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Embracing 'Abolition Ecology': A Green Criminological Rejoinder

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Abstract

Recent debates in political ecology have sought to highlight and excavate the complex connectivity between ecological and carceral harms (e.g. Heynen and Ybarra in Antipode 53:21–35, 2021; Pellow 2021; Pulido and De Lara in Environ Plan E Nat Space 1:76– 98, 2018; AAA = Brock and Stephens-Griffin, IDS Bulletin, 2017). 'Abolition ecology' presents an approach through which to explore, unravel and resist racial capitalism and environmental racism as interlocking and mutually generative systems (Heynen in Abolit A J Insurg Polit 1:240-247, 2018a; Pulido in Prog Hum Geogr 41:524-533, 2017). Green criminology is a field well-placed to explore such radical possibilities (Bradshaw in Crit Criminol 26:407-422, 2018). This paper offers a green criminological rejoinder to the bourgeoning project of 'abolition ecology'. The paper works to bring together these linked perspectives, asking how green criminology might contribute to abolition ecology. The paper outlines its abolitionist theoretical framework, and then identifies some benefits of a green criminological orientation. It goes on to suggest three possible points of unity between green criminology and abolition ecology. In embracing these points of unity, and abolitionist principles more broadly, green criminology can better work towards more racially and ecologically just futures.

Introduction

Within and beyond academia, there is increasing acknowledgement of the connections between racist carceral systems and ecological harm (Heynen 2018a; Pulido and deLara 2018; Wright 2018). This paper seeks to contribute to the growing body of work acknowledging the close connections between racial capitalism and the 'slow violence' of ecocide (Robinson 1983; Nixon 2011; Higgins 2012) by presenting a green criminological rejoinder to 'abolition ecology' (Heynen 2018a). Recent scholarly debates, particularly in the fields of political ecology and human geography, have sought to emphasise and unearth the complex connectivity between ecological and carceral harms (Pellow 2021; Heynen 2018a; Pulido and de Lara 2018; AAA = Brock and Stephens-Griffin, 2021). Abolition ecology represents a novel approach through which to explore, unravel and resist racial capitalism

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and environmental racism as interlocking and mutually generative systems, with an explicit focus on cities as 'urban natures' (Heynen 2018a). With some exceptions (e.g. Bradshaw 2018; Fitzgerald 2019), engaged discussions of abolition remain relatively rare in green criminological literature, despite the field being arguably well-placed to explore such ideas. This paper, therefore, seeks to explore and develop these abolition ecology debates through the putative lens of green criminology, asking how green criminology might contribute to the project of abolition ecology. The paper first sets out a theoretical framework resting on the concepts of abolition, racial capitalism, environmental racism, and abolition ecology, before discussing green criminology as a related but distinct orientation. Having identified some of the key strengths of green criminology, the paper suggests three potential points of unity between green criminology and abolition ecology, specifically epistemological, theoretical and political. An abolitionist turn within green criminology would encourage connections and foster unity between diverse struggles (for example, between police/prison abolitionism and ecological/animal liberation movements). The paper concludes by arguing that green criminology must embrace the project of abolition as a means of imagining and working towards more racially and ecologically just futures.

Exploring Abolition

As McDowell and Fernandez (2018: 375) have demonstrated previously in this journal, 'abolition has a long, complicated, and inspiring history'. The term 'abolitionism' was historically used to describe struggles against slavery, as associated with figures such as Harriett Tubman, Frederick Douglass and John Brown. These movements have enduring relevance and applicability to contemporary campaigns to abolish prisons and police and, as such, contemporary abolitionist struggles can and should be understood in connection to the more historic movements that they built upon (Elliott-Cooper 2021; McDowell and Fernandez 2018). Carrier and Piché (2015) delineate abolitionism into 'penal abolition', which traditionally seeks to abolish prisons, and 'carceral abolitionism', which is broader in scope, seeking to abolish all forms of punitive control, punishment and detention, including policing, expanding in some instances to the anarchist goal of abolition of the nation state. We might view these broader forces as being rooted in 'carceral logic', in other words 'the control and punishment mindset that suggests criminalization is the best paradigm to organize human life and to solve social problems' (Coyle and Nagel 2021: 1). The term 'abolitionism' is used here to refer to anti-carceral movements primarily organised against prisons and policing, accepting that these struggles are historically entwined with resistance to colonialism and slavery (Elliott-Cooper 2021; Duff 2021). While often enforced by the state, these institutions and processes increasingly extend beyond the remit of the sovereign state into private forms of securitisation (Abrahamsen and Williams 2010). The concept of the 'prison-industrial complex' (PIC) has been significant in revealing how corporations connected to the punishment industry have a financial stake in the existence of a large and expanding prison population, over policing, and the links between racism and capitalism (Davis 2003). Indeed, in North America, much renewed focus on abolitionism has come in response to the massive and still ongoing expansion of the prison population particularly associated with the so-called 'War on Drugs' (Alexander 2010).

