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Keywords: Ecofeminism; Scientific Memoir; Lab Girl; Ethics of Care; Environmental Humanities; Plant Agency; Anthropocentrism

Author:

Hina Saeed: (Corresponding Author)

M.phil English Literature, Qurtuba University of Science & Information Technology, D.I. Khan, KP, Pakistan.
(Email: hinasaeed725@gmail.com)

Irfan Ali Shah: Assistant Professor, Department of English, Qurtuba University Peshawar, Pakistan.

Moazma Tehseen: BS Graduate, Department of English Faculty of Language & Literature, International Islamic University, Islamabad, Pakistan.

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Rooted in Care: An Ecofeminist Reading of Gender, Science, and Nature in Hope Jahren's Lab Girl



Hina Saeed (Corresponding Author)¹ Irfan Ali Shah² Moazma Tehseen³

¹ M.phil English Literature, Qurtuba University of Science & Information Technology, D.I. Khan, KP, Pakistan.
(Email: hinasaeed725@gmail.com)

² Assistant Professor, Department of English, Qurtuba University Peshawar, Pakistan.

³ BS Graduate, Department of English Faculty of Language & Literature, International Islamic University, Islamabad, Pakistan.

Abstract

Life writing is a place where the intersection between gender, science and nature can be explored in the context of lived experiences, and this is the theme explored by ecofeminist criticism and environmental humanities, but scientific memoirs have not yet been studied in this way. In response to this, this article will examine Hope Jahren's *Lab Girl* (2016) from an ecofeminist perspective. The study examines how Jahren depicts nature as an ethical partner, science as an act of care and plants as active agents through the lens of qualitative text analysis and the theories of Karen Warren, a critique of human–nature dualism and Carolyn Merchant on the nature of gendered scientific objectivity. It is concluded that *Lab Girl* breaks with the traditional, patriarchal, scientific perspective and is a legacy to the ecofeminist scholarship by offering a scientific memoir of ecological care and interconnectedness.

Keywords: *Ecofeminism; Scientific Memoir; Lab Girl; Ethics of Care; Environmental Humanities; Plant Agency; Anthropocentrism*

Introduction

These twenty-first-century ecological crises have reshaped the intellectual landscape of literary studies, leading scholars to rethink the ways in which literature interacts with the more-than-human in a complex way. The challenges of climate change, biodiversity loss, environmental degradation, and unsustainable natural resource exploitation have shown that ecological issues are not only scientific and political issues, but also cultural and ethical issues that need to be considered in the humanities. The development of the Environmental Humanities has thus broadened literary studies from the study of literary representation to the study of the influence of literary narratives on ecologic awareness, environmental responsibility and sustainable forms of living. This interdisciplinary field focuses on how humans and non-human beings are interdependent, and how literature can be used to develop ethical responses to current environmental crises (Rose et al., 2012).

Ecofeminism is one of the most powerful critical lenses for exploring the ideology that has structured and permitted environmental degradation and the imbalances of domination. Ecofeminism has grown from a recognition in the 1970s that there are similarities between the oppression of women and the exploitation of nature into a more complex philosophical analysis of anthropocentrism, dualistic thinking, and ecological injustice. Some scholars have claimed that the western philosophical tradition has historically favored hierarchical binaries such as humans vs. nature, reason vs. emotion, and culture vs. nature, which continue to support an exploitative attitude toward nature (Val Plumwood 1993; Karen Warren 2000). The current ecofeminist critique, therefore, calls for a "care ethics" and a "reciprocal ethics" that is based on the ecological interdependence and the intrinsic value and agency of all living things. Such a view has drastically transformed literary criticism, prompting scholars to consider how primary anthropocentric narratives are challenged by literary texts and how they can envision alternative ecological relationships based on cohabitation and living in harmony.



