Avoiding the 'Anthropocene'?: An Assessment of the Extent and Nature of Engagement with Environmental Issues in Peace Research

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Abstract

This article critically examines the extent and nature of engagement with environmental issues within the field of peace research, and specifically with the unfolding ecological crisis ('the Anthropocene'). A representative sample of journals and book series associated with peace research were analysed in order to a. quantify the *extent* of engagement with climate change and other environmental issues in peace research, and b. assess the range of discursive positions vis-a-vis the environment represented in the sample. The article finds that, in comparison to other 'thematic niches', environmental issues have received limited attention. It also finds that the dominant orientation of publications that do have an environmental focus can be considered 'reformist' - largely concerned with or assuming the possibility of significant continuity from the present. More 'radical' perspectives are present but in a much lower proportion. Whilst acknowledging the validity of and need for a plurality of perspectives and approaches, it is argued that the scientific evidence of an accelerating and increasingly dangerous ecological crisis does raise challenging questions for peace research. The article concludes with a call for renewed debate on the purpose(s) and assumptions of peace research, informed by a wider range of perspectives on environmental issues. It is a contribution to a tradition of critical reflection within the field but is the first to provide a systematic and grounded analysis of engagement with and perspectives on, the environment within peace research.

Keywords: *peace research, climate change, ecological crisis, Anthropocene, environmental discourse, social cartography*

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What is the nature and extent of engagement within peace research with the unfolding global environmental crisis, as captured in discourses about the "Anthropocene" (Bonneuil & Fressoz, 2017; Dalby, 2015)? Is the peace research scholarly community connecting with significant debates taking place in the earth sciences or among social and political movements? If it is, in what ways? Are concepts of violence and peace evolving in line with the major trends driving change this century, including climate change? This article seeks answers to these questions through a systematic survey and thematic analysis of publications in key peace-related journals and book series.

The initial motivation for this study came from personal experience: As a self-identified peace researcher very concerned about the environmental crisis – encompassing climate change, biodiversity loss, land and forest degradation, and other aspects of pollution – I noticed that I rarely encountered or used research resources from *within* the body of peace research publications. For sure, there is no lack of useful research on various dimensions or implications of the environmental crisis, but this appeared to have little presence in or influence on publications most strongly associated with peace research. This article started as an effort to move beyond an impressionistic view to develop an understanding rooted in systematic inquiry.

A second motivation relates to intellectual history and reflexivity within the peace research community. Periodically, there have been efforts to clarify the current state of the field and/or to formulate new agendas in response to emerging trends (Patomaki, 2001; Pureza & Cravo, 2009; Rogers & Ramsbotham, 1999). Two recent of reviews, one marking 50 years of the *Journal of Peace Research* (Buhaug et al., 2014; Gleditsch et al., 2014), the other reflecting on the scope of peace and conflict studies (Gledhill & Bright, 2019; Mac Ginty, 2019), provide a particular and helpful reference point, clarifying which research agendas have received most attention in core journals. My intention is to contribute a further dimension to this endeavour through focusing on the relationship between peace research and evidence of significant global environmental change.

My sense, following Wallensteen (2015) and the above reviews, is that peace research has generally been *responsive* to world trends: Its key research agendas have followed (rather than anticipated) significant developments in world politics. It would be reasonable, then, to expect that a given environmental issue, such as climate change, would have featured in peace research at least in line with the ebb and flow of attention it has received within political and policy forums. However, it also seems that mainstream peace research has privileged certain thematic niches, mostly centered around a narrower, negative conception of peace and the study of violent conflict. Is this the case? And if so, how might this have influenced (in)attention to emerging environmental issues? Is there a bias towards the study of direct violence, and does this render the structural harms associated with climate change less important or valid for (some) peace researchers?

A third motivation relates to the last point: Perspectives on the significance or priority of the environment in relation to human affairs are cultural constructs, reflecting different values and alternative epistemological and ontological assumptions (See for example: Hannigan, 2014; Malm, 2018; Mansfield et al., 2014; White, 2004). These "worldviews" frame both scientific inquiry (including environmental science) and interpretations of and responses to information about environmental issues. Surveying the extent and nature of environmental concern within peace research necessarily involves consideration of the frames and assumptions driving, or reflected in, research activity. For example, a belief that environmental problems are readily manageable through legal/institutional reforms or technological development—through the refinement and extension of industrial modernity—might produce a very different response to one rooted in, say, radical ecologism (which assumes fundamental, biophysical limits to industrial modernity). Through looking at the extent and nature of engagement with environmental issues, I wanted to gain some insight into the logics and assumptions found in, and perhaps motivating or steering, peace research activity.

Finally, a fourth motivation—related again to reflection on the state of the field—is to assess what is at stake in this exercise: Would it matter if peace research has not given significant attention to environmental issues, or if it has done so only in relation to its own *traditional* focus areas. such as armed conflict? Can a field that expressly seeks relevance and influence beyond the academy claim to understand the drivers of violence or conditions for peace without a

meaningful ecological perspective? Could peace research actually have something useful to offer the earth and environmental sciences?

The article proceeds as follows. I first clarify the research objectives and the methodology developed to address them. The article is then divided into sections discussing the extent and then the nature of engagement with environmental themes in peace research. The latter is framed by the presentation of a social cartography—a mapping device representing a spectrum of perspectives in/on environmental thought. This map served a heuristic function in the data analysis process, helping to surface and interpret assumptions conveyed within peace research publications (those that do have an environment focus). An overview of the main findings from the thematic analysis sets up discussion in the final section, returning to the questions identified above.

This is the first article to provide a systematic analysis of environmental themes and content within peace research. The production of the article is arguably very timely, with public knowledge and concern about climate change increasing – partly in response to significant natural events but also the profile and influence of environmental movements. Its contribution, hopefully, is to support informed discussion about the intellectual priorities and orientation of this distinct area of academic work.

