# Hyperseparation in Western agriculture: Male/female and human/nature constructions in Australia and the Netherlands

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Gender, agriculture, Australia, The Netherlands, Plumwood, ecological theory

# Abstract

Transitioning toward a more sustainable global agriculture sector is key to mitigating climate change. Power over resources such as land and knowledge is largely controlled by men and what it is to be a farmer is constructed around masculinity. A counter movement of female sustainable farmers has emerged in the Global North, and many of these women are new to farming. In order to understand the rigidity of masculine, industrial global agriculture and the constraints and opportunities of transitioning to a more sustainable food system we examine the experiences of this cohort of new, female, alternative farmers in Australia and the Netherlands. We focus on the mesosocial level, of new female farmers and their interaction with sites of hegemonic agriculture. We draw on Val Plumwood’s conceptualization of dualistic hierarchies to assess the degree of flexibility in a system that privileges male over female and human over nature. The in-depth interviews with 36 new female farmers across Australia and the Netherlands reveal hyper-separation between the male and female dualism, which leads women to gender performances of masculinity in order to gain legitimacy as farmers. They do not internalize the master model, instead they hold fast to the value they place on producing food in environmentally, socially and personally sustainable ways. This study demonstrates the barriers and opportunities to remaking global agriculture as more equitable and sustainable.

# Introduction

Characterized by intensive production, widespread use of pesticides and herbicides, and global supply chains, industrial agriculture contributes twenty-two percent of greenhouse gas emissions globally (Intergovernmental Panel on Climate Change, 2019). Remaking agriculture is crucial for mitigating the impacts of climate change. Co-constitutive of industrial agriculture is hegemonic masculinity and ideals of domination, competition and control, of both the environment and women (Chiappe & Butler Flora, 1998; Saugeres, 2002a). Val Plumwood is one philosopher that sought to unpack the sociocultural dynamics that have contributed to the climate crisis. She argued that a more ecological and equitable future relied upon the interrogation of what she described as hierarchical dualisms such as human/nature and masculine/feminine.

In response to the environmental and social degradation caused by industrial agriculture a counter movement of ecologically conscious farmers has emerged (Ackoff et al., 2017; Beus & Dunlap, 1990; Bradbury et al., 2012; Guerrier, 2006; Hassanein, 1999). Research from across the Global North has found that many sustainable farmers are women (Author, 2020; Burton et al., 2003; Dinis, 2006; Sachs et al., 2016; Trauger, 2004) some of these farmers are new to agriculture (Bradbury et al., 2012; Milone & Ventura, 2019), and some are both (Author, 2021; Chatzitheodoridis & Kontogeorgos, 2020; Genello, 2018; Monllor i Rico & Fuller, 2016). The interaction of these farmers with sites of industrial agriculture is a rich study for examining the potential for challenging and remaking the dualistic hierarchies described by Plumwood (2002). This study incorporates in-depth interviews with 36 new, women engaged in alternative farming practices across two major agriculture producing nations, Australia and the Netherlands. We seek to understand the opportunity for remaking the relationship between two key dualisms identified by Plumwood (2002), the human/nature dualism and the masculine/feminine dualism. We focus on the mesosocial level, the social world between the individual (micro) and broader social structures (macro) (Lazega, 2004), in order to understand the impact of social relations on the experiences of new, female farmers engaged in alternative, sustainable production methods.

We find that new, female, alternative farmers in both Australia and the Netherland this study faced a number of barriers to navigating the gendered spaces of industrial agriculture. Both their gender and production methods were backgrounded as inferior to masculine, industrial agriculture. They engaged in a number of strategies to navigate this space including identifying with both the masculine and feminine aspects of the gendered dualism, reversing the dualism, and engaging in hyper-separation. This study highlights that despite increasing numbers of female farmers engaging in alternative agriculture, the male/female and human/nature dualisms remake themselves in sites of industrial agriculture. While the master model’s dominance was asserted in the interactions described by participants, participants did not internalize this model as natural and remained committed to their values of sustainability. While the participants in this study personally valued rural feminine traits such as care, nurture and orientation toward the community (that Plumwood argued were necessary for undoing hyper-separation and creating a more ecological future) the mesosocial level in which they interacted with sites of productivist agriculture led to gendered performances that dismissed feminine characteristics.

The article begins by articulating a framework for understanding industrial agriculture as a series of dualisms that may be remade or undone at the mesosocial level. We then outline the qualitative methodology of in-depth interviews with new, female alternative farmers across Australia and the Netherlands. Next, we outline how our participants navigate their position as ‘other’ within the hierarchical dualisms that constitute the agricultural order. We show how the master model is remade to some degree, but is not seen as natural by the study’s participants. In the final section, we make sense of these findings with respect to Plumwood’s (2002) theories of ecological feminism and the possibilities which might exist for undoing dualisms that create profoundly negative environmental and gendered outcomes. We conclude by reflecting on future work to be done in this area and the theoretical contribution of this study.