While academic debates on abolition are often traced back to the work of Mathiesen (1974, 2014), contemporary academic discourse in the area has developed in conversation with the work of North American Black feminist activist-scholarship, that of Ruth Wilson Gilmore and Angela Davis, who together helped co-found the prominent abolitionist organisation Critical Resistance (Gilmore 2007; Davis 2003; Critical Resistance 2008). For Gilmore (2014: vii–viii), abolition 'is a movement to end systemic violence, including the interpersonal vulnerabilities and displacements that keep the system going. In other words, the goal is to change how we interact with each other and the planet by putting people before profits, welfare before warfare, and life over death'. Gilmore (2007: 14) conceptualises the shift towards mass incarceration and the attendant expansion of the US prison estate as 'a geographical solution that purports to solve socioeconomic problems'. The project of abolition is self-consciously idealistic, acknowledging that an end goal of a world without prisons and police is unlikely in the immediate future, but as Critical Resistance (2008: xii) argue 'abolition is the creation of possibilities for our dreams and demands for health and happiness- for what we want, not what we think we can get'. This 'productive' dimension is crucial to understanding contemporary abolitionist struggle (Davis 2005 cited in McDowell and Fernandez 2018).

Mainstream criminology has often been reluctant to engage with abolitionist debates (Coyle and Scott 2021; McDowell and Fernandez 2018). As Ryan and Sim (2007) argued, the need for prisons has become hegemonic and unchallengeable in criminology. The same can be said for policing. This does not mean that criminology has not explored alternatives to prisons and policing, but it has tended to do so in a way that does not challenge the fundamental necessity of policing, prisons, containment and control (for example, the promotion of restorative justice within wider systems of carceral 'justice'). This is perhaps unsurprising given the discipline's roots in colonialism and the emergence of the carceral state (Agozino 2004; McDowell and Fernandez 2018). Nevertheless, the relative marginality of abolition as a topic in criminology is unusual, given it is perhaps the discipline best placed to discuss alternative responses to harm in society. Perhaps this is a result of a focus on 'system justification', or 'refining the existing' within criminology, things abolitionists tend to reject (Mathiesen 2014: 31-32). Any criticism or rejection of a system, or aspect of a system, will be met with arguments about the necessity of that system and so, for Mathiesen (2014), to pursue an abolitionist stance is to push beyond these arguments about necessity towards possibilities that exist outside of existing systems and institutions. An abolitionist stance, therefore, goes 'beyond the parameters of existing systems', and entails 'a constant and deeply critical attitude to prisons and penal systems as human (and inhumane) solutions' (Mathieson 2014: 31-32). Hence, productive arguments focussed on building alternative systems, as opposed to reforming existing ones, are so important, and have become more prominent in abolitionist messaging.

Abolition fits within a broader tradition of direct action and prefigurative politics, work which anarchist and abolitionist organisers have been doing for decades. This is evidenced in Lamble's (2021: 148) call for an 'everyday abolition' which entails 'undoing the cultural norms and mindsets that trap us within punitive habits and logics'. Thus, we are compelled to unpick and unlearn the punitive responses to social problems drummed into us from birth and, in so doing, work to prefigure abolition. For Davis (2003: 9–10), prison abolitionists are frequently dismissed as foolish idealists, so part of the project of abolition is to challenge fundamental assumptions about the necessity of control, incarceration and imprisonment, and to 'envision a social order that does not rely on the threat of sequestering people in dreadful places designed to separate them from their communities and families'. As Gilmore (2020 cited in Lamble 2021: 148) argues, 'abolition is about abolishing the conditions under which prison became the solution to problems, rather than abolishing the buildings we call prisons'. The very same principle can also be applied to policing: abolition is not (just) about abolishing prisons and the police, but rather abolishing

the conditions upon which prisons and the police become the solution to social problems (Begum 2020). Discussing this productive orientation, Elliott-Cooper (2021) argues abolition entails organising and campaigning for, inter-alia, affordable, secure housing, stronger trade unions and better employment, justice and equality in access to education and health-care and, in particular, mental health and drug addiction support. So, as well as being about ending the violence inherent in prisons and policing, this also necessitates the repeal of laws and practices which disproportionately impact marginalised communities in the first place. We can add environmental justice to this list (Pellow 2021; AAA = Brock and Stephens-Griffin, 2021).

Race, Capitalism and the Environment

Before discussing abolition ecology, for context, I first examine the connectivity between ecological and carceral harms, primarily through a discussion of race, capitalism and the environment. Brevity precludes an in-depth engagement with the wealth of literature on these topics, and this section provides what is hopefully a useful snapshot.