Methodology

The main research objectives in this study are:

 i. to quantify the *extent* of engagement with climate change and associated environmental issues in peace research,

 ii. to survey the main intellectual agendas and orientations represented in the sample, assessed against a typology of perspectives on contemporary ecological crisis, and

 iii. to consider the implications of the findings for current and future peace research.[1]

The main method adopted for addressing these objectives is thematic analysis. This is a common qualitative research approach involving a search for patterns of meaning (themes) across a given dataset through a systematic process of data collection/selection, data

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[1] In addition to existing intellectual reviews of the peace research field, I have also looked at and drawn upon others from related areas, such as Development Studies Park, A. S. (2017). Does the Development Discourse Learn from History? *World Development, 96*, 52-64. https://doi.org/10.1016/j.worlddev.2017.02.023 .

familiarisation, coding, theme development and theme representation (Braun & Clarke, 2006; Clarke & Braun, 2018). Each of these steps are described in more detail below in order to explain the approach to thematic analysis adopted in this project. It is worth noting here that thematic analysis is a highly interpretive process. It does not simply report on the presence or regularity of certain themes, but constructs meaning about the content, relationships between and significance of the identified themes. Naturally, this raises questions about the position of the researcher. This issue will also be taken up below.

Data Selection

To find data about the extent and nature of engagement with environmental themes in the peace research literature, I first created a sample of academic journals and book series which could serve as a meaningful representation of the field, whilst being manageable in size. The question of what constitutes "the field of peace research" is of course quite difficult. Research on topics which we might associate with peace research can be found in many disciplines, even if they do not always employ a language of peace. At the same time, one can also identify a core of publications that do make a clear and explicit claim to represent and promote peace research as a distinct academic area. I therefore prioritized these in the sample, with some attention to cognate areas (such as development studies) which have traditionally been closely related to peace studies. The criteria for inclusion were therefore as follows:

1. Journals / book series with a direct, explicit reference to peace in the title;

2. Journals / book series that are cited in accounts of the history of peace research (such as the *Journal of Conflict Resolution*);

3. Journals / book series that are published by established peace research centers (such as *Security Dialogue*), and

4. Book series that are edited by leading "peace" scholars

5. Journals / book series in established constituent disciplines/areas - International Relations (IR), Politics, Sociology and Development Studies.

Because this latter category was larger, journals from these areas were selected on the basis of relevance, using information about each journal's aims and scope, and then according to rank (using ranking data from SCImago). Relevant book series were mainly identified through

searching major publishers (Routledge, Sage, Palgrave-Macmillan, Springer and Wiley & Sons). Keyword searches were also run on these publisher sites to identify any directly relevant books not already identified in searches (a small number). Data collection stopped at the end of October 2019 (but includes some publications with later dates due to advance/online publication).

The next step was to identify work which addressed environmental themes across and within these publication types. For the journals, I mainly used the Web of Science platform to run keyword searches on four main terms—climate; environment* (environmental, environmentalism); sustain* (sustainable, sustainability); and ecology—within the article title, abstract and keywords. Journals not included in Web of Science were searched on the publisher's page, and manually where necessary. Book reviews were excluded from the search results, to both focus on original research articles and avoid duplication with the analysis of book series. Results were ordered by relevance with the closest matches at the top. The results included core bibliographic information (author, title, publication, date, etc) as well as the abstract for each article. Surveys of book and chapter titles were carried out manually, e.g. through examining the titles and descriptions of book series.

There are several advantages of this approach in relation to the stated objectives. In general, journals and book series provide a good measure of both foundational concerns and evolving agendas within a self-identifying community of inquiry. Journals, in particular, are able to be quite responsive to emerging intellectual trends and/or world events, with shorter publications and timescales allowing new work to surface quite quickly (Park, 2017). Examined over a longer period, journals can provide a record of the intellectual history in a given area. Book series provide useful additional information about trends in research and the commissioning and curation practices that influence not just what is published, but what research is deemed publishable (and therefore worthwhile).

Henceforth, when I am making claims about the state of peace research, I am mostly referring to peace research as it is represented in this core and more established set of publications – what could perhaps be termed mainstream peace research. Part of the discussion below will consider the extent to which this particular peace research and the specialized concerns that animate it are representative, and how relevant this remains within a changing landscape of social-ecological challenges. The discussion will therefore allow me to revisit necessary questions about the

definition, scope, and boundaries of peace research as they might be understood in our current era.

Coding and Theme Representation

All information was imported into NVivo for coding, with separate files created for the data associated with each publication. The coding process followed a number of steps. Using information in the journal title and journal abstract for each article, all results were initially coded according to two main categories: climate-focused articles (clearly addressing topics relating to climate change) or articles with an "other environmental focus" (covering a wider range of environmental—i.e. green—issues). Then within each of these two overarching categories, a set of sub-codes was created to represent the overall themes or topics found in the articles (e.g. environmental conflict and security). These sub-codes were gradually refined in later analysis of the data. This provided the basis for judgements about the extent of engagement with environmental themes in peace research journals, using data in NVivo to establish what number and proportion of articles had an environmental focus, and in relation to which core themes.

The second step was more interpretive, seeking to identify, categorize and develop explanations for the assumptions and orientations found within the publications. To guide this work, I created a provisional map of discourses of social-environmental change, drawing on the social cartography approach of Rolland Paulston (Gottlieb, 2009; Paulston, 2010; Paulston & Liebman, 1994; Yamamoto & McClure, 2011) and subsequent work by Vanessa de Andreotti Oliveira and colleagues (Andreotti et al., 2015; de Oliveira Andreotti et al., 2016). This map, discussed in more detail below, represents discursive positions within both research literature and public discourse about environmental issues (e.g. ecological modernisation, deep ecology), set out across a two-dimensional spectrum. In the research process, it provided a working set of thematic categories which were applied to and tested against the data. The map provides an additional function in this paper, as a means for summarizing and highlighting perspectives that might not be familiar to all readers and supporting claims vis-à-vis their presence/absence in peace research.