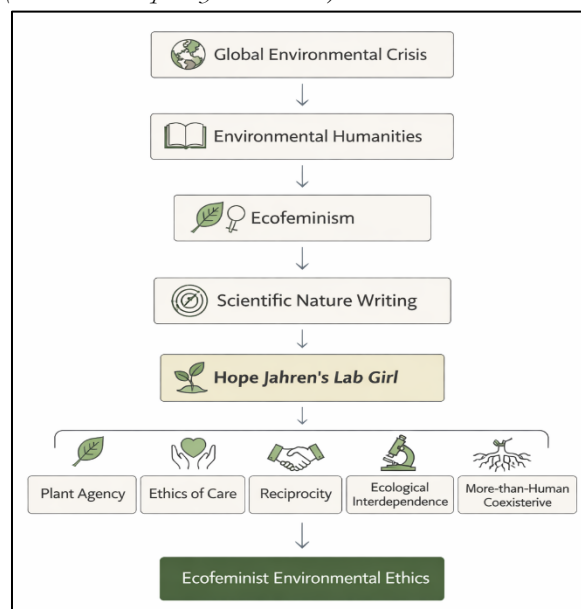
As a result of these theoretical developments, there has been a growing academic interest in literary genres that combine scientific knowledge and environmental imagination. Scientific memoir is one of these, and it stands alone in its emphasis on the individual's experience over empirical observations. Scientific memoir differs from the traditional scientific discourse that tends to emphasize objectivity and emotional distance from the object of study, by showing that ecological knowledge can be generated through prolonged observation, feeling, and moral commitment to the living world. In the modern period, environmental writing is not just about recording environmental change, but also about creating the reader's environmental imagination by inspiring more responsible and relational thinking of ecological phenomena (Buell 2009). Scientific memoir, then, is a peculiar literary form, where the scientific work is intertwined with the questions of ethical, caring, environmental consciousness.

This merging of science, self, and environmental narrative is a hallmark of Hope Jahren's *Lab Girl* (2016). While it is well known as a work of scientific tenacity and individual strength, it also contains a deep ecological vision that has not been studied as extensively as other parts of the book. In this memoir, Jahren's use of the word "plants" deifies them as living things rather than mere specimens, and their ability to survive, adapt, and thrive provides a powerful metaphor for the ethics of living together. Botanical observation is not just a scientific pursuit, but a way of being attuned, humble, and responsive to the more-than-human world. *Lab Girl* is an ethically charged conversation about science as an ethical endeavor, not a tool of domination, and an alternative ecological imagination that invites respect for the agency of non-human life to shape scientific imagination.

Although there has been some scholarship written about *Lab Girl*, the scholarship has tended to focus on the memoir through the lenses of feminist identity, autobiographical writing, science communication, and women's experiences in a scientific institution. Although these methods have yielded rich insights into Jahren's life and work, relatively little focus has been given to the memoir's reconstruction of environmental ethics from an ecofeminist point of view. More specifically, there are only a few studies that have focused on the narrative's implications for the ethical nature of scientific observation, specifically as a caring, reciprocating, interdependent, and plant-aware relationship. The present article suggests that *Lab Girl* can be understood as an ecofeminist ethics of nature that brings about a shift from an ethos of control to a relational ethos of responsibility in scientific inquiry. In an ecofeminist approach, grounded in environmental ethics, this article shows how Jahren's memoir not only deconstructs anthropocentric epistemologies but also presents scientific knowledge as an alternative way to cohabit with the environment, thus adding to the ongoing discussion in the Environmental Humanities and ecofeminist literary criticism.

Figure 1

Conceptual overview of the study. (Source: Developed by the authors).



Literature Review:

Evolution of Ecofeminism

In the 1970s, the oppression of women and exploitation of nature were found to be interrelated and a movement to overcome them emerged, Ecofeminism. The term was coined by Françoise d'Eaubonne (1974), who was saying that patriarchy is responsible for gender inequality and environmental degradation. Ecofeminist scholars in the early days focused on the fact that the same hierarchical structures that subordinate women justify the subordination of the natural world.

Classical ecofeminism posed an assault to the dualistic thinking of the West, including dichotomies such as culture/nature, reason/emotion, and human/non-human. The Scientific Revolution changed the nature from living to a mechanical thing to be exploited by the human beings, thus solidifying anthropocentric attitudes (Merchant, 1980). But classical ecofeminism was then condemned for placing women too close to nature, and thus risking to perpetuate essentialist ideas.