Mainstream US and European Left scholarship has consistently failed to recognise the centrality of racism and colonialism to neoliberalism and capitalism (Kundnani 2021). Cedric J. Robinson's (1983) concept of 'racial capitalism' helps clarify these connections, and illustrates the historical and contemporary interdependence of racism and capitalism. For Robinson (1983: 1), 'the historical development of world capitalism was influenced in a most fundamental way by the particularistic forces of racism and nationalism'. We cannot understand the development of contemporary capitalist society solely through the lens of capital accumulation, as a typical Marxist perspective might, instead we must interrogate the ways that racism has represented a 'structuring logic of capitalism' (Pulido 2017: 526). As Davis (2003: 44) highlights, 'Marxist theorists of punishment have noted that precisely the historical period during which the commodity form arose is the era during which penitentiary sentences emerged as the primary form of punishment'. To understand racist carceral exploitation, we must therefore understand capitalism, and vice versa. However, racism preceded capitalism, and it has always been entangled with colonization, with the dehumanization of indigenous people in colonized areas being central to the success of colonialism (Pulido 2017). These practices informed racist policing of racialised populations domestically. For example, Chowdhury (2021) argues that contemporary British policing has its roots in the so-called 'colonial boomerang', whereby the racialisation inherent in colonial expansion acted as a laboratory for practices that would then be used domestically. As Sinclair and Williams (2007: 221) put it, 'empire has never been a oneway process'.

Without delving more deeply into these important debates, it is sufficient, for this paper's purposes, to acknowledge the historical interdependency of racism and capitalism, and how this connectivity undergirds the abolitionist resistance discussed earlier. Abolitionist struggles are anti-racist and anti-capitalist in nature and acknowledge how oppressive systems reinforce one another. Acknowledging the linkages between racism, colonialism, capitalism and contemporary carceral society at the outset is vital, as we turn our attention to ecological forms of harm.

Just as racism and capitalism are connected, racial and environmental injustice must be understood as deeply intertwined. Historically, environmental issues have been central to unjust racial social relations. Colonialism entailed the establishment of violent, genocidal, and extractivist systems of domination and exploitation around the world (BBB = Brock and Stephens-Griffin, Forthcoming). It is widely documented and recognised that people of colour, indigenous communities, and women, especially in the global south, have borne the biggest burden in terms of environmental harm globally (Bullard 2000; Nixon 2011; Pellow 2021; Pulido and De Lara 2018; Shiva 2008). Plantation slavery was an essential component of the development of contemporary global capitalism, simultaneously providing a space in which modern scientific management techniques could be perfected, and a lucrative profit stream rooted in an extractive relationship with racialised people and with the planet itself (Dunlap and Brock 2021). Today, extractive industries, such as the fossil fuel industry, are responsible for over 80% of ecosystem destruction, 85% of water stress, and half of global greenhouse emissions globally (Watts 2019). Acosta (2017) argues that 'extractivism' is the ideology that underpins these industries and is rooted in colonialism, benefiting from and perpetuating inequalities globally, while externalising social and ecological costs of industrial activities, which mostly benefit the Global North to the detriment of the poorer, racialised Global South.

Bullard (1994: 451) uses the term 'environmental racism' to describe 'any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or colour'. Bullard's (2000) influential book 'Dumping in Dixie' drew direct connections between environmental harm faced by people of colour, and geographies of segregation in Southern US states. It provided evidence that communities of colour were more likely to experience the toxicity of hazardous waste and pollution, and that this was playing out across material landscapes of inequality that could be traced back to the Jim Crow-era and further. This work has been highly influential. For example, exploring the ways that white supremacy has been fundamental to processes such as land appropriation and access, Pulido (2017) argues that environmental racism is a constituent part of racial capitalism. Similarly, Braz and Gilmore (2006: 109) have highlighted the ongoing, corrosive threat of what they call the 'three Pspolice, prisons and pollution' on racialised communities.

This historical connection between racism and environmental harm can also be evidenced in human and non-human relationships. Non-human animals were frequently instrumentalised as means of aiding and abetting forms of racialised violence and control, for example through the mass slaughter of the buffalo and bison to control and eliminate indigenous peoples in North America (Isenberg 2000; McGinnis 1990; Moloney and Chambliss 2014). Cohen (2017: 268) argues that this is also evidenced in the use of domesticated farmed animals as a means of colonising indigenous lands, a process she calls 'animal colonialism'. Colling et al (2014) explore the relationship between white supremacy, colonialism and violence towards animals, for example through the characterisation of colonized peoples as animals and processes of dehumanisation and objectification, especially of women's bodies. They argue that ecologically destructive contemporary animal enterprises exist in direct continuity with the colonial projects of slavery and genocide (Colling et al 2014). Having very briefly examined the relationship between racism, capitalism and environmental harm, I now discuss abolition ecology as a project seeking to highlight and resist these interconnected harms.