Assessing the Extent of Engagement

Table 1 below shows the number of journal articles in the data sample (results from keyword or manual searches in 30 journals) that were coded either as "climate focused" or having another "environmental focus." A couple of key claims can be made. First, most of the core peace journals have published comparatively little—and sometimes almost nothing—on environmental issues, with the contemporary climate/ecological crisis not yet a significant topic of research. Second, the journals that do publish more on environmental issues are focused around a narrow range of themes or research niches. For example, the highest number of results (in the core peace journals category) was for the *Journal of Peace Research*, with 27 articles coded as "climate focused," and 26 others (from 178 overall returns). These addressed themes in a fairly narrow range, with most (40) of the articles focused on aspects of the relationship between environmental factors and armed conflict (See: Gleditsch, 2012). Similarly, the newer *Journal of Peacebuilding and Development* returned the second highest number of results with 25 "other environmental focused" articles, a significant proportion of which also address issues related to resource-based conflicts, especially relating to water governance. The *International Journal of Peace Studies* has a lower return overall, but the focus of its articles is both broader and is a higher proportion of the journal's overall output. Nonetheless, the data shows that most of the remaining core journals have not prioritized environmental themes.

Table I. Environmentally oriented articles per journal, up to October 2019*

	Web of Science returns (* not in WOS – direct search)	Climate focused	Other environmental focus
Journal of Peace Research (PRIO)	Climate: 52, Environment: 96, Sustain: 20, Ecology: 10	27	26
Security Dialogue (PRIO)	Climate: 16, Environment: 25, Sustain: 15, Ecology: 5	10	5
Journal of Conflict Resolution	Climate: 4, Environment: 10, Sustain: 0, Ecology: 0	4	10

Peace and Change*	Climate: 1, Environment: 6, Sustain: 0, Ecology:0	1	6
Journal of Conflict Management & Peace Science	Climate: 5, Environment: 12 Sustain: 10, Ecology: 0	0	3
Journal of Peace Psychology	Climate: 4, Environment: 4 Sustain: 11, Ecology: 4	0	0
Peace Review	Climate: 2, Environment: 4 Sustain: 4, Ecology: 1	0	3
Journal of Peace Education	Climate: 4, Environment: 10 Sustain: 3, Ecology: 1	1	2
International Journal of Peace Studies*	Climate: 0, Environment: 13 Sustain: 0, Ecology: 1	0	13
Peace and Conflict Studies*	Climate: 0, Environment: 5, Sustain: 0, Ecology: 0	0	5
Global Change, Peace and Security	Climate:7, Environment:10 Sustain:7, Ecology:1	5	3
Journal of Peacebuilding and Development	Climate: 183, Environment: 271, Sustain: 344, Ecology: 33	1	25
Journal of Peace Science, Peace Economics	Climate: 6, Environment: 11 Sustain: 3, Ecology: 0	3	3
Peacebuilding	Climate: 0, Environment: 3 Sustain: 0, Ecology: 1	0	1
Conflict, Security and Development	Climate: 7, Environment: 4 Sustain: 6, Ecology: 1	3	2
Journal of Aggression, Conflict and Peace	Climate: 1, Environment: 8 Sustain: 2, Ecology: 0	0	0
Journal of International Relations and Development	Climate: 7, Environment: 17 Sustain: 12, Ecology: 0	5	4
International Security	Climate: 5, Environment: 12 Sustain: 9, Ecology: 1	2	4

World Politics	Climate: 1, Environment: 22 Sustain: 14, Ecology: 0	0	2
Journal of Politics	Climate: 14, Environment: 110 Sustain: 18, Ecology: 2	4	5
International Studies Quarterly (ISA journal)	Climate: 16, Environment: 38, Sustain: 24, Ecology: 2	4	9
International Affairs	Climate: 51, Environment: 86, Sustain: 87, Ecology: 1	31	31
Review of International Studies	Climate: 13, Environment: 24, Sustain: 48, Ecology: 0	8	6
Millennium	Climate: 17, Environment:15 Sustain: 23, Ecology: 9	15	7
British Journal of Politics and IR	Climate: 9, Environment: 13 Sustain: 16, Ecology: 1	6	1
Journal of Development Studies	Climate: 29, Environment: 69 Sustain: 89, Ecology: 5	13	45
Journal of International Development (DSA)	Climate: 32, Environment: 26 Sustain: 79, Ecology: 1	17	24
Third World Quarterly	Climate: 43, Environment: 91 Sustain: 148, Ecology: 19	26	73
Sustainable Development	Climate: 64, Environment: 593, Sustain: 668, Ecology: 19	High	High
World Development	Climate: 194, Environment: 332, Sustain: 500, Ecology: 52	High	High

The finding is similar within the wider sample of politics and IR publications. The journal *International Affairs* has higher numbers of both climate and environmental-related articles (31 climate, 31 other) compared with JPR (with a similar publishing rate of 6 issues per year). A slightly broader range of themes can be found, including attention to energy security, but again with emphasis on the environment/security nexus or governance issues. Development-related

journals explicitly linked to other areas (peacebuilding or international relations) returned similar results, with fairly limited engagement with environmental themes. *Third World Quarterly* had the third highest number of coded articles, with Governance (14/38) and Sustainable Development (12/38) as common sub-themes; there is quite a range of topics covered.

As shown in the table above, the search terms returned a different order of results in two journals originally included in the sample: *Sustainable Development* and *World Development*. Initial analysis of the data was sufficient to establish that there is a much higher level of engagement with climate change and environmental issues, across a broad spectrum of topics. While this is not surprising, especially in a journal concerned with sustainable development, this generated a difficult question in the research process: These are not core peace journals, but they do publish some works that could be found in them (e.g. articles on environmental conflict and security). I concluded that while a thematic analysis of the kind attempted below would certainly be interesting within development studies journals (and indeed other journals in a broader sample), that would be a different and more significant task, and therefore beyond the scope of this paper.

It is difficult to interpret the above results without some further contextualization. This would include consideration of each journal's mission, aims and scope, including its epistemological and methodological orientation. Editorial policy—or indeed the research community that interacts with a given journal—might privilege or exclude certain topics or approaches. Furthermore, it is necessary to understand what proportion of published output is given over to any significant topic or research area within peace-related journals (most of which have a broad remit). It could be that the number of articles on environmental topics are comparable to others. Finally, the number and proportion of articles on a given theme needs to be understood in the context of the journal's age and publication patterns (i.e. the number of articles published per issue/per year).

