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Gender and Environmental Education: Feminist and Other(ed) Perspectives

The Selected Works of Annette Gough

ANNETTE GOUGH

Gender and Environmental Education: Feminist and Other(ed) Perspectives

This timely book provides a starting point for critical analysis and discourse about the status of gendered perspectives in environmental education research.

Through bringing together selected writings of Annette Gough, it documents the evolving discussions of gender in environmental education research since the mid-1990s, from its origins in putting women on the agenda through to women's relationships with nature and ecofeminism, as well as writings that engage with queer theory, intersectionality, assemblages, new materialisms, posthumanism and the more-than-human. The book is both a collection of Annette Gough, and her collaborators, writings around these themes and her reflections on the transitions that have occurred in the field of environmental education related to gender since the late 1980s, as well as her deliberations on future directions.

An important new addition to the World Library of Educationalists, this book foregrounds women, their environmental perspectives, and feminist and other gendered research, which have been marginalised for too long in environmental education.

Annette Gough OAM is Professor Emerita of Science and Environmental Education in the School of Education at RMIT University. She has held senior appointments at RMIT and Deakin University and has been a visiting professor at universities in Canada, South Africa and Hong Kong, as well as being life fellow of the Australian Association for Environmental Education and the Victorian Association for Environmental Education.

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This book is dedicated to my family, without whom this book would not exist: my parents, Pat and Ray Wilkinson, who supported my early education and interests; my life partner, Noel Gough, who has been my best friend, critic, co-parent and co-author for nearly 40 years; and especially my children, Kate and Simon, and my grandson, Liam, who will face the challenges of achieving a more just world for all life on Earth from the mess past generations have bequeathed them.


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Preface

Environmental education has been a focus of my career for nigh on 50 years, and I was humbled early in 2023 when my services to the field, and to tertiary education, were recognised with the awarding of an Order of Australia medal (OAM). Over these decades I have been a passionate advocate for the need for people to understand their environments, care for them and act for them, while recognising that there is no one true story of what is happening and what needs to be done to achieve environmental conservation goals or address climate change. Action and social transformation are needed, and formal schooling (and its associated teacher education) has been my focal point.

This book has its origins in my doctoral research, which was a feminist poststructuralist analysis of the beginnings of environmental education in Australia and internationally. As part of this research I examined the definitions of environmental education, the forming documents for the field, particularly those from UNESCO, and some of the people (the "founders") who helped frame these documents or who were instrumental in helping frame their interpretation and implementation in Australia and the United States of America in the 1970s through to the early 1990s.

While I started with a feminist analysis, this evolved to an analysis from the perspective of marginalised voices as I came to recognise that women's voices are just one of many marginalised people's voices silenced in the dominant environmental education discourses and that there were intersections in these voices (poor migrant women, for example).

The content of this book samples across my subsequent and related writings on feminisms, gender and environmental education. While my first article that drew attention to the absence of women from the groups that formulated the definitions of environmental education is not included here because the focus was more on language and Amero-Eurocentrism than gender (Greenall Gough 1993), the articles that built on and went beyond my doctoral thesis are collected here under three themes: putting women on the agenda, feminisms and nature in environmental education, and moving beyond feminisms and gender.

Within these main themes I explore the importance of feminist research in environmental education, and how thinking about this has changed over the

past 25 years. Gender perspectives, and other othered perspectives which are the focus of social oppression, have long been marginalised in environmental education research and practice through being subsumed into the notion of "universalised people", the "norm". This volume highlights the importance of bringing gendered perspectives to the centre of discussions with a view to inspiring others to pursue such research. I hope you find it inspirational.

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Greenall Gough, Annette. 1993. "Globalizing environmental education: What's language got to do with it?" *Journal of Experiential Education 16*(3): 32–39, 46. https://doi.org/10.1177/105382599301600306

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This book would not have been possible without the collaborations of my partners in print – Hilary Whitehouse, Judy Horacek, Connie Russell and Noel Gough (who is also my partner in life) – who share authorship of several of the articles included here.

Hilary and I have talked about writing a book like this together for over two decades. We haven't got there yet, but our collaborations in writing articles over the past 20 years are reflected in four of the chapters included here. Writing with Hilary is always a case of the sum being greater than the two parts. I just wish she lived closer (though visiting her in Cairns is always fun).

Judy's cartoons have been inspirational for me since Noel gave me her first book in 1992. When the call for abstracts for a special issue of *Environmental Education Research* on humour and environmental education was released, I immediately thought of Judy's cartoons and approached her about doing something together. The results of that duoethnography are included here.