Towards an Abolition Ecology

Emerging from political ecology, the project of abolition ecology brings together core themes of the above work, revealing and actively resisting the interconnectivity of racism, capitalism and environmental harms. For Heynen (2018a: 244), the goal of abolition ecology is 'to push forward through well-informed and deliberate organising and theorising against and about the continued existence of white supremacist logics that continue to produce uneven racial development within land and property relations'. In this sense, it illustrates the important role that white supremacy has played and continues to play in shaping relations between nature and society (Heynen and Ybara 2021). Developing from the productive project of abolition, the project of abolition ecology imagines, creates and builds new institutions and processes producing 'access to fresh air, clean water, sufficient land, amelioration of toxic chemicals, and beyond' (Heynen and Ybara 2021: 27). From a Critical Criminology reader's perspective then, an abolition ecology approach helps identify and challenge harms to ecosystems, humans, and non-humans alike, caused or exacerbated by racist carceral systems and, in so doing, imagines alternatives. For example, through examining the colonial continuities of policing, and the role policing presently plays in protecting the expansion of environmentally destructive megaprojects, the subjugation of environmental defenders, and the securing of an existing unjust hierarchical social order which disproportionately harms racialised communities globally (AAA = Brock and Stephens-Griffin, 2021).

Abolition ecology primarily focusses on cities or 'urban natures' and, perhaps intuitively given that it has emerged from the spatially oriented disciplines of human geography and political ecology, the notion of *place* is crucial within the project (Heynen and Ybara 2021). Gilmore (2017: 227 in Heynen and Ybara 2021: 22) invokes the notion of 'freedom as a place', examining the 'environment' not as something in the abstract but rather a space in which people exist, work and live their lives. In liberating the environment, we participate in a larger liberatory project. The carceral spaces of prisons, detention centres, overpoliced estates and communities exist in opposition to the goal of ecological liberation but are also all spaces in which people of colour are disproportionately represented. To illustrate, Ybarra (2021: 38) draws on the racist dynamics of immigration detention and US property relations more generally to evidence the 'spatialisation of white supremacy'. Ybarra (2021) explores the placement of immigration detention centres and how this fits into wider patterns of gentrification, segregation and displacement in the USA, in which communities of colour suffer the consequences of environmental injustice; for example, detention centres being moved from affluent Seattle's International District, out to Tacoma, in which the putrid and noxious smells associated with the pollution from industry in the area have been dubbed the 'Aroma of Tacoma'. This spatialisation also links to the ways extractive operations tend to be on indigenous or racial minority territories and are disproportionately outsourced to the Global South (Still Burning 2021). This also extends beyond problems of 'pollution' and how they affect humans, into wider ecologies of the harmful impact of extraction on non-human animals, habitats and the planet itself.

Abolition ecology is a bourgeoning approach, with a diverse range of relevant new work having been published over the past few years (e.g. Heynen 2018b; Kimari and Parish 2020; Ranganathan 2016). While succinctness prevents an exhaustive review, recently the approach has seen a broad range of fascinating applications. These include responses to the rising sea levels displacing Gullah/Geechee people on Sapelo Island, Georgia, USA (Hardy et al. 2022); intersectional analyses of disability justice, accessibility and ableism in critical

discussions of placemaking and ecology, which acknowledge the role of white supremacy in producing inaccessible, racialised geographies (Reimer 2021) and to the adverse impacts of environmental stressors (e.g. heat and cold) on racialised incarcerated populations (Colucci et al. 2021). Understanding the varied application of these ideas and the new avenues they open for conceptions of environmental justice, provides further impetus for green criminological scholarship.

Mainstream environmental justice scholarship has tended towards a liberal focus on ensuring a 'fair' distribution of harms, as opposed to advocating system-change (Álvarez and Coolsaet 2020). Pulido and De Lara (2018) reconceptualise US environmental justice struggles through exploring their connections to abolitionist theories, decolonial epistemologies and critical theories of urban ecology, arguing that contemporary multi-racial environmental struggle should be understood as a continuation of what Robinson (1983: 167) called the 'Black Radical Tradition'. Pulido and De Lara's (2018: 78) engagement with indigenous epistemology supports a practice they call 'decolonial border thinking', which involves 'the recognition that capitalism and modernity are unviable systems' rooted in the impossible aim of infinite growth on a finite planet. These ideas are rife for further exploration through the lens of green criminology.

Engaging Green Criminology and Abolition Ecology

Goyes defines (2019: 3) green criminology as 'a sub-disciplinary conceptual framework that relies on criminology knowledge to study transgressions committed against ecosystems, human beings and non-human beings in the interactions between humans and their natural surroundings'. As such, green criminology is well-situated to contribute to the project of abolition ecology. Since emerging in the 1990s as a means of examining so-called 'green' crimes (Lynch 1990; South 1998), green criminology has steadily grown in profile and significance. While it edges nearer to the centre of criminology, it remains somewhat peripheral, often regarded as a niche or optional offshoot of the mainstream discipline. This is perhaps because of its tendency to trouble many of the accepted orthodoxies of criminology, particularly around what constitutes harm (White 2008; Canning and Tombs 2021), and to whom (or what) we should confer the status of legitimate victims of such harm (Beirne 1999). Crucially, green criminology often works to destabilize notions of 'crime' altogether, acknowledging that harms against animals and ecosystems are frequently legal, thus highlighting how laws function in the interests of the powerful, and against the interests of specific communities as well as non-humans and the environment.