Today the concept of ecofeminism goes beyond this view, and has become more inclusive and intersectional. The ecological crisis is a result of a hierarchy that divides humans from nature and legitimizes their domination, according to Plumwood's (1993). In the same way, Warren (2000) suggests an ethic of care, reciprocity, and ecological responsibility to replace the "logic of domination. Hence, ecofeminism has grown into a holistic perspective of environmental ethics and the depictions of human–nature relations in literature, which is apt for the analysis of Lab Girl.

Ecofeminist Environmental Ethics

Ecofeminist environmental ethics questions anthropocentric views by promoting the fundamental worth of all living things. Ecofeminism is a way of relating to nature that is ethical, caring, reciprocal, and based on ecological justice and interdependence instead of using nature as a resource for human benefit (Warren, 2000). This perspective holds that environmental responsibility is built upon respectful interaction with the more-than-human world, not based on domination or exploitation.

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Ethics of care promotes empathy, attentiveness and responsibility towards ecological communities, and reciprocity emphasises the mutual dependence of humans and nature. These principles are based on the concepts of equality and mutual accountability. In the modern era, ecofeminism also grants plants agency, recognizing plants as active participants in ecological systems as opposed to passive objects. These views encompass environmental ethics, because they shift the focus of moral concern from a human perspective to one that extends to the broader ecological system (Plumwood, 1993).

These ideas form the basis of a theoretical framework for analyzing Lab Girl, and how botanical observation is a form of ethical practice, one of care, humility, and reciprocity with plants. Thus, the memoir is a valuable example of an anthropocentric and ecofeminist environmental ethic.

Scientific Nature Writing

Scientific nature writing has become more than mere objective accounts of the natural world; it is a literary genre that combines science with the ethical, emotional and ecological implications. Increasingly in contemporary environmental literature, the division between science and lived experience is called into question, as it is shown that ecological understanding is produced in relation, in the care, in the situated knowledge. Haraway (1988) maintains that scientific knowledge is never neutral and is created at a certain social and cultural angle. Her notion of situated knowledges disrupts the idea of an objective, detached approach to knowledge and advocates a more relational way of knowledge production. This view has had a profound impact on the field of environmental literary studies, which is now focused more on how scientific stories are read as ethical interactions rather than just scientific description and account.

This is also extended in recent ecofeminist scholarship that calls for emotional intelligence; ecological responsibility; and multiple knowledge systems in scientific practices. Whyte (2018) argues that environmental knowledge needs to engage with Indigenous and community-based knowledge to critique extractive scientific practices, and Fernández-Morales (2023) shows how autobiographical environmental stories engage with lived experience and emotional vulnerability in order to challenge the models of expertise that are grounded in male

experience. Likewise, Gaard (2012) suggests that environmental writing should foster ethical relations of caring, reciprocity, and ecological interdependence. In this literary tradition, *Lab Girl* is a scientific memoir in the form of an ecological narrative in which the act of observing plants is an ethical one, practiced through attentiveness, humility, and respect, not domination.

Previous Studies on Lab Girl

The scholarship on *Lab Girl* has focused on feminist, environmental, and science studies approaches to the memoir. The concept of ecofeminism has been proposed by Miles (2024) as a way of understanding how patriarchal systems are detrimental to women and nature at the same time, as well as the need to shift away from hierarchical relationships towards equal and co-existing relationships in the context of ecological sustainability. Building on this theme, Adams (2023) emphasizes that ecofeminist approaches are underrepresented in environmental governance and that neglecting the gendered dimension of environmental concerns undermines solidarity in combating ecological injustice. While these studies show the general importance of ecofeminist theory, they do not have a particular focus on the way that scientific memoir attempts to represent environmental ethics.

There have been other attempts to link ecofeminism to literary and cultural materials in order to examine the symbolic link between women and nature. While Bagheri (2016) shows how the literary text reflects the parallel subordination of women and nature in patriarchal societies, Figueroa (2023) argues that ecofeminist views foster more equitable environmental futures by drawing in gender, ecology, and sustainability to the current environmental debates. The studies are good theoretical reviews, but *Lab Girl* has been comparatively understudied as a scientific memoir that rethinks botanical science in the terms of care, reciprocity and plant agency. This study thus builds on previous research by exploring Jahren's reconstruction of scientific knowledge in an ecofeminist ethics of environmental responsibility, in the context of environmental humanities and ecofeminist literary criticism.