Although not overtly included here as a co-author, Connie has been part of my writing adventures for over two decades. She edited the issue of the *Canadian Journal of Environmental Education*, in which my first article with Hilary, and the Camp Wilde article, appeared. She co-edited the section of the *International Handbook of Research of Environmental Education* that included my gender chapter, and we have co-edited special issues of *The Journal of Environmental Education* (together with Hilary). I wish she lived closer too!

What can I say about Noel's immeasurable contributions? Academically, he has been a critical friend, sounding board, provocateur, occasional collaborator in teaching, researching and writing over many years, and nurturer of my career. Part of my life for over half my life, through lots of ups and downs, this book reflects many of those experiences. Thank you for being there, my love. I look forward to our continuing adventures.

The small group of friends who joined us in Camp Wilde – Warren Sellers, Mary Aswell Doll, Peter Appelbaum and Sophia Appelbaum – made that writing experience an unexpected successful experience, as it stimulated others, including Joshua Russell and Jesse Bazzul, whom I have enjoyed working with in other contexts.

I would also like to acknowledge the contributions to my feminist thinking by colleagues at Deakin University (especially Jill Blackmore and Jane Kenway), and John Fien (who suggested long ago and far away that my doctoral research should look at "environmental education as a man-made subject", and I did).

I thank Judy Horacek for permission to include a number of her cartoons (in Chapter 9 and Chapter 14), the Australian Research Council for permission to reproduce Figure S1.1, the Australian Government Department of Education for permission to reproduce Table 3.1, Ryerson Image Centre for permission to reproduce Jo Spence's photo (Figure 11.1) and Deena Metzger for permission to reproduce her image (Figure 11.2).

Last, but not least, these articles and chapters were written on the unceded lands of the Woi wurrung and Boon wurrung peoples of the Kulin Nations; I respectfully acknowledge what their elders, past and present, have taught us about this land and sea.

The following chapters were reprinted from previous publications. I thank the publishers and editors for their support.

Chapter 2. "Recognising women in environmental education pedagogy and research: Toward an ecofeminist poststructuralist perspective". *Environmental Education Research*, *5*(2), pp. 143–161. ©1999 Taylor and Francis Ltd.

Chapter 3. "The power and the promise of feminist research in environmental education". *Southern African Journal of Environmental Education*, *19*, 28–39. Reprinted in accordance with Creative Commons Attribution license CC-BY-NC-SA.

Chapter 4. "The contribution of ecofeminist perspectives to sustainability in higher education". In P. Corcoran & A. Wals (Eds.), *Higher Education and the Challenge of Sustainability: Contestation, Critique, Practice, and Promise* (pp. 149–161). Dordrecht: Kluwer. ©2004 Reprinted by permission of SpringerNature.

Chapter 5. "Researching differently: Generating a gender agenda for research in environmental education". In R. B. Stevenson, M. Brody, J. Dillon, & A. Wals (Eds.), *International Handbook of Research on Environmental Education* (pp. 375–383). New York: Routledge.©2012 Taylor and Francis Group.

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Chapter 7. Gough, A. & Whitehouse, H. "The 'nature' of environmental education research from a feminist poststructuralist standpoint". *Canadian Journal of Environmental Education*, *8*, 31–43. ©2003 reprinted by permission of Canadian Journal of Environmental Education editors.

Chapter 8. Gough, A., & Whitehouse, H. "New vintages and new bottles: The 'nature' of environmental education from new material feminist and ecofeminist viewpoints". *The Journal of Environmental Education*, *49*(4), 336–349. ©2018 Taylor and Francis Ltd.

Chapter 9. Gough, Annette and Hilary Whitehouse. "Challenging Amnesias: Feminist New Materialism/Ecofeminism/Women/Climate/Education". *Environmental Education Research 26*(9–10): 1420–1434. ©2020 Taylor and Francis Ltd.

Chapter 10. "Symbiopolitics, sustainability and science studies: How to engage with alien oceans". *Cultural Studies <=> Critical Methodologies*, *20*(3), 272–282. ©2019 reprinted by permission of Sage Publications.

Chapter 11. "Listening to voices from the margins: Transforming environmental education". In J. Russell (Ed.), *Queer Ecopedagogies: Explorations in Nature, Sexuality, and Education* (pp. 161–181). ©2021 Reprinted by permission of SpringerNature.

Chapter 12. Gough, N., Gough A., Appelbaum, P., Appelbaum, S., Doll, M.A. & Sellers, W. Tales from "Camp Wilde: Queer(y)ing environmental education research". *Canadian Journal of Environmental Education*, *8*, 44–66. ©2003 reprinted by permission of *Canadian Journal of Environmental Education* editors.