In addition to its aforementioned power in troubling orthodoxies around crime and harm, Lynch (2020) outlines numerous strengths of a green criminology approach. One is the way it helps re-define green harms. Beirne's (1999) non-speciesist criminological work has been valuable in helping define the parameters of animal abuse, while simultaneously establishing animal abuse as a criminologically relevant phenomenon, allowing violence done to animals to be acknowledged within criminological discussions. Green criminology also does the overlooked work of measuring the scale and scope of green crimes/harms (Lynch 2020). Measuring green crime is not as straightforward as measuring street crimes, as green crimes are diffuse and not contained within one location. The global outlook of green criminology is therefore beneficial, and green criminology has consistently shown its commitment to collecting data across levels of analysis and locations (Lynch 2020). Green criminology also works to theorise and explain why green harms happen in the first place.

Relevant green criminological theoretical traditions include a focus on political economy and ecological harm, often from an explicitly Marxist standpoint (Stretesky et al. 2013); non-speciesist green criminology opens up concern for non-human animals, taking into account, and rejecting, their victimisation (Beirne 1999; Nurse and Wyatt 2020); green cultural criminology seeks to place crime and its control in the context of cultural, media and virtual representations (Brisman and South 2013); and Southern green criminology critiques the heavy Global North bias of criminological and green criminology scholarship, despite the Global South suffering the worst from green harms, and seeks to produce knowledge of ecological harm that is 'attentive to the dynamics and contexts of the Global South and grows out of the epistemological power of the marginalised, impoverished and oppressed' (Goyes 2019: 11). Acknowledging these strengths, the discipline is well-positioned to contribute to the project of abolition ecology.

Three Points of Unity

Here, I suggest three possible points of unity between green criminology and abolition ecology. The first is *epistemological*, through a shared interest in new and radical ways of scrutinising knowledge and the connections between knowledge, carceral systems and ecologies, for example, through Southern and Indigenous epistemologies. The second is *theoretical*, through reconceptualising the parameters by which we measure the scale and scope of harm, to explain, unravel and resist racial capitalism and environmental racism as interlocking and mutually generative systems. The final point of unity is *political*, through actively challenging carceral expansion, imagining alternatives and providing impetus for resistance against green harms within and beyond urban spaces, for example through green criminological opposition to the so-called 'green prison'. This list is non-exhaustive, and the aim of this section is simply to try and help bring two convergent traditions further into conversation with one another. It is not to suggest that one orientation is doing something the other is not; indeed, work in this explicit vein already exists, as I will highlight. In looking to these points of unity, I hope to illustrate how the strengths of green criminology might support abolition ecology.

The first potential point of unity is epistemological, via a shared rejection of colonial, anthropocentric knowledge systems. Western, European-centric critical thinking has dominated and marginalised knowledge produced in the Global South (Santos 2014). Hegemonic scientific rationality positions itself as an objective, dispassionate 'view from nowhere', but is in fact a 'view from somewhere', a 'somewhere of privilege and domination' (Bhambra 2007: 28). Within these forms of positivist rational purported-objectivity, knowledge systems built around colonial, patriarchal, extractive, capitalist, anthropocentric, etc., values become invisible and hegemonic. Abolition ecology and green criminology share an impetus to contest this, challenging fundamental assumptions around knowledge. Of course, this is not just an abstract discussion about ways of thinking; assumptions about knowledge connect closely to the law, state and to violence. For example, the state's unchallenged monopoly on violence (cf: Weber 1919/2015) arguably having developed from rationalist 'enlightenment' thinking allows it to inhabit a position as 'arbiter of justice' (Dunlap 2020), exclusively able to define that which is 'criminal', often irrespective of harm, and in service of powerful elites (Canning and Tombs 2021). Universities themselves play an important role in advancing knowledge systems rooted in reproducing colonial-capitalist state governance (Meyerhoff 2015). Abolition ecology and green criminology share a potential oppositionality to these forces, each fundamentally challenging to the constructions of knowledge around ecological harm, as well as notions of 'crime' itself, which are invariably founded upon colonial, patriarchal, anthropocentric assumptions.