Looking more closely at the *Journal of Peace Research*—the core peace journal with the highest number of environmental publications—we can see that the journal defines editorial policy in quite broad terms. From its inception in 1964 it has described itself as "interdisciplinary," oriented by "a wide conception of peace" and with a focus "on the causes of violence and [on] conflict resolution." This would suggest an openness to a wide range of topics,

including those with an environmental dimension. At the same time, as Buhang et al. (2014) describe in their introduction to a 50th anniversary special issue, the journal has developed (or fostered?) certain "thematic niches" particularly in relation to the democratic or liberal peace, on terrorism and on ethnic conflict (and related questions of identity/conflict). It has also prioritized research based on quantitative research methods, as well as promoting the development and open publication of various data sets. In short, although editorial guidelines are open, in practice the journal represents some sections of peace research more than others.

To get a feel for the proportion of articles published on key topics in JPR, and a basis for comparison with my results, I used the thematic niches noted above as a reference point. Searches for the term "ethnic*" (using Web of Science) returned 159 results overall, with 83 of those coded as having a strong focus on the relationship ethnicity, conflict and/or peace-making (noting also that there will be many more publications on related topics of identity/group conflict). Searches for "terror*" return 93 results overall, with 54 articles coded as having a clear focus on aspects of terrorism (and noting that this is a subset of articles on political violence). This seems sufficient to at least confirm that (a) significantly more articles have been published on certain niche topics (a difference of around 1:3 in the case of climate vs. ethnicity); (b) that some topics do constitute a higher proportion of overall output, but may be published over a shorter or longer time period (most climate-related articles have been published in the last 10 years); (c) but also that the journal has established a meaningful research niche on environment and armed conflict.

What about the other journals? Is it possible that editorial policy or some other factors have discouraged attention to environmental issues? If we look at some of the statements of aims and scope, the answer is mixed. For example, *Peace and Conflict: A Journal of Peace Psychology* (which returned 0 coded results) welcomes articles "that examine peace, conflict, and their interaction at all levels of analysis, from interpersonal to community, regional, national, and international issues," written by "psychologists and scholars in kindred disciplines throughout the world." *Peace and Change* "publishes scholarly and interpretive articles on the achievement of a peaceful, just, and humane society. International and interdisciplinary in focus, the journal bridges the gap between peace researchers, educators, and activists. It publishes articles on a wide range of peace-related topics, including peace movements and activism, conflict resolution,

nonviolence, internationalism, race and gender issues, cross-cultural studies, economic development, the legacy of imperialism, and the post-Cold War upheaval." *The Journal of Peace Economics, Peace Science and Public Policy* aims "to further research in Peace Science and Peace Economics and to expose the scholarly community to innovative peace-related research," welcoming "contributions from an interdisciplinary community of scholars from a variety of disciplines." Although none of these statements explicitly mention environmental topics, they nevertheless express a fairly broad, inclusive and interdisciplinary remit. There is nothing that would preclude connection between environmental issues and more established areas of research. For example, the concern with activism and justice signalled by *Peace and Change*—as well as the intended bridge between scholars and activists—could surely make that journal a relevant destination for work on environmental social movements, on environmental and climate justice debates, on alternative histories of the Anthropocene era, and more. Similarly, the linkage between peace and psychology promoted by *Peace and Conflict* could equally house (and encourage) work on the various and significant existential and psycho-social dimensions of the environmental crisis—such as the growing interest in the idea of climate grief. In short, the editorial frameworks of these (and other) journals themselves do not seem to present a barrier to the publication of work exploring the nexus between peace and the environment. The issue must not just be one of demand (determined by journal editorial or commissioning practice), but of supply: The scholarly community must either not be producing work in this area, or if it is, it is publishing this work elsewhere.

The picture regarding book series is broadly similar. With book series that have an explicit connection to peace research or that are edited by prominent academics associated with the field (e.g. Oliver Richmond, Tom Woodhouse and Oliver Ramsbotham, Roger Mac Ginty), there is again a relative lack of priority given to environmental issues. In the *Routledge Studies in Peace and Conflict Resolution* series, for example, only 2 of 56 books can be considered to have an environmental focus, and both of these consider the debate about climate change and armed conflict. *Contemporary Security Studies* has 9 titles concerned with NATO, 12 on aspects of U.S. foreign policy, and only 3 (of 106) on environmental themes (2 of which are focused on biosecurity).

Table II. Environmentally oriented book series, up to October 2019.

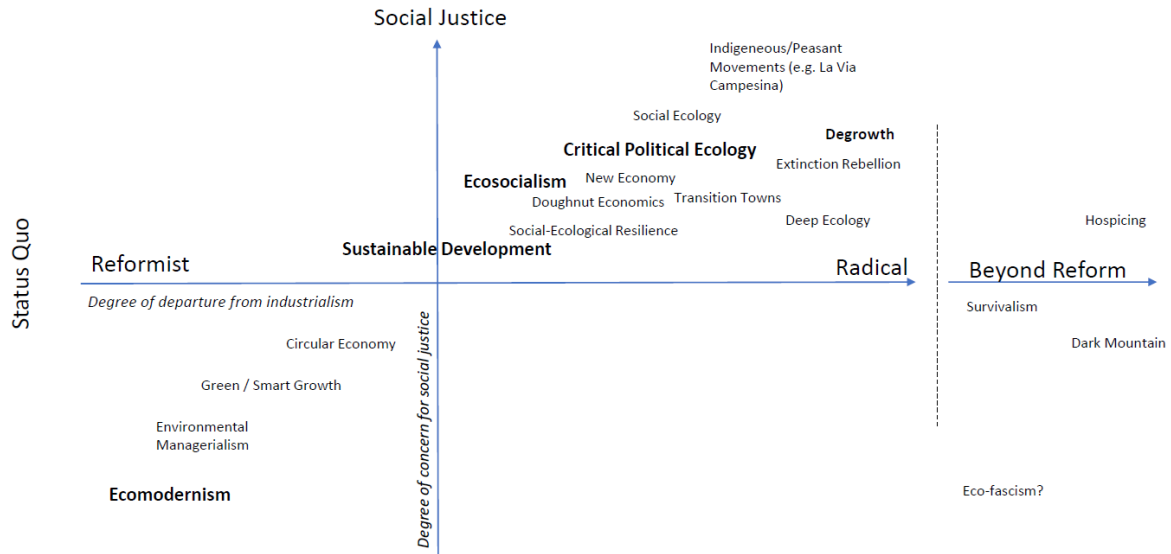| Book series	Number of titles	With an environmental focus
Routledge Studies in Peace and Conflict Resolution	56	2
Rethinking Peace and Conflict Studies	71	0
Studies in Conflict, Development and Peacebuilding	14	0
Global Security in a Changing World	12	1
Contemporary Security Studies	106	3
Routledge Studies in Security and Conflict Management	20	0
Twenty-first Century Perspectives on War, Peace & Human Conflict	4	0
Politics, Economics, and Inclusive Development	9	1
Rethinking Political Violence	23	0
Routledge Studies in Peace, Conflict and Security in Africa	2	0
Security, Conflict and Cooperation in the Contemporary World	28	0
Rethinking Development	24	2
Critical Development Studies	7	0
Perspectives on Development	30	5

