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THE FARM AS PLACE IN A CHANGING CLIMATE: CAPTURING WOMEN  
FARMERS' EXPERIENCES IN IDAHO, UNITED STATES  
AND VICTORIA, AUSTRALIA

by

Tagen Towsley Baker

A dissertation submitted in partial fulfillment  
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Environment and Society

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UTAH STATE UNIVERSITY  
Logan, Utah

2019

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## ABSTRACT

The Farm as Place in a Changing Climate: Capturing Women Farmers'

Experiences in Idaho, United States and Victoria, Australia

by

Tagen Towsley Baker

Utah State University, 2019

Major Professor: Dr. Claudia Radel  
Department of Environment and Society

In Australia and the US, women play a vital role in the agricultural sector. However, historically farmwomen's contributions to agriculture as well as their individual knowledge and social resilience to stressors like climate and climate change have been unrecognized and rendered invisible. Drawing on interdisciplinary scholarship from geography and the humanities, this dissertation explores the farm as place in a changing climate, drawing on women farmers' experiences, under three distinct themes: identity, place, and photography. The dissertation research includes three distinct parts. First, incorporating non-fiction writing and photography, I explore my agricultural and religious heritage, as well as familial connections to the landscape of rural Idaho. Second, and in conjunction with the *Invisible Farmer Project*, the largest ever study of Australian women on the land, I analyze women's photovoices, relying primarily on qualitative interview and Facebook data, as well as photographs, to understand women's emotive connections to the farm as place, farmer identities, and roles in the agricultural sector. Analysis of the Facebook posts revealed how women are establishing a new dialog about

what it means to be a woman farmer and how emotion is the foundation for establishing community and connection. Women's posted photovoices allow us to gain new insights into the women farmers' connections to the farm as place as well as their diversified perspectives and identities. Third, using integrative methods, I study women farmers and ranchers in Idaho, United States and Victoria, Australia through an environmental history lens. Examining the hydrological histories of each region, and how the layering of social and ecological factors shapes the farm as place, resilience, and women's work, I study how the identities of the women farmers and the farm as place cannot be separated. In both the second and third parts, I seek to redefine "farmer" by revealing experiences that have been invisible in the traditional agricultural sector. Rural women farmers have diverse identities and experiences, and their contributions to the agricultural sector are significant. They perceive and adapt to climate impacts and they strive for resilience. Emotion and ties to the farm as place are at the center of their identities, resilience, and day-to-day work and shape their adaptation strategies and emotional well-being.

(219 pages)

## PUBLIC ABSTRACT

The Farm as Place in a Changing Climate: Capturing Women Farmers'

Experiences in Idaho, United States and Victoria, Australia

Tagen Towsley Baker

In Australia and the US, women play a vital role in the agricultural sector.

However, historically farmwomen's contributions to agriculture as well as their individual knowledge and social resilience to stressors like climate and climate change have been unrecognized and rendered invisible. Drawing on interdisciplinary scholarship from geography and the humanities, this dissertation explores the farm as place in a changing climate, drawing on women farmers' experiences, under three distinct themes: identity, place, and photography. The dissertation research includes three distinct parts. First, incorporating non-fiction writing and photography, I explore my agricultural and religious heritage, as well as familial connections to the landscape of rural Idaho. Second, and in conjunction with *The Invisible Farmer Project*, the largest ever study of Australian women on the land, I analyze women's photovoices, relying primarily on interview and Facebook data, as well as photographs, to understand women's emotive connections to the farm as place, farmer identities, and roles in the agricultural sector. Analysis of the Facebook posts revealed how women are establishing a new dialog about what it means to be a woman farmer and how emotion is the foundation for establishing community and connection. Women's posted photovoices allow us to gain new insights into the women farmers' connections to the farm as place as well as their diversified perspectives and identities. Third, using integrative methods, I study women farmers and ranchers in Idaho, United States and Victoria, Australia through an environmental history lens.

Examining the history of water in each region, and how the layering of social and environmental factors shapes the farm as place, resilience, and women's work, I study how the identities of the women farmers and the farm as place cannot be separated. In both the second and third parts, I seek to redefine "farmer" by revealing experiences that have been invisible in the traditional agricultural sector. Rural women farmers have diverse identities and experiences, and their contributions to the agricultural sector are significant. They perceive and adapt to climate impacts and they are resilient. Their experiences with the farm as place is at the center of their identities, resilience, day-to-day work, and shapes their adaptation strategies and emotional well-being.

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Tagen Towsley Baker



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## REGIONAL MAPS

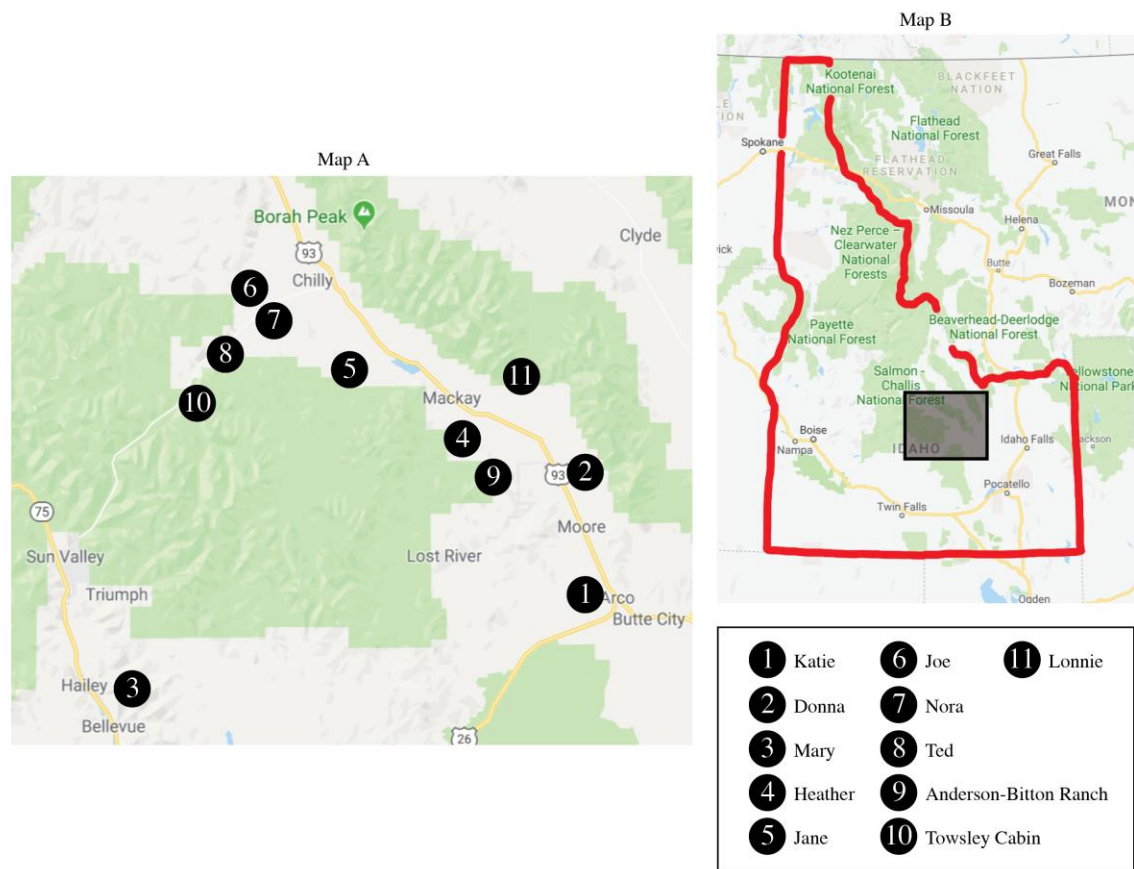


Figure 1. Idaho Study Region.

The region of Idaho where I interviewed women farmers. The numbers indicate the geographic approximate locations of the interviewees (all names are pseudonyms).

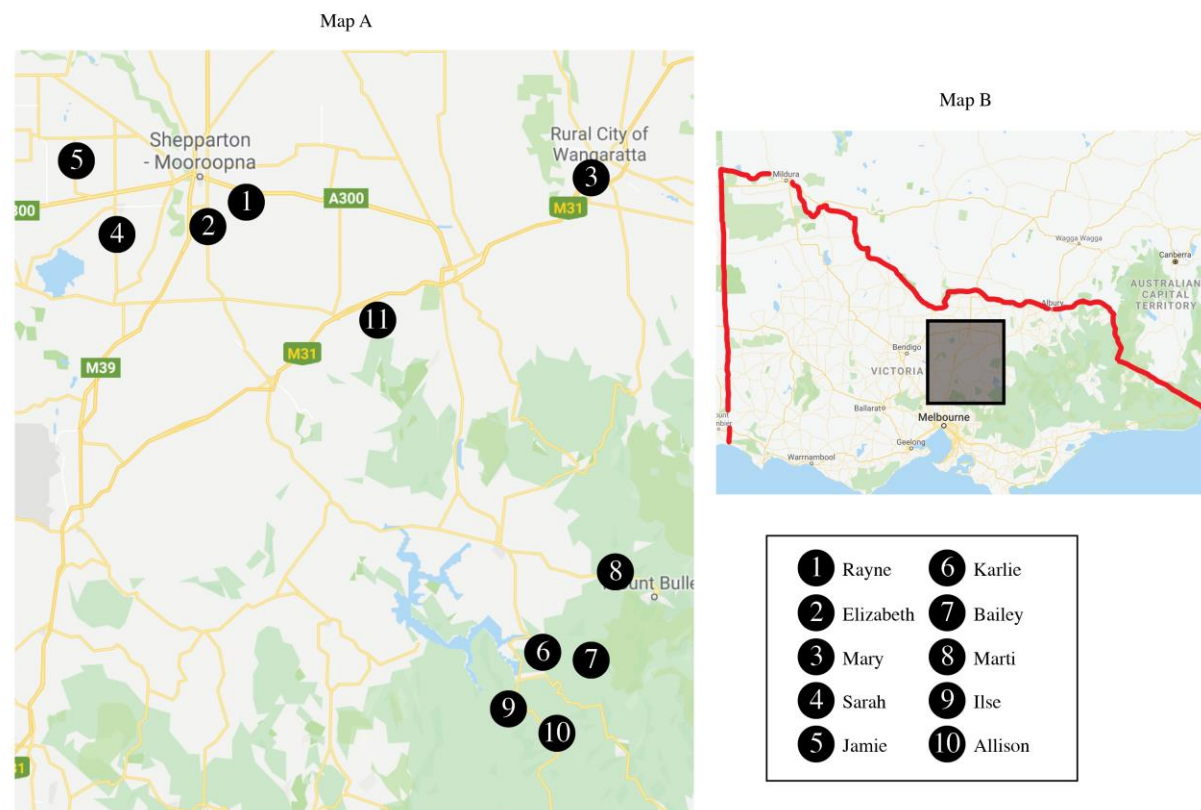


Figure 1. Victoria Study Region.

The regions of Victoria where I interviewed women farmers. The numbers indicate the geographic approximate locations of the interviewees (all names are pseudonyms).

## I. GEOGRAPHY AND THE HUMANITIES

There has been a recent renewal of exchange between geography and the humanities (Daniels, DeLyser, Entrikin & Richardson, 2011; Montello & Sutton, 2013; Driver, 2003; Cresswell, Dixon, Bol & Entrikin, 2015). Broadly defined as deepening our understanding of the roles of space and place, geography is a visual discipline, founded in a terrain of enquiry that promotes a way of seeing geographical experiences (Montello & Sutton, 2013). Geography asks us to consider what we are seeing and how (Driver, 2003). Contemporary geography is often considered to exist at the intersection of social and biophysical sciences. Human geography further delves into contextual ways of knowing, where human understanding, culture, society, and movement are connected to many disciplines and viewpoints from both social sciences and the humanities (Montello & Sutton, 2013).

Like geography, the humanities are broad in history and scope. Humanities can be defined as a way of enquiry that is approached by studying and documenting human life (Blunt, 2009). As a group of academic disciplines, the humanities cover modes of expression such as art, music, history, language, philosophy, literature, cultural studies, and religion (Montello & Sutton, 2013; Hulme, 2013). Denis Cosgrove, a foundational scholar in human geography, noted in the prologue to *Envisioning Landscapes*, “there is no historically consistent definition of the humanities and each of today’s humanities disciplines is the product of continuous evolution” (p. xxii, 2011). As geography re-embraces the humanities, enquiry at their intersection requires interdisciplinary approaches.

Interdisciplinary approaches necessitate the ability to blend methods and

knowledge from different disciplines, and the capacity to re-structure methods and concepts in the context of unfamiliar theories and practice (Tobi & Kampen, 2017). The blending of theory and methodologies from different academic disciplines is a collaborative process that presents new opportunities for reflection.

As Cosgrove further notes, the humanities cover a broad range of scholarly disciplines, but also approach knowledge by interpretive methods (Daniels, DeLyser, Entrikin & Richardson, 2011). Using these types of approaches, one might evaluate a work of art based on artistry and aesthetics. Further approaches to knowledge are in the form of writing and photography. The humanities engage in many interpretive methods of scholarship, which result in outputs such as commentary, monographs, photo essays, and creative nonfiction.

In my first dissertation article (Chapter III), “Idahome,” I engage non-fiction and photography as interpretive methods to explore and recognize how family history, the environment, and identity and place are interdependent. Although I am not using systematic, empirical research approaches found in the traditions of science, this methodology is similar in purpose, to understand reality, directly observe, and seek patterns (Montello & Sutton, 2013). Understanding reality within the framework of family history and recollection is tricky. Reading aloud to my dad my essay on his memories of the physical abuse and trauma he experienced as a young man was an experience I will never forget. Then, after the reading, I had to ask him, “is this accurate?”

Then there is family history. These are the stories I have heard since childhood. These stories are found in symbols all over my parents’ house. Branding irons and



rocking chairs are not just objects of function; they have a history and stand as relics of that history. The rocking chair of my great grandpa Pederson, and the accompanying story of great grandpa being a lifetime bishop, is a story my sister and I verified through genealogical records and interviews. Direct observation comes from personal interviews, watching those I interviewed relate with their surroundings, and photographing them in their environments. One notable interaction was during the tour of our family ranch with my second cousin Marlin who is near 80 years old. As he walked through the door of his childhood bedroom, he noted how as a young man he always had to duck his head to make it through the door (Figure 3). Interpretive methods in this essay were founded in relationship to themes of place, identity, and photography (Chapter II).



Figure 2. Marlin Anderson.  
My second cousin, Marlin Anderson, stands in the doorway of the hay barn on the Bitton property.

For my second dissertation article (Chapter IV), “Museums Victoria’s Invisible Farmer Project: Emotional Geographies, Social Media, and the Photovoices of Women in Agriculture,” I use empirical methodologies of human geography, particularly from the social sciences tradition, to collect and analyze qualitative data. However, there is still a blend of both social sciences and humanities in this article, as photography and a personal essay are included. Turing back to Cosgrove’s observations on geography and the humanities, this is not a monograph or essay, but a social science research paper, and this paper has a form and author citation system that is more consistent with traditional social science articles.

Approaching knowledge with qualitative methods required inductive reasoning. As I gathered data from the Facebook posts, new concepts and ideas emerged. How people were responding to posts from farmers who lived in the Outback, or bush, brought out new ideas and thematic approaches I had not considered before gathering the data. After I noticed many people identifying with those who posted from the Outback, Museum Curator Liza Dale-Hallet pointed out to me, “up until the 1950’s most Australians had family connections to the bush, but not many [now] venture to the Outback. They tend to face the sea with their backs to the Outback” (Personal communication, March 12, 2019). These new ideas shaped my coding process, and the way I analyzed the photographs, as many of the corresponding images were of women farmers in the Outback. From this process, the themes of identity and place became more evident.

The last dissertation article (Chapter V), “Water Dry,” is a conglomeration of multifaceted methods including ethnographic interviews, documentary photography, and

personal reflection. This article follows in what Cosgrove deems as the “queen of humanities,” history (Daniels, DeLyser, Entrikin & Richardson, 2011). Environmental history approaches knowledge through many observational lenses, providing channels for synthesis or fusion (Culver, 2014). Multiple media of storytelling and recording, such as sets of multi-temporal, aerial photographs and oral histories, which provide powers of environmental observation, are used to blend gaps of time that cannot be answered with traditional scientific methods (Merchant, 2007). The format and style of this article is the most complex in perspective, interpretation of time, and observation of environmental change.

This third article touches on three primary facets of environmental history, how human interaction with the biophysical world has shaped the landscape, technology, and social change; how place is integrated with the cultural practices and histories of the people who reside there; and how landscape has been divided, managed, governed, and altered over time (Fiege, 1999). Sources for this article came in many forms, including a map of all the old farm sites in Chilly, Idaho written on the back of a grocery list.

Place, identity, and photography are major themes across all three articles. Identity and place were themes that emerged and united the three scholarly works, and I briefly reflect on these themes next (Chapter II). Photography is both a theme and means to help blend methods from all disciplines. Photographs were a primary reference, as well as a medium of expression, illustrating land change and the multi-faceted identities of the farmers and their work, and establishing further context to the major themes across all three articles (Chapters III, IV, and V).

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Figure 3. The Water Master.

Left: (1998). Photo taken by rodeo photographer C&B Moore. Right: (1986) at Peck Canyon Ranch in Chilly, Idaho.



Figure 4. Terry the Hippy.

Left: Terry (1969) in Portland, Oregon. Right: Terry with his dog, Caesar, (1970) at the Big Lost River on his property in Chilly, Idaho.

## II. THEMES

When I interviewed the old-time cowboy and water master from Mackay, Idaho for this research project (Figure 4), he told me he had never seen a hippy riding a motorcycle through town until he was in his late teens. This hippy happened to be my dad, and the year was approximately 1970 (Figure 5). As a 37-year-old that grew up in this same area, my mind is baffled by this bit of information. Friends have commented that driving out to Mackay, Idaho is like going to the end of the earth, but this is a small town not that far from civilization. Yes, today you still have to drive two hours if you want to shop at Walmart or go to a movie, but Mackay, Idaho is the place people drive to now, on their motorcycles, for that weekend getaway to a quieter place. What is this place of isolation and escape? This landscape harbors layers of overlapping communities, cultures, and ideals. Place defines us, isolates us, mirrors our complexities, our hopes and disappointments, our knowledge, our opinions of what we see and what we know.

### Place

In the preface of Snyder's (1990) book, *The Practice of the Wild*, he asks us to consider how we establish a sense of place. How do we become grounded in place? He writes, "part of that grounding takes place in communities, which exist whether we know it or not within the 'natural nations' shaped by mountain ranges, river courses, flatlands, and wetlands" (p. ix). Throughout this dissertation project, the geography of place, the hydrology, the layering of watercourses and their subsequent division and management, and the establishment of agricultural communities are all part of these natural nations. In both Idaho and Victoria, settlers who ventured to a new place as part of the establishment of irrigation colonies picked bottomland landscapes as the areas to establish their homes.

The bottomlands were the places where, initially, streams could be easily carried over into ditches to water the fields (Fiege, 1999). However, the streams did not always deliver, and what was once a place of ease would eventually lead to hardship and inevitable disappointment.

Throughout these articles, I consider how landscapes were altered, abandoned, expanded, evolved, and managed throughout decades of capricious climate impacts. Inside this place, farmers, both men and women, established a culture. They learned every aspect of home, or place, as they participated in watching the weather, diverting streams, moving cows, gathering firewood, fishing, gardening, and growing crops (Snyder, 1990). The farmers established a relationship with the land; the trees, rocks, fields, mountains, and streams became their life, their memories, and heritage. At times, they took refuge in place, relying on the positivist ideals of irrigation and the garden myth<sup>1</sup>. At other times, they led with reality, experienced disappointment, and were either forced or motivated to accept change. As Terry Tempest Williams notes, “they accommodated change where, so often, we are immobilized by it” (1991, p.183). The identity of the farmer is change.

## Identity

I had the text at 2 a.m. from a nomadic herder who lives in a bus up in the mountains asking me if I could come interview her at 10 a.m. It had been snowing and raining, and I did not know if my truck could even reach her, but I said yes. Of course.

---

<sup>1</sup> “The irrigated landscape frequently, although not always, objectified a deeply compelling story—the garden myth. It was an ancient tale, as old as Western Civilization. In America, the garden myth became an epic of personal and national regeneration. In this version, the westward-moving pioneers conquered the howling wilderness and transformed it into beautiful, productive fields and farms” (Fiege, 1999, p. 171).

How would I ever get the chance to find this woman again? She cannot even receive text messages half the time, and she does not invite visitors to her cow camp. Her location is isolated; she does not have email or cell phone reception. Her identity is this place.

Knowledge informs the way she moves the cattle from meadow to meadow, how she responds to environmental health, and cooperative management between the rancher and the federal government. As Leopold noted in his (1966) book, *A Sand County Almanac*, environmental health is to “preserve the integrity, stability, and beauty of the biotic community” (p. 224-225). As the land changes, so does her identity.





Figure 5. Lonnie the Nomadic Herder.

In the prologue to her (1991) book, *Refuge*, Terry Tempest Williams describes her own identity as being integrated with the changes in the landscape. As the landscape was devastated by floods and began to recover, she recalls, “I remember the country I come from and how it informs my life” (p.3). The change in the landscape helped her face loss, and gave her the fortitude to persevere through crisis. The life of the nomadic herder is no different. Lonnie<sup>2</sup> claimed stewardship over an at-risk landscape and worked to bring it back to health. Her home is where she hangs her hat, and home happens to be a bus surrounded by a hundred head of cattle and mountain pastures in Mackay, Idaho (Figure 6).

I photographed and interviewed her at the camp home base. We sat outdoors in lawn chairs around a fire. Cast iron cooking pans hung behind us on a corral fence. She wore a fancy, fur-collared, wool, western-style coat covered with muddy dog paw prints (Figure 6). When she walked I could hear the clink of her spurs, but what I photographed were spurs tied with colorful ribbons to mud-caked boots. This woman liked color and paid attention to detail. The photographs showed a farmer who identified with and worked in a harsh landscape. The weather of the day was evident in the mud all over her clothes. I photographed her with the bag she carried with her to collect the sedges<sup>3</sup> in the riparian zones. This bag was handmade by her son-in-law with her family brand on the front. Her identity was integrated into her clothing, her labor, and the landscape. When she described how she became a farmer, the details of her life were integrated within her observations and interpretations of place (Qazimi, 2014).

---

<sup>2</sup> Pseudonyms are used throughout this dissertation to protect the identities of the farmers.

<sup>3</sup> Native grass-like plants, often growing in dense tufts in marshy places.

## Photography

Tim Hall, in his (2009) article “The Camera Never Lies? Photographic Research Methods in Human Geography,” introduces photography as a research method in human geography, but asks the photographer to consider the various dimensions photography can take on as a research methodology. Photography is a research method, but how can it be implemented? In each essay, I implemented photography as a research method with two key approaches, ethnographic (photography) observation as a form of evidence to support narrative, and analysis of imagery to investigate farmers’ social lives, culture, work, emotion, and attachment to place. I worked to establish not just a description but also a visual topic of inquiry. Approaching photography in this way shaped my interactions with the farmers and the way I worked with them as a documentary photographer



Figure 6. Glencliffe Dairy Farm.  
A farmer milks the cows at her dairy near Shepparton, Victoria.

Even though I was in unfamiliar terrain, my interactions with farmers in Australia were in some ways similar to my experiences with farmers in Idaho. The same themes of identity, place, and photography were evident from the beginning of my preliminary research. The week before I left for my first trip to Victoria, a farmer informed me her dairy farm was devastated by the rains and the mud was so deep no one could make it down the lane to her farm (Figure 7). She told me she did not want me to photograph her farm in this condition and that due to the dairy crisis, morale was very low amongst farmers in the area. Her arrangements for me to meet with dairy farmers were proving difficult. I was worried I would not be able to establish the rapport I needed to gain the trust of the farmers.





Figure 7. Jane with the Livestock Trailer.

In his twenty years studying immigrant communities, Steven Gold, a sociologist and photographer, implemented photography in conjunction with participant observation and in-depth interviews. He found, as a researcher, photography led him to establish foundational rapport as he “move[d] out of the air-conditioned offices of restaurants and factories into kitchens, shop floors, and warehouses” (2004, p. 1555). He noted, “the act of making photographs both required and encouraged me to confront individuals and aspects of the social world from which I might have otherwise remained at a distance” (2004, p. 1555). Ethnographic photography not only leads the researcher to become immersed in place, it allows for documentation of specific details that offer a deeply human portrayal of the participant’s life. In my third article, “Water Dry,” I photographed farmers posing in their environments, and working in their environments. One farmer has moved eight times, which included moving cattle. I asked her if I could photograph her in front of their livestock trailer (Figure 8). In big letters on the side of the trailer was the name of her and her husband’s breed of bulls, but it was also full of every household item imaginable. What did the farmer posing in front of this loaded livestock trailer say about her social life, culture, and work?

As a documentary photographer, there is a fine line of photographing the reality of the farmer in the moment and respecting their wishes and their livelihood. The way the landscape of the farm is photographed, and the condition of the animals, cannot be separated from the identity or livelihood of the farmer. In the case of the dairy farmer in Victoria, this was the landscape in that moment. Farmers’ lives are cyclic and defined by the conditions of the day, week, or season.

Utilizing photography as a visual method in qualitative research increased the

significance of the narrative, adding another dimension of expression beyond written words, and establishing important insights into the day-to-day lives of the farmers (Glaw, Inder, Kable, & Hazleton, 2017; Barbour, 2014; Balmer, Griffiths & Dunn, 2015). This dimension of expression was key to integrating all my themes into a cohesive dissertation, and as Hall notes, “[inviting] the audience to both construct meaning of the images themselves and to question their understandings of the [environment] depicted (2009, p. 460).



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### III. IDAHOME

#### Artifacts

“Things do not change; we change.” Henry David Thoreau, *Walden*

Agricultural relics do not change form or function overnight, but they slowly alter and wear away with time—rusting from the snows melting into the pores of a metal scythe, a tractor fender, or the hook of a hay wain. Some view this change not as a negative progression of the farm, the farmer, and the tools that alter the landscape, but a whim of preference and ideals. In *Weeds: a Farm Daughter's Lament* (2013, p. 59), Evelyn Funda, a native Idahoan and farmer's daughter, describes the evolution of the farm as an ideal landscape that was not transformed but “devoured by people who demanded other things of that land,” no longer claiming that place as a farm, but a place that has “a view, privacy, a rural retreat, rustic without roughing it, symbols of an agrarian past”. Artifacts are not just symbols of the past. They are dynamic and evolving pieces of reconciliation. Reconciliation to what? Can one be reconciled to an unseen place, to those who have gone before us? Objects have an appeal like the connection to the landscape that is inexplicable in memory. This can be likened to the attraction to the landscape Jim Burden experienced in Willa Cather's (1949) classic novel of life on the Nebraska prairie, as “he felt the pull of the earth” when he returned to the plains “in that singular light every little tree and shock of wheat, every sunflower stalk” (Cather, p. 238).

The juxtaposition of 11,000 ft. rocky peaks and pastoral patches of farms results in a landscape of varied scales and extremes. A four-hour drive from both Boise, Idaho and Salt Lake City, Utah, many venture to the Lost River Valley to climb Mt. Borah, the tallest mountain in Idaho and crown jewel of the Lost River Range. Beneath the shadows

of the great Lost River Range lie rusted tractors in brown hues and greying, dried-out fence posts strung up in barbed wire. These artifacts recall solitude, hardened in a place where they once functioned in some form with the landscape. Now they sit, taking in the view in all seasons, paying homage to a place of change, an evolving agricultural heritage.

I cannot remember my childhood without thinking of the landscape and what I now recognize as artifacts. Until age seven, I lived in Chilly, Idaho—a rural agricultural community, at approximately 6,000 ft. in elevation, in the valley of Lost River Mountains. My dad started buying land in Chilly when he was a teenager. As a young man, he drove to Idaho from Portland, Oregon for many summers to help with haying season on Grandfather William Bitton's ranch. Adjacent to my dad's property was his great uncle Lewis Bitton's ranch. My dad always loved Idaho and felt drawn to the land and the appeal of home even though Portland was where he was raised. By age 32, my dad moved to Chilly with my mother and started to renovate our homestead cabin, complete with a thatched roof and a pioneer-dug, four-foot well for water. The back porch of the cabin served as a laundry room as well as a bedroom for my parents. To this day, I call the laundry room the back porch. It drives my husband crazy.

My favorite place to play as a child was in the aspen trees behind the bunkhouse. The bunkhouse was an old cabin that once housed hired hands for seasonal farm work. Behind the bunkhouse lay many hidden treasures left in the dirt from my ancestors. I found a cast iron frying pan, nails of various sizes, and a lantern. My siblings and I played cook in the kitchen and made guns out of sticks and boards using the bent nails as triggers. Then there was the tractor graveyard. There were old wagons, a manure

spreader, farm implements of various functions, and our favorite—the bouncing, rusty chair from some kind of plow. I recognized these items as something of worth and function, a part of the history of our home. My ancestors plowed the fields with these rusted farm implements; they hammered those nails into their homes, chicken coops, and outhouses. These relics created the world of my childhood, one of history, discovery, and delight, and they represented my agricultural heritage.