# Maintaining and challenging industrial global agriculture

The objective of this paper is understanding some of the opportunities and constraints to remaking agriculture along more ecological and equitable grounds. To meet this objective, we set out those aspects of Plumwood’s (2002) work that we see as most illuminating and connect it with work from rural sociology in the Global North to understand how the mesosocial level may shape performances of gender. We also examine the similarities and differences in the Australian and Dutch agricultural sectors with regard to accepting women farmers that are new to agriculture, and engage in an alternative, sustainable production methods.

## Hierarchical dualisms in agriculture in the Global North

Plumwood (2002) and other post structuralist feminist theorists (see for example Lloyd, 2002; Ruether, 1995) critically interrogate how hegemony is maintained through dualisms that naturalize hierarchical relationships. Examples of dominant and subordinate dualisms include human/nature, masculine/feminine, subject/object, public/private and culture/nature. The upper side of each of these dualisms is constructed as holding a higher social value, which justifies its hegemony (see also Warren, 2000). Hegemony is preserved through the co-construction of the inferiority of subordinate dualistic structures. Plumwood (2005) refers to a ‘master model’, comprising of the superior side of dualisms, which is taken as a universal human model, other constructions are seen as deviant from this model. For example, in the case of the public/private dualism the public sphere is associated with masculinity and reason whereas the private sphere is associated with femininity, and nature (see also Lloyd, 2002). Dualisms are necessarily dependent on each other, although this is denied by the master model through what Plumwood (2002) refers to as backgrounding. She labels the lack of acknowledgement of commonality with the other as ‘hyper-separation’.

Studies on rural sociology from the Global North demonstrate how gender roles in agriculture are shaped by patriarchy. The farmer is constructed along masculine characteristics of physical strength, domination and technical knowledge (Brandth, 2002; Little, 2002; Pearse & Connell, 2016). The underside of this dualism is the farmer’s wife who is defined in relation to her lack of masculine farming traits, such as physical strength (Saugeres, 2002a). As such the woman farmer is only intelligible in relation to the subject, the male, primary farmer and his land (Saugeres, 2002a). Hegemonic agricultural femininity is constructed as nurturing and self-sacrificing behaviour (Brandth, 2002; Whatmore, 1991). Tasks, too, are subject to construction within this hierarchy (Heilman, 2001; Ridgeway, 1997). Tasks conducted by women are seen as less valuable (Saugeres, 2002b) and women are excluded from tasks considered to be masculine (Saugeres, 2002a). In addition to the farmer identity, women are largely excluded from other agricultural resources such as land and status being derived from intergenerational land ownership and connection to local areas (Bock & Shortall, 2006; Bryant & Pini, 2011). Women in agriculture who demonstrate their farming competence and transgress feminine gender performances may face derision, exclusion and have knowledge and information withheld from them (Author, 2021; Brandth, 1994; Keller, 2014; Pilgeram, 2007; Trauger et al., 2008). Plumwood (2002) described processes of radical exclusion where the dependence between dualisms is denied. This is evident in the denial of the dependence of the male farmer on the farmer’s wife. In addition to marginalising those that do not perform the roles of farmer and farmer’s wife the binary construction of gender in agriculture excludes transgender and non-binary identities.

In the Global North nature is constructed as the underside of the human/nature dualism, as a passive object and as background to the instrumentalism of human reason and culture (Plumwood, 2002; 2005). Within industrial agriculture, nature is seen as an instrument to meet human needs and desires and to be manipulated to meet these ends. For example, the application of culture through pesticides, herbicides and machinery is seen to improve and civilize nature (Plumwood, 2005). Farmers that produce in harmony with nature and recognise interdependencies in this relationship are perceived as ‘other’ in spaces of industrial agriculture (Brandth, 1994; Sachs, 1983).

For Plumwood (2002) a more equitable and ecological future relies on the unmaking of these hierarchical dualisms. Plumwood’s (2002) analysis seeks to address what she sees as the oversights of cultural feminism, deep ecology and liberal feminism. She rejects the essentializing link that cultural feminists draws between women and nature. She rejects liberal feminists’ assumption that liberation can stem from women joining masculinists institutions rather than challenging sites of hegemony (Reed, 1996). She argues against the demolishing of the feminine gender identity as this may discard important attributes such as care and nurture. Instead Plumwood (2002) argues for a recognition of the continuity between dualisms and their mutual dependence so that backgrounding, radical exclusion and hyper-separation is broken down. For Plumwood (2002) undoing hyper-separation may include the revaluing of skills, social orientations, tasks and values of those that have been backgrounded and devalued. This may involve revaluing nurture and care of self, the environment and community.

## Australian and Dutch agriculture: Opportunities for new, female alternative farmers

Australia and the Netherlands are two major agricultural exporting nations. The experiences and values of female, alternative farmers has been documented in both contexts (Author, 2020; 2021; Turesky, 2012). In both contexts these women are ‘other’ to hegemonic agriculture, which is characterised by masculinity, industrial production and farming legitimacy is based on longevity in agriculture through the generations of the family (Sayer, 2005). In order to understand the extent to which the experiences of new, female, alternative farmers is impacted by two key dualisms outlined by Plumwood (2002), male/female and human/nature, we discuss them in turn.