A practical illustration of this unifying epistemological potential can be seen in the related critical tools of 'decolonial border thinking' as discussed earlier (Pulido and De Lara 2018) and Southern green criminology (Goyes 2019). Just as Pulido and De Lara (2018) engage with indigenous epistemologies to reveal the 'unviability' of capitalist modernity, radical ideas from Southern green criminology help to better understand carceral logics and ecological harm. Where abolition ecology has embraced epistemologies that help reveal racial capitalism and environmental racism as mutually generative systems, Southern green criminological analysis has also helped to advance understandings of the 'epistemological colonialism' which underpins western science and scholarly work more generally (Goyes 2018). In doing so, it has helped highlight the ways that colonized peoples' diverse ways of knowing and understanding the world have been repressed, enforcing European rationality as a hegemonic system for people all over the world (Goyes 2018). Colonialism takes away from the colonized 'their ways of expression and their universe of meanings, forbade the multicultural production of knowledge and suppressed the heterogeneity of the subjects of oppression' (Goyes 2018: 326). In response to this, and attendant problems of reconciling fundamentally disparate epistemological paradigms, Goyes (2019) proposes a 'stereoscopic' approach. Viewing events solely through either the prism of Western rationality or Southern epistemology is inadequate but, by combining them, he argues that a third, 'colonial dimension' can be revealed. For example, Goyes' (possessive apostrophe) (2019) research on biopiracy sought to bring together Western academic understandings of the phenomena as being driven by globalization and the broadening of intellectual property laws, with the smaller-scale everyday dynamics which the native communities consulted tended to consider the main drivers of the phenomena. Doing this helped to capture 'diffused social everyday practices that were the most powerful drivers of biopiracy but were not encompassed by previous Western conceptualization' (Goyes 2019: 335). Where abolition ecology seeks to explore how 'white supremacy shapes human relationships with land in the context of settler colonialism, empire and racial capitalism' (Heynen and Ybarra 2021: 21), the application of Goyes' (2019) stereoscopic approach entails engagement with indigenous explanations around specific relationships between humans and the land, within settler colonial contexts, expanding knowledge and understanding and helping resist epistemological colonialism. Southern green criminology therefore represents a potentially useful unifying analytic tool to further contribute to building 'freedom across relations of land and people' (Heynen and Ybarra 2021: 30).

The second potential point of unity between green criminology and abolition ecology is theoretical, evidenced through a shared encouragement of widening the scope of inquiry when it comes to conceptions of harm and their explanations. A key strength of green criminology has been in defining, measuring and evidencing the nature, scale and scope of green harms, allowing for more sophisticated theorising around how they occur. For example, as discussed above, the non-speciesist green criminological tradition has been influential in acknowledging and seeking to explain harms experienced by non-human animals, within the remit of green criminological inquiry (Beirne 1999; Beirne and South 2007; Sollund 2019). Abolition ecology's focus on harms of the state and carceral systems aligns it with a critical criminological tradition, and this represents a potential unifying impetus. This is evidenced in applications of the concept of 'structural violence', first articulated by Galtung (1969) which accounts for how racist, sexist (et cetera) systems result in the denial of basic needs and restriction in life quality, thus producing a form of 'violence'

which might otherwise be ignored. This, and related ideas, have been extremely influential, shifting our lens from the interpersonal, towards an upward focus on 'political reactions from above' (Geenen and Verweijen 2017), state and corporate crime (Tombs and Whyte 2015) and 'zemiological' analyses of social harm (Canning and Tombs 2021). Uniting the approaches through a broadening of focus opens space in which to understand and explain the diverse and interconnected harms inflicted upon humans, non-humans and the environment alike, while also maintaining a focus on how these harms are often mutually generative in the context of racial capitalism.

One recent green criminological example of the benefits of a wider theoretical orientation is Fitzgerald's (2019) work on slaughterhouses. Acknowledging the increasing prevalence of 'good news' narratives, whereby non-human animals, in particular rescue dogs, are used in programmes to help rehabilitate prison inmates, Fitzgerald (2019) explores some of the less visible ways that non-human animals are implicated in the PIC, namely slaughterhouse work programmes for prison inmates in North America. These practices have largely escaped scrutiny, she argues, because of being at the nexus of two of the intentionally least visible industries in contemporary society, the PIC and animal industries. Fitzgerald (2019) highlights empirical data demonstrating that contrasted with comparison industries (such as iron and steel forging), slaughterhouses are associated with increased violent crime rates, which cannot be explained by demographic and economic factors alone. Slaughterhouses provide an important site through which institutionalised forms of harm are perpetuated, and studies of this kind help to critically examine the complex relationship between the (socially and legally acceptable) harms endured by non-human animals and by people within and beyond the PIC, as a site of racialised oppression. Slaughterhouses are key sites of capitalist exploitation, from underpaid workers witnessing, experiencing and inflicting horrible violence for the profit of their employers. Fitzgerald (2019: 151) provides evidence that the 'well-being of nonhuman animals and people is often interdependent and challenges the speciesism that undergirds the assumption that slaughtering and processing/ dismembering nonhuman animals is not qualitatively different from production processes using inanimate objects'. Engaging critically with harms to humans and non-humans alike in these contexts therefore represents a potentially valuable way that green criminology could contribute to the goal of building freedom across land, people and species borders (Heynen and Ybarra 2021).