Literature Based Thematic Map showing the Interconnections among the previous research areas, the identified research gap and the focus of the current study.

Literature-Based Thematic Map Showing the Interconnections Among Previous Research Areas, the Identified Research Gap, and the Focus of the Current Study.

Table 1

Major Trends in Existing Scholarship on Lab Girl

Theme	Representative Studies	Limitation
Ecofeminism in literary and cultural texts	Bagheri (2016); Al Omush (2021); Liu (2018); Dasthagiri & Ankanna (2022); Nath & Dhakal (2022)	Concentrated on fiction and poetry; largely overlooks scientific memoir as a distinct genre for ecofeminist reading.
Ecofeminism and environmental governance/policy	Adams (2023); Figueroa (2023); Agarwal (2001)	Addresses policy and institutional governance broadly, with little engagement with autobiographical or literary narrative.
Embodiment and situated knowledge in science	Haraway (1988); Harding (1992); Neimanis (2017); Clarke (2019)	Develops embodied, situated epistemology largely at a theoretical level, with limited sustained application to a single literary case.
Decolonial and Indigenous feminist critique of science	Whyte (2018); TallBear (2019)	Centers colonial and Indigenous contexts; does not directly address gendered experience within Western institutional laboratory science.

Theme	Representative Studies	Limitation
Restructuring scientific practice through an ethic of care	Warren (2000); Gaard (2012); Puig de la Bellacasa (2011); Eckersley (1993)	Largely philosophical and normative; rarely tested against a sustained, close reading of a scientific memoir.
Lab Girl as a hybrid ecofeminist text (the gap this study addresses)	Limited dedicated scholarship; Lab Girl treated in passing rather than as primary text	Existing work separates Jahren's science from her environmental and gendered narration rather than reading them as integrated.

Reading Lab Girl through an Ecofeminist Lens

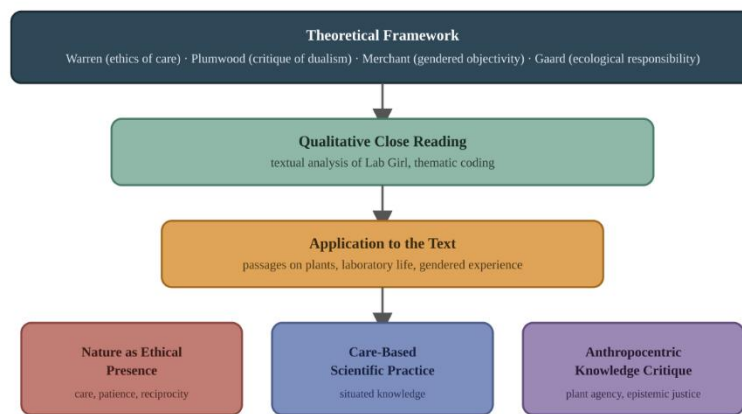
The study in this work uses qualitative textual analysis as its research method, employing the close reading technique as the most appropriate research method for the material that combines personal narrative and scientific reflection, as presented in the book *Lab Girl* by Hope Jahren (2016). Instead of identifying measurable patterns, this approach focuses on the ways in which meaning is built through metaphor, memory, and reported experience, and the inter-dependency of gender, science and nature that permeates the memoir emerges on its own terms. The reading unfolds thematically, with passages relating to Jahren's connection to plants and laboratory life following each other, and the two strands read in juxtaposition, not as two distinct threads.

This interpretive framework is mainly based on three ecofeminist theorists. The reading of Jahren's attentiveness to her plants as an alternative epistemic stance is grounded in Karen Warren's (2000) articulation of an ethics of care, and her critique of the logic of domination that underlies patriarchal thought. Val Plumwood's (1993) analysis of the dualisms that shape Western scientific rationality reason versus emotion, culture versus nature, human versus nonhuman provides the conceptual tools for determining where the memoir resists and/or repeats these dualisms. Carolyn Merchant's (1980) history of the gendering of scientific objectivity places Jahre's personal experience in the broader history of the discipline, during which nature and women both were treated as something to be taken. In cases where applicable, Greta Gaard's (2012) work on ecological responsibility adds to this framework, shifting Jahren's ethic of care towards the wider question of environmental justice.