The Australian and Dutch agricultural sectors share similarities in that they are both highly specialised, large scale, industrialized and export-oriented ([Andrée](https://scholar.google.com.au/citations?user=9QT7glYAAAAJ&hl=en&oi=sra) et al., 2010; Oppedijk van Veen et al., 2019; Ploeg, 2008). The policy regimes in both nations encourage producers to maintain profitability by seeking economies of scale ([Andrée](https://scholar.google.com.au/citations?user=9QT7glYAAAAJ&hl=en&oi=sra) et al., 2010; De Schutter, 2019; Oppedijk van Veen et al.2019; Ploeg, 2008; Pretty, 2002). To improve productivity and economies of scale producers have increased the use of inputs such as pesticide and machinery ([Andrée](https://scholar.google.com.au/citations?user=9QT7glYAAAAJ&hl=en&oi=sra) et al., 2010; Oppedijk van Veen et al, 2019). Support for agricultural producers is much higher in the European Union (17.57%) compared to Australia (2.85%) (OECD, 2022). As producers in both nations pursue economies of scale, farm sizes have increased, concentrating farm ownership in fewer hands (ABARES, 2022; Ploeg 2008; Pretty 2002). The Netherlands is more densely populated than Australia, with 518 people per square kilometre of land area, relative to Australia where there are only three people per square kilometre (World Bank, 2020). Farm size is vastly larger in Australia, with an average of 4331 hectares (ABS, 2017), compared to 15.6 hectares in the Netherlands (Piet, 2016). The Netherlands has the highest agricultural land prices in Europe, making access to farming difficult (Silvis & Voskuilen, 2018). A recent study has made visible the precarity of new farmers’ access to land where 72% of new farmers in the Netherlands have a contract of less than a year, or no contract at all (Oppedijk van Veen et al., 2019). In both countries food production for export is prioritized over supplying local markets ([Andrée](https://scholar.google.com.au/citations?user=9QT7glYAAAAJ&hl=en&oi=sra) et al., 2010; Oppedijk van Veen et al., 2019).

Both Australia and the Netherlands have pronounced gender gaps with regard to opportunities and rewards in agriculture. In both countries, women in agriculture have been constructed primarily in their relationship to men, as farmer’s wives or daughters, and their productive role and contributions have been undervalued (Alston, 1995; Turesky, 2012). Despite their ongoing contribution to farming, women’s roles remain underrecognized (Riley, 2009; Sachs, 2018). In the Netherlands women represent only 5.2 percent of farm managers (Eurostat, 2018), where as in Australian agriculture women comprise 28% of managers (Binks et al., 2008). However, in Australia women are still named as the farm successor in only ten percent of cases (Barclay et al., 2007).

Due, in part, to unequal access to industrial agriculture women in the Global North are farming on smaller scale farms, using lower levels of external inputs such as fertiliser and credit and producing niche products that are sold through shorter supply chains to capture more of the economic value of their products (Author, 2020; Seuneke & Bock, 2015; Turesky, 2012). These producers typically produce food in harmony with nature and have a strong orientation toward their local community (Beus & Dunlap, 1990; Chiappe & Butler Flora, 1998; Lyson, 2004). A key characteristic of alternative, sustainable farmers is seeking autonomy from industrial agricultural value chains, by reducing inputs and selling through short supply chains (Ploeg, 2008). In the Netherlands producers that market their products through short supply chains or direct to customers may benefit from higher population density. Alternative agriculture networks are also more inclusive of women, which facilitates access to knowledge and training (Author, 2021; Trauger, 2004; Turesky, 2012). Those that come from non-farming backgrounds often have more “room for manoeuvre” (Seuneke & Bock, 2015, p. 47), as they have not been socialized into industrial agricultural production methods.

We assess the extent to which the dominance of human and masculine, within their dualistic structures, can be challenged by examining the experiences of those seen as ‘other’ within industrial agriculture: new, female farmers engaging in alternative, environmentally centred agricultural practices. Australia and the Netherlands are typical of hegemonic industrial agriculture in the Global North and rich sites to explore this. In the section that follows we establish a methodology for doing so.

# Methodology

The data informing our analysis are drawn from two studies of cis women in alternative agriculture who do not have a background in agriculture or partner with someone who does: the first on 17 women in the Australian context the second on 19 women in the Dutch context. It is important to point out that the studies were conceived and conducted separately; neither researcher intended their work as part of a comparative project. We have chosen to discuss them together because of their striking commonalities: both studies explore the experiences of farmers who can be understood as ‘other’ to the agricultural norm in the sense that they are women, they are new to farming, and they use sustainable, alternative production methods. Together, they form a rich dataset testifying to the experience of interacting with the agricultural master model from a position of marginality. This study seeks to understand the common positionality of participants across Australia and the Netherlands as examples of sites of global agriculture, rather than to contrast two social and spatial fields. We recognise that there are differences in the positionality of participants between and across the two sites with regard to how they understand gender and farming but this is beyond the scope of this paper.