When it comes to book series in the area of Development Studies, there are a significant number of series with a sustainability/environmental focus. For example, Routledge alone lists 83 book series under a Development Studies heading, of which 20 series could be coded as relevant (e.g. Studies in Sustainability; Environment for Development). This does raise again the difficult question about the parameters of peace research, and regarding the extent to which these more specialist titles have a presence within or influence on research and teaching. Even so, the data does suggest that within a meaningful sample of peace-related journals and book series, environmental concerns have a limited presence relative to other agendas.

Thematic Analysis: Developing A Social Cartography of Social-Ecological Discourse

The second research objective was to analyse more closely what perspectives on and assumptions about the environment vis-à-vis peace studies are present within these publications. My initial intention was to use a grounded theory approach to generate and refine categories inductively within the data set. However, there have been various scholarly efforts to classify different environmental discourses and the assumptions they contain (e.g. Dobson, 2007; Dryzek, 2013). It seemed sensible to first assess whether any of these could provide a relevant organizing framework or otherwise assist me in generating valid categorizations of discursive positions found within the data set. I therefore undertook a review of existing surveys and typologies of environmental discourse—and some of the debate surrounding them—with the aim of creating a typology adapted for the purpose of this research.

The process of developing a typology is a kind of mapping. I drew on Rolland Paulston's concept of social cartography—an approach for representing and encouraging critical reflection on knowledge controversies in a given field (Paulston & Liebman, 1994). Because these controversies—and the epistemological and ontological assumptions on which they rest—are often unacknowledged or invisible in everyday discourse, he believes there is value in trying to map them out and explore their relationship and effect. Paulston explains that "[a] reflexive social cartography might serve to identify and visualize within and between disputatious communities in a way that would open space for all knowledge perspectives discovered, privilege none, yet problematize all, and promote a useful visual and verbal dialogue" (Paulston, 2000 cited in: Gottlieb, 2009). The point is not to claim any definitive representation of an intellectual field, nor to suggest a (simple) normative hierarchy in the different positions. Rather, the aim is simply "to offer a (provisional) visual representation of complex and juxtaposed spaces that we inhabit" as a stimulus for thinking and discussion (Andreotti et al., 2015). This is the spirit in which the following social cartography is presented—I am aware of the challenges of capturing the complexities of discursive positions and representing these visually.

Figure I: A Social Cartography of Environmental Discourse

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Social Justice

Indigenous/Peasant
Movements (e.g. La Via
Campesina)

Social Ecology

Critical Political Ecology

Degrowth

Extinction Rebellion

Ecosocialism New Economy

Transition Towns

Doughnut Economics

Deep Ecology

Social-Ecological Resilience

Hospicing

Status Quo

Reformist

Sustainable Development

Radical

Beyond Reform

Degree of departure from industrialism

Survivalism

Circular Economy

Dark Mountain

Degree of concern for social justice

Green / Smart Growth

Environmental
Managerialism

Ecomodernism

Eco-fascism?

Drawing on the work of John Dryzek (2013), the horizontal axis categorizes environmental discourses along a spectrum of "reformist" and "radical," (with the industrialized system the object of potential reform or more radical change. As Dryzek notes, "environmental discourse begins in industrial society" (2013, p. 14), in the sense that contemporary environmentalism emerged via the understanding of the harm to ecological systems caused by the industrial mode of life. The differences between environmental discourses are less to do with political ideology than their assumptions about the extent to which the industrial system can exist without destroying the natural systems upon which it ultimately depends; both neoliberal and socialist systems have been committed to industrialism, for example.

Reformist approaches assume that the continuity of the industrial system is possible, necessary and/or desirable. For example, Ecomodernism and Ecological Modernisation (shown in the bottom left quadrant) do recognise the environmental impact of industrialism, but are optimistic about the possibility of solving problems using the mechanisms of technological innovation, market-driven efficiency gains, and strategies for regulation and environmental management (Dana & William, 2010; Hovardas, 2016; Manuel-Navarrete, 2010; Mol & Spaargaren, 2000; Warner, 2010). The Ecomodernist manifesto published by the Breakthrough Institute in 2015 is perhaps the clearest recent statement of this perspective. It states:

> we write with the conviction that knowledge and technology,
> applied with wisdom, might allow for a good, or even great,

Anthropocene. A good Anthropocene demands that humans

use their growing social, economic, and technological powers

to make life better for people, stabilize the climate, and protect

the natural world. (Asafu-Adjaye et al., 2015, p. 6)

Ecomodernists reject the idea that there are insurmountable "limits to growth" (Meadows & Meadows, 2007) or that the industrial system necessarily presents an existential threat to the planet. Such ideas imply a dependence on the natural world—and (contested) ideas of natural limits—that Ecomodernists reject. Rather, they believe that technology will increasingly decouple the economy from the environment, allowing an intensification of human activity at the same time as reducing demands on the natural environment. More efficient machines and devices, dematerialization (creating products that combine functions and use less materials), and substitution technologies (e.g., electric rather than petrol cars) will reduce humanity's dependence on (non-renewable) natural capital. In this version of environmentalism (or post-environmentalism), technology will necessarily dominate the fight against climate change, even if this means embracing controversial technologies like nuclear power, genetic modification, or climate engineering (Kallis & Bliss, 2019).