When my mother relocated from the San Francisco Bay area to rural Idaho at the age of 22, she had never lived on a farm, let alone in a homestead cabin. My mother moved to many different locations with her family, and she never settled in one place for long. When she moved to Idaho, she established a new path. She became part of the Towsley-Bitton family, woven into the fabric of the homestead. The cabin was full of pioneer relics, and some of them she was still using, such as the hand pump for water at the kitchen sink. Although she had a difficult time living on a substantial acreage in rural Idaho, in a community of farmers with whom she had nothing in common, my mother found comfort in the artifacts. They were a reminder of her ancestors, the pioneers who settled in another part of the country but also farmed and altered the landscape. For her, artifacts evoked a sense of place and, as she later related to me, provided emotional security in what otherwise was a wild and raw setting where she felt disconnected and alone.



Figure 8. Your Forests--Your Fault--Your Loss.  
James Montgomery Flagg (1935-1943). [Oil on canvas]. Smithsonian American Art Museum, Transfer from U.S.  
Department of Agriculture, Forest Service, 1950. [www.americanart.si.com](http://www.americanart.si.com)

I have one item left from my childhood at the cabin. It is a print of a scary looking man pointing at a forest fire, but the color of the poster is in all shades of light yellows and greens (Figure 9). A frame made of rough-hewn logs encases the print; it is a copy of a famous 1930s painting by James Montgomery Flagg who also painted the familiar cartoon of Uncle Sam demanding young recruits for the U.S. Army (Figure 9).<sup>4</sup> I now have the print hanging to the left of my front door at our farmhouse in California. It says, “Your forests, your fault, your loss.” Even though this print scared me as a child, and is still unsettling as an adult, it is part of my personal landscape. It is one of many sweeping memories. The poster is part of the cabin and the Lost River Valley, a piece of remembrance from my youth, a piece of my homestead.

### Homesteads

“From then on, I was always on my way back.” Georgia O’Keeffe,

*Portrait of an artist: A biography of Georgia O’Keefe*



Figure 9. License Plates.

Nailed to the side of the original Bitton home, Idaho license plates contrast the weathered chinking of the cabin. May 28, 2018.

<sup>4</sup> Flagg, J. M. (1950). *Your Forests--Your Fault--Your Loss*. [Oil on canvas]. Smithsonian American Art Museum. Retrieved from [www.americanart.si.com](http://www.americanart.si.com).

In his late 80s, my cousin Marlin still had the natural reflex to duck in the doorway of his childhood home (Figure 10). The once lived-in cabin was now home to rusted farm implements, various tack, and a few unique furniture items. The original rose carpeting was still visible in his old bedroom, the carpet roses grey and pink, pieced over rustic floorboards covered in mouse droppings.



Figure 10. Cousin Marlin.  
Marlin standing in a bedroom of his childhood home in Leslie, Idaho. May 28, 2018.

Marlin said, “I still remember to duck to this day,” and the doorway of his youth opened memories of cold winters, an alcoholic father, and the demands of farm work for a young boy (Figure 11). He wore his overalls and walked with a wooden stick as he spoke of his home and the farm, which was not just an old structure, but also part of his heritage. “By the time I was ten, my brother and I ran this farm,” Marlin said. “My dad just sat around drunk.” The farm is overlapped memories and function, all contrasted and branded in the walls, the landscape.



Figure 11. The Bitton Branding Iron.

A branding iron hangs in front of an old window on the front porch of the original Bitton home. May 28, 2018.

As Marlin and my sister ventured out to the barns, I could not help but linger on the once covered porch of the cabin. Out of the corner of my eye, I saw a branding iron (Figure 12). I wondered if that was Grandfather Bitton's brand. Later, I saw a wall of brands at the Custer County Historical Society Museum and learned that it was his brand. Branding irons are not just pieces of a past that hang in museums. They are more than bits of memorabilia only noted for historical interest. A Google search shows branding irons as a nice, decorative piece of the Old West found in Pinterest collections. A brand could be hung in an office or on a living room wall, but the branding iron is more than living room décor. The brand signifies a process, a language, and establishes lineage. It has been forged by coal fire; branding is a tradition carried down by blacksmiths over multiple generations and is a niche artistry.<sup>5</sup> The brand, once burned into the hide of livestock, establishes ownership and a symbolic language. This language can only be read

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<sup>5</sup> Coates, T. Interview. December 29, 2017).



by those who work in the brands enforcement division of the state, or those who have worked and learned from the traditions of ranching. The brand becomes a relative—present in form, function, family, and place.



Figure 12. Old Tack.

Horse tack hangs on the wall of the barn across from the horse stalls. The horse barn is one of the outbuildings on the Bitton ranch. May 28, 2018.

In the barn, timeworn tack hung on the walls near the horse stalls (Figure 13). Marlin described the horses, how they would line up near their tack station as if they knew exactly what harness belonged to them. Dusted leather horse collars with a smoky brown hue, whips, and bridals still hung across from the stalls, waiting for the horses to return. This is my grandfather Bitton's legacy. He was an exceptional horseman who never lost a horse race. This tack is what is left of his three ranches, the horses he owned,

and the stories of his life on the ranch. The buckles and the bits paint a picture of years of use, a skillset unique to horsemanship, and an inheritance of that knowledge. These artifacts are his and mine. They are memory, and knowledge, and a love of horses that I cherish.



Figure 13. The Cheese Mold.

An antique cheese mold, filled with broken bottles, sits on the floor of the barn. May 28, 2018.

The rough-hewn boards of the horse stalls had deep cuts from rudimentary saws. Marlin only knew this place as his dad's. I never met Hoot, Marlin's father, yet I saw evidence of his life. Empty beer bottles were littered in every corner and in an open bin that looked like it could be a storage container for beer. Marlin pointed to another metal bin slightly larger than a flowerpot, and asked, "Do you know what that is?" I had no idea. I saw it was full of empty beer bottles (Figure 14). "It was a cheese mold."

A homestead associates "home," or a place of origin, refuge, and affection, with

“stead,” meaning to fill with life. The language denotes a physical and communicative place requiring a relationship with the environment and an emotional attachment. A homestead represents a process, whether it is hope, rediscovery, or abandonment. Regardless of the process that is undertaken, a homestead remains a linguistic amalgamation, reminding us of our affections and disappointments.

The first town established near Barton Flats was Chilly, Idaho. Robert Thalman, a partner in a ranching business, would herd his sheep for summer grazing from northern Utah into Idaho. In 1898, he came to the Lost River Valley and decided to settle there. He met one other family, the Bradshaws, who were the only inhabitants in the area besides the small village of Mackay, which was 20 miles to the south. The settlement of Chilly grew, with more families attracted to the free grazing and homesteading opportunities brought about by the Homestead Act of 1862.<sup>6</sup> By the early 1900s, Chilly was a thriving agricultural community. At this time, there was a schoolhouse, a mercantile company, and a hotel. However, these prosperous times were short lived as the rangeland became overgrazed, cattle prices swiftly deteriorated, and the building of the Mackay Dam lessened water access for irrigation.

As Chilly became a ghost town, a few of the original homes were moved to Mackay. These homes still stand to this day. Not many years back, a family was renovating their home and found copies of the Salt Lake Tribune inside the walls. The newspapers, used as insulation many years ago, were addressed to Byron Coates of

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<sup>6</sup> The Homestead Act of 1862 gave individuals from the United States and other countries around the world the opportunity to claim land. During the homesteading era, thousands of people claimed and settled more than 270 million acres. U.S. Department of the Interior Bureau of Land Management. Retrieved from [www.blm.gov](http://www.blm.gov).

Barton Flats Road.<sup>7</sup> The young couple researched the name Coates and found that Byron's son was still living in a neighboring town just 50 miles away. Byron Coates grew up in Chilly and died of a heart attack in 1984, and so his newspapers outlived him.

A homestead, like the one the newspapers were a piece of, is a place that can take on many roles. Synonymous with the American West, a homestead can be acquired, settled, and cultivated. A homestead becomes a mosaic, a place where one resides—a place of return, of past and present, left and retrieved.

To understand the concept of a homestead is to understand scale. Scale encompasses the biophysical world, memory, timing, relationships, history, and experience. As noted in Snyder's (1990) book, *The Practice of the Wild*, place and scale are interchangeable as "the whole earth is a great tablet holding the multiple overlaid new and ancient traces . . . a mosaic within larger mosaics" (p. 29). Mosaics are assembled with small pieces of many organic and inorganic materials such as wood, metal, and glass, creating a patchwork of complexity and dimensions. Mosaics can form within natural ecosystems with or without human influence.

As my sister and I searched earlier that day for the Bitton homestead, we took a right turn on a rutted dirt road and realized we had missed it. We stared at what looked like a pioneer-built chicken shed that poked up through alfalfa, and we knew this place was not where my cousin resided. Turning back, we looked for the great wooden sign on the fence. We saw it on the right: Anderson. No wonder we missed it. I looked for Bitton. My great grandfather, William Bitton, gave the ranch to his alcoholic son-in-law, Hoot. We saw a white truck parked next to a shell of a house that looked to be half-barn and

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<sup>7</sup> Water Master, interview, (December 29, 2017).

half-cabin, where various wires, license plates, beer bottles, and antlers draped themselves artfully along the exterior of the weathered boards of the home. The license plate on the truck said, “Hoot.” My sister commented, “Maybe cousin Marlin still had some pride in his dad.” I am unsure if a license plate qualifies as a son’s respect and devotion. Marlin began our tour with the patchwork shelter.

Marlin showed us the weather-beaten cow pens and boasted that he built the shelters so tight that the pens kept the severe winter weather at bay, and they never lost a calf. The pens sit empty now but show evidence of the work and the materials necessary to survive the harsh winter. Even with the obvious weathering, the pens appear exceptionally straight, with tight-nailed corners. Although Marlin spoke about the farm through his experiences, I saw impressions of my great grandfather William Bitton everywhere. Great Grandfather was a horseman, and his family legacy hangs on the walls and is built into the sheds. Great Grandfather Bitton’s presence has never left this place. This our family homestead. This is my heritage.

My parents were not the only ones in the early 1980s to move into an old homestead site in rural Idaho. Eight hours north of Chilly, on the other side of the Frank Church-River of No Return Wilderness, a young man named William Gruber moved into a log cabin and wrote a book about it titled *On All Sides of Nowhere: Building a Life in Rural Idaho*. In 2011, while I was completing a Master’s Degree in English Literature, I read the introduction of his book. The Idaho he wrote about was also mine.

Gruber bought 40 acres in Benewah County, Idaho in a place called Alder Creek.

His new home featured a log cabin, a meadow, and “a pasture dotted with huge stumps left from the first time that particular piece of land had ever lost trees to human hands” (2002, p. 5). Gruber saw mosaics of past and present shaped and overlaid in this second-generation homestead. Previously, before the property was a homestead, it was the site of a logging camp. Where the current barn stood, Gruber and his family found “rusty sections of rail and rail spikes . . . the remnants of a small logging railroad” (p. 6). Before he moved to Idaho, Gruber imagined Idaho to be like Thoreau’s Walden Pond. Idaho was to be a place of simplicity and isolation. However, Gruber discovered the opposite—he found community, wisdom, and intelligence. Even though Gruber and his young family moved to Idaho for graduate school, a temporary stay, his 40-acre smallholding became his homestead, his mosaic.

Generations of families originate in mosaics. As the family unit forms and changes with shifts in society, mosaics of heritage are established. Heritage encompasses a family name, status, folklore, traditions, and objects. Even though the structure and societal ideal of family life have changed with each decade, the mosaic of heritage bridges decades, societal norms, and identities. These mosaics are filled with many artifacts passed down from generation to generation, just like the stories that are retold for many years to come.

To understand a homestead and how place has shaped that homestead, we must understand scale and the scope that makes up the layers of human experience. Familial heritage is integrated with homesteads, multi-dimensional and layered with physical and emotional materials—hope, memory, and disappointment. To have heritage, we must understand those who came before us.

## Pioneers

“There are only two or three human stories, and they go on repeating themselves as fiercely as if they had never happened before.” Willa Cather, *O Pioneers!*

Terry - Grandson of William Bitton

*I always knew I wanted to live in the Lost River Valley. During my first visit, I was just a toddler. I opened the gate to the pigpen at Grandfather William Bitton's ranch and let the pigs out. I created quite the stir. Thinking back, I am not sure what I was doing out on a big ranch unattended.*

*One of my first memories of Idaho is sitting out on the front lawn and watching the flood irrigation process, the creek creeping into the lawn, and seeing the big mountains all around. The immensity of mountains felt comforting. Idaho was to me a place of peace. There were always murmurs of good conversation in the background, and no one smoked or drank. Grandfather Bitton's ranch was set apart from my yard at home in Portland, where the landscape was pine green and manicured. In Portland, there was always a faint scent of outlying berry farms. In contrast, the ranch in Idaho was a dried-out and weathered patchwork of garden, weeds, farm implements, and animals. Everything at the ranch was at least 50 years old and simple.*

*Our home in Portland was new and provided 1940s middle class comforts, but it is where I had to live with my father, Jack. Portland brought with it only high tension and ugliness, the same thing over and over. My father, a pharmacist, came home drunk every night. Hopped up on hard liquor mixed with narcotics, he would beat my mom and throw her around. Sometimes he would pass out on the front lawn before he made it in the house. We would drag him in the house, afraid he might freeze to death on our front*

*lawn. Our lives were filled with screaming, hate, drunkenness, and violence.*

*Throughout my childhood, I ended up in Idaho many times over the years. When my mother could not take the anger and abuse any longer, she would load all us kids and the dogs in the car and drive to Idaho. Idaho was a safe place, a place I could run away from him. I could hide there in the safety and security of my extended family, the mountains, and the ranch.*

*I am still working on forgiving my father. Although he was the antithesis of Christian belief, my father was raised a Mormon. My grandmother Towsley made sure he was baptized Mormon, and he always promised my mom he would clean up and go back to church. This is a story I heard over and over; then my mom told that same story to her grandchildren over and over. She said, “when we met, he called me a peach. He promised me he would clean up and go back to church, and we would be married. Well, we got married, but he never went back to the Mormon faith.” My father never went to church, and he cast a shadow of evil over my life. His alcoholic legacy left me with many demons. Alcoholism is a landscape of death. It takes everything good you have been given in life and sucks it dry. I knew from a young age I did not want that life for my children. I wanted them to have Idaho. I wanted them to have a good home.*

Tagen – Daughter of Terry Towsley and Great Granddaughter of William Bitton

In my parents’ living room, there is the most comfortable chair that seems to fit everyone. The handcrafted rocker has dark ebony wood with tiger-striped veins and a deep-seated cushion. This is my great, great grandfather Peterson’s rocking chair. He was my grandmother Towsley’s grandfather on her mom’s side. The story that has been told through generations in my family is that Grandfather Peterson was a lifetime bishop,



charged with the responsibility to watch over individuals in the surrounding community. He was excused from this responsibility after many years of service when he had a stroke. As a token of thanks for his dedication to his calling, the congregation gifted him this rocking chair. My dad says he has many memories of his grandmother sitting in the rocking chair after she had two strokes. Even though half of her body was paralyzed, she sat in that chair and wrote letters to her children. The rocker will always be a piece of the Towsley-Bitton homestead.

When people hear this story, they ask what a bishop is, or they are amazed he agreed to be a bishop for so long. The appointment of a lifetime bishop in the Mormon Church extends back to the formative times of this religion. In Mormon culture, pioneers are revered for their dedication and faith, for sacrificing personal property, wealth, and status to cross the plains from Missouri to the Salt Lake Valley and establish a community of Mormon saints. Terry Tempest Williams describes her own pioneer ancestors in her book, *Refuge*, when she writes, “with faith, they would endure. It was a small sacrifice in the name of religious freedom” (1991, p. 13). You could say they ran away to escape persecution, but it was a very slow escape. They pulled handcarts with their scant belongings or rode in wagons pulled by oxen. The journey took between three to four months, depending on the mode of transportation. Between 1846 and 1868, 70,000 pioneers crossed the plains to Utah.<sup>8</sup>

In contrast to the pioneering years, a modern-day bishop is a man called to tend over a congregation for around five to seven years. This calling from God is unpaid; it is not a position that is sought out, nor is it designated to a man considered more faithful or

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<sup>8</sup> History.lds.org Pioneer Infographic

because of professional preparation. A bishop's appointment is difficult and time consuming. A bishop will spend countless hours helping people. He is responsible for the welfare of those who reside within the boundaries of his church, regardless if they are members of the Mormon Church or not. Although in modern times a bishop is only called for five to seven years, many in the congregation and the community will call him a bishop the rest of his life. The name bishop is a brand of respect and is symbolic of a bishop's role of "father" over the congregation and community.

In Mormon culture, the home is considered equal in sacredness to the temple of God. The home is deemed as the place where Mormons learn to become better people, to live lives with respect, love, and compassion for one another.<sup>9</sup> An often-sung Mormon hymn is, "Home Can Be a Heaven on Earth." In this hymn, the home is described as a place of "happiness and joy," a place of "safety and security," and is likened to heaven as a place "we want to be," and "want to stay." I think of my childhood home as such a place. My heaven on earth was riding horses out to the old Chilly town site before dawn, reading books with my mom on the horsehair couch in the living room of the cabin, and being carried in my father's arms out across the swirling waters of the Big Lost River. I always felt loved by my parents; I never felt unsafe, and that love infused my physical surroundings and memories of place.

In my family, peace in the home meant following the tenants of what is known as the Word of Wisdom. The Word of Wisdom is a Mormon doctrine and law of health found in the Doctrine and Covenants. It states, in the modern-day scripture, "strong drinks are not for the belly, but for the washing of your bodies. And again, tobacco is not

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<sup>9</sup> The Church of Jesus Christ of Latter-day Saints. *The Family: A Proclamation to the World*. Retrieved from lds.org.

for the body, neither for the belly, and is not good for man, but is an herb for bruises and all sick cattle, to be used with judgement and skill” (D&C 98:7-8). I would often hear my dad repeat how much he loved visiting Great Grandfather Bitton’s ranch in Idaho because there was no smoking or drinking. Grandfather Bitton was not a regular churchgoer, but he lived by the tenants of Mormonism and was a gentle soul. When he was angry, the worst curse word he could come up with was, “you dirty hound dog.” My dad recognized from a very young age the contrast between two homes. His homestead was one of division. His family heritage could not be separate from the Mormon faith or from the legacy of alcoholism.

As a child, I did not understand why the environment with no smoking or drinking mattered to my dad or why the Word of Wisdom was something he chose to live his life by. However, I witnessed the effects of Post-Traumatic Stress Disorder (PTSD) brought about by years of exposure to domestic violence, as my dad was quick to anger and did not have good coping mechanisms for stressful situations. I did not comprehend that his anger and fear came from Portland, from Grandpa Jack. To me, Grandpa Jack was a mild mannered, old smoker who liked to eat at Winchell’s doughnut shop early in the morning. If my siblings and I were lucky, Grandpa Jack would take us out for a doughnut while we were there visiting.

When my family would visit my Grandpa Jack’s house in Portland, the smoking and drinking were just part of the landscape. Everything smelled of coffee, cigarettes, and the damp Portland air. By the time my siblings and I were visiting Portland, the violence appeared to have subsided, but the bar in the basement was still fully stocked. The bar, complete with an antique cash register and various shot glasses, was a childhood favorite.

I loved the green hues of the bottles, holding the shot glasses, and playing “bar.”

As an adult, I have come to understand how deep the Word of Wisdom is a part of my family heritage. Living the Word of Wisdom is more than attending church on Sundays; it is a way of life. Everyone in my family has the same Mormon background, and we all have pioneer heritage, yet we are the pioneers of our own lives. We are making choices based on what we have learned from those who came before us and our individual circumstances. Until I visited the Bitton homestead, I did not realize how alcoholism not only directly affected my immediate family, but also my cousins and extended family. My dad saw the drunkenness in his home in Portland and later saw it with his uncle Hoot when he took over Grandfather William’s ranch. Somehow, the later generations of sons did not to follow their own father’s vices, but instead followed Great Grandfather William Bitton’s legacy. The juxtaposition of legacies was everywhere on the ranch. The beer bottles, the love of horses, the family brand was all in one mosaic. I could not reconcile these items into their own categories of memory or family history. They were remnants of a living place like the fence posts driven into the invisible boundary lines of the ranch, or the badly eroded riverbanks from high flood years of the Big Lost. A place of peace and a legacy of alcoholism were driven into the landscape, branding this place, the soul.

### Branded

The mountains of the Lost River Valley are harsh. The tree line is sparse along the jutting peaks that pierce the sky. Collages of color from Challis volcanic rocks, the largest Eocene volcanic rock field in the Pacific Northwest and Canada, pepper the

mountaintops.<sup>10</sup> For miles, there is a dark shadow-like scar, jagged in contrast to rolling sagebrush-filled foothills. The shadow is a scarp—a fissure in the culture of this valley, branding this place of division and is what is left of the aftermath of the Challis earthquake.

On October 28, 1983, an earthquake struck the valley at 8 a.m. The epicenter of the 7.3 magnitude quake was at the foot of Mt. Borah. It raised Mt. Borah from 12,655 feet to 12,662 feet in just 42 seconds.<sup>11</sup> Before the quake in 1983, four major natural springs flowed near the fault line, which fed two ditches in the Lost River Valley via a pipeline. Right at this spot, the earth dropped 15 feet and the spring pipeline was hanging in the air.<sup>12</sup> The Challis (Borah Peak) earthquake left farmers without water for months. Some farmers never recovered their wells again.

For some, the Lost River Valley is not a place of recovery, but survival. For others, it is a place of quietude. Like the transformation of the valley, shaped by the convergence of the human, nature, and discovery, the valley leaves a brand. The soul and place are entwined “being like a mirror, . . . [that] can hold anything, on any scale” (Snyder, 1990, p. 27). This place shapes identity and transforms the spirit.

Before the shift to federally mandated ear tags on livestock, there were two ways to identify another rancher’s cattle or horses: branding and notching. Cattle brands date back “to 2700 BC, evidenced by ancient Egyptian hieroglyphics. But brands are most famously associated [in the U.S.] with the cowboys and cattle drives of the Old West, when brands were used to identify a cow’s owner, protect cattle from rustlers (cattle

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<sup>10</sup> Stanford, R. F. (n.d.). Geology and Stratigraphy of the Challis Volcanic Group. Retrieved from <https://pubs.usgs.gov/bul/2064/ii/508b2064ii.html>.

<sup>11</sup> Powers, J. L. (2005). *The Mackay I Remember*. Provo: Stevenson’s Genealogy Center Print.

<sup>12</sup> Water Master, interview, December 29, 2017.

thieves)” (Stamp, 2013, p.1).



Figure 14. Coates Family Brand.  
Tom Coates holds his family branding iron at his home in Challis, Idaho. June 11, 2018.

In the American West, branding has a long history associated with cattle rustling, but a brand is also part of the heritage of the rancher and his family. Brands are pictographs of family, place, and culture. When deciding on a brand, there is much to consider. It can have the family initials incorporated into it or a physical trait of a ranch, and just like our birth names, a brand must be registered. The insignia can be handed down through generations. Similar to a family name, children from later generations of a family can continue to use a brand and pass it on (Figure 15). As with anything else on a ranch, a brand has to be practical. The design must be simple and open. This way, when the design is burned into the hide of the cow or horse, the blistering will not blend and blotch.<sup>13</sup> The brand must be clean.

The Challis earthquake changed the landscape, but it also changed the isolated

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<sup>13</sup> Water Master, interview, December 29, 2017.

agricultural community in the Lost River Valley. Where water used to be, it was gone. In other places, the water was pushing through fissures in the rocks, insistent, like change, altering place. The way things once were before the quake no longer existed. Farmers could not rely on water in the way they used to. What was always a source of contention, water shares, became a commodity of survival. There was no room for pettiness; if the farms were to survive, people had to help each other. The earthquake created an evolution in farming and how people saw the land. This is when the change began. Farmers were forced to reconcile their differences because of this trauma.

A brand is a family name. The branding process is long and difficult and is symbolic of struggle, pain, ownership, and livelihood. The name becomes a badge of honor of a family heritage and culture. However, a brand can also cause years of feuds amongst farmers and ranchers fighting over water, grazing rights, and ownership of property. Like the scarp after the 1983 earthquake, change brought division. One clan of homesteaders who later become the household name of ranching in the valley held the traditions of the past. Those that were new to the valley had different perspectives and ideals. Old sayings like, “good fences make bad sheep,”<sup>14</sup> were no longer humorous, but points of lawsuits among landowners and the federal government. Like the aftermath of the earthquake, the landscape and the way of life could not return to the way they were before.

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<sup>14</sup> A saying attributed to the old western range where all livestock were free to roam without being fenced in or blocked by fences on private property.



Figure 15. Bitton Family Brand.  
Terry Towsley holds his grandpa Bitton's branding iron at his (Terry's) home in Mackay, ID. May 28, 2018.

A wall of brands resides inside the Custer County Historical Society Museum. These brands are burned into small wooden squares with the names of the owners hand written above each symbol. When I visited the museum, I saw my own family brands staring back at me from this wall. Clinton Bitton, my great uncle. W.D. Bitton, my great grandfather William Dance Bitton (Figure 16). Where are the branding irons that made those brands? William Bitton's brand sits next to my dad's nightstand. It is a relic of a way of life that shaped our family, but also of an agricultural past that has evolved and found itself staring back at us in museums. Even though the cattle have long been gone, and the ranch sits idle, the brand lives on in a legacy of belonging to those that came before us.

I am one of many brands. Unlike my mother, who did not know her grandparents, I know my great grandfather Bitton. He held me in his arms when I was blessed as a



newborn baby out on the banks of the Big Lost River. Then as a child, I remember his doorknob collection. Although we lived our lives generations apart, we fished the same rivers and rode horses across the same high mountain desert. His landscape, his heritage, and his brand are mine.

### Water Dry

The floor of the Lost River Valley is a sea of sagebrush with occasional patchworks of hay fields, even a bright square of canola. The vegetation alludes to a wellspring of water, providing vibrant color, crops—a life force amidst a harsh and raw environment. This is the Big Lost River. In the spring, the river appears along the highway, revealing itself to travelers passing through and farmers alike. White carcasses of dead trees are singled out in a flooded landscape like sentries to another time, another landscape. Everyone becomes a traveler in this setting, as the river is unpredictable, frightening, powerful, and invigorating.



Figure 16. Driving North US-93.  
The view of the Arco Desert from US-93. June 1, 2018.

By the time the river reaches Arco, Idaho, the landscape begins to change. Looming mountains give way to hilly lava flows and endless sky that leads into an

isolating desert (Figure 17). The Big Lost River sinks into the ground, becoming an invisible companion and life force to sagebrush, wildflowers, jackrabbits, and hawks, a busy but bleak-looking ecosystem. The hydrological journey of the Big Lost River is one of complexity. One hundred and eighteen miles away, towards the southwest in Thousand Springs near Hagerman, Idaho, the Big Lost reappears. This journey takes 200 years, and the water re-emerges clear and pure.

In *Desert Solitaire: A Season in the Wilderness*, Edward Abbey wrote of place as a reminder of “our own journey here on earth,” marvelous, primal, something greater and deeper (1968, p. 37). He viewed the landscape as a place of nostalgia but also understood place as a paradox, “something lost and something still present . . . something buried in our blood and nerves, something beyond and without limit” (p. 167).

The Big Lost River is a reminder that the journey of the soul cannot always be tracked. The river is buried deep but still resurrects itself in the lifeblood of the ecosystem—the farms, the living things, our memories. We see reflections and surfacing of ourselves along the way. We see ourselves in the mountains, the water, the shapes and colors. We become baptized in this place, immersed in memory, landscape, and change. Our souls are filled and renewed.

## Negatives

The lens of a vintage camera is like an eye—the aperture, or iris, fluctuates, allowing light to enter. Much like the human eye, the aperture of a camera lens can capture identity, memory, and an image that can transcend a moment in time. The aperture setting is adjusted manually, as the outside of the lens is shifted to the left or the right. When the aperture is adjusted to the next number in a sequence, light enters the

camera and exposes the film, creating a negative. The aperture must be set to a certain number, or f-stop, to gain light. Like an eye, the aperture is picky, it must be willed to allow the light in. There must be a decision to let the light in. The eye, or aperture, cannot do it alone. Without light, the negative would be rendered invisible.

Without exposing the film to the proper amount of light, depth cannot be achieved, and the negative is useless—over or under exposed, the negative is unable to take form. The negative will never be made into a photograph. The photograph will never carry meaning, and the story won't matter, because the story cannot be revealed.

The human soul is a negative. The human eye is a window to the soul. What we see becomes internalized and results in complex emotions and states of being: love, fear, sadness, anger, and joy. Our negatives define us. We experience trauma, loss, betrayal, and abuse, but that is not all. We experience kindness, friendship, and love. Without darkness in our lives, there would be no contrast for the light. Our souls would lack depth, compassion, and understanding. Our negatives influence our relationships. Negatives become our identities.

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“Oh, shit.” At 70, Grandmother Towsley's Idaho farm girl roots were still showing. I sponged her soft blue-purple skin around the bandage. “I'm sorry, I said. I know it's tender.” I was only 17, and I didn't have a lot of experience with post-surgery care. Grandmother was recovering from breast cancer surgery. Although my grandmother had two grown children that lived nearby, my dad sent me from Idaho to Portland, Oregon to take care of her. I had always known my grandmother as an Idaho girl and a veteran. Now she would take on another identity, a breast cancer survivor.