## Study 1: Australia

Between 2017 and 2019, 17 in-depth interviews were conducted with women producers who farmed using alternative, environmentally centred production methods and did not have a background in agriculture. These interviews were part of a larger study of 57 Australian women who owned agricultural businesses. Importantly, this research was not intended as an exploration of the distinctive experiences of women in alterative agriculture. Instead, this theme became apparent during data collection, after a broader set of questions regarding women’s experiences in agricultural production were posed. These questions included asking participants about the motivations for establishing their enterprise, the barriers and enablers to business development, the role of networks, technologies, innovations and stakeholders, and the challenges and opportunities facing the business. From the data these participants were classified as alternative farmers due to their production practices of working in harmony with nature, a strong orientation toward their local community, decentralization from global value chains and low external inputs such as fertiliser and credit (Beus & Dunlap, 1990; Chiappe & Butler Flora, 1998; Lyson, 2004).

This study followed a purposive sampling strategy and participants were recruited firstly through personal connections and snowballing. Once these avenues were exhausted, a web search was conducted to unearth potential interview participants. That producers were visible through internet searches skewed the sample towards those that have a direct interface with customers, rather than those that engage in commodity production who are likely to sell through established value chains and not require a website. It also skewed the sample towards those with internet access and technical skills. Following the identification of suitable participants from these sources, an introductory email was sent, accompanied by an information sheet which outlined the project.

Table 1 sets out the interviewees. The production areas include beef, poultry, pork, flour, insects, wine, vegetables, fruits, and herbs. They represent most of the states of Australia, providing a broad range of perspectives. Demographically, the participants were largely of Anglo-Saxon background and middle class. Pilgeram and Amos (2015) argue that it is white, middle-class women who are likely to have the education and capital required for farming. As such the demographic make-up of this sample biases the study towards those of privilege. Participants’ ages ranged from late 20s to mid-60s. All participants have been allocated a pseudonym.

Insert table 1.

Semi-structured, open ended, in-depth interviews were conducted, which enabled valuing the experiences of the participants (Pini, 2003). Prior to conducting this research, the ethical considerations were reviewed by the University’s research committee via the ethics approval process. As the women were widely spread geographically, the vast majority of the interviews were conducted through electronic means (Skype, Zoom or telephone interviews). Two women were interviewed at their farms or businesses which enabled a deeper knowledge of the women’s experiences as the geographical context of the farm could be appreciated and non-verbal cues recognized.

An important part of the methodological approach of this study was to recognize the influence of the researcher in shaping the narrative of the interview as both participant and observer (Beilin, 1998; Pini, 2003). In order to create a more equal relationship between researcher and participants, the study followed the tenets of feminist methodology established by Armstead (1995). Armstead (1995) argued that researchers should seek to validate participants’ knowledge. Interviewees were given copies of transcripts and permission for each quote was sought, reflecting the technique of member checking to assess the trustworthiness of qualitative results (Doyle, 2007). This enabled an iterative process where meaning was clarified and interviewees were empowered through greater ownership in the research process. This helped to reduce the hierarchy between interviewee and interviewer. Requests to omit or modify data was accommodated, as were requests for anonymity.

Data was coded using an inductive approach (Thomas, 2006), which allowed for the identification of emergent themes and the analysis of the underlying structure of experiences of the interview participants. Following transcription, common themes across the cases were identified through reflection and a deep reading of the transcripts. Following Gioia’s approach (Gehman et al., 2018), an iterative process was applied, looking for similarities and differences among emerging categories to identify some deeper structure.

## Study 2: The Netherlands

This fieldwork for this study was conducted between March and April 2019 and involved interviews with 19 farmers on 16 farms across the Netherlands. This study utilized purposive sampling and snowball sampling to locate and contact participants, as women sustainable, alternative farmers represent a hidden population with no complete list or registry (Riley, 2009). Several studies have shown that new farmers value networking and often engage in online platforms (Mailfert, 2007; Monllor i Rico & Fuller, 2016; Rantamäki-Lahtinen & Väre, 2012; Wilbur, 2014) hence a website was created to increase the visibility of the study online, share a research outline, and provide the contact details and links necessary for women to participate in the study. As new farmers necessarily link to external networks to access knowledge, the study additionally sought out new women farmers that were involved in farmer networks. Direct emails were sent to farmers by finding their contact details through their websites and relevant networks. One farmer shared a blogpost about the study on her website; it was subsequently shared on multiple farmer networks, resulting in several women volunteering to be included in the study. Relevant events such as the agroecological farmers’ conference were also used to recruit research participants.

The participants (see Table 2) were first-generation women farmers who did not inherit a family farm and were engaging in agroecological practices. This study relied on the self-identification of women alternative farmers, as this allowed participants to set a broad definition of what it means to be a farmer and what constitutes a farm (Genello, 2018; Trauger, 2004). By relying on self-identification, a diversity of farmers were able to be included in the study. Demographically, the participants were largely of Germanic background, middle class, and highly educated. Their ages ranged from late 20s to early 60s. The majority of women were managing their farms alone, together with other women and with the help of volunteers. Only two women were farming with the help of their male partners. All participants have been allocated a pseudonym.

Insert Table 2.

Semi-structured in-depth interviews were conducted with the participants. The interviews lasted between 1 and 3.5 hours and were recorded with permission. These interviews were conducted in English and followed a semi-structured format, focusing on the women’s backgrounds, motivations, challenges, practices, gendered experiences, and activism toward creating sustainable food systems. These interviews were used to gather rich data on a population of new women farmers that remains largely ‘invisible’ and about whom there exists little qualitative research (Trauger et al., 2010).