Read together, these theorists are not read as a commentary over the text but as a lens that is part of the same visual field as Jahren's plants, laboratories, and bodies, which are already filled with the questions that ecofeminism asks. This convergence is explored in the following five interrelated themes, and the nature of the contribution that the memoir makes to ecofeminist literary criticism is explored in the final section.

Figure 2

Analytical Framework Adopted in the Study



Analytical Framework Adopted in the Study

Nature as an Ethical Presence

In all of *Lab Girl*, nature is not just an uninvolved background, but an active ethical voice that calls into the narrator's consciousness and behavior. Jahren's depictions of seeds, trees, and soil are always orientated towards waiting, respecting, and honouring the nonhuman world rather than using it. In all of Jahren's descriptions of seeds, trees, and soil, the nonhuman world is always presented as something to be waited for, respected, and honoured, not utilised. This framing is in keeping with Plumwood's (1993) assertion that the patriarchal way of thinking normalizes a set of binary oppositions (reason/emotion, culture/nature, mind/body) which allow the nonhuman world to be treated as inert matter to be acted upon by humans. Jahren's memoir rejects this inheritance: Her plants are never mere objects of science, they wait, endure, and finally thrive on their own time scales, not those of the laboratory.

The theme of patience and dormancy is repeated throughout this moral register, which is enhanced by the memoir's focus on this virtue. Those seeds that lie dormant for years, even decades, until they germinate, are, in Jahren's words, a "rebuke" to any scheme based on productivity and efficiency. Yet, as is the case with all forms of resistance to systems that discipline women and ecosystems to artificially accelerated schedules of output, resistance to waiting is not passivity, but a reading against ecofeminist critiques of capitalist and patriarchal temporality (Shiva, 1988). Nature is presented by Jahren as a teacher of ethical patience, rather than a resource to be hurried along, by insisting on living with this slowness, instead of telling stories about it.

In addition, the memoir's ethics of nature resonates with a decolonial perspective on nature. Whyte (2018) contends that environmental justice demands attention to the extractive logics that have long dispossessed women and Indigenous peoples of land and knowledge and that marginalized epistemologies are integral to environmental ethics and not an add-on. Though not explicitly engaged, the argument of extractive logic is hinted at by Jahren's insistence on the relationality of plants, rather than their passivity. As she tells it, her scientific practice is a kind of attentiveness, which assumes the object of study as a co-participant in a relationship of mutual claim.

Instead of simply being a critique of the exploitation of women by men, ecofeminism is also a normative vision of a reciprocity, respect, and sustainability between people and the nonhuman world, Miles (2024) writes. *Lab Girl* is anticipating this normative dimension: Jahren's plants are not romanticized nor even metaphorized; they have a stubborn, cyclical autonomy that must be lived with by the narrator and cannot be mastered. In this light, nature in *Lab Girl* is not so much a backdrop for the human self-discovery of the narrator as a moral interlocutor whose needs for care, patience, and reciprocity shape the narrator's moral growth as a scientist and as a woman.

From Observation to Care: Reimagining Scientific Engagement

Lab Girl repeatedly redefines the relationship between the observer and the observed, one that conventional scientific method takes for granted, as an act of care. Jahren's narratives of tending to her plants, waiting for them to germinate, adjusting conditions, attending to small signs of change, seem less like protocols than like acts of relationship, and the memoir treats this attentiveness as continuous with, not a distraction from, rigorous scientific work (Jahren, 2016).

This reframing is similar to Warren's (2000) description of care as an ethical rather than sentimental attitude, which involves responsibility, attentiveness, and a lack of domination, and which shape ethical relationships, whether with a human or a nonhuman. This ethic is performed in Jahren's lab practice in a way that is not explicitly philosophically formulated: Jahren's patience with slowly sprouting seeds, and her lack of willingness to use plants as disposable material model is exactly an anti-dominative attentiveness, which Warren theorizes.

The memoir thus also resonates with Haraway's (1988) critique of the view from nowhere, that scientific objectivity is not a neutral, disembodied position but is itself a situated, embodied practice. Jahren does not hide away the fatigue, financial insecurity and emotional stress of her research; instead she tells her own story as a woman working in a male-dominated discipline. This is the kind of situated knowledge that Haraway is calling for: a responsible science that admits itself to the situation, not that which pretends to be neutral.

In TallBear's (2019) argument, scientific knowledge should shift away from models that dichotomize researcher and researched, towards models that are based on reciprocity and responsibility. Even when Jahren does not explicitly reference Indigenous frameworks, her practice of thinking of her plants as companions and

collaborators is doing just this kind of relational science. Together, Warren, Haraway, and TallBear propose that Lab Girl is a narrative, not exposition, of an argument that care and rigor do not contradict each other, but rather are reinforcing.

Ecological Reciprocity and Plant Agency

One of the most interesting features of the memoir is its attempt to give plants an agency that disrupts the objecthood that nature usually has in scientific texts. For example, Jahren tells the story of a coconut seed that can travel across an ocean before taking root on a different shore, thus making the plant an active agent in its own dispersal and survival, not a passive agent being carried away by external forces (Jahren, 2016). This is not just anthropomorphizing, but also a modelling of a change from domination to reciprocity in the human-nature relationship, as called for by ecofeminists (Miles, 2024).

In the historical argument presented in his book, *The Scientific Revolution Changed Everything* (1980), Merchant argues that the scientific revolution substituted a mechanistic, inert view of nature for one that could be encountered, where nature was made available for control. In contrast to mechanistic science, which views the plant world as a source of raw materials, everything Lab Girl says about plants has a temporal logic, resilience, and ability to surprise the observer; seeds are entities that know how to wait, which gives interiority and volition to a form of life that is typically described solely in terms of biochemical process.

The use of plant imagery to represent resilience and survival is not exclusive to Jahren; Al Omush (2021) notes that in ecofeminist literature plants are shown to be symbols of endurance, hope and continuity, and that plants are often used as a metaphor for women's experiences of marginalization and eventual success. A similar pattern can be seen in Bagheri's (2016) interpretation of Iranian women's poetry, where seeds and plants are used as a metaphor for the slow accumulation of strength, despite the oppression. Jahren's memoir is part of this symbolic economy, too, and the patience and adaptability of the plant kingdom in his account is an implicit commentary on the role of women in the institutions of science.

The memoir's emphasis on slow, reciprocal, non-linear plant growth can also be read as a subtle rejection of the productivist values, as Figueroa (2023) calls for an unsettling of market-driven, extraction focused logics of growth. Plants are not made to grow, they grow according to their own conditions, and the memoir invites its readers, implicitly, to be patient and respectful of the women who grow like plants, on a timeline not set by patriarchy.

Challenging Anthropocentric Knowledge

Lab Girl is also a covert criticism of anthropocentric assumptions in the prevailing models of scientific knowledge production, in which human reason is privileged as the only proper source of knowledge, and the nonhuman world is there to be measured. This hierarchy is repeatedly interrupted by Jahren's narration, as she is suggesting that her plants know, too, rather than only the human observer knowing.

TallBear (2019) suggests that the production of knowledge has been historically organized by a hierarchy that gives more legitimacy to some knowers and some evidence, while neglecting or marginalizing others, which is connected to colonial and patriarchal norms of legitimacy. This same hierarchy is reflected in Jahren's personal experience: she remembers as a child never having seen a living female scientist, and being forced to deal with her gender every day in the workplace. On this interpretation, her ability to succeed as a scientist depended not only on technical proficiency, but also on her constant work to negotiate institutional environments that are typically male.

Adams (2023) takes this critique up a notch: he says that the technocratic, top-down approach to decision-making more broadly systematically excludes voices that are not in line with the narrow definition of expertise that is based on standardised, quantifiable measures. Agarwal (2001) says something similar about participatory environmental knowledge processes, which acknowledge local, embodied knowledge that emerges from long-term connections with land and living beings. This participatory ideal can be read as an implicit enactment in Jahren's collaborative and attentive relationship with her research partner and with the plants she studies, a relationship that is valued as lived engagement rather than detached measurement.

All of this criticism is rooted in Haraway's (1988) emphasis that all knowledge is situated, not neutral, and that the so-called "view from nowhere" which anthropocentric science purports to have is actually a view from

a particular, historically male perspective. In foregrounding her own embodied status, as one who exists in the realm of financial precarity and institutional exclusion, Jahren models an alternative epistemology, one that would remove the knower's position as a contaminant rather than as a condition of the knowledge produced.

Toward an Ecofeminist Environmental Consciousness

Together, the themes outlined above suggest a single overarching argument namely that *Lab Girl* restores 'environmental consciousness' by challenging the binarisms (reason versus emotion, human versus non-human, objectivity versus care) that ecofeminist theory considers to be two of the common threads of gender oppression and environmental degradation (Plumwood, 1993; Warren, 2000). Jahren's memoir does not make a theoretical argument for this thesis; it makes a theoretical argument, and it is a theoretical argument that remains at the level of narrative and accumulates in the texture of her attention, given to plants, over a lifetime.

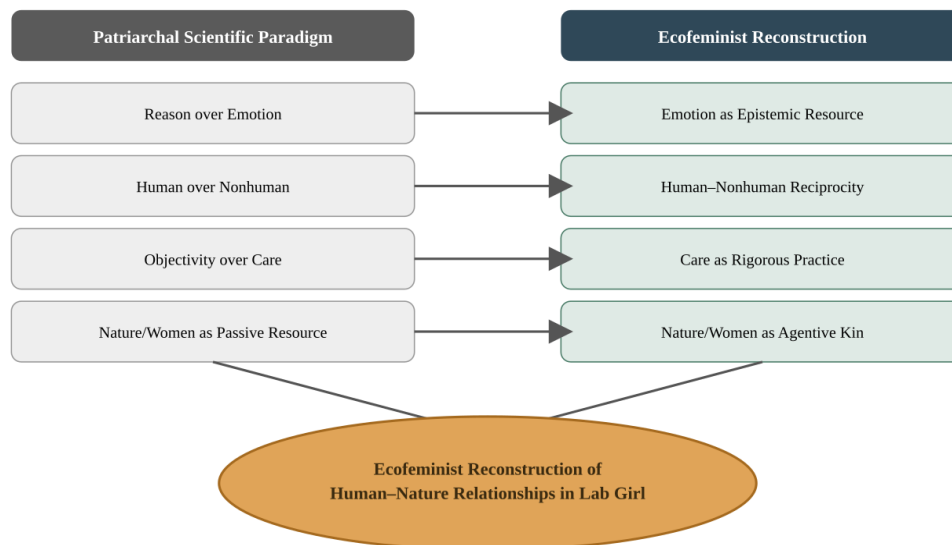
The convergence is important because it doesn't allow for a reading of *Lab Girl* as just a personal story of survival in a tough job. Rather, the memoir exemplifies d'Eaubonne's (2022) original understanding of the structural logic of the domination of women and nature, and argues that neither can be fully understood without the other. Jahren's story is not a programmatic statement, but a personal one: as her exclusion from the norms of her discipline increases, so does her sense of connection with her plants, and her ecological sensibility and her feminist consciousness are, in the text, co-constitutive rather than accidentally paired.

The synthesis of care, patience, reciprocity and situated knowledge in the memoir also points to a more general normativity, one in which the scientific practice itself can be reimagined on more relational lines. *Lab Girl* is a lived proof of what an alternative to the mechanistic science that predates Merchant (1980) and demands an accountable, situated science, as called for by Haraway (1988), might look like: a science that values emotional attentiveness as an epistemic asset, not a professional burden; a science that finds in the patience of plants a model for its ethical behavior. The importance of this goes beyond the specific case; the shift to an ethic of care for the nonhuman world is not just an orientation of the individual, it's a prerequisite for more just and sustainable relationships with the environment as a whole (Gaard, 2012, 2015).

In this respect, *Lab Girl* can be interpreted as building an ecofeminist environmental awareness, a consciousness that is oriented towards an ecology of reciprocity and gender equality as one unfinished project. Like the trees and seeds and coconuts in the memoir, whose agency, dignity, and temporal logic are inescapable, so too is the insistence that women in science are entitled to the same recognition and the same patience with which Jahren treats trees, seeds, and coconuts.

Figure 3

Ecofeminist Reconstruction of Human–Nature Relationships in Lab Girl (Source: Generated by author)



Synthesis: *Lab Girl* reconfigures each patriarchal dualism as a relation of reciprocity and care

Discussion

The above reading places *Lab Girl* in and expands upon a few strands of ecofeminist theory. While Warren (2000) posits an ethics of care as a corrective to the logic of domination that lies at the heart of western moral philosophy, Jahren's memoir provides what theory alone can't: a sustained, first-person account of what care-based scientific practice looks like when it's lived, not argued. It is a significant contribution, since the philosophy of ecofeminism has been charged by both its critics and some of its own supporters with failing to be sufficiently concrete in relation to the material circumstances it addresses: a literary memoir like *Lab Girl* helps to bridge some of this gap by making the ethics of caring concrete through the actual texture of working life in a lab.

The connection between the memoir and Plumwood's (1993) critique of dualism is not so simple as being an agreement. Jahren does not completely reject the scientific verisimilitude and technical mastery which Plumwood links to the rationality of the male, rather she balances the two and does not resolve the tension between them into an alternative paradigm. It therefore seems that the memoir's importance for ecofeminist criticism is not so much in providing a complete alternative epistemology as it is in showing that what Plumwood calls the dualisms are not as solid in practice as they are in theory: Jahren's science is exacting and loving, and the memoir does not look on this relationship as strange or paradoxical but as normal.

Jahren's memoir can be read as a partial reversal, played out from the inside of the scientific discipline that Merchant criticizes, in contrast to Merchant's (1980) historical account of the separation of nature from the feminine and the replacement of nature with mechanistic matter. Jahren does not turn her back on institutional science; she is a working scientist throughout the memoir. This is an internal critique and, in some ways, makes the ecofeminist implications of *Lab Girl* more palatable to readers in the sciences, while also avoiding the structural elements of the discipline (how it's funded, how it's organised, etc.).

It is perhaps not surprising that Jahren's love of plants is not only personal but also material, as Gaard (2012, 2015) highlighted the ecological and material aspects of care, arguing that care ethics should not be limited to the human context, but also include a broader concern for the environment. As she reads through Gaard, Jahren's sensitivity to her subjects becomes palpable, as a microcosm of an even larger moral position on the nonhuman world, with implications far deeper than her laboratory.

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All of these comparisons point to the unique role *Lab Girl* plays in the field of ecofeminist literary criticism, its inability to separate the personal from the theoretical, the memoir from the theoretical statements of ecofeminism. The weight of the memoir is in its implicit assertion of the evidence of lived experience, in the way that Warren, Plumwood and Merchant make their case in more discursive terms.

Conclusion

In this article, I have read Hope Jahren's *Lab Girl* through an ecofeminist lens, examining the ways in which the memoir frames nature as an ethical presence, re-imagines scientific observation as an act of care, ascribes agency and reciprocity to plant life, and ascribes anthropocentric assumptions to dominant scientific models of knowledge. In all of these themes, the memoir comes together around one central idea: that the marginalization of women in science and the objectification of the nonhuman world are symptoms of the same logic and that the two are inextricably interdependent.

What it adds to ecofeminist criticism is to show how a contemporary scientific memoir can be an ecological narrative, with an ethics of care and relationality, and how this can be translated into the lived texture of laboratory practice, and how the theory developed by Warren (2000), Plumwood (1993) and Merchant (1980) can be translated into the lived texture of laboratory practice. While much ecofeminist literary scholarship has been devoted to fiction and poetry, this reading proposes that life writing by working scientists provides a unique and under-exploited tool for ecofeminist analysis: a tool in which the conflict between institutional science and ecological sensibility is not represented from a critical distance, but is negotiated from within.

This reading is not just about literary interpretation. But if, as *Lab Girl* implies, care and scientific rigor are not incompatible, then perhaps the institutional work of making science more receptive to women should also heed to the relational and affective aspects of scientific work that are often ignored.

This analysis could be continued in a comparative way, considering the other contemporary scientific memoirs by women who attempt to deal with the same dilemma between institutional objectivity and ecological or relational modes of knowing. Finally, further research could examine the intersections of Jahren's mostly individual, laboratory-centric story and other more structurally based ecofeminist issues such as environmental justice and the effects of ecological degradation on those who are already marginalised issues that are hinted at in *Lab Girl*, but not fully explored.

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