Pellow's (2014) work represents another useful example of scholarship integrating the unifying broad theoretical scope of green criminological and abolition ecology principles in practice, through a theoretical framework of 'total liberation' applied across human and non-human contexts. Pellow (2014: 2) evidences the ways in which diverse forms of oppression are linked and, in doing so, approaches issues of hierarchy, state violence, and capitalism, critically examining and resisting the 'intertwined crises of ecosystem decline, nonhuman species exploitation and extinction, and human oppression'. More recently, Pellow (2018) has used this broad empirical focus to examine the Black Lives Matter (BLM) movement as an environmental justice challenge, highlighting how black victims of police violence are frequently described in animalistic terms in social discourse. Pellow (2018) argues that this dehumanising process is used in the service of white supremacy but can also serve to reinforce speciesist oppression when appeals to animality are used by antiracists. For example, where anti-racist campaigns argue that certain groups do not deserve to be 'treated like animals', Pellow suggests that such messaging may inadvertently serve to justify the hierarchically subordinate status of animals. This echoes similar arguments made in relation to the messaging of feminist campaigns (e.g. 'women are not pieces of meat'), which might implicitly serve to normalise or justify animal slaughter (Adams 1990).

Pellow's work helps illustrate how integrating green criminological theory around who counts as worthy of empirical consideration (i.e. inclusive of non-human animals) into the project of abolition ecology, can help produce valuable critical knowledge supporting the aim of abolition. The theoretical implications of this wider focus is a recognition that harm to non-humans represents a form of social harm (CCC = Stephens-Griffin and Griffin, 2021). It also encourages recognition of how hierarchies among humans, and between humans, animals and ecosystems, actually function. Bookchin (1982) argues that hierarchy and domination within human society predated, and provided the foundation for, anthropocentrism and human domination of 'nature' (including animals). For Bookchin (1982), an understanding of society and ecology as fundamentally entwined tears down dualisms as hierarchical systems of domination. Thus, green criminology and abolition ecology each represent potentially powerful tools with which to produce a healthier, horizontal social ecology. An abolitionist imperative, cultivated within this theoretical paradigm, could therefore contribute further to combining police and prison abolition struggles with abolitionist ecological and animal liberation struggles, identifying and fostering the unity between them (Springer et al 2021; Pellow 2014).

The third point of unity I would suggest, between green criminology and abolition ecology, is political, specifically through providing a basis for practical resistance to carceral expansion. There is a potential tension between a green criminologist's desire to address green harms which may result in advocating for punitive carceral systems—for example, in moves towards criminalising certain environmental harms, forms of animal abuse, etc., and therefore supporting the expansion of the existing punishment apparatus. As Sollund (2016) highlights, critical green criminology rejects the role that mainstream criminology tends to play in reinforcing deeply unjust and oppressive judicial systems. Nevertheless, as discussed above, an important strength of the green criminological orientation is in evaluating the effectiveness of those environmental laws, protections and international conventions that do exist (Lynch 2020). Coupled with criminology's focus on carceral systems more broadly, this allows not only vigorous critiques, but also creates space to imagine alternative approaches. This provides a nexus for potential fruitful alliances between green criminology and abolition ecology.

Bradshaw's (2018) work on prison ecologies represents an exemplar of the way green criminology and abolition ecology can come together to form a political impetus for radical change. Bradshaw (2018) highlights the intersecting issues of carceral and environmental harm within an explicitly abolitionist critique of prisons in the USA, calling upon green criminologists to work together with prison abolitionists towards environmental justice. In a UK context, Jewkes and Moran (2015) are robust in their criticism when examining the recent emergence of so-called 'green prisons' in the UK (characterised by carbon-zero commitments, renewable energy initiatives; 'green-collar' work and training for prisoners; and the provision of 'green care' to help reduce recidivism). While this 'green' agenda has received praise, Jewkes and Moran (2015) argue that this carceral 'greening' emerged to sustain the existing penal system, not because of the much vaunted and grossly overstated environmental benefits. They offer 'green prisons' as evidence of how the powerful are able to define the parameters of the politicised terms like 'green' and 'crime' in their own self-interest. We know that in the UK context where this research took place, imprisonment disproportionately impacts people from Black, Asian and Minority Ethnic backgrounds (Prison Reform Trust 2021), and so efforts to expand or launder the public image of prisons are enmeshed with institutional racism. This fits into a wider context in which many of the new extractive and infrastructural frontiers of capitalism, including supposed climate change mitigation technologies are deliberately packaged as 'green' despite their ecologically catastrophic effects (Dunlap 2019). This 'green capitalist' tendency can also be evidenced in carceral and militaristic developments, for example 'the arms industry developing "environmentally friendly weapons"—from lithium-ion battery tanks to solar-powered drones—and nature conservation serving as a pretext for military intervention' (Selwyn 2020: 36). Within an abolition ecology paradigm, the notion of 'green' capitalism, or of 'green' prisons or militaries are contradictions in terms, and a green criminological orientation helps allow for these insidious developments in neoliberal capitalism to be identified and forcefully rejected. This work can, in turn, form a productive common ground between scholars and activists engaged in political organising against prisons, as evidenced in the messaging of the political group 'Community Action on Prison Expansion' (CAPE 2017), who have explicitly rejected 'green prisons', highlighting the pollution, traffic, destruction of ecosystems and other negative environmental impacts that result from prison expansion.