All interviews took place in person on participants’ farms. The seasonality of farm work meant that during the time of the study participants were busy preparing their farms for the coming growing season. Because of this, most interviews were conducted while the researcher volunteered alongside participants, engaged in farm labour. This approach allowed for a greater number of interviews to be conducted, as one barrier to participation was removed; it also improved the quality of the data gathered, as it enabled a deeper and more direct understanding of participants’ farming practices.

The interview recordings were transcribed verbatim and coded using a mix of deductive and inductive methods, with a focus on inductive coding where emerging patterns were drawn out of the data. Coding was conducted in an iterative process as this allowed for the identification of common trends and outlying themes (Trauger et al., 2010). Field notes were recorded during participant observation on interviewees’ farms, where their struggles in negotiating gender relations were directly observed, as well as during attendance at conferences and events. These field notes informed the coding process, proving useful in supplementing the perspectives shared through interviews.

## Strengths and limitations of methodological approach

Given the interpretivist epistemology of this research, and the fact that all interviews took place in interaction, we recognise that intersubjectivity influences the interpretation of our data, leading to difficulties replicating both studies and generalising the findings to a wider context.

The positionality of the researchers as women, feminisst, and a some-time practitioner sof sustainable farming has no doubt shaped the way the data has been generated and interpreted. This position can be considered a strength, in that it has allowed for sensitivity to gender struggles, as well as insight into sustainable farming communities and familiarity with agroecological practices and values. At the same time, it can be viewed as a limitation, as it can tend toward bias or what some might consider an overly sympathetic approach to the struggles faced by participants. Rather than attempting to escape or resolve this tension, the research has allowed itself to be animated by it: the perspectives of participants are privileged as a source of knowledge and their voices emphasized; at the same time, an attempt has been made to maintain critical distance from participants so that the limitations of their practices and approaches can be considered. This can also help identify their continuing challenges and support the process of addressing these challenges.

The key differences between the methodological approaches used by both studies were that the majority of the interviews for study one were conducted via phone or Zoom, whereas all of the interviews for study two took place on farm. The approach in study two allowed for greater participant observation in their place of work in order to better understand the context of their narratives. However, as neither study observed women in their interaction with sites of industrial agriculture at the mesosocial level, which is the focus of this study, there was no significant difference in the ways in which data relevant to this study was collected. The perspective and voices of participants was central to both studies, taking an in-depth approach to allow women to share their stories (Bryman, 2016; Trauger, 2004).

# Findings

The investigation of the experiences of new women farmers engaging in alternative farming practices as they interacted with sites of industrial agriculture at the mesosocial level revealed the mechanisms by which industrial agriculture is preserved as dominant. Hierarchical dualisms, particularly human/nature and masculine/feminine forced our cohort of research participants—who are ‘other’ to industrial agriculture by virtue of being new, women farmers engaging in alternative farming practices—into self-conscious and strategic enactments of gender in their interaction with sites of industrial agriculture. This includes mobile and context-dependent identifications with both sides of the masculine/feminine dualism, as well as reversing the value attached to each side of the binary. Despite this, the participants in our research did not internalize the master model as natural and were committed to creating a more ecological and equitable agriculture sector.

## Preserving dualisms: Radical exclusion of women farmers engaging in alternative agricultural practices

To access the resources they required to farm, the participants in this study were required to interact with sites of industrial agriculture at the meso level. This included farm produce stores and farm machinery stores in their locales. They also interacted with industrial farmers in their neighbourhoods. Similar to Trauger’s (2004, p. 290) study, when these women claimed the status of farmer “they transgress the traditional gender roles, work culture and ideologies that define the social narratives of farming”. Many women had “the feeling I have to prove myself more to get taken seriously, as a woman farmer” (Marion, the Netherlands). Some participants reflected that this may be due to the perception that farmers need to be physically strong, for example Joanna (the Netherlands) said “People sometimes think it would be too much for me”.

In both the Australian and Dutch contexts new, alternative women farmers reported not being seen as “real” farmers. Amy (the Netherlands) said this was because “conventional agriculture is dominated by a male way of working … because the whole economic structure is male-dominated”. Grace (the Netherlands) commented on her attempts to access the resources she needed to farm from sites of industrial agriculture that “men are taken much more seriously. By landowners, by local government”. Participants in both contexts reported being invisible when they entered machinery stores to purchase machinery such as tractors. They were not recognizable in large part due to their gender and because they were transgressing hegemonic rural femininity by claiming subject status in the public sphere. Violet (the Netherlands) reported not being recognizable as feminine due to her clothing choice, but the way she describes herself reflecting a degree of continuity, rather than hyper-separation (Plumwood, 2002) between the masculine and the feminine:

Sometimes it feels like people, well men, look at you like you’re not a proper woman. I also notice that my family, they had to get used to the idea. But ever since I do this, I look shabby, I don’t really care about my clothes, sometimes I wear my husband’s clothes, but to me it doesn’t matter, but for the outside … I always feel a bit weird, out of place.