Ecomodernism (and its variants) is highly normative. It doesn't explicitly speak in terms of peace, but key ideas associated with liberal peace (and associated declinist writings) are evident. For example, the manifesto states that:

[v]iolence in all forms has declined significantly and is

probably at the lowest per capita level ever experienced by the

human species, the horrors of the 20th century and present-day

terrorism notwithstanding. Globally, human beings have moved

from autocratic government toward liberal democracy

characterized by the rule of law and increased freedom.

(Asafu-Adjaye et al., 2015, p. 8)

The strongest argument for the continuation of the current system (for ecomodernists), then, is that this is seen as the best way to reduce global poverty and continue the progress made in relation to human freedom. As radical as this might sound, Ecomodernism along with other mainstream discourses (green growth, circular economy, etc…) are classed as reformist on the

diagram because they leave (and seek to leave) most elements of social and political organization, and current relations of social and economic power, more or less intact.

Radical discourses on the diagram are distinguished by arguments in favor of deeper changes to political and economic structures. They reject the "win-win-win rhetoric whereby the economy grows, the environment improves, and everyone is better off," arguing instead that "environmental change always has winners and losers and it is those with more economic and political power that often dictate who wins and who loses" (Kallis & Bliss, 2019, p. 473). Radicals assume the environmental crisis will not be addressed simply by "improving the performance and outcomes of current governance structures" but would require a more drastic interruption of business-as-usual. There are a number of important ideas here:

- Radicals accept the idea (or evidence suggesting) that there are material ecological and social limits to economic growth (Rockstrom et al., 2009). These constitute meaningful boundaries to human activity which are not merely social constructs (though there is sensitivity to the ways in which limits discourses can be politicised (Robbins, 2011)), and cannot be entirely overcome through technological innovation or free market dynamics. As such, a more profound level of reorganization or even contraction of the industrial economy is deemed necessary if it is to operate within planetary boundaries (Bellamy-Foster et al., 2010; Raworth, 2017).

- Radicals have a more explicit concern with social and environmental justice, arguing that the system of industrial modernity is very strongly implicated in the historic exploitation of both people and nature (Loftus, 2012; Martínez-Alier, 2012; Robbins, 2011; Sealey-Huggins, 2017; Warlenius et al., 2015). The current environmental crisis is not just a given reality but is a product of "the structures of domination of global capital, and the inherent environmental degradation brought about by the accumulation of political and economic power." (Manuel-Navarrete, 2010, p. 4). In this context, the idea of the Anthropocene is problematized (by some) because it suggests that responsibility for the environmental crisis lies with humanity at a general level, rather than emerging through European industrialization, colonialism, and the world order that followed (Bonneuil & Fressoz, 2017).

- Similarly, some radicals highlight the continuities between contemporary schemes to promote a greener economy and patterns of historic social-ecological exploitation.(Aguilar-González et al., 2018; Del Bene et al., 2018; Scheidel, 2016; White et al., 2012) Dunlap's study of wind farms in Oaxaca in Mexico, for example, shows how international interests and agendas, ostensibly framed by ideas of sustainable development, are entangled with practices of land grabbing, corruption, displacement and suppression of local people, and damage to the health of people and local ecosystem (Dunlap, 2017). Work of this kind at least encourages us to think more critically about the extent to which green industries disrupt or reinforce established patterns of power and exploitation.

The extent to which radicals depart from industrialism (along the horizontal axis) depends a lot on the orientation towards human versus environmental concerns, or the degree to which it is believed that tensions between these can be resolved. This explains the inclusion of the vertical axis on the map, representing the degree of concern with social justice found within a given discourse or paradigm. Clearly, departing from industrialism in the interest of ecological health presents dilemmas for those also committed to social justice. It is easy to see how demands for urgent and radical carbon reductions conflict with social justice-based demands to address poverty and disadvantage in the least developed countries. Radicals differ therefore in their response to this tension. Some strands of Eco socialism, for instance, embrace a green industrialism that strongly echoes ecomodernist discourse in its technological optimism, largely because this offers reassurance to workers; de-industrialism implies a significant threat to employment (See for example: Barca, 2019; Napoletano et al., 2018). Similarly, the inclusion of "economic growth" in the Sustainable Development Goals arguably limits the radicalism of this initiative, because growth (and industrialism) are still seen as the main mechanisms through which development can be achieved (however self-defeating this might be in relation to environmental goals). Other radical discourses, such as the degrowth movement (itself very diverse), try to make a case that a more profound restructuring of society is necessary not only for the sake of environmental reasons, but because a different, more localized economy might better meet peoples' needs—for health, meaningful work, community, etc…; social and ecological priorities can potentially be addressed together, if we are imaginative and bold enough (Bonaiuti, 2012; Demaria et al., 2013; Martínez-Alier et al., 2010). Finally, as noted above, many

radical environmental discourses highlight the historic and continuing relationship between environmental and social exploitation.

A third element in the social cartography is the section "beyond reform," located further beyond the radical space. This represents far more pessimistic (or realistic?) assumptions about the potential for reconciling industrial modernity (at its current global scale) with the carrying capacity of the earth's ecological system. In addition, there is a stronger rejection of modernity's violence, resulting in a view that the prevailing system is both morally and functionally irredeemable:

> the modern system itself is perceived as inherently violent, exploitative, and unsustainable. Modernity's myriad oppressions are understood to be interlinked ... and even the most radical transformations do not disrupt the underlying modern system and its grammars and logics; modernity is irrecoverable.
> (Andreotti et al., 2015, p. 27)

The beyond reform space contains a range of possible responses, many of which exist currently as forms of experimentation or emergent thinking. Drawing on Andreotti's related social cartography, there are various forms of "system walk out" or efforts to withdraw from the industrial system in order to experiment with and imagine alternative modes of thinking and being that have transformative potential (Andreotti et al., 2015, p. 27). This would include various examples of eco-communities and survivalist initiatives. More radically, the idea of "hospicing" extends the philosophy of care associated with responses to terminal human illness to the (assumed) terminal decline of modernity and/or nature. Relinquishing the idea that the world can be saved, hospicing instead "would entail sitting with a system in decline, learning from its history, offering palliative care, seeing oneself in that which is dying, attending to the integrity of the process, dealing with tantrums, incontinence, anger and hopelessness, 'cleaning up,' and clearing the space for something new" (Andreotti et al., 2015, p. 28). There is recognition here that no one can think or act outside the existing system, or that we are complicit in its failures. But rather than try to rescue either it or ourselves, hospicing involves an acceptance that the system is dying, accepting in turn the pain and difficulty of this process, and

seeking to learn from the process that led to this situation in order to develop something different.