Grandmother Towsley was a telegrapher in the Navy WAVES (Women Accepted for Volunteer Emergency Service) from 1942 to 1944. During WW II, more than 86,000 Navy WAVES volunteered. Most of the WAVES were assigned to administrative jobs, processing paperwork for top-secret projects such as the D-Day invasion of Normandy, the development of the atomic bomb, and the deciphering of coded messages.<sup>15</sup>

Grandmother worked as a tele typist in the Federal Building in San Francisco, CA. With direct lines to the Pacific Theatre and Wake Island, she directed messages in code from the war front.



Figure 17. Audrey Bitton Towsley in Uniform.  
Audrey posed for a photograph in her Navy WAVES uniform in 1942 (approximate date).

Grandmother's most cherished photo album was from her years as a Navy WAVE (Figure 18). The photo album consisted of pages full of women in dark suit dresses, their

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<sup>15</sup> WAVE Recalls Satisfaction of Wartime Service: Word of Pacific battles came through Audrey Towsley's Teletype. Idaho State Journal. 26 May 2001. Print.

1940's pin curls neatly tucked inside sailboat caps. The WAVES provided her exit from the farm to the big city. First grandmother went to boot camp at Hunter College in the Bronx, then on to San Francisco. Grandmother wanted to leave the farm, because she did not want to follow the example of her older sisters and become married right out of high school. Of the eight children in her family, Grandmother was the only one to serve in the armed forces during the war. Each picture had pen notes on the back or on the bottom where she labeled who was in the photo and where it was taken. Grandmother's familiar script of fine looped t's and delicate cursive I's was very precise. She was always proud of her penmanship.

Grandmother Towsley rarely talked about her life before or after her time in the Navy WAVES. After the war, she married my grandfather, Jack Towsley. Grandmother and grandfather Jack met in college before the war. Among the pictures of the Navy WAVES was a picture of a hand that held a cigarette next to a glass of liquor. The picture was signed, "To Macki." Grandmother said, "He called me a peach." Viewing this photograph now, I cannot fathom how this gesture of the hand with the liquor was given to my grandmother as a symbol of affection. Grandmother suffered through years of a marriage to an unfaithful, abusive alcoholic and drug addict. She was beaten and demeaned. She learned to perfect her makeup routine by hiding the purple and blue bruising around her eyes after many years of violent encounters with Grandfather Jack. Appearances were always important to her. Appearances were all she had left.



Figure 18. Audrey at the Family Farm.  
Audrey leads a horse out in the corral on her family farm. 1938 (approximate date).

Grandmother always wrote me kind notes, doted on my appearance, and often commented on how we were alike in many ways. I never fully understood why until she passed away. This is when I found the other photos of her before her years in the Navy WAVES. In the photos, she wore baggy overalls that were rolled up past her ankles. Her hair was wild and curly, pieces of stray straw stuck to the curls (Figure 19). In many of her pictures, she was with horses. I too, have a deep love for overalls and horses. Grandmother always told me, “We are a lot alike.”



Figure 19. Audrey with Darwin and Smokey.

A photograph of Audrey with her brother Darwin and their friend Smokey. 1938 (approximate date)

I did not know my grandmother as a farmer. However, I have come to learn she knew her way around the farm better than the hired workers did. She drove the tractor, sorted potatoes, and helped put up hay (Figure 20). She was a beautiful woman, and the male farmhands would tease her with taunts like, “Audrey is driving the tractor today. Watch out!” Most of her life, the farm girl was hidden behind layers of makeup, fancy suit dresses, nylons, and perfectly painted fingernails. The only piece of the rural farm girl from Idaho that was left was her swearing.

Grandmother did not talk much about her marriage to my Grandfather. I can only infer what she suffered through the pictures I have seen of her in my dad’s photo album and stories my dad has told me here and there. In one story she tried to leave Jack once, to go back to her parent’s house in Idaho, and grandfather chased after her with a gun. In another story she called her parents, and they did not know how to help her.

In the photos, she has a look in her eyes. Her put-together appearance is a hollow husk—a perfect white suit dress, white heels. This picture of her could be assigned many identities: Middle class. Tasteful. Female. White. However, deeper perceptions can be drawn from her photos, perceptions that become ambiguous. Wife of man with substance abuse problems.

How do you identify someone who is abused? Abuse, like alcoholism, takes everything from a person. Any identity my grandmother once had, was replaced with constant anxiety of being beaten and demeaned, fear of making my grandfather angry, and the unknown of what would happen next. If grandmother Towsley ever identified as a farmer or a farmer's daughter, I never knew it. By the time I got to know my grandmother, her parents and the farm were distant memories. However, at the end of her life, she did mention her cousins. They were long deceased, but she mentioned how much she loved playing with her cousins out on the farm.

Grandmother Towsley died the summer I was engaged to be married. She lived with my parents the last few weeks of her life. A few days before she passed away, I came back home for a visit. My mom said she had not been eating. I went and bought her some Chinese food, her favorite. She sat up in bed and ate three bowls of fried rice. My mom said she would not eat for anyone but me.





Figure 20. Photograph of Audrey's Nephew and Niece.  
 Photograph taken by Audrey Bitton Towsley at the Anderson-Bitton Ranch, approximately 1945.

It has been ten years since my grandmother passed away. My sister and I have enjoyed viewing all her photographs many times over the past ten years. I always find myself drawn to the images of her life on the farm. I want to see this place as she once saw it and know her relationship to the land and people who lived there. She took beautiful photographs of people and of fields of hay and potatoes. There are photos of cherub-like children in puffy snowsuits sitting on horse-drawn sleighs, siblings hugging each other and laughing, horses, hay wagons, and many, many other scenes from life on the farm in Idaho (Figure 21). However, these images are deeper than simply what is found in the farm scenery in the photo albums. These images came from negatives. The light in her life and the relationships that were formed before the many years of darkness during her marriage. Both her life on the farm and her life with my grandfather are pieces of her life that have affected her children and grandchildren. The farm, her time in the military, and her life with my grandfather are all part of what made my grandmother who

she was. Her legacy, in part, defines me.



Figure 21. Hay Harvest at the Bitton Farm.  
Photograph taken by Audrey Bitton at the Anderson-Bitton Farm in 1936.

I already know Audrey the Navy WAVE. Through my dad's stories, I also know the Audrey who suffered through over 40 years in an abusive marriage. Who is Audrey the farmer? In the stories and written genealogy of my family records, she is the *invisible* farmer. However, I have come to know her as a farmer through her photographs (Figure 22). I can see through her eyes the bend of the hay in the Idaho wind during the soft light in the evening on the farm, her adoration for her younger brother, Darwin, and the dusty cow pens they worked in and played in. I see a giant mound of hay in a wagon she helped put up during harvest with the work crews and her cousins. In these photographs, I see myself. I played as a kid in these same places. I helped extended family with farm and ranch work into my early college years. Then, like my grandma, I left rural Idaho for the city and another life.

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#### IV. MUSEUMS VICTORIA'S INVISIBLE FARMER PROJECT: EMOTIONAL GEOGRAPHIES, SOCIAL MEDIA, AND THE PHOTOVOICES OF WOMEN IN AGRICULTURE

##### Introduction

For many decades, gendered roles in agriculture have been a subject of paramount interest to researchers in Australia and abroad (Brandth, 2002; Riley, 2009). The foundational work of Boserup (1970) highlighted the importance of women's labor in the agricultural sector and how women's contributions were missing from economic theory and development of the time (Turner & Fischer-Kowalski, 2010; Radel, 2011). Further research has addressed the identities of farming women, the dominant ideologies that have defined their place in the agricultural sector, and the ways women's contributions to agriculture could become more visible (Sachs, 1996; Alston, 2000; Henningham & Morgan, 2018).

The visibility of women in the agricultural sector in Australia became of interest during the Australian Rural Women's Movement 1980s-1990s (Dale-Hallet & Diffey, 2006). Researchers began leading studies on the roles of Australian women in agriculture, including analysis of agriculture work, health and welfare, leadership, and various aspects of women farmers' lives (Henningham & Morgan, 2018; Alston, 2000). This movement produced a series of positive outcomes for women in agriculture, with annual gatherings, focusing on farm skills courses, grant opportunities, and networking (Henningham & Morgan, 2018). However, there is little documentation of the events, outcomes, and legacies that were established during this movement. The history, and current reality, of the Australian women farmer has been rendered invisible. The unknown identity of the

woman farmer is the product of the historically masculine view of Australian agriculture (Brandth, 1994; Alston, 2000). This is evident in a statement from the 1992 Australian Government report, *The Invisible Farmer: A Summary Report of Australian Farm Women*: “Farming has traditionally been seen as a male domain, while women have been seen as homemakers or in domestic occupations rather than visible or significant contributors to agriculture” (Williams, 1992, p. 3). In this research article, I consider the identities of women farmers, their histories and current realities, as well as their emotional geographies of place. Who are Australian women farmers, and what are their stories?

The purpose of this article is to explore women farmers' narratives as part of Museums Victoria's *Invisible Farmer Project*. The *Invisible Farmer Project* is the largest ever study of Australian women on the land, seeking in part to redefine "farmer" and revealing experiences that have been invisible in the traditionally patriarchal field of agriculture. Women farmers and museum staff construct narratives through photographic imagery and text, as they share images, quotes, and life stories on the official Facebook page of the project. These narratives, constructed with imagery and text, are defined as photovoices. Photovoice is a process that helps facilitate community dialogue (Wang & Burris, 1997).

Using social media analysis, I address the following research questions: Do photovoices, shared through the social media platform of Facebook, convey emotional geographies? Can photovoices map emotional geographies to a specific place and time, enhancing our understanding of the farm as place and the roles of women's work in the agricultural sector? This paper concludes that Australian agricultural emotional

geographies are at the core of women's communication about their farms, families, and place. Women farmers utilize photovoices to express emotional engagement and personal narrative, articulating a tangible and visual connection to place, their daily farm work, and their individual geographies.

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In winter 2016, I travelled to Victoria, Australia to conduct preliminary fieldwork for my PhD research and for Melbourne Museum's *Invisible Farmer Project*, seeking to explore and redefine, in part, public understanding of who is a farmer. The timing of my visit was during the end of an intense winter. Two weeks before my trip, I received an email from a dairy farmer I planned to visit. She informed me her farm was so flooded she did not think I could drive up the lane to her farm without being stuck in the mud, let alone interview her. She warned that morale among farmers in the agricultural community was not good and many would not want me photographing their farms in these conditions. The rains flooded many farms, and the national dairy crisis of 2016 had left farmers in the area bankrupt and in calamity. Murray Goulburn, Australia's largest milk processor, dropped milk prices, ruining farmers' expectations of what they planned to be paid for their milk: "To add insult to injury, the farmers themselves would have to pay back the difference, a total of around \$200 million between about 2,500 farmers" (Whitmont, 2016). If farmers weren't destitute, they were angry.



Figure 22. Hooves of Dairy Cows.  
 Glencliffe Dairy. Shepparton, Victoria. August 17, 2016.

Luckily, the rains had stopped by the time I arrived in Victoria. The lanes to the farms were still very muddy, the cows were not showing satin coats, and I was stuck in mud up to my knees while following a dairy farmer out to her irrigation pivot. I was given the opportunity to photograph this farmer's dairy farm, even in its muddy glory (Figure 23). Although I had grown up around livestock, and had a lot of experience on farms, I was still shocked by the aftermath of the rains. How could I photograph this farm and show what life was like for this woman? How could I share this, her place, her story, and convey her individual journey to outside audiences? Viewing photographs with narrative helps us to become immersed in place, establish emotional connections to the farmer, and witness specific details that offer a deeply human portrayal of the farmer's life. Photography adds another dimension of expression beyond the written words, establishing important perceptions of the day-to-day lives of the farmers and their emotional geographies.

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*The Invisible Farmer Facebook Page- A Curated, Online Collection*

The Invisible Farmer Project is a three-year project and the largest ever study of Australian women on the land. The project includes a nation-wide partnership, including museums, universities, foundations, and the Victorian State Government. The mission of the project is to create new histories of rural Australia, reveal hidden stories of women on the land, learn about the diverse, innovative, and vital roles of women in agriculture, and stimulate public discussions about contemporary issues facing rural Australia and its future. The histories will establish a significant public collection that will enable far-reaching outcomes in research, industry, and public policy (Invisible Farmer, n.d.).

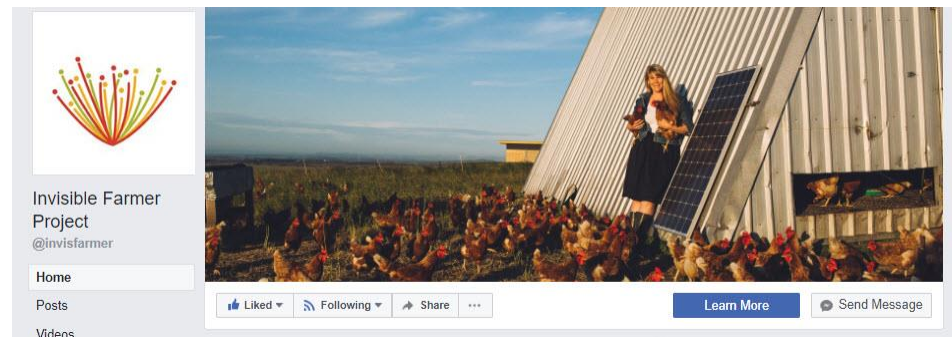


Figure 23. The *Invisible Farmer Project* Facebook Page.

The official Facebook page for the *Invisible Farmer Project* was launched on March 8, 2017, International Women's Day. This day was also the first official day beginning the *Invisible Farmer Project*, which will continue for three years (2017-2020). This research, however, only covers the period of March 8, 2017 to March 8, 2018. As of June 2018, The Invisible Farmer Project Facebook page had 3,148 followers (Figure 24).



## Literature Review

### *Identity and Australian Women in Agriculture*

Many scholarly writings have explored women's work on the farm, their identity construction, and their contributions to the agricultural sector (Fink, 1992; Whatmore, 1991). In a key work, Sachs (1996) sought to explore how women's farm work and skillsets shaped their everyday lives and the roles they established in rural areas. Additional scholarship has sought to explore and define how women farmers in the United States and abroad are portrayed in the agricultural industry as well as how they identify as farmers (Brasier, Sachs, Kiernan, Traugher & Barbercheck, 2014; Williams, 1992; Alston, 2000). Since the time of Sach's (1996) book, over 20 years ago, scholarship regarding women on farms has continued to be of paramount interest, including in the field of geography, with a more recent emphasis on emotional geographies (Wright, 2010).

Historically, the identities of Australian women farmers and their vital contributions to the agricultural sector have been largely unknown. As noted in Alston's (2000) book, *Breaking Through the Grass Ceiling*, women's entrance into farming primarily was established through marriage and was shaped by patriarchal traditions, founding the identity of the woman farmer as the 'farm wife'. Categorized as housewives, domestics, or helpmates, women farmers have been excluded from the national census and other official documentation (Williams, 1992; Alston, 2000). During the Australian Rural Women's Movement (1980s-1990s), scholarship emerged to explore gendered roles within the Australian agricultural sector, including analyses of agricultural

work, health and welfare, and economic contributions (Alston, 2000; Dale-Hallet & Diffey, 2006).

Later works, such as Liepin's (2000) study of agricultural-based masculinities in Australia and New Zealand, considered how outlets such as media and advertising agencies influenced and perpetuated the masculine perspective of Australian agriculture. Pini's (2005) study further explored the roles of women in the agriculture sector in leadership positions, who navigated the traditionally masculine field. This article builds on this foundational research, considering women farmer identities, histories, day-to-day work, and current realities, as well as emotional geographies of place.

### *Photovoice*

Photovoice has been a research practice since the early 1990s. A qualitative, participatory research methodology, photovoice was developed by Caroline Wang and Mary Ann Burris. As defined by Wang and Burris (1997), photovoice is "a process by which people can identify, represent, and enhance their community through specific photographic technique" (p. 239). Wang and Burris used photovoice as a way to communicate individuals' knowledge and to offer a unique perspective often neglected in societal issues (1997). In public health studies, photovoice has been utilized to gain a better understanding of community health and social problems (Belon, Nykiforuk, Vallianatos & Nieuwendyk, 2016; Horowitz, Robinson & Seifer, 2009). In research in geography, photovoice has been used as a method to generate participant group discussions, using photographs as a medium of expression. "Participants take photographs of their everyday realities and come together as a group to identify, discuss, and represent community issues through photographs and critical discussion and

reflection” (Masterson, Mahajan, & Tengö, 2018, p. 12; Wang & Burris, 1997; Wang, Yi, Tao & Carovano, 1998). Since the development of photovoice in the early 1990s, there have been many technological advances in the digital world. The internet, smart devices, and the continual evolution of social network sites such as Facebook have broadened research practices and implications (Boyd & Ellison, 2010).

Photovoice, as a research practice, has evolved with the development social media, texting, and access to mobile phones with cameras (Yi-Frazier, et al., 2015). Furthermore, camera technology and texting options have allowed researchers to broaden their research methods beyond the limitations of time and materials needed to take photographs and develop images with a film camera. In a study on pediatric weight management, Woolford et al. (2012) used a method where research assistants received text message images, in real time, directly from youth who took pictures of things that reminded them of exercise. Later in the research process, the youth were individually interviewed about the experience. In Yi-Frazier et al.’s (2015) study on using Instagram as an application for photovoice, the authors noted the transition from disposable cameras to cell phones as a way to further research with the teen population, as teens carry cell phones on a regular basis and are frequently engaged with social media applications. Currently, Wang and Burris’ (1997) early definition of photovoice is broadly interpreted across various disciplines and research communities, digital photographic techniques, and the integration of social media, have opened up new methods for immediate forms of communication and interaction with a wider audience via social media platforms.

This article builds upon previous research, and Wang and Burris’ (1997) definition, but defines photovoice as a photograph complemented by interpretive text.

These photographs and accompanying narratives are shared on a voluntary basis, outside this research framework, and are submitted by farmers and museum staff via the *Invisible Farmer* Facebook page, blog, and website, as part Museum Victoria's curated *Invisible Farmer Project*. The photovoices are shared from the perspective of women farmers across Australia, as a form of expression that is visual and immediate, and articulates the lives of women in agriculture and their individual connections to place.

In conjunction with photovoice, this article uses the conceptual lens of emotional geographies, recognizing emotion as a way to understand the world we live in as well as a force that shapes behaviors and outcomes (Paniagua, 2013; Ryan, 2016; Davidson, Bondi & Smith, 2012). Furthermore, this article recognizes emotional geographies are essential to the *Invisible Farmer Project* and women's communication about their farms, families, and place. Women farmers' utilization of photovoice is an emotional process that establishes powerful, connected communities that support, educate, and empower. Without emotional engagement, this establishment of community would not be possible. Both the creating and viewing of photovoices entails emotions, as women farmers establish personal narratives, articulate tangible and visual connections to place, their daily farm work, and their individual geographies.

#### *Photovoices and Emotion*

There is an emerging body of literature linking photovoices and emotion. Much of this literature focuses on participant-generated photography and on health and well-being and is specific to the fields of healthcare and education (Ronzi, Pope, Orton, & Bruce, 2016). Additional research connecting photovoices and emotion has explored the relationship of place to identity. In Power, Norman, and Dupre's (2014) research on

emotional geographies, photovoice, and stories of place, rural youth in Newfoundland, Canada used photovoice as a way to “inscribe value... and a strong sense of belonging to a place,” suggesting a sense of inclusion, pride in their home communities, and in their way of life (p. 1121-1122).

McIntyre’s (2003) research on working-class women in Belfast, North Ireland further interprets photovoice in conjunction with identity, place, and community, exploring photovoices in the context of day-to-day lives. McIntyre believes, “photo-texts reveal the significance of ‘home’ [and how] ‘home’ carries with it both a connection to one’s immediate family as well as to members of the larger community” (p. 54). In this article I extend McIntyre’s approach to ‘home,’ and how community can be applied to women farmers who connect with each other, through Facebook, from different geographical locations, across Australia.

As noted in Ellison et al’s (2007) study on Facebook friends and social capital, Facebook can facilitate the establishment of lasting connections with others, allowing people to access larger communities and build relationships outside of the traditional geographic boundaries of in-person communication. Research illustrates how sharing photography online, within these communities, forms a visual understanding, with proximity that has been compared to sharing the actual lived experience in real time (Palmer, 2010; Gye, 2007). Photovoices, shared through the *Invisible Farmer* Facebook page, convey emotional geographies, opening new doors to ‘knowing’ a geographical place in everyday life, through shared experiences of place, and emotional expression, linking distinctive, individual geographies (Lee, Lee, Moon & Sung, 2015).

### *Well-Being and Photography*

How can a person view a photograph, gain a shared knowledge of place, and experience a farmer's distinctive, individual geography? In Barthes' (2000) book on photography, the author makes the distinction between the creation of photographs versus the viewing photographs. Barthes notes that viewing a photograph is something he keeps with him, "like a treasure, my desire or my grief; the anticipated essence of the photograph could not, in my mind, be separated from the 'pathos' of which, from the first glance, it consists" (p. 144). Barthes further determines a photograph can contain what he defines as a *punctum*, or interruption of meaning. This punctum will transcend the barriers of language and culture, allowing the viewers of the photograph to "construct meaning of the images themselves and to question their understandings of the [environment] depicted" (Barthes, 2000).

This research explores how emotion can be experienced by the photographer and the person viewing the photograph and adopts Barthes' theory that photographs have lasting emotional effect. As part of the *Invisible Farmer Project*, and this research, understanding the ways both the photographer and viewer experience emotion is integral to knowing how photovoices deepen connections amongst women farmers and with outside communities.

There is also a growing body of literature that connects emotion and attachment to place to well-being, emphasizing the importance of memory, context, and meaning in a particular place to further recognize people's emotional well-being (Willox et al., 2013; Evans & Thomas, 2009; Jones, 2005). With the capacity to foster well-being as well as "distress, pleasure, and commemoration," place is complexly interwoven with identity,

social relations, and heritage, affecting people at varying scales (Davidson, Bondi & Smith, 2012, p. 8; Evans & Thomas, 2009). In geography, recent research has considered how wellbeing can be created through interaction with the environment (Smith & Reid, 2017).

Studies have revealed how people use photography as a means to document materiality and as a way to situate a person in place, to “elicit... an emotional response that is linked to health and well-being” (Anderson & Smith, 2001; Hardreaves, 2001; Jones, 2005; Power et al., 2014, p. 1122). In Maclean and Woodward’s (2012) study using photovoice for Aboriginal water resource research, participants were excited to use photography as a medium to document their lives, community, and water places. They recognized photography as a powerful medium of expression. Photography captured how water places encompass emotion, labor, physical health, and lived experience. Although these participants were not posting their photovoices online, they took photos that represented cultural knowledge, values, and livelihood.

#### *Emotional Care Work and Women Farmers*

This research also builds upon foundational literature on emotional care work, with the inclusion of women’s perspectives on their daily work, highlighting important responses “both positive and negative, to care and caring,” in an agricultural environment (Herron & Skinner, 2012, p. 233). Care work is an action that encompasses both contributory responsibilities and affective relationships (Abel & Nelson, 1990). As noted in Shisler and Sbicca’s (2019) study on agriculture as care work, contemporary women farmers are not only embracing their identities as farmers, but inscribe care work into their roles as farmers transforming the patriarchal foundation of farming (Shisler &

Sbicca, 2019). Geographies of emotional care work are intertwined in the numerous connotations of identity and home and are at the forefront of “acknowledging . . . emotions when it comes to conceptualizing and faithfully [representing] subjects’ experiences, as well as challenging previous notions of masculinist ideals of individuality and self-sufficiency” (Davidson & Milligan, 2004, p. 525; Thien & Hanlon, 2009; Riley, 2009).

As demonstrated in Herron and Skinner’s (2012) study on farmwomen’s emotional geographies of care, specific gendered roles are tied to responsibilities of care and are shaped by “distinct living and working environments” (p. 234), but are also shaped by tasks specific to their care work that crosses boundaries of traditional masculine archetypes. As noted in Heather et al.’s (2005) study on rural women farmers and nurses in Alberta, Canada, women accomplished “men’s work,” hauling hay, picking rocks, harvesting, feeding livestock, and continued to manage the household and family care. Even though women were participating in work considered men’s farm work, the traditional masculine archetypes persisted, where men are the farmers and women ‘help’ with the farm (Hughes, 1997; Radel, 2011; Heather, Skillen, Young, & Vladicka, 2005). Furthermore, women described their jointly owned farm in Alberta, Canada as ‘his’ (Heather et al., 2005). Women’s farm tasks are centered on care work in the home where they are apparently domestically skilled, tending children, handling the housework, and accomplishing the nurturing role of mother (Hughes, 1997). However, farmwomen’s emotional geographies of care are not limited to the traditionally defined care work in the home, but can be found and expressed in all aspects of the farm, regardless of gendered divisions of labor in agriculture (Silvasti, 2003). Women farmers’ identities are shaped by



their daily work, and their work contributes to their emotional engagement to place.

In this article, I contribute to scholarship on emotional geographies through the analysis of posts on the *Invisible Farmer* Facebook page, examining emotional engagement to place, and how farmers' environments and daily work shape their emotional geographies, identities, and community engagement. Examining how emotional geographies of care are integrated into women farmers' daily lives, I study how care work is expressed through all aspects of farm work and is not limited to the traditionally defined care work in the home (Silvasti, 2003). In alignment with previous research linking photovoices to mapping emotional geographies, this study will situate photovoices in the context of the social media application, Facebook (Power, Norman, & Dupre, 2014; Bonifacio & Drolet, 2018; Sutherland, 2018). I explore how women in agriculture are using Facebook to create communities, sharing their distinctive, individual geographies and behaviors, and shaping contemporary dialog and future outcomes for women in the agricultural sector (Power, Norman & Dupre, 2014; Lee et al., 2015; Wang, 1999).

## Methods

### *Data Collected*

The research data result from monitoring the official Facebook page for the *Invisible Farmer Project* from March 2017 to March 2018. The posts I monitored were submitted by farmers or on behalf of farmers by museum curator, Catherine Forge. I reviewed the Facebook page, the posts, and the subsequent comments, likes and shares once a week for one year. If a blog post was linked to the photovoice posting on Facebook, I drew contextual data from these separate, but linked, blog posts on the

Invisible Farmer website.

#### Facebook Data

There are three ways photovoices are posted to the *Invisible Farmer* Facebook page. First, photovoices are posted on the wall of the Facebook page by Curator Catherine Forge. The wall is the main homepage for the project, where curators post content. The posts are voluntarily submitted by women farmers across Australia via the *Invisible Farmer* website. Second, photovoices are posted through responses. In response to posts on the wall, women farmers can reply with comments, which can include their own narratives and photos. Third, Curators Liza Dale-Hallet and Catherine Forge post photos and narrative with their perspectives and questions to stimulate discussion and raise issues about women in agriculture. I consider posts and comments posted by farmers in response to these curated posts as part of my analysis, as emotions and a community dialog are established by these posts and comments. For this research study, curated posts are defined as posts made by Dale-Hallet and Forge that were developed based on research and the guiding principles of the *Invisible Farmer Project*. These principles are sustainability, connectivity, community and capability (Invisible Farmer, n.d.). Over the course of March 2017 to March 2018, 32 out of 50 posts tied back to emotional care work.

#### The Use of the Emoji

Using an emoji as a form of communication on Facebook is very common. Emojis are used as a way to communicate praise and other means of expression, showing agreement with the various hand signals such as a thumbs-down or two palms facing outward.



Figure 24. Comment Dialogue and use of Emojis.  
Invisible Farmer Facebook page, May 22, 2017.

This provides a system for users from all over the world to interact with each other using an emoji sign language, “transcending the limits of one’s native tongue” (Isaac, 2015).

When photovoices were posted on the *Invisible Farmer* Facebook page, commenters left emojis embedded in their text responses and, at times, responded with just emojis (Figure 25). I consider the emoji as part of my analysis, as emotions are expressed through emojis and are part of the communication within the Facebook community of women in agriculture.

### Interviews

I drew additional data from qualitative interviews conducted in August 2016 and February 2018 with farmers, involved with the *Invisible Farmer Project*. The farmers who were interviewed were ages 23-70 and lived in the regions of the Greater Shepparton area, Benalla, and Wangaratta. I designed semi-structured interview questions to collect contextual information about women’s participation in the Facebook page and their lives

as farmers. These interview questions addressed how social media has connected the farmers with others in and outside of their physical communities, and how involvement with the *Invisible Farmer Project* has influenced their lives. Further questions related to their connections to place, community, and the wider world; to their identity as a farmer; and to major contemporary issues faced as a farmer. I interviewed five farmers and the interviews lasted approximately 40 minutes. The initial 2 research participants were chosen by Museums Victoria Staff. Once I interviewed these research participants, they suggested the other farmers who I then contacted and interviewed. See Appendix A for the interview guide used for this research.

#### Guest Blog Posts

As part of the *Invisible Farmer Project*, photovoices posted on the Facebook page are often linked to blog posts. These blog posts are longer, in-depth stories about different topics that women farmers and partners of the project have chosen to write about. These women were invited by the *Invisible Farmer Project* to contribute to these stories. As part of this study, I collected data from blog posts to gain more background and insight into the women farmers' photovoices and to gather contextual data for my main analytical themes (discussed more below) of (1) women's identities as farm wife/helper vs. farmer, (2) women's contributions to the agricultural sector, and (3) women farmers' emotional geographies of place. Blog posts are referenced, in conjunction with the photovoice, to add context and background in the discussion section of this paper.