Both Australian and Dutch participants reflected on their performances of masculinity in order to be identified as the primary farmer, rather than the subordinate farmer’s wife. Helena (Australia) commented “If you're a feminine woman — and I'm a heteronormative-looking woman — there's a perception that you're not the farmer, you're the farmer's wife. It's as though you're not a ‘real farmer’”. Helena reported making her communication style more masculine in order to build trust and legitimacy and ease access to resources such as materials and information:

Especially if I'm down at the ag(ricultural) store. I'll drop my voice a bit, slow my movements, no quick talking, all that sort of thing. I think men find it a bit easier to talk to you about land or ag(riculture)-related things if you can communicate with them at their level or in a way that they're comfortable communicating in. So that helps a little but it makes me feel dirty because I’m a feminist and would like to just express how I do at home or around friends. But you got to do what you got to do.

Lieke (Netherlands) also learnt to perform masculinity in order to access resources from sites of industrial agriculture and to be intelligible to her audience as a farmer:

We also learnt that here in the region, if you want something, you go to the shop for a machine, then you have to say “I want this, and I want it tomorrow” … You don't have to smile. They appreciated it if you say “I want it tomorrow”. Finished. And if you say “Oh, maybe if you have time, it would be nice,” they don't take you seriously, they don't understand you.

Those involved in industrial agricultural production did not view the sustainable, alternative production practices of the study participants as “real farming”. Gabi (Australia) said she was seen as a hobby farmer, rather than a commercial farmer. Helena (Australia) said her sustainable production methods positioned her as “idealistic, bushy eyed” and delegitimized her agricultural knowledge. When asked how she was viewed by industrial farmers she said she was seen as “a greeny hippy trying to grow food, and a woman, what does she know?”

To navigate this exclusion participants used strategies that included associating themselves with industrial agriculture, and the upper side of the reason/nature dualism described by Plumwood (2002). Helena (Australia) reported adopting the dress of industrial agriculture when acting as a spokesperson for sustainable agriculture in order to gain legitimacy as a farmer. She opts not to dress in a feminine way, despite this being her preference, but to “wear jeans, boots and a flanno [flannelette shirt]. It gives legitimacy to the narrative that I'm talking about”.

Rosa (Netherlands) and Grace (Netherlands) referred to the fact that they did not use large pieces of machinery on their farms as one of the reasons they were excluded from being accepted as legitimate farmers at the mesosocial level. Stratigaki (1988, p. 256) labels machines as “the main criterion” for differentiating work that is designated male and female on farms. Machinery, such as tractors, signify masculine control and domination of nature (Brandth, 1995; Peter et al., 2000). Echoing findings from Haugen (1998) participants that did use machinery such as tractors reported their ability to use the tractor being questioned. Alissa (Australia) had the following paternalistic interaction with her male, industrial agriculturalist neighbours when she bought her tractor:

They were like “oh no, be very careful on that tractor”. He’s nice enough but he was like “oh another tractor accident on the hill waiting to happen”. Would you say that to a fifty-year-old man that just bought a new tractor? Probably not. But it's all right to say it to me, you know, I just ignore it.

Beyond being excluded from the farming identity by people they interacted with at the mesosocial level, machinery and farm tools are designed “by and for men” with larger bodies (Riley, 2009; Turesky, 2012, p. 87). Lola (the Netherlands) said there was a need for:

More innovative tools ... our wheelbarrow is so heavy, and I cannot fill it and walk around with it, so just more ergonomic, friendly tools. With light and strong materials, also for small people, not only for tall people, that would be nice.

For Marion (Netherlands) driving a tractor was seen as a key way to subvert and challenge gender roles and assert her gender identity:

I like to change the roles, the gender roles, sometimes I drive the tractor, and that I think is also nice because I like to change that stereotype thing, because sometimes now a lot of women go into farming, but then they usually end up on a small farm without a tractor, or they just do the administration … I would say no, you can do what you want, and if you enjoy it, you should do it.

Participants from both nations were buttressed from the exclusion they faced in industrial agricultural mesosocial spaces by the acceptance they felt in communities of sustainable, alternative agriculture and with customers that they had an ongoing relationship with, such as those in community supported agriculture schemes. The farmers of this study highlighted the importance of creating a community and working to “grow food, communities and happiness” (Amy, the Netherlands) through their work as farmers. Previous research has described the “farm as a community centre”, where women farmers build communities of like-minded people, that often share values of sustainable food and farming, and creates a sense of belonging (Trauger et al., 2010, p. 48). Further, this model creates a sense of community and solidarity that is key to counter the conventional productivist food system based on anonymity and the social isolation of farmers (Laughton, 2017). For participants in the Netherlands these networks often geographically close. For some participants in Australia felt geographically isolated from likeminded people, but to an extent overcame this through online networking.

## Creating a more sustainable future: Revaluing and breaking down dualistic structures

Both the Australian and Dutch women farmers interviewed framed industrial agriculture as masculine and sustainable, alternative agriculture as feminine, and saw alternative agriculture as superior. Grace (the Netherlands) said that industrial agriculture was “all male, and that it's all about production, it's not really sustainable”. Amy (the Netherlands) viewed women’s approaches to farming as more environmentally and socially connected, holistic and sustainable:

 There are the two opposites of the scale, and a lot of grey in between, obviously, I think I just mentioned that. On the one side, the stereotypical masculine way of large-scale, with machinery, usually growing a fewer amount of crops, going for a large wholesale. And the masculine farmer will go for the big building, tractors and the bank loan, that sort of thing, and will sooner go for profit optimization … At the opposite end, you have the typical female way, which will start slow, small-scale, without a bank loan, and a bit of help from friends and family, see how it goes, organize a lunch to go with it, be more social and more diversified, and smaller-scale. And will plant flowers, look behind you, there's a beautiful flower bed. So more by biodiversity, more diversity in the soil, more by diversity in the crops, and in the markets, and outputs as well, so in general more diversified and looking for a holistic approach.

While farming masculinity is associated with physical toughness and solitude (Author, 2021) the women farmers in this study worked in harmony with their body’s needs. They felt comfortable asking for physical help, without feeling compromised in their farmer identities. For example, when they were pregnant or had young children and were more vulnerable physically, they collaborated with others to ensure the farm kept going. Lieke (the Netherlands) said:

 You just have to say “can you help me this is too heavy”, so it worked out. And we were all pregnant in winter so we timed it quite well … but of course in winter there's a lot of carrying potatoes and heavy stuff, but you just do it a bit slower, can you just ask for some help … we just have to adapt to it.

Jacqueline's (the Netherlands) sustainable farming enabled the incorporation of her care and professional roles but the challenge of striking a balance was ongoing: “It’s always the challenge, since I’m a mother. The balance. And I’m attuned to her, and I’m attuned to the farm. There are different needs, and I need to bring those together”. Quotes such as this reflected a common theme in the data that participants framed their farming practice along feminine lines. In her study of US farmers Abatemarco (2018) mapped this integration of work and care onto the nature side of nature/reason dualism.

Despite the participants in this study engaging in a range of strategies at the mesosocial level in their interaction with sites of industrial agriculture that preserved its dominance, at the level of the farm they enacted their values of environmental and personal sustainability. The participants were reflexive and conscious of their performances of industrial agriculture, such as the masculinity associated with the industrial farmer. They did not internalize the master model that promotes masculinity over femininity and humans over nature, despite signals that their status as women and sustainable, alternative farmers was inferior. Instead, they saw their models of sustainable production as superior and a necessary challenge to what they saw as the unsustainability, both environmentally and for the individual farmer, of industrial agriculture. At a personal level they revalued nature and women in the human/nature, man/woman dualism identified by Plumwood (2002).

# Discussion

The key question driving this research has been: does the emergence of new, female farmers engaged in alternative production methods challenge the dualistic hierarchies of man/female and human/nature (Plumwood, 2002) that characterize industrial agriculture in the global north? Interviews with 36 of these farmers across Australia and the Netherlands reveal their exclusion from spaces of industrial agriculture (such as machinery stores, with landholders, the government) and their personal revaluing of the feminine and nature. This was evidenced in the revaluing of land and ecosystems and care for self, family and community. Participants signalled conceptions of the “ecological self” (Plumwood, 2002) in their non-hierarchical relationship to nature and self-care, and the breakdown of the self/other dualism. It supports (Mathews, 2017) support for a change in consciousness, rather than discourse to disrupt dualistic structures. Plumwood (2002) argued that this revaluing of the devalued poles in the binaries of male/female and human/nature were keys to a more ecological future.

While there was some evidence of the farmers in this study revaluing nature and the feminine, there was also evidence of the reassertion of the master model of industrial agriculture that values the masculine over the feminine and humans over nature. Women in both Australia and the Netherlands experienced radical exclusion based on their sex and sustainable and alternative farming methods demonstrates how hegemony is preserved. The participants in this study transgressed gender roles by claiming the farming identity in the public sphere, which is associated with rationality and masculinity rather than the femininity, emotion and daily rhythms of the private sphere (Lloyd, 2002). Plumwood (2002) argued that under the dualistic master model, the master cannot make sense of those that are unassimilated into dualistic structures and cannot conceive of them as instrumentalising moral kin. As women farmers, they were subjected to processes of backgrounding, particularly through denying their femininity, devaluing them and not seeing them (Plumwood, 2002).

The interrelationship and mutual dependence between the male farmer and the farmer’s wife is denied in agriculture and the participants in this study were not recognized as farmers while they were presumed to occupy this identity. As a result, the strategies they drew on depended upon distancing themselves from the identity of the farmer’s wife by engaging with symbols of the male farmers, such as dress and speech. This represented the structural constraints of the participants in our study as subversive agents. In this way, this strategy did not disrupt the demarcation between dualisms of the public/private and the association of the public with masculinity and the private with femininity (see Plumwood, 2002). However, by claiming the farmer identity the link between the farmer and the male body was disrupted (see also Keller, 2014; Wright & Annes, 2020).

The participants in this study engaged in alternative agriculture, primarily in response to the environmental and social degradation of industrial agriculture (Author, 2019; Author, 2021). In doing so, they are engaging in an “active, deliberate and reflective positioning of themselves with nature against a destructive and dualizing form of culture” (Plumwood, 2002, p. 39). As women farmers engaged in alternative production methods, they are delegitimized and dismissed by the hegemony of industrial agriculture. This reflects Ruether’s (2001) argument that reason is shaped by masculinity, to the exclusion of other types of knowledge. Plumwood (2002) predicted in cases where one group makes a greater claim to reason, the challenging group will be constructed as subordinate to the dominate group’s master identity. The sustainable, alternative agriculture movement represents a rejection of the environmental practices of hegemony of industrial agriculture and, in times of identity threat such as this, it is likely that industrial farmers would engage in boundary protection, such as excluding those who challenge the dominant knowledge base (Guerrier, 2006). This was evident in participants’ being derided as hobbyists or ‘hippies’ due to their alternative, environment-centred farming methods. The findings of this study show that as sustainable and alternative farming gains legitimacy as a method to mitigate climate change, sites of industrial agriculture have reconstructed it as unscientific, irrational and feminine in order to preserve its hegemonic status (see also Mathews, 2017). That participants experienced radical exclusion on the basis of their environmentally-centred production methods, that they were new to agriculture and female reflects supports the work of Quinby (1990, p. 123) who argued that power is constantly being reproduced “multiplicity of force relations”.

# Conclusion

Drawing on Plumwood’s (2002) work this study revealed a number of barriers to undoing the dominance of industrial agriculture in the Global North. This theory allowed for an understanding of gender and agriculture as mutually constitutive. It did so through a study of the interaction of new, women farmers engaged in alternative food production methods in Australia and the Netherlands with sites of industrial agriculture. This includes the continued backgrounding of the feminine, radical exclusion of women and nature from the master model. Despite these constraints, the participants did not internalize the inferiority of nature and the feminine, weakening the impact of the master model that privileges male over female and human over nature.

Moving towards sustainable agriculture is a crucial part of the global response to the contemporary environmental crisis (OECD Meeting of Agricultural Ministers, 2016). To more fully understand how this may be achieved further research is needed into how male alternative, sustainable farmers navigate their gender identities in sites of industrial agriculture. This would help to overcome issues of conflating gender struggles with women (Nightingale 2006) and help us to understand the role of masculinity in both industrial and alternative agriculture and better identify barriers to a more ecological future. Further research is also needed into how queer farmers and farmers of a diversity of genders navigate their gender identities. This would help overcome issues of conflating gender struggle with women, and challenge the binary gender roles rooted in the patriarchy and contribute to work by scholars such as Leslie (2017) in developing queer theory in relation to agriculture. Finally, a greater understanding of how colonialism and patriarchy reproduce and constitute power dynamics in agriculture is needed. Key to this project would be applying and understanding Indigenous knowledges that challenge Western dualistic thinking (Arneil, 1999).

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Table 1: Australian participants

|  |  |  |
| --- | --- | --- |
| **Participant pseudonym** | **Business type** | **Location** |
| Karen | Vegetable and herb production | Victoria  |
| Olivia | Vegetable production | New South Wales |
| Mary | Garlic production | New South Wales |
| Bonnie | Dairy goats and cheese | Victoria |
| Alissa | Beef production | Victoria |
| Jody | Fruit production | Queensland |
| Serena | Vegetable and herb production, education | New South Wales |
| Nicole | Duck egg & vegetable production, farm tourism | Victoria |
| Marian | Poultry production | New South Wales |
| Gabi | Pork production | New South Wales |
| Renee | Vegetable production | New South Wales |
| Helena | Lamb and vegetable production, agro forestry | New South Wales |
| Barbara | Vegetable and herb production | Victoria |
| Christina | Maggot farming, organic waste management | Australian Capital Territory |
| Amity | Vegetable production | New South Wales |
| Georgia | Fruit production | Queensland and the Northern Territory |
| Veronica | Egg and beef production | Victoria |

Table 2: Dutch participants

|  |  |  |
| --- | --- | --- |
| **Name** | **Description of respondents** | **Location** |
| Joanna | Fruit, vegetable, herb and flower production | Noord-Brabant |
| Iris | Vegetable, herb, fruit production and education | Noord-Brabant |
| Anna | Vegetable, herb and flower production | Noord-Holland |
| Amy | Vegetable, herb, fruit, flower production | Utrecht |
| Lia | Vegetable and flower production | Noord-Holland |
| Lola | Vegetable and flower production | Noord-Holland |
| Myrthe  | Tree, vegetable, herb and flower production | Noord-Brabant |
| Lisanne | Tree, vegetable, herb and flower production | Noord-Brabant |
| Rosa | Vegetable, herb and flower production | Zuid-Holland |
| Grace | Vegetable, herb and flower production | Overijssel |
| Katie  | Vegetable and food forest production | Gelderland |
| Mara | Vegetable and food forest production | Gelderland |
| Marion | Vegetable and herb production | Overijssel |
| Anneke | Vegetable, fruit and herb production, education | Utrecht |
| Heather | Vegetable, fruit and herb production, education  | Gelderland |
| Violet | Vegetable, fruit and herb production, education  | Gelderland |
| Lieke | Vegetable production | Gelderland |
| Maartje | Food forest, herb and flower production, education | Noord-Holland |
| Jaqueline | Vegetable and herb production | Gelderland  |