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Weed Women, All Night Vigils, and the Secret Life of Plants: Negotiated Epistemologies of Ethnogynecological Plant Knowledge in American History

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ANTIOCH UNIVERSITY NEW ENGLAND

Department of Environmental Studies

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*Weed women, all night vigils, and the secret life of plants: negotiated epistemologies of
ethnogyneological plant knowledge in American history*

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Weed women, all night vigils, and the secret life of plants:
Negotiated epistemologies of ethnogynecological plant knowledge in American history

by

Claudia Jeanne Ford

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

Doctor of Philosophy
(Environmental Studies)

at

Antioch University New England

2015

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*I humbly dedicate this dissertation to the life, work, and memory of
Dr. Vivian Marie Ford.*

I am eternally grateful that my mother paved the way before me by earning her doctorate as a young grandmother, and that her passion for education and lifelong learning is my legacy and my delight.

Therefore, always carry an observant eye and an analytic mind. You may suddenly stumble upon some truth for which your world is waiting.

--Marcus Garvey, 1937

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I would like it to be understood that I cannot and would not pretend to be a biographer, historian, or anthropologist of the Mohegan, Mashantucket, Pequot Nations or any of the tribes and communities whose archives I have had the privilege of accessing. None of my research is meant in any way to be a biographical study, a tribal history, or an anthropological study. I am humbly aware that my access to sacred tribal resources remains a special privilege, and my gratitude is profound. Any errors in interpretation of these materials should reflect only on my limitations as an individual researcher, and should not be ascribed to the Native communities, the materials, or their provenance.

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ABBREVIATIONS

BFD	Breastfeeding or lactation
CBL	Labor and birth; childbirth
FER	Fertility
GYN	Gynecology
IK	Indigenous Knowledge
INF	Infancy
MRA	Menstruation
MNP	Menopause
PPT	Postpartum
PRG	Pregnancy
RH	Women's reproductive health
TEK	Traditional ecological knowledge
TON	Tonic

GLOSSARY

abortifacient. Any drug or plant preparation that induces abortion, or prevents implantation of a fertilized ovum.

accoucheur. A person who assists a woman in labor. Formerly used more often for midwives, currently used more often for male obstetricians.

afterbirth. The placenta, expelled from the uterus after delivery of the child.

ague. A pre-modern word for fever, most often for malarial fever.

alterative. Remedy that changes a condition gradually.

amenorrhea. Insufficient or irregular menstruation, or the absence of a menstrual period.

annual. A plant that completes its development from germination of the seed through flowering and death in one growing season.

anodyne. Remedy that relieves or quiets pain.

anti-inflammatory. Remedy that reduces inflammation and swelling.

astringent. Remedy that causes the contraction of tissue.

balsam. An aromatic substance produced in certain plants.

biennial. A plant that requires 2 growing seasons to complete its development from germination of the seed through flowering and death.

branchlet. A small branch growing from a large branch or tree trunk.

breech presentation. A birth in which the baby is descending through the mother's pelvis feet or buttocks first. The normal position is head first.

caked or broken breasts. A pre-modern term for painful hardening of lactating breasts attributable to plugged mammary ducts, formerly a term used for cracked nipples or nipple pain during lactation.

catamenia, catamenial. A clinical term referring to menstruation or the menstrual cycle, more common as a description of menstruation in pre-modern use.

catarrh. Inflammation of mucus membranes in a body cavity. The pre-modern term uterine catarrh described a vaginal inflammation.

cathartic. Remedy that causes an evacuation of the bowels.

childbed fever. A blood infection resulting from a lack of hygiene in birth attendants, also called puerperal fever or puerperal sepsis.

chlorosis. A pre-modern term to describe iron deficiency anemia, exacerbated by an irregular menstrual cycle in adolescent girls, which may impart a greenish tint to the skin. Also known as “green sickness.”

cholera infantum. Obsolete, pre-modern, non-specific term for gastroenteritis in babies.

clyster. An enema.

confinement. A term used to describe the period of labor and birth.

corrective. A plant or other substance used to correct or make more pleasant the action of other remedies, especially purgatives.

costive, costiveness. Constipation.

decoction. A tea made from boiling the roots and bark of herbs rather than from the leaves and flowers.

diuretic. Remedy that increases the volume of urine.

dropsies, dropsy. Swelling due to accumulation of fluid in the body, often from kidney disease or congestive heart failure.

dysmenorrhea. Excessive, painful or obstructed menstruation.

eclampsia. Convulsions associated with pregnancy, the result of high blood pressure. Often fatal for mother and fetus in pre-modern era.

emetic. An agent that causes vomiting.

emmenagogue. An agent that induces menstrual flow.

ergot. A fungus from the rye plant used as a medicine to generate uterine contractions and hasten delivery.

ethnogyneology. A branch of ethnomedicine and ethnobotany concerned with plants used for women’s reproductive health.

fluor albus. A term used to describe excessive vaginal discharge, also called leucorrhea or “the whites.”

herb. A plant used for medicine, food, flavoring, or perfume.

hydrophobia. The fear of water that is a symptom of rabies.

hysteria. Obsolete and non-specific diagnosis for a wide variety of women's symptoms and complaints.

infant colic. Prolonged and unexplained episodes of crying in infants, commonly attributed to digestive distress.

infusion. A tea made from plant leaves and flowers that steeps about twenty minutes.

involution. The reduction in size of the uterus to a non-pregnant condition following childbirth.

lactagogue, lactuary. Remedy that increases the flow of breast milk in a lactating woman.

lactation. The secretion of milk from mammary glands, and the suckling or breastfeeding of an infant.

leucorrhea. A thick whitish or yellowish vaginal discharge that may be from a variety of normal and pathological causes. Also called *fluor albus* or "the whites."

lochia. The normal vaginal discharge during the postpartum period.

lying in. A pre-modern term for the period of time surrounding childbirth.

menarche. A woman's first menstrual cycle.

mucilaginous, mucilage. Slimy or sticky substance; mucilage is a pre-modern term for a thickened, easily digestible soup given to invalids and postpartum women.

narcotic. An agent that relieves distress and induces sleep.

neonate, newborn. A child up to 28 days postpartum thereafter referred to as an infant.

nervine. Remedy that calms and soothes, and is beneficial for the nervous system.

oxytocic. A drug or plant substance that causes uterine contractions and hastens childbirth.

parturition, parturient. Childbirth, the act of being in labor, or related to childbirth.

perennial. Plants that continue re-growth for several years.

physic. A pre-modern term for a remedy that purges, a laxative.

pessary. A remedy inserted into the vaginal canal.

prodromal labor. Early contractions of the uterine muscles, sometimes called “false” labor, not strong enough to induce childbirth.

prolapsus uteri. The falling of the womb from its normal position into the vaginal canal.

puerperal sepsis or puerperal fever. A blood infection caused by a lack of hygiene in birth attendants, also called childbed fever.

purgative. Increases peristalsis (contraction of the bowel); to purge, to cause evacuation of the bowels.

remedy. A plant medicine, herbal preparation, or treatment for a disease or complaint.

rheumatism. Pre-modern use of this term for disorder associated with pain in the joints.

rhizome. Underground plant stem.

rigid *os uteri.* A condition where the mouth of the uterus, the os, does not dilate correctly during childbirth and causes the labor to be protracted.

rootstock. Rhizome.

sedative. Used to quiet an individual.

simples. Remedy consisting of one herb used for one ailment.

soporific. Remedy tending to cause sleep.

sudorific. Increases perspiration. Pre-modern usage to refer to Native customary sweat baths.

thrush. An oral yeast infection common in infants.

tonic. Stimulates the restoration of tone to the muscles.

travail. Painful effort, a pre-modern term used to refer to labor and birth.

uterine inertia. The absence of effective contractions during labor. Pre-modern usage for the absence of menstruation in cases of amenorrhea or dysmenorrhea.

ABSTRACT

This dissertation critiques the discourse of traditional ecological knowledge described as embedded in indigenous peoples' longevity in location, for the purpose of understanding the embodiment of ecological knowledge in culture. The aim of this research is to examine the historical and epistemic complexity of traditional ecological knowledge that may be both established from the length of time people reside in a specific ecosystem and constitutive of negotiations between and among different cultures. I choose the specific case of the negotiation of plant knowledge for women's reproductive health among Native, African, and European groups as those negotiations unfolded on the American continent from European settlement in the early 17th century to the post-Emancipation period of the early 20th century. By focusing on ethnobotanical accounts of women's reproductive health knowledge I explain how this knowledge persisted or changed as people moved, and how this knowledge might have been created through negotiations across cultural boundaries. It is my contention that traditional ecological knowledge is simultaneously maintained and altered through people's migrations and negotiations. To test this contention I ask a number of key questions from my analysis of historical ethnogynecological evidence. To what extent is traditional ecological knowledge embodied in people and to what extent is it emplaced in an ecosystem? How is the traditional ecological knowledge of longevity in place different from traditional ecological knowledge that shifts as people migrate? What is the evidence that traditional ecological knowledge is formed through negotiations across boundaries of culture, race, and epistemology, and does this change the framing of traditional ecological knowledge discourse? My research conceives of a discourse of traditional ecological knowledge that explicitly addresses issues of both ecologically emplaced knowledge and culturally embedded knowledge. I demonstrate that an understanding

of traditional ecological knowledge formulated on the way knowledge moves and is shared provides a fuller and more dynamic discourse of traditional ecological knowledge.

Chapter 1: Introduction

The garden is the metaphorical uterus of the universe out of which we are expelled - no longer ignorant of our existence; no longer fed without our own personal effort; no longer sheltered without the sweat of our brow. Having emerged from the garden, we are no longer capable of being in effortless harmony. Now we have to pay very close attention to our surroundings, and even then harmony is so illusive. The first garden was never meant to be ours forever. It couldn't have had much value for us, if it were. We had to leave in order to learn what it was and who we are. We had to leave in order to learn how to hold life and those in it as precious. We had to leave in order to learn to care and to love. We had to leave so we could figure out ways of growing – not back to, but forwards toward – the garden, carrying with us our burgeoning humanity of knowledge and love.

--Rev. Charles Blustein Ortman

Falling Woman's Herbs

Native American cultures embrace a wide variety of creation stories. These origin stories hold profound significance for their communities, similar in importance to the Christian story of the first garden, the Garden of Eden. Native creation stories have been transmitted orally for millennia and the variety, themes, and protagonists of these stories are many. However, in North America there is one narrative that is familiar among diverse Native peoples: the Tale of Falling Woman, sometimes called Skywoman, and the Origins of Turtle Island.¹ Falling Woman, the Original Mother, falls through a hole in the sky while clutching the roots of important plants and herbs. In these indigenous stories Native plants and herbs are considered “the hair of Mother Earth.” Animals save Falling Woman by recognizing her vulnerability, cushioning her fall, and sacrificing their time and energy to gather soil to create a new home for her. The smallest and

¹ This summary of the Falling Woman Tale, and the story that follows, are my own creations, however, they are inspired by many sources. For more on Native storytelling and myths, see: Marsha C. Bol, ed, *Stars Above, Earth Below: American Indians and Nature* (Niwot, CO: Roberts Rinehart Publishers, 1998); Michael J. Caduto and Joseph Bruchac, *Keepers of the Earth: Native American Stories and Environmental Activities for Children* (Golden, Colorado: Fulcrum, Inc., 1988); E. Barrie Kavasch, *The Mound Builders of North America: 4000 Years of American Indian Art, Science, Engineering and Spirituality Reflected in Majestic Earthworks and Artifacts* (New York: iUniverse, Inc., 2004); Robin Wall Kimmerer, *Gathering Moss: A Natural and Cultural History of Mosses* (Corvallis: Oregon State University Press, 2003).

seemingly weakest animal is ultimately successful in grabbing a handful of dirt from the bottom of the sea world the animals inhabit. Turtle volunteers his wide strong back on which to spread the soil and establish Falling Woman's new home and garden. Falling Woman is pregnant, and it is her plants and her newborn child who join the animals of soil and sea to begin the Great Chain of Being on Earth.

A Story: In a Garden on Turtle's Back

It is the taste of my mother's hair that I remember first. Many moons ago, yet it remains indelibly firm and sleek in my mouth. Like cedar, it smells as smoky as the morning breath in our hut when the man boy who now cares for me pulls the deerskin aside and stretches his tense smooth limbs in the pale light that brings the day. The slight sweetness on my eager tongue is like the wild cherry bark tea that Grandmother gave me when my time in the women's hut was replaced by a gnawing, burning discomfort from the depths of my belly. A hint of salt, sand, and willow bark as I mouth and suck on the silky braid, the taste of my mother and my own saliva. This is my mother's hair, and it is the first thing I remember as the dream of falling comes to me again. I am falling. My belly is full and taut, my breasts are heavy, and I am falling through a void, weightless and dense as a stone. And it is the infant earthy taste of a braid that betrays me, that guides my hands to pull roots, grasping for stems, leaves, fists full of soil as I plunge. I want my hands to reach for the man boy who I care so much for, who I long for more than the ache in my swollen breasts. I want to restart the dream so that I can grasp the safety of his smooth limbs, but my memories reach for my mother's hair, and I fall. I twirl, I turn and tumble, I drift, and fall with my dirty hands full of the roots, seeds, and flowers that are my memories of cedar, wild cherries, and the sea. When I awake, looking for the light of dawn, for my hut, for my man boy, I find I am in a strange familiar place, a place that is firm, solid, green, and growing around me as I lay. My now empty soil-stained hands gently answer the insistent kicking in my belly. I know I have left almost everything behind because of the fall. It is the beginning of all, but I am not alone in this garden.

The stories of both Skywoman's and Eve's gardens inspire my research because my investigations are about the significance of different peoples intimate relationships to plants and the preparation, knowledge, and use of plants, both cultivated and wild. My interest in medicinal plant knowledge specifically, and traditional ecological knowledge broadly, developed during my first year of doctoral coursework. Reading the traditional ecological knowledge literature I was reminded of the gardening, plant, and nature wisdom I had learned from my Native and African grandmothers and grandfathers. As well, I was immediately drawn to the connections

between traditional ecological knowledge research and my observations of the environmental practices of the communities in which I had resided during thirty years of international work in more than a dozen countries. Traditional ecological knowledge investigations matched my personal experiences and professional observations of the significance of people's narratives of plants and animals, nature and land, and of the importance of ecological stories purposefully transmitted from one generation to the next.

In the design of my research project I desired to make use of my 40 years of clinical experience in women's health and midwifery. Recalling that in the birthing room, transgressing all boundaries, the women in attendance eagerly shared information to attain a single purpose, a healthy outcome for mother and child, I decided to uncover ways that people's ecological knowledge about the use of plant remedies for childbirth and other women's reproductive health concerns might have been shared across racial and cultural boundaries in American history. I was especially interested in the 300-year period from initial European colonization through Emancipation and Reconstruction - from the early 17th to the early 20th centuries - when Native, African, and European peoples were rapidly encountering each other in the New World in large numbers and in interesting, intense, and fraught ways.

The original proposal for this study was to study women's reproductive health uses of plants in the 18th century. This century was selected for two reasons: first, it was when European settlement and African slavery significantly escalated in the New World and opportunities for contact between Native Americans and these groups increased; second, it was prior to the widespread use of chloroform to relieve pain in childbirth beginning in the 1850s, before which there would have been a primary reliance on plant remedies to support women's reproductive health outcomes. In the course of conducting this research, however, it became quickly apparent

that restricting studies to the 1700s was unrealistic based on the dates of publication of the ethnobotanical source materials. Temporally restricting an examination of American ethnogynecological practices might seem practical, however, the more interesting task turned out to be comprehending a wider time range of available materials based on shifting ideas about medicine, botany, women's reproductive health, and the lifeways of New World indigenous, African, and European communities that were the subjects of the documents. Consequently, and based on available materials, the current study covers ethnobotanical knowledge and practices from a much longer period, from early New World settlement by different groups of Europeans and Africans in the beginning of the 1600s, to the post-slavery Emancipation and Reconstruction era up to the 1920s.

This study is built on the stories of plant medicines and the narratives of the cross-racial and cross-cultural encounters and interactions that transformed ethnogynecological plant knowledge and practice spanning these four centuries. In this research are true stories and imagined stories, of plants, of births, and of the meetings of Native, African, and European women. These are stories that reference the women, their families, their communities, their relationships, their knowledge, and their wild and cultivated gardens. This research is unearthed from archival ethnographic and ethnobotanical texts in an attempt to discern patterns of ethnobotanical knowledge and practice within the ecological spaces that people inhabited and migrated to. The fictional tales are built on the information gathered during the investigations. In this research, facts, information, and the real and imagined stories of interactions and encounters are woven into a net of relationship with each other as a way to remember that stories are part of the hypotheses, the suppositions, the evidence, and the findings of this research. Most significantly, storytelling honors the different paradigms of research, knowledge making, and

knowledge sharing that encountered each other in the American past, and that inform this paper in its present. These narratives pay tribute to the methodologies underlying the indigenous knowledge of all peoples. Stories serve as points of information and as signposts for navigating the real, hidden, and imagined historical journeys described within my study.

Shawn Wilson (Cree) explains the importance of storytelling to indigenous epistemologies and research approaches in his book, *Research is Ceremony*. Wilson outlines three levels of storytelling that are important to the research process - sacred stories, legends, and personal experiences.² I cannot provide or address the use of sacred stories, however in my research I have provided legends, fictional accounts, and personal experiences as ways of shaping a narrative about my research subject while building relationships between my source materials, the readers of the dissertation, and me. The stories allow the reader to participate in my research in a different and very personal way. In his text *The Wayfinders*³ anthropologist Wade Davis explains the direction-finding commitment and discipline displayed during astounding Polynesian sea journeys over thousands of miles of the Pacific Ocean void in open catamarans. Davis describes the extraordinary ability of traditional Polynesian navigators to locate themselves by “pulling islands out of the sea” with their minds, reading only the marine landscape of stars, clouds, sun, birds, fish, sea kelp, waves, and swells. Davis says,

But as we isolate, deconstruct, even celebrate these specific intellectual and observational gifts, we run the risk of missing the entire point, for the genius of Polynesian navigation lies not in the particular but in the whole, the manner in which all of these points of information come together in the mind of the wayfinder . . . The navigator must process an endless flow of data, intuitions and insights derived from observation and the dynamic rhythms and interactions of the constantly changing world of weather and the sea.⁴

² Shawn Wilson, *Research is Ceremony: Indigenous Research Methods* (Halifax: Fernwood Publishing, 2008), 98.

³ Wade Davis, *The Wayfinders: Why Ancient Wisdom Matters in the Modern World* (Toronto: Anansi, 2009).

⁴ Davis, *The Wayfinders*, 60.

In my research I am acting as a wayfinder for dynamic, shifting historical observations and interactions, and the navigation of these observations and interactions is both real and imagined. The stories are my landscape of signs and insights; the stories act as signposts - directions given from the heart of the subject and the researcher.

My research is about traditional ecological knowledge, in this case the ecological knowledge of plant species and their use and preparation for medicinal remedies. Traditional ecological knowledge is the environmental knowledge of indigenous communities who have lived many centuries, often many millennia, within a particular geographical area. In this research I review the extent to which traditional ecological knowledge is both situated in specific places and embodied in culture through an examination of how ecological knowledge is constructed from negotiations between and among different groups of people. I examine what might happen during the transmission, sharing, and reuse of traditional ecological knowledge when it is negotiated at or across the epistemological boundaries of race and culture.

Although I concur that length of time in an ecosystem is a key construct of traditional ecological knowledge, and that descriptions of the longevity and locality of traditional ecological knowledge are valid, in this research I am addressing the inadequacy of these descriptions. I contend that one challenge is that these depictions of traditional ecological knowledge tied to place are incomplete, resulting primarily from ecological research. I suggest that portrayals of traditional ecological knowledge should derive not only from ecological theories, but as well from the perspective of indigenous epistemology and historical considerations. The intent of my research is to examine the historical and epistemological complexity of traditional ecological knowledge, as this knowledge is constituted by the negotiations between and among different peoples moving and interacting with each other.

Weed Women, All Night Vigils, and The Secret Life of Plants

There is a glossary of medical and botanical terms preceding this introduction, nevertheless, I will begin by briefly defining the most important concepts and terminology used in this research, which reviews the recorded ethnobotanical knowledge of the use of plant remedies for the reproductive health needs of Native, African, and European women.

Ethnobotany is defined as the study of plants in relation to their cultural use and the topics and methods of ethnobotany are explained in my research findings. Ethnobotanical knowledge is an element of traditional ecological knowledge, which is the environmental knowledge of indigenous communities. Ethnogynecological plant knowledge is the part of ethnobotanical knowledge that is concerned with medicinal plants that are used for women's reproductive health. Ethnogynecology is defined as a branch of ethnobotany and ethnomedicine, and ethnogynecological plants are, according to Siri von Reis Altschul, "those species which have been employed in connection with the functions and diseases of the reproductive tract of the human female . . . embracing the practices surrounding pregnancy, labor and the puerperium."⁵

I use the terms ethnogynecology and women's reproductive health interchangeably throughout this research, as they constitute the specific concerns of women experiencing menstruation, menopause, pregnancy, childbirth, and the postpartum period from placental delivery through six weeks of uterine involution, including the breastfeeding and care of an infant during those six weeks. Vania Smith-Oka conducted an ethnographic study in 2008, to document women's knowledge of medicinal plants used for reproductive health purposes among a small indigenous community in Mexico. In "Plants Used for Reproductive Health by Nahua Women in Northern Veracruz, Mexico," Smith-Oka presents a common classification for the use

⁵ Siri von Reis Altschul, "Ethnogynecological Notes in the Harvard University Herbaria," *Botanical Museum Leaflets* 22, no. 10 (Harvard University, 1970): 333.

and study of ethnogynecological knowledge. The author defines women's reproductive health purposes to include:⁶

- Conception
- Pregnancy
- Abortion
- Contraception
- Birth
- Menstruation
- Post-partum
- General Uterine Health

I agree with Smith-Oka's categorization and it concurs with my professional knowledge of women's reproductive health. In my research I develop a similar classification for categorizing and studying patterns of women's ethnogynecological knowledge in the historical records, combining conception, abortion, and contraception into one category, and adding categories for menopause, general female tonics, lactation, and infant care. The 10 women's reproductive health categories in my study are explained in chapter 4, and they are:

- Fertility
- Pregnancy
- Childbirth
- Menstruation
- Postpartum
- Gynecology (uterine health)
- Menopause
- Female Tonics
- Breastfeeding (lactation)
- Infancy

My women's reproductive health research is primarily concerned with the use of plants by ordinary people and not by botanists or trained medical professionals. Yet, in the 4 centuries covered by my review, the definition and scope of botany, and of medical practice and medical practitioners, underwent considerable modifications and changes. My research is not a medical

⁶ Vania Smith-Oka, "Plants Used for Reproductive Health by Nahua Women in Northern Veracruz, Mexico," *Economic Botany* 62, no. 4 (2008): 606.

or botanical history, nonetheless, in this study when I refer to medical and botanical texts, documents, and practices I explain the coterminous medical and botanical knowledge of those authors, and their materials and practices. There is great complexity in what constituted rapidly shifting ideas of health, illness, medicine, ritual, and remedy both among and between different groups of people, and for those reasons these concepts are introduced along with my interpretations of specific historical documents.

I use the term “weed women” in the title of my research as a reminder of people’s traditional ecological skill in finding useful plants amidst the weeds of an ecological space, discovering medicinally important plants that were wild and not cultivated. In New World ethnobotanical histories recorded from the beginning of the 17th century and extending through the early 20th century, the women who used plant remedies and practiced herbal healing were variously referred to as herbwives, root doctors, root workers, conjurers, herbalists, herb doctors, wise women, weed women, and midwives. Throughout the historical period covered in this research the greater part of the expertise of these ethnogynecologically-knowledgeable women was employed for the relief of symptoms and complaints during pregnancy, childbirth -- the all night vigil -- and the immediate postpartum. Although my research covers the ethnogynecological knowledge of men and women within different communities, I do pay special attention to the recorded knowledge and practices of women herbalists and midwives. While my research is not a history of midwifery, the knowledge and practices of midwives are critical to my research because of their inestimable and consistent attentions to women’s reproductive health issues, especially around labor and birth.

Examining the history of the rapidly changing American continent over a long period of time it is important to remember that even within the 13 states that federated to become the new

United States of America, there was great regional social, ecological, and economic diversity between the New England, Middle Atlantic, and Southern colonies. On and within the borders of the newly forming United States there were sizeable Native American nations and there were immigrant New Spain and New France regions, to the south and north. While all of these regions experienced cultural interactions between the peoples living and settling there, the relationships between Native, African, and European populations were slightly different for each region due in part to the cultural differences between different Native tribes, African tribal histories, and European origins. My study examines indications of the sharing of ethnogynecological plant knowledge in the Americas, and it is, therefore, essential to explore the distinct plant knowledge and practices of different Native, African, and European groups. Specifically, my research considers the exchanges of ethnogynecological plant knowledge across these racial and cultural boundaries, and I am aware that the transformation of concepts of both race and culture during the historical period covered by my investigations is as complex as the concurrent shifts in ideas about medicine and health. For the most part I attempt to explain coterminous concepts of race and culture along with my interpretations of specific historical texts. I use the terms Native, African, and European to refer to groups of people who were considered to be of three different races, and originally from three different continents, meeting in the New World while also in the process of socially and politically being defined as distinct groups of “Americans.” The term culture is used in my research to convey elements of the practices of different ethnic, tribal, or ancestral units within these racial groups. I am aware that these are extremely simplistic constructions of race and culture; consequently these concepts are explored in greater depth and specific detail in the findings and interpretations of my research.

Research on Native ethnobotany was conducted through a review of ethnographic and ethnobotanical documents found in tribal archives located in the Northeast U.S. and online (see tables 1 and 2). I was privileged to be able to access, over a period of 18 months, the extensive archives of the Mashantucket Pequot Research Center in Connecticut, archives that contain contemporary and historical documents and materials from all of the Americas with especially robust collections for Northeastern anthropology, archaeology, history, and culture. In keeping with respectful best practice in Native and indigenous research the tribal membership of researchers and authors is noted in my study parenthetically, immediately after the first mention of a person's name. The specific names of Native tribes, bands, and groups are provided in my research if they were identified or documented in the archival materials. Generally, the archival documents that are the focus of my ethnobotanical investigations do not mention the origins of either African or European groups, and I note any exceptions to this practice when they occur.

The national origins and particular cultures of both African and European peoples in the Americas are unspecified for a number of different reasons. The ethnic and geographical origins of African peoples were maintained through the detailed records of the Atlantic slave trade; however, these identities were preserved or destroyed in contentious and controversial ways once Africans reached New World shores. While a detailed history of the African American slave trade is not within the scope of my research it is important to note that even as owners rarely preserved and never supported the maintenance of the ethnic identities of the enslaved, the owners occasionally requested that Africans from particular ethnic groups be shipped to the Americas. Slave and maroon communities were known, nevertheless, to preserve their ethnic distinctions, ties, and identities.⁷ In most cases, with the notable exception of studies of the

⁷ A focus on research that follows the specific ethnic identities of slaves from Africa to the Americas is most notable in the work of the following authors: Susan Campbell, "Africans to Dominica: 100,000 Middle Passages

Caribbean -- especially Cuba -- and of Brazil, any relationship between African ethnicity and specific healing plants or practices were not definitive or were inadequately documented by the time African American ethnobotanical studies were undertaken. In the Caribbean and Brazil documented ethnobotanical practices among different African ethnic groups occasionally accompanied distinct and widely known reputations for those healers' knowledge and abilities. In general, however, there was minimal interest among European ethnographers in documenting African American healing practices or plant knowledge during the 350 years of the slave trade.⁸

The authors of early American ethnographies and ethnobotanical studies were predominately European and European American men. These men were mostly from the ranks of botanists, naturalists, herbalists, and physicians. The paucity of ethnographies of the enslaved and African American ethnobotanical documents has its origins in racist notions of the inferiority and uselessness of African traditional knowledge, and the political complexities of the slave trade. European ethnographers' lack of interest in contemporaneously documenting the ethnobotanical practices of African slaves contrasted with a persistent interest in researching and writing about Native ethnobotanical practices. While both Native and African ethnobotanical subjects and practices were denigrated by these authors for lacking medical understanding or

from 'Guinea' to the Eastern Caribbean, 1764-1808," 2007, da-academy.org/AfricanstoDominica.pdf (accessed January 15, 2014); Judith Carney, "Seeds of Memory: Botanical Legacies of the African Diaspora," in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford, 13-34 (New York: Springer, 2013); Judith A. Carney and Richard Nicholas Rosomoff, *In the Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World* (Berkeley: University of California Press, 2009);

⁸ In addition to the authors cited in Note 7, above, for more on African American ethnobotanical history, see: Stanley B. Alpern, "Did Enslaved Africans Spark South Carolina's Eighteenth Century Rice Boom?" in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford, 35-66 (New York: Springer, 2013); Herbert C. Covey, *African American Slave Medicine: Herbal and Non-Herbal Treatments* (Lanham, MD: Rowman and Littlefield Publishers Inc., 2007); William Ed Grimé, *Ethno-botany of the Black Americans* (Algonac, MI: Reference Publications, Inc., 1979); Tinde van Andel, Sofie Ruyschaert, Kobeke Van de Putte, and Sara Groenendijk, "What Makes a Plant Magical? Symbolism and Sacred Herbs in Afro-Surinamese Winti Rituals," in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford, 247-284 (New York: Springer, 2013); and, Robert Voeks, "Traditions in Transition: African Ethnobotany in Lowland South America," in *Mobility and Migration in Indigenous Amazonia: Contemporary Ethnoecological Perspectives*, edited by Miguel N. Alexiades, 2275-294 (New York: Berghahn Books, 2009).

effect, Native remedies and practices were deemed to be useful as plant knowledge based on the species of the New World, and thus worthy of observing and recording. Consequently, African American ethnobotanical research appears much later than Native ethnobotanical studies. The published studies of African American ethnobotanical practices begin to appear post Emancipation, in the early 20th century.

The ethnic and national origins of European peoples were well known, and these identities were documented in general histories with a good understanding of where English, French, German, Dutch, Swedish, and other nationalities and their subcultures settled and moved about in the Americas. The ethnic and national groups of Europeans interacting in the New World differed depending on the region of North America, and each group of Europeans' ethnobotanical practices was likewise influenced by their specific cultural, religious, and medical traditions. However, for the New World ethnographic and ethnobotanical studies undertaken in the 17th through 20th centuries the majority of the European authors chose to generalize their references to their non-Native and non-African informants or audiences as either "Whites" or "Europeans," rather than refer to specific ethnicities or nationalities. Different European ethnic or national groups would certainly have brought their particular healing knowledge, practices, and written materials with them when they immigrated to the Americas. Nevertheless, the materials that I evaluate for my ethnogynecology research were mostly written and marketed for a general, burgeoning, and blended American public, where European ethnicity was simultaneously maintained and assimilated in complicated ways. It is beyond the scope of this research to review the specific histories and healing practices of the many European nationalities that settled the Americas, however, in the rare case that a source mentions specific European groups or practices it is noted.

Above all, while the ethnic origins and identities of Africans and Europeans are not readily available or specified in my research this does not detract from the primary purpose of this investigation. The aim of the archival study is to discover patterns in observed and recorded Native uses of ethnogynecological plants and within those patterns any indications that the knowledge of those plants was shared beyond those Native groups among the New World's African and European peoples. In most cases it is not known which specific African ethnicities or European nationalities gained or circulated knowledge of how particular ethnogynecological plants were used, however, this does not fundamentally inhibit the ability to draw conclusions about the ethnobotanical patterns that emerge, and the possible significance of the sharing of ecological knowledge across racial and cultural boundaries.

This study falls within the disciplinary boundaries of ethnobotany and not botany, an important consideration and distinction. My research investigates the ethnobotanical subjects of the relationships between people and flora, and not the botanical subjects of plant classification, structure, physiology, the history of botany, or the medical effectiveness of specific plant-based remedies. While assessing the relationships that people have with plants and plant remedies cannot exclude the botanical subjects, botany and botanical history are neither the focus of this paper nor within my expertise. There are ethnogynecological uses recorded for flowering plants, trees, fungi, mosses, and lichen, and I have chosen to use the word "plants" to signify the Plant Kingdom, as an overarching term covering these different types of flora. I am aware that fungi are considered part of a separate kingdom, however, this classification was not formally recognized until the 1960s, after the period of my historical interest. I appreciate the ethnobotanical significance of classification, as well as the ethnobotanical importance of the structure and physiology of different types of plants, thus I do provide species names as they are

recorded in the historical documents. I also consider two other important botanical and ethnobotanical issues.

First, I have accommodated the widely differing styles in plant nomenclature and classification that existed in the time covered by this research by adopting a simplified binomial name -- binomen, Linnaean, or Latin name -- when referring to a plant species. I have dropped the convention of including either the author of the binomen or the date of publication of the Latin name. I omit dates of nomenclature even if the author of an ethnobotanical manuscript provides them. Hence *Alnus incana* (L.) Moench. is described on page 20 of Hubert Smith's Menomini manuscript,⁹ known by the common names hoary alder, grey alder, and speckled alder. In my research I refer to this species in the simplified form of *Alnus incana* or *A. incana*, omitting reference to the naming botanists (L.): Carolus Linnaeus (1707-1778); or Moench: Conrad Moench (1744-1805). Shortening the identification of species to an abbreviated Latin name allowed patterns of use to emerge more clearly, and without some of the complications inherent in the widely shifting norms of botanical classification. When describing plant uses I provide as many of the common names of a species as possible, as those names are recorded in the historical documents.

Second, absolutely nothing in this research should be construed as medical or healing advice. The plant uses and remedies discussed in this dissertation are generally confined to historical descriptions and given the variations in plant classification schemes over the centuries there is no absolute certainty that plants with identical names are currently the same species. This research is based on historical ethnobotany and the alteration of species names is sometimes true for Latin designations, and quite frequently true for common names. Even when current uses for

⁹ Huron H. Smith, "Ethnobotany of the Menomini Indians," *Bulletin of the Public Museum of the City of Milwaukee* 4 (1923): 20.

plant species are mentioned in my study they are discussed not as medical advice but only in the context of very specific women's reproductive health practices and practitioners. Furthermore, this study does not consider the medical, clinical, or pharmaceutical effectiveness of recorded remedies in searching for patterns of use. While it is true that medicinal plant effectiveness is an important ethnobotanical consideration, modern technology for the assay and identification of clinically important plant compounds has undergone major changes, especially in the last twenty years of noteworthy advances in plant genomics. Hence, I exclude the consideration of ethnobotanical species' chemical constituents or medicinal and pharmaceutical effectiveness from my research. Finally, it is worth reminding the reader that pregnant women and nursing mothers should not use any plant-based remedies without expert advice, they should not self-medicate, and nothing I have written is meant to imply an endorsement for the use of a specific plant. I emphatically recommend the services of a trained medical or herbal specialist if anyone is looking to incorporate plants into their healing regime.

Organization of the Dissertation

My research advances a critique of the current discourse of traditional ecological knowledge. The specific example of the ways in which Native, African, and European people negotiated their knowledge of the use of plant remedies for women's reproductive health needs is reviewed to see if these exchanges indicate sharing of ethnogynecological knowledge. I examine patterns of recorded plant knowledge that might indicate how these negotiations occurred on the American continent from European settlement in the early 17th century up to the post-Emancipation period of the early 20th century. By focusing on historical accounts of a specific type of traditional ecological knowledge I am able to investigate the way that ecological

knowledge might endure or shift as people move and how ecological knowledge is created through negotiations across race and culture.

The dissertation is organized as follows: In *Chapter 2: Integrative Review*, I begin with an explanation of traditional ecological knowledge and its foundations in indigenous knowledge and identity, in order to understand the epistemology that supports traditional ecological knowledge development and transmission. This comprehensive assessment of the current discourse of traditional ecological knowledge covers definitions, indigenous cosmology and indigenous research methodologies, as well as the relationship of traditional ecological knowledge to place, culture, and environmental change. I also establish the historical context for ethnogynecological plant practices through an introduction to the New World encounters of Native, African, and European peoples.

In *Chapter 3: Conceptual Approach*, I describe the theoretical approaches that I choose to support my critique and why these approaches are chosen. I explain the critical theories, research frameworks, and disciplinary methodologies that underlie my critique of the discourse of traditional ecological knowledge. I explore some of the challenges and limitations of historiographic methodologies and archival ethnographic research, especially historical research that is about the lives of women or indigenous peoples. In *Chapter 4: Research Findings and Stories*, I present my Ethnogynecology Index, an indexing and assessment of 688 ethnogynecologically significant plant species. I also explore the plant ethnographies and their archival stories for patterns of recorded plant use as evidence of the negotiation of plant knowledge across racial and cultural boundaries. In *Chapter 5: Interpretation and Analysis*, I triangulate theories from the literature, with the archival stories and a thought experiment. I propose ways of looking at the historic and epistemic complexity of traditional ecological

knowledge as it shifts due to migrations and negotiations across cultural and racial boundaries. In *Chapter 6: Conclusion*, I review the meanings and significance of my findings for an expanded discourse of traditional ecological knowledge, based on my research approaches, the archival study, and its analysis. I end with suggested directions for further research.

Chapter 2: Integrative Review

“What does the reindeer itself live upon? I can’t see how they can get food enough in all the ice and snow.” “It lives upon the greenish lichen which is called reindeer-moss [*Cladonia rangiferina*], and which covers some parts of the country in great abundance. In the midst of winter, these sensible creatures will with their hoofs dig the snow away when it is four or five feet in depth that they may be able to get a supply of their favourite lichen, for without a good supply of it they never thrive.”

--*See-Saw Stories*, 1881

Traditional Ecological Knowledge: Plants, Animals, and People

Beginning with the story of a plant it is fitting that it is a story of lichens, among earth’s first plants, important to animals and humans and fashioned from a combination of two or three very different but intimately combined organisms - a protective fungus partnered with photosynthesizing alga and/or cyanobacteria. Lichens are considered non-vascular plants but fungi and cyanobacteria are not in the plant kingdom. Lichens grow slowly in very inhospitable conditions and are among the earth’s oldest living organisms.¹⁰ Because of their appearance they often carry the common name of a moss. Lichens photosynthesize, play critical ecosystem roles and functions, and are essential to the traditional ecological knowledge of indigenous communities in Europe, Asia, and the Americas. Biologist and storyteller Robin Wall Kimmerer (Potawatomi) says of lichens’ habitat, “Lichens have no roots, no leaves, no flowers. They are life at its most basic. From a dusting of propagules that lodged in tiny pits and fissures just a pinprick deep, they settled the bare granite.”¹¹ From an ethnobotanical perspective lichens have been used extensively for dyes, fiber, fuel, food, and medicine, and lichens are ethnogynecologically significant. Historical documents report that lichens,

¹⁰ For more information on lichens, see: Sylvia Sharnoff and Stephen Sharnoff, with Irwin M. Brodo, “Lichens of North America,” a website based on Brodo, Sharnoff, and Sharnoff, *Lichens of North America* (Yale University Press, 2001), <http://www.lichen.com/> accessed December 15, 2013; and Regents of the University of California, “Introduction to Lichens: An Alliance Between Kingdoms” (University of California Museum of Paleontology, 2006), <http://www.ucmp.berkeley.edu/fungi/lichens/lichens.html> accessed December 15, 2013.

¹¹ Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants* (Minneapolis: Milkweed Editions, 2013), 268.

and mosses, were used in North America as women's sanitary napkins and babies' diapers, because of their absorptive qualities.¹² Huron H. Smith describes the uses of lichen in the "Ethnobotany of the Ojibwe Indians," and he observes the practice of using reindeer moss to bathe newborns: "Lichens: Reindeer Moss (*Cladonia rangiferina*) "asa' gûniñk'" [moss]. The Ojibwe boil this moss and use the water to wash a newborn baby. They declare it is the same as if you were putting salt into the water."¹³ As well, the lichens eaten by the caribou are a traditional food of Cree and Inuit hunters, who ceremonially consume the stomach contents of a freshly killed animal, and are grateful for access to this nutrient and energy dense food during a hunt.

Fundamentally, however, lichens are a reminder that the traditional knowledge and use of plant species is not isolated to either a single species used for a single purpose -- as in the modern idea of pharmaceuticals -- or to a plant species' importance to humans alone. My research explores ethnobotanical practices as a subset of traditional ecological knowledge, remembering that plant remedies exist in a web of ecological relationships among people, culture, and the flora and fauna of their environment. The approach I take to understanding this web of relationships is to begin with a story about the importance of lichen to gestating caribou, followed by a comprehensive review of traditional ecological knowledge research.

A Story: Lichens, Caribou, and Dams

*The caribou are searching for easy access to their favorite plant, and a familiar, nourishing place to give birth. The pregnant females lead the herd. Leaving the cold taiga behind, heading at speeds of up to 50 miles per hour towards a warmer tundra, the caribou (*Rangifer tarandus*) females of the barren-ground species travel toward their traditional, lichen-rich birthing grounds, no matter where they have wintered. In 1984, an unusual number of animals perished, approximately 10,000 of the George River Herd of northern Québec drowned while attempting their crossing of the Caniapiscou River above Limestone Falls in the James Bay region. The normal annual caribou loss for this herd during their great migration, a trek that rivals the*

¹² Regents of the University of California, "Introduction to Lichens: An Alliance Between Kingdoms" (University of California Museum of Paleontology, 2006), <http://www.ucmp.berkeley.edu/fungi/lichens/lichens.html> accessed December 15, 2013, and Robin Wall Kimmerer, *Gathering Moss: A Natural and Cultural History of Mosses* (Corvallis: Oregon State University Press, 2003), 106-107.

¹³ Huron H. Smith, "Ethnobotany of the Ojibwe Indians," *Bulletin of the Public Museum of Milwaukee* 4 (1932): 373.

famed movements of the wildebeest in east Africa, is estimated at 500 animals. The local First Nations hunters of the caribou - which is a French origin word for xalibu or qualipu, the Mi'kmaq word for "snow shoveler" - impugned the engineers of the newly built La Grande Dam, a hydroelectric complex, for dramatically increasing the flow of the river in 1984, while filling the manmade reservoir, 600 some miles north of Montréal, on the heels of 3 years of dramatically reduced flows during construction.¹⁴ The caribou of the George River Herd, which had reached as many as an estimated 600,000 animals, were fatally unprepared to alter their traditional understanding of the ecology of the land and its hazards.¹⁵

In 1984, Fikret Berkes, a marine scientist and professor of ecology at the University of Manitoba was called to assist the dispute between the James Bay Cree and the Québécois government engineers. Berkes had been working with the Cree communities since 1974, at first as a postdoctoral marine researcher and eventually as a consultant for Cree elders who were concerned with documenting and preserving their traditional knowledge of the caribou migrations. In his text, *Sacred Ecology*,¹⁶ Berkes describes the ecological knowledge of the James Bay Cree and offers what has become a widely accepted definition of traditional ecological knowledge:

A cumulative body of knowledge, practice, and belief, evolving by adaptive process and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.¹⁷

Berkes purpose is to document the practical importance of traditional ecological knowledge for environmental management, specifically for the care of endangered species and important but

¹⁴ Sources concerning the impact of the James Bay La Grande hydroelectric project include: Grand Council of the Crees, "Social Impact on the Crees of James Bay Project" (Nemaska, Québec, Canada: Cree Nation, undated), <http://www.gcc.ca/archive/article.php?id=38> (accessed November 1, 2012); James Marsh, "James Bay Project," *The Canadian Encyclopedia* (Toronto: Historica Foundation, 2014).

¹⁵ A number of sources were accessed for this account of caribou behavior, biology and history, including: Arctic National Wildlife Refuge, "Caribou Migration and Biology" (Fairbanks: U.S. Fish and Wildlife Service, December 20, 2012) <http://arctic.fws.gov/carcon.htm> (accessed February 1, 2013); Arctic Studies Center, "Caribou and Reindeer" (Washington DC: Smithsonian National Museum of Natural History, Smithsonian Institution, 2004), http://www.mnh.si.edu/arctic/html/caribou_reindeer.html (accessed November 1, 2012); School of Natural Resources and Agricultural Sciences, "Reindeer Research Program" (Fairbanks: University of Alaska, February 16, 2012), <http://reindeer.salrm.uaf.edu/index.php> (accessed November 1, 2012).

¹⁶ Fikret Berkes, *Sacred Ecology*, 2nd Edition, (New York: Routledge, 2008); and Fikret Berkes, *Sacred Ecology*, 3rd Edition (New York: Routledge, 2012). I have used both editions in this research, and I indicate in the Notes which edition I am referring to.

¹⁷ Berkes, *Sacred Ecology*, 2nd Ed., 7.

burdened natural resources, like the caribou and lichens. Berkes claims that, “As the most abundant large mammal of Arctic and subarctic North America, caribou has a special importance in the traditional economy of the aboriginal peoples of tundra and the lichen-woodland zone.”¹⁸ For thousands of years the Cree had an essential, multigenerational relationship with the caribou for food, clothing, shelter, and tools that necessitated that this indigenous community develop a complex social learning system for caribou hunting adapted to the fluctuations in caribou population numbers and migratory routes. Beginning with the stories of the Cree and the caribou, Berkes’ research goal is to explain the role that traditional ecological knowledge plays in the complex monitoring of both normal and unusual transformations of ecosystems and their animal and plant species.

Indigenous knowledge recognizes the multifaceted aspects of the encompassing worldview under which traditional ecological knowledge exists. I begin with an explanation of the terms traditional and indigenous¹⁹ and how these concepts relate to ecological knowledge. Ultimately, within research on traditional ecological knowledge every part of the three-word term is or can be contested. The concepts traditional and indigenous are generally not assumed to be the same and I agree with the convention of using indigenous as a broader term than traditional. To draw attention to the relationship of traditional ecological knowledge to an indigenous worldview one group of authors, Nancy Turner, Marianne Ignace, and Ronald Ignace, use the term “Traditional Ecological Knowledge and Wisdom” (TEKW)²⁰ in their research that examines sustainable resource use among First Nations communities in Canada.

¹⁸ Berkes, *Sacred Ecology*, 2nd Ed., 119.

¹⁹ To gain equivalency between the concepts of western and indigenous knowledge both terms need to be capitalized or both lowercase so that one (western) is not being used as a referent for the other (indigenous). I have chosen to put them both in lower case and in no way imply this is the convention used by other researchers.

²⁰ Nancy J. Turner, Marianne Boelscher Ignace and Ronald Ignace. “Traditional Ecological Knowledge and the Wisdom of Aboriginal Peoples in British Columbia.” *Ecological Applications* 10, no. 5 (2000): 1276.

Although I agree that indigenous knowledge contains many aspects of wisdom I do not use the two terms together or interchangeably. In my research I recognize the dynamism of traditional knowledge and practice and do not use the term traditional to mean static. The literature, across different disciplines, uses any and all of the following expressions for what I call, in this paper, **traditional** ecological knowledge: traditional, folk, indigenous, local, native, aboriginal, First Nations, and people's. I agree that traditional ecological knowledge describes indigenous peoples' awareness, comprehension, and monitoring of environmental factors, and I concede that traditional ecological knowledge is established only as part of a larger, integrated indigenous cosmology. There is no singular or universal indigenous worldview that is identical among the many groups of indigenous peoples, and hence traditional ecological knowledge varies depending on the ancestral traditions and ecosystems of a specific indigenous community. It is beyond the scope of my research to delve further into the origins of the definitions of traditional ecological knowledge or the various expressions used to discuss it. However, there are common threads that describe the elements of many indigenous cosmologies and it is these common elements that I discuss here.

Traditional ecological knowledge can be considered an integral part of an indigenous cosmology that interweaves religion, medicine, agriculture, technology, plants, animals, kinship, elders, storytelling, and other relationships of social organization in an existing community.²¹

Traditional ecological knowledge is considered to be the environmental knowledge of indigenous communities who have lived many centuries, often many millennia, within a specific

²¹ Berkes, *Sacred Ecology*, 3rd Ed. See also, Marie Battiste and James Sa'Ke'j Youngblood Henderson, *Protecting Indigenous Knowledge and Heritage: A Global Challenge* (Saskatoon, Canada: Purich Publishing Ltd., 2000); Gregory A. Cajete, "American Indian Epistemologies," *New Directions for Student Services* 109 (2005): 69-78; Vine Deloria, Jr. *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (New York: Scribner, 1995); and, Sandy Grande, "Red Pedagogy: The Un-Methodology," in *Handbook of Critical and Indigenous Methodologies*, edited by Norman K. Denzin, Yvonna S. Lincoln, and Linda Tuhiwai Smith, 233-254 (Thousand Oaks, CA: Sage Publications, 2008).

geography. David Suzuki and Peter Knudtson define indigenous communities as, “generally viewed as the descendants of the original inhabitants of a given geographic territory that may have been subsequently taken over by outsiders . . . (and) generally considered to possess distinctive cultures bound together in part by an assortment of shared primary ecological perspectives and themes.”²² Roy Ellen, Peter Parkes, and Alan Bicker claim, “Although it may be convenient to seek a technical definition of indigenesness in terms of prior occupancy, length of occupancy, a capacity to remain unchanged or whatever, such matters are seldom politically neutral.”²³ Deborah McGregor (Anishinaabe) agrees, and she emphasizes that, “traditional ecological knowledge is more than environmental knowledge and a subset of IK (Indigenous Knowledge) . . . Although traditional ecological knowledge is a construct of non-Indigenous origin, the knowledge or way of life to which it refers is very real and originates with Indigenous people.”²⁴ Traditional ecological knowledge is historically and politically embedded in issues of indigenous identity and can be understood as transcending notions of instrumental environmental utility to include a holistic way of living and understanding the world. As part of a worldview, traditional ecological knowledge is, as McGregor contends, person, place, product, and process.²⁵ I concur that the word indigenous describes a people, a worldview or cosmology, an ontology, and a general knowledge system, and that portrayals of indigeneity can be highly politicized and contested.

A Crisis of Representation: TEK and Indigenous Communities

²² David Suzuki and Peter Knudtson, *Wisdom of the Elders: Sacred Native Stories of Nature* (New York: Bantam Books, 1992), 9-10.

²³ Roy Ellen, Peter Parkes and Alan Bicker, eds. *Indigenous Environmental Knowledge and its Transformations: Critical Anthropological Perspectives* (Amsterdam: Harwood Academic, 2000): 19.

²⁴ Deborah McGregor, “Coming Full Circle: Indigenous Knowledge, Environment, and Our Future,” *American Indian Quarterly* 28, no. 3/4 (2004), 395.

²⁵ McGregor, “Coming Full Circle, 385-410.

Traditional ecological knowledge is historically and politically embedded in indigenous identity and is linked to issues of indigenous research methodology and indigenous rights. Research about traditional ecological knowledge requires cognizance of the local and global political and historical struggles and aspirations of indigenous communities. When these histories and aspirations are considered it is accepted that there can be no separation between research on traditional ecological knowledge and attention to issues of indigenous rights and identity. The Indigenous People's Resource Network (IPRN), directed by Dennis Martinez (O'odham/Chicano), emphasizes the significance of what they call the "cultural crisis of indigeneity" when engaged in definitions, discussions, or research about indigenous knowledge. IPRN considers that the following issues are important to discussions about traditional ecological knowledge and indigeneity: an understanding of indigenous identity and indigeneity; representations of indigeneity; entanglements of colonialism, anthropology and indigeneity; the ongoing struggle for indigenous culture, land, language, rights, and sovereignties; and, the methods of research used in and with indigenous communities.²⁶ In this introduction I address each of these issues in turn.

It is a critical concern of the research on traditional ecological knowledge to consider the origins of a designation of indigeneity and the relationship of this designation to historical and contemporary anthropology and colonialism.²⁷ Clifford Geertz maintains that anthropology's ethnographic and cultural texts are created in specific "relations of dominance," and Geertz was

²⁶ Dennis Martinez, "Traditional Ecological Knowledge and Western Science," *Indigenous Peoples' Restoration Network*, Society for Ecological Restoration International <http://www.ser.org/iprn/westernscience.asp> (accessed November 1, 2011).

²⁷ See, for further political economic analyses of colonialism related to indigeneity and traditional knowledge: Johannes Fabian. "The Other Revisited: Critical Afterthoughts," *Anthropological Theory* 6, no. 2 (2006): 139-152; Paul Nadasdy, "The Politics of TEK: Power and the "Integration" of Knowledge," *Arctic Anthropology* 36, no. 1-2 (1999): 1-18; Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (London: Zed Books Ltd, 2002); and, Riyad Ahmed Shahjahan, "Mapping the Field of AntiColonial Discourse to Understand Issues of Indigenous Knowledges: Decolonizing Praxis," *McGill Journal of Education* 40, no. 2 (2005): 213-240.

among the first anthropologists to bring to light the distance in authenticity between the field as the site of activity and the academy as the site of description and naming.²⁸ Dwight Conquergood contends there is a tangled relationship between anthropology, ethnography, colonialism, science, and indigenous communities, and the foundational epistemologies of anthropology and the sciences are “implicated in our definition” of traditional ecological knowledge.²⁹ Linda Tuhiwai Smith (Maori) concurs with this point of view and analyzes the skewed accounts of indigenous knowledge that reflect how “The Native” was interpreted and understood by what the ethnographer saw and wrote, and how those privileged accounts thereafter came to dictate the identities of both the people and their practices.³⁰ Steven Salaita (Palestinian) argues that the terms “indigenous” and “native” were part of a dehumanizing colonial discourse, and he argues that it is impossible to engage in research on traditional ecological knowledge without interrogating the issue of indigeneity in its relationship to colonialism. Salaita claims that the perspectives of scholarship on both indigeneity and traditional ecological knowledge can and should, “eschew(s) Eurocentrism in favor of a privileged indigenous voice.”³¹ J. Baird Callicott and Michael Nelson discuss the altered views and accounts of indigenous practices and belief systems recorded at first contact by pre-colonial travelers, claiming that, “Early European travelers . . . overlooked much and misunderstood a lot of what they did see.”³² Johannes Fabian explores this concern about indigenous depictions and designations, and concurs with Edward Said’s stance that it takes a change in power relations between imperialist science and its othered

²⁸ Clifford Geertz, *Local Knowledge: Further Essays in Interpretive Anthropology* (New York: Basic Books Harper Collins, 1983).

²⁹ Dwight Conquergood, “Rethinking Ethnography: Towards a Critical Cultural Politics,” *Communication Monographs* 58 (1991): 179-194.

³⁰ Smith, *Decolonizing Methodologies*, 172.

³¹ Steven Salaita, “The Ethics of Intercultural Approaches to Indigenous Studies: Conjoining Natives and Palestinians in Context,” *International Journal of Critical Indigenous Studies* 1, no. 1 (2008): 8.

³² J. Baird Callicott and Michael P. Nelson. *American Indian Environmental Ethics: An Ojibwa Case Study* (Upper Saddle River, NJ: Pearson Education, Inc., 2004), 33.

traditional knowledge to escape this “crisis of representation.”³³ Fabian argues that, “The practice of knowledge making will always also be enactments of relations of power.”³⁴

I confirm the viewpoints of these researchers as they consider that designations of indigenous identity and accounts of indigenous knowledge and practices are more than what colonial officials and ethnographers observed and recorded. Geertz, Conquergood, Smith, Salaita, Callicott and Nelson, and Fabian insist on the critical importance of recounting the ways colonialism distorted the observation and recording of both indigenous identities and practices. These scholars’ arguments raise the subject of who names peoples and practices, and the processes by which they are named. These researchers insist that the historical relationships between anthropology, colonialist expansion, and indigeneity are about othering, about the ethnographic gaze, and “what gets lost and muted” in textual representations of indigenous peoples and their knowledge.³⁵

Critically related to historical issues of designation, representation, and identity are the contemporary vulnerabilities and struggles of indigenous communities, especially concerning environmental and cultural exploitation. Martinez, Smith, and others articulate the plight of indigenous communities distressed by a persistent post-colonial pattern of dispossession of land, environmental degradation, and natural resource exploitation, coupled with the specific disempowerments of modernization and market globalization, namely loss of land, language, culture, and knowledge.³⁶ David Walsh argues that while indigenous communities safeguard traditional ecological knowledge from “commercial exploitation,” it is also important to view the

³³ Fabian, “The Other Revisited,” 144. See, Edward W. Said, *Culture and Imperialism*, (New York: Vintage Books, 1993).

³⁴ Fabian, “The Other Revisited,” 146.

³⁵ Dwight Conquergood, “Rethinking Ethnography: 191.

³⁶ Martinez, “Traditional Ecological Knowledge and Western Science,” Smith, *Decolonizing Methodologies*. See also, Conquergood, “Rethinking Ethnography,” Nadasdy, “The Politics of Traditional Ecological Knowledge,” and Salaita, “The Ethics of Intercultural Approaches.”

protection of traditional ecological knowledge as equivalent to establishing political and environmental rights, territory, autonomy, self-governance, and trade secrecy.³⁷ Martinez and Walsh, among others, demonstrate that the survival of traditional ecological knowledge is joined to indigenous cultural survival both of which are tied to a required appreciation for the fragmentation and fragility of indigenous communities because of resource exploitation, modern corporate power, and international economics and politics.³⁸

An additional aspect of these connections between traditional ecological knowledge and indigeneity are the consequences, for indigenous communities, of the methodologies used for investigating indigenous practices. Indigenous researchers in particular have queried the association between indigenous research methodologies, indigenous education, and indigenous knowledge generally,³⁹ and traditional ecological knowledge specifically,⁴⁰ for both formal/academic and informal/community research. From an indigenous perspective the distinctions between investigation and instruction are not the same as in a western research or education approach. Indigenous research and instruction are expected to be experiential processes based on appropriate relationships of respect within the community. The debate around appropriate methodologies for indigenous research remains a significant area of investigation within the disciplines of education and social work, as part of critical attempts to improve the interactions between schools and indigenous youth.⁴¹ Smith insists that “ways of knowing are

³⁷ David Walsh, “Moving Beyond Widdowson and Howard: Traditional Knowledge as an Approach to Knowledge.” *International Journal of Critical Indigenous Studies* 4, no. 1 (2011): 2-11.

³⁸ See, Ellen, Parkes and Bicker, *Indigenous Environmental Knowledge*, Fabian, “The Other Revisited,” and Nadasdy, “The Politics of Traditional Ecological Knowledge.”

³⁹ See, Smith, *Decolonizing Methodologies*.

⁴⁰ See, McGregor, “Coming Full Circle,” Raymond Pierotti and Daniel Wildcat, “Traditional Ecological Knowledge: The Third Alternative (Commentary),” *Ecological Applications* 10, no. 5 (2000): 1333-1340; Enrique Salmon, “Kincentric Ecology: Indigenous Perceptions of the Human-Nature Relationship.” *Ecological Applications* 10, no. 5 (2000): 1327-1332; and, Smith, *Decolonizing Methodologies*.

⁴¹ See, Battiste and Henderson, *Protecting Indigenous Knowledge and Heritage*. Cajete, “American Indian Epistemologies,” McGregor, “Coming Full Circle,” and Walsh, “Moving Beyond.”

ways of resisting,” and she demonstrates how research and the academic pursuit of data about indigenous peoples and their knowledge and practices is deeply embedded in the global history of imperialism and colonialism.⁴² An appropriate indigenous research practice includes storytelling, experiential and informal learning, learning from elders, and the embedding of research and teaching in a web of ecological and human relationships. This is a research perspective that helps foreground the contestations of indigenous history, identity, and representation.

In summary, the literature on the foundations of traditional ecological knowledge within indigenous communities maintains the importance of reclaiming research about and for indigenous groups by taking into account both historical and contemporary struggles and aspirations as defined and prioritized by indigenous peoples themselves, while emphasizing the use of indigenous education and research methodologies. Reclamation of traditional ecological knowledge research is important for indigenous identity, and for the accuracy of recorded and shared knowledge. The substance, findings, and implications of historical studies about traditional ecological knowledge and practices are discussed throughout my research. My purposeful use of stories and narratives in this research is to recognize and respect the significance of indigenous research methodologies, and acknowledge that this research on historical uses of ethnogynecological plants is informed by studies of the traditional ecological knowledge and practices of indigenous peoples.

Indigenous Worldviews

Having examined the relationship between traditional ecological knowledge and indigenous identity and research methodologies, I would like to explore the constructs of an

⁴² See, Smith, *Decolonizing Methodologies*.

indigenous cosmology, the meaning of knowledge within indigenous communities, the differences between indigenous and western worldviews, and the relationship between different worldviews and their concepts of ecology and culture. I am aware that to undertake this exploration of indigenous cosmology I am confined to the use of concepts from western and scientific epistemologies in order to explain an indigenous paradigm that does not perceive definitions and categorizations in the same manner. I use this awareness to get through such contradictions and discuss the work of other researchers who face similar challenges. I acknowledge that many indigenous communities live in western societies and in this case western can refer to both a worldview and a location. I do not use western and scientific interchangeably as I recognize there are scientific aspects to indigenous knowledge just as there are indigenous communities within western societies.

An indigenous worldview takes into consideration the systems or frameworks of indigenous ontology or the nature of reality, of indigenous epistemology or how things are known, and indigenous philosophy. Norman Denzin and Yvonna Lincoln explain that a paradigm, cosmology, or worldview are similar and encompass ethics, epistemology, ontology and methodology.⁴³ Conceding to a general notion of the indigenous worldview that underpins traditional ecological knowledge, I recognize that there are many cultural and community variants on how these frameworks are employed. Traditional ecological knowledge research often includes general descriptions for these indigenous frameworks couched in oppositional terms to western or scientific paradigms, with ethnographic accounts providing explanations of how the ethnographer perceives that these indigenous frameworks or systems operate. For the purposes of my research, while I do not wholly agree with a tendency to over-generalize either

⁴³ Norman K. Denzin and Yvonna S. Lincoln, *The Landscape of Qualitative Research*, ed. Norman K. Denzin and Yvonna S. Lincoln (Los Angeles: Sage Publications, 2008), 245.

indigenous or western cosmologies, I present these overarching descriptions for what they demonstrate about how an indigenous worldview is contrasted, perceived, and presented in research and ethnographies. Science and western paradigms, while not completely overlapping, share many common features and are frequently categorized as objective, othering, distanced, explanatory, rational, insulated, fragmentary, measurable, reductionist, dissecting, and myopic. Within the same literature the indigenous worldview is often listed as perceptive, imaginative, personal, multisensory, immersed, connected, sacred, spiritual, interactive, and contextual.⁴⁴ There is significant agreement among both contemporary and historical researchers on perceiving these qualities in an indigenous worldview, with many scholars using emotive terms to describe indigenous knowledge and worldviews as intimate, sensitive, ecstatic, relational, and magical, as well as the more negative terms of superstitious, irrational, and primitive.⁴⁵ I revisit the implications of these depictions of indigenous worldviews in the historical ethnobotanical research when I review the findings of my ethnogynecology investigations.

Researchers who claim the holistic, relational nature of indigenous knowledge point out how themes, practices, and strategies within indigenous knowledge are “inextricably linked and not easily subject to fragmentation,” as asserted by Turner, Ignace, and Ignace.⁴⁶ Claude Peloquin and Fikret Berkes maintain that, “Indigenous knowledge is dynamic, and the social processes underpinning human-environment relations such as resource use, are often grounded in

⁴⁴ All of the literature on traditional ecological knowledge engages in some descriptions of this sort, without exception, and the list of descriptive terms numbers a few dozen. I do not list them all here.