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Chapter 14. "Body/mine: A chaos narrative of cyborg subjectivities and liminal experiences". *Women's Studies*, *34*(3–4): 249–264. ©2005 Taylor and Francis Ltd.

Chapter 15. "Education in the Anthropocene". *The Oxford Research Encyclopedia on Gender and Sexuality in Education*. ©2021 Reprinted by permission of Oxford Publishing Limited.

1 Reflections and refractions on gender and environmental education

Annette Gough

Abstract

This chapter provides a reflection on how I became engaged with feminist theorising in environmental education. Starting from a focus on "environmental education as a man-made subject", I explored and engaged with different feminist and ecofeminist theories before finding my voice for researching in this space. I explain how my position was very much influenced by Carolyn Merchant's partnership ethic and Sandra Harding's feminist standpoint epistemology and strong objectivity, as well as feminist poststructuralism research in education. I then discuss how the various articles and chapters contained in this volume came about, and how feminist research in environmental education has changed since the late 1980s.

Beginnings

When I started to investigate "environmental education as a man-made subject" in 1990 there had been very little written about environmental education from a feminist perspective. As I have discussed elsewhere, and as reflected in several of the chapters in this book, gender was not part of the agenda of environmental education in its early days. This should have been apparent to me as I was one of the few women at the 1975 Australian UNESCO Seminar (Linke 1977), the only female on the 15-member 1975 Curriculum Development Centre (CDC) Environmental Education Committee (as Secretary) and 1 of 2 women on the 11-member 1977 CDC Study Group on Environmental Education (as convenor). As noted in Chapter 2, according to the list of participants in final report of the Tbilisi conference on environmental education (UNESCO 1978, 83–99), there were only 55 females out of a total of 345 participants at the conference, a ratio of over 6:1 in favour of males (see Table 2.1). Thus, in contrast with today, there was definitely a dearth of women in environmental education deliberations at this time.

The ecofeminist movement emerged in the 1970s; Francoise d'Eaubonne first used the term "l'écoféminisme" and outlined her ecofeminism theory in her book *Le féminisme ou la mort* in 1974. Grounded in the activist social

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movements of the time, d'Eaubonne (1974) describes ecofeminism as both an activist and academic/philosophical movement where "the convergence of ecology and feminism into a new social theory and political movement challenges gender relations, social institutions, economic systems, sciences, and views of our place as humans in the biosphere" (p. 28).

The ecofeminist movement grew with the feminist movements of the 1980s and 1990s, and as is illustrated in Figure 6.1, for example, references to ecofeminism in books peaked in 1996. While environmentalists have been calling for environmental education as a means of resolving environmental problems since the 1960s, for the main part, up until the late 1980s, feminists had not addressed environmental education as a strategy for achieving their goals. Women in outdoor education had started to draw attention to the different instructional needs of women in outdoor education programmes (e.g. Miranda and Yerkes 1982; Mitten 1985), and women in science education had drawn attention to the under-representation of women in science careers (e.g. Kahle 1985; Manthorpe 1982), but it was not until 1987 that feminist perspectives were introduced into the environmental literature. Giovanna Di Chiro (1987a, 1987b) argued for the close connection between the socially and politically constructed nature of environmental problems and the importance of developing a feminist perspective in environmental education for a more complete analysis of the problems. She (1987b, 15) wrote that, as environmental education is problem-solving focused,

> the feminist perspective offers a more complete analysis of the environmental issue and thereby a better understanding of the problem and its potential solutions. Such an analysis is a political one, in that it looks at how power relations (in, for example, gender, class, race) shape the world in which we live. It is political in that it asserts that the "polity" (human social world) determines and controls how this social world is and has been historically constructed and organised and hence, refutes the myth that the past and present state of the world is a "natural" and therefore justifiable progression.

In terms of Schuster and Van Dyne's (1984) stages of curriculum change, Di Chiro was taking a different approach to that adopted by the outdoor and science educators. While working from within a social justice agenda, she had leapt to the sixth stage of seeking a transformed "balanced" curriculum rather than drawing attention to the invisible women (stage 1), women as a disadvantaged subordinate group (stage 3) or women studied on their own terms (stage 4).

At the time of writing her article, and an extended version (1987a) of which was included in a Deakin monograph that also contained a chapter of mine (Greenall 1987), Di Chiro was a lecturer at Deakin University, where I had just commenced my doctoral studies (Gough 1994). It would be nice to say that her work influenced me, but at that time it did not – at that time my focus was more on the policy politics and history of environmental education. It was only when I changed my thesis focus in 1990 that Di Chiro's chapter and article took on importance.

When I began my searches for literature on feminist research in environmental education, what I found was both sparse and predominantly written by Australians or published in Australia. A similar finding was made by Di Chiro (1993) when, in 1991, she conducted an ERIC search using the descriptors "feminism" and "environmental education" which yielded only two articles, one her own (1987b) which was written and published in Australia, and the other by Ariel Salleh (1989), an Australian ecofeminist and social theorist. My own search in 1992 added two North American articles (Kremer et al. 1990–1991; Fawcett et al. 1991), one British article (Hallam and Pepper 1991) and more from Australia calls to consider women's perspectives when developing environmental education programmes (Brown and Switzer 1991a, 1991b, 1991c; Peck 1991, 1992). With the exception of the Di Chiro and Salleh articles, the preparation of the Australian literature on women and environmental education had been funded by, or was related to actions by, the Australian government. For example, the paper by Dianne Peck (1991, and reported in her 1992 article) was prepared as part of the Commonwealth Gender Equity in Curriculum Reform Project, and the other papers were prepared under the auspices of the Office of the Status of Women in the Commonwealth Department of Prime Minister and Cabinet (DPMC/OSW) or its National Women's Consultative Council (NWCC). However, little of this literature can be called feminist research in environmental education. Rather it was calls to consider women's perspectives when developing environmental education programmes (Brown and Switzer 1991a, 1991b, 1991c; Peck 1991, 1992) or calls for recognition of the link between women and ecology in an educational context (Di Chiro 1987a, 1987b; Hallam and Pepper 1991; Salleh 1989).

Positioning my voice

As my doctoral research was a poststructuralist feminist analysis of the foundations of environmental education, I immersed myself in feminist and ecofeminist literature. A lot of ecofeminist literature was being published in the 1990s (see Figure 6.1) so there was much to be reviewed from liberal, Marxist, socialist, radical and ecological positions. There was also much contestation between the different philosophies, in what Rosemarie Tong (1989, 238) calls a "kaleidoscopic" feminist thought, in which the "preliminary impression may be one of chaos and confusion, of dissension and disagreement, of fragmentation and splintering. But a closer look will always reveal new visions, new structures, new relationships . . . all of which will be different tomorrow than today". There were also debates between ecofeminists and social ecologists (such as Bookchin 1982) and deep ecologists (such as Devall and Sessions 1985).

Many of the ecofeminist arguments of this time centred on a belief that women had natural, cultural or ideological closeness to nature, which only sought to reinforce the binaries that my feminist poststructuralist analysis was arguing against. I was interested in the emerging convergent evolution in both feminism and ecofeminism towards the notion of paying attention to

the differences among women, the socially constructed nature of both humanity and nature, and the appropriateness of deconstruction and other forms of poststructuralist analysis as a methodology for feminism and ecofeminism.

My background was in science education, and I was drawn to the writings of Sandra Harding and Carolyn Merchant. Merchant's (1980) *The Death of Nature: Women, Ecology and the Scientific Revolution* brought together my three interests of science, environment and feminism, and her socialist feminist positioning together with her writings around a partnership ethic, an environmental ethic for society "that treats humans (including male partners and female partners) as equals in personal, household, and political relations and humans as equal partners with (rather than controlled-by or dominant-over) nonhuman nature" (Merchant 1992, 188) felt right. She further argues that such an ethic treats nature and human nature as socially and historically constructed over time, transformed through human praxis, and rooted in an analysis of race, class and gender:

> Constructing nature as a partner allows for the possibility of a personal or intimate (but not necessarily spiritual) relationship with nature and for feelings of compassion for nonhumans as well as for people who are sexually, racially, or culturally different. It avoids gendering nature as a nurturing mother or a goddess and avoids the ecocentric dilemma that humans are only one of many equal parts of an ecological web and therefore morally equal to a bacterium or a mosquito.
>
> (1992, 188)

The feminist poststructuralist analysis part of my research required "attention to historical specificity in the production, for women, of subject positions and modes of femininity and their place in the overall network of social power relations" (Weedon 1987, 135). I found Sandra Harding's (1986, 1987, 1993a, 1993b) work on feminist standpoint theory and strong objectivity particularly constructive in developing my analysis. Harding (1993b, 56) argues that feminist standpoint theory

> sets out on a rigorous "logic of discovery" intended to maximise the objectivity of the results of research and thereby to produce knowledge that can be *for* marginalized people (and those who would know what the marginalized can know) rather than *for* the use only of dominant groups in their projects of administering and managing the lives of marginalized people.

These characteristics of Harding's feminist standpoint theory continue to inform my research:

- Standpoint approaches argue that all knowledge is "situated knowledge"
- Standpoint approaches intend to, and can, produce research that is "for women"

- Standpoint research is by its very focus overtly politically engaged in its conscious, intentional critical focus on the power relations that oppress women and other economically and politically vulnerable groups
- Standpoint approaches "study up": focusing on dominant institutions and their cultures and practices, not just groups less powerful than the researchers, which is usual practice
- Research that would identify the conceptual practices of power must start off with researchers' thought from women's lives instead of from those disciplinary or social policy frameworks that treat as natural women's oppression, domination and exploitation.
- Whatever strategy a researcher may use to start off inquiry from women's lives, a standpoint is an achieved and collective position, not an ascribed position or individual opinion.
- Standpoint-directed research is able to practice more effective methodological strategies and thus produce more objective accounts of nature and social relations than conventional research that attempts to achieve value neutrality.

One outcome from my analysis of the "founders" of environmental education in Australia and the United States of America was five principles for research and practice in environmental education:

- to draw attention to the racism and gender blindness in environmental education and to develop a willingness to listen to silenced voices and to provide opportunities for them to be heard;
- to foster working, individually and collectively, and equally, with other humans and with nonhuman nature rather than separating humans from nature;
- to recognise that knowledge is partial, multiple and contradictory;
- to develop understandings of the stories of which we are a part and our abilities to deconstruct them; and
- to recognise resistances to liberatory pedagogy in environmental education and to work with these resistances.

These principles have moved beyond the dominant notions of ecofeminism of the early 1990s and embraced the underlying concepts of Merchant's partnership ethic, as well as Harding's notions of feminist standpoint theory and strong objectivity. They also reflect understandings of what came to be known as feminist new materialism. For example, they are in accord with Stacy Alaimo's (1994) argument for an environmental feminism that stressed a political alliance between women and nature and one that would not slide into essentialism:

> focusing on the agency of women and nature can help keep environmentalism in the political arena and can oppose the appropriation of nature as resource by stressing nature as an actor and by breaking down the nature/culture divide, thus undermining the systems of domination. (p. 150)

More recently, Carol Taylor (2019, 39–40) has expanded on new material feminism and the more-than-human world, noting that

> New material feminism shares a social justice imperative with other modes of feminism. Like them, it is committed to finding ways to combat gender inequality, discrimination, and violence in education. More broadly, it shares with post-structuralism, post-colonialism, and intersectional studies a suspicion that the Enlightenment ideals of rationality, objectivity, and scientific progress have only delivered partial benefits for particular groups of people (mostly males, White, Western, able-bodied people) and that the narrative of "progress" it offers is also a partial affair designed to maintain the hegemony of those who benefit most from it. New material feminism, therefore, offers a radical set of tools for generating new understandings of subjectivity, relationality, and ethics, and suggests that these tools offer ways of fundamentally rethinking what we mean by – and how we do – social justice in a more-than-human world.

It is these principles and continuing reading and research drawing on feminism, poststructuralism, postcolonialism, intersectional studies, new materialism and ecofeminism that informed my writing about environmental education research and practices post thesis.

Writing feminism into environmental education

Following completion of my thesis I started writing articles – and a book (Gough 1997) – grounded in my doctoral research and other projects.

My first feminist articles (Gough 1999a, 1999b – see Chapters 2 and 3) were very much in the spirit of Schuster and Van Dyne's (1984) early stages of curriculum change – drawing attention to the absence of women in the discussions around the formulations of environmental education as a field and arguing for why their presence was important. This was also the case with Chapter 4 (Gough 2004). These articles were consistent with Valerie Brown and Margaret Switzer's (1991a, 16) argument that women are less likely to have scientific or economic training than men and, consequently, have less influence on the development of curriculum priorities. They also note that there is a need to compensate for the effects on environmental education research and teaching of the relative absence of women and women's interests from the professions of environmental science and economics: "This absence has meant that many questions on ecologically sustainable development from the fields of health, welfare, household management and social policy have neither been investigated nor included in environmental education" (1991a, 16). This observation led me to continue to aim to pursue gender equity research that transcended "the boundaries of race, ethnicity, class and socio-economic identities" (Krockover and Shepardson 1995, 223).

Sadly, women continue to be much, if not most, affected by environmental problems. As the Global Gender and Climate Alliance (2013) notes with respect to climate change,

- Women in developing countries are particularly vulnerable to climate change because they are highly dependent on natural resources for their livelihood.
- Women experience unequal access to resources and decision-making processes, with limited mobility in rural areas.
- Women make between 30 and 80 per cent of what men earn annually.
- Out of 140 countries surveyed by the World Bank, 103 impose legal differences on the basis of gender that may hinder women's economic opportunities.
- Women make up half of the agricultural workforce in the least developed countries.
- In developing countries they own between 10 and 20 per cent of the land.
- Two-thirds of the world's illiterate adults are women.
- Socio-economic norms can limit women from acquiring the information and skills necessary to escape or avoid hazards (e.g. swimming or climbing trees to escape rising water levels).
- Dress codes imposed on women can restrict their mobility in times of disaster, as can their responsibility for small children who cannot swim or run.
- A lack of sex-disaggregated data in all sectors often leads to an underestimation of women's roles and contributions, thus increasing gender-based vulnerability.

Ten years on the United Nations is still reporting that gender equality has not improved, and indeed it has probably gone backwards during the pandemic (Boecker 2023). Thus, we continually need to consciously put women on the environmental education agenda as the world is unlikely to read the United Nations' Sustainable Development Goal of gender parity by 2030 (United Nations 2015), and this is reflected in Chapters 5 and 6 (Gough 2013; Gough and Whitehouse 2019).

Beyond the women/nature binary

Ecofeminism suffered from a feminist backlash in the late 1990s, being then criticized as essentialist, elitist and ethnocentrist, "and effectively discarded" (Gaard 2011, 26). I had already positioned my writings at a distance from most forms of ecofeminism, although informed by them, but the binary association of women and nature persisted for many. Over more than a decade Hilary Whitehouse and I have attempted to destabilise traditional understandings and argued for poststructuralist and other positions as preferably approaches for environmental education research (Gough and Whitehouse 2003, 2018, 2020 – see Chapters 7, 8 and 9). Ecofeminists tended to be critical of poststructuralist approaches. For example, Salleh (1997, 9) argues "the tenets of deconstructive practice have been catechised and used as political rhetoric,

resulting in an impractical nihilism when applied to everyday life". However, Hilary and I (Gough and Whitehouse 2003) saw poststructuralist positioning as enabling a rich diversity of viewpoints to be recognised and celebrated for what it reveals about social and environmental meanings and actions.

In our more recent articles (2018, 2020) we have argued that much of what is being conceptualised in feminist new materialism was also being recognised in ecofeminist writings of the 1990s and that this needs to be acknowledged by environmental educators. This position is consistent with Gaard's argument for an intersectional ecological-feminist approach that frames issues such as global gender justice and climate justice "in such a way that people can recognize common cause across the boundaries of race, class, gender, sexuality, species, age, ability, nation – and affords a basis for engaged theory, education, and activism" (2011, 44).

There has been a resurgence of interest in ecofeminism since its 2009 low point (see Figure 1.1), and much of this writing has reflected Gaard's argument. A broader understanding of ecofeminism, gender and environmental education research was also reflected in the two special issues of *The Journal of Environmental Education* on gender and environmental education that Hilary and I edited with Connie Russell. Here we were inspired by the international encouragement for centering gender on the environmental education agenda found in *The Future We Want*, the outcomes document adopted at the Rio + 20 United Nations Conference on Sustainable Development (2012), which reaffirmed the necessity for promoting "social equity, and protection of the environment, while enhancing gender equality and women's empowerment, and equal opportunities for all, and the protection, survival and development of children to their full potential, including through education" (paragraph 11). We called for "manuscripts that respond to the need for promotion of social equity and enhancing gender equality and women's empowerment within environmental education" (Gough et al. 2017, 5) and received enough acceptable submissions to warrant two issues of the journal. We were thrilled.

Going beyond the woman/nature binary, as reflected in Chapter 10, includes the discussion of how what counts as biological life is changing and that human and more-than-human life are very much entangled, together with discussing that gender should not be a silence in sustainability education because gender and more-than-human can enhance each other, with gender more particularly helping "to disrupt the somewhat flat equation of the more-than-human" (Probyn 2016, 113).