It is worth noting that the beyond reform space could also contain what might be considered less progressive or reflective responses to the idea of catastrophic environmental change. For example, there are Realist perspectives on climate change that would see the efforts at international cooperation as futile, with powerful states moving to preserve their interests and adapt to environmental challenges at the expense of others (Heffron, 2015). Eco fascism is also included on the map to acknowledge the (instrumental) embrace of environmental concern by the populist right to further their political cause (Wilson, 2019). In other words, pessimism about a sustainable future for all could manifest in highly competitive and aggressive responses both internationally and within nations, raising the prospect of increased conflict.

Thematic Analysis: Findings

The second stage of thematic analysis involved assessing those articles that had already been coded as having an environmental focus of some type. I employed the social cartography as a heuristic device to help locate and interpret the discursive orientation of papers in relation to known environmental perspectives. I approached this task by re-coding within the most salient thematic categories, in each case creating sub-codes for "reformist," "radical," "beyond reform," and "unclassified."

The first broad conclusion from this process is that there appears to be a significant reformist orientation within the sample. For example, of 125 articles concerned with governance, 91 were coded reformist and 23 radical, and 7 unclassified. The category of governance obviously encompasses a wide range of topics, from international environmental/climate negotiations to more national or local level frameworks and institutions for managing water, pollution or other issues. Most of these were coded as reformist because, in relation to the discourses introduced above, they were judged to broadly assume the continuity of existing legal frameworks, regulatory systems, or other governance mechanisms, even if these were recognized as imperfect. The information analysed—in most cases, the title and abstract—suggested that inquiry is limited to problem-solving within the parameters of business-as-usual.

In the next largest thematic category—environmental conflict and security—reformist articles outnumbered radical ones by 46 to 12, out of 121 codes overall. This difference is explained by a

high proportion of unclassified articles (63/121), many of them positivist and descriptive-explanatory studies focused on testing specific correlations (e.g. rainfall patterns and social unrest) or hypotheses. Classification was more difficult here because article abstracts often revealed little about any normative orientation or policy implication of the research. It is nevertheless an interesting question where these apparently objective studies sit in relation to different discourses on environmental change. If climate change is treated simply as another variable to be examined in relation to the main object of interest—violent social conflict—does that at least imply an anthropocentric bias? And if those correlations appear to be uncertain so far (based obviously on historical data only), do we then conclude that climate change or the wider ecological crisis is not a priority versus factors that—according to currently available evidence—correlate more strongly with conflict or its prevention?

This leads to the second related finding in the thematic analysis: The debates and discursive positions represented on the social cartography do not appear to be strongly present in the data sample. I found very few references to key concepts/positions (e.g., ecomodernism, degrowth, Eco-socialism, circular economy) either through coding or text searches. There is a noticeable absence of papers addressing broader, meta-debates about the ecological crisis and its implications for peace research—a debate that would imply awareness of and engagement with this literature. As noted, I did find the very beginnings of discussion in some international relations publications in relation to the Anthropocene concept, but not with explicit connection to peace or peacebuilding. Some of the radical articles also clearly focus critical attention on important aspects of linked social-ecological challenges, especially the intersections of social and environmental exploitation. But these radical perspectives were a relatively small proportion of the sample of climate/environment-related articles, that sample itself being a very small proportion of overall peace research output. Only two journals—*Third World Quarterly* and *Millennium*—stood out for publishing more critical environmentalist work.

Acknowledging some limitations of the methodology—a closer reading of papers in full might bring other information to light—the conclusions that can be drawn from the thematic analysis are necessarily more tentative and provisional. Nevertheless, the process was systematic and nuanced enough, and the trends marked enough to support a claim that critical reflection on the priorities, assumptions and critical gaps in peace research is warranted.

21

Discussion

In the introduction I identified and explained four motivations for this study: to develop a systematic survey of the extent and nature of engagement with environmental themes in peace research; to contribute to an understanding of and reflection on the state of the field and its intellectual history; to surface and critically examine assumptions underpinning research agendas, and to encourage discussion of the findings and their implications—to assess what is at stake in this exercise. How should we understand the apparent limited engagement with the ecological crisis in peace research, and does it matter?

Even in the time since I began work on this article (Autumn 2017), there have been a number of developments that have significantly altered the context for discussion. This includes very visible evidence of instability in ecological systems, including more frequent, intense and devastating hurricanes, floods and wildfires in many parts of the world, as well as evidence of profound changes in Artic ice-melt and ocean acidification. It includes significant publications and statements by environmental scientists, including the latest IPCC report on climate change (Masson-Delmotte et al., 2018), the IPBES report on biodiversity loss (Díaz et al., 2019), recent analysis of more rapid sea-level rise (Kulp & Strauss, 2019), and, on the 40th anniversary of the first climate conference, an unprecedented statement by 11,000 scientists warning of the "vital signs" of a climate emergency and the "untold suffering" this could precipitate (Ripple et al., 2019).

This translates into stronger claims about what is needed if the worst-case scenarios are to be avoided. For example, in their work on carbon budgets—calculations of the total amount of carbon that could potentially be released into the atmosphere that would be theoretically compatible with targets to limit global warming to 1.5 or 2 degrees—Kevin Anderson and Alice Larkin calculate that annual carbon reductions over 10% are needed (Anderson & Bows, 2011; Larkin et al., 2018). Given that carbon emissions have yet to stabilize, let alone begin to fall, this indicates the scale of the challenge ahead. It implies very significant and rapid reductions in energy use. Similarly, a recent study considering what kinds of lifestyle changes would be needed to be compatible with maintaining a 1.5 degree centigrade global temperature change calculated carbon footprint reductions (in the case of developed countries) of "at least 47% in nutrition, 68% in housing, and 72% in mobility by 2030 and over 75% in nutrition, 93% in

housing, and 96% in mobility by 2050" (Akenji et al., 2019). In short, earth system scientists are telling us that rapid and transformative change to our societies is needed if we are to balance ecological health and human interests.