⁴⁵ See, Berkes, *Sacred Ecology*; Callicott and Nelson. *American Indian Environmental Ethics*; Anthony Davis and John R. Wagner, “Who Knows? On the Importance of Identifying “Experts” When Researching Local Ecological Knowledge,” *Human Ecology* 31 (2003): 463-489; Vine Deloria, *C.G. Jung and the Sioux Traditions: Dreams, Visions, Nature, and the Primitive*, Edited by Philip J. Deloria and Jerome S. Bernstein (New Orleans: Spring Journal Books, 2009); Pierotti and Wildcat, “Traditional Ecological Knowledge,” Salmon, “Kincentric Ecology,” and Smith, *Decolonizing Methodologies*.

⁴⁶ Turner, Ignace and Ignace, “Traditional Ecological Knowledge,” 276.

epistemological frameworks that differ markedly from one society to another.”⁴⁷ Enrique Salmon’s (Rarámuri) description of “kincentric ecology” figures importantly among attempts to tie together indigenous worldviews and the traditional ecological knowledge and practices of a specific indigenous people. Salmon provides a detailed description of the ethics and relationships of indigenous epistemology and ecological experience in the life of his community, the Rarámuri of Mexico.⁴⁸ Salmon’s main argument is that the elements of the natural world (plants, animals, physical objects, landscape, and place) are relatives, or “kin” and that all beliefs, values, practices, and instructions follow from this kincentric point of view. This worldview which affords the status of kin to all reality both animate and inanimate, Salmon proposes, provides the “interconnected, integrated, interdependent” lens through which Rarámuri communities investigate their world, and Salmon explains that, “The natural world, therefore, is not one of wonder, but of familiarity.”⁴⁹ At the level of informal community investigations the Rarámuri use a kincentric approach to explore and troubleshoot immediate challenges of land and resource management and as philosophical and ethical strategies for environmental problem solving.

Another assumption of the research on indigenous cosmologies considers that traditional ecological knowledge offers the possibility of a combined ethical, moral, sacred, or spiritual framework for ecosystem assessment, care, and management. In some contemporary research and environmental programs the goal is that this moral coding be adopted into dominant, western environmental paradigms to improve the affective component by which humans manage ecosystems.⁵⁰ Berkes addresses this common point of view by acknowledging that, “traditional

⁴⁷ Claude Peloquin and Fikret Berkes, “Local Knowledge, Subsistence Harvests, and Social-Ecological Complexity in James Bay.” *Human Ecology* 37 (2009): 534.

⁴⁸ See, Salmon, “Kincentric Ecology.”

⁴⁹ Salmon, “Kincentric Ecology,” 1329.

⁵⁰ See, Berkes, *Sacred Ecology*, Callicott and Nelson. *American Indian Environmental Ethics*, Deloria, C.G. *Jung and the Sioux Traditions*, Peloquin and Berkes, “Local Knowledge,” and Salmon, “Kincentric Ecology.”

ecosystem-like concepts combine ecology, ethics, and culture into a worldview of humans as being part of nature.”⁵¹ While I find some merit in these sacred, ethical, and moral depictions of traditional ecological knowledge, I am concerned that framing traditional ecological knowledge as a system of moral precepts about the environment may be both inaccurate and restrictive. I am apprehensive that a reliance on or reduction of traditional ecological knowledge to an ethical framework could limit respect for and comprehension of its technical merits. Nevertheless, in discussions of traditional ecological knowledge descriptions of an underlying indigenous worldview that is ethical, moral, or sacred are common.

Returning to Berkes’ research about indigenous cosmologies and their comparability to western and scientific worldviews the essence of his argument in *Sacred Ecology* is that there is commensurability between indigenous and western paradigms for ecological knowledge and resource management, and that the scientific communities of ecologists and land managers have important skills to learn from the people who hold traditional ecological knowledge. In reviewing the larger body of Berkes’ work⁵² it is apparent that his efforts as a scientist are to bring traditional ecological knowledge into the comfort zone of his community of ecologists and natural resource managers so that indigenous knowledge of the environment can be respected and potentially used for more effective resource management. Yet, I propose that on some level traditional ecological knowledge conceived in this way is misunderstood, and in many ways even the terms “environmental” and “ecological” are inconsistent with indigenous, non-western

⁵¹ Fikret Berkes, et. al., “Exploring the Basic Ecological Unit: Ecosystem-like Concepts in Traditional Societies,” *Ecosystems* 1 (1998): 414.

⁵² For important examples of Berkes’ and coauthors’ natural resource management research, by date of publication, see: Fikret Berkes, Johan Colding and Carl Folke, “Rediscovery of Traditional Ecological Knowledge as Adaptive Management,” *Ecological Applications* 10, no. 5 (2000); Nancy Turner and Fikret Berkes, “Coming to Understanding: Developing Conservation through Incremental Learning in the Pacific Northwest.” *Human Ecology* 34, (2006); Sandra C. Grant, Fikret Berkes, and John Brierley, “Understanding the Local Livelihood System in Resource Management: The Pelagic Longline Fishery in Gouyave, Grenada,” *Gulf and Caribbean Research* 19, no. 2 (2007); and, Claude Peloquin and Fikret Berkes, “Local Knowledge, Subsistence Harvests, and Social-Ecological Complexity in James Bay.” *Human Ecology* 37 (2009).

conceptions of the world, reflecting a Eurocentric bias towards the separation of man and nature.⁵³ Indigenous cosmologies do not conceive of either an ecological sphere that is different and separated from other aspects of life, or a binary opposition of man and nature in a way that characterizes if not epitomizes western knowledge. Within an indigenous worldview everything ecological is inclusive of all that is religious, economic, social, artistic, educational, and related to health and kinship. These elements come together in a cosmology that recognizes, celebrates, and depends on their interdependence. An ambiguity is created, therefore, when extracting one supposedly environmental element of an indigenous worldview in order to position it into relationship with scientific categories and frameworks of ecological assessment and management.

In the debates about the commensurability of western and indigenous worldviews some researchers argue for complimentary parallelism and others for a more distant respect. By focusing on considerations of how indigenous and western knowledge systems might be simultaneously employed to understand and monitor ecological processes, Ellen, Parkes and Bicker maintain that this emphasis on the distinctiveness of the indigenous worldviews underlying traditional ecological knowledge can make it appear unequal to western knowledge. They claim that this insistence on distinctiveness simultaneously complicates the endeavor of western trained scientists to document, codify, and appropriate indigenous knowledge,⁵⁴ while it “ignores the social and cultural context in which knowledge is generated and put to practical use.”⁵⁵ Ellen, Parkes and Bicker also claim that, “The tendency to define indigenous knowledge in terms of western knowledge is problematic in that it raises western science to a level of

⁵³ Paul Nadasdy, “The Politics of Traditional Ecological Knowledge: Power and the “Integration” of Knowledge,” *Arctic Anthropology* 36, no. 1-2 (1999): 4.

⁵⁴ Ellen, Parkes and Bicker, *Indigenous Environmental Knowledge*, 16.

⁵⁵ Ellen, Parkes and Bicker, *Indigenous Environmental Knowledge*, 19.

reference, ignoring the fact that all systems are culture-bound and thereby excluding western knowledge itself from analysis.”⁵⁶ Other researchers are concerned about the commodification of indigenous knowledge as a critical concern for intellectual property rights, an issue that I do not develop in my research.

Some researchers are quite optimistic about the possibilities of integration of knowledge across indigenous and western paradigms, and others are more circumspect. We have seen that Berkes argues for a cautious integration.⁵⁷ Paul Nadasdy, an anthropologist living and working with the Kluane First Nations communities in the Canadian Yukon, is critical of Berkes for minimizing the roles that power and politics play in the integration of ecological knowledge across paradigms.⁵⁸ Nadasdy suggests that any interpretation of the ontological assumptions inherent in an indigenous cosmology must incorporate the power differential between hegemonic principles of western science and devalued indigenous cosmologies. Nadasdy argues, “Taking aboriginal peoples’ ideas seriously (i.e., as understandings that might inform our own theories about the world rather than as merely symbolic constructs, however socially useful) necessarily entails rethinking many of the most basic concepts of social theory: personhood, agency, knowledge, power, labor, exchange.”⁵⁹ Nadasdy regards as problematic the tendency for traditional ecological knowledge to be integrated and assimilated into regimes of western management or western science in ways that are reductionist, reflecting and reinforcing unequal power relations.⁶⁰ Nadasdy’s argument is that the politics of traditional ecological knowledge and science integration are as important as the debates about different epistemologies and

⁵⁶ Ellen, Parkes and Bicker, *Indigenous Environmental Knowledge*, 14.

⁵⁷ Berkes, *Sacred Ecology*, 2nd, 270.

⁵⁸ Paul Nadasdy, “Resilience and Truth: A Response to Berkes.” *Mast* 9, no. 1 (2010): 42.

⁵⁹ Paul Nadasdy, “The Gift in the Animal: The Ontology of Hunting and Human-Animal Sociality,” *American Ethnologist* 34, no. 1 (2007): 26.

⁶⁰ See, Nadasdy, “The Politics of Traditional Ecological Knowledge.”

worldviews. Nadasdy claims that when researchers, like Berkes, insist on defining indigenous concepts of social theory as ethical belief systems, and not valid and literal truths, they continue a message of disempowerment and inequality for indigenous communities.⁶¹ I am in agreement with Nadasdy that representing indigenous worldviews in reference to western frameworks and concepts represents an unacceptable devaluation of differently constructed ways of knowing the world and the environment.

Nonetheless, the discourse of traditional ecological knowledge advanced by the ecological investigations of Berkes and other researchers provides an early and probing set of explanations for the environmental aspects of indigenous knowledge, and functions to create an essentially pragmatic depiction of traditional ecological knowledge. Berkes demonstrates that traditional ecological knowledge represents a form of ecological detection and testing over generations, and he documents the processes of indigenous communities that, “had their own understandings of ecological relationships and systems of managing resources.”⁶² Berkes argues from a western perspective, but with a view of traditional ecological knowledge and practice that includes decades of research alongside indigenous communities, especially the James Bay Cree. Berkes’ position is that the Cree are monitoring the same biological and behavioral changes in the caribou that a western trained scientist would monitor, only embedding that knowledge within a different worldview, and using different means, through the narratives of the elders, to transmit and refine their knowledge of the behavior of the caribou herds. Berkes’ goal is to help his students and colleagues to be more responsible to and respectful of their non-scientist local partners when working in natural resource management.⁶³

⁶¹ Nadasdy, “The Gift in the Animal,” 26.

⁶² Berkes, *Sacred Ecology*, 2nd, 3.

⁶³ I am indebted to PhD student Margaret Eppig for a phone conversation in March 2011, during which we reviewed Berkes’ ideas together and explored these concepts.

Traditional Ecological Knowledge: Place and Culture

This deliberation on traditional ecological knowledge, its indigenous foundations and cosmologies, and the degree of integration with western science that might be possible, ends with an introduction to the research on the relationship of traditional ecological knowledge to concepts of place and culture, discussions that encompass the accessibility and teaching of traditional ecological knowledge as well as shifts in ecological knowledge under population movements or conditions of environmental change. Traditional ecological knowledge discourse is based on a conceptualization of this knowledge as place dependent, being representative of the longevity of specific people within a particular ecosystem. Ellen, Parkes and Bicker agree with the common understanding that indigenous knowledge is informed by location and they suggest, “It is precisely the local embeddedness of IK which has made it successful.”⁶⁴ Berkes proposes that indigenous knowledge is intrinsically and experientially tied to longevity within an ecosystem. He argues, “Survival is the ultimate criterion for verification of traditional ecological knowledge, and adaptation is key. Thus, the practice of indigenous knowledge is, above all, the story of how social/cultural systems adapt to specific ecosystems.”⁶⁵ Berkes puts forward an unambiguous view on the necessity of longevity in place, and his assumption that survival and adaptation to local ecosystems is the hallmark of traditional ecological knowledge is supported by his and other researchers ethnographic studies in indigenous communities. Berkes’ claims are formulated on the basis of time in place, that traditional ecological knowledge is empirical knowledge created by longevity and experience.

Salmon argues for the inseparable connection of place and traditional ecological knowledge, incorporating the necessity for longevity of a group of people in a particular

⁶⁴ Ellen, Parkes and Bicker, *Indigenous Environmental Knowledge*, 15.

⁶⁵ Berkes, *Sacred Ecology*, 71.

place, however, he introduces a metachronous idea of what emplacement means. Salmon begins by explaining that indigenous people's knowledge is a result of the "complex flow of life with which they and their ancestors have lived interdependently for centuries."⁶⁶ Salmon suggests that his community's land, what he calls "the land base," is part of the interactive development of kincentric ecology, firmly tied to the community's specific location. Furthermore, Salmon introduces an indigenous perspective of emplacement, which is that this land base may not be in a direct relationship to a western concept of geographical space, as it may also encompass either shifts of consciousness or population migrations:

History, identity, language, land base, and beliefs connect, secure, and regulate the human-nature relationship . . . The land base is often a central subject in nearly all indigenous stories of historical origins. They often mention how they emerged in one way or another from the land. The land base is the land to which they claim a relationship. It may be the land on which they now live, or a historical, or even mythical place to which they claim relationship. Nevertheless, the life-forms that occupy the cultural land base are direct relatives to the culture.⁶⁷

The Rarámuri perspective, which ties kincentric ecology to simultaneous ideas of current, historical, and mythical place, may not be typical of the place concepts of all indigenous communities, however, as my critique of the discourse of traditional ecological knowledge considers the specific conceptualization of emplaced, ecologically situated knowledge, it is precisely the importance of understanding these varied concepts of emplacement that is central to my research.

⁶⁶ Salmon, "Kincentric Ecology," 1331.

⁶⁷ Salmon, "Kincentric Ecology," 1331.

While acknowledging that traditional ecological knowledge is embedded in location or place, many researchers likewise point out its attribute of being culturally and socially situated.⁶⁸ In their research on North American Indian worldviews and ethos, Callicott and Nelson consider that the concept of culture presents both ontological and methodological challenges. On the one hand they define culture as, “a body of ‘acquired characteristics’ transmitted from one generation to the next” including objects, skills, tools, ethics, ideas, and ways of thinking.⁶⁹ On the other hand Callicott and Nelson assert that culture is a concept no more or less perplexing than the concept of “species” in evolutionary biology, “not physical, but certainly real,”⁷⁰ and they join other researchers in asserting that no culture “has a corner on the truth-and reality market.”⁷¹ Callicott and Nelson investigate the cultural foundations of knowledge in their analysis of Ojibwa environmental ethics and they speculate on a way of understanding and defining culture by how it functions, especially in the development and transfer of symbolic information through language and narrative. They discuss the “cognitive complex” of an indigenous ontology as a cultural worldview, a “shared conceptual framework by means of which human experience is organized to create a common ‘reality’ . . . for the members of a given culture.”⁷² Likewise, Davis and Wagner describe the cultural transmission of ecological knowledge and they assert that, “It [traditional ecological knowledge] is dynamically mutable in so far as it has the capacity to incorporate each new generation’s experiences, understandings, and needs, thereby remaining current and vital.”⁷³ These researchers insist on recognizing the fragility of cultural knowledge, bound as it is to intergenerational transmission, and hence to the fluctuating tides of modernizing

⁶⁸ Davis and Wagner. “Who Knows?” 467. Also, Cajete, “American Indian Epistemologies,” Davis, “The Wayfinders,” Grande, “Red Pedagogy,” and Nadasdy, “The Politics of TEK.”

⁶⁹ Callicott and Nelson. *American Indian Environmental Ethics*, 15.

⁷⁰ Callicott and Nelson. *American Indian Environmental Ethics*, 14.

⁷¹ Callicott and Nelson. *American Indian Environmental Ethics*, 25.

⁷² Callicott and Nelson. *American Indian Environmental Ethics*, 6.

⁷³ Davis and Wagner. “Who Knows?” 467.

social structures. This research points to an understanding of culture through action, through the development and transfer of traditional ecological knowledge within the relationships and relational frameworks of an indigenous worldview.

Another critical assertion within traditional ecological knowledge research is that it involves cultural and place specific knowledge that is considered inaccessible beyond its situated, particular context. The indigenous holders of traditional ecological knowledge have developed this knowledge after long tenure on their land and they, as well as researchers of their way of life, maintain the inaccessibility of this knowledge beyond the knowledge holders and their communities. Traditional ecological knowledge, it is proposed, cannot be taught to outsiders, and is part of a worldview that remains entangled in both culture and place in ways that are neither separable nor accessible. What, exactly, does the inaccessibility of traditional ecological knowledge mean? It means many things, most significantly that it is not possible to isolate traditional ecological knowledge into discrete units that can be taught and learned outside of the ontologically, epistemologically, socially, and environmentally constructed systems of indigenous life and experience. I agree that traditional ecological knowledge cannot be packaged and taught in the manner in which instruction typically happens in a western field site or classroom. Traditional ecological knowledge is not didactic knowledge, it is a way of life. Indigenous knowledge is experiential and posed in opposition to both western and scientific knowledge that can be learned in laboratory settings where variables can be manipulated, isolated, and controlled for. The teaching of traditional ecological knowledge, on the other hand, happens inside the classroom of experience that is the fabric of a community's social and kinship interactions, intertwined with the ontological principles of that community's worldview.

Researchers Cajete, Grande, McGregor, and Smith report on the methodologies of

indigenous learning; from generation to generation, from daily experience and repeated observations, and from elders, stories, visions, and dreams. Traditional ecological knowledge can be seen as both enduring and dynamic, purposefully transmitted from one generation to the next, as well as within a social group. Traditional ecological knowledge moves inter- and intra-generationally between and among human and non-human kinship members, even while it shifts with changing environmental circumstances. Doubtlessly traditional ecological knowledge is ecologically emplaced, culturally mediated, and conveyed through ritual, relationships, language, and narrative. These transfers and movements make traditional ecological knowledge accessible in some manner, even though not teachable in the western sense of classroom instruction. Traditional ecological knowledge is dynamic in that it shifts within a community as ecological conditions change. In my research I examine how traditional ecological knowledge also shifts and changes with the movement of the holders of that knowledge.

Population migrations are not the only conditions that prompt shifts in ecological knowledge. Planetary environmental and climate changes are another type of movement; in this case the changes in an ecosystem that require shifts in knowledge and the incorporation and passing on of new knowledge. How does traditional ecological knowledge respond to rapid changes in ecological cues under scenarios of climate and environmental change? To address this question a number of studies have examined the relationship between planetary change and traditional ecological knowledge. A widespread conclusion of this research is that the ecosystem knowledge of indigenous communities living in the world's circumpolar regions is rapidly transforming as the climate alters, and that these indigenous communities can be considered the

“canaries in the coal mine” for climate change.⁷⁴ Some of the research on circumpolar communities and their responses to dramatic climate shifts consists of detailed case studies of the interactions between indigenous communities and the management and policy imperatives of western scientists. Shifting responses to environmental conditions have been observed in indigenous knowledge transmission. Researchers Aaron Fox and Chie Sakakibara have extensive recordings of Inupiat folksongs from Barrow, Alaska, housed primarily at the Center for Ethnomusicology at Columbia University. While their research⁷⁵ primarily considers the critical issue of repatriation of indigenous cultural heritage in the form of songs and photographs collected by researcher Laura Boulton in the 1940s, Fox and Sakakibara make comparisons of the narratives in the originally recorded materials with current narratives and songs. In these comparisons there is evidence of a shift in the content of ecologically themed songs that had otherwise changed little over many generations.⁷⁶ In their book, *The Earth is Faster Now: Indigenous Observations of Arctic Environmental Change*, researchers Igor Krupnik and Dyanna Jolly point out, through numerous case studies, the ways in which indigenous communities are able to perceive change and assess the depth of change faster and more accurately than the measurements of scientific teams working in the same ecosystems. They argue that this is, “the way arctic peoples perceive, influence, and are influenced by their surroundings.”⁷⁷ I find it compelling that these investigations emphasize traditional ecological knowledge as part of a dynamic system, in which indigenous people respond to both rapid environmental change and the political demands of science and policy.

⁷⁴ See, Igor Krupnik and Dyanna Jolly, eds., *The Earth is Faster Now: Indigenous Observations of Arctic Environmental Change* (Fairbanks, AK: Arctic Research Consortium, 2002), and Ellen, Parkes and Bicker, *Indigenous Environmental Knowledge*.

⁷⁵ Fox and Sakakibara, “Bringing the Songs Home: Columbia University Begins Musical Heritage Repatriation Project in the North Slope,” Columbia University Center for Ethnomusicology, <http://music.columbia.edu/cecenter/BASC/> (accessed October 10, 2011).

⁷⁶ Fox and Sakakibara, “Bringing the Songs Home.”

⁷⁷ Krupnik and Jolly, *The Earth is Faster Now*, xxiii.

The responses of indigenous communities to ecosystem change have been examined in the traditional ecological knowledge literature, but far less has been written on the traditional ecological knowledge of migrant or refugee populations or the relationship of shifting ecological knowledge to migrant issues of cultural survival, displacements, and diasporas.⁷⁸ Writing about the subject of population movements and indigenous communities, Conquergood suggests that the human hybrid community, defined by the migration of people from their location of origin, is a representation of the constructed nature of culture and identity. Conquergood calls this the “discourse of displacement,” or “culture as a verb and not a noun.”⁷⁹ Conquergood says,

The (refugee) condition epitomizes a postmodern existence of border crossing and life on the margins. With displacement, upheaval, unmooring, comes the terror and potentiality of flux, improvisation, and creative recombinations. Refugees, exiles, homeless people, and other nomads enact the post-structuralist idea of putting culture into motion.”⁸⁰

The migrant condition, however, is not solely a postmodern phenomenon as populations have moved and “put culture into motion” throughout human history. The discourse of movement and displacement is central to my analysis of patterns of ethnogynecological plant use and the sharing of ethnogynecological knowledge, and I revisit this issue in my research analysis.

To conclude, traditional ecological knowledge is dynamic, emplaced knowledge in that it represents both the knowledge of indigenous people who have a long history in a given location as an integral element of the indigenous community’s epistemology and worldview, and it is responsive to changes in that place and its ecosystems. Location is simultaneously the critical context for and a part of the network of culture and social relationships that define indigenous knowledge. My point of entry into a critique of the discourse of traditional ecological knowledge

⁷⁸ I thank Dr. Alesia Maltz for a conversation in November 2010 on the issue of cultural diffusion, diaspora communities, and traditional ecological knowledge that prompted this line of thinking.

⁷⁹ Conquergood, “Rethinking Ethnography,” 190.

⁸⁰ Conquergood, “Rethinking Ethnography,” 185.

is an exploration of the durability of its embeddedness in culture through an investigation of its historical and epistemological complexity, as well as patterns of use and sharing of ecological knowledge across cultural and racial boundaries. I identify the historical complexity of traditional ecological knowledge as encompassing the myriad ways in which people have encountered and interacted with other people over time, within and on the borders of the places they inhabit or move to. I recognize epistemological complexity as consisting of the negotiations of ecological knowledge that take place at and across these physical borders incorporating the epistemological boundaries of culture and race. I acknowledge that traditional ecological knowledge is held within an indigenous ontology that is contingent upon both situated and embodied ways of knowing. I have reviewed the ways in which traditional ecological knowledge is defined and described, and its relationship to indigenous identity and ontology, in order to illustrate how the cultural foundations of traditional ecological knowledge are as essential as its ecological foundations for more deeply understanding how this knowledge is developed, transformed, and negotiated from the encounters of different peoples.

Atlantic Encounters

Strange anticipation: the English Pilgrims arrive at Plymouth Rock in The New World only to find Squanto, a Patuxet, just back from Europe.

--James Clifford, *The Predicament of Culture*

Atlantic encounters present a unique theatre for the historical complexities and intricate negotiations of ecological knowledge across epistemic boundaries, especially negotiations around the knowledge of plants used as medicinal remedies. Atlantic World history, however, is a vast subject that is housed in multiple disciplines - cultural geography, sociology, political science, botany, environmental studies, and the history of science and medicine. Atlantic history research is firmly tied to theoretical lineages of diaspora studies, hybridity theory, and

colonialism. Critically, Atlantic World history most often implicitly and explicitly puts Europe at the center of the descriptive and analytical action. In that way it gives Europeans select agency for the events that occurred in the drama of New World encounters. Due to these challenges I am not using the stories or theories of Atlantic World history as a framework for my research, and I cannot adequately address all of the subject's disciplinary issues. Instead, I am interested in what might have occurred between the peoples of Africa, Europe, and the Americas encountering each other in the New World because these encounters were significant for the exchange of ethnogynecological plant knowledge. I examine briefly here, and later in my research analysis, evidence of the movement of plants, people, and ethnobotanical knowledge that was brought about by New World colonialism and migrations.

I begin this discussion of the botanical exchanges of the Atlantic World by acknowledging the significant contributions of historian Alfred W. Crosby to the topic of Atlantic environmental transfers. His classic book, *The Columbian Exchange: Biological and Cultural Consequences of 1492*, and the more recent book, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, established ongoing debates about the impact and consequences of Atlantic ecological exchanges.⁸¹ Crosby reports on how these exchanges began, and says, "Not all or probably even most of the plants brought to America in the sixteenth century were for human consumption or were brought intentionally . . . Most of the . . . seeds arrived in folds of textiles, in clods of mud, in dung, and in a thousand other ways."⁸² However, by the eighteenth century the purposeful harvesting and transport of people and specimens for sale and collecting on both sides of the Atlantic was well established, and joined what Crosby

⁸¹ Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, CT: Greenwood Press, 1972), and Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (Cambridge: Cambridge University Press, 2004).

⁸² Crosby, *The Columbian Exchange*, 73.

describes as a “haphazard conveyance” of species. Susan Scott Parrish in her book, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World*, argues that these Atlantic World exchanges of ethnobotanical knowledge happened through “aggravated intercultural contact” and created “intense epistemological struggle and negotiation” between different groups of people.⁸³ Parrish describes the evolution of these processes as “complex interwoven movements of knowledge and biota,”⁸⁴ and she argues,

In the eighteenth century, it was most of all in the American colonies where one found such complexity of aggravated intercultural contact. Here peoples who had developed in isolation and at great distance from each other were brought together, both voluntarily and involuntarily, often to unfamiliar environments, to live and to make societies over a sustained period. Because of the development of modernity itself and . . . the European nations’ competitive drive to exploit, collect, catalog, and understand the material richness of the Americas, both American nature and the hybrid types of knowledge forged in the colonies were inseparable from that development.⁸⁵

The impetus for European natural history competition was complex; it was political, economic, social, and cultural, and there were class, religious, and gender distinctions within the botanical and medical sciences that varied yet between each European state. What is important to my research purpose is to view what Crosby calls biological and cultural exchanges as a multidimensional, multidirectional network of people, plants, and knowledge, occurring over vast time periods and distances, and involving many actors. Over and above Crosby’s explanation of the environmental exchanges, Parrish points out the importance of the epistemological complexity within this network, and she suggests, “More than in other places, extending curiosity in America meant relying upon other peoples’ alternative knowledge

⁸³ Susan Scott Parrish, *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill: University of North Carolina Press, 2006), 6-7.

⁸⁴ Parrish, *American Curiosity*, 7.

⁸⁵ Parrish, *American Curiosity*, 6.

practices.”⁸⁶ My ethnogynecology research is concerned with the circulation of knowledge that occurred because of these Atlantic encounters and alternative epistemologies.

The Atlantic World provided extraordinary opportunities for the circulation of distinctive ethnobotanical knowledge. Understanding the sharing and appropriation of different concepts of ecological knowledge and the many unique underlying epistemologies of the people who held that knowledge is foundational to my research. Anthropologist William N. Fenton, in his 1941 article, “Contacts Between Iroquois Herbalism and Colonial Medicine,” makes a connection between colonial settlements in the New World, the resulting contact between Native and European communities, and inter-community exchanges of botanical specimens and ethnobotanical knowledge. Fenton reports that,

Plant remedies passed between Indians and the colonists of New France, New England, New Netherlands, and New Sweden to an extent that is difficult to estimate, and frequently the direction of borrowing is uncertain. Seventeenth-century explorers were on the lookout for plants which had been reported as sovereign remedies against maladies that were current in Europe . . . Peter Kalm, and John Bartram, Philadelphia botanists, were often hard put to decide which plants a century after contact were native and whether Indians or colonists first used them medicinally.⁸⁷

Fenton’s research links this borrowing to the development of botanical texts for the American public, an activity that flourished under the initiative of botanists Peter Kalm (1716-1779) and John Bartram (1699-1777). Harold Cook and Timothy Walker emphasize the epistemological mixing in the exchange of knowledge and they find that, “In connecting the circuits of exchange that enabled Atlantic commerce, then, European ships moved not only people and goods but knowledge from place to place. Sometimes they introduced their practices and knowledge to

⁸⁶ Parrish, *American Curiosity*, 21.

⁸⁷ William N. Fenton, “Contacts Between Iroquois Herbalism and Colonial Medicine,” Annual Report Smithsonian Institution (1941); repr., (Whitefish, MT: Kessinger Publishing, 2007): 514.

others, at other times they mixed new with old.”⁸⁸ Erica Moret describes the processes underlying the movement of knowledge and the agency of enslaved Africans within this network, and she claims,

In sum, the trading and translocation of plants throughout Europe and its colonies resulted in a massive multidirectional spread and mixing of plant species - like its peoples and diseases - between the Americas, Africa, Europe, and Asia. As Enlightenment ideas began to spread throughout the world, diffused by the rapidly expanding European colonial powers, the era simultaneously also saw ‘a global circulation of the hidden knowledge’ that enslaved Africans carried with them on their forced journeys, which extended to ethnomedicinal techniques.⁸⁹

I recognize that while all types of materials and knowledge were circulating in the Atlantic World network, plant specimens and ethnobotanical knowledge were central to these exchanges. Robert Voeks, a geographer, and John Rashford, an anthropologist, discuss the particular importance of plants to the global network of exchange fueled by colonial expansion. They report that,

Indeed, the objectives of the colonial enterprise were as much about the quest for “green gold” as it was for precious metals and sources of labor. Newly encountered useful species . . . as well as novel discoveries regarding the biogeography and utility of long sought-after medicinal spices and flavorings . . . enriched the purses of private entrepreneurs and the coffers of colonial powers.⁹⁰

Historians Harold J. Cook and Timothy D. Walker explain the intense and what Parrish calls aggravated intercultural contact that was required to gather these specimens and knowledge across boundaries of race and culture. Cook and Walker claim,

A kind of bio-prospecting was rampant as Europeans searched for potent remedies both to treat their compatriots who were seriously ill and distant from familiar remedies and to discover new commercial products, and this prospecting had to be done in conversation with local experts. Simply knowing that a root or

⁸⁸ Harold J. Cook and Timothy D. Walker, “Circulation of Medicine in the Early Modern Atlantic World,” *Social History of Medicine* (2013): 1.

⁸⁹ Erica S. Moret, “Trans-Atlantic Diaspora Ethnobotany: Legacies of West African and Iberian Mediterranean Migration in Central Cuba,” in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford (New York: Springer, 2013), 224.

⁹⁰ Robert Voeks and John Rashford, eds., *African Ethnobotany in the Americas* (New York: Springer, 2013), 1.

leaf was used by the local people for this or that problem usually needed to be supplemented by information about the amount to use, its preparation and application, where it could be had and so on. The transmission of such information could seldom simply be demanded. It was, therefore, commonly obtained by friendship, payment, mutual trust or favour, inquiries in local markets or the happenstance of ordinary conversation. All these required some knowledge of peoples and languages, or the presence of intermediaries and go-betweens.⁹¹

The net result of these circulations of plants, people, and knowledge, and these aggravated intercultural contacts, is what Parrish describes as intense epistemological struggle and negotiation, an essential idea for my research. These negotiations, prompted in no small part by European ethnobotanical requirements and desires, also made it possible for mutual interactions between Native and African peoples and their knowledge. Voeks discusses these interactions between Native and African peoples in the New World and he proposes that,

During the first century at least of the slave trade, Indians and Africans lived and worked as captive labourers, housed in the same squalid shacks, labouring side by side in the forests and cane fields and sometimes forming family units and zambos (African-Amerindian children) . . . Under these circumstances, the chance of exchange of know-how, for example, of Amerindian women's medicinal knowledge with their husbands seems likely. Likewise, the sharing of information between Indian and African communities living in close proximity in the forest, whether friend or foe, would have been inevitable.⁹²

In summary, the research conclusions of Crosby, Voeks and Rashford, Moret, Cook and Walker, and Parrish, on the significance and consequences of the movements of plants, people, and knowledge in the Atlantic World is foundational to my investigations. I agree with these researchers that the tumult of interactions between Native Americans, Africans, and Europeans that occurred as part of rapid European colonialism set the stage for the exchange of ethnobotanical knowledge in the Americas. I am aware that the significance and consequences of Atlantic exchanges can be interpreted in a number of different ways. In Chapter 3, I describe the

⁹¹ Cook and Walker, "Circulation of Medicine, 6.

⁹² Robert Voeks, "Traditions in Transition: African Ethnobotany in Lowland South America," in *Mobility and Migration in Indigenous Amazonia: Contemporary Ethnoecological Perspectives*, edited by Miguel N. Alexiades (New York: Berghahn Books, 2009), 285.

critical theories, research frameworks, and disciplinary approaches that guide my interpretations of the results of my research on the exchanges of ethnogynecological knowledge across boundaries of race and culture, exchanges that were prompted by the dramatic movements of peoples and extraordinary events of Atlantic history.

Chapter 3: Conceptual Approach

Reading is an act of decipherment; reading is an act of midwifery, which helps the sense to come forth from all realities, and not just from their description.

--Ivan Illich, *In The Vineyard of The Text*

Research Framework

I consider my research to be a critique of the current discourse of traditional ecological knowledge - a paradigm of knowledge that is outside of dominant western and scientific worldviews, in both concept and practice. My research approach evolves from a series of questions that I both establish and respond to concerning my engagement with this critique as a humanities study that expands beyond the disciplinary boundaries of environmental history, literature, or philosophy. Furthermore, my approach takes into consideration that my research is an historical inquiry into the ethnobotanical topic of plant medicine knowledge and practices that crossed boundaries of culture and race. Hence, I conceive of my research framework as critical for understanding these crossings of disciplinary, ontological, and epistemological borders.

I begin the explanation of this research framework by posing and responding to four questions that create a scaffold for the approach. The first two are questions about the research process; the second two are about my relationship to that process:

1. How is humanities research a process of inquiry about human experience, however, not strictly heuristic research?
2. How is authority maintained in humanities research?
3. How will my research be both reflexive and recursive? How are my craft and expertise expressed in my research?
4. How is this research about “finding what has been lost, forgotten, neglected, marginalized, or otherwise left behind”⁹³ in the academy, and in myself? How does this research advance the goals of a more harmonious and just world?

⁹³ Robert D. Romanyshyn, *The Wounded Researcher: Research with Soul in Mind* (New Orleans: Spring Journal Books, 2007), xi.

How is humanities research a process of inquiry about human experience, however, not strictly heuristic research? Humanities research involves interactions with the products of human experience - literature, the arts, and historical and philosophical events and ideas. Following the explanation of humanities research from the Stanford University Humanities Center, I understand the purpose of a humanities tradition is to “question common assumptions” and “find new ways to understand cultural interactions.”⁹⁴ The Humanities Center explains humanistic research:

A hallmark of humanistic study is that research is approached differently than in the natural and social sciences, where data and hard evidence are required to draw conclusions. Because the human experience cannot be adequately captured by facts and figures alone, humanities research employs methods that are historical, interpretive, and analytical in nature . . . humanities research [is] often posing questions about common assumptions, uncovering new meanings in artistic works, or finding new ways to understand cultural interactions. This type of inquiry can produce clearer pictures of the past, uncover the many insights that we can draw from our forebears, and in turn, help us better to prepare for the future.⁹⁵

Deborah Bird Rose, et. al. argue for recognizing the environmental humanities in partnership with the sciences as the foundation for a deeper understanding of critical environmental issues.

Rose, et. al. explain the environmental humanities:

At the core of this approach is a focus on the underlying cultural and philosophical frameworks that are entangled with the ways in which diverse human cultures have made themselves at home in a more than human world . . . innovative interdisciplinary work that is situated productively at the intersection of the natural sciences and the humanities, and which increasingly emphasizes the importance of indigenous and local knowledges.⁹⁶

It is not imperative of the humanities to engage in a dialogue with subjects in the form of

⁹⁴ Stanford Humanities Center, “How is Humanities Research Conducted,” Stanford University (2014), <http://humanexperience.stanford.edu/how> (accessed on May 1, 2012).

⁹⁵ Stanford Humanities Center, “How is Humanities Research Conducted,” Stanford University (2014), <http://humanexperience.stanford.edu/how> (accessed on May 1, 2012).

⁹⁶ Deborah Bird Rose, Thom van Dooren, Matthew Chrulew, Stuart Cooke, Matthew Kearnes and Emily O’Gorman, “Thinking Through the Environment, Unsettling the Humanities,” *Environmental Humanities* 1 (2012): 2-4.

interviews or observations, although it is not prohibited to do so. These dialogues, however, define heuristic research. As Bruce Douglass and Clark Moustakas explain, heuristic research is, “A search for discovery of meaning and essence in significant human experience,”⁹⁷ characterized by the researcher’s involved and intimate dialogues with human phenomena and subjects. Heuristic research is a phenomenological process, the discovery of meaning in human experience. Michael Quinn Patton says that heuristic research, “personalizes inquiry and puts the experience (and voice) of the inquirer front and center.”⁹⁸ As environmental humanities research, however, my study is neither phenomenological nor heuristic in the sense that a researcher or subject explains their personal encounters with a phenomenon. Certainly I build this research framework partly on the foundations of my professional familiarity with women’s reproductive health and plant medicines, however, the essence of my process is to inquire at an historical distance about the ethnogynecology practices of unknown others. Historical ethnobotany situates my study in an environmental humanities tradition of the creative discovery of meaning through research, yet without direct observation or interviews. As explained by Douglass and Moustakas I consider that my research is, “a subjective process of reflecting, exploring, sifting, and elucidating.”⁹⁹ Consequently, this search for discovery and meaning in the research process provides a personal dimension to my research framework, however, without involved and intimate dialogues with other human subjects. I return to the issue of personalized reflection and investigator involvement in the research process when responding to the third question.

⁹⁷ Bruce G. Douglass and Clark Moustakas, “Heuristic Inquiry: The Internal Search to Know,” *Journal of Humanistic Psychology* 25, no. 3 (1985): 40.

⁹⁸ Michael Quinn Patton, *Qualitative Research and Evaluation Methods*, 3rd edition, (Thousand Oaks, CA: Sage Publications, 2002), 109.

⁹⁹ Douglass and Moustakas, “Heuristic Inquiry,” 40.

How is authority maintained in humanities research? Stephen Small describes authority as, “constructing a story that has rigor, depth, is systematic and comprehensive.”¹⁰⁰ The construction of a comprehensive, compelling, and credible explanation for my observations is a fundamental part of my research approach, as much for the construction and critique of my own stories, interpretations, and arguments as for a critique of the discourse of traditional ecological knowledge. When I describe the archival documents that inform my ethnobotanical investigations I discuss their authority as the usefulness of that information for constructing a credible explanation of events and their meanings. As well, as I gather, analyze, and interpret the literature on ethnogynecological practices and traditional ecological knowledge, I simultaneously deepen my own understanding of these issues. Small lists what he considers are the most important steps in the systematic construction of authoritative research, using his research topic of race relations during slavery as an example, and he argues for the three important steps of: “[1] Conceptualizing the project in terms of theory and epistemology. [2] Specifying sources and a strategy for accessing them. [3] Writing up.”¹⁰¹ In addition to incorporating Small’s list of tasks in my research, I include a thought experiment on traditional ecological knowledge to intersect with my observations from the literature review and the Ethnogynecology Index, as explained in chapter 5. I add this interpretive triangulation in the analysis of my research so that I might address the issues of research rigor and depth. I agree with Patton when he explains that the critical purpose of triangulation is in “adding to credibility by strengthening confidence in whatever conclusions are drawn.”¹⁰² This question about issues of authority and rigor is part of

¹⁰⁰ Stephen Small, “Researching ‘Mixed-Race’ Experience under Slavery: Concepts, Methods and Data,” in Martin Bulmer and John Solomos, eds. *Researching Race and Racism* (London: Routledge, 2004): 90.

¹⁰¹ Small, “Researching Race Mixed-Race,” 90.

¹⁰² Patton, *Qualitative Research and Evaluation Methods*, 556.

my conceptual approach as I understand that a reflexive research framework requires that the research process be as much under investigation as the research topic.

How will my research be both reflexive and recursive? How are my craft and expertise expressed in my research? The reflexive approach has been framed in a variety of ways for social scientists doing qualitative research, where the practice is most common. Patton argues that reflection is, “a way of emphasizing the importance of self-awareness, political/cultural consciousness, and ownership of one’s perspective.”¹⁰³ Patton depicts reflexivity as triangulation of inquiry between the subjects of the study, those who will read the research, and the researcher.¹⁰⁴ Kristi Malterud agrees, and expands on this perspective by pointing out the pre-conditions for a reflexive process:

The investigator always enters a field of research with certain opinions about what it is all about. Reflexivity starts by identifying preconceptions brought into the project by the researcher, representing previous personal and professional experiences, pre-study beliefs about how things are and what is to be investigated, motivation and qualifications for exploration of the field, and [related] perspectives and theoretical foundations.¹⁰⁵

I agree that reflexivity is important to my research and requires attention to the existence of the researcher in the investigation, accounting for my existing craft and expertise, those preconditions that shape and situate my perspectives. Denzin and Lincoln describe the specific tasks of a situated researcher:¹⁰⁶

The gendered, multiculturally situated researcher approaches the world with a set of ideas, a framework (theory, ontology) that specifies a set of questions (epistemology) that he or she then examines in specific ways (methodology,

¹⁰³ Patton, *Qualitative Research and Evaluation Methods*, 64.

¹⁰⁴ Patton, *Qualitative Research and Evaluation Methods*, 66.

¹⁰⁵ Kristi Malterud, “Qualitative Research: Standards, Challenges, and Guidelines,” *Lancet: Qualitative Research Series* 358 (2001): 484.

¹⁰⁶ In their edited volume, *The Landscape of Qualitative Research*, Denzin and Lincoln describe the specific and general challenges for interdisciplinary researchers in their Preface, Introduction, and Epilogue; as well as Yvonna S. Lincoln, “Institutional Review Boards and Methodological Conservatism: The Challenge to and From Phenomenological Paradigms,” and Egon G. Guba and Yvonna S. Lincoln, “Paradigmatic Controversies, Contradictions, and Emerging Confluences,” in the same volume (Los Angeles: Sage Publications, 2008).

analysis) . . . Every researcher speaks from within a distinct interpretive community that configures, in its special way, the multicultural, gendered components of the research act.¹⁰⁷

I also concur with critical race theory scholar, Ruth Frankenburg who writes about the necessity of a situated research approach that is cyclical - reflexive and recursive. Frankenberg argues that, “The situation of the researcher must be accounted for. Past conclusions are potentially open to re-examination and revision and are available as resources for later research and theory. The theoretical results make the researcher’s decisions and conclusions visible – situated and positioned.”¹⁰⁸

I am inspired to provide a critical perspective on the discourse of traditional ecological knowledge that adds to current understanding and interrogates how embodied knowledge endures across boundaries through historical dislocations and migrations, by considering the construction of negotiated knowledge and resultant mixed forms of ecological knowledge. I find that my personal history as a mixed race researcher and middle aged African American Native woman contribute to my impulse to undertake this research. It is my heritage as the descendant of both Native Americans and enslaved African Americans, and my experience as an international development worker, that spark my interest in closer scrutiny of how ecological knowledge shifts and changes as groups of people move and encounter other peoples and landscapes. My research is situated in my family’s traditional knowledge as well as my extensive familiarity with communities in Latin America, Asia, and Africa suggesting the enduring retentions of cultural, including ecological, forms and ways of life. My personal embodiment of dislocations, migrations, and mixtures requires me to perform and conform to hegemonic

¹⁰⁷ Norman K. Denzin and Yvonna S. Lincoln, “Introduction: the Discipline and Practice of Qualitative Research,” in *The Landscape of Qualitative Research*, ed. Norman K. Denzin and Yvonna S. Lincoln (Los Angeles: Sage Publications, 2008), 28.

¹⁰⁸ Ruth Frankenburg, “On Unsteady Ground: Crafting and Engaging in the Critical Study of Whiteness,” in Martin Bulmer and John Solomos, eds. *Researching Race and Racism* (London: Routledge, 2004):106-107.

narratives of stereotype and discrimination that I refuse to own, but that nevertheless shape my ancestral and personal pasts, my present, and future lived reality, and that are brought, literally, to my doorstep.¹⁰⁹ While I bring my expert professional knowledge of women's reproductive health to this investigation I also bring both my embodied self and my performative self into this research, for theorizing about the materials I encounter and interpret. On the notion of embodied researcher, Dwight Conquergood quotes post-colonial feminist critic Trinh T. Minh-ha from her text, *Writing Postcoloniality and Feminism*, asserting, "What is exposed in this text is the inscription and de-scription of a non-unitary female subject of color through her engagement, therefore also her disengagement, with master discourses."¹¹⁰ In the final research framework questions I address the sites of my engagement and disengagement - those aspects of research practice that have been marginalized and silenced, forgotten, lost, and neglected, and in these engagements and disengagements mirror many aspects of my personal, professional, and academic life as a woman of color.

How is this research about "finding what has been lost, forgotten, neglected, marginalized, or otherwise left behind" in the academy, and in myself? How does this research advance the goals of a more harmonious and just world? In order to answer these final critical questions about my research framework I will describe the conceptual approaches of decolonial research, bricolage, and contrapuntal analysis that speak directly to the concerns of marginalized and forgotten knowledge and subjects. While I acknowledge the existence of an extensive literature of decolonial discourse and related postcolonial theory it is not my purpose to take up a review of those research pedigrees here. The essential work and researchers in the decolonial and

¹⁰⁹ Also my living room, if considering that the dominant format for blanketing society with these biased cultural tropes is the media - Internet, movies, and television.

¹¹⁰ Trinh T. Minh-ha, *Woman, Native, Other: Writing Postcoloniality and Feminism* (Bloomington: Indiana University Press, 1989), 43, quoted in, Dwight Conquergood, "Rethinking Ethnography: Towards a Critical Cultural Politics," *Communication Monographs* 58 (1991): 193.

postcolonial fields are too far-reaching for even a cursory review. Instead I focus on specific conceptual approaches within those theoretical lineages that inform my research framework and the conduct of my investigations.

I begin with a commitment to decolonial forms of research that make explicit the silences of the marginalized in the hegemonic texts and discourses of the dominant that were created through imperial histories. I realize that I cannot fill those silences, yet I am aware that it is my acknowledgement of these absences that is critical, and my consideration of how the voices of the marginalized, if present, might have changed the materials and documents I am working with. Linda T. Smith (Maori) makes a substantial contribution to discussions of indigenous, decolonial approaches to research. Smith's influential book, *Decolonizing Methodologies: Research and Indigenous Peoples*, initiated critical debates on the connection between colonialism, research, and indigenous sovereignty. Differentiating imperialism from colonialism, Smith explains,

The concepts of imperialism and colonialism are crucial ones which are used across a wide range of disciplines, often with meanings which are taken for granted. The two terms are interconnected and what is generally agreed upon is that colonialism is but one expression of imperialism . . . Colonialism became imperialism's outpost, the fort and the port of imperial outreach. Whilst colonies may have started as a means to secure ports, access to raw materials and efficient transfer of commodities from point of origin to the imperial centre, they also served other functions . . . Colonialism was, in part, an image of imperialism, a particular realization of the imperial imagination.¹¹¹

Based on these depictions of imperialism and colonialism Smith describes the fundamental motivations for an indigenous decolonial approach to research: "A constant reworking of our understanding of the impact of imperialism and colonialism is an important aspect of indigenous

¹¹¹ Smith, *Decolonizing Methodologies*, 21-23.

cultural politics and forms the basis of an indigenous language of critique.”¹¹² I confirm that this approach is essential for research that concerns indigenous knowledge and the colonial past of Atlantic World encounters.

In order to critique traditional ecological knowledge discourse my research rests on understanding the complex historical encounters that have shaped ecological interactions, and the foundation of my attempts to interpret these interactions is mindfulness of the complexity of the encounters. For this mindfulness I believe research bricolage provides an important approach. I acknowledge that the concept of bricolage and the idea of the bricoleur researcher have their origins in anthropologist Claude Lévi-Strauss’ 1962 book, *The Savage Mind*.¹¹³ The writing of this seminal text was a defining moment in shifting anthropology to structuralism and away from the functionalist approaches of Malinowski and others. Looking closely at the origin of the concept of bricolage in Lévi-Strauss’ writing, Christopher Johnson explains bricolage as the symbol of a new type of knowledge: “At the simplest level, *bricolage* is therefore a technical metaphor for a cognitive and creative process: the composition and generation of mythical discourse.”¹¹⁴ Lévi-Strauss’ writing about bricolage occurred at a time when concepts like “savage” and “mythical” held definitions distinct from contemporary notions and the history of these concepts is fascinating, nevertheless, a recounting of the full history of this anthropological theory is beyond the intention of my research. Instead I review my approach to the concept of bricolage as it has been parsed, critiqued, and changed since Lévi-Strauss originated it, especially by qualitative research scholars.

¹¹² Smith, *Decolonizing Methodologies*, 23-24. For more on the relationship between research frameworks and decolonial theory see: Aimé Césaire, *Discourse on Colonialism*, trans. Joan Pinkham (New York: Monthly Review Press, 1972); Albert Memmi, *The Colonizer and the Colonized* (Boston: Beacon Press, 1965); and, Said, Edward W. Said, *Culture and Imperialism* (New York: Vintage Books, 1993).

¹¹³ Claude Lévi-Strauss, *The Savage Mind* (Chicago: the University of Chicago Press, 1966).

¹¹⁴ Christopher Johnson, “Bricoleur and Bricolage: From Metaphor to Universal Concept,” *Paragraph* 35, no. 3 (2012): 358.

I describe myself as a bricoleur theorist in the terms in which Denzin and Lincoln, and Joe Kincheloe, explain bricolage. Denzin and Lincoln clarify the position of the bricoleur:

The researcher as bricoleur-theorist works between and within competing and overlapping perspectives and paradigms. The interpretive bricoleur understands that research is an interactive process shaped by his or her own personal history, biography, gender, social class, race, and ethnicity . . . The critical bricoleur stresses the dialectical and hermeneutic nature of interdisciplinary inquiry, knowing that the previously separated traditional disciplines no longer hold. The political bricoleur knows that science is power, for all research findings have political implications . . . The gendered, narrative bricoleur also knows that researchers all tell stories about the worlds they have studied.¹¹⁵

Educational research scholar Joe Kincheloe has written extensively on bricolage as a research methodology, and his point of view is that bricolage enables the complexities of research theory and lived experience to be connected. Kincheloe argues,

The bricolage exists out of respect for the complexity of the lived world. Indeed, it is grounded on an epistemology of complexity . . . Since theory is a cultural and linguistic artefact, its interpretation of the object of its observation is inseparable from the historical dynamics that have shaped it. The task of the bricoleur is to attack this complexity, uncovering the invisible artefacts of power and culture, and documenting the nature of their influence not only on their own scholarship but also on scholarship in general. In this process bricoleurs act upon the concept that theory is not an explanation of the world – it is more an explanation of our relation to the world.¹¹⁶

A further challenge for the bricoleur-theorist is to be aware of the significance of silenced and marginalized subjects when aligning the use of historical materials with contemporary theoretical analysis. To address this challenge I endeavor to be specific about the manner in which I substantiate patterns discovered in archival documents relative to contemporary ideas of their significance. All historical investigations engage in this necessary hermeneutic struggle to avoid anachronistic thinking, and my research is not singular in that regard. Aligning my discoveries,

¹¹⁵ Denzin and Lincoln, *The Landscape of Qualitative Research*, 8.

¹¹⁶ Joe. L. Kincheloe, “ Introduction: The Power of the Bricolage: Expanding Research Methods,” in Joe L. Kincheloe and Kathleen Berry. *Rigour and Complexity in Educational Research: Conceptualizing the Bricolage* (New York: Open University Press, 2004), 2.

research framework, and conceptual approach requires that I pay attention to potential biases in interpretation from historical narratives about health, gender, and race, at the same time that I examine and critique those concepts from a contemporary, decolonial perspective. I consider that a methodological bricolage is one critical component of my conceptual approach, as it encompasses the multidisciplinary tools necessary to maintain integrity within this hermeneutic struggle, what Kincheloe describes as the “epistemology of complexity.”

Contrapuntal analysis of historical documents, developed by literary theorist Edward W. Said, is another decolonial approach for interpretation of historical texts. Said’s overall purpose is to point out the ways in which western concepts of non-westerners perpetuate the power differentials at the heart of imperialism, and Said makes visible the relationships between language, representation, and imperialism that maintain the disempowerment of the colonized. Said explains that contrapuntal analysis is, “reading with an awareness both of the metropolitan history that is narrated and of those other histories against which (and together which) the dominating discourse acts.”¹¹⁷ The contrapuntal perspective was developed by Said for analyzing literature and fiction. For my research contrapuntal analysis is an approach that assists me in being attentive to the absent voices of Native, African, and women participants in the colonial histories and ethnographies that I read. This perspective reminds me to be cognizant of absent voices enabling me to propose alternative, intertwined interpretations of recorded events, and to privilege disempowered actors and events in my fictional accounts. Lindsay Ferriter claims,

¹¹⁷ Edward W. Said, *Culture and Imperialism* (New York: Vintage Books, 1993). Toni Morrison also uses contrapuntal analysis for literary texts, see Toni Morrison, *Playing in the Dark: Whiteness in the Literary Imagination* (New York: Vintage Books, 1993).

“Contrapuntal reading takes in both accounts of an issue; it addresses both the perspective of imperialism and the resistance to it.”¹¹⁸

Finally, the importance of integrating personal experience as part of a research framework and using that integration to advance social justice goals is noted by Four Arrows (Cherokee/Creek) who explains the relationship between the situated researcher, the goals of indigenous research methodologies, and what he calls “authentic” research:

As we explore the idea of an “authentic dissertation,” hear the dissertation stories and discuss these issues, a paradigm may emerge that offers hope for a global community that has endured the tragedies of the modern pathos – the holocaust, slavery, genocide, environmental degradation, racism, apartheid, homophobia, nuclear destruction, religious persecution, colonization, economic class warfare, ecological destruction, and the other tragedies of the modern era that are all too obvious today. Many scholars . . . have a vision for research that can lead to a just, caring, and ecologically sustainable global culture.¹¹⁹

My research, and my framework for understanding and interpreting my research, is fully informed by both indigenous and western paradigms, encompassing the telling of stories and the indexing of plant species. In addition to attending to those subjects and topics that have been historically lost, forgotten, neglected, and marginalized, I seek to inspire and be inspired by different ways of knowing, by knowing that is circular as opposed to linear, by knowing that is fractal as opposed to attenuated, and by knowing that is communal and relational as opposed to individualistic. In this endeavor I enter a long, well-established tradition of indigenous research methodologies informed by these ontological and epistemological paradigms that support what I have experienced of the world, what was passed on to me by my ancestral and family cultures, and what knowledge I aspire to place into the scholarly commons.

¹¹⁸ Lindsay Ferriter, “Contrapuntal Reading or Analysis,” Hamilton College English Department, 2000, <http://academics.hamilton.edu/english/ggane/contrapuntal.html> accessed December 1, 2013.

¹¹⁹ Four Arrows, *The Authentic Dissertation: Alternative Ways of Knowing, Research, and Representation* (New York: Routledge, 2008), 57. For more on this topic also see, Conquergood, “Rethinking Ethnography;” Denzin and Lincoln, *The Landscape of Qualitative Research*; Minh-ha, *Woman, Native, Other*; and Smith, *Decolonizing Methodologies*.

By training I am a scientist and clinician, with degrees in biology and women's health. As such I am well aware that science operates best under paradigms that assert the research process as apolitical, objective, and universal. These paradigms are essential, but not sufficient for my research that is reflexive, socially situated humanities research. Further, I suggest that science may not be quite as objective and apolitical as it purports to be. Mae Jemison, an African American astronaut, scientist, and physician presents the impossibility of an apolitical science. "It is important for scientists to be aware of what our discoveries mean, socially and politically. It's a noble goal that science should be apolitical, acultural, and asocial, but it can't be, because it's done by people who are all of those things."¹²⁰ Historical archaeologist Laurie A Wilkie makes a similar argument based on the recognition of a more subjective stance in her own research, and she says, "The intellectual, methodological, and personal biases and insights that I bring to interpretation shape how I construct the past."¹²¹ As I consider my conceptual approach and the research framework that supports it I find that I am not convinced that any researcher is able to be wholly objective about the conduct of their research. I am even less convinced that this objectivity is foundational to good research practice, or necessary. Goethe says that, "One learns only what one loves, and the deeper and the fuller the knowledge is to be, the more powerful and vivid must be the love, indeed the passion." In this dissertation I attempt to be simultaneously be a passionate researcher,¹²² and to be engaged in, as Small demonstrates, a research practice that has rigor and depth, and is systematic and comprehensive. I believe that finding the balance

¹²⁰ Biography of Mae Jemison, <http://quest.nasa.gov/women/TODTWD/jemison.bio.html> (accessed on June 15, 2011).

¹²¹ Laurie A. Wilkie, *The Archaeology of Mothering: An African-American Midwife's Tale* (New York: Routledge, 2003): xxviii.

¹²² Claudia J. Ford, "The passionate researcher is immersed in their practice. The passionate researcher is aware of their identity and how it affects their practice. The passionate researcher draws on empathy to enhance their practice. The passionate researcher is relational and comfortable with research participants as research partners. The passionate researcher determines the balance between introspection and activism in their research practice." This is a research archetype that I developed in my *Researcher Identity Memo*, ANE, September 2010.

between research passion and rigor rests on understanding the mysteries of human experience in relationship to each other, the natural world, and ourselves, hence the challenge is to employ a research framework that drives a humble search toward enlightening those mysteries.

Silences in the Archives

I have explained the overall framework and set of strategic questions that guide my research, and I will now describe some of the theories from the methodological and interpretive communities that inform my research. A critical design element for my research is to understand the way that information is placed in archives. What are the implications inherent in the intellectual construction of the archives for the history I am researching? What voices are silenced in these specific archival processes? I acknowledge that while colonial Atlantic World governments were systematically gathering information, plants, curiosities, indigenous knowledge, and indigenous people, the perspectives and agency of indigenous peoples are largely silent in the early 17th to early 20th century archives. As well, the voices of women in this period are generally unheard. For Native and African peoples their stories are told mainly from the biased and voyeuristic gaze of ethnographers who were interested in proving or disproving their religious and social theories about the lifeways of these communities. To address these gaps in the archives and to help me comprehend and account for these challenges in the construction of my research framework, I absorb into my conceptual approach some critical theories in the disciplines of historiography, anthropology, and feminist studies.

Historiography and Silences in the Archives

Michel-Rolph Trouillot is an anthropologist who writes about the relationship between hegemonic power and cultural marginality. In Trouillot's work in philosophical historiography he uses examples from his native Haiti as case studies, artfully weaving together his personal

field experiences and his philosophical insights. According to Trouillot, power, in the historical narrative, exists in both the creation and interpretation of archival materials. Trouillot states that his text, *Silencing the Past*, “deals with the many ways in which the production of historical narratives involves the uneven contribution of competing groups and individuals who have unequal access to the means for such production.”¹²³ Trouillot demonstrates four “crucial moments” when the production of history is silenced: in the making of sources (fact creation), archives (fact assembly), narratives (fact retrieval), and selected history (fact significance) of specific events.¹²⁴ Trouillot’s thesis is that information assembly in the archives, and the power to select, include, rank, and exclude information from the archives, function as critical locations where silences develop, and subsequently the archives perpetuate those silences in the resulting historical narratives. “Archives assemble,” argues Trouillot, “archives set up both the substantive and formal elements of the narrative.”¹²⁵ Trouillot insists on both discovering and uncovering the silences produced by hidden histories and conflicts within archives and historical accounts. Trouillot’s challenge to historians is to expose the crucial moments of historical production in their research and writing. I find Trouillot’s work compelling, and his theory of archival silences is critical to my study of the ethnographies and other documents written about Native and African Americans, and about European women’s lives. In the analysis of my archival sources I attempt to uncover the silences; the crucial moments in historical production in which those silences were created and how my interpretation of the materials works both with and against those silences.

An understanding of ethnohistory methodological theory also supports my interpretation

¹²³ Michel-Rolph Trouillot, *Silencing the Past: Power and the Production of History* (Boston: Beacon Press, 1995): *xix*.

¹²⁴ Trouillot, *Silencing the Past*, 26.

¹²⁵ Trouillot, *Silencing the Past*, 52.

of my research materials. Russell J. Barber and Francis F. Berdan define ethnohistory as, “an interdisciplinary field that studies past human behavior and is characterized by a primary reliance on documents, the use of input from other sources when available, a methodology that incorporates historiography and cultural relativism, and a focus on cultural interaction.”¹²⁶ These two anthropologists have written a practical text on ethnohistory providing advice and definitions on the use of crosscultural and primary source research materials. Barber and Berdan acknowledge the roots of ethnohistory in anthropology and history, and explain what they call the “reality-mediation model.”¹²⁷ This model depicts the ways that the narratives in the archives may not exist in a straightforward relationship to facts, truth, or reality attributable to the personal and cultural factors that Barber and Berdan claim compel humans to engage in interpretation at the same time that they engage in description. While Barber and Berdan’s ethnohistory model of the inevitability of interpretive shifting shares similarities with Trouillot’s crucial moment of fact creation, it lacks the critical political analysis found in Trouillot’s historical silences theory.

Carolyn Steedman, in her text, *Dust: The Archive and Cultural History*, sheds light on the process of historical research; research that is conducted literally in what she calls the dust of the archives. Her essays weave together a multitude of stories about British and French 18th and 19th century cultural studies that were founded on archival research. Steedman’s archives are simultaneously archives as political institutions and archives as historical instruments. The purpose of Steedman’s research is an exposition of the historical and cultural phenomenon of “archive fever,” which is an obsession with the origins and meanings of social history. Steedman accomplishes this purpose by noting and deconstructing the signs, symbols, and research insights

¹²⁶ Russell J. Barber and Frances F. Berdan, *The Emperor’s Mirror: Understanding Cultures through Primary Sources* (Tucson: The University of Arizona Press, 1998): 12.

¹²⁷ Barber and Berdan, *The Emperor’s Mirror*, 33.

of a variety of established European cultural figures, and in the process Steedman makes it clear that the archive “masks as much as it reveals.”¹²⁸ Beginning with Jacques Derrida’s seminal 1994 paper and subsequent text, *Archive Fever*, the author proceeds to look at the masking and revelation of meaning in the writings of Auden, Michelet, and George Eliot, to name only a few of the works the author examines. Steedman succeeds in writing a complex social history of social historians and literary figures, engaged in the paradigmatic practice of researching in and writing from the dust of archival sources. In Antoinette Burton’s research, *Archive Stories: Facts, Fiction, and the Writing of History*, historians provide compelling accounts of their encounters with archival spaces across the globe. Burton defines archives as, “traces of the past collected either intentionally or haphazardly as evidence,”¹²⁹ and her goal is to make the craft of the historian visible through an ethnographic treatment of archival spaces and archival institutions as subjects. Burton’s consideration of archives as the historian’s main instrument is accomplished through her investigation of the fieldwork of history, and the stories of this fieldwork, in order that the “real political and material consequences”¹³⁰ of historical accounts can be foregrounded. Burton narrates instructive tales, revealing the researchers’ exertions to access archival spaces, and their intellectual struggles within the limits and possibilities of the archives they access. In these stories Burton exposes the realities of archival fieldwork, and she attempts to, “debunk the fantasy that history is or can be a delivery system for absolute truth.”¹³¹

Underlying Burton’s fieldwork stories is a consistent narrative, similar in tone to Trouillot’s, about archives and archival materials as sites of hegemonic power specific to the

¹²⁸ Carolyn Steedman, *Dust: The Archive and Cultural History* (New Brunswick: Rutgers University Press, 2002).

¹²⁹ Antoinette Burton, ed., *Archive Stories: Facts, Fiction, and the Writing of History* (Durham: Duke University Press, 2005), 3.

¹³⁰ Burton, *Archive Stories*, 1.

¹³¹ Burton, *Archive Stories*, 10.

time and place of both their assemblage and their expression in historical accounts. The concept of historical “truth” is demonstrated by Burton when she critiques the ways in which historians are exalted in the academy and the public as what she calls “archival truth-tellers.” The essays in Burton’s text problematize this idea by observing and demonstrating provocative uncertainties about the relationships between archive and evidence, fact and evidence, and evidence and history. The questions Burton raises include: “What counts as an archive? How easy is it to get into, use, and write about the material in specific archives? How is evidence verifiable? What is the legitimacy of memory work? Which evidence is included and which evidence is excluded in archives, and who decides on these inclusions and exclusions? What issues must be taken into consideration about the construction of the archives relative to the “historical abundance” of the Internet?”¹³² I do not directly respond to Burton’s questions, but I do acknowledge that her theories of archival methodology, as well as those from Trouillot, Barber and Berdan, and Steedman, reflect the challenges I faced in accessing, selecting, and interpreting an immense amount of data on the subjects of my study, especially the challenges from a superfluity of certain types of primary ethnobotanical documents, and medical and botany source materials. I discuss these documents and materials in depth in the section of this dissertation that covers research stories and findings.

Shifting from historiographical theory to ethnographic theory I begin with the research of Richard Price who works within the disciplinary intersections of history and ethnography. Price, an anthropologist, presents what is considered an empirically and theoretically seminal study in the field of ethnographic historiography. Price undertakes research on the making and significance of history among a marginalized people. His book, *First-Time: The Historical*

¹³² See, Burton, *Archive Stories*.

Vision of an African American People, narrates “an experiment in forms of historical and ethnographic representation”¹³³ through an entrancing story of the Afro-Caribbean Saramaka tribe, a maroon people of Suriname. The foundational collective identity of the Saramaka is their knowledge of a specific past related to their African ancestors’ escape from the terrors of bondage and survival in the rain forests of their new home. Saramakans’ knowledge of this history is sacramental and is carefully preserved, proscribed, and guarded through elaborate sacred stories, songs, knowledge, and rituals, marking it as the traditional knowledge of a uniquely constituted diaspora population. Price represents the Saramaka story in his text with both the original cultural material, such as musical scores and photos of material objects, and the transcribed oral testimony of his key informants in response to the stories and songs that are at the center of the ethnographic events. This richly textured subject of the Saramakan history, and the manner in which Price recounts it, creates a narrative that is layered with meaning and with the interwoven emic and etic voices of the narrative’s subjects, and the anthropologist. The juxtaposition of ethnographic events, cultural materials, and transcribed oral testimony convene both the Saramaka and Price as co-historians. Both researcher and subjects gain equity in their authority over the events by the manner in which they are presented. This unique text gives the reader an opportunity to ponder the nature of representation in ethnography as well as the shape of both history and historiography among an isolated, non-western, combined indigenous/diaspora community. Price succeeds in an authentic and astute methodological experiment on the cultural shape of historical thought. I view Price’s work as a critical example of “authentic research” and an unusual ethnographic text. Price’s study had a profound impact on the field of historical ethnography and his methodological theories are essential to understanding

¹³³ Richard Price, *First-Time: The Historical Vision of an African American People* (Chicago: The University of Chicago Press, 2002), *xxi*.

how an intertextual and storied presentation of historical materials fully considers both who is being represented and how they are represented.

Patricia Galloway's text, *Practicing Ethnohistory: Mining Archives, Hearing Testimony, Constructing Narrative*, recounts her experiences as an ethnohistorian, and she makes visible the theoretical assumptions that underlie "archival practice, historiography, ethnography, and ethnohistory, and the state of research in all these fields."¹³⁴ Galloway describes her fieldwork with Native American nations in the American South, mainly Louisiana, Mississippi, and South Carolina. *Practicing Ethnohistory* narrates, among other experiences, her archival work with the Choctaw and how methodology from the disciplines of history and anthropology influence her research practice. Interspersed among the compelling narratives about her interpretation of Choctaw historical records for museums, courts, political commissions, and Native communities, Galloway makes critical observations about the limits of historical sources. Galloway is particularly concerned to discuss the interpretation of written documents pertaining to groups that are pre-literate and function under oral traditions. Galloway illustrates the ways in which historical materials can be evaluated and assembled to create authentic, reliable, and respectful narratives. In summary, Barber and Berdan, Steedman, Burton, Price, and Galloway insist that historical archival research should create meaningful narratives that account for the power of the act of archiving as much as the content of the archives, and these scholars discuss historical and ethnographic methods for framing a respectful story about what is found as well as what remains silent. I agree with these scholars' claims, and I take these theories into account as I read, record, and interpret the evidence I discover in the archives.

While my research relies on archival ethnographic and ethnobotanical documents in order

¹³⁴ Patricia Galloway, *Practicing Ethnohistory: Mining Archives, Hearing Testimony, Constructing Narrative* (Lincoln: University of Nebraska Press, 2006): 1.

to interpret ethnogynecological practices, I generally do not investigate historical archaeological research or material culture studies of plants. However, I acknowledge it would be possible to look for ethnobotanical events and patterns in such research. According to the Society for Historical Archaeology this material culture is “the study of the material remains of past societies that also left behind some other form of historical evidence . . . By examining the physical and documentary record . . . historical archaeologists attempt to discover the fabric of common everyday life in the past and seek to understand the broader historical development.”¹³⁵ In the one historical archaeology study that I found helpful to my investigations, Laurie A. Wilkie deals with the subject of African American midwifery and traditional herbal practice, which she calls ethnomedical midwifery.¹³⁶ In her text, *The Archaeology of Mothering*, Wilkie insists that the integrity of her interpretive argument rests on the presentation of historical materials through storytelling, because she is using records that are written about her subjects, but not by them. Wilkie undertakes this task by, “offering as many competing interpretations of documents and materials as possible, while indicating why I favor particular avenues of interpretation over others.”¹³⁷ Wilkie explains the importance of creating a narrative as a method to highlight the experiences of ignored or voiceless actors from the past, “I see narrative as a means for subverting and rising above the context in which we are enmeshed, as a means of consciously

¹³⁵ Society for Historical Archaeology, “What is Historical Archaeology?” *Department of Anthropology*, The University of Montana, 2011 http://www.sha.org/about/historical_archaeology.cfm (accessed November 15, 2012).

¹³⁶ Wilkie, *The Archaeology of Mothering*. See also for ethnobotanical historical archaeology, Tobias Glaza, “A Historical Ethnobotany of the Pequot Indians of Southeastern Connecticut 1800-1950” (Masters thesis, Connecticut College, 2003); Mark D. Groover and Timothy E. Baumann, “They Worked Their Own Remedy’: African –American Herbal Medicine and the Archaeological Record,” *South Carolina Antiquities* 28, no. 1&2 (1996): 21-32; Kimberly Kasper, “Seeds for the Future: The Materialities of Traditional Ecological Knowledge.” *Archaeologies: Journal of the World Archaeological Congress* (2012): 269-292; Kimberly Carol Kasper, “Continuity in the Face of Change: Mashantucket Pequot Plant Use From 1675-1800 A.D.” (PhD diss., University of Massachusetts, Amherst, 2013); E. Barrie Kavasch, *The Mound Builders of North America: 4000 Years of American Indian Art, Science, Engineering and Spirituality Reflected in Majestic Earthworks and Artifacts* (New York: iUniverse, Inc., 2004); and, Paul E Minnis, *People and Plants in Ancient Eastern North America* (Tucson: University of Arizona Press, 2010.).

¹³⁷ Wilkie, *The Archaeology of Mothering*, xxiii.

attempting to remove oneself from a particular subject position. I find the process of writing narratives helpful as an interpretive device.”¹³⁸ From this approach I contemplate the reasons Wilkie cites for the creation of narratives of the past, and Wilkie’s use of stories as an interpretive device is a useful model for my research.

Women’s Voices in the Archives

It is not gender that is silenced rather that the voices of women are unheard, at once excluded from discourse and imprisoned within it.

--Teresa de Lauretis, *Alice Doesn’t: Feminism, Semiotics, Cinema*

In addition to considering the methodological theories of archival work, historiography, and ethnography, my interpretation of materials and documents about ethnogynecology is informed by feminist theory and research. Ethnographies and ethnobotanical studies formed the majority of my documentary evidence, and these studies were rarely restricted to women’s issues or subjects. However, a small number of the herbal and medical texts that I discuss in chapter 4 were specifically related to women’s medicine. In the earliest archives and documents the authorship of women is noticeably absent, and the direct experiences of Native and African women are all but nonexistent. Nonetheless the women are real, they were present, and their historical presence creates both an authentic and incomplete existence in the available texts. I employ the strategy of examining government reports, travel journals, diaries, herbal and medical texts, newspaper articles, early seed catalogs, and other materials, to gain an understanding of the context for the ethnographic texts I read. The interpretive challenge for my research is to give women’s experiences a voice without, literally, putting words in the mouths of women from other times. Trouillot’s crucial moments of archive construction and historical

¹³⁸ Wilkie, *The Archaeology of Mothering*, xxv.

silences theory are important guides for this analytical work, I am also assisted in this task by the theories and methodologies of feminist research.

To explain the gendered aspects of this research project, and how my interpretation and critique is supported by feminist theory, it is important for me to be clear that I do not hold to an essentialist framework for what it means to be a woman. I am aware that I am discussing moments in history when depictions of women, if not their self-concepts, were certainly essentialized, and even as I do not personally hold to a heteronormative, binary view of gender, my research topic can appear to assume this position. Furthermore, I am willing for my research to inhabit this fraught and interesting space between the feminist theoretical imperatives against essentializing what it means to be a woman - especially around the experience of women's bodies and their reproductive health - and the lived realities of that essentialization for women in an historical, imperfectly recorded past. I am aware that I am reporting on one of the key biological experiences of an essentialized gender identity - women's reproductive health generally and childbirth specifically. Yet, I hope to maintain a balanced approach by considering that even as women may share some biological realities, as persons they are shaped by far more than their biology.

Women have always had individualized and very different experiences of the world and yet they have shared some critical circumstances, especially the experience of being discriminated against, stereotyped, and othered. Those female experiences diverge widely when the issues of race, culture, nationality, and class are figured into the socially constructed binary of gender. Feminist research theory is concerned with issues of intersectionality – the ways in which the concepts of gender, race, class, and female agency are constructed and how they overlap in their interaction within both historical accounts and contemporary interpretations.

Black feminist sociologist Patricia Hill Collins defines intersectionality and argues, “Rather than examining gender, race, class, and nation as distinctive social hierarchies, intersectionality examines how they mutually construct one another.”¹³⁹ Feminist theorist Chandra Talpade Mohanty relates the theory of intersectionality to the challenges of interpreting women’s history, and she argues,

Above all, gender and race are relational terms: they foreground a relationship (and often a hierarchy) between races and genders. To define feminism purely in gendered terms assumes that our consciousness of being “women” has nothing to do with race, class, nation, or sexuality, just with gender . . . Ideologies of womanhood have as much to do with class and race as they have to do with sex. Thus, during the period of American slavery constructions of white womanhood as chaste, domesticated, and morally pure had everything to do with corresponding constructions of black slave women as promiscuous, available plantation workers.”¹⁴⁰

I am similarly aware that historical realities of trauma, violence, and dislocation uniquely and powerfully affected and therefore intersect with an analysis of the lives of Native and African women throughout the period of my research topic. These traumas were likely to have profoundly affected Native and African women’s reproductive health. I do not take up a review of the research on historical trauma and women’s reproductive health; nevertheless I do acknowledge its critical significance.

Feminist research theory questions notions of universality in the interpretation of both current and historical events. Gerda Lerner, in her classic 1975 article, “Placing Women in History: Definitions and Challenges,” insists on an interpretation of historical materials outside of a unitary, “one interpretation fits all situations” framework, and Lerner claims that, “Women of different classes have different historical experiences. To comprehend the full complexity of a

¹³⁹ Collins, Patricia Hill. “Its All in the Family: Intersections of Gender, Race and Nation.” *Hypatia* 13, no. 3 (1998): 62,

¹⁴⁰ Chandra Talpade Mohanty, *Feminism Without Borders: Decolonizing Theory, Practicing Solidarity* (Durham, NC: Duke University Press, 2003), 55.

society at a given state of development, it is essential to take account of such differences.”¹⁴¹

Lerner argues, “We will have to recognize that no single methodology and conceptual framework can fit the complexities of the historical experience of all women.”¹⁴² Linda Kerber references the work of Gerda Lerner on the importance of questioning perceived notions of universality and objectivity within feminist theory, and Kerber insists,

At a time when many American academics insisted that good historical practice required that historians distance themselves from the political passions of their time, Lerner taught that one wrote history to save one’s own life, indeed one’s own sanity . . . As a feminist, she had already concluded that integrating women into history would wholly transform historical and therefore present consciousness.¹⁴³

Mary Maynard and June Purvis argue for a connection between feminist intersectionality theory and research in *Researching Women’s Lives from a Feminist Perspective*, and they claim, “If feminism . . . is to be able to analyze the interrelationships between class, race, and gender and other forms of oppression, then it cannot let its focus of research remain with experience alone. One way of going beyond this is to use our theoretical knowledge to address some of the silences in our empirical work.”¹⁴⁴ Maynard and Purvis question what it means to “do” feminist research from epistemological and methodological points of view. They suggest, “The feminist concern with epistemology has centered on the questions ‘who knows what, about whom and how is this knowledge legitimized?’”¹⁴⁵

The ideas of Helen Buss and Marlene Kadar in, *Working in Women's Archives: Researching Women's Private Literature and Archival Documents*, concur with the insights of

¹⁴¹ Gerda Lerner, “Placing Women in History: Definitions and Challenges,” *Feminist Studies* 3, no. 1/2 (Autumn 1975): 5.

¹⁴² Lerner, “Placing Women in History,” 13.

¹⁴³ Linda K. Kerber, et al., *U.S. History as Women’s History: New Feminist Essays* (Chapel Hill: University of North Carolina Press, 1995): 4 (Introduction).

¹⁴⁴ Mary Maynard and June Purvis, eds., *Researching Women’s Lives from a Feminist Perspective* (New York and London: Taylor and Francis, 1994): 24.

¹⁴⁵ Maynard and Purvis, *Researching Women’s Lives*, 18.

Kerber, Maynard, and Purvis. Buss and Kadar discuss the intersections of archival work and feminist scholarship by drawing on feminist scholars' experiences of historical and literary fieldwork. Their purpose is to expose the methodologies that "uncover[s] the often hidden, poorly documented and incomplete record of female persons."¹⁴⁶ Buss and Kadar reflect on the frequently intimate relationships women researchers have with their female historical subjects, especially when they are attempting to interpret archival evidence that is buried in the mendacity and trivia of the everyday – the domestic, personal, private, and anecdotal. Female archival subjects exist in what Buss and Kadar call a "complex and incomplete" relationship to archival evidence and documents, thereby requiring feminist researchers to engage in acts of deconstruction, reclamation, and interpretation.¹⁴⁷ Buss and Kadar argue that the feminist researcher should examine the available narratives of women's lives, situated in and interpreted by the social assumptions of both the times in which they lived and in which they are being written about. Buss and Kadar are candid about their struggles to combine feminist interpretation with rigorous historical, literary, and public scholarship, while maintaining a commitment to investigations that illuminate and provide insights into the historical and cultural significance of their subject's lives.¹⁴⁸

From a reflexive research approach I consider that it is my professional immersion in women's reproductive health that both motivates my work and supports my navigation of these complex interpretations and feminist theory. I bring to this research my intimate knowledge of women's reproductive health journeys through girlhood, puberty, motherhood, and menopause. As a young midwife I learned in the company of women, about women and their bodies, for the

¹⁴⁶ Helen M. Buss and Marlene Kadar, eds., *Working in Women's Archives: Researching Women's Private Literature and Archival Documents* (Waterloo, ONT: Wilfrid Laurier UP, 2001): 1.

¹⁴⁷ Buss and Kadar, *Women's Archives*, 117.

¹⁴⁸ Buss and Kadar, *Women's Archives*, 117.

health and safety of women and their families. I was trained to see the transitions of the female body as one important anchor for the human experience, and this is the perspective that I maintain in my research. My research negotiates the tension between gender essentialization and historiography by approaching the interpretation of archival source materials with a feminist theory perspective in mind. Critically, however, I remain interested in women's experiences, knowledge, and representations of the world as a subset of human experiences, and I am drawn to a deeper comprehension of how women's knowledge intersects with the knowledge of their communities. In the final analysis, while I recognize the value of and use the theories of feminist historiography and research, I do not define myself as a mainstream feminist researcher. Instead I refer back to theorists Trinh Minh-ha, Linda Tuhiwai Smith, Edward Said, and Patricia Hill Collins, as I assert a research approach that simultaneously recognizes the situation of my research topic and myself as the investigator and a woman of color engaging in historical research and analysis. Peruvian indigenous educator Sandy Grande explains this intersectional, non-feminist, decolonial perspective:

Thus, like other indigenous women, I theorize and act in public life from a standpoint that presumes *decolonization* (not feminism) as the central political project. In contrast to dominant modes of feminist critique that locate women's oppression in the structures of patriarchy, the project of decolonization begins with the understanding that the collective oppression of indigenous women results primarily from colonialism - a multidimensional force underwritten by Western Christianity, defined by white supremacy, and fueled by global capitalism . . . that also allows white women to deny their shared complicity in the colonialist project (including the benefits they reap from its mandates and imperatives). Indeed, rather than recognize their participation, "mainstream" feminists have historically presumed a universal sisterhood among all women, erasing important differences in power and social status. As a result, indigenous, "third-world," and other marginalized women have long taken issue with "mainstream" feminists, documenting their failure to acknowledge both the intersections of race, class, gender, and sexuality and the historic dispensations of whiteness.¹⁴⁹

¹⁴⁹ Sandy Grande, "Whitestream Feminism and The Colonialist Project: A Review of Contemporary Feminist Pedagogy and Praxis," *Educational Theory* 53, no. 3 (Summer 2003): 329-330.

Similarly, indigenous researchers Maile Arvin (Native Hawaiian), Eve Tuck (Aleut), and Angie Morrill (Modoc/Klamath) relate the decolonial approach to the importance of Native feminisms and a reclamation of indigenous epistemology. Arvin, Tuck and Morrill offer this reminder, “Another challenge that Native feminist theories offer to feminist discourses is to recognize the persistence of Indigenous concepts and epistemologies, or ways of knowing.”¹⁵⁰ I agree with the standpoints of Grande, and Arvin, Tuck, and Morrill. I insist, therefore, upon the importance of bringing together a research framework and a set of conceptual approaches that consider my position as a woman of color researcher, simultaneously honoring my investigations of ethnogynecology, a topic that explores the encounters of Native, African, and European peoples, the silenced, marginalized lives of Native and African women and their communities, and the distinct epistemologies and worldviews of those communities.

A Story: Nanny Mother

My name is Emma Lovings Miller, from Oakland, California. I was born in 1860 and married for 20 good years to Charles Frederic Miller, a bookseller, and Secretary of the Oakland Wharfingers. Mr. Miller was a Godfearing man, hardworking, gentle, and wise, and was taken to Heaven’s Angels in 1900, laid low by that flu he caught in an unusually cold fog down at the port one October Sunday afternoon. God gave us no children of our own, but God gave me to help women in their time, and so I’m known in the flatlands as Nanny Mother. I don’t actually remember where or how that name started.

I’m a mixed-breed. Story tells it that my great grandfather had a Choctaw father and a Gullah mother. My great grandfather walked off a South Carolina plantation after a particularly severe and undeserved beating. His anger and pride just kept him walking. From one coast to the next he walked. Took him nearly ten years but as he came to California, down through Sonoma, he walked his way into the heart of my great grandmother, a Pomo native. By the time those two lovebirds had 12 children, 22 grandchildren, and more greatgrands than anyone could count or remember we were every shade of black, white, red, and brown that the Good Lord could contrive to make. Myself I have warm brown skin, round features, and thick, black straight hair that goes to curly in the foggy Oakland nights.

Someone started the habit of calling me Nanny Mother when I was first called to assist women at their time and the name stuck. Colored, white, Indian, Chinese, it doesn’t much matter, I deliver them all in Oakland. I’m known for a firm and loving touch and I never rush women. I

¹⁵⁰ Maile Arvin, Eve Tuck, and Angie Morrill, “Decolonizing Feminism: Challenging Connections between Settler Colonialism and Heteropatriarchy,” *Feminist Formations* 25, no. 1 (Spring 21013): 21.

have a good record. The doctors call me for their breeches and twins. God gave me to know how to ease the His Little Angels into this world.

When the fog rolled in on the afternoon of Tuesday 17 day of April, it seems the tiredness rolled in with it, right into my bones it settled, that tiredness, pushing and pouring like those liquid clouds tumbling up the Bay and playing peek-and-boo with San Francisco. Getting upstairs to my third floor walk up on Clay Street was a matter of putting one foot in front of the other without much thought to it. Mr. Miller left me comfortable, we had a three room that we had rented from The Port and that I settled down into those six years missing him. I sat down to the table in the kitchen with a much-needed cup of lemonella tea¹⁵¹ and sorted my tools.

I silently thanked Mrs. Elsie for teaching me the importance of being prepared, and the value of a cup of her tea-san.¹⁵² On Tuesday night I didn't know how important my preparations would be. Before I rolled into a dreamless exhaustion I had six sets ready. Six clean white aprons, starched, ironed and folded. Six boiled sewing scissors and strong cotton thread also boiled and wrapped tightly in clean sheets of the Tribune, then packed into the linen closet under the towels. I checked that I had wrapped up the boiled cotton strips in packs. Then I repacked my jars of herbs. I always carried the ones that Mrs. Elsie had instructed me in. Raspberry, yarrow, golden seal, lemon balm, white cohosh, oak bark, and the ash tree leaves.¹⁵³ Mrs. Elsie was trained in a real school in Sweden before she came to this country. She was generous with her teaching once she saw I had the touch and the patience to learn.

I scratched out the concluding few sentences on the letter I was preparing for the Suffrage Association to commemorate Mrs. Anthony at our next general meeting. "Failure is impossible." I wrote at the bottom after my signature. By that time I was so bone tired that my eyes were closing on their own.

I heard the shaking before I felt it. I thought I was dreaming right before waking, and my first thought was that a ship had docked wrong in the port. There was a brief but great straining sound as if Mother Earth herself was about to give birth. And then the waves. On the third floor I felt as if I was being bumped and pushed and floated all at the same time. I grabbed one of Mr. Miller's old jackets to put over my cotton dressing gown and headed for the stairs and dashed outside.

By the time I reached Clay Street I was dizzy from walking down steps that seemed to be walking up to meet me. It was like the worst ferry journey. Nothing was solid and my empty stomach had just a touch of nausea. My nausea instantly disappeared as I encountered all the neighbors similarly jolted awake and in half states of dress and undress at about 5:30 in the morning. It was an unusually clear morning, the fog was just a memory. And so we could see clearly across the water of the Bay the dust that was rising quickly from the hills of The City. The Earth was still straining and groaning but the violent shaking had stopped. We looked around at our own houses and flats, cottages and apartments, and realized we had escaped any significant damage. A shingle was loose here, some china had fallen in that kitchen over there, and Little Peter was crying in his mother's arms because he had bumped his head falling out of bed. We

¹⁵¹ *Melissa officinalis*, also known as lemon balm, a sedating, calming remedy.

¹⁵² Tisane, French word for herbal tea.

¹⁵³ *Rubus idaeus*, raspberry leaf, a tonic for pregnant women. *Achillea millefolium*, yarrow, a cleansing herb for women. *Hydrastis canadensis*, golden seal, the root is used for postpartum hemorrhage. *Melissa officinalis*, lemon balm, a calming herb. *Actea arguta*, white cohosh, baneberry or bugbane, a lactagogue. *Quercus alba*, white oak, an astringent and antiseptic. *Fraxinus americana*, white ash, used to encourage the delivery of the placenta and for postpartum issues.

were okay on Clay Street. But a combination of noise and silence came at once from across the Bay. It wasn't what we could hear but what we imagined we heard, and it wasn't what we didn't hear but what we definitely saw as the dust became smoke and we realized The City had borne the brunt of what we now knew for sure was a big earthquake.

I ran back upstairs, did my well-practiced quick bath, put on my cleanest tusked cotton shirtwaist and the dark grey woolen circular skirt without a train, found a small hat, braided my hair, packed the old leather bag with three sets of the clean supplies, cotton, and herbs and was back down the stairs in less than 30 minutes. Sure as I suspected I nearly ran head first into 15-year-old Victor as he sprinted around the corner. He had run all the way from by Lafayette Square where his mother lived with him and his five younger siblings in a shanty behind the hotel. Mr. Roberts volunteered his buggy when he heard Victor screaming at me to hurry, and we begged that horse to high tail it down Jefferson Street to Mrs. Lucy's place.

I knew without thinking about it that if Mother Earth was groaning, shaking and birthing that my ladies were not far behind. I made it just in time to see that young one into the world. Another girl to add to the four she already had. Thank goodness the older girls had remembered to boil a big pot of water for the herbs before I got there. It was an easy birth as I suspected it would be. Experienced mothers come on their confinement with few problems. Mrs. Lucy was not one to complain. Life was too hard for her and her brood to complain about a few birthing pains.

I barely had time to sponge off and wrap up that pretty little red haired baby before Victor was standing outside the door yelling at me again. "Mrs. Nanny Mother," he panted, "Looks like Mr. Whitmore's wife is in her time. He's run over here from Market Street to carry you over to his place." I quickly instructed Lucy's daughters on how to help their mother stay dry and clean, and how to prepare the oak bark tea, and then I took off immediately with a nervous Mr. Whitmore. Flora Whitmore was a delicate thing, having her first baby, and I knew it probably wasn't as much of an emergency as Mr. Whitmore supposed it was. Truth was, the day of the San Francisco earthquake I did two births waiting for Mrs. Whitmore to get going, and in that first 48 hours I assisted God in bringing six souls into this world. By the end of the two days fast Victor was my official runner. I sent him, huffing and official, back and forth all hours of the day and night to my apartment to get the clean supplies and aprons, and refill the herb stocks.

Somehow, while the hours flew by, the mothers groaned, and the babies slipped into this mixed up, shaken up world, in between Victor's errands and my birthing's, we ended up with a family of refugees from across the water. Mr. Wiggins, the port master, knew I had a spare room and he had been such a good friend of my husband. He did me the kindness of rooming with me a young woman who had a two year old by the hand, a nine months big stomach under her skirt, and a look of sorrow around her eyes. Clara was the name of this poor soul. Story was she couldn't find her husband in the chaos after the quake had collapsed her small house.

I finally trudged, bone weary, up those three flights of stairs to find a hot cup of my favorite lemonella and some fresh soda biscuits waiting for me. I knew I would have to keep that sadness away from Clara as long as I could so that her time would come on without troubles. I set her to helping me wash and prepare my kits and herbs, easing her mind with the work of it. Then I curled up on my bed in another dreamless nameless exhaustion, a bone tired Nanny Mother, lying next to the warm and slightly yeasty smell of a smudgy two year old and his fog soft baby breaths.¹⁵⁴

¹⁵⁴ For my midwife partner-in-births, Susanna Napierala, June 2011.

Chapter 4: Research Findings and Stories

Ethnobotany and The Secret Life of Plants

Beginning with an introduction to the discipline of ethnobotany this section of the dissertation discusses the findings from 18 months of ethnobotanical archival research, and my review of 688 ethnogynecologically significant plant species, looking for patterns of use of these species among Native, African, and European populations. Ethnobotany is the study of plants in relation to their cultural use. In this research I follow Voeks and Rashford's definition of ethnobotany, namely, "It seeks to understand how culturally relevant floras are cognitively categorized, ranked, named, and assigned meaning."¹⁵⁵ Anthropologist David Cozzo provides clarification about the specific area of historical ethnobotany, focusing on the multidisciplinary nature of ethnobotanical studies and the importance of accessing historical documents for consideration of culturally relevant flora. Cozzo observes,

In the past, historical ethnobotanists have mainly been concerned with the relationship between people and plants as recorded in ancient texts and the pictographs of preliterate societies. As the discipline has evolved and methodologies have improved, it is advantageous from both practical and cultural perspectives to revisit the historical records of the ethnographers from the early days of the profession. This is especially relevant in North America, where most of the early ethnographic material was gathered by ethnographers bent on compiling as much information as possible before the demise of the native populations, languages, and cultures.¹⁵⁶

In my research the cultural relevance of plants is determined by which species are described in the ethnographic records as having been in use for women's reproductive health, and I have recorded, categorized, and assigned patterns to the uses of these plants. The Ethnogynecology Index serves the purpose of creating an account of patterns of plant use against which ideas about

¹⁵⁵ Voeks and Rashford, *African Ethnobotany*, 2.

¹⁵⁶ David N. Cozzo, "Ethnobotanical Classification System and Medical Ethnobotany of the Eastern Band of the Cherokee Indians" (PhD diss., University of Georgia, 2004), 3.

the sharing of traditional ecological knowledge of plants can be constructed. I begin by framing questions that guide my initial appraisal of the archives in order to support the emergence of any patterns of plant use. Which plants and plant remedies were in use by which peoples? How did people obtain and exchange their knowledge of the use of plant-based remedies for women's reproductive health concerns across a number of complicated racial and cultural boundaries? Between whom were these exchanges of medicinal plant knowledge? These are some of the questions that I consider from my initial surveys of the archives. These questions focused my strategy to determine patterns of plant use and helped me conduct and analyze my investigations. I pay close attention to ethnographic or ethnobotanical materials that clearly identified reasons for plants being employed and the groups of people who were employing them. I looked for materials that indicated the lineage of the remedy in terms of where and who the knowledge came from.

My research strategy has been to follow the plant species named in the materials, to look for patterns in the recorded uses of specific plant species, and to determine if the knowledge of ethnogynecological plant remedies used by any one of the three groups - Native, African, or European - was reported as being shared and used among the others. Following the plant species and their ethnobotanical information is not an attempt to present a single historical narrative about the plants or their uses, but rather an attempt to understand the range of possible patterns suggested by the recorded practices.¹⁵⁷ There are recorded stories about plants in the archives and ethnographies; about how plants were used, and about how they came to be known for specific uses. I examine these stories for any indications of the transfer of information about an ethnogynecologically significant plant or remedy. I look for acts of knowledge sharing among

¹⁵⁷ Laurie Wilkie suggests this strategy for the task of understanding and presenting archival materials, in Wilkie, *The Archaeology of Mothering*.

the ethnobotanical knowledge of Native American groups who were mostly living with the plants they were using, and the retained knowledge of African slaves and European colonists and immigrants, who brought both their ethnobotanical knowledge and some plant specimens with them to the New World. The colonists and slaves were simultaneously adapting their traditional plant knowledge to new environments, and in the case of women's reproductive health concerns, they were adapting to the new social and cultural situations in which they found themselves. The recorded practices of Native, African, and European communities establish a pattern of ethnobotanical information for a small subset of plant remedies that had ethnogynecological significance.

I have purposefully limited myself to this small subset of plants and plant knowledge anticipating that patterns of use might be easier to discern. Plants used as ethnogynecological remedies were necessarily fairly narrow in their desired scope of physiological action. These plant remedies were valued for very specific, largely unvarying bodily processes related to women's reproductive health, which may have accounted for their persistence and common usage over time and across different peoples. In addition to plants used as health remedies, wild foods and non-plant materials, like ergot, are noted in my Index if they emerge as important remedies in the ethnographies, and if their pathways or patterns of use are indicative of ways that knowledge was or was not shared. Overall, however, the Ethnogynecology Index, and my analysis, is limited to the use of plants as remedies. In the language of qualitative research I was looking for ethnobotanical information that could shed light on my questions about the sharing of knowledge.¹⁵⁸

¹⁵⁸ The process of using an index and tallies in an historical, theoretical critique is a tricky balancing act. I found the following texts on qualitative research to be helpful for the strategy and design of this index: Wayne C. Booth, Gregory G. Colomb and Joseph M. Williams, *The Craft of Research*, 3rd Edition (Chicago: The University of Chicago Press, 2008); John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods*

My professional knowledge of women's reproductive health was a factor in the selection and categorization of plants in my study, and I clearly explain my choices and biases below. However, I acknowledge that I am overlaying my professionally informed framework of women's reproductive health issues onto historical circumstances that are in very critical instances distinct from my concepts of women's reproductive health. I take seriously the pitfalls of anachronisms in this regard. Even as I bring my professional knowledge into this research, I am aware that my contemporary knowledge of women's bodies and women's reproductive health cannot be conflated with either the concepts held by the authors of my key documents or with the people and practices these documents report on. Medical historian Mary E. Fissel, in a review of an updated 1671 midwifery manual, points out the challenges that face a researcher investigating historical gynecological health issues:

Note the profound problems historians encounter in trying to equate an early modern understanding of the body with any modern counterpart . . . The womb cannot be considered wholly cognate with the uterus. The womb, in early modern perspectives, often included structures we would now call the cervix and the vagina and it had very different powers and attributes than those of the uterus. Babies were born due to their own efforts - not because of any action on the part of the womb that we might equate with uterine contractions - kicking and fighting their way out of the mother's body . . . seventeenth-century bodies cannot be fully mapped onto twentieth-century ones, nor can remedies transcend time.¹⁵⁹

Thus, to overcome this challenge the focus of my research is on analyzing patterns of ethnogynecological use of plants, the ways in which specific plants and their associated remedies are discussed over time rather than an analysis of the uses themselves. Given this focus I hope to avoid some of the challenges of anachronistic misunderstandings of women's reproductive health concerns and remedies.

Approaches, 2nd Edition (Thousand Oaks, CA: Sage Publications, 2003); and Elizabeth Henning, *Finding Your Way in Qualitative Research* (Pretoria, South Africa: Van Schaik Publishers, 2004).

¹⁵⁹ Mary Fissell, review of *The Midwives Book of the Whole Art of Midwifery Discovered by Jane Sharp*, edited by Elaine Hobby, *National Women's Studies Association Journal* 13, no. 1 (2001): 200.

My preliminary ethnobotanical research uncovered some indications of interesting patterns for the cross-racial circulation of knowledge about ethnogynecological plant remedies, that I explain when describing each source document, and this solidified my archival research approach. For example, in my initial review of historical materials I discovered that Charlotte Erichsen-Brown, in her book *Medicinal and Other Uses of North American Plants*, claims that the actual exchanges of knowledge between European immigrants and Native healers are quite difficult to glean from the historical documents, and so she begins her research by tracing the origins of European ethnobotany that contributed to future exchanges of knowledge. Erichsen-Brown argues that,

The medical training given in France in the 17th and 18th centuries was regarded as the best in Europe. Every ship leaving France was obliged to carry a surgeon for the duration of the voyage who often had to fill the triple role of physician, surgeon and apothecary. There was a botanical garden attached to the medical school in Paris as well as the King's garden. All French explorers were looking for strange and interesting plants . . . The English speaking settlers brought with them from England Gerard, Culpepper, Wesley Buchan and W. Lewis [popular home remedy books] all writing of European plants. They also brought with them their handwritten recipe books containing their tried and true remedies for the common household ills. They brought the seeds of many of the plants they use in Europe and sowed them by their door steps.¹⁶⁰

Given the recorded importance of medicinal plants to New World settlements, and despite the challenges of locating evidence of the sharing of European plant knowledge across racial and cultural borders, Erichsen-Brown reveals numerous ways in which European and Native ethnobotanical knowledge did cross cultural boundaries. In general, documentary evidence exists for the established ethnobotanical knowledge of Native Americans, and for the ethnobotanical knowledge and specimens that accompanied Europeans. The knowledge and specimens that

¹⁶⁰ Charlotte Erichsen-Brown, *Medicinal and Other Uses of North American Plants: A Historical Survey with Special Reference to the Eastern Indian Tribes* (New York: Dover Publications, Inc., 1979) vii-viii.

accompanied the 20 million Africans bought to the New World in chains is a far more complicated and contested story that I address in my research analysis in chapter 5.

Purposefully, my archival approach begins with Native ethnographic and ethnobotanical documents. Centering my research on Native ethnogynecological practices takes into consideration that the story of knowledge sharing and adaptation on this continent is best told in the context of encounters and interactions that unfolded around pre-existing practices, knowledge, and cultural structures. To do otherwise would be to buy into the myth of the New World as a *tabula rasa* at the time of European settlement and African enslavement here.

Researcher Lisa Brooks (Abenaki) asks,

What happens to our view of American history when Native narratives are not just included but privileged? What happens when we put Native space at the center of America rather than merely striving for inclusion of minority viewpoints or viewing Native Americans as a part of or on the periphery of America? What happens when the texts of Anglo-American history and literature are participants in Native space rather than the center of the story?¹⁶¹

I attempt to address these questions, not directly yet deliberately by starting my research with Native knowledge and Native uses of plants, privileging these at the center of a discourse that attempts to unearth the patterns of American ethnogynecological plant practices across cultural and racial boundaries. I suggest that starting with Native uses of plants, through the ethnographies located in the Mohegan, Mashantucket, and Pequot tribal archives, is an act of research strategy and an act of epistemology. It is epistemological because it reclaims Native space and Native knowledge at the center instead of its typical place on the periphery.

This research is not a study of the ecological origins and movements of specific plant species. My study looks at patterns of ethnobotanical practice. If Native groups used certain plants before the early 17th century it does not necessarily imply New World origins for those

¹⁶¹ Lisa Brooks, *The Common Pot: The Recovery of Native Space in the Northeast* (Minneapolis: University of Minnesota Press, 2008).

species, and similarly, the plants that African and European peoples brought with them or used once they arrived in the Americas were not necessarily native to Africa or Europe. Sufficient movement and trading of plants had occurred by the early 17th century, across Europe, Asia, Africa, and both the Atlantic and Indian Oceans, to make the matter of species origins a very complex ecological and botanical subject, beyond the scope of my research. Consequently, in my analysis of the ethnobotanical information species origins are rarely discussed. This issue of plant species origins and migrations relative to ethnobotanical patterns of use is further complicated by a diversity of species classification schemes used in the ethnographies, and the variety of scientific and common names used for plants from the early 17th century to early 20th centuries. Species naming and classification is discussed under the description of the archival source documents used for my Ethnogynecology Index.

An Ethnogynecology Index: Plants and Practices

Plants enable human life to be nurtured and healed, to fashion tools and to communicate with the spirit world. Plants restore our spiritual balance.

--Trudie Lamb-Richmond, Schaghticoke Elder

This section of the dissertation describes the creation of an Ethnogynecology Index¹⁶² that supports my attempt to find ethnobotanical use patterns, and to read, interpret, and analyze the information found in the ethnobotanical documents. The Ethnogynecology Index lists details for 27 of the ethnobotanical studies that I reviewed, and 688 of the reproductive health plant species listed in those studies. I created the Index as a tool for intellectual control over vast amounts of documents and information I encountered during my research; so that I might begin to see if any patterns emerged in descriptions of over 3000 species of plants and many ethnographies,

¹⁶² The Ethnogynecology Index is a multi-workbook spreadsheet that I created to help me keep track of plants and their uses. I have opted to share the relevant information from the Index in the Appendix in the form of tables.

ethnobotanical studies, and *materia medica* describing American plant use from the early 17th through early 20th centuries.

I describe the creation of the Ethnogynecology Index by explaining my criteria for choosing specific studies out of the archival documents. I explain the ways in which I selected and categorized plant species used for reproductive health issues, and how my selections and categorizations were designed to pick up any patterns of plant use. My study is not quantitative, and other than simple counting and percentages I perform no statistical analysis on the Ethnogynecology Index. The eclectic, non-standardized character of most of the ethnographic, ethnobotanical, and medical documents I reviewed would not have easily allowed more sophisticated quantitative analysis, however, it was never my intention or interest to attach my discussions to a numerical analysis of documentary evidence. My aim is to look for patterns, and the limited number of tallies in this Index of plants is meant to assist that aim. My critique of the significance of these historical materials is based on the patterns that emerged from sorting through, counting, and indexing thousands of ethnogynecologically important plant species.

My intent is to pose and answer central questions about the archival source documents that inform and are entered into my Ethnogynecology Plant Index. How and why were these key documents chosen? Who are the authors? What critical assertions about plant knowledge and practice are made in these documents? What other historical sources were consulted for my research? Is there evidence of the sharing of ethnogynecological plant knowledge between and among Native, African, and European groups in these manuscripts? These questions are addressed next, along with details of the patterns of plant use discerned from the documents and the Index as a result of my investigations.

Ethnognecology: Documents

The goal of my ethnobotanical investigation is to find and assess patterns of women's reproductive health plant knowledge and use over 300 years of cross-racial contact in the Americas, from the early 17th through the early 20th centuries. To interpret patterns of use over such a long period of time it is critical to locate the earliest possible accounts of Native, African, and European American medicinal plant practices in available archives. Andrew MacDougall's research evaluates the possibility of human mediated plant movements in North America through a review of historical texts. He reviews 67 historical documents, 12 of which also inform my research as they either describe ethnognecologically important species that are entered into the Index (6 manuscripts), or they provide critical historical and botanical background information (6 manuscripts).¹⁶³ Regarding the use of historical texts in ethnobotanical research, MacDougall argues,

The . . . period, spanning the eighteenth and early nineteenth centuries, was a time of considerable botanical exploration in eastern North America driven by interest in natural history, plant taxonomy, and the potential use of native species for medical and ornamental purposes in Europe and colonized North America. Numerous travelogues, natural histories, and medical lists were compiled during this time that include descriptions of plant use by Native Americans . . . Although

¹⁶³ Manuscripts reviewed in MacDougall's research that were also entered into my Ethnognecology Index: Smith, Huron H. Smith, "Ethnobotany of the Menomini Indians," *Bulletin of the Public Museum of the City of Milwaukee* 4 (1923): 1-174; Huron H. Smith, "Ethnobotany of the Meskwaki Indians," *Bulletin of The Public Museum of The City of Milwaukee* 4, no. 2 (1928): 175-326; Huron H. Smith, "Ethnobotany of the Ojibwe Indians," *Bulletin of the Public Museum of Milwaukee* 4 (1932): 327-525; Huron H. Smith, "Ethnobotany of the Forest Potawatomi Indians," *Bulletin of the Public Museum of the City of Milwaukee* 7 (1933): 1-230; Frank Gouldsmith Speck, "Medicine Practices of the Northeastern Algonquians," *International Congress of Americanists XIX* (1917): 303-320; and, Frank G. Speck, Royal B. Hassrick and Edmund Carpenter, "Rappahannock Herbals, Folk-Lore and Science of Cures," *Proceedings of the Delaware County Institute of Science* X, no. 1 (1942): 1-49. Manuscripts reviewed in MacDougall's research that provided me with background history and context: William Bartram, *Travels through North and South Carolina, Georgia, East and West Florida* (1733), repr. (New York: Dover Publications, 1955); Frances Densmore, *Uses of Plants by the Chippewa Indians*. 44th Annual Report (Washington, DC: Bureau of American Ethnology, 1928); John Heckwelder, *Narrative of the Mission of the United Brethren among the Delaware and Mohegan Indians* (Philadelphia: McCarty & Davis, 1820); John Josselyn, *New England's Rarities: Discovered in Birds, Beasts, Fishes, Serpents, and Plants of the Country* (1672). repr. (Boston: William Veazie, 1865); Peter Kalm, *Travels in North America* (New York: Dover Publications Inc., 1964); and, Frederick Pursh, *Botanical Excursion to the Northeastern Parts of Pennsylvania and New York During the Year 1807* (Philadelphia: Brinckloe & Marot, 1869).

most ethnographical studies occurred one or more centuries after first contact . . . they contain the most detailed accounts of Native American plant use, including descriptions of procurement, cultural significance, source areas, and methods of use.¹⁶⁴

MacDougall finds that these historical accounts are particularly important for understanding Native ethnobotany which is the starting point for my ethnogynecology research. While there are challenges to fully comprehending the information in historical manuscripts, and limitations to the explanatory authority of these documents, nevertheless, they remain important sources of information for my investigations. Therefore, I will return to a review of MacDougall's research and the limitations and challenges of historical documents in my discussion of the manuscripts that provide context and background to my research about the plant species entered into the Ethnogynecology Index.

My choice of the 27 documents that were entered into the Ethnogynecology Index was a matter of access, strategy, and availability. The archives that I had access to are located at the Mashantucket Pequot Research Center and the Mohegan Tribal Offices, both in Connecticut. I used botanical archives at the Providence Athenaeum and the John Carter Brown Library (see table 4.1). I made extensive use of online archives, including: Library of Congress Digital Collections and Services, Yale Indian Papers Digital Collection, Historical Society of Philadelphia Digital Library, Digital Schomburg African American Women Writers of the 19th Century, The Internet Archives, Accessible Archives, and Goggle Play (see table 4.2). From the available archival documents, I selected 27 ethnobotanical studies to record the ways in which these authors described women's reproductive health plant uses and practices (see table 4.3). For these 27 studies, the dates of ethnographic or ethnobotanical collection and publication ranged

¹⁶⁴ Andrew MacDougall, "Did Native Americans Influence the Northward Migration of Plants During the Holocene?" *Journal of Biogeography* 30 (2003): 643.

from 1754, Samuel Occum's, "Herbs and Roots,"¹⁶⁵ to 2007, Herbert C. Covey's *African American Slave Medicine*.¹⁶⁶ Covey's ethnobotanical information is taken directly from the early 20th century WPA Slave Narratives.¹⁶⁷ This is a span of 253 years of publications that describe New World botany and plant medicine practices for Native, African, and European peoples from the early 17th to the early 20th centuries. The selected studies are an inclusive cross-section of available research, and critical to my study, but they are not representative of all ethnobotanical materials on Native, African, or European use of plant remedies in early American history, nor can the patterns which emerge be generalized, transferred, or extended beyond my Index.

Specific strategies for the review and selection of historical documents that discussed Native, African, and European ethnobotanical information are listed below. The overall strategy for selecting historical documents for plant species entered into the Ethnogyneology Index included the following criteria:

1. The author of the document is an ethnobotanist, ethnographer, anthropologist, physician, or herbal medicine practitioner who undertook the direct study and/or practice of the ethnobotanical uses that he or she describes.
2. The author lists ethnogyneological uses of plants, and provides details of plant species and their preparations.

¹⁶⁵ Samson Occum, "Herbs and Roots," in *The Collected Writings of Samson Occum, Mohegan: Leadership and Literature in Eighteenth Century Native America*, ed. by Joanna Brooks (Oxford: Oxford University Press, 2006), 44-47.

¹⁶⁶ Herbert C. Covey, *African American Slave Medicine: Herbal and Non-Herbal Treatments* (Lanham, MD: Rowman and Littlefield Publishers Inc., 2007).

¹⁶⁷ The WPA narratives contain more than 2,300 first-person accounts of slavery collected as part of the Federal Writers' Project of the Works Progress Administration from 1936-1938. For further information on the WPA Slave Narratives, see: National Archives, "Records of the Work Projects Administration," web version based on *Guide to Federal Records in the National Archives of the United States*, Compiled by Robert B. Matchette et al. Washington, DC: National Archives and Records Administration, 1995, <http://www.archives.gov/research/guide-fed-records/groups/069.html> accessed November 15, 2012; Henry Louis Gates, Jr., and Charles T. Davis, eds., *The Slave's Narrative* (New York: Oxford University Press, 1985); and Mindy J. Morgan, "Constructions and Contestations of the Authoritative Voice: Native American Communities and the Federal Writer's Project, 1935-41," *American Indian Quarterly* 29, no. 1/2 (2005): 56-83.

Native Ethnobotany Sources

Native ethnobotanical studies were consulted and selected first, and were chosen for 21 of the 27 Index documents. To select Native ethnographic and ethnobotanical documents for the Ethnognecology Index, I employed the following strategies:

1. Dates of authorship: The earliest published studies of Native ethnobotanical practices were located and chosen if they provided more than general descriptions of Native medical practices and included species and use specific information. The purely descriptive studies of Native ethnobotany, healing practices, and plant use were available in the archives, were helpful for historical and cultural context and background, and were consulted but not chosen to be entered into the Index. The earliest selected study was Occom's 1754 "Herbs and Roots."
2. Species documentation: By 1753, Carolus Linnaeus had assigned or changed the polynomial names of known plants to binomial designations that were widely adopted from that point forward to both name and describe plant species.¹⁶⁸ Documents were selected that identified plants by Linnaean species name, with the exception of Occom's "Herbs and Roots" that provides no Latin names. Occom's text is included because of its early date, Native authorship, and specific mention of ethnognecological remedies.

¹⁶⁸ "Regarding the history of Linnaean binomial plant names, "Most botanical taxonomic priority begin with Linnaeus (1707-1778): the oldest plant names accepted as valid today are those published in *Species Plantarum*, in 1753. Before Linnaeus' [*Systema Naturae* publications], species naming practices varied. Many biologists gave the species they described long, unwieldy Latin names, which could be altered at will; a scientist comparing two descriptions of species might not be able to tell which organisms were being referred to." From, Ben Waggoner, "Carl Linnaeus (1707-1778)," *University of California Museum of Paleontology* (Regents of the University of California, 2000), <http://www.ucmp.berkeley.edu/> accessed December 1, 2013. See also, Staffan Müller-Wille, "Gardens of Paradise," *Endeavour* 25, no. 2 (2001): 49-54; Staffan Müller-Wille, "Collection and Collation: Theory and Practice of Linnaean Botany," *Studies in History and Philosophy of Biological and Biomedical Sciences* 38, (2007): 541-562; Staffan Müller-Wille and Sara Scharf, "Indexing Nature: Carl Linnaeus (1701-1778) and his Fact-Gathering Strategies," *Working Papers on the Nature of Evidence: How Well do 'Facts' Travel?* London School of Economics, no. 36/08 (2009): 1-46; and Londa Schiebinger, "Forum Introduction: The European Colonial Science Complex," *Isis* 96, no. 1 (2005): 52-55.

3. RH plants listed: Studies were included if there was at least one plant species listed for women's reproductive health/ethnogynecological (RH) purposes. As it turned out, for all documents eventually selected and listed in the Index when ethnogynecological plants were mentioned then at least 3 such species were discussed in that source. There were studies of Native uses of plants for food, fiber, and construction that did not list ethnogynecological plants and these studies were not consulted except for historical context.
4. Native authorship: Studies with Native authors were specifically included. Native authorship was rare as European and European American men authored most of the relevant archival materials. As discussed earlier in this research the importance of a Native perspective is critical to this research and it was hoped that the inclusion of Native authors would support that goal. It was anticipated that Native authors might have less complicated access to Native plant medicine practitioners and their possibly coveted information about ethnogynecological practices, an issue that I discuss in greater depth as one challenge of the interpretive authority of historical documents. However, while my research privileges a Native centric perspective, it does not test for these specific hopes or anticipations. Native authorship of ethnographic and ethnobotanical materials is recent; therefore these documents were from the 20th century and later, with the exception of Occom's short text. Native authors included: E. Barrie Kavasch (Cherokee), Samson Occom (Mohegan), Gladys Tantaquidgeon (Mohegan), and Lyda Averill Paz Taylor (tribal affiliation unspecified). European and European American men authored, in the 19th and early 20th centuries, the other sources of Native ethnobotany that were selected for the Index.

European Ethnobotany Sources

To choose source materials that documented European American practices it was necessary to review dozens of herbal medicine books published in Europe and the Americas from the 17th through 20th centuries. The majority of these books were available online through the archival sources mentioned above. These materials were useful and were consulted for their ethnobotanical context and *materia medica*. The *Oxford Dictionary of American English* defines *materia medica* as, “The study of the origins and properties of remedial substances used in medicine.”¹⁶⁹ I sought descriptions for the uses of ethnogynecologically important plants in the *materia medica* of European and European American texts. I include a review of the medical and historical background gleaned from the *materia medica* of 38 European and European American herbal medicine books following this section on my Ethnogynecology Index key documents. I investigated cultural history texts from the same time periods - diaries, journals, travel journals, and letters. These investigations helped to contextualize both European American knowledge and use of plant remedies for women’s reproductive health, and the New World medical, botanical, and cultural histories that were important to the ethnogynecological practices of European people. While botanical and medical texts were readily available for historical context, European American ethnobotanical studies were less common. European American ethnobotanical texts were chosen for 3 out of the 27 studies entered into the Index. To select European American ethnographic and ethnobotanical documents containing plant information that could be entered into the Ethnogynecology Index, I employed the following strategies:

1. Dates of authorship: The earliest published studies of European American ethnobotanical practices were reviewed.

¹⁶⁹ *Oxford Dictionary of American English* (Oxford University Press, 2014), http://www.oxforddictionaries.com/us/definition/american_english/materia-medica accessed December 15, 2013.

2. Referred studies: European ethnobotanical materials that were cited in the Native ethnobotanical documents already chosen were reviewed.
3. RH plants listed and species documented: Review of materials that specifically identified ethnogynecological plant species was also a strategy employed for European sources. Ultimately, texts by R. Swinburne Clymer, Clarence Meyer, and Nancy Locke Doane were chosen after review of their entries on ethnogynecological plants and practices.

African Ethnobotany Sources

For a variety of reasons African American ethnographic and ethnobotanical studies were difficult to locate. There was little interest among European ethnographers in documenting African healing practices during the more than 350 years of the Atlantic slave trade.

Ethnographies of plant and medical practices on the African continent were available but were not consulted for my research, as my study looks at practices specific to Africans in the Americas, especially North America. Plant medicine studies from the Caribbean and South America were consulted, are important as comparative historical context, and are referred to throughout my research. Archival documents that discussed African American uses of plants for ethnogynecology were chosen for 3 out of the 27 studies, and were selected for entry in the Index using the following strategies:

1. Dates of authorship: There is a scarcity of slave ethnographies and African American ethnobotanical source documents; consequently, while earlier documents, like plantation journals, were consulted for background and context, the earliest available ethnobotanical studies of African American practices are from the 20th century or later.

2. RH plants listed, species documented, referred studies: Selection of materials that identified and listed ethnogynecological plants was a strategy employed for African American sources in the Index. The authors that were referred to and/or cited most frequently for researching slave ethnobotany, including ethnogynecological plants and practices, and were used as source materials for the Ethnogynecology Index, included William Ed Grimé, Herbert C. Covey, and Wonda Fontenot.

Female authorship was considered in tandem with the strategies described above for selecting Native, African, and European ethnobotanical studies, and archival materials with women authors, when located, were comprehensively reviewed. Eight of the 27 studies in the Ethnogynecology Index were collected and authored by women. Female authorship of ethnobotanical studies that included ethnogynecological plants was rare, and all of the located documents of female authorship were consulted for context and background. It was supposed that women authors might have better access to information about ethnogynecological practices; however, my research does not specifically test for this supposition. Ethnobotanical and ethnographic studies of women's uses of plants in this time period was rarely self-recorded, and in the case of Native and African women was almost without exception not of their authorship.

Theorists such as Trouillot and Steedman refer to the challenge of missing voices in the archives demonstrating that the silences created are reflective not only of the absence of subject female voices, but attributable as well to the construction of the historical records by European men of a particular social, religious, political, and class background. In addition to the limits of using materials that were not recorded by the women themselves, issues of religion, race, and class overwhelmingly influenced the ethnographic observations and subsequent recordings for the men who did create ethnobotanical records. In the end I was able to locate contemporary

sources about historical ethnobotany authored by women, and women non-Native authors were selected for 3 of the 27 studies, and included: Meredith Jean Black (Native research), Nancy Locke Doane (European research), and Wonda Fontenot (African research). Native women ethnobotanists authored 5 of the 27 studies and included: E. Barrie Kavasch, Gladys Tantaquidgeon (3 studies), and Lyda Averill Paz Taylor.

Ethnogyneology: Researchers and Authors

In the Ethnogyneology Index, 19 different ethnographers and practitioners authored 27 studies (see table 4.4). Addressed in order by author and by the date of authorship, from oldest to most recent, further information on the authors and examples of their assertions about the sharing of American plant knowledge and practices are provided here. It is noted, however, that while there are published histories, biographies, and autobiographies available for some of the 19 authors, there is very little background, research, or biographical information available for others, including in some cases no information on their dates of birth or death. As a result some of the following author descriptions are comprehensive and others are brief.

Samson Occom, Mohegan (1723-1792)

There is ample documentation and scholarship surrounding the life, times, and achievements of Reverend Samson Occom. Occom's persuasive powers and authority were felt in New England's Native, European, and African communities, during his life and posthumously. Occom was the first Native American ordained as a Presbyterian minister, and he was an educator, the founder of Dartmouth College, and a founder of the Brothertown Indian Community in Oneida.¹⁷⁰ Occom authored hymns, sermons, journals, and speeches, he traveled

¹⁷⁰ For further information on Brothertown, and the extraordinary life and scholarship of Samson Occom, see: Francis G. Hutchins, *A History of Brothertown* (Brookline, MA: Hutchins Report - Brothertown, 2004); Brad D. E.

to and spoke widely throughout England, and he was an early abolitionist who corresponded with well-known African Americans - author Phillis Wheatley (1753-1784), and minister Lemuel Haynes (1753-1833). Francis Hutchins, the author of a report on Brothertown, sums up Occom's influence, "Like Benjamin Franklin, Samson Occom was a celebrity on both sides of the Atlantic long before the American Revolution."¹⁷¹

Occom's "Herbs and Roots" is a singularly fascinating example of one influential Native American's relationship to plant remedies and medical practice. Kelly Wisecup suggests that Occom's herbal booklet reflects his status of being entrenched in both Native and Christian/European modes of practicing, thinking, classifying, and writing. From her review of the body of Occom's written work, and scrutiny of the "Herbs and Roots" text, Wisecup claims that, "Occom's interest in medical knowledge was early and ongoing, and it accompanied his Christian education and ministerial work."¹⁷² Occom does not provide Latin names for any of the 52 remedies he lists; however, he classifies the plants with brief descriptions, by their common names, and/or by their Mohegan names. Occom identifies the uses of the 52 remedies, including the 6 that are indicated for reproductive health purposes. Wisecup argues that Occom's classificatory scheme is in keeping with his Native understanding of the relationships between plant, remedy, disease, patient, and practitioner, and she says, "The herbal's descriptive names for plants thus allowed Occom to represent correspondences among plants, their medical qualities, and the illness they counteracted. Far from being incomplete or partial descriptions,

Jarvis, *The Brothertown Nation of Indians: Land Ownership and Nationalism in Early America, 1740-1840* (Lincoln, NE: University of Nebraska Press, 2010); Samson Occom, *The Collected Writings of Samson Occom, Mohegan: Literature and Leadership in Eighteenth-Century Native America*, ed. by Joanna Brooks (Oxford: Oxford University Press, 2006); and Bernd C. Peyer, *The Tutor's Mind: Indian Missionary-Writers in Antebellum America* (Amherst: University of Massachusetts Press, 1997); and Kelly Wisecup, "Medicine, Communication, and Authority in Samson Occom's Herbal," *Early American Studies* (Fall 2012).

¹⁷¹ Francis G. Hutchins, *A History of Brothertown* (Brookline, MA: Hutchins Report - Brothertown, 2004), 3

¹⁷² Kelly Wisecup, "Medicine, Communication, and Authority in Samson Occom's Herbal," *Early American Studies* (Fall 2012): 543.

Occom's entries provided information about herbs' and roots' characteristics and accompanying uses."¹⁷³

Two ethnogynecologically relevant remedies, and examples of Occom's style of representation, are entries #30: "an herb good to make women bear Children Pretly [sic] high Stock and Long Leaves," and entry #32: "a wead [sic] good to Restrain women from bearing Children."¹⁷⁴ In order to interpret these entries, Wisecup suggests a consideration of Occom as a health practitioner; drawing on his deeply held traditional knowledge of Native healing plants and practices. Wisecup emphasizes,

Occom's herbal does not decontextualize plants. Instead it communicated information about roots and herbs by presenting plants in terms of their connections with maladies and with specific places. Rather than obtaining their identity and virtues from Occom's descriptions . . . the herbs and roots remain connected to contexts outside the herbal . . . In this way "Herbs & Roots" referred to a preexisting body of environmental and botanical knowledge . . . Finally, the lists of herbs and roots required a knowledgeable interpreter to bring full meaning to the entries, and as such, they represent not only the relationship between a plant and disease but also between the practitioner and plants.¹⁷⁵

Thus, while Occom's manuscript lacks specific Latin names for plants, the essence of Wisecup's argument, and the utility of Occom's text for my Index, is that connections are revealed between ethnogynecologically significant plant functions, uses, and healing practices.

Walter James Hoffman (1846-1899)

Hoffman was a military physician from a family of doctors and surgeons. Beginning in 1879, Hoffman worked as a naturalist with the Smithsonian Bureau of Ethnology where he was responsible for reports on his fieldwork among Native populations in the Arctic, California, Michigan, Minnesota, Nevada, Oregon, Pennsylvania, Washington, and Wisconsin. Hoffman's

¹⁷³ Wisecup, "Medicine, Communication, and Authority, 548.

¹⁷⁴ Samson Occom. *The Collected Writings of Samson Occom, Mohegan: Literature and Leadership in Eighteenth-Century Native America*, ed. by Joanna Brooks (Oxford: Oxford University Press, 2006), 46.

¹⁷⁵ Wisecup, "Medicine, Communication, and Authority, 550.

published studies and papers are concerned with Native language, pictography, ritual, art, and folklore.¹⁷⁶ Hoffman was particularly interested in the Grand Medicine Society or Mide'wiwin of the Ojibwa (also referred to as Ojibwe), and his 1891 ethnobotany of the Mide'wiwin¹⁷⁷ lists 53 plants species, 3 with reproductive health uses that are entered into my Ethnogynecology Index. In the introduction to his manuscript Hoffman demonstrates his attention to the details of the Native medical training and healing rituals he was observing:

It may be that the candidate [for medical training] is taken into the woods where it is known that a specified plant or tree may be found, when a smoke offering is made before the object is pulled out of the soil, and a small pinch of tobacco put into the hole in the ground from which it was taken. This is an offering to Noko'mis - the earth, the grandmother of mankind - for the benefits which are derived from her body.¹⁷⁸

Hoffman held the common prejudice that “purely aboriginal” forms of herbal medicine were interesting but magical, and that Native forms and practices gained in effectiveness and scientific rigor with European influence. Describing his list of “Mide' Therapeutics” Hoffman asserts,

It is interesting to note in this list the number of infusions and decoctions which are, from a medical and scientific standpoint, specific remedies for the complaints for which they are recommended. It is probable that the long continued intercourse between the Ojibwa and the Catholic Fathers, who were tolerably well versed in the ruder forms of medication, had much to do with improving an older and purely aboriginal form of practicing medical magic.¹⁷⁹

While Hoffman appears to be a sympathetic observer of Ojibwa healing rituals he credits the effectiveness of specific remedies to Ojibwa relationships and exchanges of knowledge with Europeans, a point of view that was frequently held by European ethnographers of Native

¹⁷⁶ Alex F. Chamberlain, “In Memoriam: Walter James Hoffman,” *The Journal of American Folklore* 13, no. 48 (1900): 44.

¹⁷⁷ Walter James Hoffman, “The Mide'wiwin or “Grand Medicine Society” of the Ojibwa,” *Seventh Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution*, 1885-1886. Washington: Government Printing Office, (1891): 143-300. The Project Gutenberg EBook <http://www.gutenberg.org/files/19368/19368-h.htm> (accessed January 1, 2012).

¹⁷⁸ Hoffman, “The Mide'wiwin or “Grand Medicine Society” of the Ojibwa,”143.

¹⁷⁹ Hoffman, “The Mide'wiwin or “Grand Medicine Society” of the Ojibwa,”143.

botanical and medical practice. Later, I address this bias as one of the limitations of the explanatory authority of many of the historical documents.

George Bird Grinnell (1848-1938)

George Grinnell was a paleontologist, ornithologist, and anthropologist, and was well known as a naturalist and the founder of the Audubon Society. Grinnell published dozens of books, articles, and reports, many of them about the Native cultures that he studied. Grinnell's article, "Some Cheyenne Plant Medicines" provides both the Cheyenne and Linnaean names for 21 listed species along with the properties and preparations of the remedies.¹⁸⁰ Four of the listed species are recorded for ethnogynecological uses and are found in my Index. Grinnell was well known among the Native groups that he studied as it was his habit to spend long periods of time in the field living, hunting, and trapping with his Native hosts. In his Cheyenne ethnobotanical study Grinnell discusses the intimate relationships Native women had with specific plants and he credits one of his Native informants for his knowledge of plant remedies:

Almost every woman possesses certain plants, used as medicine, which are peculiarly her own, and the secrets of which she alone knows . . . From my old 'mother,' Wind Woman, of the Northern Cheyennes, I have received a number of specimens of plants used in healing by these Indians.¹⁸¹

Grinnell includes details about the preparation of remedies that Wind Woman has given him in this typical entry: "A little of the root cut into small pieces, boiled and made into an infusion, is given to a woman when she begins to have labor pains, in order to insure easy delivery," (*Balsamorhiza sagittata*),¹⁸² and "An infusion made of this plant is drunk by women who have had children and have an insufficient supply of milk, for the purpose of increasing the flow,"

¹⁸⁰ George Bird Grinnell, "Some Cheyenne Plant Medicines," *American Anthropologist*, New Series 7, no. 1 (1905): 37-43.

¹⁸¹ Grinnell, "Some Cheyenne Plant Medicines," 37-38.

¹⁸² *Balsamorhiza sagittata* is known by the common names bark medicine and arrowleaf balsamroot. Grinnell, "Some Cheyenne Plant Medicines," 38

(*Lygodesmia juncea*).¹⁸³ The plant descriptions in Grinnell's ethnobotanical manuscript demonstrate the knowledge he gleaned from his informants and hosts.

R. Swinburne Clymer (1878-1966)

R. Swinburne Clymer was a popular eclectic medical practitioner, herbalist, and dietician practicing among European Americans at the turn of the twentieth century, and in his book, *Nature's Healing Agents*, he collects and summarizes medicinal plant knowledge from the 1800s and before.¹⁸⁴ Although Clymer was a medical doctor he was deemed controversial for his strong critique of the medical establishment's ignorance of dietary regimes and herbal remedies for health and wellness. Clymer was a collector of plant medicine remedies and practices, and *Nature's Healing Agents* includes general medical advice, remedies he learned from his own practice, and plant uses he collected from other European American practitioners and patients. Clymer mentions Native uses of plants in some of his 52 ethnogynecologically important species that are listed in the Index, however he does not specify tribal origins. This entry for *Mitchella repens*, commonly referred to as squaw vine, is typical of Clymer's Native references, "For ages past, the American Indian women have used Squaw Vine as a tea or infusion all during pregnancy to assure proper development of the child and render parturition both safe and easy, and at the same time develop lactation."¹⁸⁵

Frank Gouldsmith Speck (1881-1950)

Speck was trained at Columbia University by Franz Boas - considered the "Father of American Anthropology" - although Speck eventually received his doctorate from and was the founder of the anthropology program at the University of Pennsylvania. Speck was a prolific

¹⁸³ *Lygodesmia juncea* is known by the common names skeleton weed, rush skeleton plant, rushpink, blue medicine, and milk medicine. Grinnell, "Some Cheyenne Plant Medicines," 41

¹⁸⁴ R. Swinburne Clymer, *Nature's Healing Agents: Herbs, Roots and Barks and their Use in the Prevention and Elimination of Disease: The Medicines of Nature* (Philadelphia: Dorrance & Company, 1905).

¹⁸⁵ Clymer, *Nature's Healing Agents*, 112.

scholar and published hundreds of ethnographic and natural history papers based on his extensive fieldwork.¹⁸⁶ Native ethnobotany figured as one of Speck's specialties, and Speck enjoyed a long, familiar relationship with his tribal colleagues in the Northeastern U.S. Ms. Fidelia Fielding (1827-1908), a Mohegan, and grandmother of ethnobotanist Gladys Tantaquidgeon, was a family friend of the Specks who Frank described as, "A woman of unusual cast of mind . . . to whom we owe a debt of gratitude."¹⁸⁷ Three of Speck's Native ethnobotanical studies are entered in the Ethnogynecology Index, covering the plant knowledge and practices of Catawba, Rappahannock, and Northeast Algonquian (Montagnais, Penobscot/Wabanaki, Mohegan, and Nanticoke) tribal groups. In these 3 studies, Speck discusses more than 240 plant species, of which 18 are ethnogynecologically important. Speck also provides ample details of the non-plant based folkloric practices of pregnancy, childbirth, and infant care, which I do not consider in my research.¹⁸⁸ Speck's brief entries on the 18 ethnogynecological plant species include what he has been told about preparation and use, for example this Penobscot plant entry: "Yellow ash (*Fraxinus americana*), *wi'kabi*, "splint (wood)"; leaves, in a very strong, bitter decoction, are given to women after childbirth to cleanse them."¹⁸⁹

¹⁸⁶ Much of Speck's original scholarship was available, and consulted for my research, at the Mohegan Nation tribal archives, and the studies that were useful background include: Frank Gouldsmith Speck, "Medicine Practices of the Northeastern Algonquians," *International Congress of Americanists* XIX (1917); Frank G. Speck, *Native Tribes and Dialects of Connecticut*. Extract from the Forty-Third Annual Report of the Bureau of American Ethnology (Washington DC: United States Government Printing Office, 1928); Frank Gouldsmith Speck, *Catawba Medicines and Curative Practices* (Philadelphia: University of Pennsylvania Press, 1937); Frank Gouldsmith Speck, "The Iroquois: A Study in Cultural Evolution," *Cranbrook Institute of Science Bulletin* no. 23 (October 1945); Frank G. Speck, Royal B. Hassrick and Edmund Carpenter, "Rappahannock Herbals, Folk-Lore and Science of Cures," *Proceedings of the Delaware County Institute of Science* X, no. 1 (1942); and, Frank G. Speck and Ernest S. Dodge, "On the Fable of Joe Pye, Indian Herbalist, and Joe Pye Weed," *The Scientific Monthly* 61 (July 1945).

¹⁸⁷ Frank G. Speck, *Native Tribes and Dialects of Connecticut*. Extract from the Forty-Third Annual Report of the Bureau of American Ethnology (Washington DC: United States Government Printing Office, 1928), 223.

¹⁸⁸ An example of a non-plant based folkloric belief: "During labor, the father's hat was thrown under the bed to make the after-birth come easier." From, Frank G. Speck, Royal B. Hassrick and Edmund Carpenter, "Rappahannock Herbals, Folk-Lore and Science of Cures," *Proceedings of the Delaware County Institute of Science* X, no. 1 (1942): 21.

¹⁸⁹ Speck, "Medicine Practices of the Northeastern Algonquians," 310.

Speck was an astute, circumspect observer of Native customs and practices, and his comfort in crossing the boundaries between his scientific training and his childhood residence in Native communities is evident in his ethnobotanical writing. Using language common to the early 20th century, Speck describes Native herbal healing and folk medicine as primitive and superstitious, yet he also demonstrates his respect for Native plant knowledge:

Primitive man has a magnitude of wisdom that we are often prone to ignore as superstitious and useless. But this is far from true if we consider to what extent isolated peoples have contributed through their cultures to chemotherapy and medical cures. The Indians have done their share in interpreting and discovering natural treatments from Nature's rich store. Nature has a cure for every disease and this is a part of Indian philosophy.¹⁹⁰

Speck repeats similar sentiments in his other ethnobotanical studies, and he reports on the plant knowledge of the Algonquian tribes:

Native pharmacopeia from different parts of North America shows that the therapeutic qualities of herbs are recognized quite generally among Indians . . . The knowledge of plants and trees among both young and old, the ability to identify them from parts, and acquaintance with their properties, are quite remarkable. The fact that my list has been assembled from many different persons leads me to think that an almost unexhaustible [sic] fund of knowledge exists on the subject."¹⁹¹

I consider the most instructive element of Speck's research, however, to be his comments on the ethnobotanical origins of Native plant uses, and the possibility of borrowing and historical influence among and between Native, African, and European groups living in the same ecological areas. Speck contends that European settlers adapted the plant foods and medicines of the Native groups they encountered, even as those Native groups were acculturating to European culture. Speck says,

The direct contagion of culture in respect to exploitation of native food resources came to the first colonists, as we now know, from the Algonkian-speaking tribes of New England in the early seventeenth century . . . While acculturation was

¹⁹⁰ Speck, Hassrick and Carpenter, "Rappahannock Herbals," 4.

¹⁹¹ Speck, "Medicine Practices of the Northeastern Algonquians," 303-307.

progressing among the natives their long-evolved culture of plants, medicinal as well as edible, was effectively adding to the larder and wealth of Europeans.¹⁹²

Speck claims that the effects of this bidirectional sharing create a conundrum for uncovering the original users of plant remedies and that his fieldwork with tribal elders does not reach back far enough to expose the origins of most plant practices. While insisting on Native origins of plant medicine practices, Speck also suggests that cross-racial sharing was essential and ought to be considered as the basis of Native, African, and European ethnobotanical practices. In the Rappahannock herbal text, Speck claims,

The result [of the fieldwork] was to acquire in its progress a fuller context of the meaning and functioning of the curing science of the [Native] community in its cultural setting. It would be premature to attempt to check the beliefs recorded in these lists with beliefs current among the low income whites of the adjacent counties . . . For the same reason local negro beliefs have not been checked. Until collections have been made from them no sources of derivation can be definitively suggested. Undoubtedly, however, the herbals of all would be found to coincide largely with a probable older source in the Indian medicinals, due to characteristics of ecology and aboriginalism . . . Some of the women and even the Indian men are approached for advice by whites as well as colored farmer friends on simple remedies . . . There is thought to be some mystic potency in what the Indians have handed down from the great days when they were masters of the country.¹⁹³

While Speck is arguing for an acknowledgement within the longer term of Native history for the indigenous origins of the healing practices he observed, he insists that ethnobotanical investigations ought to take place among all three racial groups in order to come to any conclusions about the patterns of sharing of medicinal plant knowledge. Speck claims,

It is necessary to point out that a total of thirteen Old World plants are included within the Rappahannock collection of curatives. Several possibilities are present: complete borrowing of plant and cure, or independent native adaptation of the new plant to the wider Rappahannock pharmacology, ether directly or indirectly. Until a thorough investigation of negro and white plant curatives is made, any

¹⁹² Frank Gouldsmith Speck, "The Iroquois: A Study in Cultural Evolution," *Cranbrook Institute of Science Bulletin*, no. 23 (1945): 40-41.

¹⁹³ Speck, Hassrick and Carpenter, "Rappahannock Herbals," 10-13.

conclusion is premature. The resulting interplay of three peoples all familiar with plant medicines intensifies the complexities of the problem.¹⁹⁴

Certainly Frank G. Speck, an ethnographer respected among Native communities and European American scholars, had sufficient field experience to make these fascinating conclusions about the Native origins of medicinal plant knowledge, and the challenges of uncovering patterns of use among and between America's different racial groups.

Wilson Dallam Wallis (1886-1970)

Wallis was an anthropologist and philosopher who trained at Oxford and the University of Pennsylvania. Wallis' research interests included all aspects of Native culture, and he spent his summers in Canada doing fieldwork with the Micmac and Dakota Indians. Wallis and his wife, Ruth Sawtell Wallis (1895-1978), an anthropologist trained by Boas, authored dozens of published and unpublished manuscripts on Native medical practice and ethnobotany. The article authored by Wallis in 1922, "Medicines Used by the Micmac Indians" lists 52 plants, 4 of which he recorded for ethnogynecological uses.¹⁹⁵ Wallis' entries are grouped together by ailment, rather than listed by plant species, although he does provide the Linnaean names for most of the plants he discusses.

Wallis harbored fairly common sentiments, among ethnographers of his time, about the probable lack of effectiveness of the Native practices he observed and catalogued, and the positive influence of Christian/European culture on Native practice. This sentiment echoes that of Hoffman's writing in his 1891 manuscript on Ojibwa remedies. One entry on childbirth plants and practices reveals Hoffman's thoughts on African American ethnobotany as well:

Childbirth. Fresh milk and boiled ground-hemlock (not too strong) are given to the mother. (Ground hemlock yew is used by ignorant Negroes in the southern

¹⁹⁴ Speck, Hassrick and Carpenter, "Rappahannock Herbals," 41.

¹⁹⁵ Wilson D. Wallis, "Medicines Used by the Micmac Indians," *American Anthropologist*, New Series 24, no. 1 (1922): 24-30.

states to produce abortion but has caused many fatalities.) A tea made from the black haw or stag-bush sloe (*Viburnum pomifolium [sic]*) is given to women both before and during parturition. A tradition is current to effect that the Virgin Mary carried this latter plant around with her when she was with child.” *Viburnum* is credited with distinct virtues by many (Indian) physicians, but there is grave doubt as to its real value.¹⁹⁶

It appears that Wallis’ biases on ethnobotanical use and effectiveness were based on a particular assemblage of available information. A review of the medicinal use of *Viburnum prunifolium* (black haw), *Taxus canadensis* (ground hemlock, or American yew) and both Native and African American ethnobotanical history, is a fascinating tale. As this story demonstrates some of the specific challenges in interpreting historical materials, including Wallis’ article, as well as the broader challenges of ethnogynecological plant research, I pursue these stories of black haw and hemlock here.¹⁹⁷

Ethnobotanical Stories: Viburnum prunifolium, Taxus canadensis, and Gossypium sp.

Most historical ethnobotanical documents relied on ethnographic fieldwork to question informants, observe rituals, and investigate the practices of particular communities. These studies relied on prior research and reports for specific plant species and their uses. Medical information, botanical knowledge, and social prejudices evolved rapidly over the four centuries of ethnobotany under my investigation, greatly altering the reliability and accuracy of prior information. In this example, the *Canadian Pharmaceutical Journal* reported in 1882 on the use of *Viburnum prunifolium* or black haw, considered it an effective remedy, and provided a detailed entry referencing African ethnobotanical practice:

This article [plant], which has for many years been known to the people, and especially to those of the southern states, for its property of preventing miscarriage, was first introduced to the profession in 1866 by Dr. Phares, of

¹⁹⁶ Wallis is discussing Blackhaw, or *Viburnum prunifolium*, an important ethnogynecological species. Wallis, “Medicines Used by the Micmac Indians,” 28.

¹⁹⁷ I cannot comment on Wallis’ association of *Viburnum sp.* with the Virgin Mary, except to note that it is **not** one of the common plant species associated with The Virgin.

Mississippi, but was not accorded a very extensive trial until in 1876 by Dr. E.W. Jenks, of Detroit, Mich, discussed its merits with favorable conclusions in a paper read before the American Gynaecological Society. Dr. Phares described it as, “Particularly valuable in preventing abortion and miscarriage, whether habitual or otherwise; whether from accidental cause, or criminal drugging.” He [Phares] further adds, in the same connection, to the habit common among the negro women on some of the southern plantations, of taking a decoction of gossypium, or cotton root, for the purpose of procuring an abortion, and says: “Some farmers on whose plantations I have used the medicine, and who have seen much of its effects on negro women who had always managed to miscarry, declare their belief that no woman can possibly abort if compelled to use the viburnum.” As already indicated, black haw was largely employed in slavery times as a preventive of abortion, and to counteract the effects of cotton root taken with criminal intent by the negresses. Its efficacy in preventing threatened miscarriage in certain conditions is undoubted.¹⁹⁸

The conditions under which African female slaves would desire to abort a pregnancy were many, including rape, maltreatment, brutal labor, and the tragedy of enforced separation from young children sold away to other masters. I revisit this discussion in the form of a story about *Gossypium sp.* (cotton root) as an ethnogynecological species in common use among Native, African, and European Americans.

Medical information on black haw and hemlock continued to be reported and debated, and from February through April 1886, three articles were published in *The British Medical Journal* on the ethnogynecological effectiveness of *Viburnum prunifolium*, or black haw, responding to an original article published in the *Liverpool Medico-Chirurgical Journal* in January 1885, authored by obstetrician John Henry Wilson.¹⁹⁹ Drs. Wilson, Campbell and Napier report on successes with their patients using black haw to stop miscarriages. Wilson references the 1882 *Canadian Pharmaceutical Journal* article, and he reports, “On some of the plantations

¹⁹⁸ Ontario College of Pharmacy, “Viburnum Prunifolium,” *Canadian Pharmaceutical Journal*, edited by E.B. Suttleworth, volume XV, no. 9 (April 1882): 275-277.

¹⁹⁹ Listed by date of publication: W. Macfie Campbell, M.D., “Note on *Viburnum prunifolium* in Abortion,” *The British Medical Journal* (February 27, 1886): 391-392; A. D. Leith Napier, M.D., “*Viburnum prunifolium* in Abortion,” *The British Medical Journal* (March 13, 1886): 489-490; and John Henry Wilson, M.D., “*Viburnum prunifolium*, or Black Haw, in Abortion and Miscarriage,” *The British Medical Journal* (April 3, 1886): 640-641.

in America, it is the popular belief a woman cannot abort if she be under the influence of black haw, although she may be taking medicine with a criminal intent. My experience would go so far as to confirm that opinion.”²⁰⁰ Almost one hundred years later, in 1979, Charlotte Erichsen-Brown cites the *Canadian Pharmaceutical Journal* article on *Viburnum prunifolium* in her text, *Medicinal and Other Uses of North American Plants*.²⁰¹ Echoing Wallis’ entry, Erichsen-Brown also reports on the uses of hemlock among a variety of Native tribes and claims that it was hemlock needle tea that cured Cartier’s crew of scurvy.²⁰² All species of hemlock, *Taxus canadensis*, *Tsuga americana*, and *Tsuga canadensis*, were widely known as mild tea, strong medicine, and potent poison, in addition to their use in tanning. Erichsen-Brown quotes Charles F. Millsbaugh from 1892, “A decoction of the bark has been used to produce abortion with dangerous effects . . . Pregnant ewes are said to lose their lambs from gnawing on the bark of hemlock.”²⁰³ Further, Erichsen-Brown references Raymond Tete de Boule from 1945, “Curiously enough the ground hemlock has always been considered a powerful abortifacient . . . The Old People warned pregnant women of its shadow.”²⁰⁴

This histories of the ethnogynecologically important plants black haw and hemlock demonstrates how opinions about the medical effectiveness of plant remedies, and the practices associated with the remedies, were liable to wax, wane, or be referenced depending on the judgments of each author. In his 1922 study Wallis refers to hemlock and black haw, and he mentions the use of hemlock as an abortifacient by “ignorant Negroes” but he omits, and perhaps was unaware of, any of the existing ethnobotanical references to cotton root or the medically

²⁰⁰ John Henry Wilson, M.D., “*Viburnum prunifolium*, or Black Haw, in Abortion and Miscarriage,” *The British Medical Journal* (April 3, 1886): 641.

²⁰¹ Charlotte Erichsen-Brown, *Medicinal and Other Uses of North American Plants: A Historical Survey with Special Reference to the Eastern Indian Tribes* (New York: Dover Publications, Inc., 1979), 150.

²⁰² Erichsen-Brown, *Medicinal and Other Uses of North American Plants*, 17.

²⁰³ Erichsen-Brown, *Medicinal and Other Uses of North American Plants*, 16.

²⁰⁴ Erichsen-Brown, *Medicinal and Other Uses of North American Plants*, 36.

antagonistic properties of black haw. While it is possible that Wallis was an intimate and keen observer of Native ethnobotanical practices his biases against the effectiveness of Native remedies, and his partial assembly of historical references critical of African ethnobotanical practices, reveal some of the limitations of my source materials, written largely by European and European American men. Some of the authors in my Ethnognecology Index held similarly biased points of view and over the centuries information that was steeped in the racist ideology of the authors' times was passed on uncritically through these references and citations.

Huron H. Smith (1883-1933)

Huron H. Smith was a botanical curator in Chicago and Milwaukee who authored, between 1923 and 1933, six seminal ethnographic studies on the medicinal uses of plants among Wisconsin-based Native groups.²⁰⁵ His career was unfortunately cut short in 1933 by an automobile accident. Smith differentiated his Native ethnobotanical information between three groups of herbal medicine users and practitioners: Indians, white people, and eclectic practitioners. Both Smith's "white people" and "eclectics" were European Americans, the distinction being made between average users -- white people -- living in the same areas as the Native tribes that he worked with, and herbal medicine practitioners -- eclectics -- who had a wider geographical area of herbal practice, research, and influence than the European neighbors of his Native informants.²⁰⁶ Smith describes the influence of Native practice on eclectic physicians, and says, "Much of the knowledge of the white men originated from studying the

²⁰⁵ Huron Smith's six Native studies are for the Menomini, Meskwaki, Ojibwe, Forest Potawatomi, Oneida, and Winnebago: Kelly Kindscher and Dana P. Hurlburt, "Huron Smith's Ethnobotany of The Hocąk (Winnebago)," *Economic Botany* 52, no. 4 (1998): 352-372; Huron H. Smith, "Ethnobotany of the Menomini Indians," *Bulletin of the Public Museum of the City of Milwaukee* 4 (1923): 1-174; Huron Smith, "Ethnobotany of the Meskwaki Indians," *Bulletin of The Public Museum of The City of Milwaukee* 4, no. 2 (1928): 175-326; Huron H. Smith, "Ethnobotany of the Ojibwe Indians," *Bulletin of the Public Museum of Milwaukee* 4 (1932): 327-525; and, Huron H. Smith, "Ethnobotany of the Forest Potawatomi Indians," *Bulletin of the Public Museum of the City of Milwaukee* 7 (1933): 1-230.

²⁰⁶ Kindscher and Hurlburt, "Huron Smith's Ethnobotany of The Hocąk (Winnebago)," 356.

Indian plant uses, in the early days. Eclectic practitioners sought the Indian herbs and observed carefully what parts of the plant were used.”²⁰⁷ Consequently, most of the plant entries in Smith’s six Native ethnobotanical monographs refer to the use of each species by European Americans - laypersons or practitioners. The following entry for *Lonicera dioica*, wild honeysuckle, from the same plant family, Caprifoliaceae, as *Viburnum sp.* is typical of Smith’s references to Native and European practice:

Glaucous Honeysuckle (*Lonicera dioica* L.), “täpopa’kwisîk” The berry and sometimes the root bark is used in a tea to cure worms in pregnant women, who are poor and weakly. It is also used in combination with other roots. All the local species of *Lonicera* have been used by the white man as medicine, though only by eclectic practitioners.²⁰⁸

I chose to enter 5 of Smith’s ethnobotanical studies in my Ethnogynecology Index, omitting only the one about the Oneida, which was assembled posthumously by Smith’s academic colleagues. In these 5 studies Smith discusses 918 plant species, 171 of which were ethnogynecologically indicated.

Lyda Averill Paz Taylor (c1910-1960)

There are very few biographical details about Lyda Taylor, outside of the publication of her Yale Master’s thesis, “Plants Used as Curatives by Certain Southeastern Tribes.”²⁰⁹ The biographies of Ms. Taylor’s husband, Walter W. Taylor, an influential anthropologist and archaeologist, overshadow information on Lyda Taylor. Lyda Taylor’s study of 185 plants used by eight southeastern U.S. tribes (Alabama, Catawba, Cherokee, Chickasaw, Choctaw, Creek, Koasati, and Natchez), mentions 30 species that were ethnogynecologically important and are entered in the Index. Curiously, Taylor acknowledges that sharing of remedies between Native

²⁰⁷ Smith, “Ethnobotany of the Ojibwe Indians,” 348.

²⁰⁸ Smith, “Ethnobotany of the Meskwaki Indians,” 207.

²⁰⁹ Lyda Averill Taylor, *Plants Used as Curatives by Certain Southeastern Tribes* (Cambridge, MA: Botanical Museum of Harvard University, 1940).

and European groups was recorded for the instances of European borrowing from Native practices but not in the other direction. She asserts,

The possibility of the Indians having learned some of the plant usages from the whites should be taken into account, but information on this subject is lacking. There are many documented in cases of borrowing by the whites from the Indians, but the known cases of Indians borrowing from the whites are few. Even in the use of introduced plants, it is unwise to assume that these uses were learned from the white people, since their use may have been discovered independently by the Indians.²¹⁰

I note that Taylor makes no mention of Native and African ethnobotanical interactions, which is not unusual for research undertaken in the early twentieth century, yet represents a missed opportunity considering the well-documented Native/African interactions and intermarriages of the eight tribes Taylor studied.

In addition to recording plant use practices among these Native groups, Taylor attempts to compare the practices of the eight tribes through analysis of the medicinal effectiveness of the observed remedies using pharmaceutical and chemical data available at the turn of the 20th century. For example, Taylor names the remedies specific to each tribe that uses a particular plant, and comments on their effectiveness in these four entries from her text:

1. *Prunus serotina*. Wild Black or Rum Cherry. Cherokee - childbirth - The bark is made in to a warm infusion which is drunk at the first pangs of labor. Cherokee - chill, fever, ague - The bark, in mixture with that of *Prunus virginiana*, is made into a decoction which is blown on the patient. Medicinal Properties: The bark is astringent and sedative and is used as a tonic in convalescence from fevers. Comments: the decoction of *Prunus serotina* may be given in childbirth for its sedative properties with the idea of quieting the mother.²¹¹
2. *Stillingia sp.* Creek - childbirth - The mashed roots are boiled and the mother drinks and bathes in the decoction soon after the child is born. Creek - loss of manhood - the roots of *Stillingia* and *Tephrosia virginiana* are pounded and put into water. This is drunk to regain potency. Creek - cathartic. Medicinal Properties: *Stillingia* is emetic and cathartic. Comments: The combination of the

²¹⁰ Taylor, *Plants Used as Curatives*, Introduction.

²¹¹ Taylor, *Plants Used as Curatives*, 26-27.

roots of *Stillingia* and *Tephrosia virginiana* makes a very strong cathartic, but does not produce the effect desired by the Creeks.²¹²

3. *Impatiens biflora*. Spotted Touch-Me-Not. Cherokee - childbirth - The stems are made into a decoction with the roots of *Veronica officinalis* and the bark of *Ulmus fulva*. This is drunk to ease childbirth. Medicinal properties: No data.²¹³

4. *Scutellaria lateriflora*. Mad-dog Skullcap [sic]. Cherokee - to expel the afterbirth - The roots are mixed with those of *Polymnia uvedalia* and made into a decoction which the mother drinks as an emetic to aid in expelling the afterbirth. Medicinal Properties: Although once used in the treatment of various ailments. Skullcap is destitute of medicinal properties. Comments: This plant is of no value as applied by the Cherokee.²¹⁴

Regarding Taylor's comment in entry 4, "This plant is of no value as applied by the Cherokee," modern pharmaceutical assessments of *Scutellaria lateriflora* indicate that the plant has over 63 uses and more than 50 chemicals that are responsible for 447 clinical and laboratory actions.²¹⁵ M. Grieve, author of *A Modern Herbal*, describes *Scutellaria*, and reports, "The American species, Virginian Scullcap is one of the finest nervines ever discovered. Popularly this plant is known in America as Mad-dog Scullcap or Madweed, having the reputation of being a certain cure for hydrophobia [from rabies]. Scullcap has strong tonic, nervine and antispasmodic action, and is slightly astringent."²¹⁶ It would be possible that the indicated combined qualities of being a tonic and nervine could make skullcap very useful for expulsion of the afterbirth. Although my research does not address issues of plant chemical properties or medicinal effectiveness of ethnogynecological species, assumptions about effectiveness were made on the basis of what can now be shown to be deficient or faulty data. Recent technology in the assay and genetic identification of plant chemicals renders speculative or inaccurate Taylor's and other authors' opinions on medicinal effectiveness. Consequently, while recognizing the limitations of the

²¹² Taylor, *Plants Used as Curatives*, 31.

²¹³ Taylor, *Plants Used as Curatives*, 36.

²¹⁴ Taylor, *Plants Used as Curatives*, 49.

²¹⁵ For detailed plant chemical assays see: James A. Duke, *Handbook of Medicinal Herbs*, Second Edition, (Boca Raton, FL: CRC Press, 2002); and James A. Duke, Dr. Duke's *Phytochemical and Ethnobotanical Databases*, [Online Database] <http://sun.ars-grin.gov:8080/npgspub/xsql/duke/plantdisp.xsql?taxon=919> accessed June 8, 2014.

²¹⁶ M. Grieve, *A Modern Herbal*, Botanical.com, 2014, <http://botanical.com/botanical/mgmh/s/sculle34.html> accessed January 1, 2014.

information on which Taylor made her comments about plant practices and effectiveness, historical inadequacies or inaccuracies of medical and botanical knowledge remain a challenge for the interpretation of historical ethnobotanical documents.

Gladys Tantaquidgeon, Mohegan (1899-2005)

Gladys Tantaquidgeon is a Mohegan tribal elder whose life crossed three centuries. As a trained ethnographer she was pivotal to preserving Mohegan history and served as a crucial bridge between the 18th century knowledge of her grandmothers and the tribe's legacy for the 21st century.²¹⁷ Tantaquidgeon was a student of anthropologist Frank Speck at the University of Pennsylvania in 1919, although she met Speck when she was a young child and Speck was living with her family. While author James Fenimore Cooper had famously declared the fictional demise of the Mohegans in a story²¹⁸ that takes place in 1757, it was Tantaquidgeon's records and collections of documents, kept neatly under her bed, which proved their survival and provided the Mohegan Nation with federal tribal recognition in 1994. In 1942, Tantaquidgeon published an ethnographic text, *A Study of Delaware Indian Medicine Practice and Folk Beliefs* that was subsequently expanded and re-published in 1977.²¹⁹ Of the almost 200 plant species mentioned in these two books, 46 species are ethnogynecologically important. In the introduction to Tantaquidgeon's 1942 text, Cadzow, an anthropologist, observes, "Born and reared in the environment of a Mohegan Indian home in Connecticut she had the advantages of association in childhood with her grandmother and other old women versed in tribal traditions of plant and

²¹⁷ The official biography of Dr. Tantaquidgeon is written by Mohegan cultural historian Melissa Zobel, see: Melissa Jayne Fawcett, *Medicine Trail: The Life and Lessons of Gladys Tantaquidgeon* (Tucson: The University of Arizona Press, 2000).

²¹⁸ I refer to the novel by James Fenimore Cooper, *The Last of the Mohicans*. New York: Random House, 1826.

²¹⁹ Gladys Tantaquidgeon, *A Study of Delaware Indian Medicine Practice and Folk Beliefs* (Harrisburg, PA: Commonwealth of Pennsylvania, Department of Public Instruction, Pennsylvania Historical Commission, 1942); and Gladys Tantaquidgeon, *Folk Medicine of the Delaware and Related Algonkian Indians* (Harrisburg, PA: Commonwealth of Pennsylvania, The Pennsylvania Historical and Museum Commission, 1977).

herbal medicines.”²²⁰ In addition to her grandmothers and aunts -- Fidelia Fielding, Emma Baker, Lydia Fielding, and Mercy Ann Nonesuch Mathews²²¹ -- Tantaquidgeon’s key informant for the first *Medicine Practice and Folk Beliefs* text was Medicine Man Wi·tapanóxwe (Lenni Lenape).

It is significant for my research that Tantaquidgeon reports on the sharing of plant knowledge between Natives and Europeans, and she, like her teacher Frank Speck, asserts the difficulty of deciding on the origins of medicinal plant practices, especially for Old World species that were established in America and brought into Native healing practices.

Tantaquidgeon observes that Native peoples would make use of European introduced species of plants by incorporating the new species into their existing *materia medica*. Tantaquidgeon claims that,

Where the practices and beliefs of many tribes reveal similarity to the folk remedies of Europeans in the New World, the problem of interpretation of properties is made extremely complicated. Realizing that many of the plants and weeds are migrants from Europe to the New World, we shall have to proceed with caution in view of the fact that the Indians had an ample native pharmacology of their own before the period of conquest, and that an experimental spirit was always and everywhere active in revealing new cures among the invading plant hosts.²²²

Tantaquidgeon acknowledges this history of Native sharing of plant knowledge with European settlers, and she asserts, “No one, I believe, would deny that there has been much borrowing, as it is called, on the part of Colonial whites from the Indians. In the north this process was initiated by the French who accompanied Cartier and who would have perished from scurvy, had it not been for the therapeutic knowledge of those Algonquin who supplied them with an effective

²²⁰ Tantaquidgeon, *A Study of Delaware Indian Medicine*, v.

²²¹ Fawcett, *Medicine Trail*, 37.

²²² Tantaquidgeon, *A Study of Delaware Indian Medicine*, x.

medicine concocted of white cedar bark.”²²³ Tantaquidgeon, especially as a Native woman and trained ethnographer, is considered one of the most important chroniclers of Native ethnobotany.

Virgil J. Vogel (1918-1994)

Virgil Vogel was an historian, educator, and social activist, trained at the University of Chicago. Vogel’s dissertation, *American Indian Medicine*, was published in 1970, and remains a key and influential ethnobotanical text.²²⁴ Vogel’s book is both a treatise on the history of the influence of Native medicinal practices on American medicine, and an ethnobotanical catalog of plants used by Native Americans. Vogel argues that average European settlers were influenced by Native healers and adopted Native plant practices before official acceptance by European American medical practitioners. He says,

The earliest settlers who landed on the Atlantic shores had some knowledge of European remedies, but as they pushed westward they necessarily had to resort to the indigenous medicines, the properties of which could most readily be learned from the Indians. Thus aboriginal herbals were often long used as folk remedies before they were accepted by official medicine. Many of the educated physicians of the times were slow to ascribe any virtue to savage medical knowledge.²²⁵

Vogel credits this sharing of medicinal plant knowledge among Native, African, and European groups in the eventual development of new forms of American medicine, and he claims,

Undoubtedly the earliest settlers in America sought plants resembling those familiar in the Old World and even introduced some of them to the new land, but many more were borrowed from the natives and handed down through generations so that American folk medicine became a blend of the herbal lore of

²²³ Note that this scurvy cure is credited to white cedar and not to hemlock. *Thuja occidentalis* (white cedar), and *Tsuga canadensis* (eastern hemlock) are both evergreens of the same geographical area in North America. Ethnobotanist Glen Blouin asserts, “While there is no definitive proof, and debate continues to this day whether *annedda* [the remedy given to Cartier] was white pine (*Pinus strobus*), white cedar (*Thuja occidentalis*) or white spruce (*Picea glauca*). Etymological evidence points to eastern hemlock (*Tsuga canadensis*) as the life-saving tree species. The foliage of all the above conifers has antiscorbutic properties. Conifer leaves contain 3-5 times the ascorbic acid, or vitamin C, of orange juice.” From, Glen Blouin, “Medicinal Use of Forest Trees and Shrubs by Indigenous Peoples of Northeastern North America,” *FAO World Forestry Congress*, 2003, <http://www.fao.org/docrep/article/wfc/xii/0191-a2.htm> accessed on January 1, 2014; and Tantaquidgeon, *A Study of Delaware Indian Medicine*, x.

²²⁴ Virgil J. Vogel, *American Indian Medicine* (Norman: University of Oklahoma Press, 1970).

²²⁵ Vogel, *American Indian Medicine*, 125.

two continents, or even three, for the Negro, too, had some influence on domestic remedies. One of the significant aspects of American folk medicine is that it acted as an intermediate step on the road toward official acceptance of many native remedies.”²²⁶

Specifically, it is Vogel’s section on “Obstetrics, Gynecology, and Pediatrics”²²⁷ that informs my Ethnogynecology Index choices. In this section Vogel describes the uses of 53 ethnogynecologically important plant species that are entered into my Index. Vogel begins by explaining the reaction of Europeans to Native reproductive health practices, especially childbirth, and he reports, “The ease of childbirth among Indian women was long a cause of amazement to white observers . . . To ease labor, [plant] medicines were given sometime before the expected birth or during it.”²²⁸ Vogel continues this section with detailed descriptions of women’s reproductive health practices that include the plant remedies that were used by various Native groups, as in these three examples:

1. If there was postpartum hemorrhage, the Arikaras gave the juice of chokecherry (*Prunus melanocarpa*) to drink, and also combined the gum of that tree with the powdered root of the *Malva coccinea* (mallow) into an infusion given as a drink. In case of blood clot, or inflammation and abscess of the breast, the pulverized roots of red baneberry (*Actea rubra*) were used, being combined, in the later case, with the application of a poultice made from the spore mass of a puffball.²²⁹
2. Cherokees used herbal medicines to eliminate the afterbirth, including a decoction of mad dog skullcap (*Scutellaria lateriflora*) or leaf cup, saw briar, hemlock, and buttonwood. For the same purpose, the Comanches used *Helenium microcephalum* (sneezeweed), which accomplished the object by inducing sneezing.²³⁰
3. Indians had several remedies to overcome delayed menstruation, to control profuse menstruation, or to relieve pain. During their period, Arikara women took an infusion of the big wild sage (*Artemisia gnaphalodes*) or the roots of the little wild sage (*Artemesia frigida*), a bitter tonic considered useful as an aid to the physiologic functions . . . The Rappahannocks relieved menstrual pain with a tea of fresh or dried pennyroyal (*Hedeoma pulegioides*), or a tea made of split twigs

²²⁶ Vogel, *American Indian Medicine*, 263.

²²⁷ Vogel, *American Indian Medicine*, 231-245.

²²⁸ Vogel, *American Indian Medicine*, 233.

²²⁹ Vogel, *American Indian Medicine*, 235

²³⁰ Vogel, *American Indian Medicine*, 235-236. I note that physiologically it is possible that sneezing could induce uterine contractions in a woman who had just given birth, and thereby begin the expulsion of the placenta.

of the spicebush (*Benzoin aestivale*). The last was also used to correct delayed menses.²³¹

It is evident from Vogel's descriptions that his study emphasizes the practices around medicinal plant use and not only the plant species and their effectiveness. Such rich detail provides a fuller picture of the patterns of plant use, in this case among different Native groups, as well as the numerous and sophisticated preparations Native peoples used for women's reproductive health concerns.

Clarence Meyer (1903-1997)

Clarence Meyer was an ethnobotanist and herbalist from a multigenerational family of botanists and herbalists - both his father and his son were herbal medicine practitioners. Meyer collected and wrote about the herbal medicine practices of both herbalists and ordinary people, and he wrote a number of books documenting European American ethnobotany, including *American Folk Medicine*.²³² In this book Meyer provides an interesting history of the early practice of European American medicine, beginning his account with healing practices in Boston in 1721.²³³ Meyer credits early European American medicine with extensive borrowing from Native sources. Meyer reports that, "Indian medicines were essential to the early colonists, especially during the long winter months when few ships came from the Old World. Squaws sold native botanicals in the streets of the settlements and were often asked to help the ailing. Indian healers gained local repute for their successes in treating the sick."²³⁴

Meyer acknowledges the role that Africans played in early New World medical practices as they accommodated to the properties of both native and introduced species. Meyer claims that,

²³¹ Vogel, *American Indian Medicine*, 238.

²³² Clarence Meyer, *American Folk Medicine* (Glenwood, IL: Meyerbooks, 1973).

²³³ Meyer, *American Folk Medicine*, 1.

²³⁴ Meyer, *American Folk Medicine*, 1.

In desperate times medical help often had to be sought wherever it could be found. Some slaves proved to have remarkable aptitude in the healing arts. A slave named Caesar won fame for remedies curing poisons . . . Various species of native gentians were known in colonial times as Sampson snakeroot because a slave named Sampson cured snake bites with the roots of these plants . . . Slaves doctored themselves. Like the Indians they had always lived close to nature and quickly learned the properties of plants.²³⁵

Meyer also discusses the critical role and contributions of midwives in early American medicine:

Midwives were an ever-at-hand source of medical help in colonial settlements as well as in the backwoods. The profession of the midwife is the oldest in man's history. It began in remote antiquity when females had to help each other in times of difficult childbirth . . . Tombstone records of midwives reveal deeds of the past. Inscription on a stone in an old burial ground in Charleston, South Carolina, claims Elizabeth Phillips [1685-1761] delivered some 3,000 babies. A Mrs. Lydia Robinson [1699-1769] of New London, Connecticut, delivered 1,200 babies in a 35-year period without losing a single mother or baby.²³⁶

Meyer's research goal was ethnobotanical documentation and accounting for the use of herbs by practitioners and common people, and *American Folk Medicine* is a comprehensive collection of the plant remedies available to and used by European Americans. In the Index I have listed 77 plants that were important for women's reproductive health that are described by Meyer in *American Folk Medicine*.

Edward M. Croom, Jr. (c1948-)

Edward Croom was a research botanist at the University of Mississippi School of Pharmacy in the 1980s. Croom was responsible for the establishment and maintenance of a medicinal plant garden, where vital academic and pharmaceutical industry research still takes place. Further biographical information about his work and scholarship is scarce. Croom contributed to a text by Kirkland, et. al., *Herbal and Magical Medicine*, and he authored the

²³⁵ Meyer, *American Folk Medicine*, 2-3.

²³⁶ Meyer, *American Folk Medicine*, 4.

chapter “Herbal Medicine Among the Lumbee Indians.”²³⁷ Croom gained his ethnobotanical information through observations of 25 men and women elders all reportedly over 60 years old and therefore born in the early 20th century. These Lumbee elders assisted him in documenting their medicinal plant knowledge and practices. Croom explains, “While conducting the research, I lived with the Lumbee and so had an opportunity to observe firsthand the preparation and use of herbal remedies . . . I interviewed them about plant use in their homes and made collecting trips with them to harvest herbs from surrounding fields and forests.”²³⁸ Croom’s study includes comparative information on medicinal species that were used for similar purposes in other cultures, and he explains the strategy he used for understanding comparative plant practices:

Since most plant species have a restricted geographical range, all comparisons of plant uses are made at the level of the genus which generally has a much broader geographical range spanning several continents. For example, *Acorus calamus* is used for stomachache by the Lumbee . . . [and] the genus *Acorus* is used as a carminative for stomachache by whites, blacks, and Indians in North America as well as in Europe and Asia.²³⁹

The purpose of Croom’s two-year field study was to observe and document Lumbee medicinal plant practices, while investigating the chemical makeup and medical effectiveness of reported species. Croom discusses 87 plant species used by the Lumbee, 12 of which were reported to be ethnogynecologically important and are entered into my Index. Croom’s entries provide brief details of species uses and preparations, as can be seen from this example:

Oak. *Quercus laevis* (Turkey Oak). *Quercus phellos* (Red Oak). A tea from the sap layer is also taken to stop menstrual bleeding. Comparative: Reproductive. Menstrual Problems - North America: Eastern Cherokee Indians, South Carolina blacks, whites; Europe, Asia.²⁴⁰

²³⁷ Edward M. Croom, Jr. “Herbal Medicine Among the Lumbee Indians,” In *Herbal and Magical Medicine*, edited by James Kirkland, Holly F. Mathews, C.W. Sullivan III, and Karen Baldwin, (Durham, NC: Duke University Press, 1978), 137-169. For Lumbee history, see also: Malinda Maynor Lowery, “Telling Our Stories: Lumbee History and the Federal Acknowledgement Process,” *American Indian Quarterly* 33, no. 4 (2009): 499-521.

²³⁸ Croom, “Herbal Medicine Among the Lumbee Indians,” 141.

²³⁹ Croom, “Herbal Medicine Among the Lumbee Indians,” 147.

²⁴⁰ Croom, “Herbal Medicine Among the Lumbee Indians,” 162.

William Ed Grimé (1940-)

William Ed Grimé was a botanist who contributed a singular study of African American ethnobotany, *Ethno-botany of the Black Americans*.²⁴¹ Very little information is available on Grimé except what appears in his text. The book jacket cover says that Grimé was born in Missouri in 1940, and became a managing botanist at the Harvard Herbarium and the Museum of Natural History, Chicago. His book documents “the plants and plant knowledge that slaves carried from Africa to the New World, as well as those indigenous plants that became important to African communities in the Americas.”²⁴² Grimé developed his manuscript by reviewing 17th through 19th century manuscripts of European and European American botanists, naturalists, and medical practitioners, along with interviews of his contemporary ethnobotanist colleagues.

Grimé’s introduction to his text includes a brief history of the slave trade, which he begins by stating, “One of the least explored aspects of the history of the American Negro pertains to their contribution to our knowledge of dispersal and utilization of plants which are in some way beneficial to man.”²⁴³ The plant descriptions in *Ethno-botany of the Black Americans* are organized in two sections - those plants that were introduced by slaves, and those plants already established in the New World but widely known to be used by African Americans. Out of 116 species that Grimé considers already established in the New World before slavery, 12 were mentioned for ethnogynecological use, and are listed in my Index. In these four representative entries Grimé lists his archival source, the plant, and recorded uses for each plant:

1. M. E. Descourtilz, *Flore Pittoresque et Médical Des Antilles*, 1821:
Dracontium polyphillum [fer-de-lance or guapa]. The root is of a biting sourness,

²⁴¹ William Ed Grimé, *Ethno-botany of the Black Americans* (Algonac, MI: Reference Publications, Inc., 1979).

²⁴² Grimé, *Ethno-botany of the Black Americans*, 1.

²⁴³ Grimé, *Ethno-botany of the Black Americans*, 1.

nevertheless the negroes use it, in the case where purgatives are prescribed. They utilize it equally as emmenagogue [provokes menstruation].²⁴⁴

2. Charles Thornton, *Druges and Medicines of North America*, 1885: *Modiola caroliniana* [Carolina bristlemallow]. The negroes of the south use this plant, as they say, 'to bring the women right' - that is with dysmenorrhoea or obstructed menstruation.²⁴⁵

3. F. P. Procher, *Resources of the Southern Fields and Forests, Medical, Economical and Agricultural*, 1863: *Quercus rubra* [red oak]. I have myself found the bark of the tree in some service among the negroes, in several cases where a tonic astringent injection was required, using it in one of *prolapsus uteri* [uterus falls into the vagina], where the organ became chafed and painful from exposure.²⁴⁶

4. H. Barham, *Hortus Americanus*, 1794: *Stachytarpheta jamaicensis* [blue vervain]. The Indian and negro doctors perform great cures with it in dropsies [edema or swelling], especially those in women, occasioned by obstruction of the menstrual discharge, and that by giving only the juice of the plant.²⁴⁷

Grimé's brief entries contain some Latin species names that pre-date Linnaean classifications.

Nevertheless, the plant descriptions are instructive of his research findings on

ethnogynecological practices and common herbal knowledge between Native and African peoples.

Meredith Jean Black (dates unknown)

There is no biographical information available for Meredith Jean Black, the author of a seminal Canadian study on Native ethnobotany, "Algonquin Ethnobotany: An Interpretation of Aboriginal Adaptation in South Western Quebec."²⁴⁸ Black lists the uses and preparations for 541 medicinal plants, 122 of which are ethnogynecologically important and are entered in my Index. Black combines her archival investigations of ethnobotanical information, which begins

²⁴⁴ Grimé, *Ethno-botany of the Black Americans*, 117.

²⁴⁵ Grimé, *Ethno-botany of the Black Americans*, 144.

²⁴⁶ Grimé, *Ethno-botany of the Black Americans*, 167.

²⁴⁷ Grimé, *Ethno-botany of the Black Americans*, 187.

²⁴⁸ Meredith Jean Black. "Algonquin Ethnobotany: An Interpretation of Aboriginal Adaptation in Southwestern Quebec," *Musée National de l'Homme. Collection Mercure. Division d'Ethnologie. Service Canadien d'Ethnologie. Dossier Ottawa* 65 (1980): 1-243.

with manuscripts from the 17th century, with her fieldwork among Iroquoian and Algonkian bands and groups in Québec.²⁴⁹ Examples of Black's plant entries include:

#279. *Prunus pensylvanica*. Bird, Pin, Fire-cherry, *Petit Merisier*. At Manouan the inner bark is scraped and used to make a poultice for the umbilical cord which bleeds or takes too long to heal.²⁵⁰

#411. *Vaccinium angustifolium*. Low Sweet, Late Sweet Blueberry, Low-bush Blueberry, *Airelle à Feuilles Etroites*. At Revert Desert a tea is made from the leaves to treat colic in infants. It is also used by women after a miscarriage. At Barrière the root is used to make a tea to induce labor. No medicinal uses were learned at Grand Lake Victoria, Simon Lake, Obedjiwan, or Weymontaching.²⁵¹

#521. *Eupatorium maculatum*. Joe-Pye-weed, *Eupatoire Maculée*. This is used everywhere in the study groups to treat menstrual disorders and for venereal disease. At River Desert it is also used to facilitate the recovery of women after childbirth. Two kinds are recognized, pink or purple flowered and white flowered. The white flowered type is used for treatment of venereal disease in men only. The pink flowered is used for women.²⁵²

Black's exhaustive research on Algonkian and Iroquoian plant practices is germane to the possibility of the cultural embedding of medicinal plant knowledge and practices, despite community migrations to new ecological areas. A key component of my research is how plant knowledge and use shifts when people migrate taking their plant medicine practices with them. Because Black's study explores a critical, related hypothesis about medicinal plant practices and tribes' cultural and geographical/ecological origins it is essential to examine Black's work further. In Québec in the mid-twentieth century, Black was working among Algonkian and Iroquoian Native groups in an effort to track the aboriginal locations and movements of those groups that had originally been hunters -- the northern dwelling Algonquin -- and those that had originally been agriculturists -- the southern dwelling Iroquois -- by tracing the similarities and

²⁴⁹ The Algonquin bands that Black worked among are: River Desert, Barrière, Grand Lake/Simon Lake, and Obejwan/Weymontaching. Note that Iroquois and Algonquin refer to tribal names, and Iroquoian and Algonkian refer to linguistic groups. *Algonquian* and *Algonkian* are used interchangeably here, and by different authors, including Black and Speck. Black. "Algonquin Ethnobotany.

²⁵⁰ Black. "Algonquin Ethnobotany," 184.

²⁵¹ Black. "Algonquin Ethnobotany," 217.

²⁵² Black. "Algonquin Ethnobotany," 238.

differences in their medicinal plant practices, adjusting for the ecological zones they currently inhabited. Critically, Black explains the basis and intent of her investigations: “Studies of plant uses such as described here can be applied to questions of prehistoric relationships much as linguistic studies are used.”²⁵³

Historically, Black is referring to information that demonstrates that well before European settlement, and increasing in the 16th and 17th centuries, these two large groups of Native Americans consisting of many different bands and tribes, trekked back and forth across the zone that eventually became the Canadian/U.S. border, and between the sub-Arctic and southern areas of Québec. Algonkian and Iroquoian Native groups migrated great distances and in large numbers for reasons of increased trade, warfare, displacement by settlers, and retreat from disease epidemics. Frank Speck confirms the difficulty of assessing the cultural origins and relationships between the people involved in these historical migrations. “In the general dispersion of the historically famous Algonquin nation, much confusion has been left behind as to how far eastward and southward this people extended at the time of the arrival of the first Europeans.”²⁵⁴ In addition, Speck, who has undertaken thoughtful investigations of the ethnobotanical and cultural histories and practices of both Algonkian and Iroquoian groups, both substantiates and complicates Black’s intended ethnobotanical classification of these two groups through his critique of the cultural comparative approach of linguistic analysis:

One of the long-established principles of anthropology is to classify peoples by the languages they speak. Thus tribes speaking languages which by correspondence in word stems and grammatical construction indicate that they have sprung from a common source are grouped into linguistic families or stocks.

²⁵³ Black. "Algonquin Ethnobotany," 33.

²⁵⁴ Frank. G. Speck, “Boundaries and Hunting Groups of the River Desert Algonquin,” *Indian Notes* 6, Museum of the American Indian, Heye Foundation, (1929): 100. For further discussion of the movements of Algonquin and Iroquoian peoples, see also: Speck, Frank G. *Native Tribes and Dialects of Connecticut: A Mohegan-Pequot Diary*, 43rd Annual Report of the Bureau of American Ethnology. Washington: U.S. Government Printing Office, 1928.

It does not follow, however, that tribes so related through common ancestry of language are necessarily identical in culture.²⁵⁵

Andrew MacDougall's related investigations concern the degree to which these population movements are recorded in historical documents, and how these reports account for Native agency in transporting and cultivating specific plant species. MacDougall confirms the extensive migrations of Native groups, and he reports,

The historical literature . . . indicates that long-distance travel by Native Americans was common, both within regions with shared linguistic affinities (e.g. Algonkian or Iroquoian) and among warring nations (e.g. Iroquoian raids into North Carolina). Combined with an extensive trail and river network that covered eastern North America, these forays would have afforded numerous opportunities for plant transport.²⁵⁶

MacDougall's study does not address Native origins or patterns of plant practices, and instead he looks for evidence of plant transport and purposeful cultivation within the historical records.

In light of the research by Speck and Mac Dougall, Black's thesis that plant use analysis is as strong an argument as the more commonly used linguistic analysis is a potential dialetheism - both imaginable and implausible. Black, in reporting on her ethnobotanical fieldwork among the two different Native groups in hopes of discovering traceable shared origins across geographic population dispersals and migrations, claims:

It is assumed here that variations in plant use by different Algonkian speaking groups will reflect differences in adaptations and in degree of relationship. The more closely related two groups are, the more similar will be their use of plants. Differences due to variation in local environments of the two groups or due to local introductions of plants not native to aboriginal North America may be controlled by comparing only difference in use of native plants which are available to both groups in the comparison.²⁵⁷

Black undertakes these comparisons with each band in her study, and she echoes Speck's sentiments about the usefulness and challenges of linguistic cultural analysis. She finds,

²⁵⁵ Speck, "The Iroquois," 15.

²⁵⁶ MacDougall, "Did Native Americans Influence the Northward Migration of Plants," 642.

²⁵⁷ Black. "Algonquin Ethnobotany," 64.

Agriculture [is considered] to be the distinguishing feature used to differentiate between the Subarctic and other culture areas to the south . . . Such a distinction is considered to be of importance because it presumably reflects real and deep-seated differences in social organization and other aspects of culture . . . Similarities between the southernmost Algonquin and the groups to the south, particularly the Iroquois, are to be expected. Culture areas are artificial categories and no boundary line can realistically be considered to be absolute. However, it is more reasonable and presumably more useful to include these southern Algonquin bands in the same culture area as their northern neighbors . . . On the other had, the contrasts between the Algonquin and the agricultural Iroquoians are obvious . . . To provide additional insights about their aboriginal location and patterns of subsistence . . . the plant use data alone might not be considered to be conclusive, in combination with historical data and with similarities and contrasts of cultural characteristics, they provide a framework for the interpretation of culture which has not yet been explored.²⁵⁸

Ultimately, Black's thesis is fascinating and potentially important yet her fieldwork has not been repeated or replicated. I found no similar studies to support or refute her hypothesis that plant²⁵⁹ knowledge and practices might be retained sufficiently to differentiate the aboriginal geographic, ecological, and/or cultural origins of and relationships between Native groups. Nevertheless, I find Black's thorough cataloging and interpretation of Native ethnobotanical adaptations corresponds well with the arguments made by Speck and MacDougall regarding both the possibilities and challenges of trying to trace Native groups' relationships through population migrations. I find Black's extensive study of patterns of plant practices and shared cultural origins to be compelling and plausible. Black's collected ethnobotanical descriptions of the plants used by these geographically dispersed Native groups forms a critical part of my Ethnogyneology Index.

Nancy Locke Doane (dates unknown)

There is no biographical information available for Nancy Locke Doane or for her grandmother, Minnie Susan Decker, from whom she collected and published her materials for

²⁵⁸ Black. "Algonquin Ethnobotany," 64-69.

²⁵⁹ Black also looks at plants used for food, shelter, and other subsistence needs, but by far her most important category is medicinal plants. Black. "Algonquin Ethnobotany."

the *Indian Doctor Book*.²⁶⁰ Doane reports that Decker raised 12 children using the herbal remedies assembled in her book, and the collection was typical of “how early pioneers handled their medical problems.”²⁶¹ To better understand Doane’s book, published in 1983, it should be noted that the category of an “Indian Doctor” was an historically contentious label. Beginning in the 17th century, and fluctuating in definition through time, “Indian Doctors” could be Native Americans who practiced herbal medicine among their European neighbors, or European Americans who were declaring their remedies, methods, and practices had Native origins. Conversely, by the 19th and 20th centuries the label “Indian Doctor” was being used as an advertising and promotional gimmick for commercially popular herbal formulas, of varying degrees of clinical effectiveness, known collectively as patent medicines.

Peter Smith, the son of a European American practitioner who claimed to have been inspired and taught by Native Americans, wrote a popular book in 1813 called, *Indian Doctor’s Dispensatory*.²⁶² Smith reports that he was motivated by Native plant remedies and practical healing practices, and says, “I call myself an *Indian Doctor*, because I have incidentally obtained a knowledge of many of the simples [single plant remedies] used by the Indians; but chiefly because I have obtained my knowledge generally in the like manner that the Indians do.”²⁶³

Reviewing the detailed plant formulas in Doane’s text, I believe it is most likely that Doane’s grandmother was motivated by books similar to Smith’s, and by herbal remedies ascribed to

²⁶⁰ Nancy Locke Doane, *Indian Doctor Book: Nature's Method of Curing and Preventing Disease According to the Indians* (Charlotte, NC: Aerial Photography Services, 1983), preface.

²⁶¹ Doane, *Indian Doctor Book*, Preface.

²⁶² Peter Smith, *The Indian Doctor’s Dispensatory: Being Father Smith’s Advice Respecting Diseases and Their Cure: Consisting of Prescriptions for Many Complaints: and a Description of Medicines, Simple and Compound, Showing Their Virtues and How to Apply Them* (Cincinnati: Browne and Looker, 1813).

²⁶³ Smith, *The Indian Doctor’s Dispensatory*, x.

Native sources. I return to a partial accounting of the complex history of herbal medicine books in the next section of the dissertation.²⁶⁴

Out of more than 200 plants recorded in Doane's text -- not all of them providing common or Latin names -- 35 are for women's reproductive health issues, and are entered into the Ethnogyneology Index. Doane's herbal formulas are in the common forms of recipes, called "receipts," which are detailed instructions on the preparation of the remedies and the care of the patient. Here are some examples of Doane's ethnogyneological receipts, with my insertion of binomens and common names:

No. 10 - For Obstructed Menstruation. Take three parts of female flowers, commonly found by the side of ponds, leaf deep green shaped like the cowslip, flowers of a bright yellow, this certainly is one of the first herbs in the world for females [unknown, could be marsh marigold]; two parts of unkum [*Senecio sp.*, modern *Packera aurea*, common names golden ragwort, squaw weed, life root, female regulator], found in swamps, known by the name of blood gut, and one part of Indian pink [*Spigelia merilandica*], boil them in fair water till the strength is all out, then strain and add to this as much port wine, or good Madeira, as will keep it from souring, and take a wine glass full three times each day, if the bowels are costive, use a little syrup of elecampane [*Inula helenium*], and I warrant you a speedy cure.²⁶⁵

No. 39 - For Prolapsus Uteri. First let the patient be placed as near as possible in an horizontal position, and remain as much as is convenient in that position for eight to ten days, during which time there must be steeped in water, witch hazel leaves [*Hamamelis virginiana*], and slippery elm [*Ulmus rubra*], and flannel cloths wet with this liquor, applied to the parts as often as they cool, they must be warm as can be borne, the patient must take as much beth root [*Trillium erectum*], pulverized as will fill a teaspoon, three times each day in half teacupful of the same liquor, also a free drink of either, or all of the articles under the head of the receipt for cleansing the blood, the patient's food must be light soups, or mucilages, till the cure is effected, drastic purges must be avoided always.²⁶⁶

What is immediately evident in Doane's book of herbal receipts is the assumption that the readers have an intimate familiarity with qualitative aspects of the flora of their environment. No

²⁶⁴ For more on Indian Doctors, see: Michael A. Dubick, "Historical Perspectives on the Use of Herbal Preparations to Promote Health" *Symposium: Perceptions of Virtues of Foods*, American Institute of Nutrition (1986): 1348-1354; Smith, *The Indian Doctor's Dispensatory*; and, Vogel, *American Indian Medicine*.

²⁶⁵ Doane, *Indian Doctor Book*, 8.

²⁶⁶ Doane, *Indian Doctor Book*, 14.

doubt it was so; that when people relied exclusively on an assortment of basic plant remedies for their healing and well-being they were as familiar with the color, appearance, and ecology of the flora in their immediate environment as modern shoppers know the labels and placements of their most frequently used products in the aisles of a grocery store.

James A. Duke (1929-)

James Duke is a globally renowned ethnobotanist and herbalist, and there is considerable information on his life, scholarship, and achievements. Duke has published more than three dozen botanical and herbal books, has authored hundreds of academic articles, and developed and maintains the U.S. Department of Agriculture's "Phytochemical and Ethnobotanical Database."²⁶⁷ Duke's abiding interest is in international medical ethnobotany, and in addition to his scholarly activities on botany and herbal medicine he maintains a vast organic medicinal herb garden in Maryland, arranged by disease conditions and containing hundreds of species of medicinal plants. Duke's text, *Handbook of Northeastern Indian Medicinal Plants*, highlights what he considers the 75 plant genera (the first part of the binomial plant name), of most significance to Native peoples as recorded in ethnobotanical history. Duke selects the ethnobotanically important plants based on a combination of recorded frequency of use among different Native groups and the variety of remedies recorded for each plant species. The top 10 most significant genera out of these 75, in terms of frequency and variety of use, include 6 ethnogynecologically significant species that are entered into my Index. For one of the reproductive health plant species, *Caulophyllum thalictroides*, Duke list 14 uses for 9 different Native groups, and cites the research of some of the authors discussed elsewhere in my research: Arnason, et. al., Erichsen-Brown, Hamel and Chiltoskey, Krochmal, et. al., Meyer, Moerman,

²⁶⁷ James A. Duke, Dr. Duke's *Phytochemical and Ethnobotanical Databases*, [Online Database] <http://sun.ars-grin.gov:8080/npgspub/xsql/duke/plantdisp.xsql?taxon=919> accessed June 8, 2014.

Tantaquidgeon, and Vogel. *Caulophyllum*, on the other hand, is not one of the genera that is in Duke's top 10 for ethnobotanical significance in terms of reported frequency and variety of uses for Native groups across different historical manuscripts.²⁶⁸ Duke claims that, "What was important historically may no longer be important."²⁶⁹

The 6 genera that Duke identifies as having greatest significance as well as having important ethnogynecological uses are *Acorus*, *Sanguinaria*, *Echinacea*, *Panax*, *Prunus*, and *Salix*. Duke's entries on these genera provide ethnobotanical and species information:

Sanguinaria. *Sanguinaria canadensis*. Common names Bloodroot, Puccoon. Abenaki used the plant as an ecbolic [induces uterine contractions]. Delaware used the root in a compound as a strengthener for women. Cherokee and Lake Superior Indians used the root for cancers, especially uterine cancer. Seneca washed the uterus with a decoction of bloodroot with wood ashes following delivery.²⁷⁰

Prunus. Common names Wild Cherry, Wild Plum, Chickasaw Plum, Fire Cherry (*P. pensylvanica*), Peach (*P. persica*), Black Cherry (*P. serotina*), Choke Cherry (*P. virginiana*). Tete-de-Boule used the innerbark as a hemostat on umbilical cord. Rappahanock made peachleaf tea for morning sickness. Cherokee used the bark for parturition. Lumbee employed cherry wince for difficult pregnancies, the bark for menorrhagia. Thompson gave a bark tonic following parturition.²⁷¹

Duke's other books include international ethnobotany texts, modern herbals, and botany reference books, whereas *Handbook of Northeastern Indian Medicinal Plants* is a North American ethnobotanical source document that provides essential plant histories.

Wonda L. Fontenot (c1935-1999)

There is very little biographical information on Wonda Fontenot, who wrote *Secret Doctors: Ethnomedicine of African Americans*,²⁷² one of three African American ethnobotanical

²⁶⁸ James A. Duke, *Handbook of Northeastern Indian Medicinal Plants* (Lincoln, MA: Quarterman Publications, Inc., 1986), 29-30.

²⁶⁹ Duke, *Handbook of Northeastern Indian Medicinal Plants*, ix.

²⁷⁰ Duke, *Handbook of Northeastern Indian Medicinal Plants*, 138-139.

²⁷¹ Duke, *Handbook of Northeastern Indian Medicinal Plants*, 119.

²⁷² Wonda L. Fontenot, *Secret Doctors: Ethnomedicine of African Americans* (Westport, CT: Bergin and Garvey, 1994).

field studies investigated as part of the Ethnogynecology Index. Fontenot was an anthropologist who conducted a field study of the plant based medical practices of elder folk healers in rural Louisiana, known locally as “secret doctors.” Fontenot explains the uses of 34 plant species, 4 of which have ethnogynecological value and are listed in the Index. Fontenot’s text and plant entries are brief, for example: “Peach Leaves (*Prunus persica*). The leaves are used to make tea for female health problems. It is a domestic plant.”²⁷³ Here, Fontenot uses domestic to mean domesticated or cultivated by humans on purpose, rather than domestic as native to an ecological area.

Fontenot’s book is primarily concerned with the origins of folk medical traditions and the contemporary effectiveness of traditional practices. In the introduction to her study Fontenot emphasizes the familiarity that both ordinary people and secret doctors have with the cultivated and wild plants in their environment. She points out that,

Most medicinal plants in this study were found in swamps and woods. Some were domestic and could be found in the backyards as part of the landscape or in pastures and fields. Those herbs that were found in the pastures and fields were commonly known to locals who relied on herbs for curing benefits; they were the more popular herbs. Medicinal plants found in the swamps and woods were mainly used by secret doctors. Secret doctors took care in gathering these plants and seemed to recognize them by sight.²⁷⁴

Fontenot’s study is particularly helpful to my interests in the origins and sharing of plant knowledge across racial boundaries, as she repeatedly refers to intergenerational sharing of remedies between African American secret doctors and their Native American neighbors and kin. Fontenot discusses the origins of medical knowledge as revealed to her by this community of healers, and she reports:

Perhaps the greatest influence the Native American had on the African American culture is through the passing on of their oral plant knowledge. Several of the

²⁷³ Fontenot, *Secret Doctors*, 137.

²⁷⁴ Fontenot, *Secret Doctors*, 127.

people I interviewed credited their Native American ancestry for their knowledge about herbal remedies. In addition to racial intermixing, medical ethnobotany displays the strongest influence of African American and Native American intermingling.²⁷⁵

Fontenot describes specific instances when healers rely on their Native cultural heritage, referencing the gender of the patient and the healers, and the Native ancestry of plants, remedies, and practices. She explains in a number of cases, “Native medicinal remedies are especially popular with children, women, and older people.”²⁷⁶ In addition she reports, “If a plant has a Native American origin, or perhaps was introduced by a Native American to the secret doctor, or has some other association with Native Americans, then the plants are referred to as Indian plants, or ‘my Indian grandmother told me about that plant.’ Native American women were often the ones cited as the person who passed on the medicinal plant knowledge.”²⁷⁷ Fontenot also states that, “[This is] folk healing in rural southwest Louisiana where three cosmologies interplay - Christian, African and Native American perspectives.”²⁷⁸ While discussing the influence of generations of Native practice on contemporary African American secret doctors, Fontenot’s ethnographic informants indicate a reliance on herbal remedies typical of and based on the cross-racial practices from much earlier times.

E. Barrie Kavasch, Cherokee (1942-)

E. Barrie Kavasch is a respected Native botanist, mycologist, herbal healer, food historian, and botanical illustrator who has published dozens of books on Native culture and history, for adults and children. Out of the twelve botany books authored by Kavasch, I chose to

²⁷⁵ Fontenot, *Secret Doctors*, 132.

²⁷⁶ Fontenot, *Secret Doctors*, 1994),127.

²⁷⁷ Fontenot, *Secret Doctors*, 1994),128-129.

²⁷⁸ Fontenot, *Secret Doctors*, 1994),134.

consult four, because they have important ethnogynecological information.²⁷⁹ One of these texts is a Native ethnobotanical study, *American Indian Earth Sense*, which lists and describes 13 plants historically used for women's reproductive health. These 13 plants are entered into my Index. An example of Kavasch's ethnobotanical entries as found in *American Indian Earth Sense*: "Algonquin women in the Northeast made teas with the leaves, twigs, and ripe red berries of spicebush, *Lindera benzoin* (also known as fever bush), to relieve cramps; they also used it to reduce fever. And Plains Indian women made infusions from various wild sage roots and leaves to control heavy menstrual flow and regulate their menses."²⁸⁰

Kavasch authored an important Native historical text, *The Mound Builders of Ancient North America*, and in this book she provides a precise explanation for the overall role and importance of plant medicine practitioners and practices in Native culture. She claims,

Herbalists are people skilled in the knowledge and use of herbs. They were societies' first scientists and doctors, because they could often treat people's illnesses, cure fevers, rashes, wounds, and assist in childbirth rituals. Herbalists studied throughout life to learn about the many uses of wild plants . . . Each specialist might know the uses of two to three hundred herbs in their lifetime . . . Early societies prized their herbalists, medicine people, shamans, and healers, who specialized in these unique fields and often trained others to follow in their footsteps.²⁸¹

Kavasch continues her account with a description of the ancient practice of sharing plant knowledge between different tribal groups. She argues, "Many additional healing plants were undoubtedly learned about and traded during the mound builders' extensive trading excursions.

²⁷⁹ I chose these botany books authored by Kavasch: E. Barrie Kavasch, *Herbal Traditions: Medicinal Plants in American Indian Life* (Washington, DC: The Smithsonian Institution, 1983); E. Barrie Kavasch, *American Indian Earth Sense: Herbaria of Ethnobotany and Ethnomycology* (Washington, CT: Birdstone Press, 1996); E. Barrie Kavasch, *The Medicine Wheel Garden: Creating Sacred Space for Healing, Celebration, and Tranquility* (New York: Bantam Books, 2002); and, E. Barrie Kavasch and Karen Baar, *American Indian Healing Arts: Herbs, Rituals, and Remedies for Every Season of Life* (New York: Bantam Books, 1999). I also chose one Native history text, E. Barrie Kavasch, *The Mound Builders of North America: 4000 Years of American Indian Art, Science, Engineering and Spirituality Reflected in Majestic Earthworks and Artifacts* (New York: iUniverse, Inc., 2004).

²⁸⁰ Kavasch, *American Indian Earth Sense*, 16.

²⁸¹ Kavasch, *The Mound Builders of North America*, 153-154.

The diffusion of healing knowledge reached far and wide during ancient times. We continue to rely on some of their ancient wisdom.”²⁸² Kavasch’s other texts are informative contemporary botany and herbal books, based on her keen understanding of plant medicines, and the history and culture of Native plant practices. In *American Indian Healing Arts*, Kavasch and her co-author, Karen Baar, report on the importance of ethnogynecological plants and practices:

The medical specialties we call gynecology, obstetrics, and pediatrics have always been areas of primary concern to Indian women. Although their herbal medicine chests varied considerably depending on where they lived, native women use many valuable herbs to enhance pregnancy and ensure a shorter, gentler labor than what many women experience today. Many early explorers observed the apparent ease with which American Indian women gave birth . . . The cleansing astringency of uterine herbs such as blue cohosh roots and red raspberry leaves has long been valued for use throughout pregnancy and childbirth.²⁸³

Kavasch provides descriptions of the uses and preparations of ethnogynecologically significant species. This entry on squaw vine is typical:

Another fine tonic for female reproductive systems is squaw vine or partridgeberry, *Mitchella repens*. The aboveground parts of squaw vine are used to make tinctures and infusions. Women appreciate its cool, slightly bitter taste, and drink it during the last two months of pregnancy to prepare the uterus for childbirth. This herb often strengthens contractions and shortens labor. Later on, women use squaw vine teas and salves to treat sore nipples during breastfeeding.²⁸⁴

Kavasch’s work contains plentiful explanations of Native traditions for pregnancy, childbirth, and infant care, and these essentials of Kavasch’s scholarship are important context for my research.

Herbert C. Covey (dates unknown)

Herbert C. Covey is the author of *African American Slave Medicine*, an important inventory of the herbal medicine practices of slaves, and pre and post Civil War African

²⁸² Kavasch, *The Mound Builders of North America*, 156.

²⁸³ Kavasch and Baar, *American Indian Healing Arts*, 143.

²⁸⁴ Kavasch and Baar, *American Indian Healing Arts*, 143.

Americans.²⁸⁵ Covey reviews the ex-slave oral histories that were conducted by the U.S. Government's Works Project Administration during the 1930s, and he extracts evidence for enslaved and free Africans' health practices and utilization of plant medicines.²⁸⁶ Covey confirms the paucity of medical and ethnobotanical studies of African Americans and he asserts that, "The medical practice and treatment of and by slaves remains a neglected area of medical history."²⁸⁷ Covey's summary of reported practices includes his research on the origins of slave plant knowledge and use. Covey argues for combined African, European, and Native origins for both African and European medical care:

Whites, in spite of their sense of superiority, were usually open to Native American folk medical practices, at least those based on herbs, and these remedies crept into the medical practices of Whites. Native American herbs and medicines were critical to the early colonists, as ships from Europe were relatively rare, especially in the winter months. In response, Native populations sold herbals to settlers and helped them resolve medical concerns when they arose. European-trained physicians were also relatively scarce and early colonists turned to Native American folk practitioners for medical care . . . Just as they worked with Whites, Native Americans also had extensive contacts and social relations with African Americans. Some Native Americans shared their knowledge of herbal remedies with the enslaved. In the process of adjusting to the New World, Africans merged West African with European and Native American traditions.²⁸⁸

Covey makes critical observations on the role of African women and midwives in both European and African health care, a subject that is discussed in detail elsewhere in my research.

²⁸⁵ Herbert C. Covey, *African American Slave Medicine: Herbal and Non-Herbal Treatments* (Lanham, MD: Rowman and Littlefield Publishers Inc., 2007).

²⁸⁶ The WPA narratives contain more than 2,300 first-person accounts of slavery collected as part of the Federal Writers' Project of the Works Progress Administration from 1936-1938. For further information on the WPA Slave Narratives, see: National Archives, "Records of the Work Projects Administration," web version based on *Guide to Federal Records in the National Archives of the United States*, Compiled by Robert B. Matchette et al. Washington, DC: National Archives and Records Administration, 1995, <http://www.archives.gov/research/guide-fed-records/groups/069.html> accessed November 15, 2012; Henry Louis Gates, Jr., and Charles T. Davis, eds., *The Slave's Narrative* (New York: Oxford University Press, 1985)

²⁸⁷ Covey, *African American Slave Medicine*, 2.

²⁸⁸ Covey, *African American Slave Medicine* 26-27.

In *African American Slave Medicine*, Covey describes more than 200 plant species, of which 19 are significant for women's reproductive health and are entered in my Index. These three entries are typical:

1. Horsemint (*Monarda punctata*). Native Americans used horsemint for a variety of medical ailments. Contemporary authorities believe it reduces fevers, promotes menstruation, relieves nausea, and has value for upper respiratory problems. Slave folk practitioners used horsemint in teas for a variety of ailments, such as sickness, swelling, and others. Carrie Davis (Alabama) [WPA State Narrative] referred to using horsemint, but didn't specify a purpose, "When us got sick Mistus' give horse-wint [sic], life-everlasting, an' holly tea, yessum."²⁸⁹
2. Red Oak/Swamp Red Oak (*Quercus shumardis* or *Quercus rubra*). Red oak is a common plant used in the South to treat a variety of ailments. The leaves and the bark of the tree are used to make a tea . . . Charity Jones (Mississippi) remembered: "When any of us niggers got sick old Granny doctored us. She would give us red oak bark tea for runnin' off at de bowels an' for young girls when dey re'ch a certain age."²⁹⁰
3. Wild Cherry (*Prunus serotina/Prunus virginiana*). Wild cherry bark frequently was used in Southern Appalachian folk medicine as an ingredient in cough syrups. Folk practitioners used wild cherry to make a tea, also known as Cherokee tea, which was used to relieve pain during the early stages of labor. The tea, made from boiling the bark, had sedative properties.²⁹¹

Covey's African American ethnobotanical descriptions include the plant practices of Native and European Americans as well as quotes from the WPA narratives, demonstrating the complex relationships and interconnections of 19th century plant practices.

Ethnogyneology Plants and Practices: The Ethnogyneology Index

In my Ethnogyneology Index each plant entry is recorded based on the description used by each author, and the 27 studies represent descriptions of approximately 3,177 plant species for multiple uses, of which 688, or 22 percent are described as having women's reproductive health uses (see table 3). Of the 688 species listed as women's reproductive health remedies, 598 species, or 87 percent, are plants for women's reproductive health issues, and 132 species, or 19

²⁸⁹ Covey, *African American Slave Medicine*, 99.

²⁹⁰ Covey, *African American Slave Medicine* 109.

²⁹¹ Covey, *African American Slave Medicine*, 116.

percent, are plants for newborn and infant health issues. The authors mention a combined total of 253 ethnogynecological uses, which I have sorted by 10 categories of breastfeeding, labor and birth, fertility, gynecology, menstrual regulation, menopause, postpartum, pregnancy, general tonics, and infant uses (see table 6). In table 6, I indicate the number of studies that include my plant use categories for each plant species, and their distribution of use across Native, African, and European groups as described by the authors.

Twenty-two of the 27 studies I consider primary sources for my Index because the author of the ethnobotany was undertaking original research, collecting his or her descriptions of plant practices directly from communities of people who were using the plant medicines (see table 4.3). The remaining 5 ethnobotanical studies were based only on other authors' primary materials, and I consider those secondary ethnobotanical sources. These definitions of primary and secondary materials are in accordance with Turabian's *A Manual for Writers* that explains:

These aren't sharply defined categories, but they roughly characterize how researchers think about most sources . . . Evidence consists of the data that researchers collect. The primary sources for those collected data are the publications that first publish them, ranging from government and commercial databases to scholarly journals . . . and sources written at the time . . . Secondary sources are books and articles that analyze primary sources, usually written by and for other researchers.²⁹²

For 21 of the 27 studies listed in my index, the primary ethnographic subjects are for plants used by Native tribes, bands and groups, and for 3 each, they are about plants used by Africans or Europeans in the Americas. The geographic affiliations of the Native tribes, bands, and groups, listed in table 5, is based on contemporary information, because although the tribal names are the ones provided by the authors in their manuscripts, I recognize that tribal names and affiliations were contested and in flux during the times that the documents were written. I

²⁹² Kate L. Turabian, *A Manual for Writers of Research Papers, Theses, and Dissertations: Chicago Style for Students and Researchers*, revised by Wayne C. Booth, Gregory Colomb, Joseph M. Williams and the University of Chicago Press Editorial Staff, 7th Edition (Chicago: The University of Chicago Press, 2007), 25.

kept track of Native tribal and geographic affiliations because of the possibility of tracing tribal origins through plant practices, as explored in Meredith Jean Black's research. In the final analysis, however, such tracing was beyond the scope of my research and this data might prove useful for future studies.

Ethnobotanical studies fall under a number of different disciplines, especially botany and anthropology, each of which currently maintains their own standards for observational fieldwork and for documenting cultural practices. Over the time period in which my key Index studies were undertaken, however, standard anthropological or ethnobotanical methodologies for collecting or reporting on the cultural use of plants were changing. Therefore, there is no consistency to the way in which the ethnobotanical information is presented by the authors of the 27 studies in my Index. Some authors provide an accurate total list of plants for their study. Other researchers are not clear on the total number of plants assessed in their research, and other researchers are so encyclopedic in their descriptions of plant medicines and uses that they discuss multiple species repeatedly when describing a particular practice or illness. Multiple listings of the same species are the norm in most of the source documents. For each of the 27 ethnobotanical studies I list a reported species only once in my Index, and I group together any uses for the species under one listing. Consequently, the lack of ethnobotanical methodological standardization means that the 3,177 total species noted for the 27 manuscripts is an approximate figure, representing my attempt to count the total number of species discussed in each ethnobotanical study. If the figure is inaccurate, it is inaccurate as an underestimate.

The descriptions of plants mentioned in specific ethnobotanical studies and my classification into their reproductive health uses provides no definitive indication of consistency of use over time. Nevertheless, I assume women's reproductive health remedies were likely to be

conservative in use over time because the biological processes underlying most women's reproductive health concerns, the physiological actions of the plants that might have been chosen to address these concerns, and therefore the ethnobotanical significance of these plants would be consistent over time. In order to make use of this assumed consistency in ethnogynecological plant uses I kept a separate list of the plant species used in the childbirth category. For two reasons I chose to follow plants sorted to the childbirth category in greater detail. First, descriptions of plant remedies used to support labor and delivery and assigned to the childbirth category contain the most specific and unambiguous language within the ethnographic documents. In the archival documents that I reviewed both men and women authors discuss childbirth in simple, straightforward, and uncomplicated language. While recognizing that my interpretation of historical practices cannot be uncritically viewed through contemporary knowledge of women's reproductive health, I found that descriptions of childbirth appeared to be less subject to social conventions protective of female bodies and feminine modesty, or archaic, obsolete medical terminology compared to the other women's reproductive health issues, making these depictions of ethnobotanical practice easier to recognize and interpret.

Second, childbirth, although not without potential physiological and anatomical complications, is the most straightforward of women's reproductive health concerns. While the basic bodily processes underlying women's reproductive health are straightforward, there is less variability in the course of labor and birth compared to issues such as menstrual irregularities, or the highly subjective variations of conditions described as hysteria or uterine weakness. During the historical period considered by my study women and their families were aware of the possibility of the deaths of women and newborns during childbirth and the immediate postpartum, and childbirth was considered a spiritually taxing and physically painful undertaking

within European communities. However, it was largely not seen as an illness or a disease among Native, African, or European groups, a subject that I take up in greater detail in the discussion of my archival analysis.

Given that I am not concerned to trace the effectiveness of the medical actions of plant species I deemed that within the physiologically less complicated category of childbirth, I might be more likely to see patterns in plant practices across different groups of people. My Index shows that under the childbirth category 21 of the studies discussed 57 different plant species used among 27 different groups of people, including 25 different Native tribes, and both African and European communities (see table 4.9). This indicates the importance of the childbirth category of ethnogynecological plants with considerable uses reported among different cultures and races, and some suggestion of shared practices. I examine the possible ethnobotanical significance of the childbirth category when I review *Viburnum sp.*, *Caulophyllum thalictroides*, and *Gossypium sp.* plant stories.

My research, and my Index, is not about the medical effectiveness of ethnogynecologically important plants, remedies, or practices. This is in contrast to the purpose of some of the 27 historical ethnobotanical studies, which do attempt to prove or disprove the effectiveness of plant use mostly in negative terms as ineffective folk remedies, beliefs, and/or superstitions. Contemporary chemical analysis of plants is sophisticated enough to provide very detailed lists of the compounds in a plant. These list of chemicals, however, are not indicative of the effectiveness of the plant, or the effectiveness of an isolated chemical. Because my research is not about plant use effectiveness I make the passive assumption that the plants were used historically because they were considered culturally and physiologically effective by and for the

people who used them. Making this assumption does not affect the manner in which I record plants in my Index, or look for patterns of practice across different groups of people.

Ethnognecology Plants and Practices: Plant Species and Names

In the Ethnognecology Index I list the species of each plant exactly as described by the author in the source document. In most cases this means entering a binomen, a Latin name that is comparable against modern botanical classification references and botany websites (see Table 4.10). My references of listed species to modern taxonomies are not listed in my Index, and are solely to increase my understanding of both the historical and contemporary plant species and its uses. The classifications provided by the document authors were not changed after my comparisons to modern taxonomies. Suspected spelling errors or variations in the original documents are noted in my Index as species variations. In some cases the binomen is not given in the source document, or an old, no longer in use taxonomy is provided. Some authors provide only the genus and not the species. I recorded all plant names as provided, with any variations noted. Where the authors provide a plant family name I recorded that as well.

I recorded in the Index all of the common names for a species that were provided by the author in their document. The common names of plants are interesting and significant, but they are difficult to use for tracing the employment of the plants as remedies. The species names are better, but not foolproof. Historically, different plants often shared the same species name, common name, or both. A plant as it is currently known might have historically had more than one species name. In the past the same species name might have been used for more than one plant, and common names were inconsistently correlated to a given species name. I opted, therefore, to record, as closely as possible, the information that was provided by the author and not to editorialize, modernize, or update any of the plant species information. Researching the

subset of medicinal plants that were used for women's reproductive health lessened the difficulties inherent in tracing a consistent historical taxonomy, classification, and nomenclature. I include in a Plant Notes column in my Index any author or botanical ascriptions provided by the ethnobotanist, and I have recorded an entry number or page number for the species so that I might check references if I were to use the Index in future studies.

I selected, by genus, the 20 ethnogynecologically significant plants that were most widely used as recorded in all 27 studies (see table 4.11). This selection is based on the frequency of descriptions of their use in the key ethnobotanical studies. The plant species are grouped under their common genus, and their descriptions of use are distributed to my women's reproductive health categories in order to look at their distribution of use across cultural and racial groups. The *Quercus* species, for example, is well known for the actions of its pain and fever reducing salicylic acids, and thus the different species of this genus are grouped together for my recording and analysis. *Quercus sp.* is reported to be used across Native, African, and European groups, and described in 10 different ethnobotanical studies. The *Quercus sp.* is reported to have uses for childbirth, menstrual regulation, postpartum care, general uterine health, as a women's reproductive health tonic, and for infant care. The 20 commonly recorded plants are described in 13 of the 27 source documents. Nine of the 20 plant species in table 4.11 are reported to have been used for ethnogynecology issues across Native, African, and European groups: these are *Nepeta cataria*, *Prunus sp.*, *Quercus sp.*, *Sambucus canadensis*, *Asclepias sp.*, *Ulmus sp.*, *Viburnum sp.*, *Vitis sp.* and *Gossypium sp.* In the next section I discuss the plant stories of 2 of these 9 species -- *Viburnum sp.* and *Gossypium sp.* -- as illustrations of shared ethnogynecology knowledge and practices among Native, African, and European populations in the Americas.

Ethnobotany Plants and Practices: Plant Parts and Preparations of Remedies

In the Index I record the plant parts used, and the preparations of remedies from the plant when such a description is provided in the 27 source documents. The most common method of preparation for a remedy mentioned in the studies is a “tea.” Regarding the modern preparation of medicinal plant remedies, Dena E. Bolton says,

Teas are made by using a quantity of fresh or dried herbs in a cup of hot water. You allow them to steep just long enough to get the flavor and oils of the herb to add taste and color to the water -- usually just a few minutes. Infusions are allowed to steep longer. To make a standard infusion, use 1-2 teaspoons of a dried herb per cup of boiling water. Fresh herbs contain more water; therefore, it takes more to equal the amount of the dried herb. Allow the infusion to steep for about 20 minutes. Decoctions are made from the roots and bark of herbs rather than from the leaves and flowers. As a result, it takes more effort to get the compounds out of the herbs. Instead of just steeping the herbs it is necessary to place them in a pot of water, which is then brought to a boil. Reduce the heat and allow the herbs to simmer for about 10-20 minutes.”²⁹³

Although this is a contemporary description for the preparation of teas, infusions, and decoctions, my research in the historically coterminous medical and botanical receipt books indicates that this is mostly accurate for the times and practices recorded by the authors. The detailed instructions for plant remedy preparations in these documents vary considerably between species entries, and between the different studies. An example of the different level of detail on preparations is in the following entries from Huron H. Smith and George Bird Grinnell. Smith in his 1928 study of Hocak remedies describes the following preparations:

Entry 13. *Asclepias exalta*. Milkweed. The root is a medicine. A tiny piece boiled is a lactary for a squaw (to increase lactation).

Entry 42. *Diervilla lonicera*. Bush honeysuckle. The root is cooked for a tea to clean out after childbirth.

Entry 56. *Euphorbia corollata*. Flowering spurge. The leaves are steeped to make a tea to cure a baby's colic.²⁹⁴

²⁹³ Dena E. Bolton, “Herbal Teas, Infusions, Decoctions, and Tinctures,” <http://voices.yahoo.com/herbal-teas-infusions-decoctions-tinctures-6722336.html?cat=68>, 2010. Accessed 1 March 2013.

²⁹⁴ Kindscher and Hurlburt, “Huron Smith's Ethnobotany of The Hocak (Winnebago), 352-372.

Grinnell in his 1905 study of Cheyenne plant medicines observes the following plant preparations:

Balsamorhiza sagittata. A tea made of the root is good also for fever, and a little of the root cut into small pieces, boiled and made into an infusion, is given to a woman when she begins to have labor pains in order to insure an easy delivery. *Lygodesmia juncea*. An infusion made of this plant is drunk by women who have had children and have an insufficient supply of milk, for the purpose of increasing the flow.²⁹⁵

Lastly, Samson Occom reports the details of a preparation in his 1754 text, (original spelling and punctuation unchanged): “an herb boild in a 2 gallon of water and boil it about half away and then Cool it, and then Put about 3 Qu^{ts} of Pound it flax Sead good for to Ease Women that are in Traval.”²⁹⁶

Across my 27 source documents there are 43 different plant parts described for preparing ethnogynecological plant remedies, and the methods of preparation include 39 frequently mentioned depictions (see table 4.12). I also include a short list of unique and fascinating descriptions of the way plant remedies were prepared (see table 13). Perhaps the method of preparation of a remedy has the potential to enlighten us as regards patterns of use, or the sharing of remedies across different groups of people, however, the absence of sufficient and consistent descriptions in the ethnobotanical studies for these preparations, as seen in the above examples, results in insufficient information to draw any conclusions. A plant remedy could be an infusion, a decoction, a bath, or a tincture, sometimes, but not always specified which in the source documents. While I do not assume that all plant remedies consisted of single plants, or simples, in many cases they did, and in a few cases the authors describe the plant species in compound remedies with other plants. I make note of compound remedies, but include only single species

²⁹⁵ Grinnell, “Some Cheyenne Plant Medicines,” 39-41.

²⁹⁶ Samson Occom, “Herbs and Roots,” in *The Collected Writings of Samson Occom, Mohegan: Leadership and Literature in Eighteenth Century Native America*, ed. by Joanna Brooks (Oxford: Oxford University Press, 2006), entry 50, page 47.

information in the Ethnognecology Index. I do not include any remedies mentioned as folk remedies unless they are described as the preparation of a named plant species, and I have not indexed plants that were only noted for their use as food resources or wild foods.²⁹⁷

Ethnognecology Plants and Practices: Categories and Uses

I indicate in the Index - next to the species name, plant part, and preparation - the ethnognecological uses as described by the study author, and assign them into one or more of my 10 ethnognecological categories. Because the purpose of this categorization is to discern any patterns in how these plant medicines are described across different ethnobotanical studies these reproductive health categorizations are applied consistently across all of the studies. The process of assigning plants to women's reproductive health categories was challenging, as some of the descriptions in the source documents were very general or medically obsolete, and contemporary understandings of women's reproductive health issues are different from the conventions and descriptions in the source documents. As a result there are a wide variety of plant species and genera under each category. For example, plants used to stimulate the production of breastmilk -- lactagogues -- are assigned to the breastfeeding category and are mentioned in 9 different studies, with descriptions for 11 unique plant genera. Plants used for postpartum issues are described in 12 different studies, with descriptions for 51 unique genera. Plants described for both suppressed and insufficient menstruation (amenorrhea) or excessive and painful menstruation (dysmenorrhea) are grouped together under the menstrual regulation category.²⁹⁸ I selected the categories based on the descriptions in the ethnobotanical source

²⁹⁷ I have included in the index a separate section of plant-based and non-plant substances used in reproductive health, e.g., charcoal or soot tea. These uses are not important to the current research and were noted only for the possibility of future research.

²⁹⁸ For a discussion of the multiple effects and uses of plants for menstrual regulation see, John M. Riddle, *Eve's Herbs: A History of Contraception and Abortion in the West* (Cambridge, MA: Harvard University Press, 1997).

documents, and assigned plants to categories based on what was written in the documents as well as my professional knowledge of women's reproductive health issues.

For my Index I consider women's reproductive health to include the entire period of uterine involution up to 6 weeks postpartum, including the infant's neonatal period up to 28 days postpartum, and the period of newborn and infant breastfeeding and initial lactation up to six weeks postpartum. I consider postpartum infant plant uses as part of women's reproductive health, nevertheless, I kept separate accounts of infant health uses for plants as a way of discerning patterns of use in that specific category. There is overlap in plant species described as being used for women and infants, with 23 species recorded for medicinal uses for both women and infants. Out of the 27 studies in the index, all but 2 listed plant uses that include uses for both women and infants. Two of the studies have plant practices only for women's reproductive health issues (see table 4.4). Since the documents I reviewed did not specify the age of a postpartum infant, I include any remedies that discussed uses for newborns or infants but not for children. I exclude specific remedies discussed for common childhood illnesses like measles, mumps, whooping cough, etc., even though I am aware that historical designations of these illnesses do not perfectly match with my infant age descriptions or our current understandings and diagnoses. I created sub-categories of infant health issues, for possible future studies, and kept a separate list of the plants and practices for 84 species that are described as remedies for infants or newborns, making note of the five infant use species that are recorded most frequently in the 27 key documents (see tables 4.7 and 4.8). Two of these five plants are described as being used across Native, African, and European groups (*Sambucus canadensis* and *Nepeta cataria*).

I do not include, and do not index, the majority of the total plant species and their uses that were described in the source documents, as the source documents did not limit their

ethnobotanical information to women's reproductive health. Plant species that are noted as useful for fevers or blood purification were possibly used for women, especially in the postpartum period, but I do not include these. I do not include in the Index remedies that were mentioned for specific or general venereal diseases like syphilis or gonorrhea even though this is part of women's reproductive health. I do not record remedies used as diuretics, or for bladder or urinary tract issues even though these could be considered part of women's reproductive health. I do not include plants listed as love charms, love potions, or aphrodisiacs although these could also be considered part of women's reproductive health. These categories of health and plant practices were discarded because the descriptions provided in the source documents did not indicate if their uses were for male or female complaints.

Anemia is a common occurrence in the cycles of a reproductively active woman, from menarche to menopause. Regular menstrual bleeding is sufficient, in itself, to temporarily lower the blood hemoglobin and iron counts of an otherwise healthy woman. Lowered blood iron levels from dietary deficiencies would have compounded this problem. The main symptoms of iron deficiency anemia are tiredness, weakness, and fatigue. While fatigue is a legitimate women's reproductive health complaint I only include plant remedies for this complaint when specific mention is made of a plant's use for female fatigue, tiredness, weakness, or debility. I do not include plants where fatigue is mentioned without the gender qualification. Other reported uses that were not included, unless gender was specified, include:

- To stop bleeding.
- As a coagulant when blood is passed.
- For internal bleeding.
- To stop hemorrhage.
- A blood medicine.
- For pains in the stomach.
- To stop cramps.
- Medicinal uses, has medicinal value.

- As a physic, tonic, alterative, or cathartic.

Ethnognecology Plants and Practices: Stories and Patterns

One consequence of my selection and categorization strategies for the Ethnognecology Index is an overlap in the Index entries for certain plant species. The 20th and 21st century materials cite earlier studies that are also included in the Index. For example, Meredith Jean Black's ethnobotanical research extensively cites Huron Smith's six studies. The purpose of my investigation is to look for patterns in the use of ethnognecologically significant species across, among, and between racial groups. As there are no ethnognecological archival studies or indexes to argue as models, deciding what constitutes ethnobotanically significant patterns of plant use is an admitted challenge of my research. I chose to enter multiple descriptions of the same plant from different sources in my Index, and I considered that a plant mentioned in more than one manuscript, and referenced from the same original source document, could signal the significance of the plant for that author's research choices. I considered that when plant species were frequently described and ethnobotanical practices were repeatedly referenced across different studies it might indicate their significance to the author's research and could make any patterns of use more apparent.

Accordingly a large number of supplemental texts, books, documents, and manuscripts about ethnognecologically important plants, ethnobotany, and the medicinal plant practices of Native, African, and European groups in the Americas were consulted for the context in which the species that I chose to enter into the Index were used, especially the most commonly discussed and reported species. These ethnobotanical and historical documents provide the cultural and medical background for ethnognecological plant use over the four centuries considered in this research. The additional ethnobotanical documents are described here,

however, to illustrate the possible significance of this context I begin with a number of plant stories. I begin by telling the stories of blue cohosh, *Caulophyllum thalictroides*, because it is a commonly mentioned ethnogynecological species, but also as a way to introduce the supplemental historical manuscripts that inform my investigations. Looking more closely at this one plant introduces the *materia medica* of herbal medicine texts, and indicates the possibility of a variety of patterns of ethnogynecological plant use.

A Story: The Secret Life of Squaw Root

“Susanna?” I am clumsily holding the landline while patting the back of a clammy, sleep heavy 19-month-old, trying to put her back to sleep.

“I know its 2 o’clock in the morning, sorry. I’m in Petaluma, at Gina and Tim’s birth. You remember the young farmers I told you about? Gina had a really normal prodromal, and a long but steady first stage. Her contractions seem to have stopped altogether, for maybe about three hours now. She’s about 6 centimeters. Heart tones are fine and she’s tired but in good spirits, but I’ll take any suggestions. What do you think?”

“Hey, Claudia. No problem. I’ll be right over if that’s okay with everyone. Give me the address again. Have you given her anything to stimulate her contractions? I’ll bring the blue cohosh and we can see what we think about using that.”

John Gunn, 1861, writes:

This is an Indian remedy, and considered by them as one of great value, principally used by the squaws as a parturient – that is to facilitate child-birth; hence the name Papoose root. It is said that they drink a tea of this root for two or three weeks before the expected time of labor . . . owing to this, the ‘confinement’ of the Indian women is a matter of but short duration and small concern. It has been abundantly proved as a valuable article in this respect by our white women. It is recommended also in profuse and painful menstruation, inflammation of the womb, in suppressed menses, and in worm complaints of children. It is diuretic, emmenagogue, and antispasmodic, and may be used with safety in almost any moderate quantity. It can always be found at Botanic drug-stores, and often at others – either crude or in powder – caulophyllin – this is the active, resinous principle, obtained from the root of the Blue Cohosh.²⁹⁹

*In 1978, 117 years after John Gunn’s ethnobotanical entry, Susanna and I used blue cohosh, *Caulophyllum thalictroides*, with our laboring woman, Gina, who had been on our recommended red raspberry³⁰⁰ leaf tea as a tonic during the end of her pregnancy, and the mother was safely delivered of an 8 lb. baby girl, her second daughter.*

²⁹⁹ Erichsen-Brown, *Medicinal and Other Uses of North American Plants*, 356.

³⁰⁰ *Rubus idaeus*, used as a uterine tonic in the end of pregnancy.

Negotiating Knowledge of Blue Cohosh: “A Better System”

The genus *Caulophyllum* is a perennial flowering plant in the family Berberidaceae that is native to forests of eastern North America and has a current geographical range that extends from Georgia to Oklahoma, and the Canadian provinces from Manitoba east to the Atlantic coast.³⁰¹ *Caulophyllum thalictroides* is most commonly known as blue cohosh, with historical common names of squaw root, sweet root, blueberry root, and papoose root. Kavasch discusses the origins of the word cohosh, and uses of the plants with that name, in her historical text, *The Mound Builders of Ancient North America*, and she says,

Cohosh is an Algonquian word for “healing roots.” There are four species of cohosh: Black Cohosh, *Cimicifuga racemosa*, Blue Cohosh, *Caulophyllum thalictroides*, Red Cohosh, *Actea spicata*, and White Cohosh, *Actea alba*, or “Dolls Eyes.” Although toxic to poisonous, these plants were used for millennia to treat an array of native health problems . . . Women use these herbs, with caution, during pregnancy and childbirth, and later in life during menopause.³⁰²

New World plant medicines with Native American eponyms are numerous, and *Caulophyllum thalictroides* shares the common name of squaw root with black cohosh and several other different species: *Cimicifuga racemosa* (*Actea racemosa* or black cohosh), *Conopholis Americana* (bear corn), *Rubus occidentalis* (black raspberry), *Senecio aureus* (*Packera aurea* or golden ragwort), and *Trillium grandiflorum* (wood lily). Kavasch and Karen Baar describe the origins of ethnogynecological Native eponyms such as squaw root in their text, *American Indian Healing Arts*:

Squaw and *papoose* are among the earliest (Algonquian) Narragansett Indian words recorded in the Northeast. The Oxford English Dictionary notes them as early as 1634. *Papoose* means “American Indian baby.” *Squaw* or *squa* means “woman” or “wife” . . . These were early words of distinction, but in some regions the words were corrupted by derogatory insinuations and became terms of

³⁰¹ United States Department of Agriculture, *Natural Resources Conservation Service: Plants Database*, Plant Profile: *Caulophyllum thalictroides* (L.) Michx., Blue cohosh, <http://plants.usda.gov/core/profile?symbol=cath2> accessed November 15, 2012.

³⁰² Kavasch, *The Mound Builders of North America*, 158.

derision. Numerous herbs were marked colloquially with the words *squaw* and *papoose*, signifying their specific usefulness by and for Indian women and their infants. Their names reflect vital early human needs. Many are parturients, or substances that induce uterine contractions during labor. Most are also uterine tonics, strengthening and toning the muscles and nurturing the general well-being of the uterus.³⁰³

These species that have common names similar to *Caulophyllum thalictroides* reflect some of the plant exchanges that were happening in the New World, and ethnobotanical stories that indicate the give-and-take of herbal healing advice from observations of practices that crossed racial and cultural boundaries. The stories of blue cohosh, however, are interesting to my research because of the plant's past and current uses in ethnogynecology. It is reported that the knowledge and use of blue cohosh for women's reproductive health issues was shared across racial boundaries, and the following review of both my Index documents and other important North American ethnobotanical sources supports both the general sharing of medicinal plant knowledge among Native, African and European peoples, and the specific sharing of the use of *Caulophyllum thalictroides*.

I begin with the descriptions and arguments from the sources that form the foundation of my Index, and then review other historical ethnobotanies. Reviewing the 27 key documents of my research, I found *Caulophyllum thalictroides* mentioned as a remedy in 8 of these studies (see table 4.14), written from 1905 to 1980, and authored by the following 5, out of a total of 19, ethnographers or herbalists: R. Swinburne Clymer, Huron H. Smith, Virgil J. Vogel, Clarence Meyer, and Meredith Jean Black. In my Index studies, *Caulophyllum thalictroides* is described as a remedy in use by Native and European populations for 5 of my 10 women's reproductive health categories: menstrual regulation, childbirth, postpartum complaints, gynecological disorders, and as a general female tonic. Blue cohosh was listed in the U.S. Pharmacopoeia from

³⁰³ Kavasch and Baar, *American Indian Healing Arts*, 148.

1882 to 1905 as a childbirth herb, and according to Vogel blue cohosh should be considered one of the plant species that has had a major contribution to American pharmacology. In *American Indian Medicine* Vogel includes a detailed ethnobotanical description of the plant. Vogel reports:

Cohosh, blue (*Caulophyllum thalictroides*), papoose root, squaw root. Had been used in menstrual obstructions and to strengthen the stomach. Quoting physician Stephen Williams, “The Indian women use it successfully in cases of lingering parturition. It appears to be peculiarly suited to female complaints. It is a powerful emmenagogue, and promotes delivery, the menstrual flux, and dropsical discharges.” Some of these uses may explain why the plant was commonly called squaw root and papoose root. It was used by the Menominees, Potawatomis, Ojibwas, and Meskwakis in a tea for suppression of profuse menstruation and for genitourinary troubles in both sexes. The Potawatomis also used it as an aid to parturition.³⁰⁴

Meredith Jean Black, in 1980, reports on 26 different uses for *Caulophyllum thalictroides*, citing Huron Smith’s studies from 1923-1933, and emphasizing what others have reported about remedies among the Chippewa, Pillager Ojibwa, Potawatomi, Cree, Menomini, and Meskwaki.³⁰⁵ In his text *American Folk Medicine*, Meyer quotes Peter Smith, an eclectic practitioner and author of *The Indian Doctor’s Dispensatory*, “The blueberry root (*Caulophyllum thalictroides*) is said to be the great medicine that the squaws use at the birth of their children. Experience has however proved, among white women, that its assistance is very special.”³⁰⁶ Clymer calls blue cohosh, “the woman’s remedy,” and referencing its Native origins he describes its uses for European American women: “The Indians used this herb as an agent for the relief of colic and cramps in children, and cramps during menstruation . . . it is an agent now chiefly given for menstrual difficulties . . . it is much used also in promoting labor pains.”³⁰⁷ Finally, Huron Smith reports on *Caulophyllum thalictroides* in each of his six Native studies (see table 4.15). This entry in “Meskwaki Medicinal Plants” is typical of Smith’s entries:

³⁰⁴ Vogel, *American Indian Medicine*, 291-292.

³⁰⁵ Black, "Algonquin Ethnobotany," 169.

³⁰⁶ Meyer, *American Folk Medicine*, 205.

³⁰⁷ Clymer, *Nature’s Healing Agents*, 148.

Blue Cohosh (*Caulophyllum thalictroides* L.), “wîskopîtce’pîk” [sweet or squaw roots] The root is called a woman and it is nearly like the sycamore bark in action. The roots are boiled and the tea is taken as a remedy for profuse menstruation. It is also a genito-urinary remedy for men . . . Eclectics have used it in the treatment of hysteria and uterine diseases, corresponding to the use by these Indians. Eclectics claim that it will prevent abortion, by causing uterine contraction when uterine inertia is present.³⁰⁸

Other important ethnobotanical studies and herbal texts discuss blue cohosh. Botanists C.S. Rafinesque (1783-1840) the author of *Medical Flora: A Manual of the Medical Botany of the United States of North America*, and C.F. Millspaugh (1854-1923) author of *American Medicinal Plants: An Illustrative and Descriptive Guide to Plants Indigenous to and Naturalized in the United States Which are Used in Medicine*, have written two frequently referenced historical sources. Rafinesque, a European trained botanist and zoologist, was a contemporary and colleague of American scientists Benjamin Rush and William Bartram, and a university lecturer who devoted considerable time to studying, collecting, and documenting the flora of North America, publishing dozens of volumes cataloging his fieldwork. His description of the use of *Caulophyllum thalictroides* in his book *Medical Flora*, is referenced by many other texts.³⁰⁹ Rafinesque reports, “This is a medical plant of the Indians, and although not yet introduced into our official books, deserves to be better known. I have found it often used in the country and by Indian Doctors.”³¹⁰ Rafinesque’s reference to Indian Doctors denotes European American eclectic practitioners, as he makes clear elsewhere in the text.³¹¹ Although for other plant entries Rafinesque relates ethnobotanical information about African users, for example for *Robinia acacia* (black locust), a non-ethnogynecological plant species that he says is, “much

³⁰⁸ Smith, “Ethnobotany of the Meskwaki Indians,” 204-205.

³⁰⁹ Constantine S. Rafinesque, *Medical Flora: A Manual of the Medical Botany of the United States of North America* (Philadelphia: Atkinson & Alexander, 1828).

³¹⁰ Rafinesque, *Medical Flora*, 99.

³¹¹ Rafinesque, *Medical Flora*, 40.

used by Indians and negroes,”³¹² there is no reference to African American use of blue cohosh in Rafinesque’s *Medical Flora*. C. F. Millspaugh was an important homeopathic physician, a botanical illustrator, and the first botanical curator of the Chicago Museum of Natural History. Millspaugh’s most frequently cited work is, *American Medicinal Plants*, which he authored in 1887.³¹³ Millspaugh credits the Native origins of knowledge of *Caulophyllum thalictroides*, and extols the ethnogynecological usefulness of the species. Millspaugh reports, “There is hardly an American remedy in our *Materia Medica* that needs, and probably merits, a more thorough proving, upon females especially, than *Caulophyllum*; and the sooner it is done, the better able will we be to cope with many of our most obstinate uterine cases.”³¹⁴

Anthropologist William N. Fenton (1908-2005) was an ethnographer of Iroquois history and culture, working with the U.S. Indian Service and the Bureau of American Ethnology between 1935 and 1951. Fenton’s work provides detailed Native and European histories of the Northeast U.S. and neighboring Canada with examples of herbal medicine practices gleaned from 16th and 17th century documentation.³¹⁵ Fenton’s focus is on Iroquois bands, and the French and English who settled in the regions that the Iroquois inhabited. In “Contacts Between Iroquois Herbalism and Colonial Medicine,” Fenton discusses sharing of plant knowledge between Native and European populations, and he suggests that,

The average settler had brought from the old world a knowledge of herbs that in kind was not unlike that of the Indian, but as newcomers they were unfamiliar with New World plants; and although the level of their own popular medicine did not set them above adopting Indian remedies, the Indian herbalist whose knowledge was power was not always a ready teacher. Two centuries of

³¹² Rafinesque, *Medical Flora*, 253.

³¹³ Charles F. Millspaugh, *American Medicinal Plants: An Illustrative and Descriptive Guide to Plants Indigenous to and Naturalized in the United States Which are Used in Medicine* (New York: Boericke & Tafel, 1887).

³¹⁴ Millspaugh, *American Medicinal Plants*, 16/2 - 16/3.

³¹⁵ The American Philosophical Society, William N. Fenton Papers, APS Digital Library (Philadelphia: 2013), <http://amphilsoc.org/mole/view?docId=ead/Mss.Ms.Coll.20-ead.xml> accessed November 15, 2012.

missionary, military, and scientific travel were to enlarge medical botany until many new world plants in use by the Indians were to become part of (our) pharmacopoeia.³¹⁶

Fenton proceeds to, “summarize this discussion of white borrowings from Indian medicine” and among other plants he characterizes blue cohosh or papoose root as well known species used by, “Indians and settlers alike.”³¹⁷

Charlotte Erichsen-Brown is an ethnobotanist and the author of, *Medicinal and Other Uses of North American Plants: A Historical Survey with Special Reference to the Eastern Indian Tribes*.³¹⁸ There is very little information about her work or life, nevertheless this book remains a classic in Native North American ethnobotany. Erichsen-Brown directly addresses the sharing of knowledge about the use of blue cohosh between Native and European communities by reviewing Europeans’ early travel journals and pharmaceutical and medical practice texts.³¹⁹

From these accounts, she argues:

Another area of medical knowledge in which the advanced Indian nations of northeastern north America were ahead of contemporary European practice was in that of childbirth. In Europe bearing a child often meant the loss of both mother and child from infection or botched delivery. The tombstones of our oldest cemeteries tell the same story on this continent several hundred years later. The native peoples had a much better system. The medicine woman of the tribe kept the mother on a special regime for weeks before delivery. She was given a tea made of the root of the blue cohosh (*Caulophyllum thalictroides*) and her delivery was usually easy and swift. The root possesses caulosaponine which provokes strong uterine contractions, intermittent and more successful ones than those provoked by ergot, the plant fungus used by white physicians for the same purpose in childbirth. The Indians also use the blue cohosh root to control profuse menstrual discharge. White women who were settled far from doctors and even other white women were glad to have the help of the Indian midwife. The blue cohosh became widely known and appreciated.³²⁰

³¹⁶ Fenton, “Contacts Between Iroquois Herbalism and Colonial Medicine,” 506.

³¹⁷ Fenton, “Contacts Between Iroquois Herbalism and Colonial Medicine,” 523-524.

³¹⁸ Erichsen-Brown, *Medicinal and Other Uses of North American Plant*.

³¹⁹ Erichsen-Brown’s archival sources begin with the journals of the Jesuits in southern Canada in the early 1600s. Erichsen-Brown, *Medicinal and Other Uses of North American Plants*.

³²⁰ Erichsen-Brown, *Medicinal and Other Uses of North American Plants*, xii.

In the ethnobotanical entry for blue cohosh, Erichsen-Brown cites 13 studies, undertaken from 1828 to 1977 and authored by C.S. Rafinesque (1828), J.D. Gunn (1858), C.F. Millspaugh (1892), F. Fyles (1920), H. Smith (1923-1933), F. Densmore (1926), J.A. Mockle (1955), H. Coulter (1973), and Lewis & Elvin-Lewis (1977).³²¹ Quoting Mockle, Erichsen -Brown reports:

The rhizome and roots [of blue cohosh] are used as an antineuralgic, antirheumatic and above all as an emmenagogue, facilitating delivery and menstruation; this later action is due to a saponine, caulosaponine, which provokes strong uterine contractions recalling those provoked by ergot. The Indians attributed the facility of their parturition to the use of a tea of these roots, taken for two or three weeks before the birth.³²²

Anthropologist Daniel E. Moerman (1941-) is the author of a widely used text on Native ethnobotany, *Native American Medicinal Plants*, published in 1998.³²³ Moerman, a former Antioch University faculty member and currently teaching at the University of Michigan, documents both Native ethnobotany and the medical knowledge and practices of rural African American communities. Moerman's online database, "Native American Ethnobotany" has more than 44,000 entries of plants used for medicine, food, and fiber by nearly 300 Native groups.³²⁴ Moerman's catalog of Native medicinal plants focuses on gathering accurate information on which tribes were reported to use which species and for what purposes. Moerman's approach to the issue of the medical effectiveness of ethnobotanical species corresponds with my own in that he does not attempt to assess the pharmaceutical or medicinal effectiveness of plants, rather he adopts a behavioral and cultural framework for understanding the effectiveness of plant remedies. Moerman claims,

³²¹ Erichsen-Brown, *Medicinal and Other Uses of North American Plants*, 355-357.

³²² Erichsen-Brown, *Medicinal and Other Uses of North American Plants*, 357n1955.

³²³ Daniel E. Moerman, *Native American Medicinal Plants: An Ethnobotanical Dictionary* (Portland, OR: Timber Press, 2009). This dictionary is an abridged form of the 1998 text.

³²⁴ Daniel E. Moerman, "Native American Ethnobotany," *University of Michigan-Dearborn*, [Online Database] <http://herb.umd.umich.edu/> accessed October 1, 2012.

The first thing people usually ask about American Indian medicinal plants is, do they work? This, it turns out, is a tricky question. The short answer is, Yes. The longer answer is more interesting. What does it mean to say that a medicine “works”? Essentially it means that the medicine has the effect that we want it to have, that it meets our expectations. This means that a drug that meets one person’s expectations may not meet another’s, and people may therefore disagree over whether the drug works. Such disagreements usually hinge on different conceptions of health or healing. This is to say that definitions of health and well-being are often cultural matters; they are rarely simple matters of fact . . . Whereas the Euro-American, the Iroquois, and the Cherokee are likely to agree on one dimension of [these] treatments, they may disagree about others. Asking about the effectiveness of a drug, then, is not a simple biological or medical issue but a complex problem of culture and meaning.³²⁵

Moerman lists more than 2500 plant species in *Native American Medicinal Plants*, and indicates ten species that reported the greatest number of uses by the most Native groups: *Achillea millefolium* (common yarrow), *Acorus calamus* (calamus), *Artemisia tridentate* (big sagebrush), *Lomatium dissectum* (fernleaf biscuitroot), *Prunus virginiana* (common chokecherry), *Artemisia ludoviciana* (Louisiana sagewort), *Olopanax horridus* (devil’s club), *Juniperus communis* (common juniper), *Mentha canadensis* (Canadian mint), and *Urtica dioica* (stinging nettle).³²⁶

Each of these species characterized by Moerman as important for Native ethnobotany is indicated for use in a range of issues related to women’s reproductive health. The *Acorus* and *Prunus* genera overlap with Duke’s similar categorization of the relative ethnobotanical importance of Native medicinal plants. Moerman’s entry for *Caulophyllum thalictroides* lists a variety of uses for ten different Native groups: Cherokee, Chippewa, Iroquois, Menominee, Meskwaki, Mohegan, Ojibwa, Omaha, Ponca, and Potawatomi. Moerman’s descriptions of the

³²⁵ Moerman, *Native American Medicinal Plants*, 12-13.

³²⁶ Moerman, *Native American Medicinal Plants*, 12.

ethnogynecological uses and preparations for blue cohosh reference Erna Gunther and Huron Smith,³²⁷ as in this entry:

Plant promoted childbirth and used for womb inflammation. Decoction of root taken to suppress profuse menstruation. Root used for stomach cramps accompanying painful menstruation. Infusion of root taken to suppress profuse menstruation and aid in childbirth.³²⁸

Moerman has very little to say on the sharing of ethnogynecological plants across racial groups, as that is outside the purpose of his investigations.

To complete these stories about the ethnobotany of *Caulophyllum thalictroides*, I looked for evidence of the sharing of Native and European knowledge of the plant to African American communities. This evidence is scanty; one reference is located on the “Ethnography Program” website of the U.S. Department of Interior’s National Parks Service, stating:

Knowledge of home remedies prescribed by African healers circulated secretly through the slave quarters and passed down privately from generation to generation. Some medicinal plants like okra used to cure sores had African origins. Other plants were indigenous to the Americas like blue cohosh used to promote rapid childbirth. Africans may have gained knowledge of their curative powers from American Indians.³²⁹

Another reference to African American use of blue cohosh is found on the pages of many contemporary herbal medicine “Patient Information” websites³³⁰ from hospitals and clinics around the U.S. and these pages cite an herbal desk reference, *The Review of Natural Products*. The desk reference states, “Blue cohosh was used in the 1800s by

³²⁷ Erna Gunther, *Ethnobotany of Western Washington*, revised ed. (Seattle: University of Washington Press, 1973); also, Smith, “Ethnobotany of the Menomini Indians,” Smith, “Ethnobotany of the Ojibwe Indians,” and Smith, “Ethnobotany of the Forest Potawatomi Indians.”

³²⁸ Moerman, *Native American Medicinal Plants*, 125.

³²⁹ National Park Service Ethnography Program, “African American Heritage in the Chesapeake,” U.S. Department of the Interior, 2014, <http://www.nps.gov/ethnography/aah/AAheritage/ChesapeakeF.htm> accessed January 1, 2014.

³³⁰ For example: “Patient Education: Blue Cohosh,” *Boulders Ambulatory Surgery Center*, (Richmond, VA, 2010) <http://bouldersasc.com/patient-education/?id=21599&lang=English&db=hlt&ebscoType=static&widgetTitle=Orthopaedic+Surgery> accessed January 1, 2014.

European settlers and African Americans, primarily for gynecologic conditions.”³³¹

Curiously, the contemporary sources have citations that lead back to the work of the authors already reviewed in my research, including Erichsen-Brown, Moerman, Rafinesque, and Millspaugh, yet these ethnobotanists did not specifically indicate the use of *Caulophyllum thalictroides* among African American communities.

In summary, Susanna and I were aware that we were giving our client Gina, a laboring woman, a powerful plant medicine that has a history of successful use for a protracted first stage of labor going back many centuries, if not further. The historical ethnobotanical evidence convincingly points to the sharing of knowledge from Native to European communities about the use of blue cohosh to improve pregnancy and childbirth outcomes. Evidence of sharing between Native or European communities and free or enslaved Africans is sparse, and might be supposed from cross-racial and cross-cultural attendance of neighbors, friends, and family in the birthing room, a topic that I explore subsequently in this research. I envision that a concerned birth attendant of any race or culture would have readily shared what plant knowledge they had during childbirth, however, in the archival stories of blue cohosh I found no specific evidence to support the sharing of the use of blue cohosh with African communities; it was only mentioned in contemporary accounts of historical ethnobotanical practices. The stories of *Caulophyllum thalictroides* are important for this research because they indicate the sharing of ethnogynecological plant knowledge between different populations, as well as some of the challenges of archival ethnobotanical investigations.

³³¹ B. R. Olin, ed., *The Lawrence Review of Natural Products: Facts and Comparisons*, St. Louis, MO: Wolters Kluwer Company, 1992. Also found in, Ara DerMarderosan and John A. Beutler, eds., *The Review of Natural Products*, 7th Edition, Philadelphia: Lippincott, Williams & Wilkins, 2012.

Negotiating Knowledge of Cotton: “Pain Pollen”

White faces, pain-pollen settle downward through a cane-sweet mist and touch the ovaries of yellow flowers. Cotton-bolls bloom, droop. Black roots twist in a parched red soil beneath a blazing sky.

--Jean Toomer, *Cane*

The stories of blue cohosh show evidence of the sharing of plant knowledge and use between Native and European populations, and, very likely, a transfer of this knowledge to African populations. The stories of cotton, *Gossypium sp.*, on the other hand, provide unambiguous reports of being used ethnogynecologically among all three groups. Given the importance of the cotton crop to the history of New World slavery, the ethnogynecologically significant stories of this plant are even more intriguing. Besides sugar cane, *Saccharum sp.*, no other plant is more iconic of the vile economic and social conditions of American slavery. It is a compelling irony that cotton seeds and root were widely known and used by African women as effective abortifacients, used in small personal acts of agency and resistance against a heinous system and the unwanted pregnancies that resulted from rape and enforced breeding. The genus *Gossypium* is an herbaceous perennial shrub in the family Malvaceae. *Gossypium hirsutum* is primarily known as common cotton, with other familiar names being upland cotton and Mexican cotton. *Gossypium* is described by E. Barrie Kavasch in her book, *Herbal Traditions*, and she says, “Of the two New World cotton species cultivated by early Indian cultures, *Gossypium hirsutum* the oldest cotton grown in this hemisphere, can be dated back to about 2500 B.C. in prehistoric Mexico.”³³² *G. hirsutum* and *G. barbadense* are considered the New World origin species, and *G. arboreum* and *G. herbaceum* are Old World origin species. Due to the ancient history of cotton domestication, cultivation, and transport there are many modern species

³³² E. Barrie Kavasch, *Herbal Traditions: Medicinal Plants in American Indian Life* (Washington, DC: The Smithsonian Institution, 1983), 8.

synonyms, hybrids, and varieties of this plant, and by the 1600s many different species of cotton, native and introduced, were already known in the Americas.

Reviewing the 27 documents that are the basis of my Ethnogynecology Index I found *Gossypium sp.* mentioned in 5 different studies (see table 4.16), written from 1940 to 2007, and authored by the following 5 ethnographers or herbalists: Lyda Averill Taylor, Virgil J. Vogel, Clarence Meyer, William Ed Grimé, and Herbert C. Covey. In my Index studies, *Gossypium sp.* was documented to be in use by Native, African, and European populations for 4 of the 10 reproductive health categories: menstrual regulation, childbirth, postpartum, and gynecological disorders. Lyda Taylor's study of southeastern Native groups lists *Gossypium herbaceum*, and the plant entry states: "Common cotton. Koasati - childbirth - The whole roots are boiled and the decoction is drunk during labor to ease childbirth. Medicinal Properties: Cotton is an excellent oxyto[xic] and is valuable in arresting hemorrhage and ameliorating the other symptoms of uterine fibroids. Comments. This is a most valuable medicine as used by the Koasati."³³³

Clarence Meyer, in *American Folk Medicine*, assigns the use of cotton root to African slaves: "The decoction made from the bark of the root of cotton plant was used by slaves for painful and obstructed menses."³³⁴ William Ed Grimé quotes botanist Laurence Johnson to explain the history of *Gossypium*, and he states,

Cotton root was introduced to professional notice as a specific uterine tonic after having long been used among the negroes of the Southeastern States as an abortifacient. Its action upon the uterus is similar to that of ergot, and it is used instead of the latter in cases of uterine inertia during parturition, and in amenorrhoea, dysmenorrhoea and scanty menstruation. Whether its action upon the system at large be also similar to that of ergot is unknown but worthy of investigation.³³⁵

³³³ Taylor, *Plants Used as Curatives*, 38.

³³⁴ Meyer, *American Folk Medicine*, 174.

³³⁵ Grimé, *Ethno-botany of the Black Americans*, 122; citing Laurence Johnson, *A Manual of the Medical Botany of North America* (New York: William Wood & Company, 1884), 108.

Herbert C. Covey begins by offering a general explanation of the undervalued contributions of Africans to American plant knowledge and practice. Covey argues,

Slaves brought with them African knowledge of Cesarean sections, midwifery, a method of small pox inoculation, and other effective medical practices . . . Despite their introduction and use of these effective treatments, White generally failed to recognize African contributions to medical and health care in the antebellum South and in the years that followed. This is particularly true for their contributions in plant and herbal remedies that were adopted by White physicians.³³⁶

Covey's ethnobotanical entry for *Gossypium herbaceum* includes its use by both Native, African, and European communities, and provides the following information:

Native populations in Alabama used cotton roots to ease labor pains. Folk practitioners used cotton root bark, inner root bark, and seeds, which they believe were the medicinal parts of the cotton plant . . . Folk practitioners made tea out of cotton roots to ease labor. The root bark and seeds also cause uterine contractions . . . Modern medicine has concluded that cotton root bark does, in fact, promote abortion or the onset of menstruation and the seeds lower sperm production. In general, slaves found limited medical use for cotton. However, some used it as an abortifacient. In the nineteenth century, some slaves used the plant to induce uterine contractions and hence abortions.³³⁷

Turning to the other sources of ethnobotanical information, we find the work of John Uri Lloyd (1849-1936), a chemist and pharmacist, well known for his eclectic medicine sympathies and profound knowledge of herbal medicine. Lloyd published prolifically, authoring thousands of academic articles, 14 books, and 8 novels.³³⁸ Lloyd credits African American sources with the practice of using cotton root as an abortifacient:

Gossypii cortex (Cotton Root Bark) Introduced into U. S. P. in 1860, Secondary List. Official from 1870 until 1900. Dropped from 1910 edition. *Gossypium*, the fiber, has been official in all editions from 1850. Cotton root bark, *Gossypii radialis* cortex, is used as a stimulant and emmenagogue, the decoction being considered, in the days of American slavery, capable of producing abortion. It

³³⁶ Covey, *African American Slave Medicine*, 47.

³³⁷ Covey, *African American Slave Medicine*, 93.

³³⁸ Lloyd Library and Museum: Bringing Science, Art, and History to Life, "The Lloyd Brothers," Historical Research Center for the Natural Health Movement, Cincinnati, http://www.lloydlibrary.org/history/lloyd_brothers.html accessed December 1, 2013.

was thus introduced by the negroes, and from thence came into the hands of the profession, being first employed by physicians of the Southern United States . . . The credit for the discovery of its uses must be given to the negroes of the South. Cotton fiber and root bark are obtained from one or more cultivated species of *Gossypium herbaceum*.³³⁹

Historian John M. Riddle (1937-) has written a definitive text on the history of the use of plant medicines for contraception and abortion, *Eve's Herbs: A History of Contraception and Abortion in the West*.³⁴⁰ Riddle claims African origins for the use of cotton root as an abortifacient, and, citing the work of medical historians Wood and Bache (1847), Crellin and Philpott (1989), and Shneider (1974),³⁴¹ Riddle reports, "The use of cotton root (*Gossypium arboreum*) for abortions appears to have been discovered in Africa and was brought to America by slaves. The active substance is identified as gossypol . . . Negro slaves drank a preparation made from its root for an abortion, which became widespread in the southern United States."³⁴² Moerman has a short ethnobotanical entry on *Gossypium herbaceum*, referencing Lyda Taylor: "Levant Cotton. Koasati. Gynecological Aid. Decoction of roots taken to ease childbirth."³⁴³ Moerman then proceeds to elaborate on the reported use of cotton by Native, African, and European groups, insisting that, "The Alabama and Koasati Indians boiled cotton-plant roots and gave the tea to women to ease labor in childbirth, which is one of the uses to which it has been put by whites . . . In slave days a decoction of it was considered an abortifacient."³⁴⁴ Voeks explains the conditions under which ethnogynecological knowledge for terminating unwanted pregnancies would have been sought and shared. Voeks claims,

³³⁹ John Uri Lloyd, *Origin and History of all the Pharmacopeial Vegetable Drugs, Chemicals and Preparations with Bibliography: Volume I* (Cincinnati: The Caxton Press - American Drug Manufacturers' Association, 1921), 155-156.

³⁴⁰ John M. Riddle, *Eve's Herbs: A History of Contraception and Abortion in the West* (Cambridge, MA: Harvard University Press, 1997).

³⁴¹ Riddle, *Eve's Herbs*, 312n208.

³⁴² Riddle, *Eve's Herbs*, 198.

³⁴³ Moerman, *Native American Medicinal Plants*, 221.

³⁴⁴ Moerman, *Native American Medicinal Plants*, 295.

There were significant social and political dimensions to the use of medicinal species by African slaves. In Suriname and the Caribbean, for example, African and Indian slave women were forced to submit sexually to European planters, sailors and soldiers, as well as to free and enslaved African men. The use of herbal treatments to induce abortion was, however, suppressed by the Crown authorities for fear of injuring female slaves. In spite of prohibitions, abortion was common . . . Indian and African women, confronted with similar hardships, somehow crossed their cultural and language barriers in order to share their knowledge of herbal abortifacients.³⁴⁵

These stories of *Gossypium sp.* and previous stories about the relationship of this plant to *Viburnum prunifolium*, indicate the likelihood that the knowledge and use of this ethnogynecologically significant plant circulated among and between Native, African, and European communities in the New World. It is probable that Native groups were using cotton root for menstrual regulation before Africans and Europeans arrived on the continent. If, as Riddle indicates, Africans brought the knowledge of the species' properties with them to the Americas, they urgently put it to use exercising some agency over the inhumane breeding practices of slave owners. Cotton root induced abortions could be seen as an act of African American women's resistance. Even as slave women bloodied their hands picking the masters' bolls, they could chew the roots of the cotton plant to impede unwanted conception. Knowledge of the use of the cotton plant spread through the slaves' practices and the European botanists' publications, hence even while slave owners attempted to thwart African women's resistance by forcing them to drink *Viburnum prunifolium*, or black haw, Native and European communities shared in this new knowledge of the ethnogynecological uses of *Gossypium sp.*

Materia Medica: Ethnogynecology and Herbal Medicine Books

The ethnobotanical stories of *Caulophyllum thalictroides* and *Gossypium sp.* demonstrate plant specific patterns of use for women's reproductive health remedies and the sharing of this

³⁴⁵ Robert Voeks, "Traditions in Transition: African Ethnobotany in Lowland South America," in *Mobility and Migration in Indigenous Amazonia: Contemporary Ethnoecological Perspectives*, edited by Miguel N. Alexiades (New York: Berghahn Books, 2009), 283-184

knowledge across racial and cultural boundaries. These two plant stories serve as an entry into my examination of European American historical manuscripts about midwifery, medicine, botany, and herbal medicine. A complete history of the medical and botany books published in or commonly used in the Americas in the 17th to early 20th centuries is fascinating, but my research does not offer such a history, a far more complex task. Nevertheless, during my archival investigations I reviewed those midwifery, medicine, botany, and herbal medicine manuscripts that were cited as important resources by the authors of the Index ethnographic documents. Original historical documents, secondary accounts, and re-publications of these manuscripts are sources of evidence regarding the medical context for European women's reproductive health practices in the New World; they include descriptions of how women's health complaints were viewed and how plant remedies were used.

To choose which *materia medica* and historical manuscripts to review I began with botany and medical texts that were cited in the Ethnogynecology Index documents. Those texts referenced other medical, botany, midwifery, and herbal books, and they also referenced cultural history texts, like travel journals and diaries. I reviewed many of these manuscripts, and used three search terms: childbirth (or parturition, confinement), Indian (or Native), and Negro (or African). If the texts had these terms I delved into their narratives to determine if they had any ethnobotanical material relevant to the use of plants for women's reproductive health, and cultural or racial origins of ethnogynecological practices. If there were relevant passages on women's reproductive health I added a search for discussion of any of the plant species that my Index had already identified as significant (see table 4.11), such as *Caulophyllum thalictroides*, *Viburnum opulus*, and *Gossypium herbaceum*. Ultimately, however, I read these materials in order to appreciate early 17th through early 20th century European American histories of botany

and medicine, especially related to women's reproductive health issues. I chose to review 38 texts, published between 1672 and 1919. I do not report on each of these documents separately here, instead I summarize the material from these texts that is typical of or explanatory for the range of information in these sources and relevant to my research objectives.

Although historical documents form a critical part of my research, I review and interpret these sources of information keeping in mind important potential differences between the perspectives of the Native, African, and female subjects and the observations of the European male doctors, botanists, and authors. When European men were writing about the botanical knowledge of Native or African Americans the observers were operating under the prejudices created by socially constructed ideas of race, gender, religion, and vastly different healing traditions. The authors of these texts were operating under the medical and botanical assumptions common to their place, time, and culture. Referring to Native botanical sources, MacDougall points out the consequences of these prejudices for Europeans' understanding of the practices they recorded, and he claims:

Although the historical documents show the importance of plants to Native Americans, they also reveal that there were many obstacles to the direct observation of plant trade, transport, or cultivation by Europeans . . . The earliest accounts of Native American plant use mostly emphasized species that were of potential importance to Europeans. These included plants with commercial value in Europe that might serve as sources of food or medicine for future colonists, that emphasized the productivity of the land, or that met emergency health needs of the explorers. In some cases, it was unclear whether these species were equally valued by local Native Americans.³⁴⁶

Keeping in mind that these biases and limitations constrain the descriptive authority of the historical documents, MacDougall adds this account of the challenges faced by Europeans who were recording Native botanical knowledge:

³⁴⁶ MacDougall, "Did Native Americans Influence the Northward Migration of Plants." 640.

Other inhibitors to European observation of plant dispersal include the restriction of detailed botanical knowledge to a few specialized individuals within the community (i.e. what was observed depended on who was observed or, in the case of ethnographers, who was interviewed – observations were often opportunistic), and the application of herbal remedies by women (i.e. most European/Native American interactions, from all historical periods, were among men).³⁴⁷

The limitations of these medical and botanical documents are the authors' preconceptions and misconceptions about the botanical practices they were observing, the racial and gender biases common to the times in which the authors wrote, the economic motivations of colonialism, and the potential for medical and historical inaccuracies contained in previous research to be relied upon and cited in subsequent manuscripts.

These manuscripts remain important, nevertheless, as sources of information about historical medical and botanical knowledge and practices. Ethnobotanist Clarence Meyer discusses the history of American medical practice in his text, *American Folk Medicine*, including the contributions of 18th and 19th century texts written by Cutler, *Plants of New England* (1785); Elliott, *Sketch of the Botany of Carolina and Georgia* (1821); Barton, *Vegetable Materia Medica of the United States* (1825); and Coxe, *American Dispensatory* (1830).³⁴⁸ Meyer describes the significance of these and other herbal medicine books, and he observes:

European medical books were an invaluable source of help to practitioners as well as households in colonial America. The most popular publications available to the general public were: Theobald's *Every Man His Own Physician* (1764), Culpeper's *English Physician* (1652), and Buchan's *Domestic Medicine* (1769). Schoepf's *Materia Medica Americana* and Thatcher's *Pharmacopoeia* were among the earliest to reveal the virtues of native American plants. Rafinesque's volumes, *Medical Flora of the United States* (fol. I, 1828; vol. II, 1830), added new species and medicinals . . . and listed native drug plants that could be substituted for expensive or hard-to-get foreign drugs.³⁴⁹

³⁴⁷ Andrew MacDougall, "Did Native Americans Influence the Northward Migration of Plants During the Holocene?" *Journal of Biogeography* 30 (2003): 642.

³⁴⁸ Meyer, *American Folk Medicine*, 11.

³⁴⁹ Meyer, *American Folk Medicine*, 10-11.

We have seen that fairly interpreting and assessing these historical materials requires an awareness of the changing medical and social norms under which these European and European American authors' wrote their texts. These norms include rapidly changing ideas about botany, medical practice, women's reproductive health, and racial categorization. Martha Robinson discusses some of the most widely held medical beliefs -- about humors, qualities, and signatures -- that arrived along with the Europeans who settled in the New World, and both clashed with and complemented the beliefs of the Natives and Africans they encountered in the Americas.

Although the English expected to find remedies among the Indians, they did not expect to find medical systems. When such systems were apparent, as when Indians incorporated ritual and prayer in their healing practices, colonists were inclined to regard these practices as superstitious at best, demonic at worst. The English, of course, also sought to fit new remedies into their own understanding of medicine . . . European medical theory held that the four humors of the body (blood, phlegm, black bile, and yellow bile) and the body's four qualities (heat, cold, dryness, and moisture) existed in a precarious balance . . . Another medical principle that suggested that the English could find remedies in the New World was the "doctrine of signatures," an ancient belief that plants revealed in their very structure what diseases God had intended them to remedy.³⁵⁰

The medical concepts of humors, qualities, and signatures had been established in Europe for thousands of years and were the foundation of European medical beliefs well into the 19th century. Historian of medicine Todd L. Savitt recounts the ways in which the medical beliefs of Native, African and European communities, when they encountered each other in Virginia in the 1600s, contained many elements of similarity. Savitt argues that Native and African approaches to health were most alike, but Europeans held beliefs common to both groups:

Though the specific gods and goddesses, rituals, incantations, potion ingredients, and names of diseases differed from those of Virginia's Native Americans, the basic West African concepts of and approaches to health, disease, and healing were in some ways quite similar. Like Native Americans, West Africans intertwined medicine and religion. Supernatural forces controlled health.

³⁵⁰ Martha Robinson, "New Worlds, New Medicines: Indian Remedies And English Medicine In Early America," *Early American Studies* (Spring 2005): 97-99.

Transgressions, either personal or tribal, could affect physical well-being: failure to correct the underlying problem usually meant failure to recover . . . In some ways seventeenth-century English settlers brought with them medical ideas not much different from those of Africans and Native Americans . . . Seventeenth-century English medical practice included a mixture of ideas not so far removed from traditional West African and Native American medicine and of ideas based on the writings of Greeks and Romans who had lived 1,600 or more years earlier. All seemed to stress the idea of balance.”³⁵¹

The observations of Native and African medical practices and beliefs recorded in the European manuscripts and *materia medica*, as Robinson and Savitt point out, were biased as to the superstitious and religious connotations accorded to these practices. Yet, as Savitt indicates, certain Native and African medical beliefs and practices such as purging, sweating, and bleeding patients, were familiar to Europeans, even as they continued to denigrate the effectiveness of both Native and African uses of these therapies.

As the 17th century ended there was an upsurge in American medical and botanical publications that corresponded with European Enlightenment theories about science and the body. Simultaneously, European medical science began to solidify its fascination with women’s reproductive health, and the medical discipline of midwifery became firmly established within a male dominated scientific paradigm. Savitt points out that scientific thinking influenced European medical beliefs, even as religion played a constant role: “Though seventeenth-century Europeans maintained a belief in divine intervention in their lives . . . religion and science sat side by side.”³⁵² Feminist philosopher Nancy Hartsock describes Enlightenment thought, which was central to expanding European science, and Hartsock says, “The Enlightenment was marked by a faith in the neutrality of reasoned judgment, in scientific objectivity, in the progressive logic

³⁵¹ Todd L. Savitt, *Fevers, Agues, and Cures: Medical Life in Old Virginia, An Exhibition* (Richmond: The Virginia Historical Society, 1990), 10-11.

³⁵² Savitt, *Fevers, Agues, and Cures*, 11.

of reason in general and of science in particular.”³⁵³ Hartsock connects the progression of European 17th century thinking about science, medicine, gender, and economic development to global colonialism, and she claims:

It must be remembered that this Eurocentric, masculinist, and capitalist world was constructed not only in theory but also in fact through such practices as the Atlantic slave trade, the development of plantation agriculture in the New World, the introduction of markets and private property in Africa, the colonization of large parts of Asia, Latin America, and Africa, and the introduction of European forms of patriarchal and masculinist power.³⁵⁴

Scientific thinking drawn from Enlightenment theories intruded into medical practices in Europe and the Americas, and laid the foundation for the rapid rise through the 18th and 19th centuries of a male-dominated scientific and medical model for women’s reproductive health issues. This model for women’s reproductive health had passionate adherents in Europe and America as seen by a rapid increase in the publication of midwifery texts in the 19th century.

By 1851, John Flagg had published, in Philadelphia, a volume on the use of chloroform in childbirth, called, *Ether and Chloroform: Their Employment in Surgery, Dentistry, Midwifery, Therapeutics, etc.*³⁵⁵ This manual supported the use of these drugs in medical practice and reinforced male power in the birthing room. In fact, chloroform, by rendering women unconscious during parturition and thereby supposedly protecting their modesty, is credited with accelerating the across-the-board entry of men into women’s reproductive health. The use of forceps in childbirth, which increased in the 1850s, was the prerogative of male surgeons and increased the degree to which childbirth was taken out of the hands of women. Historian Laurel Ulrich describes these technical developments in women’s health history, and argues that the

³⁵³ Nancy Hartsock, “Postmodernism and Political Change: Issues for Feminist Theory,” *Cultural Critique* 14 (Winter 1989-1990): 17.

³⁵⁴ Hartsock, “Postmodernism,” 18.

³⁵⁵ J.F.B. Flagg, *Ether and Chloroform: Their Employment in Surgery, Dentistry, Midwifery, Therapeutics, Etc.* (Philadelphia: Lindsay and Blakiston, 1851).

concurrent contraction of social relationships that supported reproductively active women in European American communities contributed to the rise of the medical model and the diminished role of midwives in childbirth. Ulrich says,

The rapid development of forceps in the second half of the eighteenth century gave the physician a technological advantage he had not had before. By 1800 'male science' had diverged dramatically from 'female tradition' and midwifery was under strenuous attack. But the decline of the midwives in the nineteenth century cannot be attributed solely to the development of obstetrical science. It was also a consequence of the undermining of traditional social relations and the increasing privatization of the family. Midwives were 'experienced,' where as physicians were 'learned.' Because the base of the midwives' experience was shared by all women, their authority was communal as well as personal. In attacking the midwives, nineteenth-century physicians were attacking a system more than a profession.³⁵⁶

The use of the word "midwifery" underwent a number of changes though the 18th and 19th centuries, and by the late 19th century it referred to the medical practice of women's reproductive health, a practice that as it was taken over by men began to be referred to as obstetrics and gynecology. Representative of many of the 19th century medical books, and very popular in its time, *Gunn's Domestic Physician*, authored by John C. Gunn (1795-1863), dispenses women's reproductive health advice to midwives from a member of the slowly burgeoning obstetrics profession:

I can not urge too strongly upon every midwife the great importance, during the time of labor, of keeping the woman calm and composed, and not to hurry Nature; by this course of conduct, a great variety of accidents may be prevented. Besides, women should be aware of the fact that hundreds of deaths and a long train of diseases are produced by too great haste, and not waiting patiently for the operations of Nature; her laws cannot be infringed upon with impunity. A long experience in my profession, in the obstetric art, has convinced me that patience is the great remedy in childbirth.³⁵⁷

³⁵⁶ Laurel Thatcher Ulrich, *Good Wives: Image and Reality in the Lives of Women in Northern New England, 1650-1750* (New York: Vintage Books, 1991), 134.

³⁵⁷ John C. Gunn, *Gunn's New Domestic Physician* (Cincinnati: Moore, Wilstach, Keys & Co., 1857), 418.

In this time period there was also considerable pushback, for medical and social reasons, against male control and medicalization of European women's reproductive health, primarily from prominent botanists, homeopaths, eclectic, and Thomsonian physicians. Cyrus Thomson (1797-1860), the son of the originator of the controversial system of Thomsonian medicine, made an impassioned plea in an 1863 treatise regarding the impropriety of male involvement in parturition. It was typical of the opposing response to the rise of the profession of obstetrics and gynecology. Thomson implores,

It is to women that I now more particularly address myself; and I feel most sensibly the responsibility of the task I have imposed upon myself — that of endeavoring to convince women of their capacity to render to each other all the needful assistance which is usually necessary at Child-Birth, instead of continuing the present indelicate, unnatural, and immoral habit of calling upon the other sex, except it be the husband of the patient . . . The inquiring mind is led to ask. What qualification; for this business can a man possess, which cannot also be possessed by a woman? Not one. His unwieldy hands, less sensitive touch, and impatience in attendance, when compared with woman, should be sufficient, if nothing else, to deter him from the assumption of this delicate office. But this is not all. The decency and morality outraged by the attendance of a male physician upon such occasion to a delicate woman, is beyond comparison.³⁵⁸

This excerpt from Thompson's "Pregnancy and Midwifery" does not, however, fully capture his three pages of outrage at the perceived indecency of male involvement in childbirth, with Thompson going so far as to accuse doctors of attending women in childbirth in order to fuel their desire to commit adultery!

At the same time that 19th century European American women were being exhorted, from some quarters, to avoid male midwives, preconceptions and stories about Native and African women's abilities to give birth without the challenges of a protracted or painful labor abounded, and these descriptions from John Burns 1837 text, *The Principles of Midwifery*, are typical of the stereotypes passed on within midwifery and medical texts:

³⁵⁸ Cyrus Thomson, *Dr. Thomson's Materia Medica: A Book for Everybody* (Geddes, NY: C. Thomson, 1863): 521.

The American Indians, as soon as they bear a child, go into the water and immerse it. One evening he [Dr. Long] asked an Indian where his wife was; "he supposed she had gone into the woods, to set a collar for a partridge." In about a hour she returned with a new-born infant in her arms, and, coming up to me, said, in Chippoway, "*Oway sagonash payshik shomagonish*;" or, "Here, Englishman, is a young warrior" . . . With the Africans, the labour is very easy, and trusted solely to nature, nobody knowing of it till the woman appears at the door of the hut with the child."³⁵⁹

Ann Marie Plane refutes these kinds of accounts of effortless births for Native women. In her article "Childbirth Practices among Native American Women of New England and Canada, 1600-1800," she argues:

When seventeenth-century European men wrote descriptions of the New World, they often included detailed passages on Indian life. Almost without exception, these authors marveled at the ease of childbirth among the "savages." A native woman went off alone into the forest and returned in a short while with a new baby, resuming her activities as if nothing had happened . . . Was native childbirth actually so easy and painless? Indeed would a Pokanoket or a Micmac woman even recognize her experience in the descriptions made by French priests and English gentrymen?³⁶⁰

Plane's contention is that Native women had a socially conditioned experience of childbirth so radically distinct from the expectations of European men and women that the European men who were recording narratives about Native birth practices could not have fully understood what they witnessed. Similar misperceptions abounded for the observed birth experiences of enslaved and free African American women.

The publication of medical and midwifery texts written for European American citizens blossomed in the 18th century and veritably exploded in the 19th. These texts were full of specific advice for women written from the perspective of shifting medical beliefs that were still, however, anchored to very old European ideas about bodies and health. Botanical manuscripts

³⁵⁹ John Burns, *The Principles of Midwifery: Including the Diseases of Women and Children*, 9th edition (London: Longman, Orme, Brown, Green, and Longmans, 1837) 381-382.

³⁶⁰ Ann Marie Plane, "Childbirth Practices among Native American Women of New England and Canada, 1600-1800," in *Medicine and Healing*, edited by Peter Benes (Boston: Boston University, The Dublin Seminar for New England Folklife Annual Proceedings, 1990), 13.

experienced a similar upsurge in publication due in part to Europeans' exposure to the flora and botanical practices of the New World. In 1807, Benjamin Barton (1766-1815) describes the extent of European American botanists' knowledge of and fascination with North American plants. Barton claims,

Botany has, certainly, been cultivated, with more attention and success, in the United-States, than any other branch of Natural History. The earliest naturalists of our country were chiefly attentive to the examination of the indigenous vegetables [plants] . . . The Flora of the United-States is, indeed, perhaps as complete as that of some of the countries of Europe, and unquestionably, as complete as that of many of the countries of Asia. I say nothing of Africa, and of the continent of Australasia. The vegetables of these countries are very imperfectly known to us . . . When we consider the great extent of the United-States, even excluding the country beyond the Mississippi, I presume it may be stated, at a moderate calculation, that, at least, one eighth part of our native vegetables is entirely unknown; certainly to the botanists of Europe.³⁶¹

Barton describes a qualified willingness of European practitioners to learn from Native healing practices, and he says, "I have elsewhere shown, that our Indians are in possession of many useful medicines. However imperfect the state of medicine among these people, however rude or empirical their practice in the employment of their remedies, we may derive essential advantage by studying the history of medicine among the Indians."³⁶² Martha Robinson demonstrates how this fascination with Native remedies waxed and waned, and she argues, "By the nineteenth century, many such plants first known as Indian remedies had been adopted by American doctors. Indeed, when Jacob Bigelow, professor of botany at Harvard, wrote on the medicinal plants of America in the early nineteenth century [1817], these plants had been so naturalized to American medicine that he did not mention their origins in Indian medicine."³⁶³ With the strengthening establishment of the European American botanical, scientific and medical

³⁶¹ Benjamin Smith Barton, *A Discourse on Some of the Principal Desiderata in Natural History* (Philadelphia: Denham and Town, for the Linnaean Society, 1807), 39-41.

³⁶² Barton, *A Discourse*, 44-45.

³⁶³ Robinson, "New Worlds, New Medicines," 105.

communities through the 18th and 19th centuries, the ability to discount the indigenous origins and Native knowledge behind American plant remedies increased. Robinson discusses the 1789 publication of Benjamin Rush, *An Inquiry Into the Natural History of Medicine Among the Indians*, and his dismissive attitude to Native knowledge:

Some might still hope that the Indians could show new remedies to the colonists, but Rush dismissed the notion that Indians could have anything to teach white physicians. “We have no discoveries in the materia medica to hope for from the Indians in North-America,” he wrote . . . In Rush, we see a turning point. The complex history of Indian-white medical interaction in the colonial period is dismissed, and Rush points toward a nineteenth-century future in which Indians appear in American physicians’ works primarily as representatives of a vanishing race.³⁶⁴

In conclusion, while I am aware that I am condensing and simplifying a very complex narrative of European American medical and botanical history, this review provides a glimpse into the European American context for both women’s reproductive health and cross-racial ethnobotanical encounters. However, jointly with my research on botanical exchanges between Native, African, and Europeans in the New World, and the observed patterns of plant use in my study, this recounting serves as context for some of the ethnogynecological ideas that were foundational for many of the European authors of my archival documents. Although I am also aware that a full development of women’s reproductive health and medical history has deep roots in the European and American witchcraft trials of the 16th and 17th centuries, that aspect of women’s medical history is beyond the scope of my dissertation and I do not recount it.

³⁶⁴ Robinson, “New Worlds, New Medicines,” 109-110.

CHAPTER 5: INTERPRETATION AND ANALYSIS

It is not our differences that divide us. It is our inability to recognize, accept, and celebrate those differences. In our work and in our living, we must recognize that difference is a reason for celebration and growth, rather than a reason for destruction.

--Audre Lorde, *Our Dead Behind Us*

Negotiated Epistemologies: A Thought Experiment

The purpose of figure 5.1. is to create a *gedankenexperimente*, and test it in image and descriptive forms. *Gedankenexperimente* is a German-hybrid word that translates to mean “thought experiment.” My research includes this thought experiment on traditional ecological knowledge to intersect with my observations from the literature review and the Ethnogyneology Index, and to strengthen confidence in my research conclusions. Philosopher John Norton takes the view that thought experiments are forms of argument and they provide information that, “does not come from the reporting of new empirical data,” rather from visualizations and narratives.³⁶⁵ I have created the simplest model possible, realizing that it is impossible as a real account of events. The intention is not to build the model on actual proceedings. Rather, the narrative of a thought experiment is couched in suppositions - the assumptions, proposals, hypotheses, critical questions, and discussions that follow this model. A thought experiment serves the purpose of providing an additional way of understanding the ethnogyneology information and the literature, thereby enriching the meaning of negotiated epistemologies of ecological knowledge.

³⁶⁵ John Norton, “Thought Experiments in Einstein’s Work,” in *Thought Experiments in Science and Philosophy*, edited by Tamara Horowitz and Gerald J. Massey, (Savage, MD: Rowman & Littlefield, 1991), 129. My model does not strictly conform to western philosophy’s standards of argumentation, examples of which may be found in: James Robert Brown and Yiftach Fehige, “Thought Experiments,” *The Stanford Encyclopedia of Philosophy* (2011), <http://plato.stanford.edu/archives/fall2011/entries/thought-experiment/> accessed January 30, 2014; Massimo Pigliucci, “What is a Thought Experiment, Anyhow?” *Philosophy Now: A Magazine of Ideas* (2006), http://philosophynow.org/issues/58/What_is_a_Thought_Experiment_Anyhow accessed January 30, 2014; or, Michael A. Bishop, “Why Thought Experiments are Not Arguments,” *Philosophy of Science* 66 (1999), 534-541.

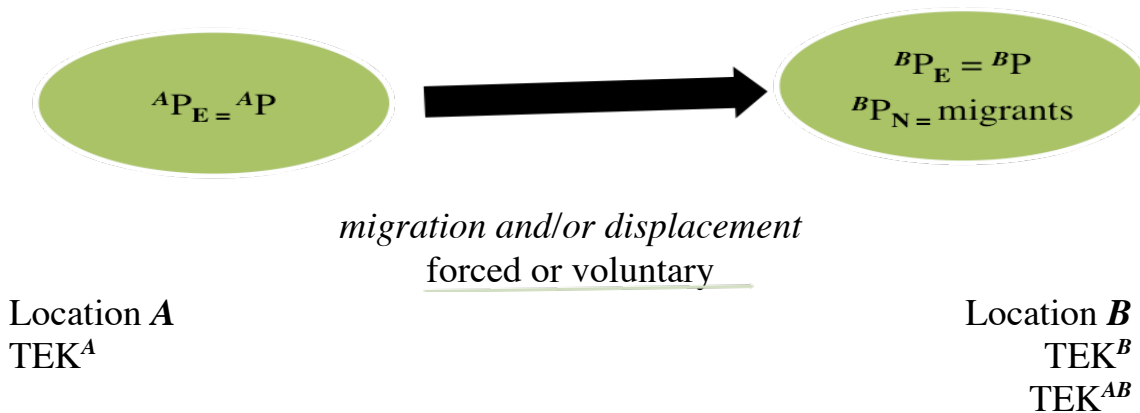


Figure 5.1. Negotiated Epistemologies of Traditional Ecological Knowledge

Key:

A or B

The location is the environment where a group of people resides, the context for and part of their traditional ecological knowledge. Location is synonymous with place, environment, ecological zone or ecosystem in this model.

${}^A P_E = {}^A P$

The group of people (P) who are established (E) at location **A**, and whose traditional knowledge of that location consists of TEK^A

${}^B P_E = {}^B P$

The group of people (P) who are established (E) at location **B**, and whose traditional knowledge of that location consists of TEK^B

${}^B P_N$

The group of people who were formerly established at location **A** as ${}^A P_E = {}^A P$, who migrated from location **A** and are new (N) to location **B**, and whose emerging knowledge of location **B** is the purpose of the hypothesis and discussion, below.

TEK^A or
TEK^B

The traditional ecological knowledge practices and processes held by the people who reside in each location.

TEK^{AB}

Traditional ecological knowledge hypothesized as some combination of a people's original ecological knowledge, TEK^A or TEK^B, in interaction with a new situation; and the possible result of the negotiated epistemologies of the people established at **B** location (${}^B P_E$ or ${}^B P$), and the people migrated into **B** location (${}^B P_N$).

Negotiated Epistemologies: Assumptions

1. The model assumes two locations, **A** and **B**. These locations are the environments or ecosystems for the people who reside there.
2. The model assumes two different groups of people, ${}^A\text{P}$ and ${}^B\text{P}$ based on their location of origin. The two groups of people are distinguishable from each other and each is defined as a group based on traits of shared culture, history, and lineage.
3. At location **A** there are the people who are established ${}^A\text{P}_E$. At location **B** there are the people who are established ${}^B\text{P}_E$ as well as the people who are newly arrived from location **A**, ${}^B\text{P}_N$
4. TEK^A and TEK^B are assumed to be the traditional ecological knowledge held by the people who reside in each location.
5. Migration is the movement of a group from one location to another, and can be as a result of:
 - a. Displacement - the necessity to leave a place of some type of perceived misfortune.
 - b. Voluntary - the desire to move to a new place of perceived opportunity.
 - c. Forced - being pushed out of the place of origin due to loss of power, loss of freedom, punishment, indenture, servitude, or enslavement; or some combination of these causes.
 - d. Migration is assumed to be unidirectional -- people from location **A** move to location **B** -- and for this model there are no other groups living in either location.

Negotiated Epistemologies: Suppositions

The purpose of this model is to consider the characteristics of TEK^{AB} ; to consider what might be the processes for developing ecological knowledge and the content of ecological knowledge when humans relocate from location **A** to location **B**, regardless of the impetus for their migration. For many reasons movement is a part of human history. Locations undergo environmental changes, such as the melting of tundra permafrost attributable to global warming,

but shifts in traditional ecological knowledge of a specific place due to planetary environmental change is not a part of the considerations for this simple model. In my research on ethnogynecological plant use in American history it is evident that Native, African, and European populations all migrated, for a variety of reasons. One issue that is raised by these movements and considered in this model is whether a people's ecological knowledge, TEK^A , is lost through migration to a new location. Another issue is the possible processes of new ecological knowledge formation, TEK^{AB} , when people are in contact with new people and new environments. This model is an attempt to address these two issues and ultimately to imagine the epistemological processes that might occur within a group of people when their traditional ecological knowledge transforms through migration and through contact.

Traditional ecological knowledge at an original location and as part of the worldview of the people at that location, TEK^A or TEK^B , is a network of interdependent relationships that include and are contextualized by that location. I argue elsewhere that this makes traditional ecological knowledge both ecosystem and cultural knowledge; for a specific group of people it is both emplaced and embodied knowledge. In my review of research on traditional ecological and indigenous knowledge I have described the development of traditional ecological knowledge by an indigenous population at location *A* or *B*. The question I am asking of this model is: What might happen to indigenous people and their traditional ecological knowledge in the event of their movement to a new location and their interactions with the people already established in that location? What follows is a hypothetical discussion of relationships and processes within the model. I then proceed to discuss these proposed relationships and processes based on my research. First, my suggestions of what might happen:

1. At location **B** the people who arrive bring their ecological knowledge with them. I propose it is embedded in their identity, culture, and concept of themselves as individuals and as a group. It is embodied knowledge and it cannot be lost in migration. This knowledge retention is the basis of diasporic syncretism and hybrid traditions, such as the syncretic West African/European Christian religious traditions of Voudoun and Santeria. Although the process of moving from location A to location B may involve varying degrees of traumatic experience from disorientation and dislocation, and I acknowledge that trauma might effect the retention and transmission of knowledge, I do not consider that the knowledge is lost because of these traumas. However, the precise consequences of trauma on the retention of traditions and knowledge by migrating indigenous populations is not the subject of my dissertation.
2. At location **B** the people who arrive bring a disrupted web of relationships that must take into account a new location, ecosystem, and new relationships with other and different groups of people. The new location functions as both context for and a part of a new web of relationships. I propose that the old web does not collapse since the ecosystem is but one, albeit critical, strand in an original cosmology, but indeed relationships are altered, they need to be built or rebuilt after a migration. Atlantic history was epitomized by this explosive growth in dramatic new encounters between peoples, their beliefs, their traditions, and their relationships with different ecosystems.
3. At location **B** there is new knowledge to be built, but I maintain that this new knowledge is established from the foundation of a people's existing cosmology and their customary rules about the building of ecological relationships within their existential network. As well, the new things to learn at location **B** include familiar ecological elements and patterns from a

people's previous concepts of and relationships to animals, humans, food, soil, plants, climate, and weather. For example, while the species of healing plants and the types of diseases in a new location are new, the fact of plants, or the actuality of human suffering from disease and disability is not novel. Acknowledging that new diseases may completely overwhelm existing models of ecological and social understanding and coping, as happened with Native exposure to smallpox, attempts will be made within a people's existing understanding to cope with a new disease situation. Some events, such as childbirth, might continue to happen within very familiar social and ecological patterns even in a new location, and prompt the group to search for new knowledge to support the familiar event. In this hypothetical model previous learning about plants, disease, and healing would be assumed to be crucial to comprehending and coping with the ecological elements of the new location, new species, and new ecological patterns in order to create new, adaptive practices and behaviors.

4. While all elements within the new location may have shifted, the degree of difference might be anything from familiar to alien. In Atlantic history, for example, African population shifts from West Africa to the Caribbean, or European population shifts from Western Europe to northeast North America were considered less disruptive of these group's existing ecological patterns, elements, and even species in the new locations. I imagine that the degree of difference in ecological elements, like climate, soil, or species, would have an effect on the ease and extent of the sharing of ecological knowledge between established and newly arrived groups of people with greater overall similarity in location **A** and location **B** signaling greater retention of existing knowledge and perhaps easier communication of shared knowledge.

5. At location **B** indigenous knowledge systems exist within the worldview of the people established in that location, and those people are able, and possibly willing, to share information about the ecological elements in location **B** with the newly arrived migrants. The epistemologies underlying the ecological knowledge of the people who arrive and the people who are already there may be somewhat similar or quite distinctive. Existing residents are potentially able to communicate to the people who arrive that under certain conditions ecological elements, such as plants and weather, create a pattern or respond in a way that has significance within the established ecological knowledge of that place. For example, existing residents would be able to communicate about seasonal patterns of rainfall, or location of plant species within specific ecosystems.
6. When knowledge is negotiated at location **B** it is assumed that the ecological knowledge of the people who arrive will be shifted, and will emerge as new knowledge of a new location. The degree of change in the worldview of those same people, in their cultural rules, and embodied knowledge is not easy to ascertain. Any transformation of the knowledge of the people who were already established in the location, due to their interactions with the newly arrived migrants, is also difficult to presume. The extent of sharing and the ability of established and new groups of people to negotiate ecological knowledge is subject to challenges of language and culture, and relationships of unequal agency and power, as discussed elsewhere in this research. What transpires across the different epistemologies of these groups of people, I suggest, is the formation of an emerging ecological knowledge of the people who arrive and a transformation of the existing knowledge of the people who are established.

7. The result of negotiated epistemologies of traditional ecological knowledge is an emerging shared knowledge, TEK^{AB}. I surmise, in this case, that the traditional uses of an ecosystem **B** plant species that incorporate the ecological knowledge of a similar species of plants by people previously established at location **A**, and newly arrived at location **B**, may ultimately emerge to become a new or mixed plant use for both groups now living at location **B**. In my research, what makes this new ecological knowledge, TEK^{AB}, so worthy of consideration is that the negotiations necessary for this emerging knowledge might occur across boundaries of radically different cultures, epistemologies, and worldviews.

Negotiated Epistemologies: Critical Questions

Many questions emerge from this thought experiment, and it is my intention to address, in my conclusion, those issues that are essential for understanding the central problem of what a negotiated epistemology of ecological knowledge could be; of what might happen to people and their ecological knowledge in the event of their movement to a new location and their subsequent interactions with the people already established in that location. These critical questions address the role of place in traditional ecological knowledge, how traditional ecological knowledge is both held and transformed by migration and contact, and what this transformed knowledge should be called:

1. What does it mean that places -- location, environment, and ecosystem -- serve as the context for the web of relationships that comprises indigenous knowledge? How do different groups of people hold and maintain traditional ecological knowledge within their place-based networks?
2. When a new set of people are settled in a new location can the traditional ecological knowledge of existing populations remain unchanged? What types of interactions take place

in order that established ecological knowledge is transformed? What happens to the traditional ecological knowledge of the people who are newly arrived?

3. If the traditional ecological knowledge of the people who arrive contributes to the transformation of the established ecological knowledge of the people already in a location is the emerging knowledge local, traditional, or both? Why should the established, emerging, or transformed knowledge located at, and concerned with the new location's elements, patterns, and species be described as traditional ecological knowledge for one set of people, and local ecological knowledge for another?

Ultimately, I propose that by addressing the issues raised by these questions the discourse of traditional ecological knowledge is enriched with a deeper understanding of the historic and epistemic complexities of the ecological knowledge held by indigenous groups. My research purpose is to critique and enlarge this discourse, and here I will develop this purpose further, and show how a slightly transformed discourse functions to expose the epistemic sophistication of indigenous worldviews and indigenous knowledge. It is only from this position of acknowledgement of the sophistication and nuances of indigenous knowledge that a truly fruitful dialog can occur between western and indigenous worldviews. I complete this *gedankenexperimente* with a discussion of research that elucidates these possibilities for altering the discourse of traditional ecological knowledge.

Thought Experiment: Traditional Ecological Knowledge Discourse

While traditional ecological knowledge is well theorized, it takes stability of people for granted.

--Nell Painter

One motivation for the development of this thought experiment about traditional ecological knowledge is to consider the circumstances of new ecological knowledge created in

existing locations by people who already hold ecological knowledge of other places. My research into the ways in which knowledge may have circulated about plant remedies for women's reproductive health between Native, African, and European communities is an attempt to find an instance of the creation of new knowledge regarding the use of medicinal plants. My goal is to understand the significance of both emplaced and embodied ecological knowledge, and the possibility that people communicate and negotiate their traditional practices with each other. These negotiations of traditional knowledge might lead to new ecological knowledge that retains old traditions in part or whole.

Extending my *gedankenexperimente* on traditional ecological knowledge negotiation, I imagine, for example, that a Native midwife in northern New York in the early 1800s, attends the birth of a newly arrived African woman who has escaped slavery in Delaware, and the Native midwife introduces the use of *Leonurus cardiaca*, or motherwort, for assisting in the successful delivery of the placenta. That new mother and all of the women in attendance at the birth might then be assumed to carry this useful knowledge with them for future reference. Perhaps, while the new mother is resting and breastfeeding her newborn, these women ask the midwife to show them the plant and tell them where, when, and how it is harvested. They may also share with the Native midwife their knowledge of plants used to aid expulsion of the placenta. In future all of these women will seek to use plants that they are already familiar with for confinement, but they will have added to their repertoire of remedies as a result of their serendipitous contact with each other during a birth. From that point forward they can combine their existing ethnogynecological knowledge with new knowledge of a new plant. In this situation, the Native midwife's knowledge of the ethnogynecologically important plants of her immediate environment is traditional ecological knowledge, rooted in intimate familiarity with important plant species from

her people's extended tenure on that land. Any African or European women in the birthing room, whether they ordinarily reside in New York or in Maryland, have gained knowledge of plant species identification and use that they will add to their existing ethnogynecology knowledge, use in new combinations with their existing practices, and likely pass on as useful information to the members of their families and communities.

I consider that the interactions that might have occurred around plants used for women's reproductive health concerns could be representative of the ways in which people communicated their ecological knowledge and negotiated with each other to learn new things about their environment, and this example of ethnogynecological interactions serves to demonstrate my assertion that traditional ecological knowledge is both place dependent and culturally maintained. Traditional ecological knowledge is ecological information that depends on an intimate familiarity with the immediate environment and knowledge that is embedded in the culture of a people, no matter where they are. I believe that when traditional ecological knowledge is equally conceptualized as embodied cultural knowledge, and the emphasis is not only on its characteristics as emplaced knowledge, traditional ecological knowledge can be more fully viewed as both enduring and dynamic, purposefully transmitted by elders, experts, experiences, and stories, from one generation to the next within a social group's cosmology. As well, traditional ecological knowledge understood as embodied cultural knowledge is fully able to shift, change, and move with the people who hold this ecological knowledge, and it is potentially available to be shared and negotiated with the people who hold knowledge of ecosystems and locations newly encountered. I conclude the analysis of my research by examining the extent to which ethnogynecological knowledge exchanges might be considered representative, and the possibility of the sharing of ecological knowledge across race and culture.

Negotiating Ecological Knowledge Across Boundaries

The conceptual approaches taken in my research support an understanding of the agency of those people who have been marginalized and silenced in history and the archives, therefore, this discussion of the negotiation of ethnobotanical knowledge across racial and cultural boundaries focuses on research that primarily considers Native knowledge, African knowledge, and the interactions between Native and African populations that led to the potential for shared knowledge. Even as the subject of European ethnogynecological knowledge in the New World is part of my overall investigations, it is not in the foreground of the following analysis. European stories of the Americas are most commonly portrayed at the center of historiography. Instead, I use this opportunity to envision those European stories from the perspective of the narratives about Native and African ecological knowledge. To conduct this analysis I begin by considering historical ideas about race, misconceptions about relationships between Native and African communities, and assumptions about disappearances, retentions, and sharing of Native and African ethnobotanical knowledge in relationship to the overall discourse of traditional ecological knowledge.

The research on the variable ideas and categorizations of race, over the 17th through 20th centuries in North America is vast, and it is not necessary for me to address this research in its entirety. Among the studies I have selected however, there are a number of critical points of view held in common. They all emphasize the fluctuating, politicized, and increasingly controversial racial categorizations of Native and African peoples through these years of European settlement and nationhood in North America. John Wood Sweet investigates race and citizenship in *Bodies Politic: Negotiating Race in the American North, 1730-1830*, and he contends, “Race acquires its power by exaggerating, extending, and transmuting other social cleavages and modes of self-

understanding. Racial identity is particularly complicated because of the way the categories themselves shift over time.”³⁶⁶ The 18th century in particular was a moment of debate around the changeable meanings of racial categories, and racial differences were increasingly considered to be permanent, significant, and hierarchical. Sweet suggests that, “some intellectuals sympathetic with the challenges faced by Indians and free blacks in the new Republic raised the possibility that white prejudices were not so much a natural response to racial differences as a major source of the problem.”³⁶⁷ Sweet argues for similarities in Native and African responses to this racialization of North American society, and the ways in which newly forming concepts of racial differences disguised more complex ideas about culture. Sweet claims that,

Stories of [religious] conversions illustrate how settlers paralyzed the alleged responses of Africans and Indians to Christianity into stereotypes about racial natures. Ideas about both cultural differences and racial characteristics served the same purpose of explaining why black people and Indians could never be incorporated into American society . . . Certainly, propagandists of colonization in North America tried to convince themselves that race and culture were inextricable . . . But shouldn’t we consider the alternate possibility that individuals and groups reproduce culture through more complex processes?³⁶⁸

Anthropologist Lee D. Baker takes up this theme of the racialization of North America, and the conflation of race and culture in his book, *Anthropology and the Racial Politics of Culture*. Baker constructs his arguments around what he calls “the racial politics of culture and the cultural politics of race” by explaining the ways in which African Americans and Native Americans were treated differently as subjects in the anthropological studies of the late 19th and early 20th centuries. Baker argues that, “Race and culture have routinely served as contentious fulcrums for particular political projects that range from claims of white supremacy to claims for

³⁶⁶ John Wood Sweet, *Bodies Politic: Negotiating Race in the American North, 1730-1830* (Philadelphia: University of Pennsylvania Press, 2003): 5.

³⁶⁷ Sweet, *Bodies Politic*, 275.

³⁶⁸ Sweet, *Bodies Politic*, 106-107.

citizenship, sovereignty, and civil rights.”³⁶⁹ Baker demonstrates the role that anthropology plays in distinct discourses of race and culture for these two marginalized groups, Native and African Americans. His purpose is to show, “the history of specific anthropological questions that turn on and around race and culture in the United States.”³⁷⁰ In his text, Baker makes use of a distinct historiographic method of analysis by presenting and critiquing vignettes of the research methodologies and findings of individual anthropologists from the point of view of Baker’s two main themes of culture and race. Baker’s ultimate aim is to show the slipperiness of the social constructs of race and culture, and the ways in which social power continues to mediate notions of race and culture relative to these two marginalized groups.

James N. Leiker demonstrates the connections between the growing New World racialization of Natives and Africans, their complex interactions with each other, and the ways that European imperialism overshadowed these interactions. Referencing Native scholar Vine Deloria, Jr. (Yankton Sioux), Leiker connects the shifting concepts of race with the economic and political exigencies of imperialism, and he suggests that,

Vine Deloria Jr. has claimed that whites regarded blacks as “draft animals,” fit only for work, whereas Indians were seen as “wild animals” who infested vast acreages of bountiful land. In dehumanizing both groups, racist attitudes justified the stealing of labor and freedom from one, and the stealing of land from the other . . . Most scholars concur, however, that initial black-Indian encounters happened through the colonial expansion of European powers into the Western Hemisphere and the dependence of empire-building on expropriated labor. The concept of “race” evolved to justify the elaborate labor hierarchy that followed.³⁷¹

James Brooks looks at the relationship of shifting concepts of race to the realities of colonialism and in his text, *Captives and Cousins: Slavery, Kinship, and Community in the Southwest*

³⁶⁹ Lee D. Baker, *Anthropology and the Racial Politics of Culture* (Durham: Duke Univ. Press, 2010), 5.

³⁷⁰ Baker, *Anthropology and the Racial Politics of Culture*, xii.

³⁷¹ James N. Leiker, “Tangled Histories: Contemporary Research in African American/Native American Intersections,” in *The First and the Forced: Essays on the Native American and African American Experience*, edited by James N. Leiker, Kim Warren and Barbara Watkins (Lawrence, KS: Hall Center for the Humanities, University of Kansas, 2007), 8-10.

Borderlands, he studies racial and cultural interactions among Spanish settlers, various Native American nations, and enslaved Africans. Brooks' purpose is to understand the results of interactions across racialized groups of people. Brooks emphasizes the importance of looking beyond race to explain these interactions, and he suggests incorporating a type of syncretism that occurs at cultural interfaces. Brooks contends, "When cultural worlds collide and coalesce, the social languages that give them voice become mixed. New words and meanings are born; others are lost to the opacity of the mixture itself."³⁷² Like Leiker, Brooks examines the rapidly changing concept of race and argues that these concepts effected the interactions between different peoples. Tiya Miles and Sharon Holland, in their edited volume, *Crossing Waters Crossing Worlds: The African Diaspora in Indian Country*, examine the ways in which race intersected with culture, ethnicity, and identity during the interactions between marginalized groups of Native Americans and African Americans. In their introductory comments they argue:

What happens when key issues in African diasporic experience, such as migration, freedom, citizenship, belonging, peoplehood, and cultural retention and creation, and key issues in Native American experience, such as tribalism, protection of homelands, self-determination, political sovereignty, and cultural-spiritual preservation and renewal, converge? Scholars of both African American and Native American history who have pursued this question [have found] that Africans and Indians forged bonds with one another while jointly enslaved in the Americas and West Indies in the seventeenth century and eighteenth century; that some enslaved African people successfully escaped to Indian countries; that major figures in black historical life have been both black and Indian in racial and cultural background; and that African American and Native American individuals and groups have joined forces to challenge European imperialism, colonialism, and slavery.³⁷³

Miles and Holland demonstrate the many ways in which Native and African peoples had contact with each other over both shared and distinct challenges in their colonial experiences. James

³⁷² James F. Brooks, *Captives and Cousins: Slavery, Kinship, and Community in the Southwest Borderlands* (Chapel Hill: The University of North Carolina Press, 2002): 9.

³⁷³ Tiya Miles and Sharon P. Holland, eds., *Crossing Waters, Crossing Worlds: The African Diaspora in Indian Country* (Durham: Duke University Press, 2006), 4, 9-10.

Taylor Jackson studies southern Native Americans' forced removals from the early 19th to early 20th centuries, emphasizing that in these times ideas of race in North America continued to be fluid and differently constructed between common citizens and government policy. Jackson claims, "There were innumerable ties of trade, kinship, violence, and faith that, before the expulsions, bound First Peoples, invaders, and enslaved people . . . First Peoples, invaders, and enslaved people lived as neighbors in any number of ways that worked against - and, indeed, undermined - the socially constructed identities of race and civilization that prevailed during the Age of Jackson [1828-1850]."³⁷⁴

In summary, the research of Sweet, Baker, Leiker, Brooks, Miles and Holland, and Jackson demonstrates that in the newly forming nations of the New World there was, and one might argue that there still is, a considerable debate on the concept of race pertaining to both Native and African communities. In the investigation undertaken by these authors what is most directly important to my research is that even as Native and African Americans were both accommodating to and contesting their racialized categorization and disempowerment by European Americans they were meeting each other across these categories. My research hinges on understanding contested ideas of both race and culture in order to look at knowledge sharing across these boundaries, and to deconstruct the transmission of ecological knowledge, and the formation of ecological knowledge that results from these interactions. Between the early 17th and early 20th centuries the changing definitions of racial categories for both Natives and Africans had an effect on the interactions between the two groups in increasingly complex ways. Native and African Americans were in conflict and cooperation with each other, they were learning from each other's deeply held cultural practices, and they were increasingly sharing

³⁷⁴ James Taylor Carson, "The Obituary of Nations: Ethnic Cleansing, Memory, and the Origins of the Old South," *Southern Cultures* (Winter 2008): 24.

knowledge across racialized boundaries. I review the studies that discuss ecological knowledge sharing between Native and African Americans after an assessment of the research and assumptions concerning the ethnobotanical knowledge of each group.

African American Ethnobotanical Knowledge: Plants as well as Peoples

The research on African knowledge and cultural retentions in the New World is robust, multidisciplinary, and fascinating. It is particularly well documented for culturally distinctive religious and food preferences that were established within the diaspora and persisted as parts of a unique African worldview.³⁷⁵ I contend that if in fact ecological knowledge is embodied in a people's culture it is likely that indigenous African ecological knowledge would endure, like food choices and religious beliefs, in some recognizable forms in the New World. Then again, it is true that for indigenous worldviews, like those held by newly enslaved Africans, foodways and religious practices are manifestly ecological; hence the evidence for the continuance of African traditional ecological knowledge in the New World is buttressed by the observed maintenance of these other cultural forms. However, research on the continuance of African ecological knowledge for individual species or for specific ecological practices is limited, except in Brazil and the Caribbean where in-depth study is attractive because of the larger African population numbers. Given that the overall focus of my analysis of existing research is on indications of Native and African ethnogynecological knowledge and practices, and the sharing of this knowledge between and among Europeans in the temperate and subtropical climes of North America, the limited number of studies within this field obliges me to include research that is either outside the main geographical area of my archival search, or ethnobotanical studies that are not limited to ethnogynecology.

³⁷⁵ Judith Carney, "Seeds of Memory: Botanical Legacies of the African Diaspora," in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford (New York: Springer, 2013), 30, talks about preservation of dietary preferences and culinary traditions.

I begin with the arguments of Henry Louis Gates, Jr., who provides a theoretical framework from which to view studies about African retentions of cultural knowledge. In his classic text, *The Signifying Monkey: A Theory of African-American Literary Criticism*, Gates discusses the possibility of retentions of African cultural forms in the Americas. Gates speaks to the fluid nature of cultural retention, which he understands as additionally indicating the fundamental adaptability of existing worldviews, and he claims:

Common sense, in retrospect, argues that these retained elements of culture should have survived, that their complete annihilation would have been far more remarkable than their preservation. The African, after all, was a traveler, albeit an abrupt, ironic traveler, through space and time; and like every traveler, the African “read” a new environment within a *received framework* [emphasis added] of meaning and belief.³⁷⁶

The fluidity and adaptability of the slaves’ culturally embedded knowledge was foundational to the retentions of that knowledge within the diaspora population, and Gate’s theory of a “received framework” is a reminder that Africans arrived in the New World with their indigenous cultural elements and traditional knowledge as a ready referent for comprehending and making use of their shocking new circumstances.

Judith Carney and Richard Rosomoff in their text, *In The Shadow of Slavery*, provide evidence of African retentions of ecological knowledge through details about the exchanges of ethnobotanical practices between African slaves and their European owners. Carney and Rosomoff reinterpret evidence from both pre-slavery and slave trading sea journeys and they theorize new ways of understanding the introduction of African botanical specimens and knowledge into the Americas. They claim, “Africa’s botanical legacy traveled with its peoples . . . across vast intercontinental trading networks. These networks spanned thousands of years and moved sequentially from the Indian Ocean through the Mediterranean, eventually reaching the

³⁷⁶ Henry Louis Gates, Jr., *The Signifying Monkey: A Theory of African-American Literary Criticism* (New York: Oxford University Press, 1988): 4.

Atlantic shores of the Americas. The African diaspora was one of plants as well as peoples.”³⁷⁷ Carney and Rosomoff delve into maritime journals and records to uncover the particulars of the provisioning, over 350 years, of 35,000 documented slave trade ship voyages, and the comparative botany of food and medicinal plants thus transported and currently found and used on both the New World and African shores of the Atlantic. Robert Voeks argues that Africans’ ability to create an ethnobotanical network in the Americas was attributable to the fact that they met sufficiently familiar ecological conditions and known or similar medicinal plant species when they arrived in the New World, especially in the Caribbean and the Caribbean rim of North and South America. It appears that Africans understood these new but familiar conditions and species by using their extant traditional ecological knowledge for the development of new botanical knowledge and novel practices in their new location. Voeks argues:

Examination of the specific weeds and cultigens found in African diaspora pharmacopeia points to the continuity of healing traditions . . . When Yoruba slaves arrived in Brazil, they discovered many of their familiar healing plants - herbaceous, *weedy* and New World in origin - but nonetheless already lexically encoded in the Yoruba language and part of their Old World pharmacopeia . . . It is likewise clear from other pharmacopeia reported for South America, and especially the Caribbean, which has been more thoroughly documented, that this phenomenon is universal. Africans on both sides of the Atlantic functioned in and came to employ medicinally a similar weedy flora.³⁷⁸

Here, Voeks’ arguments are comparable to Gate’s theory of a received framework, and Voeks’ concept of lexical encoding of plant knowledge for a particular culture is critical to understanding current theories about traditional ecological knowledge. Current theories divide local knowledge from traditional knowledge on the basis of indigenous peoples’ tenure in a specific place. Berkes, specifically, characterizes local ecological knowledge as lacking encoding

³⁷⁷ Judith A. Carney and Richard Nicholas Rosomoff, *In the Shadow of Slavery: Africa’s Botanical Legacy in the Atlantic World* (Berkeley: University of California Press, 2009), 2-3.

³⁷⁸ Voeks, “Traditions in Transition,” 283.

in language and stories that is typical of traditional ecological knowledge.³⁷⁹ I return to this debate in my analysis of the distinctions between local and traditional knowledge within traditional ecological knowledge discourse. First, I continue to examine the peculiarities of the slave trade and the movement of plant species that both hindered and facilitated Africans' retention and adaptation of their traditional knowledge to American ecosystems and flora.

Voeks, Carney, and Rosomoff's arguments for the retentions of African ethnobotanical knowledge rest on a number of issues, namely: the political economy of the slave trade, the role played by communities of escaped slaves, or maroons, the considerable pre-trade homogenization of flora in New and Old World, the degree to which Africans served as vectors and agents for species diffusions, and the contact between African and Native communities suggestive of substitution and sharing of knowledge of plants species between them and among Natives, Africans, and Europeans. Whereas Judith Carney uncovers South Carolina plantation owners' requests for enslaving people from particular West African ethnic groups who were known to possess expert knowledge on the cultivation of rice in a finicky subtropical climate,³⁸⁰ Voeks discusses the high rate of turnover and new entry for slave labor and the effect this had on the retention of African cultural forms within enslaved populations. Voeks reminds us that the slaves were brutally treated, and it was the philosophy of many owners that it was cheaper to replace labor than to care for the enslaved humanely. Voeks insists that,

Because slave owners routinely overworked, underfed, and discouraged family units within their enslaved populations, there was a steady demand for replacement labor . . . Because slave owners viewed the importation of 'fresh hands' as economically preferable to the cost of maintaining a healthy slave

³⁷⁹ This argument is specific to Berkes, *Sacred Ecology*, 3rd, 222

³⁸⁰ See Judith A. Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge, MA: Harvard University Press, 2001). Also discussed in Judith Carney, "Seeds of Memory: Botanical Legacies of the African Diaspora," in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford (New York: Springer, 2013); and Judith A. Carney and Richard Nicholas Rosomoff, *In the Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World* (Berkeley: University of California Press, 2009).

population, the captive labour force was throughout much of the slave trade numerically dominated by people whose world view was shaped by their African heritage.³⁸¹

This continual arrival of new Africans with their existing indigenous traditions and knowledge, attributable to the perverse political and economic logic of the slave trade, would have contributed to keeping distinctly African cultural practices alive throughout enslaved communities.

It seems as well that slavery, as brutal as it was, was not an absolute barrier to the retention of ecological knowledge in general and plant knowledge specifically. Favorable conditions for the retention of Africans' traditional knowledge of plants and plant remedies depended on the transport for food and medicine by the enslaved and their captors of known species, the presence of similar species in a new habitat, and the insistent incentive of medical and sustenance needs. Ecological knowledge, especially plant knowledge, was critical to survival; reliance on plants for subsistence and medicine was an unavoidable, essential part of life for all New World populations up through the early 20th century. Voeks argues:

African pioneers forged novel ethnobotanical relations . . . based especially on systems of knowledge introduced by the varied African ethnic groups that arrived in the Americas. Considerable knowledge was certainly lost in the transatlantic crossing, and many useful African species were absent . . . But these displaced peoples had subsistence and health needs, which, although different from those left behind in Africa, nevertheless depended upon knowledge of the local flora. By a variety of methods, the black diaspora became skilled ethnobotanists.³⁸²

In addition to ecological knowledge retentions attributable to the economic rationalizations of the slave trade or the agency of the enslaved, the profound ethnobotanical knowledge of the enslaved was both acknowledged and appropriated by Europeans, freely and with impunity. In this way what traditional African knowledge was used and collected was in that sense also maintained,

³⁸¹ Voeks, "Traditions in Transition," 277.

³⁸² Voeks, "Traditions in Transition," 289.

even as it was not credited to African sources but instead to their European slave owners. Judith Carney observes that,

Ownership of human beings imparted to slaveholders the right to appropriate the practices and cultivation methods that slaves used to secure their daily sustenance. Property rights gave plantation owners the power to claim that knowledge as their own and transmute it over time as proof of their presumed ingenuity. Slavery signifies not only an appropriation of the body and its labor but also the knowledge and ideas held by enslaved human beings. Significantly, it enabled the slaveholder to trade occasional favorable treatment for the knowledge and skills of the enslaved person's mind.³⁸³

Carney's observations on the trading of favorable treatment for knowledge is reiterated in research on the role of enslaved women serving as skilled healers and midwives within the plantation and neighboring communities, a topic I return to in the conclusion of my research.

Africans came from sophisticated, very old indigenous ecological traditions and were intimately familiar with the sustenance and medical uses of plants. In addition to the full provisioning of Atlantic Ocean crossings, that lasted anywhere from 6 weeks to 3 months, with plant foods from every part of the trade's geographical triangle -- Europe, Africa, and the Americas -- seeds, plants, and people were transported purposefully on each leg of the journey for labor, cultivation, and collection. Geographer Erica Moret claims that,

The savanna-rainforest zone . . . from where many of these [enslaved] groups originated, was one of three African centers, or 'cradles,' of agricultural domestication, where over 2,000 native plant species were being cultivated for food and magico-medicinal use at the time when the slave trade began . . . The ethnic groups most significantly represented . . . particularly those of Yoruba and Dahomean decent, were also those that had among the world's most developed ethnomedicinal systems at the time of colonial rule. Yoruba communities, in particular, were widely credited for their healing skills by the various colonial authorities in the Caribbean.³⁸⁴

³⁸³ Carney, "Seeds of Memory," 30.

³⁸⁴ Erica S. Moret, "Trans-Atlantic Diaspora Ethnobotany: Legacies of West African and Iberian Mediterranean Migration in Central Cuba," in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford (New York: Springer, 2013), 223.

Voeks agrees with Moret's argument about the sophistication of African ethnobotanical knowledge and practices, and he reports on a particular example, reminiscent of the previous ethnobotanical stories of *Gossypium*. Voeks says,

In West Africa, crop plants frequently served both food and medicinal purposes. Grains, fruits and tubers served to sustain the body; their leaves, bark and roots were employed to heal it. The introduction of Old World food plants to feed the burgeoning slave population thus coincidentally supplied bondsmen with a portion of their native pharmacopeia . . . Okra (*Abelmoschus esculentus*), a West African domesticate, was introduced as a staple food for the American slave population. It continued its dual role as food and abortifacient for African slaves.³⁸⁵

Enslaved Africans arrived in the Americas and encountered both familiar domesticates as well as African plant species that had already been transported and cultivated, especially in subtropical and tropical regions, conditions that facilitated their retention of traditional ethnobotanical knowledge. In addition to the continual influx of slaves, newly arrived from their African homelands, the plants themselves were powerful aids to maintaining extant knowledge in the face of acknowledged hardships and trauma. Voeks argues that, "Endemic healing flora and native intellectual property diffused back and forth between Europe and the tropical colonies, dramatically transforming the geography of South American plant pharmacopoeia and folk healing traditions . . . The diffusion of African crop plants to the Americas facilitated the continuation of utility and cultural significance of these species among the black diaspora."³⁸⁶

Voeks, Moret, Carney, Rosomoff, and others who research both the ecological knowledge retentions of African diaspora communities and their ecological and cultural interactions with New World indigenous populations, demonstrate that previously existing traditional knowledge of African populations was a factor in shifting configurations of ecological knowledge for both Native and African communities. Voeks' recognizes that the emerging

³⁸⁵ Voeks, "Traditions in Transition," 279.

³⁸⁶ Voeks, "Traditions in Transition," 280-282.

knowledge of local plants and their uses is also the ecological inheritance of the indigenous populations in which African communities were geographically and culturally integrated to varying degrees. Voeks concedes, however, that the combined circumstances of recent arrival to an ecosystem and acquisition of ecological knowledge in that location may be features of a local knowledge rather than traditional knowledge and he observes, “Native people are characterized as repositories of ancient plant wisdom handed down as sacred oral text from generation to generation. Diaspora communities [and] . . . their relatively recent arrival in a protean landscape is seen as inconsistent with the acquisition of significant ethnobotanical knowledge.”³⁸⁷ On the other hand, Voeks critiques this point of view, and he is concerned to present a more nuanced picture of the relationship between “migration and ethnobotanical retention and acquisition” by questioning the “assumption that knowledge of nature is historically contingent in time and space.”³⁸⁸ Voeks argues, “African diaspora ethnobotany suggests that knowledge of nature is more fluid and adaptable than is often assumed.”³⁸⁹

In conclusion, to appreciate these arguments for the retention of Africans’ ecological knowledge and the influence of migrants’ retained knowledge on existing indigenous knowledge within a particular location, Robert Voeks and John Rashford question the stasis implied in focusing exclusively on the concern for longevity as a precondition of depictions of traditional ecological knowledge.³⁹⁰ Voeks and Rashford suggest:

This conceptual interpretation of the nature-society interface implies a degree of temporal and spatial emplacement of human populations and useful plant species that is strikingly inconsistent with the record. It hinges on the notion that

³⁸⁷ Voeks, “Traditions in Transition,” 275.

³⁸⁸ Voeks, “Traditions in Transition,” 276.

³⁸⁹ Robert Voeks, “Ethnobotany of Brazil’s African Diaspora: The Role of Floristic Homogenization,” in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford (New York: Springer, 2013), 289.

³⁹⁰ See Miguel N. Alexiades and Daniela M. Peluso, “Plants ‘of the Ancestors’ Plants ‘of the Outsiders’: Ese Eja History, Migration and Medicinal Plants,” in *Mobility and Migration in Indigenous Amazonia: Contemporary Ethnoecological Perspectives*, edited by Miguel N. Alexiades (New York: Berghahn Books, 2009); Carney, “Seeds of Memory,” and Carney and Rosomoff, *In the Shadow of Slavery*.

indigenous societies have been geographically stable throughout much of their history, which is clearly wrong in almost every instance, and follows from the untested assumptions that environmental knowledge is the outcome of a 'long-term empiricist enterprise.'³⁹¹

Before turning to specific arguments about retentions of Native ecological knowledge and practices, I reiterate that a fundamental assumption of my thought experiment is that the experiences of African peoples in the New World provides evidence for new ecological knowledge created in existing locations by people who already hold ecological knowledge of other places with the distinct possibility that the arriving migrants and the existing communities will negotiate their indigenous practices with each other. These negotiations of traditional knowledge and practices lead to new ecological knowledge that retains old traditions in part or whole and could continue to be viewed as traditional ecological knowledge.

Native American Ethnobotanical Knowledge: Complex Historical Processes

There is a presumption in the traditional ecological knowledge literature, as Voeks and Rashford claim, that Native communities maintained stable geographical locations in the Americas during the pre-European settlement era, and that their relationship to ecological knowledge was and remains tied to place. Based on this presumption the traditional ecological knowledge of Native communities is contrasted with the local ecological knowledge of African and European migrant communities regarding the essential issue of longevity in place. As well, the research about Native ecological knowledge often makes assumptions about the characteristics of indigenous identity. I begin with a discussion of the matter of indigenous identity, and I address the issues of local knowledge and longevity in place subsequently.

Two assumptions are made regarding the concept of indigenous identity. First, it is proposed that a limited number of indigenous American communities survived European contact

³⁹¹ Robert Voeks and John Rashford, eds, *African Ethnobotany in the Americas* (New York: Springer, 2013), 3;

and colonization, consequently the unquestionable genocide and decimation of Native communities signifies that Native knowledge and ways of life were extinguished. Second, it is assumed that the Native communities that did survive could not be truly considered indigenous unless they were “pure” therefore mixed or hybrid communities that formed in the New World lacked and/or lost essential characteristics of their indigenous identity without which their ecological knowledge could only be conceived of as other than traditional. It is important to examine both of these assumptions and their importance to the concept of indigenous identity within the discourse of traditional ecological knowledge.

The abominable history of Native dispossessions of life and land with the onset of European settlement of the New World does not need to be recounted in full in order to examine some of the consequences of this post-settlement devastation. Millions of Native peoples died or were killed, most were dispossessed of their lands of custom or origin, and those who survived slaughter, disease, and dispossession were severely persecuted for their indigenous cosmologies - their communities’ ways of life, kinship, religion, and medicine. Nevertheless, the assumption to question is whether particular Native peoples and Native cosmologies were completely extinguished in this wreckage. It is hardly a simple matter to address this question. Historian and ethnographer James Clifford provides two critical considerations for this problem of indigenous survivals. Clifford first considers the development of definitions of indigenous identity and culture, he then shines light on the craft of ethnographers and historians, those who officially chronicle and define peoples’ identities and cultural pasts.

Clifford attended the well-known trial, *Mashpee vs. New Seabury Corp.*, a failed initial attempt by the Mashpee Wampanoag to gain federal recognition in Massachusetts in 1979. Viewing this as an ethnographic experience it was pivotal in inspiring Clifford’s understanding

of the relationships between identity, culture, and Native survivals. In his text, *The Predicament of Culture*, Clifford addresses both the emplacement and survival of Native cultures and he argues:

Groups negotiating their identity in contexts of domination and exchange persist; patch themselves together in ways different from a living organism. A community, unlike a body, can lose a central “organ” and not die. All the critical elements of identity are in specific conditions replaceable: language, land, blood, leadership, religion . . . The idea of culture carries with it an expectation of roots, of a stable territorialized existence. How rooted or settled should one expect “tribal” Native Americans to be - aboriginally, in specific contact periods? Common notions of culture persistently bias the answer toward rooting rather than travel. Moreover the culture idea, tied as it is to assumptions about natural growth and life, does not tolerate radical breaks in historical continuity. Cultures, we often hear, “die.” But how many cultures pronounced dead or dying by anthropologists and other authorities have . . . found new ways to be different? Metaphors of continuity and “survival” do not account for complex historical processes of appropriation, compromise, subversion, masking, invention, and revival.³⁹²

Here Clifford offers the idea of identity and cultural embodiment explained as a metaphor of a living organism. He envisions that a culture transcends embodiment, it is hydra-like, able to lose pieces of itself and yet still retain an essence of undeniability, recognizable as itself. This image stands in some contrast to an insistence that indigenous cultures and their knowledge are rooted, unchangeable, and pure. Clifford is also concerned with understanding the complexities of Native survival relative to Eurocentric cultural impositions, and he insists,

It used to be assumed, for example, that conversion . . . would lead to the extinction of indigenous cultures rather than to their transformation. Something more ambiguous and historically complex has occurred, requiring that we perceive *both* the end of certain orders of diversity *and* creation or translation of others. More than a few “extinct” peoples have returned to haunt the Western historical imagination.³⁹³

³⁹² James Clifford, *The Predicament of Culture: Twentieth-century Ethnography, Literature, and Art*, 1st Edition (Cambridge, MA: Harvard University Press, 1988), 338.

³⁹³ James Clifford, “Introduction: The Pure Products Go Crazy,” in *The Predicament of Culture: Twentieth-century Ethnography, Literature, and Art*, 1st Edition, edited by James Clifford (Cambridge, MA: Harvard University Press, 1988), 18.

Clifford further supports his claims about the problem of depictions of Native cultural disappearances by describing the ways that Native identity and culture are sacrificed in the making of histories and ethnographies about Native peoples. Clifford insists on examining the representations of indigenous peoples in the documents produced about them and he argues that,

The theme of the vanishing primitive, of the end of traditional society, is pervasive in ethnographic writing. Undeniably, ways of life can, in a meaningful sense, “die”; populations are regularly violently disrupted, sometimes exterminated. Traditions are constantly being lost. But the persistent and repetitious “disappearance” of social forms at the moment of their ethnographic representation . . . ethnography’s disappearing object is, then, in significant degree, a rhetorical construct legitimating a representational practice: “salvage” ethnography³⁹⁴ in its widest sense. The other is lost, in disintegrating time and space, but saved in the text.³⁹⁵

Salvage anthropology is the Boasian idea of a final opportunity to rescue disappearing cultures and preserve cultural practices through intensive field observation, ethnography, and documentation. Salvage anthropology became the *raison d’être* for the growth and range of ethnographic undertakings in the late 19th and early 20th centuries, and undoubtedly contributed to the efforts of the Boasian anthropologists whose Native ethnobotanical manuscripts I review for my Ethnogyneology Index, especially Frank G. Speck and Wilson D. Wallis.

Native scholars argue for explanations of these narratives of cultural extinctions in connection to the overall colonialist objective of dispossessing Native Americans of their rights to land, citizenship, and sovereignty. Georges E. Sioui (Huron) claims that, “The inevitable disappearance of the Amerindian, or the myth of the disappearance of the Native . . . was regarded as the logical and normal outcome of the shock that occurs between a highly ‘advanced’ civilization and another - particularly that of the New World Natives - very

³⁹⁴ See Herbert S. Lewis, “Franz Boas: Boon or Bane?” *Reviews in Anthropology* 37, no. 2-3 (2008).

³⁹⁵ James Clifford, “On Ethnographic Allegory,” in *Writing Culture: The Poetics and Politics of Ethnography*, edited by James Clifford and George E. Marcus (Berkeley: University of California Press, 1986), 112.

‘backward’ one.”³⁹⁶ Sioui’s purpose is to dispel this myth of cultural extinction in order to recover confiscated cultural and political power for contemporary Native peoples. Sioui argues, “Why should the governments of modern states adopt a policy for preserving cultural phenomena if Natives are officially extinct, or if their disappearance is imminent? The Native American cultural (or spiritual) being is as far from disappearing today as at the time of contact.”³⁹⁷ Lisa Brooks (Abenaki) relates notions of extinction and disappearances to contemporary Native political struggles and to ideas of cultural stasis and purity. In her book, *The Common Pot: The Recovery of Native Space in the Northeast*, Brooks claims:

Culture, like anything that is alive and “engaged,” must grow and change, must take its own course. In the anthropological framework of preservation, it would seem that the only “real Indian” is a “dead Indian” . . . Such frameworks not only create a false picture of Native culture but deny Native peoples the right and the ability to survive, adapt, and change . . . Furthermore, the idea of “pure,” and “authentic,” and static Native culture also ignores centuries, indeed millennia, of cultural change and exchange in Native space. In truth, this activity . . . of engaging in cultural exchange - is long-standing on this continent.³⁹⁸

Brooks reiterates Clifford’s claim that anthropological representations of Native peoples create their own falsehoods about cultural identity, continuity, and stasis. Critically related to my assertions about the enduring and dynamic cultural foundations of ecological knowledge, Brooks recognizes that these claims of Native cultural disappearances and stasis ignore exchanges of knowledge and practices - the historical and ongoing relationships among Native groups and between Native and other peoples.

Amy E. Den Ouden also traces the colonial origins of concepts of Native extinctions and cultural disappearances to the European imperative to dispossess Native people of their lands.

³⁹⁶ Georges E. Sioui, *For An Amerindian Autohistory*, trans. Shiela Fischman (Montreal: McGill-Queens’ University Press, 1992), xx.

³⁹⁷ Sioui, *For An Amerindian Autohistory*, xxii.

³⁹⁸ Lisa Brooks, *The Common Pot: The Recovery of Native Space in the Northeast*, (Minneapolis: University of Minnesota Press, 2008) xxxi-xxxii.

Den Ouden examines the legal and political implications of the myth of Native cultural extinction in her book, *Beyond Conquest: Native Peoples and the Struggle for History in New England*. Den Ouden explains the origins, in the 18th century, of ideas about Native extinctions:

The doctrine of anticipated “Indian extinction” was thus introduced into colonial legal prescriptions regarding Native’s rights to reservation land. And the monitoring of Native existence (and concomitantly the “adjusting” of Native land rights) would come to require more than simply counting Indians: the policing of Native identities and the imposition of boundaries on those identities were tactics of rule that emerged out of struggles over reservation land in the eighteenth century.³⁹⁹

Den Ouden’s particular concerns are the consequences in land dispossession and denial of sovereignty that arise from these identity prescriptions, specifically those instances when Native identity was contested because of Native/African intermarriage. Den Ouden writes about the legal policies that sanctioned a divide-and-disempower strategy for Native and African Americans, and she claims:

Among the Native nations and communities of southern New England, there are many individuals of mixed ancestry . . . but popular Euro-American assessments of Indian identity have long been shaped by a racial mythos that adheres to and promotes the notion that the only truly “authentic” Native Americans - and thus the only Indians considered to be endowed with indigenous rights - are those who display presumed (that is, Euro-American and government-sanctioned) characteristics of “pure bloodedness.” In southern New England, Native Americans who also have African American ancestry have been subjected to intensely racist scrutiny, and disparagements of their identity are informed by the “one-drop rule,” a tenet of the white supremacist ideology that construes what is perniciously termed “black blood” as a contaminant that negates Indian identity.⁴⁰⁰

The essence of Sioui, Brooks, and Den Ouden’s research is that since colonial times the entwined myths of Native cultural extinctions and Native cultural purity served racist political and legal aims designed to continue to dispossess and disempower Native peoples. These myths

³⁹⁹ Amy E. Den Ouden, *Beyond Conquest: Native Peoples and the Struggle for History in New England* (Lincoln: University of Nebraska Press, 2005), 29.

⁴⁰⁰ Den Ouden, *Beyond Conquest*, 30.

served to obscure the ways that indigenous culture and knowledge are retained as well as obscuring the dynamic, creative, and shifting needs of Native communities and the exchanges they have with other peoples. I conclude this analysis of the assumptions made about both Native and African cultural retentions and knowledge by considering indications of exchanges of knowledge between Native and African communities.

Knowledge Sharing: When Trickster Interprets Between Two Worlds

I have indicated that the focus of Carney and Rosomoff's studies concern the introduction and use of plants species, especially rice, from African sources. However, they also document the traditional plant knowledge that African slaves brought with them, and the exchanges of botanical knowledge that took place in the New World. Carney and Rosomoff discuss the botanical knowledge held by escaped slaves, maroons, who were often new arrivals and who were forced to rely on their knowledge of wild species for sustenance and medicine. Maroons were known to have extensive interactions with Native communities in the remote environments in which the maroons survived.⁴⁰¹ Regarding the exchanges of knowledge between African slaves and Native Americans the authors demonstrate that,

Africans in the Americas experimented with plants from their immediate surroundings and incorporated many into their diets, healing, and religious practices . . . Slaves acquired additional knowledge of New World species in their early and repeated interactions with Amerindians, for initial generations of enslaved Africans frequently worked and suffered alongside them . . . We see the cumulative significance of this fusion of African and Amerindian knowledge systems in the longstanding homeopathic⁴⁰² medicinal tradition of the circum-Caribbean region. In these areas local people still rely on many plant based cures ("green medicine") for the treatment of common ailments. In many areas of tropical America where Maroon ancestors won their freedom, their countrymen

⁴⁰¹ Maroons are the escaped slaves who lived off the land in wild, inaccessible places in order to maintain their freedom from bondage. Maroons and maroon culture figured in all regions of the New World that enslaved Africans. See Richard Price, *First-Time: The Historical Vision of an African American People* (Chicago: The University of Chicago Press, 2002).

⁴⁰² In this case the authors use "homeopathic" to mean plant-based, which, although not the most common current usage, is a correct meaning for this term.

held in high regard Maroon knowledge of the valuable properties of wild botanical species.⁴⁰³

Prominent among the research that incorporates ethnobotanical knowledge, Native/African knowledge exchanges, and the ethnobotanical practices of both communities is a book by Sharla Fett, *Working Cures: Healing, Health, and Power on Southern Slave Plantations*. Fett evaluates the role of herbal remedies within the enslaved community, and the pathways of exchange of ethnobotanical knowledge between the enslaved, Native, and European communities. She finds:

White southerners wrote slave remedies into their private recipe books even as they wrote laws curtailing the practice of enslaved doctors. Enslaved mothers learned cough remedies from planter women even as they bitterly condemned slaveholders who forced them to attend white infants at the cost of their own children's well-being. While therapies appeared to flow across social divides, enslaved practitioners and health seekers often struggled against racial, gendered, and class-based constructions of who was fit to claim the privileges of medical authority.⁴⁰⁴

Fett emphasizes the importance of the pathways of knowledge for domestic medical practice suggesting that ethnobotanical practice was a reflection of the complicated social and cultural realities within the plantation household:

Plant medicines, whether in the form of food, teas, or poultices, formed the core of rural American household health care. Yet antebellum herbalism in any region of the country was comprised of more than a body of specific remedies. Herbal practice involved a dynamic set of social relations and distinctive relationships to the natural environment. American herbal recipes and the oral and written descriptions that surround them carry long histories of cultural transformation fueled by both colonial expansion and the desire of ordinary people for effective remedies. In the antebellum south both the social relations of slavery and the cultural heritage of African herbal practitioners shaped the contours of herbal practice. As healers and sufferers, enslaved African Americans significantly influenced the herbal repertoire of southern white households and cultivated a distinctive tradition grounded in a sacred view of the land.⁴⁰⁵

⁴⁰³ Carney and Rosomoff, *In the Shadow of Slavery*, 89.

⁴⁰⁴ Sharla M. Fett, *Working Cures: Healing, Health, and Power on Southern Slave Plantations* (Chapel Hill: The University of North Carolina Press, 2002): 5.

⁴⁰⁵ Fett, *Working Cures*, 60.

Fett acknowledges the role of women generally, and midwives specifically, as a site of cross-racial exchanges of knowledge and practice as these women carried out the duties of providing and modifying herbal remedies, and she asserts, “Black midwives visited slave dwellings and white households to attend mothers and catch babies. Elderly root doctors built regional reputations among a multiethnic clientele. Skilled herbalists cultivated local botanical expertise that significantly influenced southern domestic medicine.”⁴⁰⁶ In addition to correspondence with the arguments made by Carney and Rosomoff regarding African agency over their own knowledge, Fett recognizes the complexities surrounding knowledge sharing that occurs across the gender, class, and power divides of racial boundaries.

Another text that examines cross-racial and cross-cultural relations is Cynthia Cumfer’s study, *Separate Peoples, One Land: The Minds of Cherokees, Black, and Whites on the Tennessee Frontier*. Cumfer charts the political and civic legacies of the three-culture interactions between Native, African, and European communities. Cumfer explains these interactions as occurring within the concept of hybridity, which she defines as, “the in-between spaces produced in the articulation of cultural differences in which people may utilize elements of both societies to create new values and practices.”⁴⁰⁷ In my research the patterns of ethnogynecological plant use discovered in ethnographic and ethnobotanical manuscripts can be explained by Cumfer’s “in-between spaces” for women’s reproductive health plant knowledge among Native, African, and European communities. These spaces held the potential for creating new plant knowledge and practices that utilized elements from different groups of people. Jonathan Brennan’s research is about the cross-racial experiences of African Americans and Native Americans as represented in fiction in colonial America. *When Brer Rabbit Meets*

⁴⁰⁶ Fett, *Working Cures*, 2.

⁴⁰⁷ Cynthia Cumfer, *Separate Peoples, One Land: The Minds of Cherokees, Blacks, and Whites on the Tennessee Frontier* (Chapel Hill: The University of North Carolina Press, 2007): 6.

Coyote: African-Native American Literature is a volume of essays that provides examples of Native and African interactions found within the stories from both groups. Brennan's intent is to provide a context for the narratives described by the contributed essays, and he establishes his contextual claims as a response to what he deems a long denied issue in American history - the relationships forged between Native and African Americans. Brennan examines the narrative traditions that emerge from and are testimony to these relationships as he argues that African-Native American historical narratives, stories, and experiences have been silenced. Brennan begins with evidence that African-Native American trade and communication began in some form before Europeans dictated the terms of the relationship. Then Brennan exposes the extent of Native American enslavement, largely buried within American history. He claims, "Millions of Native Americans were enslaved throughout the Americas and the Caribbean; this enslavement continued in most colonies alongside the enslavement of Africans, and the eventual result in many slave communities was a racial and cultural mixture of Africans and Native Americans."⁴⁰⁸

Brennan also claims that,

Despite a significant body of work on the history, culture, and literature of African-Native Americans, a scholarly myopia remains, clouding African-Native American studies in an often impenetrable fog . . . It has been difficult for African-Native Americans because political pressure has divided the allied interests of African Americans and Native Americans. From the start of European colonization of the Americas, plantation owners believed that it was in their best interests to prevent interactions between African Americans and Native Americans. The official policy of European governments and European American colonial governments often entailed a 'divide and conquer' strategy when it came to Native Americans and African Americans . . . Colonial authorities were fearful of alliances between African Americans and Native Americans.⁴⁰⁹

Brennan reviews the opportunities for African-Native cultural collaboration that led to syncretic

⁴⁰⁸ Jonathan Brennan, *When Brer Rabbit Meets Coyote: African-Native American Literature* (Chicago: University of Illinois Press, 2003), 3. Brer Rabbit and Coyote are recognizable literary and mythic tropes in most African American and Native American cultures, respectively. Both are considered "trickster" figures, and enact stories of triumph over adversity by, usually, outwitting power holders or oppressive structures.

⁴⁰⁹ Brennan, *Brer Rabbit*, 39-42.

oral and literary traditions for these communities:

At the crossroads, the meeting place of runaway African slaves and displaced Indians, of oral and written traditions, of the human and the divine, of meaning and indeterminacy, of the past and the future, we find a liminal space of mixed-race Black Indian identity and culture where the longest unwritten chapter in American history is written (and spoken). African-Native American literature becomes a possibility when the trickster interprets between worlds, when understanding meets truth, when Brer Rabbit meets Coyote.⁴¹⁰

Brennan demonstrates the impact of Native/African cross-racial interactions, and the creation of syncretic and hybrid spaces that are also suggested by Cumfer's research. Within these spaces, disputed concepts of cultural identity, disappearances, survivals, and retentions combine with the real opportunity and initiative to share cultural practices, ecological and other forms of knowledge. I examine the implications of these disputed concepts for the discourse of traditional ecological knowledge, and I conclude by returning to the unique circumstances of knowledge sharing that are created around women's reproductive health needs.

Traditional Ecological Knowledge in a Shared Space

In my investigation that seeks to illuminate historical interactions and knowledge sharing between and among different groups of people any uncritical assumptions about cultural survivals and retentions, indigenous identities, and indigenous tenure in a fixed geographical space must be examined to see how these assumptions function to shortchange the discourse of traditional ecological knowledge. My purpose is to discuss traditional ecological knowledge in consideration of complex historical and epistemic realities, and the ways in which this complexity changes the defining characteristics of traditional ecological knowledge. When these complexities are taken into account it permits an enlargement of the discourse, and foregrounds the dynamic, hybrid, and culturally mediated characteristics of traditional ecological knowledge.

⁴¹⁰ Brennan, *Brer Rabbit*, xiii.

I begin by reviewing the research of Fikret Berkes, not only because his work has been so influential within traditional ecological knowledge conversations, but as well because he specifically tackles these issues of indigenous cultural survival, identity, and geographic tenure in his research.

Berkes devotes a chapter of his text, *Sacred Ecology*, to West Indian fishing practices, and he describes the timeframe differences between indigenous ecological knowledge (multi-generational timeframes) and local ecological knowledge (shorter timeframes), in order to set the perspective of both time frame and location for the use of traditional knowledge systems in modern environmental management. Berkes considers local ecological knowledge as distinct from traditional ecological knowledge not only by a lack of time in place but also by other characteristics. Specifically, Berkes classifies local knowledge as: (1) different from traditional knowledge; (2) a basic layer in the knowledge-practice-belief complex of indigenous knowledge;⁴¹¹ (3) an early stage in the development of traditional ecological knowledge;⁴¹² and, (4) knowledge developed without the concept of encoding in indigenous cultural forms or “learning from other times.”⁴¹³ Berkes states his belief that the islands in the Caribbean:

Provide laboratory-like settings in which the evolution of local knowledge and resource management practices can be studied . . . The West Indies, strictly speaking, is one part of the world in which traditional systems do *not* exist. Thus, the Caribbean islands provide appropriate field experiments in the creation of environmental knowledge, and the evolution of community-based management systems that use this knowledge.⁴¹⁴

Berkes describes the current knowledge of marine ecosystems held by fishermen descended from slaves brought to the Caribbean hundreds of years ago and makes the assumption that the forebears of these fishermen arrived in their new location unable to access or use any of their

⁴¹¹ Berkes, *Sacred Ecology*, 3rd, 17

⁴¹² Berkes, *Sacred Ecology*, 3rd, 217

⁴¹³ Berkes, *Sacred Ecology*, 3rd, 222

⁴¹⁴ Berkes, *Sacred Ecology*, 3rd, 217-218.

traditional marine ecology knowledge. Describing his work with fisheries in the Caribbean, Berkes emphasizes,

The Caribbean cases are informative in showing the characteristics of local knowledge systems and how they differ from traditional knowledge. Regarding elements of knowledge, they show incremental learning and some institutional development, but little or no encoding or communicating of knowledge and no evidence of belief systems to consolidate supporting values . . . They do not show learning from “other times” and knowledge encoded in language and narratives.⁴¹⁵

Berkes’ observations of the ecological knowledge of Caribbean populations of African descent are contrary to what other researchers have claimed about the retentions of African traditional knowledge, the encoding of that knowledge in language, the retention of prior learning in other locations, and the belief systems that accompany this traditional knowledge, especially in the Caribbean. They are also contrary to what Berkes himself points out in his analysis of fishing practices in the same text, namely:

Fishing communities included individuals with a great deal of local knowledge on the biology and habits of reef fish, some of it culturally transmitted, multigenerational knowledge. The technology used (dugout canoes and fish traps) was of mixed traditional heritage and came from indigenous people (now extinct in Jamaica) and from Africa.⁴¹⁶

These contradictions are not unexpected however, given that Berkes’ primary concern about the characteristics of local knowledge is the emergence of ecological knowledge of place as a monitoring methodology that can be coordinated with western scientists’ efforts for adaptive environmental management. Furthermore, Berkes’ attempts to distinguish local from traditional knowledge compares the millennially settled and homogenous communities of the James Bay Cree with the formerly enslaved African and hybrid communities of the Caribbean, and he finds that Caribbean ecological knowledge cannot be considered at the same level of utilitarian natural resource management value. Although I concur with Berkes that length of time in an ecosystem

⁴¹⁵ Berkes, *Sacred Ecology* 2nd, 221-222.

⁴¹⁶ Berkes, *Sacred Ecology*, 3rd, 223

is a key construct of traditional ecological knowledge and these arguments about longevity in place and locality of knowledge are valid, I suggest they are partial depictions, and the discourse of traditional ecological knowledge is enriched by the inclusion, beyond utilitarian ecological constructs, of the particularities of complex indigenous cultural histories. I disagree with Berkes' that the African Caribbean migrants arrived in their new locations without a received framework of marine ecological knowledge, with no previous cultural history of the sea, and without traditional ecological knowledge about fishing. Based on the ecological, anthropological and historical research of Gates, Carney, Voeks, and others, it is not possible to concede that forcibly migrated Africans arrived without traditional ecological beliefs, values, practices, and past learning, fully encoded in language and narratives, which they subsequently adapted and passed on, and that inform and support their current fishing practices. I believe that viewing traditional ecological knowledge in relationship to place, culture, and shared knowledge allows a fuller consideration of the complexities of survivals and retentions, longevity and movement, and local and traditional knowledge.

Berkes explores the issue of Native cultural extinctions when he explains the extinctions of the indigenous peoples in Jamaica, and he insists that, "The indigenous populations of the Eastern Caribbean islands, and whatever traditional knowledge and resource management systems they might have had, have almost completely disappeared."⁴¹⁷ The influence of indigenous and Native systems in the Caribbean is admittedly difficult to discern, but this difficulty does not signal its absence. Berkes' argument, that the indigenous peoples of the Caribbean were sufficiently decimated such that any traditional ways of life could not be accounted for in the ecological knowledge of the islands is debatable, at the very least. It is

⁴¹⁷ Berkes, *Sacred Ecology*, 3rd, 218.

extremely tricky to trace indigenous continuances in the Caribbean, and it is not the purpose of my research to dig deeply into this field of study. On the issue of Caribbean indigenous identity myth confounds a paucity of evidence and leads to overall confusion. Geographically the Caribbean accounts for a large combined ecosystem of land, island, coast, and sea with a richly intertwined regional ecological and cultural history. The Caribbean indigenous peoples were lively migrants, and whole communities moved between thousands of different islands and the North, Central, and South American coastal areas both before and after contact, and before and during slavery.⁴¹⁸ Indigenous Carib and Taino peoples survived, and lived in small, intact communities well into the 18th century. Taino and mixed African and Carib descendants, today known as Garifuna, proudly continue to claim their rich indigenous histories and lineages against what they consider the post-colonial myths of their demise, and they assert a continuation of specific cultural habits and worldviews. Native peoples from as far away as the New England region were enslaved in the Caribbean, further complicating attempts to locate and trace indigenous influences in the region. Finally, advances in genetic research have confirmed current claims of indigenous survivals in the Caribbean. Indigenous cultural extinctions in the Caribbean may well have been local phenomena, however, they were definitively not regional.

I argue that a re-engagement with these historical complexities within the discourse of traditional ecological knowledge incorporates the possibility that ecological knowledge is retained as place shifts, and this calls into question the degree of dissimilarity between local knowledge and traditional knowledge. This re-engagement involves closer scrutiny of the

⁴¹⁸ It is important to remember that one of those movements was between the New England and both Bermuda and the Bahamas, where Pequot, Pokonoket, Mohegan, Narragansett and Wampanoag tribal members were enslaved, especially after King Phillip's War. See, Eugene Foggo Simon, "The Legacy of St. David's Islanders, Bermuda: Their Voices Are Not Silent," in *The First and the Forced: Essays on the Native American and African American Experience*, edited by James N. Leiker, Kim Warren and Barbara Watkins (Lawrence, KS: Hall Center for the Humanities, University of Kansas, 2007);

depictions of retained and acquired ecological knowledge in the diaspora communities of formerly enslaved Africans, as well as their encounters with the established and adapted ecological knowledge of indigenous Native communities in the Americas. The possibility of Native influence upon African plant knowledge, and African influence on indigenous American knowledge is a critical consideration. These historical complexities and interactions also relate to a central tenet of my thought experiment, which is that new forms of traditional ecological knowledge are created at the place where one set of indigenous people already exists and another group arrives. Although I agree that concentrating my analysis on evidence and examples of retentions for fishing knowledge would more neatly refute Berkes specific arguments about the lack of a marine tradition for the ecological knowledge of the Caribbean populations that he works with, to concentrate on traditional knowledge of the marine environment takes me too far outside the scope of my own research.⁴¹⁹ I am similarly aware that traditional knowledge of fishing practices and traditional knowledge of plant use might be differently constituted as traditional ecological knowledge. However, previous assertions of the holistic and encompassing cosmology of indigenous knowledge systems generally, and traditional ecological knowledge specifically, create a reason for me to view these not as discrete subjects, in a western didactic sense, but as different aspects of a cohesive epistemic system. In order to determine the extent to which traditional ecological knowledge is emplaced or geographically situated in such a way that a change of location threatens to annul the traditions that underlie that knowledge, the attribution of stasis or purity to indigenous traditions, people, and cosmologies should also be considered.

⁴¹⁹I recall a face-to-face conversation I had with Dr. Berkes at Arizona State University, Tempe, on March 13, 2011 at the *Resilience 2011 International Science and Policy Conference* about the topic of my dissertation. Dr. Berkes recounted the possibility of a distinct African style for the fishing baskets that were being used by a population he was working with in the Eastern Caribbean. We were unable to continue the conversation because he was setting up for a presentation, however, this conversation was pivotal in enflaming my passion for my current research. I am grateful for the time and ideas, and subsequently the journal articles Dr. Berkes shared with me. His extensive research has been pivotal to my own.

Within the research that demonstrates the historical complexity of ecological knowledge retention among the communities encountering each other in the Americas, specifically looking at the influx of twenty million Africans and their ecological and plant knowledge during the slave trade, my analysis demonstrates how questioning assumptions about survivals and retentions, stasis and dynamism, longevity and movement, and local and traditional knowledge complicates and enriches the discourse of traditional ecological knowledge.

First, I consider Berkes contention that the local ecological knowledge of diaspora populations lacks prior or staged learning. Voeks' research in Brazil supports the notion of a staged acquisition of ecological knowledge as he compares the ethnomedicinal uses of indigenous communities versus those of mixed or primarily African ancestry. Voeks finds that African diaspora communities make less use of mature trees and primary forest species, and Voeks asks, "Does the dominance of herbaceous, cultivated, and weedy species in immigrant ethnofloras suggest a ethnobotanical acquisition and/or retention process?"⁴²⁰ However, other researchers present evidence that diaspora communities use a robust ethnoflora that avails different but equally diverse ranges of forest resources as those used by indigenous populations in the same areas.⁴²¹ The types and sequences of use for specific species and the knowledge base that might be assumed by their use is important, and toward this end Voeks claims, "In order to understand the processes of continuity and change that shape foodways and pharmacopoeias, ethnobotanists are encouraged to pay greater attention to human diasporas."⁴²² I recognize that my endeavor to comprehend local ecological knowledge as it might have been constructed and

⁴²⁰ Voeks, "Floristic Homogenization," 412.

⁴²¹ See, Bruce Hoffman, "Exploring Biocultural Contexts: Comparative Woody Plant Knowledge of an Indigenous and Afro-American Maroon Community in Suriname, South America," in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford (New York: Springer, 2013); Tinde van Anandel, Sofie Ruysschaert, Kobeke Van de Putte, and Sara Groenendijk, "What Makes a Plant Magical? Symbolism and Sacred Herbs in Afro-Surinamese *Winti* Rituals," in *African Ethnobotany in the Americas*, edited by Robert Voeks and John Rashford (New York: Springer, 2013); and, Voeks, "Traditions in Transition."

⁴²² Voeks, "Floristic Homogenization," 412.

applied for historical ethnobotany may not correlate to the attempts of researchers, including Voeks and Berkes, to seek a contemporary explanation for this ecological knowledge.

Nevertheless, it appears that the research on the divergence between local knowledge held by indigenous peoples and traditional knowledge held by a different set of indigenous people, living within the same ecosystem, is not conclusive. There are arguments about staged learning of ecological knowledge that support both the retention of the indigenous knowledge of migrants and the development of a shared ecological knowledge between newcomers and local peoples, with distinct characteristics for this shared ecological knowledge. Additionally, the concepts of local knowledge and staged knowledge need to be located within non-didactic and indigenous concepts of knowledge sharing and instruction. It is understood that indigenous elders and specialists possess particular and respected knowledge. Indigenous educator Marie Battiste (Aroostook Mi'kmaq) describes the complex hierarchy within indigenous knowledge systems:

To treat local knowledge as merely empirical trivializes its significance to Indigenous peoples . . . There are not only differences between ordinary folks and experts, such as experienced knowledge keepers, healers, hunters, or ceremonialists, there are also major differences of experience and professional opinion among the knowledge holders and workers, as we should expect of any living, dynamic knowledge system that is continually responding to new phenomena and fresh insights.⁴²³

These specializations among knowledge holders may not represent the identical ideas of staging and sequencing that Berkes and Voeks suggest, however, it is critical to examine the relationships between local knowledge, staged knowledge, and indigenous instruction, which I return to in the next section of the dissertation.

Above all, the current discourse of traditional ecological knowledge is established on an imperative duration of residence for an indigenous people in a specific ecosystem. As well, this

⁴²³ Marie Battiste, "Indigenous Knowledge: Foundations for First Nations," *World Indigenous Nations Higher Education Consortium Journal*, University of Adelaide, 2005 <http://mikmawarchives.ca/documents/indigenous-knowledge-foundations-for-first-nations> (accessed December 1, 2013): 7.

discourse distinguishes traditional as different from local ecological knowledge by this key idea of longevity in place. Voeks observes the manner in which indigenous populations in South America and the Caribbean maintain their traditional plant knowledge and he confirms this view. Voeks argues, “Most ethnobotanical narratives, whether stated or implied, assume that mature knowledge profiles are the outcome of long term residence and gradual cognitive familiarity with the floristic environment . . . The ability to recognise, label, categorise and especially learn the material and spiritual values of individual plant species is taken to be a glacially slow process.”⁴²⁴ Berkes, Suzuki, Knudtson, and other traditional ecological knowledge investigators are in agreement with these arguments.⁴²⁵ Marie Battiste emphasizes the importance of emplaced indigenous knowledge, claiming, “Indigenous knowledge is . . . inherently tied to land, not to land in general but to particular landscapes, landforms, and biomes where ceremonies are properly held, stories properly recited, medicines properly gathered, and transfers of knowledge properly authenticated.”⁴²⁶ I have, however, also presented the divergent ways that Salmon and other researchers discuss indigenous place as more than a temporal or geographical concept in order to explore my conviction that both emplacement and embodiment of ecological knowledge are to be equally considered. Assuming that it is important to find a way through these apparent ambiguities about the characteristics of local versus traditional ecological knowledge, I review other ways of considering the concepts of location and emplacement of peoples.

Vital Dimensions of Place and Culture

⁴²⁴ Voeks, “Traditions in Transition,” 275.

⁴²⁵ See, Suzuki and Knudtson, *Wisdom of the Elders*; Roy Ellen, Peter Parkes and Alan Bicker, eds. *Indigenous Environmental Knowledge and its Transformations: Critical Anthropological Perspectives* (Amsterdam: Harwood Academic, 2000); Fikret Berkes, Johan Colding and Carl Folke, “Rediscovery of Traditional Ecological Knowledge as Adaptive Management,” *Ecological Applications* 10, no. 5 (2000); Fikret Berkes, *Sacred Ecology*, 2nd Edition.

⁴²⁶ Marie Battiste, “Indigenous Knowledge: Foundations for First Nations,” *World Indigenous Nations Higher Education Consortium Journal*, University of Adelaide, 2005 <http://mikmawarchives.ca/documents/indigenous-knowledge-foundations-for-first-nations> (accessed December 1, 2013): 8.

The fieldwork and research of ethnographers and ethnobotanists is foundational to my ethnogynecological investigations. For that reason I consider that anthropologists, particularly ethnographers, have continuously debated what it means for a people to be located or rooted to a particular place. I am interested in how the debates within anthropology about location connect with research about local and indigenous knowledge. It is my belief that these debates add depth to the discourse of traditional ecological knowledge. Most anthropologists see knowledge as something that adheres to place and location in ways that are surprisingly intricate, and forms of knowledge like traditional and local are explained in ways that suggest there is a fluid division between them. Indian-American anthropologist Arjun Appadurai argues, “In the cases of anthropology and history, given their idiographic, qualitative, and narrative orientations, place is not just a trivial contingency associated with data gathering, but a vital dimension of the subject matter of the disciplines.”⁴²⁷ Appadurai continues this theme through much of his research, and he claims, “Natives are in one place, a place to which explorers, administrators, missionaries, and eventually anthropologists, come. These outsiders, these observers, are regarded as quintessentially mobile; they are the movers, the seers, the knowers. The natives are immobilized by their belonging to a place.”⁴²⁸ Exploring the relationship between culture and location has been a central exercise of ethnography and Appadurai’s investigations of the concept of belonging to a place are influential within anthropological ideas of emplacement.

James Clifford explains the cultural and political origins of ideas of location and rootedness, and points out the contradictions and complications of comparing rooted communities and diasporas. Regarding Native locations Clifford argues:

⁴²⁷ Arjun Appadurai, “Theory in Anthropology: Center and Periphery,” *Comparative Studies in Society and History* 28, no. 2 (1986): 360.

⁴²⁸ Appadurai, “Putting Hierarchy in Its Place,” 37.

The category tribe, which was developed in U.S. law to distinguish settled Indians from roving, dangerous "bands," places a premium on localism and rootedness . . . Tribal groups have, of course, never been simply "local": they have always been rooted and routed in particular landscapes, regional and interregional networks . . . They occupy the autochthonous end of a spectrum of indigenous attachments: peoples who deeply "belong" in a place by dint of continuous occupancy over an extended period. (Precisely how long it takes to become indigenous is always a political question.) Tribal cultures are not diasporas; their sense of rootedness in the land is precisely what diasporic peoples have lost. And yet, as we have seen, the tribal-diasporic opposition is not absolute.⁴²⁹

Anthropologist Mary Anglin takes up the same themes as Appadurai and Clifford, and argues for the importance of awareness of the ties between anthropology and indigenous knowledge.

Anglin claims that,

Anthropology's ties to colonialism are exemplified by the "classic" approach to ethnography, in which the task of anthropologists is construed as that of delineating the cultural beliefs and practices, means of subsistence, and adaptation to environmental context of non-western societies and which is based upon the assumptions that such peoples existed in isolation and their ways of life were subject to empirical verification.⁴³⁰

What is critical to these arguments about indigenous emplacement is a full understanding of the origins and conduct of ethnography, a continuum of notions of movement and rootedness, and the cultural and political origins and consequences of what Clifford identifies as the "rhetorical constructs and representational practices" of the ethnographers' craft.⁴³¹ Ideas of location and rootedness take on added significance when there are consequences for indigenous peoples who are described and circumscribed by their attachment to a particular location. Appadurai refuses to set down the idea of emplacement with a simple explanation of its ethnographic origins, and delves deeply into the consequences of these ethnographic descriptions. Appadurai insists:

Natives are those who are somehow confined to places by their connection to what the place permits. Thus all the language of niches, of foraging, of material

⁴²⁹ James Clifford, "Diasporas," *Cultural Anthropology* 9, no. 3 (1994): 309-310.

⁴³⁰ Mary K. Anglin, "Erasures of the Past: Culture, Power, and Heterogeneity in Appalachia," *Journal of Appalachian Studies* 10, no. 1/2 (2004): 7.

⁴³¹ Clifford, "On Ethnographic Allegory," 112.

skill, of slowly evolved technologies, is actually also a language of incarceration. In this instance confinement is not simply a function of the mysterious, even metaphysical attachment of native to physical places, but a function of their adaptations to their environments . . . But anthropologists have always known that natives are not always so incarcerated. The American anthropological tradition, at least as far back as Boas . . . has always seen cultural traits as shared and transmitted over large cultural areas, as capable of change, and as creating shifting mosaics of technology and ideology across many geographically scattered places. Most groups that anthropologists have studied have in some way been affected by the knowledge of other worlds, worlds about which they may have learned through migration, trade, conquest, or indigenous narratives.⁴³²

Here, Appadurai protests against the confinement of indigenous peoples within outsiders' definitions of their emplacement. Appadurai thereby challenges Voeks, Berkes and other researchers' arguments about the longevity of emplacement being coupled to a slow process of traditional ecological knowledge acquisition, including acquiring the technical knowledge of ethnobotanical practice. What Appadurai emphasizes is that indigenous technologies have always been infused and enlivened with new ideas from other peoples and other places, with the resulting potential to considerably complicate any straightforward relationship between traditional ecological knowledge, time in place, and staged acquisition of technical knowledge.

Yet, location is an essential component of an indigenous sense of self and culture such that one way of explaining emplacement is to revisit the importance of place to indigenous worldviews and the manner in which an indigenous sense of emplacement may be different from western and scientific perspectives that underlie much of the research on traditional ecological knowledge. It is important to be cognizant of the distinctiveness of indigenous epistemologies and practices while being mindful that indigenous epistemology is not a catch-all phrase that describes a unitary way of being in the world, and cannot be posed strictly in opposition to western and scientific epistemologies. Cultural anthropologist Laurelyn Whitt suggests a way of

⁴³² Appadurai, "Putting Hierarchy in Its Place," 37-39.

thinking about these differences, and she says, “The diversity and non-unitary character of both “indigenous” and “western” must be acknowledged, and indeed, stressed. There are differences within, and similarities across, western and indigenous knowledge systems that confound any attempt to cast the contrast as a simple dichotomy.”⁴³³ On the other hand, as indigenous epistemology is more fundamentally about relatedness than western ways of knowing, indigenous concepts of location and local knowledge should be understood as much as possible from this perspective. An example that I have already reviewed is Salmon’s kincentric knowledge, which Salmon proposes affords the status of kin to all reality, both animate and inanimate and provides the lens through which Rarámuri live in the world. Salmon claims that in the Rarámuri cosmology location is both emplaced and embodied, with no need for a separation in those two concepts. Salmon says, “The land base is the land to which they claim a relationship. It may be the land on which they now live, or a historical, or even mythical place to which they claim relationship.”⁴³⁴ Columbian-American anthropologist Arturo Escobar describes the inextricability of cultural practices from both emplacement and embodiment, and he argues,

This means recognizing that place, body, and environment integrate with each other; that places gather things, thoughts, and memories in particular configurations; and that place, more an event than a thing, is characterized by openness rather than by a unitary self-identity. From an anthropological perspective, it is important to highlight the emplacement of all cultural practices, which stems from the fact that culture is carried into places by bodies — bodies are encultured and, conversely, enact cultural practices.⁴³⁵

The essence of Escobar’s and Salmon’s arguments is that ideas about place are, ultimately, as much about relationships as any other aspects of indigenous knowledge.

⁴³³ Laurelyn Whitt, *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge* (New York: Cambridge University Press, 2009), xvi.

⁴³⁴ Salmon, “Kincentric Ecology,” 1331.

⁴³⁵ Arturo Escobar, “Culture Sits in Places: Reflections on Globalism and Subaltern Strategies of Localization,” *Political Geography* 20 (2001): 143.

Anthropologist Keith H. Basso argues for an indigenous concept of location and place in his text, *Wisdom Sits in Places: Landscape and Language among the Western Apache*. Basso's research on the remapping of Western Apache territory is about the relationship between language and meaning related to location. Basso argues for emplacement of culture through a community's stories about and names for places, and using the term as introduced by Clifford Geertz, Basso describes this emplacement as "local knowledge." Basso explains, "Unavoidably, senses of place also partake of cultures, of shared bodies of 'local knowledge' with which persons and whole communities render their places meaningful and endow them with social importance."⁴³⁶ Basso describes the specific stories and language that accompany the Apache sense of place and the relationship of this sense of place to a sense of self and to indigenous identity. Basso recognizes, similar to Salmon, that an indigenous concept of place is simultaneously location and more than geography. Basso says, "Its [sense of place] complex affinities are more an expression of community involvement than they are of pure geography . . . sense of place rests its case on the unexamined premise that being from *somewhere* is always preferable to being from *nowhere*."⁴³⁷ Arvin, Tuck, and Morrill affirm the importance of an indigenous perspective for understanding concepts of place and land. To begin they explain the rationale of "place as ownership" that is part of colonialism, native disappearances, and slavery, and they claim, "Settler colonialism is a persistent social and political formation in which newcomers/colonizers/settlers come to a place, claim it as their own, and do whatever it takes to disappear the Indigenous peoples that are there . . . Extracting value from the land also often

⁴³⁶ Keith H. Basso, *Wisdom Sits in Places: Landscape and Language among the Western Apache* (Albuquerque: University of New Mexico Press, 1996), xiv.

⁴³⁷ Basso, *Wisdom Sits in Places*, 148.

requires systems of slavery and other forms of labor exploitation.”⁴³⁸ Arvin, Tuck, and Morrill insist upon a critical perspective of location that recalls the indigenous view of place as knowledge, in opposition to dominant constructions of land as property. They argue that,

Within Indigenous contexts land is not property, as in settler colonialism, but rather land is knowing and knowledge. Conceptualizations of land and place that rely upon latent notions of property are tangled in the ideologies of settler colonialism, dependent on constructions of land as extractable capital, the denial of Indigenous sovereignty, the myth of discovery, and the inevitability of the nation-state.⁴³⁹

In the final analysis location matters, but the significance of place is found as much in the context of its belonging in the network of all other elements of indigenous knowledge, and in relationship to indigenous cosmology, than in scientific attempts to differentiate local and traditional knowledge on the basis of how long a people have been tied to a specific geography. To say that one form of knowledge is local and another is traditional calculates indigenous knowledge solely in the language of western knowledge, confines indigenous peoples to a particular concept of location, and constricts indigenous knowledge to stasis and the myth of purity. These definitional restrictions prohibit traditional ecological knowledge from being fully comprehended in its epistemological relationship to indigenous cosmologies. Whitt speaks about the importance of considering the indigenous epistemological foundations of traditional ecological knowledge as she argues that, “To speak of a knowledge system is to abandon the idea that a single epistemology is universally shared by, or applicable to, all humans insofar as they are human. It facilitates instead a cultural parsing of the concept of epistemology, suitable to the heterogeneity of knowledge. There are specific epistemologies that belong to culturally

⁴³⁸ Maile Arvin, Eve Tuck, and Angie Morrill, “Decolonizing Feminism: Challenging Connections between Settler Colonialism and Heteropatriarchy,” *Feminist Formations* 25, no. 1 (Spring 21013): 12.

⁴³⁹ Arvin, Tuck, and Morrill, “Decolonizing Feminism,” 21.

distinctive ways of knowing.⁴⁴⁰ Linda Tuhiwai Smith affirms the need to remember the fundamental dominance of western over indigenous research frameworks and epistemologies. Smith insists, "From an indigenous perspective Western research is more than just research that is located in a positivist tradition. It is research which brings to bear, on any study of indigenous peoples, a cultural orientation, a set of values, a different conceptualization of such things as time, space and subjectivity, different and competing theories of knowledge, highly specialized forms of language, and structures of power."⁴⁴¹ Escobar invokes one of the main differences between western and indigenous ecological knowledge, which is the scientific conception of a nature/culture binary and the impossibility of this concept in an indigenous cosmology. Escobar argues, "There is, of course, no unified view on just what characterizes local models of nature. Perhaps the most well-established notion today is that many local models do not rely on a nature society dichotomy."⁴⁴²

My point is that despite traditional ecological knowledge being enfolded within indigenous knowledge, the discourse of traditional ecological knowledge, and the debates about local versus traditional knowledge, are embedded in discussions of western notions of ecological utility. The intent is not to abandon either attempts for more holistic natural resource management or an ecological discourse for traditional ecological knowledge but rather to broaden the perspectives that enliven this discourse. A consideration of indigenous worldviews, and the historical, ethnographic, and epistemic debates about local and traditional knowledge will invigorate the utility of traditional ecological knowledge while enlarging the discourse. My research on ethnogynecological practices requires the capacity to conceptualize a retention and negotiation of ecological knowledge, knowledge that is both local and traditional, despite

⁴⁴⁰ Whitt, *Science, Colonialism, and Indigenous People*, xv.

⁴⁴¹ Smith, *Decolonizing Methodologies*, 42.

⁴⁴² Escobar, "Culture Sits in Places," 151.

peoples' changes in location and across boundaries of race and culture. Embracing traditional ecological knowledge within its holistic indigenous epistemology helps to conceptualize these retentions and negotiations.

That emplacement somehow trumps embodiment in the development of traditional ecological knowledge such that this knowledge is conceived as being lost when indigenous peoples move, and consequently the local ecological knowledge of “newcomers” is significantly distinct from the traditional ecological knowledge of “inhabitants” is an idea that does not accord with indigenous epistemologies about people, place, or knowledge. An indigenous epistemology is built on relationships, and this relational foundation imbues traditional ecological knowledge with different structural characteristics than western or scientific knowledge. These indigenous systems characteristics ought to be foundational to traditional ecological knowledge discourse. Shawn Wilson explains the way in which concepts, like local, location, place and land, are shaped through what he calls relational accountability:

An [indigenous] epistemology where the relationship with something (a person, object or idea) is more important than the thing itself. Inherent in this concept is the recognition that this person, object or idea may have different relationships with someone or something else . . . The concepts or ideas are not as important as the relationships that went into forming them. Again, an Indigenous epistemology has systems of knowledge built upon relationships between things, rather than on the things themselves. Indigenous epistemology is more than merely a way of knowing. It is important to recognize that the epistemology includes entire systems of knowledge and relationships. These relationships are with the cosmos around us, as well as with concepts. They thus include interpersonal, intrapersonal, environmental and spiritual relationships, and relationships with ideas.⁴⁴³

Wilson not only explains the relational foundations of indigenous epistemology, he points out that within a unified cosmology specificity is allowed for individual relationships with persons, objects, and ideas. I suggest this is the ideal framework for recognizing the improbability of

⁴⁴³ Shawn Wilson, *Research is Ceremony: Indigenous Research Methods* (Halifax: Fernwood Publishing, 2008), 73-74.

losing culturally embodied knowledge and the relativity of concepts like local and traditional.

When envisioning a relational interaction for ethnogynecological knowledge it is very likely that peoples' need for and familiarity with the uses of plants for women's reproductive health supported the retention and sharing of that knowledge differently, but to as deep an extent as length of time living with the plants in a specific ecosystem.

The midnight sky and the silent stars.

--Frederick Douglass, *Letter to Harriet Tubman, 1868*

A Story: The Passenger, January 1859

Emily knows everything about me. She's more than my sister; she's like my second skin. She's like my cotton sack underdress that I pull over my head every morning after washing up. I feel her against me, coarse, firm, protective. But she didn't know this. I was keeping this for myself. Not like the secret gift of homemade preserves that I snuck out of Missus kitchen for Emily's birthday. No, it was not the sweet taste of a happy secret. It was the bitter, sour taste of betrayal and fear. It was my love for Emily that kept the darkness deep inside my own heart where it lay buried and growing, as relentlessly as the new life inside me. Emily could not know the betrayal, and the treachery could not keep us from getting our tickets. This evil was part of the reason for our passage. We were leaving, soon enough to protect my baby sister, not soon enough for me. Nothing would force me to give away my secret, which I now wrapped up in long sheets of scratchy fabric under my sack underdress, that I explained away as a peculiar new sensitivity to the cold.

We traveled far from the snow buried Dorchester farm in the back of an old wagon. Covered over with thick tar cloth, holding hands, breathing quietly in perfect rhythm with Mr. Ben, his wife Margaret, and their new baby Isabella. We welcomed the smell of turpentine, the pitch that threatened to suck away what little air we had under that thick cloth. It smelled like freedom, and the struggle to breathe kept us calm and steady, and as quiet as the boxes of cargo that jiggled next to us. That dense air kept our silence, the breathing in and out, and the look on Miz Minty's face, wearing breeches, a pipe between her teeth, a hat jammed on her head, riding as a man, bold as ever, on the front seat of the rattling wagon. Wagon and boat, river, road, forest, darkness, the fierce, constant, humming prayers of Miz Minty, the worried maternal brow of Miz Margaret, that strangely quiet infant bundle. These were our lucky stones, our magic beads. With the stars clinging like jewels in their velvet midnight case, Miz Minty's eyes ever glancing upward at their silent reverie. These are the things that got us safely to the house in Philadelphia. Emily and me, hand in hand.

I was unnaturally tired at the Philadelphia station, a big stone house in a quiet part of town. Emily was as grateful as I was for the soft, warm, high bed in Mr. Still's house. We breathed in the smell of lavender between the starched sheets and fell into dreamless exhaustion. I remember a confident girl child, about ten years old, Little Caroline, not too much younger

than Emily and me. She would knock firmly on the door, bring in mild peach leaf tea,⁴⁴⁴ and gaze with a bold mixture of compassion and curiosity that was more than her age. But we found no rest with Mr. Still and Little Caroline. Me and Emily, Mr. Ben, Miz Margaret, Isabella, we kept on the passage, following the directions of Miz Minty with no questions asked. Every night we walked or rode, we slept during the day, and we kept moving.

When we reached Auburn, New York, we found another big house, another soft, warm, high bed, the smell of clean pine logs in the fireplace, and a strange gathering of free and whites. Miz Minty was called Moses in this house, and sat at table night after night with Mr. and Mrs. David Wright, Mr. and Mrs. John Garrett, the two old ladies, Old Miz Mott and Old Miz Sojourner, and a strange, proud man called Douglass.⁴⁴⁵ Their conversations were heated, loud and soft, fierce and compassionate, male and female voices equally rising and falling in turn. The sweet smell of anise and beeswax drifted up to the bedroom as the candles burned down low and they kept on talking, sometimes laughing, but mostly talking long into the night.

I was too uncomfortable to sleep. The twisting and kicking started in my belly as soon as I lay down next to Emily. This child who knew nothing about secrets or treachery. A passenger in the cage under my ribs. Wriggling and dancing for the chance to breathe free air. The group at the table decided Moses needed to take us to a place called Saint Catherine's. Across more water, into Canada. So we packed up our small bundles, Miz Minty gave baby Isabella a draft of that sweet white water⁴⁴⁶ that helped her sleep, and we walked.

Of course it was the walking that finally gave away my secret. After two nights of walking we were comfortably settled in the younger Mr. Garrett's barn, and I crept out into the white silence of an icy, hushed, grey dawn, stars fading in the cottony light. I thought I was going to relieve myself in the snow then go lie down on the straw under a warm comforter, next to Emily, but out came a flood of water that I had no chance of stopping. Miss Margaret must have watched me get up, 'cause she knew right away. She came up behind me squatting over the snow. Silently she put her wool shawl around my shoulders, lifted me to my feet, and gently supported me back into the barn. She whispered to Mr. Ben who went to fetch Miz Minty. When next I looked up the patient gazes of women surrounded me. Young Miz Garrett looked long at my face and said, "You young and strong, and this is your first. Breathe right through them pains, Mary. I'm a go fetch Miss Deborah to help us."

Time meant nothing to me as the twisting and turning and wriggling moved further down beyond my belly, into my bones, deep someplace into the heart of everything. Emily's hand was a rope thrown down into the dark waters that rushed over and threatened to drown me. I held Emily's hand, I held her hand like my life depended on it, and I tried to match my breathing with hers. Silently, as I came up for air, a stranger was watching, a small brown woman with long braids dressed in a simple, layered deerskin shift. I heard Miz Garrett whisper, "It's okay now, Mary. Miz Deborah is a granddaughter to Chief Blacksnake. She's Onondowagah, married into

⁴⁴⁴ *Prunus persica*, peach leaves used as a tonic for expectant mothers or general female maladies by Native, African, and European American women.

⁴⁴⁵ There is no record that these important historical figures were together at the same time in the same house. Had they met, however, in January 1859, when this story takes place, Harriet Tubman would have been 31, Sojourner Truth 61, Frederick Douglass 40, Martha Wright 52, her sister Lucretia Mott 65, and in Philadelphia the free black William Still 37, and his daughter Caroline, a future African American doctor, would have been ten. The spirit of their individual and collective courage to cross many different kinds of barriers and boundaries is what inspired this entirely fictional birth story.

⁴⁴⁶ Paregoric, or camphorated tincture of opium, *Papaver somniferum*, used to calm fretful babies.

Wolf Clan. Her Indian name is Deohako.⁴⁴⁷ She knows the stories of plants and the ways of women. She helps all of us when our time comes.” I barely heard most of these words, but I looked into the unlined face and kind eyes of a small quick woman who appeared to be just older than I was. I heard her name, and saying it, Deohako, it became my magic stone. Deohako was soft on my dry tongue and almost made me laugh. I instantly attached myself to the still calmness of her breaths.

Deohako had prepared a soft spot in a warm corner of the cavernous, drafty barn. A narrow hollow in the ground was lined with sharply washed old comforters, clean straw, mosses, and more straw. Above this moss and straw basin was a rope, tied from the strongest beams in the barn, and at the end hung a smoothed branch of willow, about the thickness of a young boy’s arm. Emily lifted my head and pressed a cup of warm liquid to my parched lips.⁴⁴⁸ I tasted summer warmth, new grass, and between pains I drifted into the memory of a carefree berry picking afternoon with Baby Emily, just learning to walk. I gulped down the warm liquid and clutched at Emily’s hands. Deohako sat quietly, she watched, and the women waited. I breathed and gulped and clutched.

The drink that Emily pressed to my lips was different. It was dark, bitter, the taste of my fear, the taste of betrayal and treachery.⁴⁴⁹ I shook my head and Deohako quietly insisted, “It’s a good root, Little Mother, drink it.” From that moment I swam in a dream, in and out of the waves, drowning, clutching, and breathing. Deohako got me up to squat over the moss-lined basin. I felt easier all of a sudden, I clutched the willow branch,⁴⁵⁰ I bit and sucked it when the waves came, I looked into Deohako’s eyes and she swam next to me, lifting, encouraging, comforting, with her warm silent presence and her wide black eyes. The clutching stopped and a strength I did not know I had rippled through me. I surprised myself with the feeling of a wet slipperiness dancing out of me, twisting, turning, and falling into the bed of mosses and straw.

Another sip of warm liquid⁴⁵¹ brought more pains and the afterbirth. Deohako was quick, quiet, and efficient. With the help of the women who watched we were washed off, cleaned up, dressed, warm, and lying on a fresh bed of straw and comforters in what seemed to me like no time at all. Deohako offered me a cup of milky sweet tea⁴⁵² and a tightly wrapped bundle. A tiny pale cheek peeked out of the blanket, eyes like buttons, rosebud mouth round, pink, determined. I lifted the little mouth to my swollen nipples and jumped at the pain and joy of her determined sucking. She never took her eyes off of mine, breathing and sucking, and gulping down her freedom. She stretched out a perfect little arm and found Emily’s hand, which she clutched, and grasped, and refused to let go.

⁴⁴⁷ Deohako is the name of the Corn Goddess, also called Onatah, of the Onondowagah, or Seneca people. Seneca Chief Blacksnake (1760-1859), was respected by Native and European communities in the Northeast. I do not know if he had a granddaughter who was a midwife.

⁴⁴⁸ *Rubus strigosus* or *Rubus idaeus*, wild red raspberry, leaves used by Native and European women for women’s complaints and possibly in early labor.

⁴⁴⁹ *Caulophyllum thalictroides*, blue cohosh, root used by Native and European women to increase the efficiency of labor contractions.

⁴⁵⁰ *Salix tristis*, grey willow, bark used as analgesic by Native, African, and European women.

⁴⁵¹ *Leonurus cardiaca*, motherwort, leaves used for bringing down the afterbirth by Native and European women.

⁴⁵² *Asclepias syriaca*, common milkweed, root used to encourage the flow of milk in breastfeeding.

CHAPTER 6: CONCLUSION

Dora, go out and fetch us some fresh eggs. Its time to make the groanin' cake.⁴⁵³

--Ami McKay, *The Birth House*

The investigative task of my research is twofold, to critique current discourses of traditional ecological knowledge, and to theorize what happens when traditional ecological knowledge is created across boundaries: at edges, borders, and shared spaces. Ethnographer Dwight Conquergood explains the importance of boundaries and borders as sites of cultural action: "All that confidence in continuous traditions and innocent encounters with pristine cultures has been shattered . . . Borders bleed, as much as they contain."⁴⁵⁴ Escobar addresses the active nature of borders as sites of knowledge production:

Boundaries and links to places are certainly neither natural nor fixed, and while boundaries do not exist in a "real" sense, their construction is an important aspect of the active material and cultural production of place by groups of people that, while heterogeneous and diverse, do share what Virilio calls the *hic et nunc* (here and now) of social practice.⁴⁵⁵

Boundaries, in my research, are seen as creative arenas that produce new, hybrid, syncretic forms of ethnobotanical knowledge and practice. Racial and cultural boundaries were crossed through trading, ritual, ceremony, captivity, enslavement, conquest, employment, potlatch, adoption, intermarriage, and important event specific contact - like childbirth. For that reason, I begin my research conclusions with a review of the boundary crossing potential within women's

⁴⁵³ Groaning Cake: 2 1/2 cups flour; 3 eggs; 2 tsp baking powder; 1/2 cup oil; 1 tsp baking soda; 1/2 cup orange juice; 2 tsp cinnamon; 1/4 cup molasses; 1/2 tsp cloves; 1 c sugar; 1 1/2 c grated apple, no skin; 1 tsp almond extract. Sift dry ingredients. Add apple. In another bowl, beat eggs. Add oil, juice, molasses and sugar. Add wet to dry ingredients. Mix well. Add almond extract. Pour into greased muffin tins, 9 x 13 pan or 2 loaf pans. Bake at 350 F for 35-45 minutes. Optional: raisins, dates, nuts. Ami McKay, *The Birth House: A Novel* (New York: Harper Perennial, 2007), 376.

⁴⁵⁴ Conquergood, "Rethinking Ethnography," 358.

⁴⁵⁵ Escobar, "Culture Sits in Places," 152.

reproductive health. Women's reproductive health needs are a beginning to this conclusion; however, they also point to opportunities for further research.

Weed Women of All Races

Groaning Cake was prepared during confinement as a way to keep the helping women busy, to keep up the spirits of the woman in labor, and as sustenance for the midwife and all visitors. It would have been a welcome, nourishing food for a new mother prepared by the woman's neighbors and friends. Weed women were among the mothers, sisters, and cousins, friends, chattel, and servants who assisted and were assisted in their turn through the physical, emotional, and spiritual experiences of women's reproductive health. I review evidence of the roles that women played in carrying and negotiating the ethnogynecological knowledge of their communities across cultural and racial boundaries because of these shared experiences. This assessment of the experiences of women being assisted and assisting in reproductive health issues concentrates on parturition because historical studies of birth and labor are more frequently encountered in the literature. However, other women's reproductive health concerns, especially menstrual irregularities, would have contributed to the quality of life and mortality of women and infants and would have been of concern to their families and communities. Even original accounts of labors and births are difficult to locate, and for the European women who were able to keep journals and diaries they provide few details about the contradictorily liminal but quotidian experience of birth. My research looks at secondary reports and research on American women's reproductive health events, and I do not review the diaries and journals of individual men or women here.

Highly uncertain outcomes for childbirth and the physical and emotional tolls of women's reproductive health issues, including high levels of infant mortality, were prevalent

from the early 17th through early 20th centuries, and forced a certain degree of shared concerns and intimacy among women and across the boundaries of race and culture. Todd L. Savitt, historian of medicine, claims, “All women, regardless of race, knew that childbirth was a dangerous procedure for both mother and infant . . . Among the problems women faced were convulsions, retention of placenta, breech presentation, premature labor, and bacterial infection (puerperal or childbed fever) brought on by a lack of cleanliness on the part of attending midwives or physicians.”⁴⁵⁶ It is essential to remember that while Native, African, and European women shared in this uncertainty of birth outcomes, they had distinct social beliefs about illness, disease, and health exigencies, and very different expectations for their individual childbirth experiences. It is important to remember that the presence of a midwife or other women at a birth did not guarantee a good outcome, and unskilled midwives could and did do as much harm as any other type of unskilled birth attendant. Nevertheless, there is evidence that women of all racial groups sought out each other’s care and knowledge when trying to guarantee the best outcomes for themselves and their families in the absence of the regimes of hygiene and safety taken for granted today.

The following studies provide instances of the sharing of the ethnogynecology knowledge and skill of both ordinary women and more experienced midwives, framed in the perspective of women’s concerns for each other’s reproductive health outcomes and indicating negotiated knowledge across racial and cultural boundaries. This research on the activities of women and midwives speaks to a limited but significant transcendence of racial and cultural boundaries, during childbirth and around the other health concerns of women. Although I do not recount here the history of midwifery in the Americas it should be noted that through the early

⁴⁵⁶ Savitt, *Fevers, Agues, and Cure*, 54.

20th century the majority of female midwives gained their skills and reputations through experience, practice, and sometimes through a family history of assisting at births rather than through formal schooling. I note that while ethnogynecological knowledge circulated among communities, and therefore included both women and men as the repositories and recipients of that knowledge, the childbirth space was specifically a women's sphere. Judith Leavitt describes childbirth as a women's event, and says, "Throughout American history up until the twentieth century, when childbirth moved to the hospital, most women gave birth at home with the help of their female friends and relatives. Birth was a women's event, and women eagerly gave their aid when it was needed."⁴⁵⁷

In the antebellum South, birth and motherhood became networks of social interactions and identities.⁴⁵⁸ In *Born Southern: Childbirth, Motherhood, and Social Networks in the Old South*, V. Lynn Kennedy considers these interactions among women during childbirth and her research relies on her reading of primary sources – the letters and diaries of southern women. Kennedy interprets the evidence for women's responses to their health concerns across the restrictions of race, in this case between European slaveholders and the African enslaved, arguing:

Despite the systemic divisions between white and black women, complex interactions and relationships were formed among them within individual southern households. Women negotiated the boundaries and possibilities of these relationships on a daily basis. The commonalities of birth and motherhood, in particular, brought them together as much as it divided them. Recognition of their common struggles, mutual aid offered in the birthing room, and shared responsibilities for infant nurturing created bonds that seemed to defy the power relationships of slavery.⁴⁵⁹

⁴⁵⁷ Judith Walzer Leavitt, "Under the Shadow of Maternity: American Women's Responses to Death and Debility Fears in Nineteenth-Century Childbirth," *Feminist Studies* 12, no. 1 (Spring 1986): 142.

⁴⁵⁸ V. Lynn Kennedy, *Born Southern: Childbirth, Motherhood, and Social Networks in the Old South* (Baltimore: The Johns Hopkins University Press, 2010), Introduction.

⁴⁵⁹ Kennedy, *Born Southern*, 3.

Kennedy maintains that the women's urgent reproductive health needs temporarily but powerfully dismantled some boundaries in favor of the solidarity of what was then a shared, physically dangerous, female experience. Kennedy discusses the birthing room as a site of temporary transcendence of boundaries, and she suggests,

The birthing room, in fact, formed a unique social space in southern society. In the birthing room the issues of control and power were less clearly defined. Many women valued skill over racial identity in selecting birth attendants, and they followed the instructions and advice of those who seemed most knowledgeable. Perceptions of skill could override, at least temporarily, the racial barriers in southern society. Both white and black midwives attended births across racial lines, becoming part of, and generally directing, the female-centered birthing room. Much of the basis for recognition of common gender identity among birthing women sprang from a shared sense of danger. Southern women, black and white, were linked by the real and perceived pains and physical dangers of childbirth. A women's "hour of trial" put her in a liminal position between life and death, and in the process other boundaries became blurred.⁴⁶⁰

Kennedy finds evidence that in addition to emotional and physical support during labor and birth, botanical remedies were part of midwives' knowledge and practice. "A black midwife's attendance on other black women made her a powerful person within her community and a valuable contributor to the maintenance of her culture. Their practices included folk rituals as well as physical assistance and emotional support. They might offer pain relief which ranged from cloves and whiskey to the use of herbs, salves, and home ointments, or to the more idiosyncratic practice of placing a rusty tin or ax beneath the mattress to 'cut' the pains."⁴⁶¹ Experienced midwives would have been known for their skills in attending to pregnant women, assisting laboring and new mothers, and preparing plant remedies for the women and infants in their communities.

Laurel Ulrich, in *A Midwife's Tale*, discovers the same narratives of female support during childbirth in the diary of midwife Martha Ballard (1735-1812a) and Ulrich calls this

⁴⁶⁰ Kennedy, *Born Southern*, 67-69.

⁴⁶¹ Kennedy, *Born Southern*, 66.

multigenerational and sometimes cross-cultural support that women provided each other during their confinement “social childbirth.”⁴⁶² Ulrich claims, “Labor and delivery were central events not only for the mother and baby but for the community of women.”⁴⁶³ Ulrich also studies 17th and 18th century European American journals and diaries, of men and women, to uncover narratives about pregnancy, childbirth, infant care, and midwifery. Ulrich finds that plant remedies played a part in the socially mediated care of reproductively active women and she states, “To relieve discomfort, the women used herbs gathered earlier from the field and garden. Most families had a supply of medicinal and culinary herbs; husbands as well as wives might be involved in their preparation.”⁴⁶⁴ Yet, it is important to remember that there is no singular, universal women’s experience of childbirth, neither within nor across racial and cultural divides. While offering a reminder not to generalize about the reproductive health experiences of women, cultural historian Ann Marie Plane indicates that social childbirth did not generally describe Native experiences of birth:

In no way does it suppose that all native peoples . . . found the same meanings in childbirth, or even that they all shared the same practices. Yet the accounts show that Native American women constructed a different sort of childbirth than their French or English neighbors. While European women would have called four or five female friends over to help during the birth, native women apparently preferred to be alone or attended by only a few people . . . What historians have called “social childbirth” was absent from the native world. To look at the experiences of Amerindian peoples, then, allows the recovery of a piece of the cultural diversity which shaped colonial America.⁴⁶⁵

Thus, while it appears that Native women, and women with mixed Native ancestry, were sometimes called into birthing rooms to assist African and European women during parturition

⁴⁶² Laurel Thatcher Ulrich, *A Midwife’s Tale: the Life of Martha Ballard Based on Her Diary, 1785-1812* (New York: Random House Inc., 1990): 13.

⁴⁶³ Laurel Thatcher Ulrich, *Good Wives: Image and Reality in the Lives of Women in Northern New England, 1650-1750* (New York: Vintage Books, 1991), 126.

⁴⁶⁴ Ulrich, *Good Wives*, 127-128.

⁴⁶⁵ Plane, “Childbirth Practices among Native American Women,” 14.

as experienced or concerned neighbors, the reproductive health norms for Native women's own experiences were conditioned on distinct social expectations. It is probable that Native women were sufficiently supported and looked after during their confinements, but their expectations of labor and birth were differently constructed than those of European women. It is likely that African women would have somehow tried to combine their socially constructed knowledge of birth rituals with the loathsome system of forced breeding enforced on farms and plantations.

Ellen G. Gartrell discusses her research on the medical recipe or receipt book of Elizabeth Coates Paschall (1702-1767) a Quaker merchant who lived in Philadelphia and kept a list of her community's medical remedies between 1740 and 1765. Gartrell describes the manuscript: "Like most personal remedy collections, Elizabeth Paschall's recipe book is not a treatise on health and disease. It is a collection of practical solutions to prevalent problems . . . In her remedies, Elizabeth Paschall often used multiple ingredients, usually from two to six items . . . Plant materials accounted for over two thirds of the different substances used."⁴⁶⁶ Gartrell describes the circulation of knowledge that surrounded Elizabeth Paschall, no doubt gathered around her role in the community as a merchant. Gartrell reports,

Mrs. Paschall also exchanged information, hearsay, and advice with a large number of other people: relatives, neighbors, friends, servants, patrons in her shop, tavernkeepers, Germans, Indians, Negroes, and what she called 'antient' women⁴⁶⁷ - a broad social network of medical information sharing . . . Information moved in all directions in society: from washerwomen to heads of household, from tavernkeepers to Indians, from neighbor to neighbor, between men and women.⁴⁶⁸

Similarly, Sally McMillen, in her study, *Motherhood in the Old South: Pregnancy, Childbirth, and Infant Rearing*, finds evidence of female support and assistance, and the sharing of the use of

⁴⁶⁶ Ellen G. Gartrell, "Women Healers and Domestic Remedies in 18th Century America: The Recipe Book of Elizabeth Coates Paschall," *New York State Journal of Medicine* (January 1987): 25.

⁴⁶⁷ Antient is an obsolete word for ancient. It is not clear why Paschall referred to these women as antient.

⁴⁶⁸ Ellen G. Gartrell, "Women Healers and Domestic Remedies in 18th Century America: The Recipe Book of Elizabeth Coates Paschall," *New York State Journal of Medicine* (January 1987): 26-27

home remedies as important factors in antebellum southern households. McMillen insists, “For thousands of years, women had regarded childbirth as a natural though painful event and relied on midwives and female friends and relatives to assist in birthing. Infant health care had traditionally fallen within the province of domestic medicine and homemade cures.”⁴⁶⁹ Judith Leavitt describes the way that women responded to the sense of shared danger by banding together for mutual support during childbirth:

During most of American history, women's anticipation of the possibility of dying or of being permanently injured during childbirth influenced their life expectations and experiences. But women's responses to their repeated and dangerous confinements suggest, instead of resignation to their difficulties, an active participation in shaping events in America's birthing rooms.⁴⁷⁰

Leavitt provides this excerpt from the 1849 journal of Mr. Preston, in which there is evidence of both social childbirth and a shared cross-racial event. Leavitt reports,

Antebellum southerner Madge Preston gave birth to a child in 1849, which her husband, who waited in another room, reported this way: “At this birth were present Dr. J.H. Briscoe, Mrs. Margaret Carlon, Mrs. Connolly her friend-our servant Mary Miskel, and our Negroes Lucy and Betty. They inform me that Mrs. P. bore her protracted labor, difficulty, pain and anxiety, which endured forty eight hours, with calmness, courage, and fortitude.”⁴⁷¹

Rebecca Tannenbaum speaks of the role of supporter and comforter as one of both choice and compulsion. In, *The Healers Calling: Women and Medicine in Early New England*, Tannenbaum argues that,

[Women’s] first call was to take care of their households. However, medical care was an inherent part of that work. Housewives raised medicinal plants, sat up all night with sick children, and made medicines for their families. Medicine was part

⁴⁶⁹ McMillen, *Motherhood in the Old South*, 9.

⁴⁷⁰ Leavitt, “Under the Shadow of Maternity,” 130.

⁴⁷¹ Leavitt, “Under the Shadow of Maternity,” 143n41: William P. Preston to his daughter, May, on her fifteenth birthday, 19 May 1864, from the collection of the McKeldin Library Archives and Manuscripts, University of Maryland, College Park.

of a religious call as well. For the pious, healing one's neighbors was an occasion for charity and service to others and God.⁴⁷²

In Todd Savitt's text, *Race and Medicine in Nineteenth- and Early-Twentieth-Century America*, his findings echo the discoveries of Leavitt, Ulrich, Kennedy, McMillen, and Tannenbaum on both the calling to midwifery as an extension of women's domestic duties, the sharing of medicinal plant knowledge among many different people, and the site of the birthing room as potentially a cross-racial social space for women. Savitt includes information about the roles that were in operation in these spaces, and he recalls that enslaved women had specific expectations placed on their involvement in women's reproductive health events. Savitt says,

To black women often fell another task: prenatal and obstetrical care of whites and blacks, especially in rural areas. At least one enslaved woman on most large Virginia plantations learned and practiced the art of midwifery, not only at home but also throughout the neighborhood. Owners preferred to employ these skilled accoucheurs in uncomplicated cases.⁴⁷³

Savitt finds instances of the use of plant remedies, some African retentions of botanical knowledge, and sharing of this knowledge across racial groups. He reports,

To offset the failures and harshness of white remedies or the negligence of owners, or perhaps to exert some control over their lives, some enslaved people treated their own diseases and disorders or turned to other trusted blacks for medical assistance with or without the owner's knowledge . . . Others developed or retained from African heritage their own brand of care, complete with special remedies, medical practitioners, and rituals. Most of these cures were derived from local plants . . . Occasionally whites would learn of a particularly effective medicine and adopt it.⁴⁷⁴

Herbert Covey confirms Savitt's analysis of the role of enslaved African women in women's reproductive health care and he claims, "African American women served a vital role as midwives. Slave midwives frequently served as medical providers on the plantation serving as

⁴⁷² Rebecca J. Tannenbaum, *The Healer's Calling: Women and Medicine in Early New England* (Ithaca: Cornell University Press, 2002): vxi.

⁴⁷³ Todd L. Savitt, *Race and Medicine in Nineteenth- and Early-Twentieth-Century America* (Kent, OH: The Kent State University Press, 2007): 76.

⁴⁷⁴ Savitt, *Race and Medicine*, 74-75.

folk doctors, root women, religious ritualists, healers, herbalists, among other roles. They served both White and African American.⁴⁷⁵

Voeks extends the example of the sharing of cures and remedies by considering a specific plant species, *Caesalpinia pulcherrima* (commonly known as poinciana), in the exchange of knowledge between Native, African, and European women, and he discusses the sharing of ethnogynecological knowledge of this plant, similar to what is in evidence about the sharing of *Gossypium sp.* Voeks claims,

Consider the parallel use of *Caesalpinia pulcherrima* by slaves in the Dutch and French colonies. In each locale, the seeds of this species were employed by slave women, Indian and African, to abort their unwanted fetuses. Since this herbal knowledge is unlikely to have been passed to either of these two groups by the disapproving slave holders, inter-ethnic collaboration is the more likely explanation.⁴⁷⁶

This research can be understood as confirmation of a powerful site of ethnogynecological knowledge construction within shared but distinct experiences. In these studies the instances of the sharing of ethnogynecological plant knowledge across racial groups and the limited but significant transcendence of racial boundaries during childbirth indicates the possibilities of women's reproductive health events as sites of negotiated epistemologies and shared knowledge, experiences, and stories. Anthropologists Brian Bates and Alison Turner study the imagery and symbolism of birth rituals in a range of indigenous and traditional cultures. Bates and Turner insist on the importance of cultural expectations in individual women's experiences of birth that transcend and modify shared physical experiences. Bates and Turner claim,

The physiological process of birth is a universal phenomenon, uniting women across cultures and throughout history. Despite earlier beliefs that women in primitive cultures gave birth with less suffering, the evidence now suggests that the degree of childbirth pain experienced is universally constant and that differences lie rather in the expression than in the experience. But the experience

⁴⁷⁵ Covey, *African American Slave Medicine*, 52.

⁴⁷⁶ Voeks, "Traditions in Transition", 286.

of childbirth is also conditioned by its cultural setting - by the values attached to it and the circumstances prescribed by a society for its occurrence. It is the rituals surrounding childbirth that take it beyond an individual experience, which give it a specific cultural context, impose upon it a specific cultural interpretation and which relate the individual experience to a wider cosmology.⁴⁷⁷

In conclusion, childbirth specifically, and women's reproductive health more broadly, were powerful sites of opportunity for the exchange of ethnogynecological knowledge and practices. While holding distinct cultural expectations of the events that took place in these sites, it appears, nonetheless, that women were able to come together across boundaries of race and culture and share their knowledge of helpful plant remedies to try to ease and support each other's reproductive health experiences. The importance to my ethnogynecology research of investigating the experiences taking place in the birthing room is the indication that an opportunity for important ethnobotanical knowledge to be shared was possible. I include this review in the conclusion to my research because I believe it returns this critique of the discourse of traditional ecological knowledge to the potential held within negotiations of knowledge and the recounting of stories.

Traditional Ecological Knowledge and Stories

Wherever you are can be the center of the world.

-Black Elk (Oglala Lakota), Paris, 1889

My research suggests that exchanges of knowledge across racial and cultural boundaries can be understood through the language of encounters and negotiations, an understanding that profoundly alters the discourse of traditional ecological knowledge by considering this knowledge as equally emplaced in the land and embedded in culture. Nancy Turner, Iain Davidson-Hunt and Michael O'Flaherty explore the idea of knowledge created at combined

⁴⁷⁷ Brian Bates and Alison Newman Turner, "Imagery and Symbolism in the Birth Practices of Traditional Cultures," *Birth* 12, no. 1 (Spring 1985): 29.

ecological and cultural edges in their 2003 paper, “Living on the Edge: Ecological and Cultural Edges as Sources of Diversity for Social-Ecological Resilience.” Turner et al. describe the boundaries between different tribal groups of First Nations peoples in the Canadian Northwest as cultural edges,⁴⁷⁸ and they explain the importance of these edges as zones of encounters and negotiations:

We would like to propose that, like ecological edges, cultural knowledge systems could intergrade producing a richness of knowledge and practices that enhances the resilience of local societies. Cultural edges, rather than being border zones between discrete social entities, are zones of social interaction, cross-fertilization, and synergy wherein people not only exchange material goods but also learn from one another. There may be exchanges of locally developed knowledge and practice appropriate to the diverse ecosystems in which the different societies are based.⁴⁷⁹

The authors put forward a process definition of cultural edges and they state that, “The concept of cultural edges seeks to explain the processes of *interaction* [emphasis in the original] between social groups that promote the exchange of knowledge, technologies, and resources in such a way so as to increase the adaptive repertoire available to any one local group. Such cultural edges are like ecological edges in that they allow for a diversification of resources, in this case cultural resources.”⁴⁸⁰ In my research racial and cultural boundaries are like these borders, and are viewed as having the potential to be creative arenas that produce new forms of ecological knowledge. Boundaries may be sites of contestation, dispossession, and resistance; nevertheless they are also sites of cooperation, assistance, and sharing. What my research suggests is that the practices associated with women’s reproductive health and the use of ethnogynecological plant medicines are sites of what Atlantic history researcher Susan Scoot Parrish calls “a critical

⁴⁷⁸ Nancy J. Turner, Iain J. Davidson-Hunt and Michael O’Flaherty, “Living on the Edge: Ecological and Cultural Edges as Sources of Diversity for Social-Ecological Resilience,” *Human Ecology* 31, no. 3 (2003): 454.

⁴⁷⁹ Turner, Davidson-Hunt and O’Flaherty, “Living on the Edge,” 440.

⁴⁸⁰ Turner, Davidson-Hunt and O’Flaherty, “Living on the Edge,” 456.

crossroads of knowledge productions.”⁴⁸¹ At the level of day-to-day practice, and especially for childbearing women, ethnobotanical knowledge production took place in these zones of cultural interaction.

My research suggests the extent to which all these racial groups - Native, African, and European - brought their cosmologies, cultural traditions, and ecological knowledge to their encounters with each other on the American continent. Native ethnobotanical practices assumed both continuity and flexibility even though the beginning of the intense contact period marked increased Native migrations and movements, both from a desire to get away from disease and community devastation, and from Europeans’ politically motivated dislocations and disinheritance of Native land. For Africans, their cosmology, culture, families, language, and traditions were intended for obliteration by the brutality of the Middle Passage and slavery, and are sometimes portrayed as if they had indeed been destroyed. The research shows, however, that African traditional knowledge was not completely shattered, even though it was violently assailed. For Native and African populations the New World encounters were fraught with distinct but related aggressive traumas of concurrent dislocations, genocide, and slavery. The toll these ordeals placed on the traditional knowledge of Native and African peoples is difficult to imagine, yet there is evidence of enduring knowledge and practices for both groups. Europeans came to the New World from very different cultural backgrounds and under a variety of motives including indenture and imprisonment, however, they enjoyed dominance from their emerging New World citizenships, and had access to power carved out of the hegemonic colonial imposition of European economic, cultural, and legal will. European’s access to power was further secured by constantly shifting ideas of race that were designed to solidify white social,

⁴⁸¹ Parrish, *American Curiosity*, 15.

political, and economic control as more important than any individual European ethnic and national identities.

The encounters and interactions between and among these peoples occurred on the foundations of their established frameworks of knowledge, and contact allowed for negotiated epistemologies that created new and shared knowledge. I employ a number of critical approaches to understanding these interactions and these negotiated epistemologies, including examining the particular situation of shared ethnogynecological knowledge across racial and cultural boundaries. I would like to conclude my research by describing a discourse of traditional ecological knowledge that takes these negotiated epistemologies into account. I will discuss the power of narrative and storytelling for sharing knowledge across boundaries, how this points to future research opportunities and a different discourse for traditional ecological knowledge that acknowledges indigenous worldviews while enhancing relationships with other forms of knowledge.

Riyad Ahmed Shahjahan considers, like Turner et. al., that all knowledge is created across borders that result in a hybrid, mixed knowledge. He says, “Knowledge has been generated everywhere, and not solely in the West, and that what we call Western knowledge is actually a hybrid and mixture of knowledges from other cultures and societies.”⁴⁸² All systems of knowledge are, as Dennis Martinez maintains, “branches of the human imagination,”⁴⁸³ and the human ability to create new knowledge or undertake conceptual shifts is neither finite nor infinite. While it is outside the scope of this dissertation to delve into paradigm shifts within human epistemology, or the ways those shifts might be made on individual, community, or

⁴⁸² Riyad Ahmed Shahjahan, “Mapping the Field of Anti-Colonial Discourse to Understand Issues of Indigenous Knowledges: Decolonizing Praxis,” *McGill Journal of Education* 40, no. 2 (Spring 2005): 230.

⁴⁸³ See, Dennis Martinez, “TEK and Western Science.”

societal levels, I would like to consider how knowledge is able to be shared, and is accessible and available to the human community.

One supposition that emerges from these explorations of the sharing of knowledge is that both as individuals and communities humans have the capability and aspiration to incorporate new knowledge even when underlying epistemologies might be quite different and derived from distinct cosmologies. The history of Indian Boarding Schools, for example, is a poignant reminder of a mandatory system of both individual and community epistemological shifting that had negative, multigenerational consequences. Another expression of the idea of straddling an epistemological gap is W.E.B. DuBois' concept of the "two-ness" of oppressive American social norms within African American cultural and spiritual life. In the history of the New World, and because of the resultant encounters of groups of people coming from different epistemological traditions, members of disempowered communities and/or those who are of mixed racial and cultural backgrounds, have undertaken both willing and compulsory epistemological shifts, some of which entail straddling psychologically uncomfortable epistemological gaps. These spaces have been crossed, nonetheless, and it has been suggested that the ability to learn across these boundaries is related to human developmental ability for language acquisition.⁴⁸⁴ Clearly, as Basso points out, naming and language are critical to indigenous concepts of identity and knowledge. Salmon mentions the relationship of language to indigenous identity, asserting, "The concepts of identity and language are connected to indigenous peoples' concepts of self. Words shape thought. Thought is an expression of spirit."⁴⁸⁵ Cajete, and other indigenous education researchers speak of the indigenous process of learning through experience, storytelling, ceremony, dreaming, tutoring, and artistic creation as suggestions for incorporating appropriate

⁴⁸⁴ Callicott and Nelson. *American Indian Environmental Ethics*, 19-21.

⁴⁸⁵ Salmon, "Kincentric Ecology," 1331.

education for indigenous youth within western classrooms. The substance of this supposition about knowledge sharing and negotiated epistemologies is that the ways in which access to language are most potent - through myth, story, fable, and song - are the ways in which it is also possible to share new knowledge and make epistemological shifts achievable.

Callicott and Nelson observe that it is language that analyzes, arranges, and connects experience into categories and relationships that are then transmitted culturally. They say, “Language mediates and structures the world until its experiences are assumed uncritically.”⁴⁸⁶ Other theorists -- Edward Sapir, Franz Boas, and Bruno Latour, as mentioned by Callicott and Nelson -- have asserted that language, by representing social reality, is the medium by which culture provides a socially constructed version of “reality.”⁴⁸⁷ Callicott and Nelson assert that, “Epic, lyric, mythic, and other originally oral narrative materials indeed are the principal resource for traditionally less formal literary and philosophical analyses.”⁴⁸⁸ All peoples have stories, inherited wisdom, and traditional ecological knowledge in their ancestral histories. Science also tells stories. The use of stories for sharing knowledge appears to be a cultural universal. In this manner narrative may point to the connections that exist between indigenous and western knowledge; between very different ways of knowing the world. Deloria demonstrates the fascinating possibility of convergences of indigenous and western epistemologies by comparing the “spirit of the sacred” in Sioux tradition to the stories of Jungian psychological constructs. Deloria argues traditional ecological knowledge does not need to be incorporated into “existing intellectual frameworks and edifices,”⁴⁸⁹ but rather that a better

⁴⁸⁶ Callicott and Nelson. *American Indian Environmental Ethics*, 20-21.

⁴⁸⁷ Callicott and Nelson. *American Indian Environmental Ethics*, 19.

⁴⁸⁸ Callicott and Nelson. *American Indian Environmental Ethics*, 31.

⁴⁸⁹ Deloria, C.G. *Jung and the Sioux Traditions*, 183.

strategy is to transcend “the parochial nature of both bodies of knowledge.”⁴⁹⁰ Deloria explains the synthesis that exists in the ideas of the “philosophical physicist, a metaphysical common ground”⁴⁹¹ that can help modern science make sense of traditional ecological knowledge.

Suzuki and Knudtson argue for the potential of traditional ecological knowledge to meet western knowledge at those theoretical and empirical junctions where the shifts for western paradigms have already begun. Suzuki and Knudtson present these openings as discoveries within western science - such as time elasticity, the intuitive insights of theoretical and quantum physicists, and the non-duality of subatomic particles with their synergism and complexity. Suzuki and Knudtson ask, “What might the Native Mind glimpse that the scientist’s more myopic gaze cannot?”⁴⁹² Suzuki and Knudtson demonstrate the power of an indigenous worldview to fill in the gaps of western scientific knowledge by describing a natural world that is both encompassing of and different from the rational objective world.⁴⁹³ In comparing the two ontologies of environmental thought and practice Suzuki and Knudtson say, “Scientific expertise is so narrowly focused and specialized that it can barely comprehend the dimensions and the interconnectedness of life.”⁴⁹⁴ They base their arguments for the cooperation of the two worldviews on the importance of inculcating a sense of “wonder and veneration” into western science.

It remains critical to keep in mind, when considering ways that knowledge is shared and bridges can be made across the boundaries of western and indigenous epistemologies, the assaults that have been and continue to be made on indigenous peoples and indigenous ways of life. Leanne Simpson recalls the reasons for these historical and contemporary affronts:

⁴⁹⁰ Deloria, *C.G. Jung and the Sioux Traditions*, 184.

⁴⁹¹ Deloria, *C.G. Jung and the Sioux Traditions*, 186.

⁴⁹² Suzuki and Knudtson, *Wisdom of the Elders*, 14.

⁴⁹³ See, Suzuki and Knudtson, *Wisdom of the Elders*.

⁴⁹⁴ Suzuki and Knudtson, *Wisdom of the Elders*, xxxvi.

When Indigenous Nations were an obstacle toward establishing European sovereignty over Indigenous lands, the foundation of Indigenous Knowledge was attacked by the invading culture as a mechanism to annihilate Indigenous nations and assimilate Indigenous Peoples. Indeed, the colonial powers attacked virtually every aspect of our knowledge systems during the most violent periods of the past five centuries by rendering our spirituality and ceremonial life illegal, attempting to assimilate our children and destroy our languages through the residential school system, outlawing traditional governance, and destroying the lands and waters to which we are intrinsically tied. Our knowledge comes from the land, and the destruction of the environment is a colonial manifestation and a direct attack on Indigenous Knowledge and Indigenous nationhood.⁴⁹⁵

The continuing hegemony of western and scientific ecological systems, and the tenuous historical and current protections afforded to indigenous people and indigenous knowledge should not be ignored. Attempts to discuss or implement shared ecological experiences, knowledge, or management ought to proceed under the leadership of indigenous people, centering indigenous histories, using indigenous research frameworks, and respecting rules of access to different types of stories and knowledge.

It is possible that a focus on the sharing of traditional ecological knowledge across boundaries of race and culture, and ultimately across epistemological borders, may be advantaged from more closely considering the mediating role of narratives and storytelling, and their essential functions as forms of access to new knowledge. Further study might demonstrate that the narratives of indigenous knowledge and the nomological deductions of science, as modes of explanation, are equally important stories, and a potential window between distinct worldviews. Marion Glaser, in “The Social Dimension in Ecosystem Management: Strengths and Weaknesses of Human-Nature Mind Maps,” proposes four mind maps for human/nature interactions, what she calls ecocentric, anthropocentric, interdisciplinary, and complex system.⁴⁹⁶

⁴⁹⁵ Leanne R. Simpson, “Anticolonial Strategies for the Recovery and Maintenance of Indigenous Knowledge,” *American Indian Quarterly* 28, no. 3/4 (2004): 377.

⁴⁹⁶ See, Marion Glaser, “The Social Dimension in Ecosystem Management: Strengths and Weaknesses of Human-Nature Mind Maps.” *Human Ecology Review* 13, no. 2 (2006).

I suggest the additional possibility of a narrative-based, empathy-driven human/nature mind map that would model empathic relationships between human and all non-human environmental elements as the basis of human/nature interactions. Further, the development of neurological maps of human empathy is currently experiencing considerably new and wider horizons in contemporary brain and trauma studies. The theories and findings of this recent research are beyond the scope of my dissertation, however, I note the discovery of neural connections between states of care and empathy and the brain's capacity for pattern recognition, storytelling, and narratives.

This returns of course to an indigenous understanding of traditional ecological knowledge as a relational construct and as a way of life. I am aware that the empathic human/nature interactions of traditional ecological knowledge are based on relationships that have been developed over time and passed on from generation to generation, much the way that my grandmothers instructed me while I sat at their formica tables, watching them water plants, make tea, and feed our extended families from food grown in their kitchen gardens.⁴⁹⁷ Indigenous knowledge is passed on through direct empirical training and constant storytelling. As an educator my mother knew, and taught me, that stories and songs remain the most fundamentally important of all teaching methods. Traditionally, people observed, listened to, and understood the elements of nature, they understood that these elements were signs and insights with which to navigate their lives, and they sang songs and told stories about what they comprehended in order to pass that awareness on. The creatures - plant, animal, and mineral - of those stories were established firmly in relationship to their human community, and it was fundamentally a relationship of respect and reciprocity. Many indigenous worldviews accord to human agency

⁴⁹⁷ I also remember so much of the ecological wisdom of my grandmother, Elsie Brown Hill, and of her father, my great grandfather, Hayden Brown, who talked about the plants in the rural landscape of Virginia as he walked it with me until I was 17 years old.

the responsibility of dreaming, singing, or storytelling a location or place into being, or maintaining a place through dreams, songs, and stories. Ultimately, these stories and these relationships describe a new discourse of traditional ecological knowledge.

A Praise Poem: Spirit and Form⁴⁹⁸

Praise Roots Woman

*ripped feet
pulled from the warm salty flesh
of the mother womb
a vibrant vulva
dangling above
clinging to a rough skin
gulping air
pushing off
flying, trailing
a cape of dreadlocks
spread out behind
and headed back to earth*

Praise Sacred Leaves

*high upon a lonely wooden tower
you shelter us protect us
our pain our joy our sins
you cleanse us of
our walking away toward evil
with the flow in your veins
you sustain us
ultimately, you abandon us
you sacrifice yourself
so that we can turn our hearts
to the light of the sacred*

Come Back as a Flower

*If flowers were in black and white
perhaps we'd never know,
our eyes would never see
the showy beauty of a crocus
with its head above the snow.
We'd stop at thoughts of emptiness
and long for unknown messages
of loveliness to soothe our hearts
from false imaginings and pretense.*

⁴⁹⁸ Claudia J. Ford, written to honor herbalists Deb Soule and Jillian Kelsey Rose, April 2014.

*Yet we never can be separate
and never quite alone
only each exists in flashy difference
in our garden home.
Seed, Fruit, Seed, Fruit, Seed, Fruit
with faith the size of a mustard seed
and the child of my labor
from an idea germinating
a flowering, a womb
grows a mystery
inside another vessel
like a hall of mirrors
an endless set of rooms
stretch into the infinity
of the realization of my dreams*

Growing Forward

The current discourse of traditional ecological knowledge is too closely framed around inventions of nescience, stasis, and isolation, especially constructed around the falsehoods of uncontaminated knowledge and indigenous purity. The historical origins of this framework of myths are the hegemonic power of first contact and colonialism, and the narrowing of indigenous options to a limited, rickety, legal and cultural scaffold of survival during attempts at annihilation. There is great danger in the purity myth, however. These myths are imposed, simplistic, and false. Myths of racial isolation and purity begin in deeply disempowering origins and are not, originally, indigenous constructions. The protection of indigenous knowledge and indigenous rights under this framework of falsehoods has been proven time and again to be murderously shallow and dangerously fragile. Traditional ecological knowledge is and always has been dynamic, creative, and hybrid knowledge. Through my research I have come to consider that acknowledging and uncovering this dynamism will provide greater protection for indigenous knowledge and indigenous peoples. As a mixed race researcher I emplace and embody myself outside of false notions of epistemic purity and within the power of shared and

hybrid knowledge. I hope to have provided a critical perspective on traditional ecological knowledge that adds to current attempts to share knowledge across boundaries and respects the indigenous wisdom that traditional ecological knowledge assumes, while collectively addressing serious environmental challenges.

I return to the stories and questions raised by my dissertation. This research is a way to realize my aspirations: that traditional systems of knowledge about ecological processes are considered with greater esteem; that comprehension of the ways in which this knowledge is historically constructed, epistemologically sophisticated and dynamic is increased; that there is a recognition of traditional ecological knowledge as created and shared across boundaries; and, that the narrative traditions that give systems of knowledge their power to structure a more respectful and sustainable human/nature relationship is uncovered. One of the challenges is that of reframing the discourse of traditional ecological knowledge such that there is no need to co-opt, appropriate, integrate, learn, or explain traditional ecological knowledge solely relative to and within the rules of a western paradigm - a paradigm that has too often stood in opposition to and oppression of indigenous knowledge. My hope is that further investigations will recognize the unique qualities of indigenous knowledge, honor an indigenous worldview, and simultaneously concede what is universal across human communities. I see great merit in undertaking research on the sharing of ecological knowledge through narratives and across boundaries of race and culture, even when people are separated by epistemological differences.

A Story: The Grandmothers

The Grandmothers have called on me to do this research. I have 8 great great grandmothers, as does everyone of us. One of these grandmothers, Grandma Annie Simmons, was a mixed-race freewoman, and a community midwife, in the 18th century. When I began to catch babies, at age 21, I felt Grandma Annie's spirit was always with me. As a young midwife, I learned quickly that my knowledge and my practice was a calling, and that my commitment to correct and steady action was to be found in the wisdom of my sister and grandmother midwives. Delivering babies

across all racial, cultural, and economic boundaries I was taught two things. First, that for all of human existence we equally come into this world naked, upside down, and backwards. Second, for the safety of the mother and new child, we sit with other women, we watch, wait, and pool our collective wisdom. We share our knowledge. We, as women in a birthing room, mothers, grandmothers, sisters, aunts, daughters, cousins, midwives, and weed women, we become a temporary community sharing our ethnogynecological knowledge across the boundaries that separate us in our daily lives. As I undertook this research and created and recorded these stories I felt Grandma Annie's spirit was always with me.

APPENDIX

Table 4.1. Archives consulted in-person

NAME OF ARCHIVE AND LOCATION	COLLECTION DETAILS & WEBSITES
The John Carter Brown Library Providence, RI 02906 401-863-2725	An Institute for Advanced Research in History and the Humanities at Brown University Digital Book Collections http://www.brown.edu/academics/libraries/john-carter-brown/jcb-online/digital-book-collections
Mashantucket Pequot Museum and Research Center 110 Pequot Trail P.O. Box 3180 Mashantucket, CT 06338-3180 800-411-9671	Libraries and Archives http://www.pequotmuseum.org/ Online Catalog http://www.mpmrc.com/
Mohegan Tribal Council 5 Crown Hill Road Uncasville, CT 06382	By invitation only.
The Providence Athenaeum 251 Benefit Street Providence, RI 02903 401-421-6970	Library and Cultural Center http://www.providenceathenaeum.org/index.html

Table 4.2. Online archives consulted

NAME OF ARCHIVE & WEBSITE	COLLECTION DETAILS	
<p>Accessible Archives http://www.accessible-archives.com/collections/</p>	<p>African American Newspapers: The Christian Recorder (1861–1902); The Colored American (1837–1841); Frederick Douglass’ Paper (1851–1855; 1859–1863); Freedom’s Journal (1827–1829); The National Era (1847–1860); The North Star (1847–1851); Provincial Freeman (1854–1857); Weekly Advocate (1837–1837). Also: The Pennsylvania Gazette South Carolina Newspapers The Virginia Gazette (1736–1780)</p>	<p>American County Histories to 1900: Delaware, Maryland, New Jersey, New York, Pennsylvania, Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. Godey’s Lady’s Book The Liberator The Pennsylvania Genealogical Catalogue The Pennsylvania Newspaper Scenes in the Life of Harriet Tubman</p>
<p>Google Play https://play.google.com/store?hl=en</p>	<p>A large collection of downloadable historical medical, botany, herbal, and travel manuscripts from the 17th through 20th centuries, including some diaries.</p>	
<p>Historical Society of Philadelphia History Online http://hsp.org/history-online</p>	<p>Small Repositories Subject Guides in: Nature, Technology, and Medicine Women’s History</p>	
<p>Internet Archive: Digital Library https://archive.org/index.php</p>	<p>Large collection of open source libraries and archives in one location.</p>	
<p>Library of Congress Digital Collections and Services http://www.loc.gov/library/libarch-digital.html</p>	<p>American Memory: American History and Culture Chronicling America: Historic Newspapers</p>	
<p>New York Public Library: Digital Schomburg http://digital.nypl.org/schomburg/writers_aa19/toc.html</p>	<p>African American Women Writers of the Nineteenth Century: The series is a contextualized collection of fully searchable electronic editions.</p>	
<p>Yale University: Yale Indian Papers Project http://www.library.yale.edu/yipp/indian_papers/index.html</p>	<p>New England Indian Papers Series Database Fully searchable and online.</p>	

Table 4.3. Summary of documents and plant species in Ethnogyneology Index

AUTHORS, DATES OF PUBLICATION, TYPES OF DOCUMENTS	PLANT SPECIES	
27 studies selected Published 1754-2007	Total plant species	3177
Native, African, European ethnobotanical subjects N = 21, A = 3, E = 3	Ethnogyneological (RH) plant species	688 22% of total species
8 female authors 19 male authors 30% female authors	RH plant species for women	598 87% of RH species
22 primary documents 5 secondary documents 81% primary documents	RH plant species for infants	132 19% of RH species
	Reported uses and practices for RH plants	253

Key: N = Native; A = African; E = European; RH = Women's Reproductive Health/Ethnogyneology.

Table 4.4. Ethnognecology Index source information by date of publication

YEAR OF PUBLICATION	AUTHOR NAME AND GENDER		TOTAL PLANT SPECIES IN STUDY	RH PLANT SPECIES IN STUDY			RH USES LISTED	GROUP STUDIED
				TOTAL	RH WOMEN	RH INFANTS		
1754	Occom	M	52	6	6	0	3	N
1891	Hoffman	M	53	3	3	0	3	N
1905	Grinnell	M	21	4	3	1	3	N
1905	Clymer	M	75	52	44	15	17	E
1917	Speck/Algonquian	M	132	6	5	1	6	N
1917	Speck/Mohegan	F	62	6	1	5	4	N
1922	Wallis	M	52	4	3	1	4	N
1923	Smith/Menomini	M	222	34	32	4	15	N
1928	Smith/Winnebago	M	117	21	14	7	11	N
1928	Smith/Meskwaki	M	206	35	31	6	15	N
1932	Smith/Ojibwe	M	183	47	41	7	15	N
1933	Smith/Potawatomi	M	190	34	31	4	14	N
1937	Speck/Catawba	M	46	6	6	1	5	N
1940	Taylor	F	185	30	29	2	9	N
1942	Tantaquidgeon	F	179	26	21	6	14	N
1942	Speck/Rappahanock	M	84	7	4	3	6	N
1970	Vogel	M	78	53	50	5	10	N
1972	Tantaquidgeon	F	92	9	3	5	5	N
1973	Meyer	M	92	77	75	13	14	E
1978	Croom	M	87	12	11	2	6	N
1979	Grimé	M	116	12	12	0	5	A
1980	Black	F	541	122	106	25	25	N
1983	Doane	F	40	35	35	0	8	E
1986	Duke	M	24	11	9	3	11	N
1994	Fontenot	F	34	4	2	2	4	A
1996	Kavasch	F	13	13	12	2	8	N
2007	Covey	M	201	19	9	12	13	A
TOTAL PLANT SPECIES AND USES			3177	688	598	132	253	

Key: N = Native; A = African; E = European; RH = Women's Reproductive Health/Ethnognecology

Table 4.5. North American Native tribes, bands, and groups discussed in Index studies

AFFILIATION	TRIBES, BANDS, GROUPS
A: EASTERN WOODLANDS, NORTH	Abenaki, Algonquin, Barriere Obedjiwan, Canadian Delaware, Six Nations, Munsee, Michigan Chippewa, Chippewa, Delaware, Oklahoma Delaware, Flambeau Ojibwa, Gayhead, Illinois Miami, Iroquois, Lumbee, Lenni Lenape, Lake Superior, Mohegan, Micmac, Meskwaki, Menominee, Menomini, Minnesota Chippewa, Wisconsin Chippewa, Nanticoke, Ojibwa, Ojibwe, Penobscot, Ponca, Pillager Ojibwa, Potawatomi, Prairie Potawatomi, Forest Potawatomi, River Desert, Kitigan Zibi, Rappahannock, Seneca, Tete-de-Boule, Tuscarora, Winnebago, Hocak, Ho-Chunk, Wisconsin Ojibwa
B: EASTERN WOODLANDS, SOUTH	Alabama, Alibanu, Cherokee, Creek, Catawba, Choctaw, Koasatis
C: SUBARCTIC EAST	Cree, Manouan Cree, Montagnais, Lake Victoria Obedjiwan or Cree
D: PLAINS	Arikara, Cheyenne, Comanche, Dakota
E: MEXICO, CARIBBEAN	Aztec, Opata, Zapotec
F: WEST, SOUTHWEST	Bella Coola, Hopi, Navaho, Pima, Paiute, Shoshone, Zuni
G: NORTHWEST, SUBARCTIC WEST, ARCTIC	Quinault

Note: Names of Native tribes are taken directly from the source documents, including any spelling irregularities.

Table 4.6. Ethnogynecological (RH) categories and recorded uses of plants for women

RH CATEGORY	WOMEN'S USES	# STUDIES INCLUDE THIS USE
BFD Breastfeeding	to treat caked breasts, for sore breasts, sore nipples, broken breast, lacteal troubles, inflamed breasts, swollen breast, breast pain	12
	to stimulate the flow of milk, activate lactation, benefit nursing mothers, a lactagogue, a lacteal stimulant	12
CBL Childbirth	to induce labor	2
	to make childbirth easier, speed delivery, used during childbirth, to relieve the pain of childbirth, aid in parturition, relief of women in labor, in midwifery, parturient, rigid os	21
FER Fertility	to increase fertility	6
GYN Gynecology	to treat leucorrhea, vaginal discharge, vaginitis, excessive lochia, <i>fluor albus</i>	9
	an excellent douche, to flush the vagina	6
	for women suffering displacement of womb, injured womb, injured uterus, <i>prolapsus uteri</i> , uterine trouble, uterine problems cause by childbearing, uterine sedative, uterine cancer, womb ailments, uterine catarrh, used for uterine dressings, uterine ulcerations	11
	useful in treating female diseases, diseases peculiar to women, female disorders/troubles, for a female remedy, cleanses the system, female maladies	20
MRA Menstruation	for suppressed/obstructed menstruation, menstrual irregularities/disorders, cramps, to induce abortion, for an excessive menstrual flow, for amenorrhea, induce delayed menses, an emmenagogue, to ease menstrual pains, contraceptive, for dysmenorrhea, menstrual headaches	20
MNP Menopause	to treat symptoms of menopause	7
PPT Postpartum	to women following childbirth, after childbirth, pain in the chest caused by childbirth, experiencing complications after childbirth, postpartum hemorrhage, to cleanse after childbirth, during confinement, clear up after-birth, puerperal infection	16
PRG Pregnancy	for pregnant women, tonic for pregnancy, sickness during pregnancy, for expectant mothers, to prevent miscarriage	12
TON Tonic	for female weakness and debility, a tonic for frail women, for weak women, a female/women's medicine, for chlorosis, a female vitalizer	13
	a tonic to strengthen the female generative organs, used by adolescent girls, for menarche, to purge women, for weakness of the womb, hysteria	10

Table 4.7. Ethnogynecological (RH) sub-categories and recorded uses of plants for infants

RH CATEGORY	INFANT USES	# STUDIES INCLUDE THIS USE
IN1	for colic in infants, stomachache of infants, constipation	14
IN2	for healing properties, infections, infected navel, umbilical cord healing	5
IN3	for infant colds	6
IN4	a mouth wash for infants, to prevent sore mouth, for thrush or thrash	7
IN5	for teething infants	9
IN6	to quiet infants/soothing drink for infants, for fretfulness, pain, for crying	7
IN7	a tonic for infants, frail infants, general disorders of babies, physic for babies	8
IN8	to treat chafed skin of babies, diaper rash	5
IN9	to wash a newborn	4
IN10	for fevers and convulsions in infants, infantile spasms	3
IN11	for <i>cholera infantum</i> , diarrhea, worms	6
IN12	for gestational jaundice	1

Table 4.8. Ethnogynecologically significant plants frequently recorded for infant use

SPECIES & COMMON NAMES	# STUDIES REPORTING USE	RECORDED DESCRIPTIONS OF USE	GROUPS REPORTED TO USE THIS SPECIES	# NATIVE TRIBES REPORTED TO USE THIS SPECIES*
<i>Nepeta cataria</i> Catnip, Catmint, Baby Medicine	12	Leaves prepared with peach seed, very beneficial tonic; infusion of leaves as cure for colic; for babies pain and rheumatism; tea is given to babies for colic; used as a carminative in the flatulent colic of infants; cuts mucus in babies throat; remedy for infant colic, teething, colds and crying; the leaves are made as a tea for colic; used for infant pain.	N, A, E	11
<i>Coptis trifolia, C. groenlandica</i> Golden Thread, Goldthread, Canker Root	7	Decoction of the root to soothe and heal a teething child's gums, for teething babies, mouthwash for babies; tea from leaves, used as mouth wash; the root of this plant for lessening the pain of teething babies; astringent mouth wash for sore throat of babies, used for teething babies.	N, E	8
<i>Sambucus canadensis</i> Elder, Common Elder, Elderberry, Elder blow, "Hollow tree"	6	Tea from flower, for colic in infants; tea from dried flowers, to cure colic; babies colic, and stillbirths; worn around babies necks to help with teething.	N, A, E	5
<i>Lycoperdon pyriforme, L. subincarnatum</i> Puffball, Gem Puffballs, Pinkish Puff Ball	5	Used to treat chafed skin of babies; tore a small fresh puffball in half and placed it on the navel of a newborn infant until healed; pulverized to prevent or relieve skin chafing; to soothe any chafing between the legs and under the armpits of an infant; called the "Indian baby talcum."	N	6
<i>Salix alba, S. tristis</i> White Willow, Red Root, Dwarf Gray-willow	3	Use the bark topically on newborn navels; used for washing the sore mouth of a young child; medicine with which the child's mouth is washed when it is sore.	N	6

Key: N = Native; A = African; E = European. *The number of different tribes using the species for this purpose.

Table 4.9. Ethnogynecologically significant plants frequently recorded for use in childbirth

# STUDIES REPORTING USE OF THIS SPECIES	PLANT SPECIES	GROUP USING PLANT
5	<i>Caulophyllum thalictroides</i>	N, E
4	<i>Trillium sp.</i> , <i>Ulmus sp.</i> , <i>Prunus sp.</i> , <i>Gossypium herbaceum</i>	N, A, E
3	<i>Clintonia borealis</i> , <i>Aralia sp.</i> , <i>Osmorrhiza sp.</i> , <i>Veronica sp.</i> , <i>Eupatorium sp.</i> ,	N, E
2	<i>Mitchella repens</i> , <i>Myrica sp.</i> , <i>Leonurus cardiaca</i> , <i>Smilacina racemosa</i> , <i>Actea sp.</i> , <i>Sarracenia purpurea</i> , <i>Celastrus scandens</i> , <i>Napaea dioica</i> , <i>Sambucus canadensis</i> , <i>Unknown</i> , <i>Discorea villosa</i> , <i>Rubus sp.</i>	N, A, E
1	<i>Chrysanthemum parthenium</i> , <i>Pulsatilla nigracans</i> , <i>Lobelia inflata</i> , <i>Lycopodium sp.</i> , <i>Comptonia peregrina</i> , <i>Caltha palustris</i> , <i>Ledum groenlandica</i> , <i>Vaccinium angustifolium</i> , <i>Viburnum sp.</i> , <i>Balsamorhiza sagittata</i> , <i>Taxus sp.</i> , <i>Populus sp.</i> , <i>Cornus sp.</i> , <i>Asclepias sp.</i> , <i>Solidago speciosa</i> , <i>Juniperus communis</i> , <i>Malva rotundifolia</i> , <i>Marrubium vulgare</i> , <i>Sanguinaria canadensis</i> , <i>Rhus sp.</i> , <i>Cicuta sp.</i> , <i>Opuntia sp.</i> , <i>Ustilago zaeae</i> , <i>Thuja sp.</i> , <i>Montanoa tomentosa.</i> , <i>Quercus sp.</i> , <i>Impatiens biflora</i> , <i>Nepeta cataria</i> , <i>Syngium aromaticum</i> , <i>Cimicifuga racemosa</i> , <i>Euonymus atropurpurea</i> , <i>Arctium minus</i> , <i>Typha latifolia</i> , <i>Betula pumila</i> , <i>Spiraea tomentosa</i>	N, A, E

Key: N = Native; A = African; E = European.

Table 4.10. Botanical online databases consulted

I used the following 10 websites as references for comparing my archival ethnobotanical documents to modern taxonomies and their botanical classifications, scientific names (family, genus, and species if available), and common names. Comparisons to modern taxonomies were for information and clarity, and were not used to editorialize, update, or modernize the source document information.	
NAME OF DATABASE & URL	DETAILS OF COLLECTION
Biodiversity Heritage Library http://biodivlib.wikispaces.com/About	A consortium of natural history and botanical libraries that works with the international taxonomic community, to ensure that biodiversity heritage is made available through open access representing over 100,000 volumes.
Botanical.com http://botanical.com/	Home of the electronic version of "A Modern Herbal" by Maud Grieve, originally published in 1931.
Dr. Duke's Phytochemical and Ethnobotanical Databases http://www.ars-grin.gov/duke/	A collection of detailed chemical analysis and ethnobotanical information assembled and maintained by botanist, Dr. Duke.
Gray Card Index www.herbaria.harvard.edu/data/gray/	This database of the Harvard University Herbaria catalogues over 325,000 citations of names of New World vascular plants.
International Organization for Plant Information http://plantnet.rbgsyd.nsw.gov.au/iopi/iopihome.htm	A series of databases summarizing taxonomic, biological, and other information on plants of the world. IOPI databases include the following: names and geographical distributions of plant taxa, biological attributes, potentials for utilization, and conservation-related data.
National Science Digital Library – Botany and Plant Science http://www.biosciencednet.org/portal/index.php	The BEN portal is part of the National Science Digital Library for biological sciences education managed by the AAAS. Over 18,827 reviewed resources covering 77 biological sciences topics, including botany, are available.
Native American Ethnobotany – University of Michigan Dearborn http://herb.umd.umich.edu/	This site houses Dr. Moerman's encyclopedia of Native American ethnobotany and is collected and maintained by Moerman.
The International Plant Names Index http://www.ipni.org/	A database of the names and associated basic bibliographical details of seed plants, ferns and lycophytes, IPNI is the product of collaboration between The Royal Botanic Gardens, Kew, The Harvard University Herbaria, and the Australian National Herbarium
The Plant List http://www.theplantlist.org/	Collaboration between the Royal Botanic Gardens, Kew and Missouri Botanical Garden The Plant List provides the accepted Latin name for most species, with links to all synonyms by which that species has been known. The Plant List contains 620 plant families and 16,167 plant genera.
United States Department of Agriculture: Germplasm Resources Information Network http://www.ars-grin.gov/npgs/aboutgrin.html	GRIN provides National Genetic Resources Program personnel and germplasm users continuous access to databases of national germplasm collections.

Table 4.11. The twenty most frequently recorded ethnogynecologically significant plant genera

#	SPECIES NAMES	# STUDIES*	GROUPS REPORTED TO USE THIS SPECIES		
			NATIVE	AFRICAN	EUROPEAN
1	<i>Nepeta cataria</i>	13	Yes	Yes	Yes
2	<i>Prunus: P. serotina, P. pensylvania, P. virginiana, P. persica, P. melanocarpa</i>	13	Yes	Yes	Yes
3	<i>Quercus: Q. alba, Q. marilandica, Q. rubra, Q. shumardis, Q. macrocarpus</i>	10	Yes	Yes	Yes
4	<i>Sambucus canadensis</i>	8	Yes	Yes	Yes
5	<i>Asclepias: A. syriaca, A. tuberosa, A. exalta, A. halli</i>	8	Yes	Yes	Yes
6	<i>Caulophyllum thalictroides</i>	8	Yes	No	Yes
7	<i>Actaea/Actea: A. rubra, A. arguta</i>	8	Yes	No	Yes
8	<i>Ulmus: U. rubra, U. fulva</i>	8	Yes	Yes	Yes
9	<i>Eupatorium: E. puerpeurium, E. maculatum, E. perfoliatum</i>	7	Yes	No	Yes
10	<i>Coptis: C. trifolia, C. groenlandica</i>	7	Yes	No	Yes
11	<i>Salix: S. alba, S. discolor, S. tristis, S. humilis, S. nigra, S. microphylla, S. amygaloides</i>	7	Yes	No	Yes
12	<i>Acorus calamus</i>	6	Yes	No	No
13	<i>Viburnum: V. prunifolium, V. pomifolium, V. opulus, V. lentago, V. trilobum</i>	6	Yes	Yes	Yes
14	<i>Gossypium sp.</i>	5	Yes	Yes	Yes
15	<i>Sanguinaria canadensis</i>	5	Yes	No	Yes
16	<i>Lycoperdon: L. subincarnatum, S. pyriforme</i>	5	Yes	No	No
17	<i>Apocynum androsaemifolium</i>	5	Yes	No	No
18	<i>Vitis: V. vinifera, V. vulpina, V. rupestris, V. riparia</i>	5	Yes	Yes	Yes
19	<i>Aralia: A. racemosa, A. nudicalis, A. hispida</i>	5	Yes	No	Yes
20	<i>Rubus: R. strigosa, R. strigosus, R. idaeus, R. occidentalis, R. allegheniensis, R. frondosus, R. aculeatissimus</i>	5	Yes	No	Yes

Note: *Number of authors reporting the use of this genera.

Table 4.12. Plant remedies, parts, and preparations

Plant Parts (N=43)			Plant Preparations (N=39)	
Bark	Young Branches	Plant	Amulet	Oil
Inner Bark	Cones	Juice	Bath, Wash	Ointment
Bark Coals	Needles	Pod	Bed	Pessary
Bark Powder	Root(s)	Pollen	Boil	Pills
Branch Bark	Dried Root	Spores	Boiled	Plaster, Poultice
Root Bark	Mashed Root	Powder	Boiled in Milk	Powder(ed)
Berry(s)	Pounded Root	Unstated	Chewed, Gum	Remedy
Fruit(s)	Powdered Root		Decoction, Infusion, Tea	Sap
Sloe	Seed(s)		Douche	Seasoner
Blades	Stalk(s)		Drink	Steeped
Fronds	Stem(s)		Eaten	Sudatory, Steam
Leaf, Leaves	Tips		Extract	Syrup
Blossoms	Tops		Grated	Talc
Flower(s)	Rind		Inhalant	Tincture
Branch(s)	Thistle		Juice	Tonic
Branchlets	Vine		Mash(ed)	Suppository
Twigs	Rhizome		Medicine	Wine
Split Twigs	Herb		Necklace	Unstated

Table 4.13. Recorded unique preparations of plant remedies

In addition to teas, infusions, and decoctions:
<ul style="list-style-type: none">• The inner bark is used as a dressing.• The oil which comes to the surface of the water when the inner bark is boiled is used as a medicine.• Gum is used as a salve and chewed like chewing gum.• A jelly is prepared from the cones.• Dried leaves and/or crushed bark are burnt as an inhalant.• Inner bark half-cooked and beaten to make a poultice.• Make small balls or pills of the hardened sap and swallow.• Drink the sap.• Rotten wood crushed and used as a powder.• Bruise leaves or twigs to make a drink.• Leaves dried and powdered and used as a talc.• The root is scraped in an upward direction and a pinch of powder made from dried bumblebees is added. This tea is drunk by some experiencing difficulty in childbirth.

Table 4.14. Recorded uses for *Caulophyllum thalictroides* from 4 documents

SOURCE AUTHOR, YEAR, ENTRY OR PAGE # IN SOURCE	PLANT PART USED & PREPARATION	USES FOR WOMEN'S RH	GROUPS REPORTED AS USING PLANT
Clymer 1905 p. 148	Root Infusion	MRA, CBL: <ul style="list-style-type: none"> • relief of cramps during menstruation • for menstrual difficulties • promote freer menstrual flow • relief from menstrual pain • promote labor pains 	Native European
Vogel 1970 p. 244	Root Powder	MRA, CBL: <ul style="list-style-type: none"> • to expedite parturition • for menstruation 	Native (Chippewa)
Meyer 1973 p. 173	Root Decoction	MRA, CBL, PPT, PRG, GYN <ul style="list-style-type: none"> • for painful, difficult menses • to facilitate childbirth • during pregnancy • for inflammation of the uterus • for afterbirth pains 	Native European
Black 1980 E. 208	Root, Flowers, Rhizome Infusion, Powder	MRA, CBL, PPT, GYN: <ul style="list-style-type: none"> • for menstrual cramps • suppress menstrual flow • aid in childbirth • for uterine troubles • for post-partum hemorrhage • for amenorrhea • as an abortive • for the suppression of excessive menstrual flow 	Native: Pillager Ojibwa Potawatomi Cree Menomini Meskwaki

Table 4.15. Recorded uses for *Caulophyllum thalictroides* from Huron H. Smith manuscripts

YEAR, ENTRY OR PAGE # IN SOURCE	PLANT PART USED & PREPARATION	USES FOR WOMEN'S RH	GROUPS REPORTED AS USING PLANT
Smith 1923 p. 20	Root Decoction	MRA, TON, GYN: <ul style="list-style-type: none"> • suppression of profuse menstruation • very valuable female remedy • treatment of hysteria • treatment of uterine diseases • prevent abortion • cause uterine contractions 	Native (Menomini) European
Smith 1928 p. 205	Root Decoction	MRA, GYN, TON: <ul style="list-style-type: none"> • for profuse menstruation • treatment of hysteria • treatment of uterine diseases • prevent abortion • cause uterine contractions 	Native (Meskwaki) European
Smith 1932 p. 358	Root Tea	MRA, TON, GYN: <ul style="list-style-type: none"> • for female troubles • for painful menstruation • treatment of hysteria • treatment of uterine diseases • to prevent abortion 	Native (Pillager Ojibwe) European
Smith 1933 p. 38	Root Tea	MRA, CBL, GYN, TON: <ul style="list-style-type: none"> • suppresses profuse menstruation • aids in childbirth • in cases of hysteria • for uterine diseases • prevents abortions • causes uterine contractions • emmenagogue • parturient • in chronic uterine diseases 	Native (Potawatomi) European

Table 4.16. Recorded uses for *Gossypium sp.* from 5 documents

SOURCE AUTHOR & YEAR	PAGE # IN SOURCE	PLANT PART USED	PREPARATION OF PLANT FOR REMEDY	USES FOR WOMEN'S RH	GROUPS REPORTED AS USING PLANT
Taylor 1940	p. 38	Root	Decoction	MRA, CBL, GYN: <ul style="list-style-type: none"> • to ease childbirth • an excellent oxytocic • arrests hemorrhage • ameliorates symptoms of uterine fibroids 	Native (Koasati)
Vogel 1970	p. 234	Root	Decoction	CBL: <ul style="list-style-type: none"> • an oxytocic agent • to promote contractions • to relieve pain 	Native (Koasati) European
Meyer 1973	p. 174	Root Bark	Decoction	MRA: <ul style="list-style-type: none"> • for painful and obstructed menses 	African European
Grimé 1979	p. 122	Root	Decoction	MRA, CBL: <ul style="list-style-type: none"> • for dysmenorrhea • a uterine tonic • an abortifacient • for uterine inertia 	African Native
Covey 2007	p. 93	Root Root Bark	Decoction	CBL, PPT, BFD: <ul style="list-style-type: none"> • to expel afterbirth • to treat poor lactation • to ease labor • an abortifacient 	African Native European

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She pulled in her horizon like a great fish net. