws on environmental science literatures to detail an inherent reductionism in attempts to capture the complexity of biodiversity with simplistic proxies, a questionable use of multipliers (increases in offset area relative to impact site) to account for operational uncertainties, and epistemic limitations surrounding the practice of ecological restoration.

In the most theoretically dense section of the text, Chapter 4 argues that the operations of ecosystem markets (such as payments for ecosystem services, carbon credits, and biodiversity offsets) can be fruitfully theorised using Marx’s writings on value, use value, exchange value, and the commodity form. Adopting an approach where value is understood as the result of socially necessary labour time raises the question: to what extent can offset credits be understood as “commodities” if minimal labour is expended? Contributing to a sub-disciplinary turn (see Andreucci et al. 2017; Felli 2014), the chapter asserts that, rather than relying on an idea of value as a performative construction, offsets need to be understood as a question of *rent*, where “profit stems from controlling a limited natural resource” (p.130) and where value is diverted away from production elsewhere. Although I found this argument persuasive, as recent interventions have shown (e.g. Kay and Kenney-Lazar 2019; Sullivan 2017), a commitment to Marx’s labour theory of value to theorise ecosystem “commodities”

remains a contested area of debate in the fields of political ecology and critical environmental geography.

Chapters 5, 6, and 7 dive deep into English experimentation with offset policy, which was adopted in some regions after a UK government pilot project began in 2013. The first of these chapters unpacks the post-crash climate in which the government's proposals emerged, the "reductionist" (p.185) metrics deployed, and an explicit preference to establish a market where biodiversity could be bought "off-the-shelf" (p.193). Through an analysis of three case-studies (including housing developments in the South East and North East of England and a controversial rail infrastructure development, known as HS2), this section of the book deals with local contestation surrounding the policy and provides insight into the ways in which environmental compensation interacts with politics surrounding land-use planning decisions. The analysis reveals that offsetting "not only facilitated the granting of planning permission in the majority of case studies ... but has been also actively used to attract developers and unblock urban development" (p.331). In the last of these chapters, an explicit attempt is made to confront issues pertaining to researcher positionality and the representation of participants in academic research by including full interviews held with both advocates and opponents of offsets in England.

As is made clear in the book, at the heart of debates surrounding the use of offsetting lies a wider discussion related to conservation pragmatism in an era plagued by a consistent failure to challenge capitalist-driven "biological annihilation" (Ceballos et al. 2017). While scholars such as Morgan Robertson, who has written extensively on nature's neoliberalisation and offsetting in particular, see potential for such schemes to deliver measurable conservation gains (see zu Ermgassen et al. 2020), Apostolopoulou is unequivocal in her opposition: "as long as conservation, and environmental politics, remain trapped in the tyranny of pragmatism things will only get worse" (p.338). Throughout the book, offsets are critiqued for re-framing environments as exchangeable across time and space, discounting the socio-cultural context of sites of degradation, their potential to unevenly produce natures in the interests of developers, and the depoliticising impacts of technical disputes over "natural

capital” accounting methods. In the face of entwined socio-environmental crises, it is clear to many that only radical systemic change can enable a more socially and environmentally just future. But how to get there?

Having roundly criticised compensation schemes, Apostolopoulou ends the book by posing a vital question: “What is the alternative if we reject not only offsetting but altogether recent attempts to put an economic price to nature?” (p.338). If readers are hoping for a considered alternative programme of action, they may be a little disappointed. The book’s conclusion calls for academics to embrace “direct involvement with the messy reality of everyday politics to unravel the political processes through which particular socio-environmental configurations are produced, configured, and contested (or not), and identify the political strategies through which the production of socially-environmentally just socio-natures would be possible” (p.340). But while Apostolopoulou’s sustained engagement with the minutiae of land-use planning politics in England speaks to the first half of this call, I was left wondering what obstacles had prevented her from fleshing out a strategic contribution to the latter part of the radical praxis she rightly advocates.

After a (long!) decade of Conservative Party rule in the UK, the regional experimentation with offsetting examined by Apostolopoulou has re-emerged as a national policy after a long period of “neoliberal policy refugia” (Corbera et al. 2021). With sufficient time between a barrage of negative press coverage at the time of the government’s original Green Paper in 2013 (discussed at length by an offset advocate in Chapter 7), a national offset system is included in a current, and much-delayed, UK Environment Bill. Although the toxic term offsetting has been scrapped and replaced with a more optimistic sounding “net gain”, the fundamentals of a re-branded “Biodiversity Net Gain” policy remain much the same as that floated in 2013. As we are likely to see a whole lot more offsetting in the UK, Apostolopoulou’s work provides geographers with much food for thought as impacts of a nationwide system come to fruition.

Nature Swapped and Nature Lost is a comprehensive exploration of the nature and international rise of offsetting, its relation to the political economy of capitalism, and the

particularities of its application in England since 2013. The book skilfully uses yet another complex attempt to price “environmental externalities” as a jumping off point to engage with much broader questions around the social production of space, nature, and the political ecology of austerity Britain. Although at first glance its thematic focus might appear restrictive, Apostolopoulou’s text contributes much to debates around the evolution of for-profit conservation, Marxian political ecology, and the operation of a development-conservation nexus in affluent country contexts.

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