Troubling gender and nature

The remaining chapters span nearly 20 years, but all reflect my writings around troubling gender and nature. Section III opens with overt examples of queering environmental education (Chapters 11 and 12). Here queering is in the sense described by Mary Bryson and Suzanne de Castell (1993), who describe

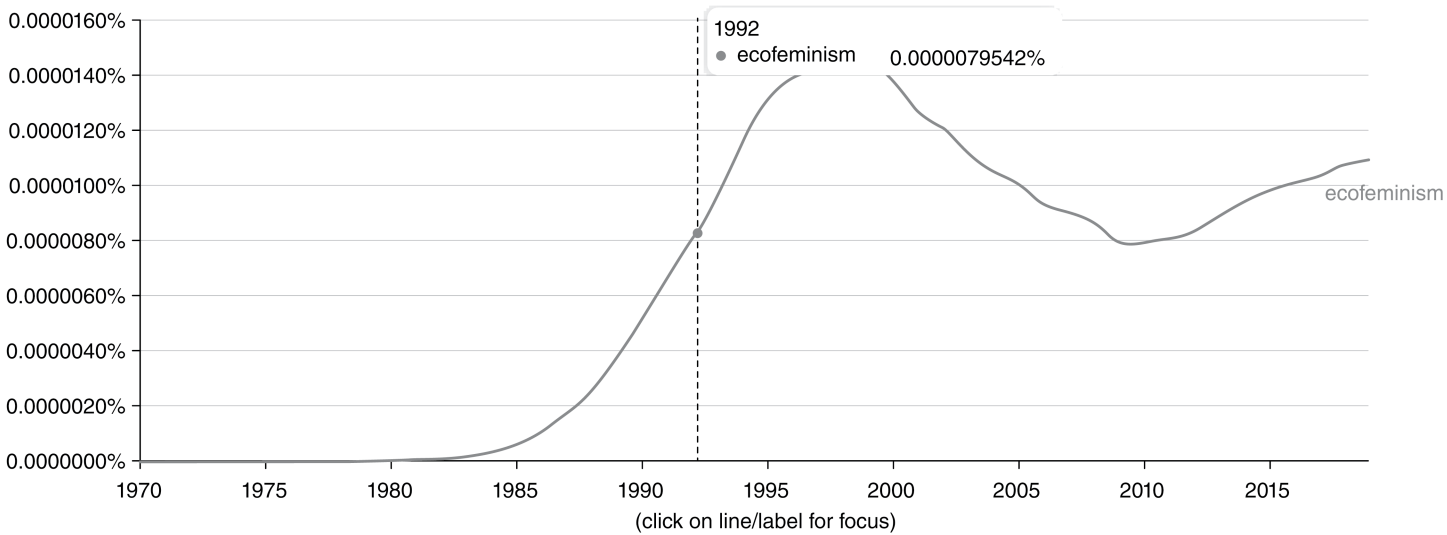

Figure 1.1 Ngram of use of "ecofeminism" in books update 1970–2019.

an actively queering pedagogy in terms of "queering its technics and scribbling graffiti over its texts, of colouring outside of the lines so as to deliberately take the wrong route on the way to school – going in an altogether different direction than that specified by a monologic destination" (p. 299). I would also call writing with cartoonist Judy Horacek (Chapter 13) as providing an opportunity to queer environmental education in a different way as we explored both of our experiences of gender, environment and environmental education through her cartoons and other experiences: through our duoethnography we certainly went in a different direction from a specified monologic destination.

Troubling gender and nature also involves exploring becoming more-than-human. I initially wrote of becoming a cyborg as a result of my breast cancer experiences (Chapter 14), informed by Haraway's (1985) cyborg manifesto, but this evolved, through other writings not included here (such as Gough 2015) to be discussions of being biopolitics and posthumanism, to the two examples included here that discuss the concept of becoming more-than-human (Chapters 10 and 15). These concepts, together with some of the others raised in Chapter 11 (intersectionality and assemblages), are likely to be important for future developments in environmental education research, as discussed in Chapter 16.

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Section I

Putting women on the agenda

The five chapters included in this section draw on my writings, solo and with Hilary Whitehouse, which have argued for the importance of putting women on environment and environmental education agenda.

The first of these articles draws on some of the research from my doctoral thesis which looked at "environmental education as a man-made subject" through a feminist poststructuralist lens, and reports on research into the gaps and silences present in policies, pedagogy and research in environmental education from a feminist perspective. The documents analysed are UNESCO-UNEP discourses on environmental education including intergovernmental conference reports and the International Environmental Education Programme (IEEP) "green" series because these statements have been used to inform national- and school-level policies and programmes in environmental education in many places, and I saw it as important to critically examine the gendered world view implicit in these statements as a starting point for a discussion on how to destabilize these statements so that women are more recognised in environmental education pedagogy and research.

The second article built on the first article and explored the related issue of the potential of adopting feminist research methods and methodologies in environmental education research. This article was stimulated by my experiences of working with South African colleagues on a capacity building in environmental education research project and finding that gender was not on the research agenda in South Africa at that time (1998–1999): the focus was much more on equality writ large as a result of the relatively recent election of Nelson Mandela's government after years of apartheid. Thus, the article was designed to convince South African environmental educators to adopt different ways of thinking and perceiving in environmental education research by using feminist research strategies.