#### *Data Analysis*

Based on the literature and the guiding principles of the Invisible Farmer Project, I approached my data largely through thematic analysis with deductive reasoning, coding

the Facebook posts, comments, emojis, interviews, and associated blog posts based on my three pre-determined analytical themes.

### Qualitative Analysis in Relation to Themes

I analyzed posts on the *Invisible Farmer* Facebook page with an overall thematic approach to emotional geographies. After monitoring the posts on a weekly basis, I went back through and re-read posts, analyzed the photo and coded the text narrative. I always analyzed the photograph with the accompanying text. I looked for parallels between the subject matter and the image, such as a woman writing about her work in the outback and the corresponding photo of her working in that environment. I highlighted words and phrases that expressed reoccurring values and beliefs. Although I focused on my three primary, pre-determined themes (1. women's identities as farm wife/helper vs. farmer, 2. women's contributions to the agricultural sector, and 3. women farmers' emotional geographies of place.), throughout the coding process, sub-themes were revealed. These themes tie back to my primary research questions regarding women's roles in the agricultural sector and on the farm.

Sub-themes I identified were the struggles of daily life, how place is an integral part of farm life, the interest in the Outback, acknowledgement of contributions, and establishing a community of action. Challenges arising from living in remote areas of Australia ("the Outback") emerged as a sub-theme for the women farmers particular to that region. These sub-themes were revealed through narrative analysis, as I reviewed the text for narrative arc and chronological events. These sub-themes arose from the ground up within the analysis of the three pre-determined themes.

Table 1. Major Themes and Sub-themes

Major Theme	Sub-Theme
Women's identities as farm wife/helper vs. farmer.	Struggles of daily farm life.
Women's contributions to the agricultural sector.	Establishing a community of action. Acknowledgment of contributions.
Women farmers' emotional geographies of place.	Living and working in the Outback

I analyzed the use the use of emojis in response to posts. Even though Facebook users cannot see each other's facial expressions, the constructed emoji faces, hand signals, and hearts can be analyzed as internationally identifiable symbols portraying emotion.

#### Quantitative Analysis Using Birdsong Analytics and Facebook Metrics

I also quantitatively analyzed the data by using birdsong analytics and Facebook metrics to see how many people viewed the post and how many comments, likes, and shares each post received. These metrics allowed me to also determine the geographic location of viewers, to know, for example, if only people from Victoria, Australia were viewing these posts. I then compared the content of highly viewed posts to my pre-selected themes (see above).

#### Results and Discussion

##### *Place and Emotional Attachment*

Providing a platform for sharing imagery and for linking emotion and place, women's photovoices on Facebook speaks to an emerging focus of emotional geographies, that the capability to identify how we feel in places matters, particularly in

relation to physical health and emotional wellbeing (Davidson & Milligan, 2004). Health and well-being are enabled by place, and memories and meaning are established in an environment where women form emotional connections and attachment towards their surroundings.



Figure 25. Simone with the Sunflowers she Harvested.

In a post submitted by Simone, a flower farmer in the Geelong region of Victoria, she shared an image of herself smiling and holding a giant bouquet of sunflowers (Figure 26). The image shows her demeanor and the harvest, immediately establishing a connection to the happiness she experiences as a flower farmer. In her narrative, she expresses how her farm as a place initiates an emotional process, calming her and providing an environment where she can bond with her son:

Last summer my 4-year-old son and I planted one pack of sunflower seeds after dinner one night. We excitedly watched them grow for the next couple of months and, because we were so proud of them, sold around 40 sunflowers to local florists. It was such a buzz for us both. There is something about farming - it soothes the soul.

Simone's post was viewed 17,310 times, shared 33 times, and 28 people

responded to her post. Commenters agreed with Simone's thoughts on farming, and noted farming provides "emotional satisfaction" and "it's challenging but so rewarding" with five emoji hearts after the comment. Simone further expressed her physical and emotional connections to the farm as she conveyed how the farm provides continual learning and hands-on work that keeps her physically fit, enabling a lived experience of well-being as well as insight into her day-to-day life (Smith & Reid, 2017).

When some farmers post images, they do so with the forethought and intent of discussing place, community, and what is happening in their lives. As a local dairy farmer noted, "I think that is what is really important about networks. It is what keeps women going. Women talk, find out about new farming practices, and support each other really well" (Interview, August 11, 2016). They express discouragement when spring floods unexpectedly hit their crops, or when accident or sickness happen on the farm, and dates are memorable to them such as an anniversary or the passing of a loved one. These expressions all tie back to emotional care work and the positive and negative aspects of care and caring (Herron & Skinner, 2012). Over the course of March 2017 to March 2018, 32 out of 50 posts tied back to emotional care work. In the posts, both farmers and contributors shared aspects of care work on the farm.





Figure 26. Sallie Jones at her Dairy Farm.  
Photo taken by Catherine Forge in Jindivick, Victoria, Australia on April 28, 2017.

Further posts about farm life, financial hardships, and weather identify a need for “day-to-day [emotional] support that is congruent with the realities of farming” (Herron & Skinner, p. 240, 2012; Wang, 1999). This can be seen in a Facebook post/response to the devastating dairy crisis of 2016. Curator Catherine Forge posted an image of Sally Jones, a dairy farmer wearing a work shirt and a hay-speckled black cowboy hat, who is photographed in a field of dairy cows. Jones’s photovoice is introduced by the curator, Catherine Forge (Figure 27):

Sallie Jones, a 36-year old dairy farmer from West Gippsland, who in 2016 found herself starting up an independent, farmer-owned milk label, @gippslandjersey. Established alongside her business partner, Steve Ronalds, the Gippsland Jersey project grew from – a profound desire to honour the work and life of Sallie’s dairy-farming father, Michael Bowen, who passed away tragically in 2016 during the dairy crisis.

The post about Sallie Jones was viewed 9,121 times. This post was shared 35 times on Facebook and both male and female Facebook users commented about Sallie’s photo, writing, “we love Sallie’s story,” and “a real inspiration in the dairy industry.” Supportive comments, likes, and shares illustrate a response to the family story of

hardship, farm productivity, and emotional well-being, “creating an expressive and spatial community” (Herron & Skinner, 2012, p. 242). The photovoice integrated personal narrative, farm life, hardship, and place. Insights into the aftermath of the dairy crisis established a museological perspective—“a space to learn and share, integrating current social history, [and] generating narratives” (Proctor, 2010, p.38). Other photos brought forth how women experience the geography of a place and how agricultural work is integrated with the landscape and the weather.



Figure 27. Lisa Shannon in South Burnett, QLD.  
Photo submitted by Lisa Shannon on September 8, 2017.

Many women’s posts focused on physical elements of the landscape, and the experiences of life on the Australian bush. Cattle and sheep farmer, Lisa Shannon, shared her story about the Australian Outback landscape and her journey in agriculture when she wrote, “the desert country is some of the most beautiful, most fragile country that I had ever seen. I spent my hottest work day at 52 degrees (17 °F) and my coldest night camped out at -8 degrees (125 °F).” The photo Shannon shared illustrated the Outback landscape. There is little vegetation and direct sun shines down on her (Figure 28). She is dressed in protective clothing, suggesting she has to prepare for work in all kinds of harsh

weather. Over one hundred people commented on Shannon's post, and her post was viewed by 48,099 people as well as shared 119 times. This is when I found the posts from women who lived/worked in the outback received the most interest. Her story resonated with many, overlaying portrayals of the Australian bush, the seasons, weather patterns, and the work that must be performed. Posts about weather and the agricultural work attribute "emotional agency or capacity... [with] heart-felt articulations of emotion . . . [acknowledging] their interactional quality" (Davidson & Milligan, 2004, p. 524). Many responded to Shannon's post discussing the hardships of landscape and climate in the bush, writing, "what a great story. A very strong lady. I love reading about people of the bush."

Using photovoice to share aspects of the farm, the weather, and affective responses illustrates how women in agriculture express emotion, how "being in place, and perhaps remembering through place... are powerful elements of emotional geographies of the self" (Jones, 2005, p. 279). Photovoices are the catalyst of emotion, bringing into focus events and sensations, and enabling the audience to become their own curators of place (Proctor, 2010). Through Facebook, women remove divisions of place, sharing personal stories, and responding to one another through virtual spaces that are expressions of individual lives, inherently spatial and emotional (Damasio, 2004).

Photovoices are situated moments that often showcase seasons of the year, a visual reminder of seasons past, and tasks in daily life that are performed during those seasons. Text, images, and colors of farm life, associated with seasons, are interwoven with the geography of the self, emphasizing how emotion and place are part of identities and memories (Dallman, Ngo, Laris & Thien, 2013). Women explore their individual

geographies by writing about and taking pictures of animals, colors, textures, and seasonal weather, using text and the camera as tools for communication virtually anywhere, anytime, “opening up possibilities for communication articulated, expressed, and exchanged in unexpected ways” (Lee et al., 2015, p. 552; Farbotko & McGregor, 2010).



Figure 28. Marree Wallace.  
Photo submitted by Marree Wallace on September 21, 2017.

In Marree Wallace’s post about her life as a dairy and potato farmer in Koo Wee Rup Swamp of Gippsland, she wrote about her life on the farm, the passing of seasons, and the work (Figure 29): “I would bring the cows up ready for milking in all conditions, whether it be below zero, bucketing down with rain or in the fierce heat of summer.” She further describes harvest time in the early years, “feeding five starving men well after midnight.” Marree’s photovoice was liked by 133 people, shared by 11, and viewed 6,430 times. In reply to Marree’s story, there were 22 comments. Women expressed their appreciation for Marree’s story and life work, writing, “I loved reading your account of living on the land – what an inspirational autobiography.” Another woman wrote, “Farm

women – the backbone and soul of our nation.” This dialog illustrates how landscape, season, and emotional attachment are expressed by the farmer and those who see her photovoice, creating a cultural dialog in real time (Russo, Watkins, Kelly & Chan, 2006).

### *Contributions to the Agricultural Sector: A Call to Action*

Shared emotional responses and experiences have the ability to influence others in a community, enabling a call to action (Wilcox et al., 2013). With Australian farmwomen, these calls to action often can be closely tied to their efforts to change the conventional portrayal of the female farmer (Sachs, 1996; Alston, 2000; Henningham & Morgan, 2018).



Figure 29. Sallie Jones with her Children.  
Photo taken by Museum Curator Catherine Forge on March 1, 2017.

On March 1, 2018, before International Women’s Day, a Museums Victoria curator shared a post with the initial question, “did you know that if you do a Google search of the term “farmer” 90% of the images will depict men?” After this question, the curator stated, “we have the power to change this though.” In partnership with ABC



Landline, and Australian television program that focuses on national rural issues, the Invisible Farmer Project posted an image of a female farmer and her children (Figure 30).



Figure 30. Facebook Response on Farm Work.  
A response to post by the Invisible Farmer Project. Photo by Kia Ora Merino. March 1, 2017.

In response to the call to action, over 18,000 individuals viewed the post, as well as the follow-up post, and many posted pictures of themselves at work on the farm or the names of women contributing to agriculture (Figure 31). Women from all over Australia, and from other countries, posted images and text of lived experiences as farmers, offering up their perspectives about women's work in the agricultural sector as well as a call to action to raise awareness for the many 'invisible farmers' in Australia (Wilcox et al., 2013). Commenters responded by posting the names of other farmers writing, "I challenge you all to have a go! Let's do this!" Others commented on the tasks they had to manage that day, including "caring for new babies," with a photo of the farmer caring for a baby lamb, illustrating both the work of the farmer and her living and working environment.

Photovoices, such as those associated with a call to action, affirm women's distinct living and working environments, pride in the responsibilities, and level of care needed in farm work. Within the Facebook platform, the *Invisible Farmer Project*

establishes widespread, virtual participatory action, spreading across multiple states and countries, creating a relationship for exchanging new knowledge between the museum project staff and the audience (Russo, Watkins & Groundwater-Smith, 2009). Audiences were not physically present in a museum building but were able to gain deeper knowledge about women farmers and their contributions to the agricultural sector in Australia.



Figure 31. McDougall in a Wheat Field.  
Photo submitted by McDougall on May 31, 2017.

Photovoices present the opportunity for sharing women's stories about their contributions to a wider audience. Leila Sweeny McDougall, a fashion design graduate with a farming background, described in her post her efforts to raise money for farmer health. McDougall's post was viewed 2,350 times. She established the charity, Live Rural, promoting agriculture and supporting farmer health (Figure 32). She wrote, "I was invited to speak at events and share my message, but realized I was talking to people who already love and support farming." Appointed as a member of the Young Farmer

Ministerial Advisory Council, Leila is now sharing her message with policy makers and aims to build an awareness by sharing farmers' personal stories, to educate consumers and combat misinformation. Like Leila's post, other posts about women's contributions to the agricultural sector establish a community where women regard themselves as not just informed individuals but as activists, farmers, and members of a community willing to share and help keep one another current on recent policy changes, advances in irrigation technologies, and opportunities for continuing education (Lovejoy & Saxton, 2012).

When women farmers keep one another informed, and acknowledge each other's accomplishments, they establish strong community networks as well as share emotional dimensions of their day-to-day lives. Through shared experiences, beliefs, and emotional expression, they link their individual geographies into a collective geography (Lee et al., 2015). As one farmer noted, discussions about belonging to a community, and one's contributions to a community, are emotionally charged. She related, "I can have belief in myself but if I don't get that external validation, if I don't acknowledge whom I am and what I do, it's very difficult for me to maintain my energy and my passion" (Interview, August 7, 2016). Both Alison Brinson and Ilse Matthews wrote in their post about activism in the agricultural sector, and the cut flower industry, that farming is about recognizing each other's accomplishments and bringing people together. The image they chose to accompany their narrative is evident of their passion for flower farming and their friendship, as they pose together amongst Gerber daisies in a greenhouse, the center for agricultural production and management in the cut flower industry. In a space where men have historically worked, the image and the text provide insight into the contemporary



workspace and contributions of women farmers in the nursery industry (Power, Norman & Dupre, 2014).



Figure 32. Alison Brinson and Ilse Matthews.  
Photo submitted by Ilse Matthews. November 15, 2017.

The grouping of the text and imagery establishes connections to emotional care work, highlighting Matthew's and Brinson's perspectives on farming and caring for plants in the cut flower industry (Herron & Skinner, 2012). As Brinson noted, farming "gives people joy." Matthews added to Brinson's narrative and highlighted the key aspect of contribution, writing,

Farming is vital for our daily life – the food and fibre we grow feeds and clothes us, and the plants and flowers we grow feeds our souls and helps to power our Earth's 'lungs', with the air we breathe. *I am proud to be a part of all of this* [emphasis added].

Brinson and Matthews are founding members of WinHort, a community horticultural group that brings women together in an informative and supportive way to discuss issues that affect them and their business (Figure 33). As a community, they visit different farms, host workshops and training sessions as well as discuss government regulations, climate impacts, and challenges that come up as part of running the day-to-

day business of the farm. In response to their post, both businesses and individuals who work in the horticulture industry commented on Matthews and Brinson's contributions, responding with smiley face emojis and writing, "thank you for sharing, from the team at Yarra Ranges Business" and "so much respect and fond memories from working alongside them as a Landcare Officer."

The positive responses to the post on the Facebook page, as well as the in-depth narrative of Brinson and Matthew's blog post, illustrate both contributions to the agricultural sector and a community of action. The post was viewed by 2,141 people and shared 11 times. At the end of their blog post, Ilse wrote about their public recognition for their contributions to WinHort, noting, "WinHort's activities were recognized by our local council in 2015 on Australia Day. It's not often that you get publicly recognized for the things you do."

The photovoices shared as part of the *Invisible Farmer Project* provide a platform for establishing community and create a dialog about women's varied roles in the agricultural sector, their distinctive and individual geographies of place, and their perspectives on emotional care work. As women shared their contributions and working and living environments, emotive aspects of farmwomen's identities began to take shape.

#### *Women Farmers' Identities: Farmer versus Farm Wife, Farm Helper*

Through Facebook, women are able to share experiences and influence others in a community setting, evoking emotional responses, and the opportunity to share their identities as women farmers and leaders in the agricultural sector. The identity of women in the Australian agricultural sector is complex. The traditional, social constructions of women in the industry are difficult barriers to cross. Historically, women farmers have

been excluded from the national census and other official documentation and have been categorized as housewives, domestics, or helpmates (Williams, 1992; Alston, 2000).

Women who participated in the *Invisible Farmer Project* shed light on the barriers they face on a daily basis, and they are working to inform others about their day-to-day work, leadership experience in the agricultural sector, and their identities as farmers. Many of the photovoices analyzed here illustrate how women farmers perceive their work and contributions versus how others respond to their roles in agriculture. A field officer, who advises farmers on chemical use for their crops and pest control, shared she had to be ‘visible’ for 20 years before male farmers and other industry professionals would take her seriously. She noted:

I knew that was the way it was; they wouldn’t take me seriously until I got wrinkles or grey in my hair. I’ve got this lovely streak here that, I have a very big grey patch and they’ve seen me around a fair bit and now they’re starting to go, Ok, yeah, well, we’re not just going to pat her on the head and say well, you’re a good girl. They say, what do you think? What do you think about this? You have to be very active and you have to get out there and make your face seen in every situation. Whereas a guy can sit in the office and they’ll come to him (Interview, August 8, 2016).

She further explained that challenges she faces in relation to her identity, as a woman farmer, do not end there. She is juggling kids, sexism, and navigating communication with others as a horticultural advisor, where at times she has chosen to “play the submissive card” (Interview, August 8, 2016). Another farmer noted changes in how she was viewed in the industry when she became a business development manager for a grazing company. She shared one of her experiences as a woman and a manager:

Since starting as the business development manager, I’ve been asked by three different people if I’m the new secretary! It doesn’t really matter, but I bet a male my age wouldn’t be asked if he was secretary of a medium scale agricultural business.

As noted by the business development manager and other women farmers, other people

can have a pre-conceived understanding of who women farmers are and what their roles in the agricultural sector should be. The women face these pre-conceptions on a regular basis. The photovoices identified how women see themselves as farmers and the interactions they have had in the agricultural sector. These posts signaled frustration with trying to navigate continual social barriers, expectations, and labels of being a farm wife/helper vs. a farmer (Williams, 1992; Alston, 2000). Further analysis revealed how women form emotional connections to place that are both positive and negative. From the posts, there were instances of isolation, reflection, and frustration (Davidson, Bondi & Smith, 2012; Evans & Thomas, 2009).

In 2017, Beck Middleton, a dairy farmer from South Australia shared her story of her journey in agriculture with ABC rural, a department of the Australian Broadcasting Corporation that provides news coverage on the politics and business of Australian agriculture. As part of their partnership with ABC rural, *The Invisible Farmer* curators re-posted Middleton's story. Middleton's photovoice begins with the question:

'Is your husband here?'

'No. What can I help you with?'

Sound familiar ladies? If you are a farming woman, or in any traditionally male-dominated occupation, you have probably heard that line before, or at least some variation of it.

I am not 'the farmer's wife'; I am the farmer, something my partner hurriedly attests to whenever anyone asks, bless his cotton socks! Luckily, I have that support but not every woman out there is so fortunate.



Figure 33. Beck Middleton at her Farm.  
Photo submitted by Beck Middleton on May 10, 2017.



Figure 34. Comments in Reply to Middleton's Post.  
Screen shot of comments taken June 14, 2018.

Middleton's story received 66 comments and was shared 74 times, viewed 30,889 times, and liked by 421 people (Figure 34). This community response demonstrates that the post resonated with many women, who in turn shared their own experiences. One woman replied, "I still get people that expect a man to get out of the car when the vet is

coming. Sorry mate, women can pull calves too.” Ten other viewers of this comment liked it. Middleton replied with her own comment, “oh they so can!! Don’t you just love blowing people’s minds though?” with a laughing face emoji after her words (Figure 35). The vast range of responses from both men and women, and the online discussion that developed from Middleton’s original post, created an atmosphere of inclusion, discussion, and mutual understanding about the contemporary identity of the woman farmer and the societal barriers she faces to be recognized as such (Brasier et al., 2014). The diversity of comments and stories that were shared in response to Middleton’s photovoice illustrates how women farmers’ connections through the *Invisible Farmer Project* Facebook platform share their identities, struggles to be seen as farmers, and the opportunity to express emotional geographies (Herron & Skinner, 2012; Bosco, 2007).

To raise the question of women’s identities, and their invisibility in the agricultural sector, Museum Curator Liza Dale-Hallet posted the results of what appears when one searches on ‘farmer’ in Google. Dale-Hallet wrote:

One of the most graphic ways of demonstrating the invisibility of women in agriculture and farming is just to do a Google Image search. In every ten images, you’ll be lucky if you find one woman. Most of them are white, middle aged blokes. It’s such a discrepancy with the reality. The fact is women create half the real farm income in Australia.

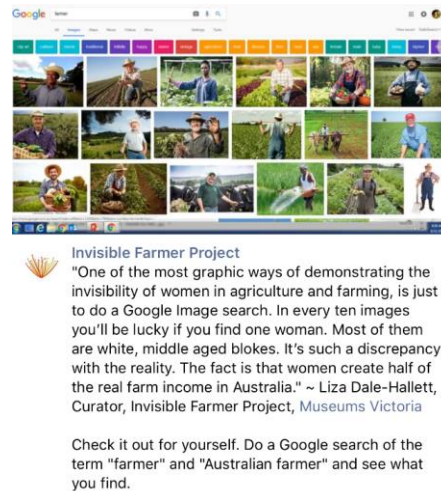


Figure 35. Dale-Hallett's Post of her Google Search.  
 Dale-Hallett posted her Google search for farmer and the results she received. January 14, 2018.

With her text, Dale-Hallett posted an image of a Google search for farmer and posted the text, "check it out for yourself. Do a Google search of the term 'farmer' and 'Australian farmer' and see what you find." Dale-Hallett's post was unique compared to the other photovoices previously shared, in that it did not contain one image, but a myriad of images (Figure 36). Her post tied back to the core identity of the woman farmer and the central mission and guiding principles of the *Invisible Farmer Project*, to honor "the contributions and leadership of farm women of the past, in the present and into the future," opening a dialog not only in research communities, but among farmers and outside audiences (Invisible Farmer, n.d.). Dale-Hallett's post was viewed by 1,193 people and shared 11 times. In response to Dale-Hallett's post, there were 23 comments. One researcher noted:

I did a [Google search] for that exact phrase! I can see now I need to be working on terms such as 'farmer' and 'Australian farmer' too! If we do that then surely we can make a huge difference to the images that come up and in turn the overall perception of who farmers are!



Figure 36. Women Farmers at Work.

A screen shot illustrating responses to Dale-Hallet's post on a Google search for "farmer", January 14, 2018.

Other women noted that they are always the ones taking photos of their kids, with only a rare selfie here and there with their children, and are not posting pictures of themselves as farmers (Figure 37). Many farmers attributed the lack of photos to being caught between two places at once, such as taking the kids to a soccer practice then unexpectedly having to pen a loose cow on the way back home. Women responded to the post with further comments, and posted pictures of themselves working on their farms, sharing their experiences "as women, mothers, wives and daughters as well as farmers" (Herron & Skinner, 2012, p. 244). Part of the mission of the *Invisible Farmer Project* is to encourage women to photograph themselves and document their lives. Photovoices of women farmers provide insights into the reality of their day-to-day lives and further defines their responsibilities, roles, proficiencies, and pride in affirming their identities as farmers, stating, "I am a farmer, too."



### *Am I a Farmer, Too?*

As curators, farmers, and partners of the *Invisible Farmer Project* shared the stories of women farmers across Australia, the stories of these women and their contributions have raised questions regarding the traditional, patriarchal definition of “farmer”. Women participating in the project have established a new dialogue about what it means to be a woman farmer. They have engaged outside audiences and shared aspects of their daily care work on the farm, their contributions to the industry, and the responsibility they feel towards the farming community (Herron & Skinner, 2012).

The photovoices shared through the *Invisible Farmer* Facebook page illustrate an enthusiasm to share experiences but also reveals the societal barriers women have to work through to claim their identities as farmers. The project illuminates women’s contributions, working to make visible what has been ‘invisible’ historically, and initiates a conversation with outside communities (Dale-Hallet et al., 2016). As noted by Margaret Alston (2000), diffusion of information is key to bringing forth social justice regarding women’s work, in that women are key agents of change in the agricultural sector, initiating development through their contributions and knowledge.

### Conclusion

Although women contribute to half of the agricultural workforce in Australia, the identity of women farmers and their roles on the farm are often misrepresented and historically unknown (Invisible Farmer, n.d.). In this study, women farmers who shared their photovoices agreed there was a great need for a deeper understanding of women’s roles in the agricultural sector in Australia, and that these roles are currently being redefined. The posts that gained the highest numbers of views and comments, or

community engagement, were the posts about women not being recognized as a farmer. This situated well with my pre-determined theme of women farmers' identities, exploring women farmers labeled as farm wives or helpers. Women shared posts about the daily care work they do on the farm and how this work can be both a positive and negative experience. Many women commented that they were the “backbone” of Australian agriculture. Participants, in both personal interviews and Facebook posts, identified as farmers, wives, and mothers, but did not define themselves by the terms “farm wife” or “helper.”

Women shared ways they contributed to the agricultural sector as industry partners, community advocates, managers, and leaders. Establishing charities, community networks, and opportunities for education, required emotional engagement. As one farmer and fashion designer noted, “If people are emotionally connected to something, they are more likely to support it” (Leila Sweeny McDougall, 2017).

As farmers photographed their daily environments, aspects of their work, and shared narratives of their daily lives, place was central to their story, identity, and emotional engagement. Photovoices situated the viewers in a specific time and place, allowing Facebook users to experience this place through the farmers' perspectives, but for the viewers to also ascribe meaning and value to these posts from their own life experiences and emotions.

Although the landscapes of the many farms across Australia were vastly different, the daily work and ties to place established emotional engagement and a starting point for community dialog. As this dialog progressed, subthemes became evident—the struggles of daily life on the farm and how place is interwoven with women's daily lives. Some

daily struggles mentioned were having access to medical services in their remote locations, extreme weather and brush fires, livestock health, and water issues. These subthemes relate back to my methodologies and pre-determined themes, but also further illuminate how deeply emotion can be experienced and establish can a sense of place (Herron & Skinner, 2012; Silvasti, 2003).

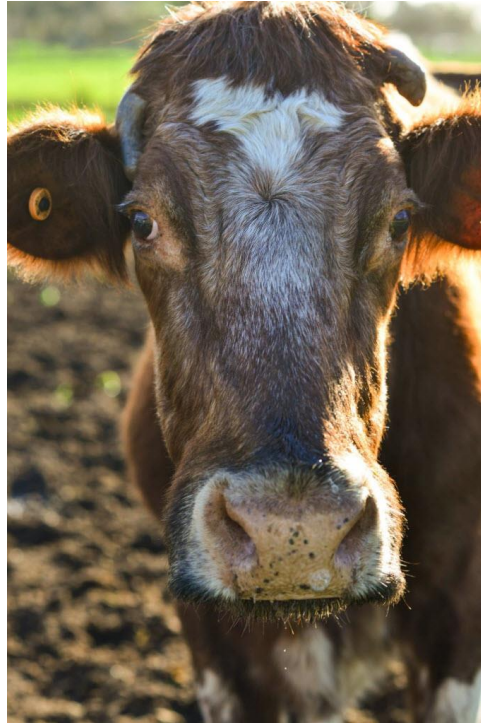


Figure 37. Joyce the Cow.  
A photograph taken at Glencliffe Dairy Farm in Shepparton, Victoria, Australia. August 11, 2016.

Can a picture speak a thousand words? What about a picture accompanied by a sentence, or an emoji? While visiting the dairy farm in Shepparton, Australia, I had the opportunity to photograph the farmer's oldest dairy cow, Joyce. This dairy cow was retired and enjoying a life of leisure with a few young calves to keep her company. When I arrived home, and reviewed all the photographs, I could not help but smile when I saw the portrait I had taken of this sweet, old cow with crooked horns (Figure 38). Not long after my visit, Joyce passed away. The farmer shared the photo I took of Joyce on her

Facebook page. When she posted the photo, she wrote, “Rest in peace old friend Glenclyffe Joyce 85 EX 2E, the last of our original cows we brought down when we moved to Victoria.” Many responded to the post with their condolences. One commenter wrote, “I am really sad for you, but also wish some ‘city dwellers’ could read this post and comments as an example of how much farmers invest emotionally to their cows.”

Can a photovoice establish connectivity among women farmers and outside audiences? The creation of the photo establishes an interpretation of meaning by both the creator of the photograph and the viewer. The image elicits memory, familiarity, and establishes meaning based on the viewer’s and photographer’s lives and individual experiences. The accompanying narrative establishes a deeper connection as the viewer can read about the farmer’s life. In the case of the *Invisible Farmer Project*, where this photo is presented as part of a larger project, through a social media application, the creator and viewer establish a conversation, participating in a community dialog. As this community is established, photovoice provides the entry for open communication and a dialog that can stimulate public discussions about contemporary issues facing rural Australia and its future. The photographs are the catalyst of emotional engagement. Emotion is the foundation of expanding capacity for caring and gaining new insights into place, and diversified perspectives.

The use of Facebook as a platform to share photovoices provides a visceral connection to something deep in us, “a narrative of self that is inherently spatial,” removing divisions of cultural and physical space, evoking a link to how we feel about place, what we grow, eat, care and work for (Pile, 2002, p. 112). Photovoice is a tool for creating and establishing emotional engagement, connecting individual geographies and a

tangible and visual tie to place. Emotional geographies are at the core of women's communication, via Facebook, about their farms, families, and place—providing a means to connect women in agriculture, illuminating the intimate links between emotion, memory, and identity.

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## V. WATER DRY

### THE FARM AS PLACE IN A CHANGING CLIMATE, CAPTURING WOMEN FARMERS' EXPERIENCES IN IDAHO, USA AND VICTORIA, AUSTRALIA

“Surprisingly, little has been written about the cultural history of water.” William Cronon

“God speed the plow.... By this wonderful provision, which is only man's mastery over nature, the clouds are dispensing copious rains ... [the plow] is the instrument, which separates civilization from savagery; and converts a desert into a farm or garden.... To be more concise, *Rain follows the plow.*” Charles Dana Wilber, *The Great Valleys and Prairies of Nebraska and the Northwest*, 1881

#### Introduction

The regions of the Eastern Snake River Plain, Idaho and the Murray-Darling Basin, Victoria are places of extremes. They are so extreme that the native landscape of sagebrush, shrub lands, and a few native grasslands were erased in advertisements and replaced with fields of greenery, goddesses, and a sun as big as a planet (Figure 35, Figure 47). These romanticized advertisements were created to attract early settlers to farm these raw environments in the late 1800s and early 1900s with the promise that irrigation would transform the desert into a garden. The settlers came. It took some time (1860-2019), but the romantic landscape, in both regions, has come to fruition. Vibrant greens infuse the desert landscapes. Miles of potatoes, wheat crops, and pastureland live and thrive within desert ecosystems, drastic elevation changes, and diversified climates. What initially lured the original homesteaders continues to lure newcomers to these landscapes to this day.

However, no landscape is just a picture-perfect postcard. Behind the precision of

the greenery, the orchards, and neatly shaped rows of potatoes is a place infused with social, cultural, and environmental division. Layers of adaptation and failure are visible in the rustic farm implements and the varied irrigation technologies, such as the old Dethridge wheel used to measure water allocation (1910), the windmills of Shepparton, Victoria, and the sagebrush-filled canals and massive irrigation pivots on the Arco Desert, Idaho (The Dethridge Wheel, 2019). These are landscapes with a dichotomous history. The Shoshone (Native Americans) and the Yorta (Aboriginals) of both regions were evicted, killed in massacres such as the Bear River Massacre, died of diseases they were exposed to from homesteaders, or were often forced to sign agreements to move. These first peoples claimed rights to place long before the railroads, the federal government, or the European farmer. Then there were policies such as the White Australia Policy (1901), which banned Asian migration for the next 50 years (Migration Heritage Centre, n.d.). Bigotry, eviction, violence, appropriation, drought, and environmental degradation are all foundational to what has now become the contemporary agricultural landscape.





Figure 38. A Farmer Moves Fencing.  
A farmer moves electric fencing in the cow pasture. She is growing a new legume that is resistant to frost.

Today, who has taken up the mantel of this complex multi-layered legacy of those who have lived and established homes before? Who lays claim to place? Does the spirit of the homesteader looking to create this garden in the desert still exist? In a world where industrial agriculture, factory farms, urbanization, and climate change threaten sustainable agriculture, and a way of life, how do the family farmers navigate these challenges? What can we learn from their stories? This research project is about those farmers. They live on the fringe of industrial agriculture and are trying to keep the legacy of the family farm from disappearing. What will disappear? Knowledge. Identity. A sense of place. Different ways of discerning the past. Who are these farmers? If you live in a rural area, you might see one as you drive by. She is moving pipe. She is moving cows across the paddock with a baby on her hip (Figure 39). She is driving the tractor, setting pivots, and bucking hay. This is not the farmer you have seen in TV ads or billboards for large-scale agribusinesses. Who is she? This is her story.

Historically, farmers in Idaho and Victoria have faced many crises, particularly during drought years. The purpose of this research was to discover how rural women farmers have perceived and experienced climate change and responded to crises connected to climate events. Reflecting this exploratory study of rural women who live in Idaho and Victoria, in this essay I seek to deepen our understanding of climate impacts at the farm level, of women's work, and of women farmers' adaptive strategies in the face of climate change in arid environments. The farm, as place, is a product of a complex history where landscape becomes claimed by resource management, controlled and altered over time. Seeking to recognize how women's work plays a role in the

transformation and production of the farm, I demonstrate how claims to place in stories and memories are interwoven with the shape of the landscape (Fiege, 1999; Langston, 2003; Sachs, 1996). I also illuminate the value and contributions of the invisible woman farmer—to her family farm and agricultural communities—evidencing the culturally influenced gender barriers women continue to face in the agricultural sector.

Idaho, USA and Victoria, Australia have long histories of seasonal drought, water challenges, and arid rangelands. I focus here on two case studies in the region of Idaho known as the Eastern Snake River Plain and in the Goulburn Valley of Victoria. Using concepts and methods from the disciplines of gender studies, landscape history, and environmental history, this interdisciplinary study illustrates how historical and contemporary narratives around crises and the adaptive strategies that come from times of calamity provide knowledge and experience that will inform future decision making when extreme weather and drought situations arise under capricious climate conditions.

### The Invisible Farmer

Who is she? The *yeowoman* behind the plow. Her history is often and largely unknown, but her role on the farm is diverse and vital. Her work and contributions have not been documented sufficiently (Damousi, 2014; Sheridan & McKenzie, 2009). Her title is known only to herself, and her knowledge and experience are not acknowledged or celebrated outside of her immediate community. She is the *invisible* farmer.

Nearly a third of farmland in the United States is farmed or co-farmed by women, and women contribute over 49 percent of real farm income in Australia (American Farmland Trust, n.d.; Invisible Farmer Project, n.d.). However, women's roles in agriculture and their knowledge and contributions in the agricultural sector have

historically been excluded from official statistics and documentation. Women's domestic work and off-farm income, in both the U.S. and Australia, have often been ignored in the public sphere and disregarded as agricultural work (Damousi, 2014; Sheridan & McKenzie, 2009). Women farmers have not been validated as contributors to the livelihood of their farm operations (Invisible Farmer Project, n.d.). Women farmers are key agents of change and critical to the future of agriculture and food security, but cultural dynamics are complex, contradictory, and slow-changing, continuing to render the woman farmer *invisible* (Sachs, 1996).

In the following sections, I address the varied identities of the invisible woman farmer and how her day-to-day work shapes the landscape. Considering the environmental history of each region and the foundational strategies implemented to irrigate arid landscapes, I present a brief history of the land, agricultural settlements, and hydrology of the Eastern Snake River Plain in Idaho and the Goulburn Valley in Victoria. I next explore how women's agricultural work and the mechanization of farm labor are integrated within culture, landscape, history, and gender norms. I address resilience in farmwomen's work and life patterns, as well as their decision-making and adaptation strategies in the face of crisis. In the final section, I discuss the farm as place in a changing climate—how stories, work, and climate adaptation are woven together to establish a sense of place.

## Methods

Using the methodologies of ethnographic interviews, photography, and oral histories, I explore the history of women's farm work, and how the collected narratives of rural women farmers living in Idaho and Victoria reflect and shape farmwomen's

identities as well as cultural and ecological landscapes. In addition, I reviewed books, photographs, engineering reports, land surveys, memoirs, and maps at the special collections library at Idaho State University, Idaho State Historical Society, and Museums Victoria. Data from these latter sources help me establish the context of settlement dates, irrigation methods, and regional aspects specific to farming in Victoria and Idaho.

During my preliminary research in Idaho and Victoria, I interviewed women ranging in age from 25 to 83. Using a semi-structured approach, I interviewed 17 women in Idaho and 24 women in Australia and observed a pattern of emerging themes. Themes that were evident amongst interviewees were identity, work, place, and water. In subsequent follow-up interviews with two of the same women with a subset of eleven women in Idaho and seven women in Victoria. I explored these themes in greater detail. I also took photographs of farmers at their homes and places of business, along with reviewing historical photographs. Photographs provided additional data for content analysis, where the farmers shared meaningful aspects of their identities and their farms through imagery.

#### A Comparative Climate

The regions of the Eastern Snake River Plain, Idaho and The Murray-Darling Basin, Goulburn Valley, Victoria share similarities in climate and rainfall patterns. The Eastern Snake River Plain has a continental climate, with hot, dry summers, cold winters, and little rainfall. Similarly, The Murray-Darling Basin Goulburn Valley has a semi-arid climate with a frequent history of drought and rare periods of above-average rainfall (Lane & Nichols, 1999). The observed annual precipitation for the state of Idaho, over a

five-year period from 1895-2014, has shown an average of 23.7 inches annually.

Comparatively, the observed annual precipitation for the state of Victoria, over a five-year period from 1900-2018, has shown an average of 25.9 inches annually. Both states have experienced significant droughts that continue to surpass the droughts on record from previous decades (Bureau of Meteorology, n.d.; Runkle, Kunkel, Frankson, Champion, & Stevens, 2017).

Although these regions vary in terrain and elevation, they experience similar climate impacts, such as the first identification of the Spotted Wing *Drosophila*, or fruit fly, in both states in 2012 as well as late spring rains and flooding (Quinn, 2019; Interview, August 11, 2016). Fruit fly infestations have caused drastic damage to horticultural crops in both states, as the flies can destroy berries and stone fruits with little detection on the exterior of the fruit (Interview, August 11, 2016). The arrival of the fruit fly was mentioned by women farmers in both Victoria and Idaho. The farmers discussed and how it has affected their crops, adaptation strategies, and chemical use. As one Victorian farmer noted, “fruit fly is definitely something that has occurred because of climate change” (Interview, August 11, 2016).

The late spring rains and flooding have also required farmers to adjust their planting times as well as their irrigation schedules, terrains, and technologies. What irrigation practices were successful for many years, have now been altered with the large spring runoff, as the spillways from reservoirs and smaller dams have impacted erosion barriers and certain areas of the farms where growing conditions have been reshaped from flooding. An Idaho farmer who used sprinkler irrigation discussed how certain parts of the farm were only flood irrigated due to the change in the river and the spring runoff.

She no longer used sprinkler irrigation in that field due to the saturation of the water table (Interview, May 29, 2018). A farmer in Victoria saved for many years in order to implement a new irrigation technology on her property and expand her berry farm. However, the unexpected late season rains damaged the new irrigation equipment (Interview, August 6, 2016). The climates in the regions of the Eastern Snake River Plain and the Murray-Darling Basin, Goulburn Valley challenge farmers and require adaptation strategies and evolution of technologies to make farming viable. Climate change will continue to bring unexpected problems to farmers in both agricultural regions, and irrigation technologies will continue to be of paramount importance. Irrigation technologies have evolved over time as multiple generations of farmers continue to work the land. Irrigation is tied to the history of these regions, the landscape, the farmers, and their communities.

#### The Eastern Snake River Plain: Idaho, USA (1860-2018)

Since the establishment of irrigation in southeastern Idaho in the early 1900s, the resultant human and natural convergence cannot easily now be separated. A new ecological system was formed as settlers began to farm and move livestock across the land once inhabited by the Eastern Shoshone tribes (Fiege, 1999). Spanish, Mexican, and indigenous women claimed homes, established communities, and farmed long before homesteaders from the eastern United States and Europe came to the west (Public Square, 2015). As part of the Fort Bridger Treaty of 1868, the Shoshone were forced from their native lands for designated reservations, such as the Fort Hall Indian Reservation (Hodge, 2019).

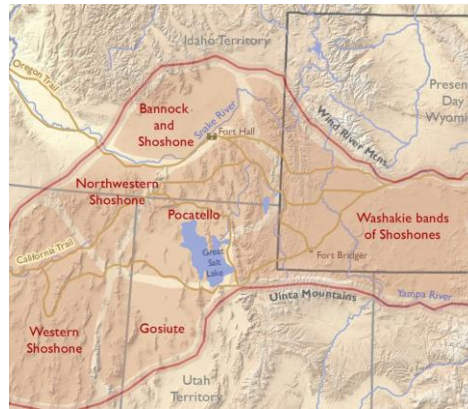


Figure 39. Shoshone Territories

An illustration of the Shoshone Territories in 1868. Retrieved from <https://www.wyohistory.org/encyclopedia/coming-wind-river-eastern-shoshone-treaties-1863-and-1868>. Copyright 2019 by the Wyoming State Historical Society.



Figure 40. Grubbing Sagebrush

A farmer grubbing sagebrush in the Twin Falls area in the early 1900s. Retrieved from [http://yanceyfamilygenealogy.org/photos\\_of\\_farming\\_in\\_idaho.htm](http://yanceyfamilygenealogy.org/photos_of_farming_in_idaho.htm). Copyright 2019 the Yancey Family Surname Resource Center.

As the 20<sup>th</sup> Century unfolded, many tribal women faced devastating poverty and a loss of their culture and land (Public Square, 2015). Shoshone territory was claimed by the federal government as railroad construction was progressing through the Wyoming Basin (Figure 42) (Hodge, 2019). A landscape once utilized for hunting, gathering, and seasonal migration changed. Farmland once cleared by the Shoshone with 300 wild ponies was now cleared again by homesteaders with horse drawn grubbers (Figure 43) (Hodge, 2019). New homesteaders laid their claims to this place. Partners in ranching businesses



extended their summer grazing territories from northern Utah into Idaho. The settlement in the Eastern Snake River Plain began with many families who were attracted to free grazing and homesteading opportunities brought about by the Homestead Act of 1862. The Homestead Act of 1862 gave individuals from the United States and other countries around the world the opportunity to claim land. During the homesteading era, thousands of people claimed and settled more than 270 million acres (The Homestead Act of 1862, 2019).



Figure 44. Pocatello, Idaho

Illustration created by William Bittle Bell for the Pocatello, Idaho Booster Booklet, ca. 1909. Retrieved from <https://education.boisestate.edu/irrigatedwest/text-poems/>. Copyright 2019 by the Idaho State Historical Society.

The Oregon Short Line Railroad and reclamation service officials promoted a utopia, but many homesteaders found a harsh and raw environment with difficult living and working conditions. This imagined utopia is evident in the illustration William Bittle Bell created for the Oregon Short Line Railroad, showing a gateway to green landscape with neat-rowed crops, bountiful harvests, and not one grubber or sagebrush in sight (Figure 44).



Figure 45. Elinor Stewart on a Horse-drawn Hay Mower.  
Retrieved from <https://www.wyohistory.org/encyclopedia/elinore-pruitt-stewart-writer-and-homesteader>. Copyright 2019 elinorstewart.com.

This vision of western agriculture aligns with writings of women homesteaders and authors who published in newspapers and magazines during this time. Women's reflections on the west are found in letters, sketches, essays, and journal entries that described their daily lives and an exotic frontier (Square, 2015). Elinor Stewart, who later gained notoriety from her essays and letters, wrote about homesteading the west and the independence she gained. Stewart's letters were published back east in prestigious magazines such as the *Atlantic Monthly* (Figure 45). She wrote, "any woman who can stand her own company, can see the beauty of the sunset, loves growing things, and is willing to put in as much time at careful labor as she does over the washtub, will certainly succeed, will have independence, plenty to eat all the time, and a home of her own in the end" (Wyoming History, n.d.)

Independence wasn't gained without the difficult realities of farming. Some homesteaders failed at farming and left their land behind. Eventually, with many failed farms passing from one homesteader to the next, the sagebrush-filled desert state began to bloom (Funda, 2013; Lovin, 2002). Farmers began to understand seasonal climate and grew certain crops based on the availability of water. Hay and grains were introduced in

early spring and summer before water was scarce in later summer and fall months.

Farmers established a home—both a human and natural place, “not simply as a departure or degradation, but as a new environment, a new ecological system . . . created and formed” (Culture of the Irrigated West, n.d.; Fiege, 1999, p. 9; Lovin, 2002).

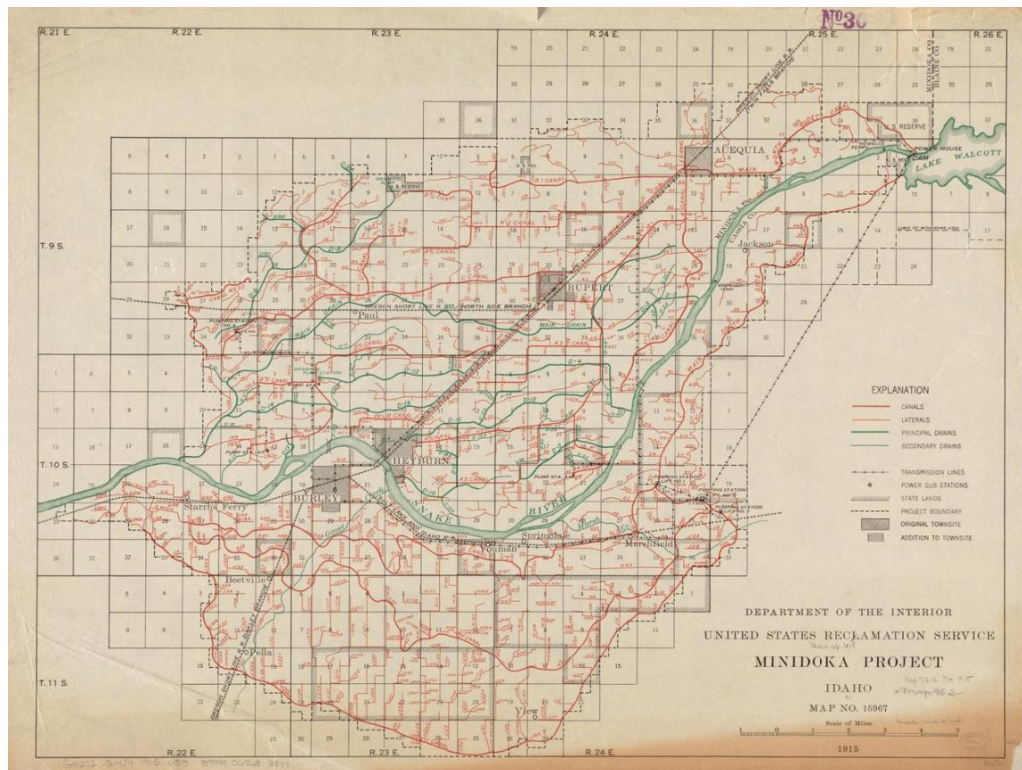


Figure 46. Minidoka Project Map.

A map of the Minidoka Project illustrating the canal systems and irrigated land around the present-day cities of Burley and Rupert, Idaho. Before the irrigation project, Burley and Rupert were desert towns with small populations and a few ranches. The project began in 1904. By 1919, there were 9 towns, 2,208 farms were in operation, and an estimated population of 17,000 people lived in the area. Retrieved from <https://usbr.gov>. Copyright 2019 by Bureau of Reclamation.

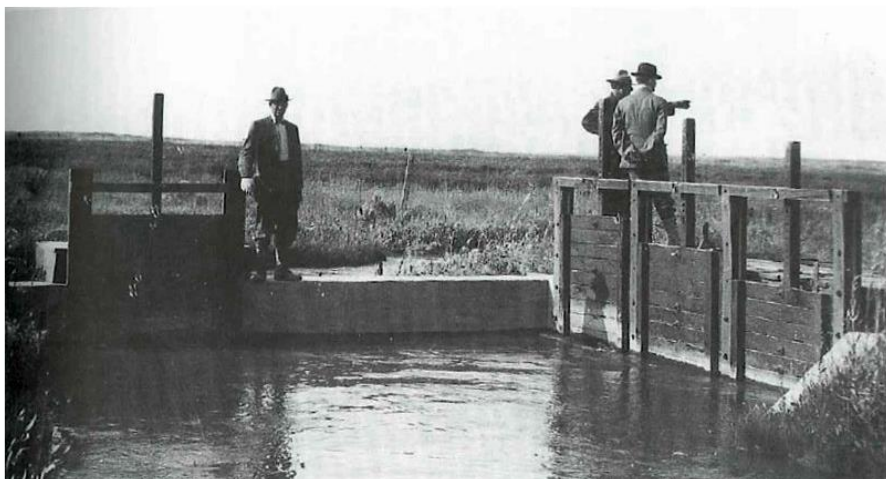


Figure 41. Wooden Headgates.

A photograph of wooden headgates on the newly built canal that distributed water from the Snake River (early 1900s), retrieved from <https://history.idaho.gov/collections/>. Copyright 2019 by the Idaho State Historical Society.



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Figure 48. Headgate Advertisement.

A headgate advertisement from the Irrigation Age, Vol. 24, April 1909. Retrieved from <https://catalog.hathitrust.org>. Copyright 2019 by the Hathi Trust Library.

Agriculture in Idaho was founded on the use of the latest irrigation technologies obtainable. *The Irrigation Age*, a newspaper published for farmers and irrigation manufacturers alike, displayed advertisements with detailed illustrations of hill ditchers, headgates, and hoists. These technologies molded and connected an agrarian network of canals woven into the landscape (Figure 46). In the early years (1880s), water passed through primitive wooden headgates into smaller conduits and laterals that transferred water to the surrounding farms (Figure 47). By 1908, canal companies were pushing iron headgates and turbines, the latest technology, as effective, powerful, and long lasting (Figure 48) (Funda, 2013; Lovin, 2002; *The Irrigation Age*, 1909). What resulted from this continual evolution of irrigation technology? A region shaped by appropriation, increased technology, communal canal networks, and water rights (Fiege, 1999). Irrigation, like many aspects of the agricultural industry, was interwoven with the gendered social system. This gendering of irrigation is illustrated in early advertisements, such as Bell's illustration created for the Oregon Short Line Railroad (Figure 44).

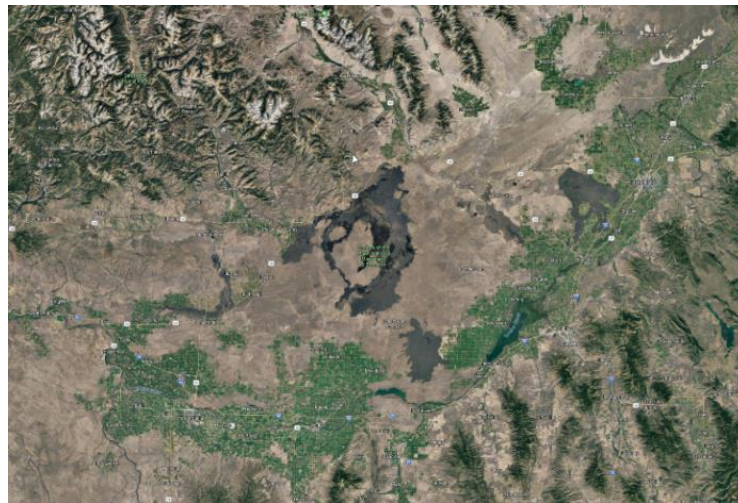


Figure 42. The Eastern Snake River Plain.  
A Google Earth view of the Eastern Snake River Plain in Idaho. Retrieved from <https://google.com/maps>. Copyright 2019 by Google Maps.



Today, Idaho is the largest producer of potatoes in the United States and is in the top 12 producers of cattle, sheep, trout, sugar beets, barley, and fruits such as apples and peaches. Profitable agricultural production would not be possible without irrigation (King & Stark, 2006; Idaho State Department of Agriculture, n.d.). When engineers began to fabricate their immense canal systems into the arid Idaho landscape, crop-growing experimentation thrived (Idaho Potato Museum, 2019; Fiege, 1999). What was once acre upon acre of muted green sagebrush evolved into furrows then quilted fields of vibrant green alfalfa, hay, beets, and potatoes (Figure 49). The crops in valley bottoms are pinned together by headgates, and canal systems were later replaced by lateral irrigation pivots irrigating fields with water pumped from the ground aquifer.

Irrigation not only founded an agricultural enterprise; it also fostered a complex ecological, political, and social landscape, driven by market-oriented governance, and a myth—that rain would follow the plow (Funda, 2013; Lovin, 2002). “Irrigation, it was thought, would create a nation of small farmers in the desert West and, in turn, provide a ‘safety valve’ against poverty by offering inexpensive land to industrial society’s less affluent members” (Culture of the Irrigated West, n.d., p. 1). The “magic-by-irrigation gospels” became a foundational rhetoric in profitmaking, publishing, and scientific communities (Lovin, 2002, p. 233).



Figure 43. Irrigated Lands Advertisement.

An ad run by the Oregon Short Line Railroad drawing settlers to farm Idaho land in the years 1907-1910. Retrieved from <https://catalog.hathitrust.org>. Copyright 2019 by Hathi Trust Library.

Settlers, led by the speechmaking of land agents, corporations, advertising, and government incentives, established farming practices that sought an immediate economic return (Figure 50) (Lovin, 2002). These farming practices included extending canal systems, building diversion dams, and maintaining existing canals. Many of the canals were extended far beyond the river reaches, leaving farmers with canals that no longer carried a continuous stream of water.

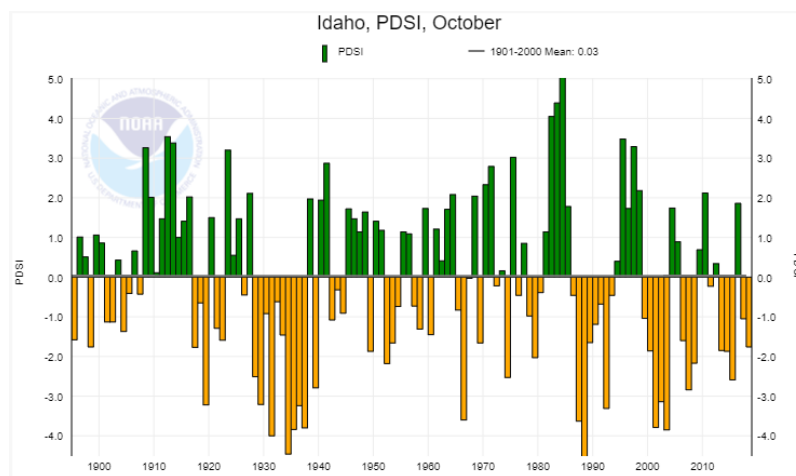


Figure 44. Annual Rainfall - Idaho 1900-Current.

The Palmer Drought Severity Index (PDSI) uses readily available temperature and precipitation data to estimate relative dryness. It is a standardized index that spans -10 (dry) to +10 (wet). Retrieved from [climatedataguide.ucar.edu](http://climatedataguide.ucar.edu) January 4, 2019.

As noted by the local Watermaster<sup>16</sup>, at the upper end of the Lost River Valley, the river reaches are always charged first. “There are three different river reaches. The upper reach sinks and returns to the aquifer. When it gets full, it is like a bathtub that is tilted. It will overflow and fill the next reach. The trick is to fill the bathtub” (Interview, March 15, 2017). Headgates were needed to rotate water flow to certain canals depending on the time of day and water allocation (Fiege, 1999). Even with the continuing expansion and evolution of irrigation technology, years of drought in Idaho have been frequent, resulting from severe climate conditions and stream flow deficits (Figure 51) (Horn, 1989).

Drought is prolonged periods of dryness and impacts agricultural, hydrological, and socioeconomic systems (IDWR, 2001). Surface water supplies, such as those that fill the reaches of the Big Lost River, are cyclic. Droughts have been common at both the regional and state level. The earliest, well-documented drought was during the 1920s and 1930s during the Dust Bowl Era (IDWR, 2001). Since that time, several regions of the state have experienced severe drought conditions, in the early 1960s and 1987-88, when Idaho and the West experienced the worst water shortage in the history on record.

Climate in this region of Idaho is continental, with hot, dry summers, cold winters, and little rainfall. Within the region of the Snake River Plain, there are also drastic differences in elevation, 710-12,662 feet. The elevation differences create microclimates and different growing conditions for farmers who can live within 30 miles of each other (Idaho Climate Center, 2019; Interview, May 30, 2018).

Drought years reduce the amount of water that returns to the Snake River through

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<sup>16</sup> The Watermaster is appointed by the director of the Department of Water Resources. The Watermaster is elected and compensated by the district water users and is in charge of daily water distribution, record keeping, measurement, and general district management (Idaho Department of Water Resources, 2019).



spring discharge. With little snowpack or seasonal rains, there are stream flow deficits and little to no recharge. A woman farmer who owns a greenhouse business and worked for the city of Arco, Idaho, commented on the how drought not only affects the farmers, but the city wells:

When the river is not running, and the aquifer is drained above the valley, it affects us down here. The city is on a well and has its own water rights. The city has five wells, but only two are working because they aren't stable. Why are we irrigating the desert [crops] when the river never flows out there? (Interview, June 13, 2018)

From the irrigation projects established through the Reclamation Service in the early 1900s to contemporary times, Idaho's agricultural development has come to encompass complex ecological and social systems—3.2 million acres of irrigated land and 24,000 operating crop farms (Idaho State Department of Agriculture, n.d.). Decades later, those who thought Idaho to be a land in the making, “a world of fresh starts,” have found a changed yet resilient environment, a home shaped by day-to-day decision-making. “Idaho's irrigated fields did not represent only human choice and artifice; it reflected the reciprocal interplay of culture and nature that created the irrigated landscape as a whole” (Fiege, 1999, p. 206). The landscape of the Snake River Plain, traced with irrigation ditches, patched with beets, potatoes, hay, and alfalfa, and sprinkled with silhouettes of beef cattle and sheep, has become a symbol of those who reside on the land and are tied to water. However, drought years produce a far different landscape. Fields that cannot be irrigated from lack of surface water return to the native landscape of grasses. Cattle and sheep are sold or moved to different locations where they have the feed necessary for them to survive. The farmer is rooted in place, establishing a home and livelihood on a “tremendously complicated set of claims that at any moment may betray [her]” (Funda, 2013, p. 202). These claims are established by her expectations of place,

culture, and identity, and lie in the function of the landscape, her daily work, and water availability.

### Idaho Water Rights

In the early 20<sup>th</sup> century, state water laws were defined by the ‘doctrine’ “which granted a permanent water right to those who first appropriated surface waters” (Shupe, Weatherford, & Checchio, 1989, p. 413). The idea of first site, first right was an attempt to allocate water and divide streams and rivers into private property (Fiege, 1999; Shupe, Weatherford, & Checchio, 1989). “When a creek or river ran low, the earliest claimants—those holding prior rights—would take water before those farmers holding later rights” (Fiege, 1999, p. 26). This early attempt to simplify water allocation became much more complicated for farmers and the way they irrigated when water was stored in reservoirs and diverted into streams and canals. In hopes of meeting increasing demands for surface water, farmers developed cooperative irrigation practices.

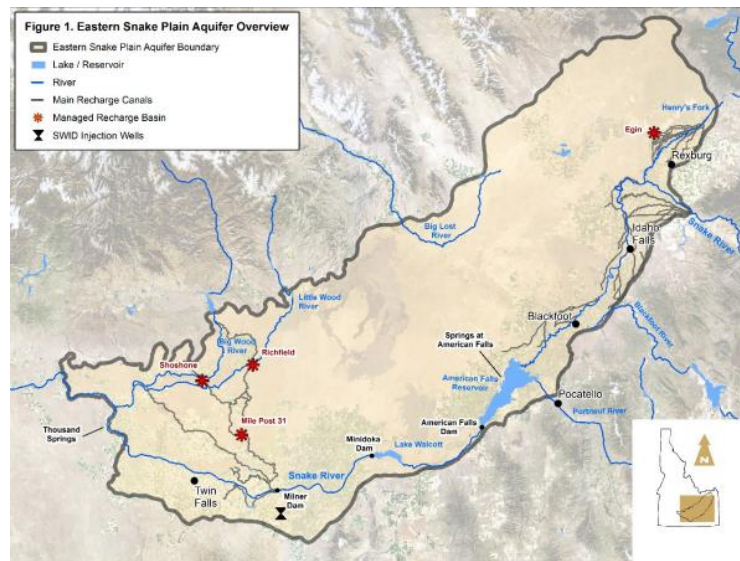


Figure 45. The Eastern Snake River Plain Canals and Basins.

An illustration of the Eastern Snake River Plain Aquifer and recharge canals and basins. Retrieved from <https://igwa.info>. Copyright 2018 by Idaho Ground Water Association.

A water district was defined where water was distributed on a sliding scale by a water master. The sliding scale determined who received water first based on the date the owner settled the land. When there was a water shortage, the landowners with the oldest water rights received their water allocations first (Idaho Department of Water Resources, 2019; Fiege, 1999). Later came ground water rights that were accessed by drilling irrigation wells. Ground water rights were established around 1950. Farmers were allowed to claim ground water by drilling until 1963. Due to over tapping the aquifer from the early 1960s to the 1990s, ground water rights now only can be established for purposes of domestic consumption, where a landowner has a half-acre or less. Both types of water rights affect the distribution and movement of water and the ability of an aquifer to recharge (Figure 52).

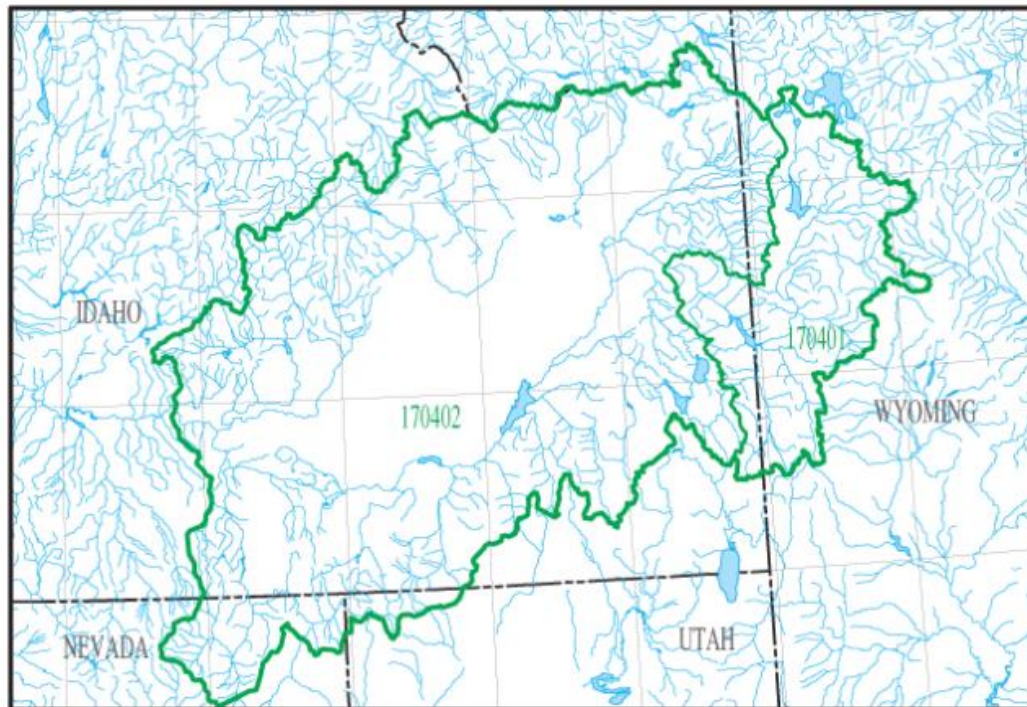


Figure 46. Watershed 170402.

A map of Watershed 170402, which covers the Eastern Snake River Plain. Retrieved from <https://water.usgs.gov>. Copyright 2018 by U.S. Geological Survey.

These cooperatives were established within the geographical boundaries of a

watershed (Figure 53). The Big Lost River and the Little Lost River are two of the four sink watersheds in Idaho. A distinctive feature of the sink watersheds is the interchange from surface streams into the ground then back again to surface streams (Crosthwaite, Thomas, & Dyer, 1994). These rivers ‘sink’ into the Snake River Aquifer. Idaho farmers in the geographical area of the Snake River Plain draw their irrigation ground water from the Snake River Aquifer.

The Snake River Plain is the source of a large part of economic and agricultural production of southern Idaho (De Grey & Link, 1996). With over three million acres of farms and ranches irrigated on the Snake River Plain, roughly two-thirds from canals and one-third from wells, Idaho has one of the highest per capita water consumption rates in the U.S. (De Grey & Link, 1996). Irrigation practices directly influence the water resources of the aquifer system, and it is estimated that nearly 60 percent of the aquifer recharge is reliant on irrigation surface water (De Grey & Link, 1996). The “total ground-water storage in the upper 500 feet of the aquifer is estimated at 200 to 300 million acre-feet, roughly the equivalent of Lake Erie” (De Grey & Link, 1996, p.193). The ground storage is fed by many drainage basins, which are managed mainly by the federal government. These basins, however, have limits on their water carrying capacity. Capacity can vary based on the soil types in the region, underlying geology, and how the delivering canal or stream is functioning (Idaho Ground Water Association, 2019).

#### The Murray-Darling Basin, Goulburn Valley: Victoria, Australia (1870-2018)

Since the establishment of irrigation in Victoria, water reform has been a constant, evolving process. In the late 1800s, the Victoria State Government began setting water fees to access irrigation water. In 1878, the Victorian government established the Water

Conservancy Board. This board was in charge of determining how water management should be funded and organized. The Board issued irrigation reports based on research findings from major irrigation projects in countries across the globe. The western U.S. irrigation model was one of the models that they implemented. However, the valleys selected in Victoria for irrigation lacked the needed annual rainfall, snowpack, and soil composition found in other countries (Davidson, 1966).

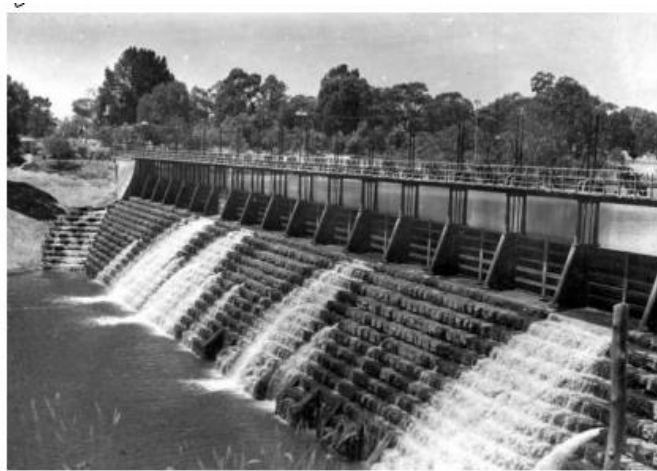


Figure 47. Goulburn Weir.

The original Goulburn Weir built from the state-funded trust money under the Irrigation Act of 1886. Retrieved from <https://museum.rba.gov.au>. Copyright 2019 Reserve Bank of Australia Museum.

The Australian government established the Water Conservation Act in 1883 and the Irrigation Act in 1887, building irrigation networks, taking control of all rivers, and constructing dams on many of the major rivers across Victoria. Many of the irrigation technologies came from the western United States, as Victoria's economy and climate closely resembled that of U.S. western states. A weir, an example of this technology, was built to increase the height of the Goulburn River and would divert water to a series of canals (Figure 54) (Davidson, 1966; Irrigation Australia, 2018).

As in Idaho, the establishment of irrigation networks and the attempt to control the region's hydrology resulted in "a hybrid landscape, [where] clear distinctions between

technology and natural systems dissolved,” resulting in many serious and unintended consequences (Fiege, 1999, p. 205; Garryowen & Weidenhofer, 1967). The selection of the Goulburn Valley as one of the nation’s primary irrigation areas had inadvertent ramifications. Rainfall in the region ranged from 323mm to 750mm per month, but in the summer months, it exceeded 1500mm across all summer months (Davidson, 1966). Crops were slow to establish and provided small yields. The formation of irrigation furrows in the clay and loam soils did not help water penetration, or germination, and it took many years to establish ground cover pastures in the dense soils (Davidson, 1966).

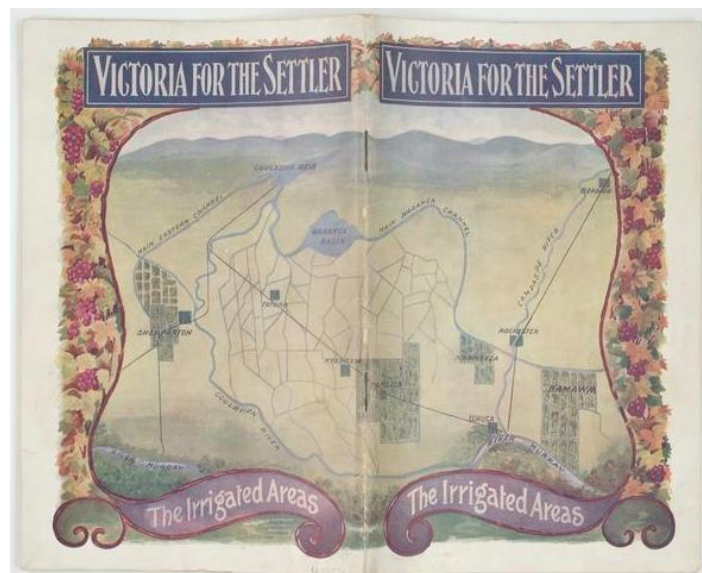


Figure 48. The Irrigated Areas.

An illustration from a guidebook published in 1912 for new settlers. Retrieved from Museums Victoria <https://collections.museumvictoria.com.au/items/402351>. Copyright 2019 <https://collections.museumsvictoria.com.au>.

Like settlers in the Western United States, Victorians, women and men, were lured by the appeal of independence and the dream of working the land (Figure 55). They had a desire to “transform the landscape, which they saw as barren and empty, and improve on nature by bringing [irrigation] land practices to Australia” (Anderson, 2011, para. 3). However, water came with a price. Farmers struggled to meet land payments in early years (1890-1910) and increase their crop yields:

In spite of the economic failure of earlier projects and the emerging problems created by the physical environment, major river regulation projects with larger storage reservoirs were constructed and irrigation continued to expand in the Goulburn Valley. Construction was also encouraged by a population that believed that in the driest continent irrigation must be profitable (Davidson, 1966, p. 135).

These larger storage reservoir projects, including the Hume Dam that holds 1,417,118 megaliters of water, have covered many early settlement ‘drowned towns’ as well as considerable sites important to Indigenous Australians (Drowned Towns, 2019).

With the ready adoption of American irrigation systems, such as canals, dams, and storage reservoirs, agricultural development in Victoria was largely influenced by monetary pressures. The first irrigation settlement in Mildura (1887-1895) was based on California plans with irrigation designed to be rejuvenated by snowpack. Rather than implementing irrigation technologies adapted to the Australian river systems, irrigators ignored a landscape prone to years of drought, flooding rains, and poor soil quality and hoped for quick monetary gain (Davidson, 1966; Environment Land and Water Planning, 2019). In 1883, an Irrigation Bill was introduced to allow local landholders to establish irrigation trusts. These trusts were created by borrowing money from the state to finance reservoirs. By 1895, there were twenty-six trusts, which, with government funding of \$1,957,000, had managed to create an infrastructure of 49,000 hectares of irrigated land. However, even with interest, capital payments, and returns from agricultural production, the government never regained this money (Davidson, 1966; Environment Land and Water Planning, 2019). Much like farmers in the American West, Victorians relied on the myth propagated by climate theory of the time, that deep ploughing would allow the soil to “absorb rain like a huge sponge once the sod had been broken. This moisture would then be given slowly back to the atmosphere by evaporation” (Ferrill, 1980, p.68).

Building an agricultural and economic empire on the foundation of irrigation technologies, Victoria nonetheless has become Australia's largest food and fiber exporter, with 12 million hectares of agricultural land and over 11 billion dollars' (AUD) worth of exports in 2015-16 (Victoria State Government, 2017). However, droughts have plagued the Murray-Darling Basin, also known as the 'food bowl' of Australia, which spans over half of Victoria, with a number of rivers flowing directly into Australia's longest river, the River Murray. This basin is the 20<sup>th</sup> largest river catchment and is one of the flattest catchments in the world. Victoria is divided into eight smaller catchment regions, or watersheds (Victorian Water Register, 2019).

A prolonged drought spanning from the mid-1900s to 2010, often called the 'Big Dry' or 'Millennium Drought,' has required farmers to adapt their farming practices to maintain their livelihoods (Kiem & Austin, 2013; Sherval & Askew, 2011). These adaptation practices have included selecting new, drought-resistant sheep and cattle breeds, such as the Dorper sheep that were introduced to Australia in the late 1990s (Interview, August 11, 2016). Other adaptation strategies have included restructuring orchards to grow drought-tolerant fruit trees that need only occasional watering and no supplemental watering during the wet season (Interview, August 11, 2016; Interview, August 10, 2016).

### Victorian Water Rights

Early settlers established homes near lakes, rivers, and other natural water sources. The building of weirs, dams, wells, tanks, and other irrigation mechanics was layered over an early understanding of water supplies that belonged to Australia's first farmers, the Aboriginal people (Dale-Hallett, 2016). Aboriginal knowledge was rooted in



valuing water as sacred, necessary for survival, and protected by lore, establishing sustainable use of water resources. However, early settlers who utilized these same water resources did not view the ecosystems as connected or protected (Moggridge, 2010). This was the beginning of water appropriation and degradation in Victoria. What was once an intricate network of waterways that provided for the daily life activities of the Aboriginal people, such as fishing, swimming, ceremonies, and trade, evolved into overgrazed, eroded creek and riverbanks, silty watering holes, and polluted water sources. During the early settlement years in Victoria, seasons of drought were already prevalent. In attempt to regulate water, the Murray and Goulburn rivers were used as a source for irrigation canals.

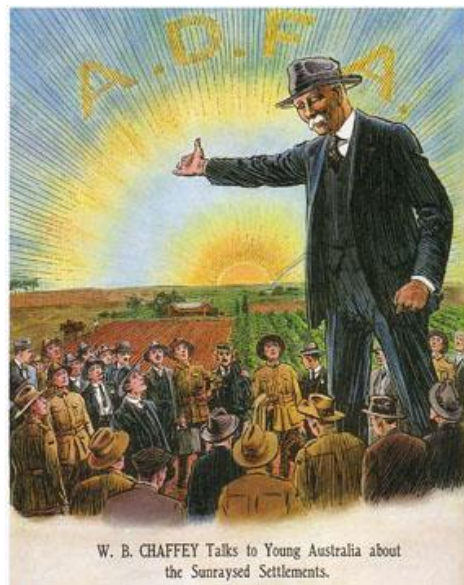


Figure 49. The Red Book.

An illustration from the Red Book advertising irrigation colonies near Mildura in Northern Victoria. Retrieved from [murrayriver.com.au](https://murrayriver.com.au). Copyright 2019 by <https://murrayriver.com.au>.

The climate in the central region of Victoria is similar to that in Idaho, classified as semi-arid with extreme variability, a history of frequent drought, and rare periods of above-average rainfall (Lane & Nichols, 1999). Similar to the beginnings of the irrigation domain in Idaho, water projects in Victoria were established with advertising campaigns

that were “lyrical [in] prose, designed to sell land and, in particular, the irrigation ethos” (Anderson, 2011, p.1). One advertising campaign came in the form of the Red Book, which made for a magnificent enticement, with its colorful, garden-like illustrations, presenting the opposite of reality—an arid climate with dust storms, stifling heat, and flies (Figure 58). Approximately 100,000 pamphlets and 1,000 hardbound copies of the Red Book were printed and distributed across the Western World (Anderson, 2011; King, 2011).

### Irrigation Ethos: History, Legacy, and Identity

What resulted from this irrigation ethos, in both regions of the world, was a positivist ideal wrapped in romantic vision for the future. Men and women farmers established connections to place based on irrigation technologies and had specific expectations based on that technical knowledge. They had faith in science and did not doubt irrigation could make the malleable desert landscape into a fertile, profitable, and bountiful garden (Wulffhorst & Glenn, 2002). However, the blooming desert was not without years of hardship, failure, environmental degradation, and contradiction. Within this alteration of the natural world is a history of people who made mistakes and lived with unexpected outcomes and limitations (Fiege, 1999). Water became a symbol of the farmers’ individual and collective identities, woven into culture and livelihood. As women and men alike brought pieces of their culture, knowledge, and farming practices to these regions, a societal structure was formed. Together they established gendered roles on the farm and in their communities. What do we know of the identities of the women farmers in particular? We often perceive the myths and legends of the American West and the Australian bush through the masculine archetypes of the bushman and the

cowboy. These archetypes are products of complex landscapes and histories and hold a bit of romanticism and historical notoriety. This is the familiar representation of agriculture we know from movies, TV commercials, Google searches, government pamphlets, and billboards for agribusinesses. The documentation of women, in Idaho and Victoria, who farmed the land, indigenous and later settlers, is sparse and hard to find. Clues about the identities of the women farmers are found in journal entries and the tools specific to women's work. This is evident in the grinding stone used by indigenous women and the agricultural yoke made for the farmer's daughter, so she could lift heavy buckets of water, milk, and other farm necessities (Dale-Hallett, 2016). Agriculture has been documented and represented as a traditionally male domain, and women have been perceived as domestic laborers, or as homemakers, rather than important and visible contributors to agriculture (Damousi, 2014; Sheridan & McKenzie, 2009; Williams, 1992). Have women always been perceived in this way? How did women come to work as farmers? What were their lives like on the farm?

### Women's Work Historically

Before the irrigation settlements established by immigrants from European countries, the first farmers were indigenous women. Early settlers and explorers of the Australian territories noted that indigenous people planted seeds, harvested plants, and preserved the harvest in sheds and vessels, and that they had extensive irrigation networks (Wilson, 2014). What are now contemporary farming sites still hold the names of the first peoples in Australia, with these names often reflecting the importance of water. Wangaratta, a rural farm community in Victoria, was named in the indigenous language of the Pangerang peoples, meaning meeting of waters. Nagambie is derived

from the Aboriginal word signifying a lagoon (Koorie Victoria, n.d.). In Idaho, Shoshone and Bannock women farmers fished for salmon, collected obsidian for tool making and trade, and gathered plants native to the region of the Eastern Snake River Plain such as the Chokecherry, Tansy Mustard plant, and Fireweed, and controlled the distribution of crop surpluses (Brosnan & Blackwell, 2017; Department of Energy, 2016).

During the early irrigation settlement years, for women in both Victoria and Idaho, life on the farm brought hardships and freedoms. Women were isolated in these rural irrigation settlements, and they worked sun up to sun down, but they were not bound by the societal standards of city life. Early Victorian women farmers cleared land with bullock teams<sup>17</sup>, managed large tracts of land, and hunted and rode in horse races (Waterhouse, 2002). The women farmers in the American West oftentimes lived more equitably as partners over the family farm, and gained opportunities for women's rights, including the right to vote, earlier than women in the Eastern United States. However, the woman farmer did not end her day in the fields. She devoted hours to preparing food, cleaning, sewing, and doing laundry, and then continued her day milking cows, tending the garden, and cleaning the barn and chicken coop. As one woman farmer wrote, "We are not much better than slaves. It is a weary monotonous round of cooking and washing and mending and as a result, the insane asylum is a third filled with wives of farmers" (Corbett, et al., 2014, para. 3). With the farm came freedoms, obligations, and connections to place, and ultimately, contradictions. The day-to-day work of women farmers was difficult, valuable, necessary, and unrecognized.

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<sup>17</sup> Ox-wagons tied to a team of oxen. Bollocks were used for harvesting timber and hauling hay and farm goods.

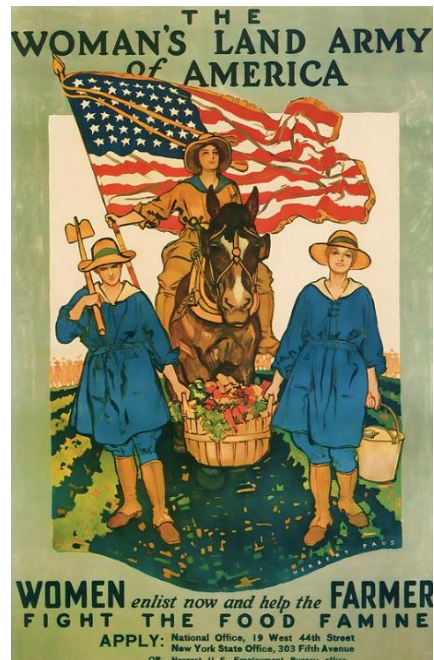


Figure 59. A Recruitment Poster for the U.S. Woman's Land Army.  
A poster produced to encourage women to join the Woman's Land Army during WW I. Retrieved from army.mil.  
Copyright army.mil.

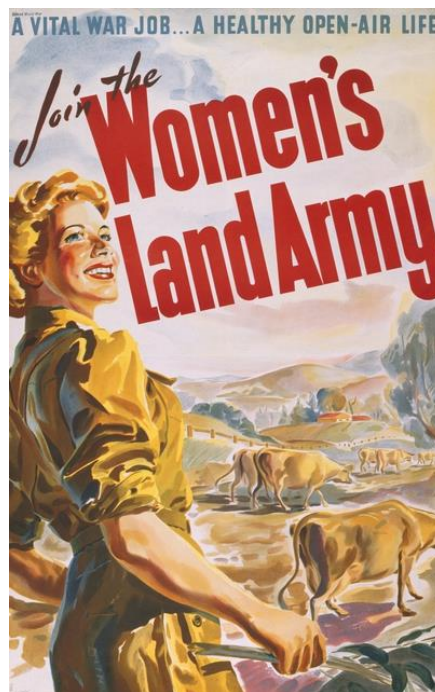


Figure 60. A recruitment poster for the Australian Women's Land Army.  
A poster produced to encourage women to join the Women's Land Army during WW II. Retrieved from australia.gov.edu. Copyright Australian War Memorial australia.gov.edu.

Spanning the years of 1914-1919 and 1939-1945, women went to work as waged

farm laborers as part of the war efforts. These women were not typically from agricultural backgrounds and had previously held other jobs such as teachers, nurses, and students. As men had to leave the farms for the front lines, women stepped in to fill the labor shortages. Patterned after the Women's Land Army (WLA) in Great Britain, both the U.S. and Australia adopted voluntary WLA farm labor systems of their own. In the U.S., for example, more than 20,000 women volunteered from the years 1914-1919 (Figure 59). The women were paid by the government for an 8-hour workday an amount equal to that received by their male counterparts. In Australia, however, women were paid by the farmers and received less than men (Figure 60). Where women in the U.S. WLA were known as "tractorettes" and hailed as patriots and historical icons of the war era, women in the Australian Women's Land Army (AWLA) were not recognized as vital contributors to the war efforts (Spring, 2017; Lennon, 2017). In 1997, those who participated in the AWLA were finally awarded the official civilian service medal in recognition of their contributions to the war (Lennon, 2017).

Advertisements for recruitment for the WLA and AWLA were patriotic and consisted of illustrations of women wearing hats and overalls hauling hay and working in the orchards. These illustrations contrasted with the agricultural advertisements of the times, where men drove tractors and women wore dresses and brought the lunch. Earlier advertisements, such as Bell's ad for the Oregon Short line Railroad, depicted women wearing colorful robes, posing as props while holding fruit. Now, with the wars, women were no longer artful goddesses or bystanders, but farmers illustrated doing men's work of the time.

From the first people, to early irrigation settlers, to military service through

multiple decades, women have worked the land in various capacities. Historically and currently, women farmers' diverse roles, accomplishments, and contributions have all been part of the family farm, farming communities, and the agricultural sector. However, societal and cultural norms have contributed to the way women's work has been perceived and defined.

### The Experiences of Today's Farming Women in Victoria and Idaho

To this day, cultural backgrounds and social norms can contribute to women describing their farm work as managing the household, even when they are equally entrenched in the day-to-day operations of the family farm (Deere, 2005; Doss, Meinzen-Dick, Quisumbing, & Theis, 2018). Nonetheless, women interviewed for this study refer to themselves as farmers and ranchers, not as housewives or farmer's/rancher's wives.

The distinction between rancher and farmer can be important in rural Idaho, where many farmers grow hay and grain, manage a garden, raise chickens, and attend to milk cows. A rancher, on the other hand, runs a large herd of cattle or sheep and grows feed for livestock. In Victoria, there is no differentiation between a rancher and a farmer. The term rancher is not used. However, words such as working on a cattle station, or mustering, are applied to those women who run large cattle and sheep operations.

Women in Victoria all refer to themselves as farmers. However, women in Idaho identify themselves as either ranchers or farmers. Although there is a heavily blended crossover between farming and ranching tasks, and women in Idaho may be very knowledgeable in both, they choose their designation, rancher or farmer, based on their primary source of income. As one woman rancher noted, "even though we farm pivots, we are definitely ranchers. Cowboy hats vs. baseball caps" (Interview, June 1, 2018).

*A Changing or Persisting Cultural Divide? Karlie and Bailey*

Women's work in agriculture around the world, in many different capacities, can be indoors, or outdoors, off-farm, or on farm, and is not singularly defined by gardening, types of livestock or poultry, or recordkeeping (Doss et al., 2018, p. 71; Invisible Farmer Project, n.d). Women's farm work is cultural. Dynamics of day-to-day work at the farm level are varied and influenced by the beliefs and values of the family unit and agricultural traditions of the state and country where the farmers reside. "Women perform distinct tasks, are socialized in . . . specific ways, and must enact their... roles daily to continually reconstitute their identity as women" (Aptheker, 1989, p. 12).

Across Australia and the U.S., as in many places, farming is a family partnership, and women are farmers too. However, the traditional duties of farm work, such as running the household or 'helping' with chores during harvest and other busy times, have been labeled the work of a housewife or helper and in many cultures and countries have defined women's work for decades (Radel, 2011; Sachs, 1996). How can women's work be redefined? Women farmers' daily activities revolve around agricultural production. They understand and have unique knowledge about the natural world; they are equal partners in sustaining the livelihood of the farm and their agricultural heritage (Sachs, 1996). However, "symbolic categories persist, reinforcing dominant forms of masculinity and femininity through social rules, taboos, and structural obstacles of women becoming farmers, or legible as such" (Keller, 2014, p. 86). The persistence of these categories continues to subordinate women's progression in the agricultural sector, where farmwomen's knowledge, workmanship, and contributions are not equally valued or acknowledged at the same level of acceptance as their male counterparts (Shisler &



Sbicca, 2019).



Figure 50. Fordson Major Tractors.  
An advertisement for Fordson Major Tractors published approximately 1920-1939. Retrieved from nla.gov.edu.  
Copyright nla.gov.edu.

In Australia, farm women's work has been omitted from official data and historical records. As noted earlier, historically farmers in Australia have been portrayed with a masculine national identity, "highlighting values and myths and stories about bushmen, bushrangers, and mateship" (Invisible Farmer, n.d.). Today, it is still the case that male farmers are construed as "rugged, physically active in outdoor work and knowledgeable and decisive in their farm management" (Liepins, 2000, p. 612). Rural media, farming federations, and other popular discourses of information sharing, such as advertising for large-scale agricultural equipment companies, portray men as farmers and agricultural leaders, much as they did almost a hundred years ago (Figure 61) (Liepins, 2000).



Figure 51. Karlie in her Garden.  
Karlie has a large garden with old rose varieties from all over the world.





Figure 52. Bailey the Berry Farmer.  
Bailey picks large Navajo blackberries cultivated from U.S. varieties. Bailey hand-painted signs by each row of cultivars.

Karlie, who, with her daughter and son-in-law, is a primary operator and manager of a third-generation berry farm in Victoria, discussed her family culture and the work she was expected to do as a girl on the farm (Figure 62). Today, Karlie manages to employ her family and her daughter's family on the berry farm. All the berries from their farm are packaged on site and sold to local grocers. However, Karlie's family business is small in comparison to large-scale companies such as Driscolls that monopolizes the berry market in Australia and, as a distributor, contracts with farmers from Australia and New Zealand. Although Karlie had brothers, her parents did not rely on the typical Australian archetype of fathers depending on sons to deliver additional work and support (Alston, 2000; Gullifer & Thompson, 2006). Karlie completed the same outdoor hard-labor tasks as her brothers:

Well the fact that we were girls was beside the point. We were people. Dad never treated us in a way that there was anything special about whether you were a girl or a boy. I'm the eldest but I never, ever, ever got any impression from him that there were girl jobs and boy jobs. There were just jobs. And you did whatever jobs you were suited to. The winter work was always picking up sticks because it's a big farm and there's a lot of bush and he's cleared land and stuff. (Interview, August 5, 2016)

In contrast, Bailey (Figure 63), who runs the berry farm with her mother, Karlie, discussed the "girl jobs" she was required to do as a child on their family farm. Bailey attributes her designated jobs on the farm to her dad's Dutch background, where men and their sons do the work that requires equipment. However, the jobs that she completed required greater physical strength and were traditionally jobs chosen for male farmers in Australia (Liepins, 2000). As in the U.S. and Australia, farming in the Netherlands is dominated by men. Mechanization was "designed by and for men," making it difficult for women to reach the levers and pedals to operate the tractor, continuing an already established gender disunion in agriculture (Beach, 2013; Rosenfeld, 1985; Turesky, 2011,

p.87). As Bailey notes, the women in her family did not run machinery but worked manual labor farms tasks:

There were designated boy and girl jobs. Boys did anything to do with implements and tractors, but the girls always did the manual labor. I remember one time we had to get a bobcat to clear out some igloos (plastic poly tunnels for hydroponics) and that was the easy job because you just had to drive the bobcat backwards and forwards. My sister and I had wheelbarrows, and we had to wheelbarrow everything backwards and forwards while the boys drove the bobcat. (Interview, August 5, 2016)



Figure 53. Bailey and her Chainsaw.  
Bailey starts her chainsaw to clear the brush from the family berry farm.

Within two generations of the same family, different beliefs and values regarding work and the types of labor women should do established different individual experiences and working relationships with the environment. Women's labor reflects patterns of human reaction to the biophysical world in the context of social systems and shapes what the farm landscape will become (Fiege, 1999). These experiences shaped how Bailey and her mother Karlie viewed their daily work, the natural world, and cultural differences within the same family unit (Sachs, 1996). Their daily labors shaped their understanding of the farm as place. As an adult, Bailey learned how to drive a tractor and run a chainsaw (Figure 64). These newfound farm skills added to her independence, her identity, and her cultural heritage:

When he brought me my chainsaw, it meant that I could actually go and get wood without having to ask somebody to come and help me. I kind of like being independent. And it is very hereditary in my family. All of the family members on my side of the family have been firelighters.  
(Interview, August 5, 2016)

In Bailey's family, lighting a fire in the stove provides heat for cooking as well as heat for the home. In the winter months, Bailey spends many hours clearing brush from the berry patches and cutting wood for the fire. The farm becomes an evolving landscape enveloped in culture and family lore, where Bailey, and those who cut wood before her, have lived, worked, and created stories in this place (Ingold, 1993). Bailey's skillset with the chainsaw shaped the farm landscape as she cleared brush and stacked large woodpiles. The transformed landscape is evidence of her work, the importance of fire lighting in her family, and the process of brush clearing.

Breaking with Gender Tradition: Lonnie and Mary

Women in both Victoria and Idaho recognize that their beliefs and methods of daily work are shaped by their cultural backgrounds as well as their abilities to establish

their own identities and independence (Trauger, 2004). Their day-to-day tasks define their experiences on the farm and create an individual knowledge base where they are equal partners in the family farm (Aptheker, 1989). While farmers in Victoria found freedom in varied tasks like running machinery, managing the farm, and having leadership roles, women in Idaho described the beginning of their independence as being outdoors.

One woman farmer in Idaho discussed how she preferred to be outdoors. “I would go with my dad as often as I could because it got me out of housework. I preferred outside work. I didn’t want to stay at home and clean house or cook or any of that” (Interview, June 1, 2018). Drawing on the rhetoric of the old mythologies of the American West, Idaho women farmers described their desire to be outdoors as an escape, establishing an individual relationship with the landscape and liberation from indoor housework (Trauger, 2004). As one woman noted, she wanted to escape the norms of where she came from. “The west is a place [I] have always wanted to escape to. The culture of the west is different. Everyone came here for a reason. My number one reason for moving [to Idaho] was to escape gender work” (Interview, June 16, 2018). Although she made her escape, her vision of the West has become an enigma, a place where she has left one form of gender work and replaced it with the masculine tradition of work, boot making.

The division of labor on farms in the U.S. still largely follows the traditional ideologies of masculinity; men do the majority of the outdoor work (Peter, Mayerfeld, Bell, Jarnagin, & Bauer, 2000). The desire to work outdoors went against the societal expectations of rural women on farms. “Domestic ideology called upon women to remain



in the home to provide labor and emotional support for their families. The proper role for a woman... in rural areas was as a farm wife” (Sachs, 1996, p. 133). The freedom to work outside offered a space where they could leave behind the civilization of the indoors and reclaim their rights to place (Funda, 2013).

Lonnie, an Idahoan woman and nomadic herder<sup>18</sup>, talks about her interest in farm work from a very young age. Her yearning to be outside was supported by her father, even though her mother asked for her help in the house. Looking back, Lonnie feels bad that she left her mother to do the indoor jobs, but she noted she was always a daddy’s girl:

Well my mom tried to make me do housework, but my dad didn’t let me do that. After dinner my mom would say, ‘Lonnie Ray, when we’re done with this dinner you are going to do the dishes, so don’t you dare try to slip out of here.’ And my dad never even let her finish. He goes, ‘there’s a black bottle cow I need suckled down there in the field, I need you to go get her.’ Then I would say, ‘Ok.’ I wouldn’t even finish eating. My mom tried to learn how to make me cook, but I was like, ‘Why would I need that shit?’ I still don’t cook. (Interview, May 16, 2018)

Even though Lonnie rejected housework, she still described her identity as a farmer and her connection to managing livestock as an emotional process where she was a caretaker. She was completing work that was traditionally a man’s job, but she ascribed her identity as a farmer in alignment with both ideologically masculine and feminine traits. “When I was a child, my dad would tell me a calf wasn’t going to make it. I would go all kinds of things to care for it. I would lay my body over that calf, and he would make it.” Lonnie viewed her obligations as a farmer as a role that required both labor and care (Interview, May 16, 2018; Herron & Skinner, 2012).

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<sup>18</sup> Nomadic herders in Idaho are commonly found herding livestock on BLM land during late spring through fall. They establish a semi-permanent camp and herd livestock through vast acreages owned by the government or ranchers (Interview, May 29, 2018).



Figure 54. Lonnie the Nomadic Herder.

Left: Lonnie discusses how much food it takes to feed all her dogs while petting her favorite herding dog. Right: Lonnie in front of her home/bus.



Figure 55. Mary in her Bootmaking Studio.

Lonnie went on to continue her father's legacy as a farmer and herder and is a key agent of change in the ranching community (Figure 64). With no official degree or schooling, Lonnie learned all she knows from working with her father. During the winter months, Lonnie works as a seasonal warehouse worker for Simplot, one of the largest agribusinesses in the United States, which owns and contracts with several farms and ranches in the western United States. However, during the summer and fall months, Lonnie has chosen to be hired on at smaller, family-owned ranches where the rancher was in jeopardy of losing grazing permits due to poor grazing management. For many years, Lonnie has managed the cattle and brought these at-risk grazing areas from depleted and polluted grazing zones back to healthy riparian areas. Working primarily in the Pass Creek area, Lonnie has returned to work late spring through fall in the Lost River Valley for many years. As part of her daily work, she takes cuttings from streambeds to measure the vegetation and stabilization of soil erosion on the stream banks. Based on her observations, she rotates the cattle through different grazing areas with the aid of her twenty-eight herding dogs. Her knowledge of the effects of cattle running through these zones and her day-to-day observations have been invaluable to both ranchers and the Forest Service, as she has managed to keep the sedges (vegetation) at the four inches required to maintain a sustainable riparian zone (Interview, May 16, 2018).

Years later, Lonnie's knowledge of cattle grazing and the management of riparian areas earned her a special award and acknowledgement from the United States Forest Service for her years of dedication to conservation and sustainable land management practices.

As agriculture continues to evolve to become more connected to the public realm and reflect cooperative management, women's farm work will not be isolated to just the family farm (Turesky, 2011). As seen in Lonnie's experience with the Forest Service, her work was at the center of supportive management between the rancher, the herder, and the government. Her care for the cattle and the riparian areas is evident in her dedication to the health of both the animals and the land. She learned how to care for the farm and livestock from her father, who was her advocate in breaking gendered norms and divisions of labor on their family farm.

Like Lonnie, Mary established her true passion and work identity from her father. Mary, a farmer and a bootmaker, described her journey growing up in a ranching culture in Texas and her relocation to Idaho (Figure 65). Although Mary was raised on a large corporate ranch in Texas, she owns a small farm in Idaho, works two off-farm jobs, and sells boots:

Growing up on a ranch, everybody works. Especially as a kid, there aren't a lot of gender barriers. It's weird, because you are raised until maybe you go to high school, work is equal. Then there is this transition where a woman is expected to be in the home, raising your children, cooking and cleaning and all that. Which I just truly rejected. That being said, I love to cook, I love to sew, I love to do ladies' things, but I want to be treated as an equal. I don't want to be separated out. (Interview, June 16, 2018)

When Mary graduated high school, her father gave her a gift of handmade boots. She noted, "I thought, this might be something I might be interested in trying. I would guess most bootmakers are men, because it is traditionally a job that would be outside the

home.” With Mary’s ranching background and family culture, she felt an immediate connection to sewing with leather: “People on the ranch always made things.” However, outside her family and the ranch she began to realize, to her surprise, that boot making was also gendered:

There are about 300 bootmakers in the United States. I have heard there are about a dozen female bootmakers. I don’t know if that is true or not. I know maybe six to eight. I’ve sewn since I was four, and a really important part of boot making is sewing. There are a lot of wives working in the boot shops, doing the top sewing, but they aren’t considered bootmakers, because they are sewing the top half of the boot. (Interview, June 16, 2018)

Like the berry farmers in Victoria, Mary’s work also was gendered based on the culture of the boot making community. Just as tractor and chainsaw work were delegated based on gender in Bailey’s family and culture, Mary’s work on the sewing machine was designated as feminine. Farm machinery is integrated into the archetype of masculinity and is often designated mechanical knowledge: “The tractor informs significant others that the persons are in possession of qualities required of a ‘real man’” (Brandth, 2006, p.21). However, the use of the sewing machine was classified as women’s work. Sewing does not require the brute force needed in other areas of boot making, such as seaming, pegging and heel work, or the mechanical skills necessary to operate and repair line finishers and sole stitchers (Interview, June 16, 2018).

### The Assumptions of Others: Jamie and Marti

Differentiations from traditional household roles in the family unit, although accepted by the family, caused controversy with those outside the family in both Victoria and Idaho. Conflicts can arise when those outside the family expect women to meet their traditional role of housewife, designated by a longstanding societal patriarchal stereotype that “continues to legitimize the subordination of women” (Sachs, 1996, p. 7). These assumptions are made about women’s and men’s work on the farm, are “simplistic gender-role stereotyping,” and have hindered women’s representation in the agricultural sector, as well as their contributions and opportunities to share their knowledge in the public sphere (Bell & Pandey, 1989, p. 45; Invisible Farmer Project, n.d.; Trauger, 2004).





Figure 56. Jamie the Fish Farmer.

Jamie discusses the process of her fish farm in Shepparton, Victoria. Jamie rides her quad out to the paddock to feed the cattle on her farm.



Jamie, a fish scientist and farmer in Victoria, noted the differences between her own family dynamic of managing the farm and outsiders' assumptions. Jamie manages a small-scale fish farm, where she primarily raises barramundi fish in modular systems that use minimal water (Figure 66). All wastewater is used for the pasture for 30 head of cattle. As a farmer and manager, Jamie has had many experiences with people in the aquaculture industry:

People would call up and order fish. I'd answer the phone and they'd say, 'Hi, I'd like to talk to your husband.' I'd say, 'No, he's not here. Can I help you?' They'd go, 'No, thank you. I need to speak to your husband.' Yeah. Well, you don't get any fish. (Interview, August 10, 2016)



Figure 57. Marti with Lilies.

Left: Marti holds the specialty bulb they propagate in their farm warehouse. She discusses the equipment they use for the bulb processing.

A woman flower farmer in Victoria recalled past meetings with her family bank manager and the assumptions he made (Figure 67). Moving to Australia from the Netherlands, Marti observed the cultural change between her home country and Australia. As Marti and her partner have grown their business through research and development, using sustainable technologies to produce over six million lilies and Dutch iris a year, they have used innovation and sustainability to meet a niche market in a competitive industry. A chemical engineer by trade, and co-manager of a multi-million dollar family farm, Marti experienced cultural barriers and gender assumptions about her role on the farm:

There is a more masculine society in Australia, especially in the agricultural industry. When we came out here 18 years ago, the bank manager would come over and he would not shake my hand. He said he was touching the missus. That was the explanation he gave me. I felt very bad about that. I thought, why is he not taking me seriously? Back home, if you are dealing with husband and wife in one business, you know their value and influence are equally important. If you want to sell off your tractor, you need to make sure the lady is involved too. Shake her hand. I found that very challenging out here. I didn't want to be rude. Why do I have to be rude as a female to get my message across? (Interview, February 3, 2018)

Cultural change in agrarian communities is “strongly rooted to local communities through ties of ‘blood and belonging,’ including those of kinship, family, [and] ethnicity” (Inglehart & Norris, 2003, p. 11). The value and influence of women’s work contributes, if not equally, to the management and survival of the family farm as well as shapes future attitudes and beliefs towards women’s and men’s roles in the agricultural sector (Sachs, 1996). Mechanization of farm work continues to create duality for women’s experiences, as some women are liberated and gain a new identity through mechanized farm work and others still face social and cultural barriers because of machinery (Brandth, 2006; Galiè, Jiggins, & Struik, 2013). Even though women on farms still experience a great deal of complexity because of the social and cultural barriers of farm machinery and the expectations of gendered roles, they are acutely connected to the farm as laborers, managers, partners, and leaders. Their daily work, knowledge, and experiences are multifaceted and valuable, providing insights into adaptation, individual ecological conditions, and the resilience required to be a farmer (Brandth, 2006; Sachs, 1996).



Figure 58. Jane at her Home.  
Right: Jane holding a painting of her favorite horse.

### Resilience: Jane

“Ranching can be hard. You work long hours, and you sacrifice a lot. You don’t get a regular paycheck every month. You get one a year and you say, ‘Ok, now we’ve gotta make this stretch for the whole year.’” Jane, a woman farmer interviewed in Idaho

In broad terms, resilience denotes the ability to cope with change. Farm work is inherently about coping with change. The concept of resilience “is often employed to describe the capacity of systemic renewal and innovation in social-ecological systems” (Buchmann, 2009, p. 706). Folke (2016) describes resilience within three primary categories: “learning to live with change and uncertainty, nurturing diversity for reorganization and renewal, and combining different kinds of knowledge” (p. 44). Then there is emotional resilience that encompasses all three primary categories under one umbrella: the ability to adapt to stressful situations, adversity, and crisis. Emotional resilience is entwined in everyday work and the management of the farm; emotion is embedded in place. Resilience involves learning from the past and requires a deeper understanding of women’s interactions with their families, communities, and the natural world. Learning from the past offers experiences and insights into the farm as place that strengthens new ways of understanding and encourages approaching knowledge from different perspectives.

The term ‘crisis,’ or time of intense difficulty, in conjunction with ‘resilience’ is commonplace in agricultural and environmental organizations, research, and policy-making, citing natural disasters, food insecurity, and vulnerable populations, etc. (Food and Agricultural Organization of the United Nations, 2019). In this study, I consider resilience within the context of Woster’s (2017) definition of the ‘crisis narrative,’ a way

by which women farmers remember experiences, how they perceive, decide, and act in crises. I utilize Woster's concept of crisis narrative here to describe how women farmers use the following narratives, revealing their truths, attempting solutions, and implementing these solutions in their work.

Even though Jane was raised on a family farm, nothing could prepare her for the uncertainty of the constant moves she experienced as an adult (Figure 68). Running a herd of bulls and managing ranches across the western United States, moving was never just packing a U-Haul and driving to the next destination. Moves were sudden and complicated: "Can you get out in a month? We've got seven kids and a hundred cows. We were moving tractors and were moving cattle. All our household. Every time we had to move it was a crisis" (Interview, May 31, 2018). Moves were spurred by circumstances beyond her family's control. These included the harsh high desert environment, extreme temperatures, the Great Basin Drought, changes in ownership, and other conditions that would not allow them to sustain their cattle. Jane told me, "We left Nevada because there was such a drought. Weather is a factor; there are so many things that factor in that you can't control. It's a high risk business." Yet Jane persisted in maintaining a cattle herd and lifestyle, even when her family had to sell off their herd of 100 down to 20. She adapted and moved her family, and she was not passive or helpless, but she cared for her family and livestock in response to financial risk of poverty with fortitude and resourcefulness (Smyth & Sweetman, 2015). Jane related, "I learned that in a crisis, you survived. I could sit there and stew and sweat over it, but it turns out it always comes out fine. Everything always works out, a little at a time." To maintain their family legacy, knowledge base, and livelihood, Jane and her family learned to cope with

change. Jane and her husband saw their family land sold off early in their marriage:

There was a big recession in the 80s. It was either we have to sell out or lose everything. We struggled, and we went to court and tried to figure out how to hold onto everything. When we finally said, 'Maybe, we can't. Let's just sell and walk away with a little money in our pocket.'  
(Interview, May 31, 2018)

The 1980s farm crisis was the worst farmers and ranchers in the United States had experienced since the Great Depression. The prime lending rate on loans soared from an average of 6.8 percent in 1976 to an all-time high of 21.5 percent in 1981 (Iowa Public Television, 2019). During this time, many rural farmers and ranchers could not afford the high interest rates and were forced from their family land (Interview, May 31, 2018).

Since Jane sold her family property in the early 1980s, she and her husband have not been able to own their own ranch. Jane had to be emotionally resilient, to come to terms with this long-term struggle and constant change. She remained validated as a rancher, partner, and an individual—for her family and their livelihoods, and she did not give up on her family's lifestyle or heritage (Hoare, Smyth, & Sweetman, 2012). "It's getting so expensive," she said. "We've been looking all these years, and that's why we keep leasing, renting, or managing ranches." She coped with change the best way she knew how and continued her family legacy of farming. Losing the land was not the end of her connection to ranching. The lifestyle never left her mind or her work (Funda, 2013). With eight moves, and recalculating the cattle herd with every new ranch, Jane helped keep records of all the cattle: "You have to be meticulous about the record keeping and the pedigrees," she told me. The family cattle breed they developed was based on their years ranching in regions prone to drought and a climate where summers are hot and dry. The Blackford cattle pedigree they developed is hardy and can withstand extreme heat. She also managed the family finances, grew a substantial garden, and



canned the resulting produce. Despite the shock and stresses of the uncertainties of each move, she worked to remain positive for her family, recovering and reestablishing the ranch every time. “Bloom where you are planted was my motto,” Jane said.



Figure 59. Jane Holding her Family Photo.  
Jane holding a photograph of her family that was taken out on the ranch they manage.

With each move, she had to form a new relationship to place. She formed this relationship through work:

The biggest thing is that your children learn how to work. They learn how to do hard things at a young age. They don't exactly love it, but when they get to be adults they come back and say 'We are so glad you made us do that. We're not afraid to get our hands dirty.' (Interview, May 31, 2018)

Her strength and decisiveness in the face of crisis helped establish new opportunities to keep their livelihood and agricultural heritage alive. She thought out her priorities and the wellbeing of her family and the farm not just once (Figure 69). She chose concisely from alternative strategies and focused on her own past experiences and

situations to proceed (Brandth, 2006). At the center of her identity and lifestyle is resilience.

Jane's story may embody resilience in an especially acute way, but all the women I interviewed, both in Idaho and in Victoria, expressed resilience in the ways they described their lives and their farming experiences. These sources of resilience are critical as our societies confront the demands of a changing climate. Due to climate impacts, many contemporary women farmers are facing difficulties on the farm. Women farmers are seeking out sustainable solutions and ways to adapt in the face of climate change.

#### Climate Change: Heather and Mary

Regional weather in long-term patterns, or climate, affects the ecology of the farm and the water table (Fiege, 1999; Splinter, 1976). The uncertainty of water has required women farmers to combine different kinds of knowledge and seek out ways to adapt. They make decisions to move their families when prolonged drought can no longer sustain their livestock. Climate change and related water issues have played a role in mobility and changed irrigation practices, such as transitioning from flood irrigation to drip lines and pivots to help conserve water, and reorganizing their options on their family farms and ranches to maintain their livelihoods. "Many farmers and ranchers belong to families which have worked the land for multiple generations, and they have had the consistent opportunities to closely observe environmental change" (Safi, Smith, & Liu, 2012, p. 316). Many women farmers in Idaho and Victoria seek to understand environmental change. Personal experiences with long-term weather conditions shape farmers' perceptions of climate and adaptation strategies (Howe & Leiserowitz, 2013). In

both Idaho and Victoria, all women farmers agreed on two aspects of climate change, that weather is becoming more unpredictable and severe, and that water cycles are changing. Women in Victoria, particularly horticulturalists, noted climate change has affected the microsystems on the farm with the introduction of fruit fly (2012) and severe hailstorms. Fruit farmers have conducted fruit fly trials to learn how to manage the pestilence and use minimal chemical applications to control the fruit flies on their farms. With an average of six severe hailstorms in Victoria per year over the last decade (Severe Storms Archive, 2019), horticulturalists are anticipating these extreme weather events and buying hail netting and trellis frameworks to protect their orchards. Dairy and sheep farmers in Victoria have experienced loss of livestock due to sudden flooding from extreme storms. One farmer noted 1200 ewes drowned on her farm from the flooding. An Idaho farmer noted that the increased hailstorms over the past 13 years, and more sporadic and severe storms, had resulted in variable water issues such as flooding. Another farmer noted the unpredictable frost date as well as the issues also with flooding and spring runoff. Because of the weather extremes and unexpected changes in water availability, many farmers have adapted their choices in crops to perennial, low-water legumes, ornamental and pie cherries, and other drought-tolerant species, as well as water systems. They have taken extra measures, such as buying hail nets, to protect their crops from unexpected and extreme weather events.

Much of this unpredictability is caused by seasonal weather fluctuations, as each year brings new unexpected challenges, including little or no snowpack, extreme wind and hail, and unseasonal rains and flooding. In Idaho, without sufficient rains, or snowpack, it costs a farmer or rancher significantly to winter their stock. During a season

with ample water, a ton of hay costs \$40 to grow. During a drought season, one ton of hay will cost \$120 at a minimum. A single cow can eat one ton of hay in just over a month (Interview, June 12, 2018).



Figure 60. Heather at her Farm.  
Left: Heather helps her granddaughter lead a show steer. Her granddaughters help her run the farm.

Heather, an old-timer who has lived in the Lost River Valley for nearly 40 years, raises 230 head of beef cattle (Figure 70). She has experienced these seasonal water fluctuations and has endured drastic financial costs associated with multiple years of drought. Her family moved to Idaho in 1973, when her father worked for a large ranch and always had a steady paycheck. When Heather and her husband established their own farm, her husband went to work outside the farm as a pipefitter to supplement their income. Heather stayed home, ran the farm, and raised her children.

The evolution of agricultural production is evident as Heather discusses how she has applied new technologies, such as moving from sprinkler irrigation to flood irrigation, to alter irrigation practices the last two decades. The change in irrigation technology has allowed her ranch to grow additional acres of feed for their cattle, but it has also altered their daily work and the ecology of the farm. Acres of mountain big sagebrush, native needle grass, and Idaho fescue were replaced with hay, potatoes, and alfalfa. Where once labor-intensive laterals and soil grading were done by hand, and water allocation delivered by a ditch and gravity, the new automated center-pivot irrigation lines carved pathways through vegetation, sprinkling the crops with a light and frequent application of water (Fiege, 1999; Splinter, 1976). Technology has created an evolution in farming and changed the landscape and the water table. This was seen in the late 1990s, as native vegetation and trees along riverbeds began to die. Continued irrigation and 20 years of periodic droughts in 1980s and 90s depleted the aquifer at alarming rates, 4,000 acre-feet annually since 1952, as the water table no longer recharging (Weiser, 2018) As Heather related,

The fact that we don't flood irrigate has a big effect on the water table and the river. People farm differently now, and I don't see how it will ever go

back to how it was. We used to flood irrigate a 20-acre field. We used as much water to irrigate that 20 acres as we did to sprinkle 136 acres that we had under a pivot and didn't do as good a job irrigating it. Sprinklers are so much more efficient. However, when you flood irrigate, you always have excess water going somewhere. (Interview, May 29, 2018)

Like Heather, farmers and ranchers in Idaho will continue to experience seasons of drought and attempt to manage water, a finite resource and “capricious entity, mutable and irregular within the confines of broad seasonal cycles” (Fiege, 1999, p. 111). New irrigation systems could provide stability for a time, but much like the complexity of the hydrological system, management is fleeting without ranchers and farmers learning to manage water effectively during drought situations. In 2015, the Idaho Department of Water Resources required all groundwater users to reduce their pumping by about 240,000 acre-feet a year. Farmers, city governments, and businesses that all rely on the aquifer agreed with water authorities and supported a state recharge agreement of 250,000 acre-feet a year (Weiser, 2018). This mitigation requires a cooperative network and information sharing among farmers in the Valley as well as an understanding of the hydrology of the region. Although water might be plentiful in one season, the water will still be divided and managed by long-standing allocation doctrines, a water manager, and neighbors. This division of water has caused years of contention among farmers, canal companies, and water managers. As Heather notes, knowledge of water management in the agricultural sector is key to understanding how the aquifer needs to recharge. With pivot irrigation, a farmer can extend their crops with less water, but the ground water is no longer saturated as it was with flood irrigation. This causes inconsistencies in stock water and deficit stream flows. Heather discussed the challenges,

You don't always have that with a surface right. We had trouble getting a stock water stream consistently this year. Not because of a lack of water, but because of a lack of knowledge on how to deliver a stream. That can

be very aggravating. (Interview, May 29, 2018)





Figure 61. Mary the Cherry Farmer.

Left: Mary standing in front of one of the old cherry trees. Mary holds a jar of canned cherries Right: Mary stands where an old tree was pulled out during the Millennium Drought. Mary and her husband planted their trees in alignment with the contour of the valley, establishing a dam and gravity-fed irrigation.

In drought years, resilience requires forward thinking and adaptation. Adaptation requires “people on the ground being responsive to what the land is telling [you], and being responsible for acting on that knowledge” (Langston, 2003, p. 155). A cherry farmer in the hill country of Victoria, Mary did not have to worry about cattle or the loss of snowpack. However, she had to think ahead, adapt her way of life, and move and replant trees on a substantial acreage. She had to “prepare, withstand, and recover” as her experience and knowledge of the farm was necessary during crisis years on the farm (Hoare, Smyth, & Sweetman, 2012, p. 208). As part of the preparations for their cherry farm, Mary and her husband designed their irrigation dams with the contour of the hills and vegetation. However, they planned this design based on their knowledge from the first years on the farm, which were before the drought hit.

Mary and her husband planted 4,000 cherry trees by hand. They planned their dams with the natural contour of the valley so their trees would always have enough rainfed water:

Ok, well when we bought the farm it had no irrigation on it at all, and we are what is known as dry land irrigators. We had to look at whether we would be able to harvest enough water from the sky. Our dams would be able to be filled properly to be able to irrigate our cherries. We put our first dam in. We built that in 1989. In 1990, there were some good rains and it filled. So, it was a good choice. (Interview, August 12, 2016)

They had a successful farming operation until 1998. This is when the Millennium Drought took its toll on their farm. Since the early years of irrigation in Victoria, droughts have been commonplace and tended to reach severe drought conditions on average every three out of ten years. However, in more recent years, Victoria has seen a 20 percent increase in temperatures with a five-fold increase in the number of days each

year where temperatures, in some region of the state, have topped over 45 degrees (113 F) as well as lowest accumulated rainfall since 1900 (Holton, 2006; Bureau of Meteorology, n.d.). The Millennium Drought (1997-2009) was caused by poor rainfall and was more severe than any other drought in southern Australia over the last 400 years (Freund, Henley, Karoly, Allen, & Baker, 2017). Mary explained its effects,

We watched as we ran out of water. So my husband started to dig wells of his own. And he did that with a crowbar. We found water and that was ok for a little while. It kept us going for a bit longer. In 2005 we started to lose water again because there hadn't been any real break. We had nothing left and our bores had run out as well. By 2008 we had absolutely nothing left and so we weren't able to irrigate the trees. (Interview, August 12, 2016)

The Millennium Drought ended in 2010, but the years of stress on the fruit trees took their toll and caused cherry production to decline. The progression of the ecology of the farm is seen in the rows of cherry trees. Massive, heavy-laden cherry trees with three-foot-wide trunks are in rows. These rows have variegated spaces in between them where the old trees died during the drought. Intermittently spaced are small, hardy cherry varieties. Mary and her husband have adapted the spaces where mature cherry trees once grew to grow smaller, drought-tolerant varieties of ornamental and pie cherry trees that can be sold to local nurseries for residential use. The natural vegetation of the valley is much the same, but the dilapidated packing shed and sporadic layering of trees suggest another story. Mary continues to work an off-farm job, and she and her husband are now working towards a farm tourism plan to regain some of their lost income from the drought years. The gaps in the large cherry trees, filled with newly planted ornamentals and diversified varieties, signify their adaptation strategies and resilience. However, the layering of the trees also speaks to failure, hardship, and disappointment. The farm landscape tells their story.

Despite hardship, drought, migration, and at times little monetary gain, women farmers continue to persevere. Is this perseverance what fuses the soul of the woman to her farm, her home, and her family? Women farmers' day-to-day work is essential to the progression and livelihood of the farm. They are rooted in place, using daily practices to navigate financial struggle, climate change, and an evolving rural landscape, striving to preserve their homes, their histories, and way of life.

#### Landscape is a Story: Donna, Joe, and Rayne

The farm landscape is a story. The landscape is altered with each inhabitant, forming and unfolding with the lives, work, and histories of the farmers that reside there (Ingold, 1993). The farm landscape is movement. It is furrowed, sown, irrigated, frozen, soaked, baked, sold off, and redefined. The farm as place is complex and shaped by the way people experience and perceive the local climate (Howe, Markowitz, Lee, Ko, & Leiserowitz, 2013). The farm landscape becomes multidirectional pointing both backwards and forward.





Figure 62. Donna the Apple Farmer.

Donna grows apples and vegetables north of Mackay, Idaho. She and her husband love the high mountain desert landscape in this region of Idaho.

After many years in Mississippi, Donna and her husband planned to spend their retirement years farming (Figure 72). On their way home from visiting Canada, they drove through the Lost River Valley of Idaho and loved the area. Although Donna and her husband based the purchase of the farm on the beauty of the landscape and their desire to reestablish an abandoned farm, they immediately found themselves in crisis when they were not prepared for the extreme climate or the flooding. Much like the settlers that came to the valley in the early 20<sup>th</sup> century, Donna was from another region of the U.S. where the growing conditions and climate were much different from the arid region of Idaho. She was lured by the beauty of the romantic landscape. Living downriver from the Mackay Reservoir, Donna and her husband bought their farm in an area where over the span of 70 years, the river has periodically gone dry on the surface, but has continued to run underground (Interview, June 14, 2018). In a geographical area named the “Darlington Sinks,” a unique feature of the Big Lost River basin, is the “large interchange of water from surface streams into the ground and from the ground into the surface streams. Large quantities of water disappear in the Chilly, Darlington, and other sinks, reappear[ing] above Mackay Narrows, Moore Canal heading, and in other reaches” (Crosthwaite, Thomas, & Dyer, 1994, p. 109).

Before Donna moved to the Valley, locals told her the farm would never flood. With late season rains, and the irrigation district refusing to adjust the flow of the river, Donna’s farm has flooded in the spring, summer, and winter for two years. Other old-timer women farmers have commented on the late season rains in the past decade, with one stating, “It rains almost every day in the spring.” (Interview, June 13, 2018;

Interview, May 29, 2018). Due to the flooding, Donna and her husband built rock berms along the river and around her apple orchard. Although she has altered the landscape to alleviate constant flooding, water rights have caused further issues for her family. Donna explained,

The irrigation district won't adjust the flow of the river. The water rights issues up here, you're not even allowed to talk about them because the blow up of emotion is just ridiculous. Somehow, some way, people decided that water belongs to a certain amount of people and other people don't have the rights. You can't even use past a certain amount of water from your well because it belongs to the irrigation district. (Interview, June 13, 2018)

Despite the flooding, Donna planted apple trees in the spring. She elaborated, “Right after we planted, the apple trees bloomed and this blizzard hit and took every blossom there was. It's a much shorter growing season here. We've been told by people that every month of the year you will get a cold snap, even in the summer.” With a continental climate, early spring blizzards are common to this region of the Snake River Plain. However, Donna and her husband did not have knowledge of the seasons, or the weather, when they planted their apple trees. After experiencing a loss of their first season apple harvest, Donna reevaluated the crops to grow on their farm and researched varieties that are cold resistant. Learning how to adapt their agricultural practices has been difficult. Donna acknowledges she still has a lot to learn about the climate and regional differences such as the late-season rains and monthly freezes. There is also the financial loss she has to consider: “As a woman-only farm, the profit margin is so slim. It's hard to make money, especially for the first five to ten years when you're paying back loans for property, getting your infrastructure set, your equipment set. You have to have an outside job.”

Although they have had great advice from neighbors and friends in the valley,

Donna acknowledged how beneficial long-term knowledge of climate and the farm is to understand place and to sustain their livelihood:

In the past, families would pass down information to kids that grew up on the farm. They know, ok, the winter looks like this and you better hold off on your crop, or this kind of crop won't do, that's a loss. So, you have to start all over. Really, you really only have 30 or 40 tries in your lifetime to get it right, cause it's seasonal year by year. (Interview, June 13, 2018)

This historical viewpoint helps later generations of farmers to have a deeper understanding of the ecology of the area and modify their farming practices to be sustainable for their livelihoods as well as healthy ecosystems.

Donna's experiences shaped her daily work, how she shaped the landscape based on climate impacts, and her expectations of establishing the apple farm. The landscape was infused with creativity, and it mirrored her dream of becoming a farmer. Donna noted, "I had to wait until I was retired to do what I really wanted to do." The farm as place lies at the core of her adaptation and progression (Tempest Williams, 1991). Even through crisis, she built a landscape of meaning and memory.

Joe, an old-timer woman and fourth-generation farmer who manages 200 acres, learned from a young age that climate in the Lost River Valley means one thing: winter. "Winter comes early and stays late." An avid gardener, Joe purchased raspberry plants from another region of Idaho and tried establishing her tomatoes in tires to insulate them from the monthly freeze: "I did bring raspberries and planted a lot of raspberry plants. They all died out. Then I went and got raspberries from the mountains. They all lived, but they usually get froze before they matured. I'd work all summer and get one bowl full of raspberries." As Joe shaped the farm landscape and established her garden, she brought a piece of the mountain vegetation, her daily work, and established place. Through existing on the farm, the landscape became a piece of her, just as she was a part of it (Ingold,



1993).

In the many years Joe has lived on the ranch, there has been much change and sacrifice. In a state where the motto is, “Esto Perpetua” – “Let It be Eternal,” that motto “is a hope, not a promise, made in a place where change is as sure as the sunrise” (Funda, 2013, p. 93). Joe explained, “You have to be really tough to live here. It’s not easy. And it’s not big enough that you can make a living on, so you have to supplement it with outside income. The ranch is a side job after you had two other full-time jobs.” For her, work on the family ranch has overlapped with jobs in the agricultural industry, connecting government, community labor, and the family farm, which could not function separately (Fiege, 1999). Joe worked for a local farm insurance agency, specializing in ranch accounts. She also worked for the water master. Her husband taught FFA at the local high school. According to Joe, “All the work. You have to be willing to work a regular job and then come home and do six hours of chores and stuff.”

Joe has been able to keep her farm in the family by working off-farm jobs, but there have still been many years of hardship. She related just how hard, “The water situation is complicated. There’s decrees on how the water has to be managed. Sometimes the water would not come back and we had an absolute loss of income. We had to buy hay for our cows.” With years of extended drought (1987-1994), Joe had to make the choice to sell off pieces of the farm: “It was hard for me to sell off part of the ranch, but it was the only way we could survive.” Where she once moved pipe and hand lines near “the crossroads”, a piece of the landscape where two old cow trails transverse, is now a road leading to a new property owner. Joe and her family were able to keep the core of the farm, but the landscape was divided, transformed, and reclaimed. Still, the

names and places of physical recognition, such as “the crossroads,” live on in story and memory.



Figure 63. Rayne the Pear Farmer.

Left: Rayne stands in front of two aerial photographs in her office. These photographs illustrate the changes they have made to the farm, moving towards more sustainable farming practices. Right: The new pear tree varieties that require less water and can be trellised. The trellises provide support for the hail netting.

In Victoria, all that is left of Rayne's original family apple and pear orchards are her memories and two large photographs that hang above her computer in her office (Figure 73). As fourth-generation apple and pear farmers, Rayne and her husband have had to alter their farming practices and their orchards due to climate change and subsequent water use. The evolved farm landscape is evidence of climate impacts and the necessary changes to sustain their family knowledge base and livelihood. She describes the transition of replacing old pear trees with new ones:

We had pear trees, old-fashioned pear trees that were eighty, ninety years old. They have large root systems and adapting them to smaller, lower water use and irrigation techniques that are sprinkler or drip harmed the trees. The roots of the trees are wide, and flood irrigation was the only way that those trees gave us high production per hectare that we needed. So, we changed the irrigation, and we changed the trees. It was hard when we pulled out the first hundred-year-old tree out of this farm. Emotionally it was hard for us to pull the trees, but it was a very obvious and wise decision. (Interview, August 12, 2016)

The two photographs of their orchards are a visual reminder of the evolution of the farm as place; the physical work, sacrifice, and alterations evidence time, knowledge, and family generations (Ingold, 1993). The two separate plots of pear trees are different in form, as the older plot illustrates a patchwork of large, tall trees spread across the landscape in wide paths, where the deep, wide root systems of the trees required the historical irrigation techniques of heavy flood irrigation. The second photograph resembles a fine embroidery needlepoint where the trees are much smaller and planted very close together. These trees require much less water and are hardier to weather extremes since they are trellised with hail netting. The farmstead reflects how landscape, culture, knowledge, climate, and markets weave together in complex ways (Langston, 2003). According to Rayne, "The old fashioned farms look completely different than ours. Those farmers aren't doing well financially, because they can't keep up with the

modern techniques.” The alteration of the orchards resulted in water use being cut in half, as the old trees’ systems required nine megaliters of water per hectare. The new trees only require five. The landscape cannot be separated from Rayne’s family story or her legacy (Tempest Williams, 1991). Rayne’s farm and her livelihood have been threatened by hail. She related that,

When it hails, it is very close to every orchardist’s heart. Within two to three minutes, not even that long, you can lose your entire crop. You have worked for an entire year on that crop. Pruned and planted and irrigated and plucked the little leaves off the trees to help the fruit get more sunshine. When the hail comes, you see this green blue cloud coming across. We got outside and just pray. At first, we bought hail insurance. It started out at twenty thousand dollars, but then it kept going up to sixty, eighty, and hundred thousand dollars. (Interview, August 11, 2016)

Rayne and her husband came to a point where they could no longer afford hail insurance, and they had to take their chances. As Rayne notes about crises, such as hailstorms, she has to choose to be resilient and think towards the future:

You never forgot the hail. You remember those hail events and what you do afterwards. It is really hard. On a Sunday, we had been out on our last pick of the season. At 3 pm, the hail came and we lost 300 bins of fruit in just two and a half minutes. There’s 2.2 tons of fruit in each bin. As a woman, I felt like I had to be very strong and support my husband. Women bring perspective back into the situation. Just looking forward to the next season and assessing the exact damage. I think that’s a role that women play in any crisis. We are supportive, get ourselves back together, and band together as a group. We set a new direction. (Interview, August 11, 2016)

As Rayne’s son has started managing the farm, their family has continued to work towards evolving farming practices by modernizing their techniques. Hail netting is a new adaptive technology that has allowed their family to not only protect the orchards from hail, but also mitigate evaporation and sunburn to the fruit. Rayne’s perspective and ability to provide support and local knowledge are integral to her identity and her daily work. Her narrative is woven with the stories of crisis, the trellised trees, the hail nets, the

micro-sprinklers, and the many new fruit varieties.

The farm landscape is itself a narrative shaped and altered by time and response to climate impacts. The ecology of the farm and the farmer are integrated by daily work, climate, water, livelihood, and history. This is the farm as place in a changing climate.

## Conclusion

In an attempt to better understand women's identities in the agricultural sector, I interviewed women in regions of Victoria and Idaho from ages 24 to 83. These women had diverse cultural backgrounds and experiences. Many of them were first or second generation immigrants. Some of the women in Idaho had moved there from different regions of the United States and found the landscape, climate, and culture vastly different from what they had previously known. Even within the geographical boundaries of this research, and the small number of participants, it became evident early on there is no such thing as a single "woman farmer." However, as a researcher and photographer, I noticed patterns of speaking, relationships to the land, and shared aspects of these different women's cultural backgrounds that, in part, established their identities as women farmers. The following is a concluding reflection on these observed patterns of the identities and experiences shared with me by all these different women. With these patterns, I seek not to essentialize the woman farmer, nor to create a set of essentializations, but rather I seek to portray a diverse composite of many different women with some key differences highlighted.

In this research, if I asked a woman farmer from rural Idaho, "do you have a crisis experience about the farm you would be willing to share?" she would say, "I've never had a crisis." If I then asked her, "what about that time your husband was run over by the

tractor and could not work for eight months?” This is not a crisis to her. This is normal life. This woman has lived in this region of Idaho for most of her life and took over the mantle of the family farm that she inherited from her parents. She kept the farm and her family legacy alive. It was not an easy task. The climate and the weather are as familiar as the mountains and cow paths she has names for, but the climate does not make her life any easier. In seasons of drought, she sold off land to make ends meet, sold off livestock, experimented with new drought-tolerant feed and watched it bake and die in the hot July sun. This woman does not have visitors outside her immediate family. Ever. She owns the landscape and labels the terrain by words that reflect her life journey.

This woman cannot be separated from the land. Her very vocabulary reflects her establishment in this place. Her words are cultural and regional. Labels such as the crossroads, the old school site, or the sinks are known only to her and a few neighbors. An outsider would walk or drive past the sites that are significant enough in rural culture to have names and see nothing. This woman has travelled the cow trails on horseback since she was a toddler, or she was sent out to the farm in her early 20s when she married and moved to this harsh, isolated, raw place. This woman is an enigma. She is the stuff that the myth of the West is made of. She is independent, tough, wears cowboy boots, and can rope a calf like the best of them, yet she is unknown. Unknown by choice? She works an off-farm job at the local insurance agency, the library, the post office, and she is a bus driver and a substitute teacher at the local school. She is integrated into her community and offers seasoned advice on insurance for combines, as well as suggestions on pasture rotations, water usage, and feed. She teaches her children the value of hard work. Her work is her identity, and her work is her own. She is only visible to her immediate circle

of friends and family. Unknown to the outside world, her knowledge of place is insular. Her knowledge base and wisdom are undocumented in the ever-increasing world of industrial agriculture.

In this research, if I asked a woman farmer who is new to rural Idaho, “do you have a crisis experience you would like to share?” she would respond, “which one would you like to hear? This place is hell frozen over.” She is lacking the knowledge to understand the climate or ecology of this tough region, yet she brings a wealth of experience and vitality with her. She does not understand the local dialect except for the fact that she is a newcomer. She brings her dreams, creativity, and new ideas and experiences from another world. She has moved eight times trying to outrun the drought and keep her lifestyle, family, and cattle breed from dying off. She is tough too. She understands environmental change in a different way. She has established her own drought tolerant livestock breed and is capable of moving 250 head of cows across state lines with a week’s notice. She is resilient in the way adaptation requires moving to a cow town in the middle of nowhere Idaho to find a job managing a ranch because family ranching is a dying art form. She is also the myth that the West is made of. She is escaping hardship for the hope of another place of freedom, freedom to maintain her livelihood and family heritage. However, that freedom comes with a price—more hardship, drought, and the continual need to cope with change.

In this research, if I asked a woman farmer from Victoria, Australia, “do you have a crisis experience you would like to share?” she would remind me that she lives on the driest continent on Earth and that all of the snakes are poisonous. “But don’t worry; you can’t kill the snakes because they are protected. Even though the snakes will try to kill



you.” This woman walks around in flip-flops in the cow paddock but has a snake-killing shovel within an arm-length’s reach. She is a farmer, a professional, an industry leader, a widower, a mother, a wife. She is navigating a sea of increasingly difficult international markets where there are complex import laws on flowers, fruits, and other agricultural commodities. Her community is not quite as narrow as the one of the woman in Idaho, as women here have agricultural networks and support systems throughout the state and the country. She can be new to farming, or a long-time farmer, but she will not face the same isolation and gaps in knowledge. Her support network is strong. However, she still battles ever-insistent gender barriers unique to the agricultural industry and the masculine archetype of Australian agriculturalists. She is the first woman on an industry board or a fish biologist and a farmer. She notes you have to have a few gray hairs before the men in the industry will take you seriously.

She lives in a world of firsts but is paving the way for women who follow her. She is ever coping with change as the Victorian government has separated the water from the land. She no longer has control over her water shares. She now has the financial distress that comes from buying water shares on the private market during drought years. This is another expense. However, she understands climate and is working to initiate a healthier, drought-tolerant farm. She introduces breeds of drought-tolerant livestock, micro-sprinklers, and hail netting. Water is her concern, and she is constantly seeking out new information and ways to adapt her farm to secure her future livelihood. She has had her share of loss. Due to drought years and increasingly climbing summer temperatures, she has lost trees, livestock, water, money, and land. However, she moves forward with resilience. She works to spread her knowledge through her local community and she

encourages those outside the agricultural industry to visit her farm. Even though she is the first woman on the water board, her knowledge is largely undocumented. She is working towards visibility. She mentors, she volunteers, and she engages with the outside world. She seeks change and recognizes the importance of collaboration and partnership.

Establishing and maintaining a livelihood on the farm requires partnership.

Women labor alongside their partners, children, and industry specialists such as representatives from the U.S. Forest Service and the Victorian Water Board. They network within their communities. Their work is cultural, familial, inherited, and tasked based on gender dynamics within the family unit. Those outside the family unit make assumptions about the roles of women on the farm and in the agricultural industry. Like the men who called the ‘farmer’ to discuss buying fish, and the bank manager who could not shake these assumptions, they create gender barriers and complicate the social life for women farmers. The actual diverse roles of women in the agricultural industry, in both Australia and the U.S., extend beyond the labels of helpers, housewives, or the farmer’s wife. In this research study, women in both states and countries did not identify with any of those terms, but did identify themselves as farmers, ranchers, mothers, and partners.

In Victoria and Idaho, many of the notions, or invisibilities, of women on farms are shaped by the historical rhetoric of advertising agencies and news media portraying the rugged cowboy of the American West, or the bushman of the Outback. However, this discourse does not portray the reality of American and Australian agriculture, as women are knowledgeable partners and key agents of change, and form part of the backbone that continues to sustain food and fiber production in both countries (Invisible Farmer Project, n.d.). Regardless of this reality, there are still societal gender barriers that exist

historically and today. These barriers continue to render the woman farmer *invisible*. As a society, we do not see her.

Yet she is everywhere. The landscape of the farm is shaped by her work, her family traditions, and her story. She knows the trees, soil, hydrology, the seasons, and how to care for the farm, managing a dynamic and multidirectional ecology. Women farmers in Victoria and Idaho understand climate. Climate is integrated into every aspect of their lives and has required they adapt during times of crisis, including moving the farm, culling cattle herds to make ends meet, watering a thousand trees by hand, or upending trees. Climate directly influences women farmers' daily work and the way they interpret and respond to the farm. They are observant of the ecosystem of the farm and base their adaptation strategies on what they discover.

The farm is her place. Her history. Her story.

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## APPENDIX

## APPENDIX: INTERVIEW GUIDES

### Water Dry: The Farm as Place in a Changing Climate, Capturing Women Farmers' Experiences in Idaho, USA And Victoria, Australia

1. What is your name and age?
  - a. Do you run the farm/ranch with your partner or other family members?
2. Where are you from originally?
  - a. Did, you grow up farming/ranching?
  - b. If so, what did you learn from your parents about farming for a living and raising a family on a farm?
3. What do you farm/ranch?
4. Have you noticed changes in the weather over the years?
  - a. Warmer or colder overall climate differences?
  - b. Has this caused you to change the way you farm?
  - c. Do you think the weather patterns will continue to change in the future?
  - d. Have you witnessed more extreme weather in recent years?
5. Have you had many visitors outside the valley?
  - a. What have their reactions to your lifestyle been?
6. Do you have an item of value that represents you, your life as a woman in the agricultural community and the work that you do?
  - a. How is item symbolic of your life and your work?
7. What is your relationship like with your neighbors?
  - a. Do you have issues with water shares?
8. What do you think about the place you live?
  - a. Do you like the landscape?
  - b. Do you find it an ideal place to raise your family? Why or why not?
9. What is it like balancing being a partner, a mother, or a single woman with a farm/ranch to run?
10. Have you ever experienced a crisis you would be willing to share?
  - a. What did you learn from that crisis?
11. Have many of your peers sold their farms or ranches to larger farms/ranches?
  - a. Do you think it is becoming more difficult to keep your family land and the farm/ranch running?

### Museums Victoria's Invisible Farmer Project: Emotional Geographies, Social Media, and the Photovoices of Women in Agriculture

1. Have you participated in the social media application, Facebook, in conjunction with the *Invisible Farmer Project*?
  - a. What have you done to participate?
2. Have you made connections outside the immediate farming community you live in through the *Invisible Farmer Facebook page*?
  - a. Whom have you made connections with and how did that come about?
  - b. Have you gained new community connections, friendships, educational associations, or international friendships/connections?

3. Have you taken photos and posted them to the Invisible Farmer Facebook page or had pictures taken by museum staff?
  - a. Why did you take the pictures you chose to post?
  - b. How do the photographs represent your farm, life, and work?
4. How has engagement with the *Invisible Farmer* Facebook page helped you establish a wider community network and information sharing?



## CURRICULUM VITAE

Tagen T. Baker

EDUCATION

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**Ph.D. in Environment and Society (2019)**

Department of Environment and Society, Utah State University

*Dissertation: The Farm as Place in a Changing Climate: Capturing Women Farmers' Experiences in Idaho, United States and Victoria, Australia***MA in English (2012)**

Lindquist College of Arts and Humanities, Weber State University

*Thesis: Homesteads—Places Left and Retrieved***BFA in Art (2007)**

Department of Art and Architecture, Idaho State University

*Senior Project: For a Greater Perspective—Photography, Mixed Media, and Design***Study Abroad (2004)**

Centre for the Liberal Arts and Sciences, University of Malta

RESEARCH INTERESTS

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Geography and the humanities, gender and environmental change, climate change communication, women's cooperative association in agriculture/natural resource management, environmental history, image-text relations, gender and agriculture, human-environment geography, documentary photography, and visual storytelling.

PRESENTATIONS

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Baker, Tagen T. "Photography for Gear Makers." April 2019. Idaho Commission on the Arts: *Idaho Cowgirl Congress*. The Art Museum of Eastern Idaho, Idaho Falls, Idaho.

Baker, Tagen T. and Alexandria Dolezal. "Waste Reduction, Recycling, and Community Engagement: Associated Food Stores' BYOBag Program." April 2017. Office of Research and Graduate Studies: *Research Week*. Utah State University. Logan, Utah.

Baker, Tagen T. "A Feminist Political Ecology of Home: Idaho, Resilience, and Rural Women Rancher-Farmers." September 2016. Western Literature Association Conference: *The Profane West*. Montana State University. Big Sky, Montana.

PUBLICATIONS

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**Peer-Reviewed Journals**

Baker, Tagen T. et al. "Mackay, Idaho." *GeoHumanities: Space, Place, and the Humanities*. Taylor and Francis, 26 May 2016.

<http://www.tandfonline.com/doi/full/10.1080/2373566X.2016.1170623>

**Literary Journals**

Baker, Tagen T. et al. "Left Behind." *Typehouse Literary Magazine*. The People's Ink, 1 May 2016.

- Baker, Tagen T., Caitlin Channer, and Michael Gillham et al, eds. "Travel" *The Lost River Review*. PDP Utah State University, 2016.
- Baker, Tagen T., Caitlin Channer, and Michael Gillham et al, eds. "Technology" *The Lost River Review*. PDP Utah State University, 2015.
- Baker, Tagen T., Caitlin Channer, and Michael Gillham et al, eds. "Home" *The Lost River Review*. PDP Utah State University, 2014.
- Baker, Tagen et al. "ICR South Salt Lake." *Gravel Magazine*. University of Arkansas, 1 Sept 2013.
- Baker, Tagen T., et al. "With My Great Pyrenees at Dawn." *Utah Voices and Poetry on Canvas*. American Fork Arts Council Press, 2013.
- Baker, Tagen T., et al. "Fredonia, AZ" and "Roswell, NM." *Chaparral*. St. George Arts Commission, 2013.
- Baker, Tagen T., et al. "Malad, Idaho." *Exit 13 Magazine*. 18 (2012) : 69.
- Baker, Tagen T., et al. "Apple Picking with Robert Frost." *Aelurus*. 1 (2012) : 59.
- Baker, Tagen T., et al. "Green Schwinn's." *The Lullwater Review*. Emory UP, 2012.
- Baker, Tagen T., et al. "Walking to a Farmhouse in Blackfoot Idaho for a Canning Lesson." *Ardent*. 6.2 (2011) : 1.
- Baker, Tagen T., et al. "Chesterfield, Idaho." *Foliate Oak*. University of Arkansas UP. 1 March 2011.

## AWARDS AND GRANTS

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- 2019 Service Award, Space Dynamics Laboratory, Logan, UT
- 2018 Feed a Bee Grant, Bayer Crop Science, (\$1000), Marysville, CA
- 2018 Professional Development Award for Conference Presentation, School of Graduate Studies and College of Natural Resources, (\$600), Utah State University, Logan, UT
- 2017 Photoshop World Conference Student Scholarship, (\$998), Photoshop World, KelbyOne
- 2016 Professional Development Award for Conference Presentation, School of Graduate Studies and College of Natural Resources, (\$600), Utah State University, Logan, UT
- 2016 National Geographic Fulbright Fellowship finalist and interviewee, Washington, DC
- 2015 Photoshop World Conference Student Scholarship, (\$998), Photoshop World, KelbyOne
- 2015 Graduate Tuition Waiver, Utah State University Research Foundation, Logan, UT
- 2014 Graduate Tuition Waiver, Utah State University Research Foundation, Logan, UT
- 2013 1<sup>st</sup> Place Poetry, Chaparral Poetry Forum, St. George, UT
- 2010 Photography Installation Grant, American Art Resources, Pocatello, Idaho
- 2003 John B. Davis Art Scholarship, Idaho State University, Pocatello, Idaho

## TEACHING EXPERIENCE

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Spring 2013	Creative Non-Fiction	SLCSD, Salt Lake City, UT
Spring 2013	Introduction to Mixed Media	SLCSD, Salt Lake City, UT

Spring 2012

MENG 6210

Weber State University

## PROFESSIONAL MEMBERSHIPS

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Association of American Geographers

American Agri-Women

## PROFESSIONAL EXPERIENCE

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### 2013- Present

### USU Research Foundation

#### Technical Writer

- Manages single source and competitive proposals for Research and Development (R&D) and for Department of Defense (DoD) customers.
- Manages a team of technical writers for the Virtual Imagery Processing-Marine Corps (VIP-MC) and Geospatial Intelligence (GEOINT) Programs, overseeing all documentation efforts including: system specifications, white papers, interactive multi-media content, quality assurance, and Contract Data Requirements Documentation (CDRLs).
- Researches risk management and information systems standard and create documentation for Department of Defense (DoD) Risk Management Framework Process (RMF).

### 2009-2013

### Salt Lake City School District

#### Media Clerk

- Managed accounts and inventory for the District Media Center. Responded to emails and phone calls regarding online library system, media accounts, and other project inquiries.
- Designed posters, signs, and other informational products for the media center. Photographed media personnel for district directory. Assisted administrators and educators with media related projects for their curriculums.

#### Continuing Education Teacher

- Planned a curriculum for a creative nonfiction class and a mixed media art class for high school students and adult learners. Taught students about basic principles of nonfiction and design and provided support outside of class time to help with additional questions and concerns.

### 2011-2012

### Weber State University

#### Production Director

- Implemented a literary journal for the English Department at Weber State University. Taught class sessions to graduate students about magazine production, logos, fonts, and design.

### 2007-2009

### Corporation of the President

#### Electronic Production Assistant

- Worked with a team of graphic designers and production artists on various print and online materials in over 100 languages. Communicated with translators on language design, checked for press issues, researched image libraries, and reformatted images for press.

**2008****Blackfoot Morning News****Reporter and Photographer**

- Wrote articles and took photographs that covered community events in education, healthcare, and agriculture.

**2001-2007****Idaho State University****Managing Editor-Bengal Newspaper**

- Managed a staff of 30 for the independent student newspaper. Designated funding for new equipment, student scholarships, and other circulation necessities. Held various editorial positions in photography, layout, and design. Built newspaper pages, took pictures, interviewed students, faculty, and administrators.