To take this further, we might also see this potential indirectly evidenced in broad based political resistance to increasingly draconian attacks on the right to protest itself, for example, in Britain, the Police, Crime, Sentencing and Courts Act (2022). This repressive legislation can be understood as a direct reaction 'from above' to various progressive protests and uprisings in recent years, and has subsequently inadvertantly served to foster coalitions between environmental, feminist and racial justice campaigns united under the 'kill the bill' banner (Price 2021). That these coalitions have emerged is illustrative of the ways that carcerality, patriarchy, colonialism and fossil-fuel capitalism are intimately entwined, something abolition ecology and green criminology can help to further reveal and contribute towards resisting.

Conclusion

Racial capitalism and the carceral systems central to it are key drivers of the ecological catastrophe our planet faces (AAA = Brock and Stephens-Griffin, 2021). I am hopeful that the above discussion illustrates some of the ways green criminology would benefit from embracing abolition ecology. Just as green criminology shares commonalities with abolition ecology, as described above, it is also the case that green criminology as an orientation would benefit from the idealism that comes with embracing abolitionist principles and actively working to reject and dismantle these institutions, building a new world in the shell of the old, as the saying goes. The above discussion has attempted to provide a green criminological rejoinder to the project of abolition ecology, and so to bring two connected but distinct orientations closer together, notwithstanding the overlaps that already exist. This paper has thus aimed to contribute to a broader trajectory of abolitionist scholarship, within and beyond green criminology. As Coyle and Schept (2018) have previously argued in this journal, a slave-free society only existed in people's imaginations, before the abolition of slavery in the USA, and a non-carceral, ecologically just society only exists in our imaginations today. It is therefore vital we have the courage to imagine more racially and ecologically just futures, articulating a vision of 'what we want, not what we think we can get' (Critical Resistance 2008: xii).

Embracing abolitionism is particularly important at a time where academia and the criminal justice system are increasingly enmeshed. Within a competitive market system, criminology programmes are existentially reliant on connections with carceral institutions,

and the discipline continues to be cosily entwined with the state's punitive carceral regimes. This might be expected given criminology's colonial foundations (Agozino 2004) and the carceral, colonial tendencies of universities more broadly, despite largely superficial efforts to 'decolonize' (Meyerhoff 2015; Mayorga et al 2019). With universities operating on a neoliberal logic of endless growth and capital accumulation, business justifications for these academic-carceral alliances are abundant, just as they give 'sensible' pretext to investments in fossil fuels, animal exploitation, arms-manufacturing and other ecologically and socially indefensible industries. Hillyard (2020) argues that criminology as a discipline is in a particularly alarming state, often lacking criticality and sweeping up and constraining the social harms it should be seeking to understand within the extremely narrow parameters of criminal justice, policing and crime, and rarely challenging orthodoxies. In this context, green criminologists may worry that in aligning themselves with an abolition ecology approach they risk being taken less seriously or losing credibility within mainstream criminology. But imagining radical alternatives must be part of what we do. As Bookchin (1990: para 5) argues, 'the assumption that what currently exists must necessarily exist is the acid that corrodes all visionary thinking'. We must not let the limits of the present curtail our visions for the future.

Nevertheless, despite these real, material, and practical tensions, abolitionist perspectives continue growing in profile and significance across global contexts (e.g. Chartrand and Rougier 2021; Lamusse, 2021; Asare 2021), including in Britain where I am based (e.g. Duff 2021; Elliott-Cooper 2021; Joseph-Salisbury et al. 2021; Scott 2018; Ryan and Ward 2015; Ruggiero 2010). I hope that in articulating these points of unity between green criminology scholarship and abolition ecology, I contribute to the cross-disciplinary and scholar-activist alliances which continue to be formed. I hope in turn this works towards the productive goal of an ecological society where policing, prisons and containment are no longer necessary, which is mutually fruitful for abolition ecology and green criminology alike. Within this, preventing harms to ecosystems, humans and non-humans alike including those caused or exacerbated by carceral systems themselves—can become unifying priorities. At a time of ecological crisis, green criminology can become a thorn in the side of anthropocentric carceral capitalism, embracing the project of abolition ecology as a means of averting global ecological collapse and working towards more racially and ecologically just futures.

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Declarations

Informed consent This research did not involve human participants and so there are no informed consent issues to declare. The research did not involve animals.

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