Chapter 4, which discusses the contribution of ecofeminist perspectives to sustainability in higher education, focuses on research into the absences of women's perspectives from sustainability policies, pedagogy and research, and it argues that ecofeminist pedagogies and research methodologies suggest new possibilities for the development of sustainability in higher education. In this

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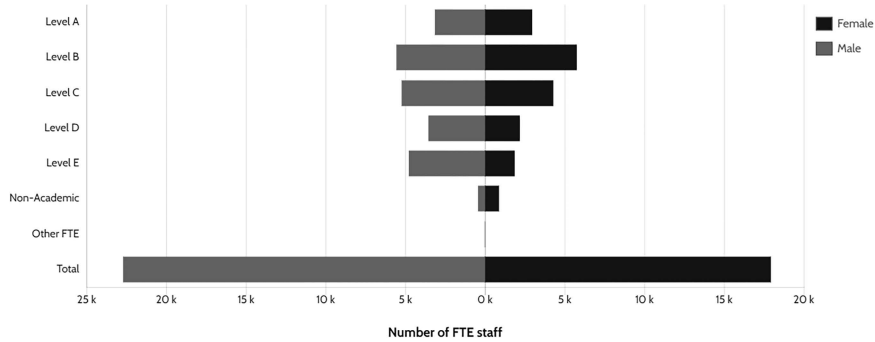

Figure S1.1 Number of FTE staff by gender by employment level, from the *State of Australian University Research 2018–19*. Reproduced with permission from the Australian Research Council.

chapter I draw attention to the imbalance in the distributions of women and men across Australian university positions (Table 4.1). More recent data from the Australian Research Council indicates that the proportion of women in higher-ranking positions is increasing, though still lower than men, except at lower ranks (see Figure 1.1).

As discussed in Chapter 1, the ecofeminist movement suffered from a feminist backlash in the late 1990s because of its perceived essentialism, elitism and ethnocentrism. However, the second decade of this century has seen a resurgence of interest in ecofeminism and feminist and intersectional perspectives in environmental education. Chapter 5 was written before the resurgence, but it provided a new opportunity to argue that environmental education research has rarely addressed areas of different women's experiences and knowledges, which means many useful insights have not been adequately pursued, but that using feminist research strategies to generate a gender agenda provides the basis for different ways of thinking and perceiving in environmental education research. In particular, the chapter explains why a feminist perspective is important in environmental education and what characterises feminist research; it also discusses what feminist research has been undertaken to date in environmental education and the potential for feminist research in environmental education.

The final chapter in this section comes from 50th anniversary special issue of *The Journal of Environmental Education*, in 2019. Hilary Whitehouse and I were invited to reflect on feminism and environmental education research since 1969, so we traced the history of feminist environmental education research across *The Journal of Environmental Education* and other environmental education research journals. We noted that, although there was some research in the 1990s and 2000s, until two special issues of *The Journal of Environmental Education* in 2016 and 2018, there had been a prolonged,

even a deafening, silence around gender and eco/feminism in environmental education research. We argue that it is time for gender to be much higher on the agenda of environmental education researchers and of journals if we are to better achieve gender equality and more fully address the climate emergency within the field.


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2 Recognising women in environmental education pedagogy and research

Annette Gough

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Summary

In the past, women have been overlooked in most environmental education programmes through being subsumed into the notion of 'universalised people'. However, women have a distinctive contribution to make to environmental education pedagogy and research which needs to be foregrounded. This chapter reports on research into the gaps and silences present in policies, pedagogy and research in environmental education from a feminist perspective. This research has been inspired by feminist critiques of critical pedagogy and the potentialities of feminist poststructuralist methodologies. In particular I focus on the silencing of marginalised perspectives in environmental education policy development, as well as in research conducted from the perspective of the dominant positivist research methodologies, and argue for the possibilities for new directions when poststructuralist pedagogies and research methodologies are used in environmental education.

Introduction

Women were noticeably in the minority at the international gatherings which formalised conceptions of environmental education. This absence of women can be seen as being related to the epistemological framework of environmental education being very much that of a man-made subject and to the content of the corresponding curriculum and research programmes tending to be determined by the male agenda. However, through recent environmental education statements, such as those emanating from the 1992 United Nations Conference on Environment and Development, through the development of feminist poststructuralist educational research strategies and other feminist critiques of science and society a significant place can be argued for a women's perspective in both pedagogy and research in environmental education.

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