In this light, it seems to me that *the* central question for peace research is how societies might transition from a highly energy intensive and ecologically harmful form of organization to one that can operate within the parameters of healthy ecological systems—and to make this transition while addressing and/or minimizing human suffering and violent conflict. This question matters in more ways than one. It is not simply a call to pay more attention to the environment. It challenges assumptions in mainstream policy discourses like sustainable development which still assume that growth can be the key mechanism for solving social challenges. Moving away from this understanding demands some hard reflection and knowledge from areas perhaps not traditionally associated with peace research—for example, about the energetic foundations of modern societies, the nature and timescales of energy transitions, about the potential substitutability of energy forms and technologies, about—ultimately—the size and capacity of economies based on renewable, low-carbon energy (Capellán-Pérez et al., 2015; Huber, 2015; Schaffartzik et al., 2014; Smil, 2017). Without the simple assumption of stable and benign ecological systems, of cheap and continuous energy flows, of unending economic growth—what does this mean for our theories and practices of peace?

Given that related questions have been debated elsewhere for a long time (even if not explicitly framed in terms of peace), it is difficult to explain the limited engagement with the various trends of ecological change—and the rich debate surrounding its causes and implications—within the field of peace research. As noted earlier, nothing in journal editorial policy would obviously rule out publication of research on climate change or associated issues, though it is also clear that journals have developed their own niches and audiences. Indeed, in a recent survey of peace and conflict studies Gledhill and Bright (2019) found a high degree of specialization and "an overall tendency toward intellectual siloes" with little exchange and cross-citation between different topic areas. This is part of a reinforcing dynamic found in academia generally: Certain research agendas are encouraged, funding and careers become invested in specific areas, teaching gets focused around the most important, canonical topics as well as staff interests. Such a dynamic might be helpful in developing a focus and identity for a field, as well

as specialized knowledge, but perhaps also discourages exploration and inquiry beyond its established parameters.

In a second related point, there has long been a tension in peace research between broader and narrower conceptions of the field (and peace itself). In an empirical review of conceptions of peace found in articles published in the *Journal of Peace Research* and the *Journal of Conflict Resolution*, Gleditsch, Nordkvelle and Strand (2014) concluded that "negative peace, in the sense of reducing war, has long been the main focus in peace research," and that any efforts to broaden the concept of peace—or example, following Galtung's theorisation of structural violence – have "largely evaporated" (in JPR, at least). Gledhill and Bright's (2019) broader analysis of peace and conflict studies also concludes that "studies of violent conflict dominate the field." Mac Ginty (2019), in reply, rightly points out the many forms of growth in the field and the numerous opportunities for interdisciplinary exchange (with critical geography, for example). Nevertheless, this more generous reading of the field also makes no mention of climate change or the wider challenges that will increasingly change the context for peacebuilding; growth and interdisciplinarity is still focused around fairly established agendas.

Third, this article arguably provides *some* empirical support for claims made about the decline of a normative/critical orientation—what Pureza and Cravo (2009) call the "political contraction of peace studies." As they wrote over a decade ago:

> peace studies has become, especially since the 1990s, a conceptual and analytic field called upon to tend to public policy related primarily to the conducting of an international system by its actors (including the major funding agencies, the platforms of global governance, and the States which control the mechanisms of international-decision making). (Pureza & Cravo, 2009, p. 3)

They argue that peace research, through a (reasonable) concern for relevance and practical/policy impact, moved away from its more normative and critical heritage through becoming increasingly involved with mainstream institutions and agendas. There is, of course, critical work around influential agendas of (liberal) peacebuilding, transitional justice, and sustainable development, but the parameters of critique are still relatively limited; these debates are premised on the continuity of extant economic and ecological systems. If the evidence about

environmental change brings that premise into doubt, what does that imply for the kinds of questions that are being asked or need to be asked in peace research?

Finally, I would tentatively suggest that the environmental crisis sits uncomfortably with mainstream traditions of peace research because it is future-oriented. Much climate science is based on modelling and extrapolation from existing data into the future—approaches which are either not established, possible or acceptable in our field. Most peace research has been concerned with analyzing events in the past. We don't—and perhaps can't—model the social dynamics that might emerge in communities as they respond to changes in linked social-ecological systems. On the other hand, our field has produced a significant body of knowledge about the conditions in which social conflict escalates, or that explains state failure. Are dynamics in social systems really more complex to model or understand than those in natural ones?

Ultimately, then, this article is asking questions about the identity and relevance of peace research. Perhaps it does not matter if peace research retains an identity around certain thematic niches, especially within an increasingly porous, cross-disciplinary research landscape. But equally, perhaps the continued relevance of this field will depend on a serious and sustained engagement with the specific challenges of the Anthropocene era, taking on board what these challenges might imply for the meaning and prospects of peace itself. That in turn will require some reflection and rethinking (again) of the parameters and priorities of this field, in conversation with other specialists. The influential climate scientist Prof. Kevin Anderson has made a strong call for more engagement between the natural and social sciences, recognizing that many of the challenges presented by climate change are social in nature (Anderson, 2017). There is an opportunity here for peace researchers to apply their knowledge to this unprecedented challenge—such as in recent work exploring linkages between transitional justice and climate change responses (Klinsky, 2018). Will this opportunity—and challenge—be taken up?

Conclusion

This article set out to examine the extent and nature of engagement with environmental issues—and especially an unfolding ecological crisis—in peace research, finding that there is considerable scope to both extend and deepen discussion of the unfolding ecological crisis within

core peace research publications. I conclude therefore with a call for a new conversation within peace research, one based on a fuller engagement with questions, perspectives, agendas and voices that may fall outside the traditional domains of inquiry in our field. This in turn requires a willingness to re-examine assumptions that have informed our endeavour in the past, with the awareness that these might not withstand scrutiny in the light of our changed and changing circumstances. Other voices can no doubt help refine the analysis presented above and, through discussion, help us clarify the questions and agendas that peace research should be taking up in the coming decade or more.

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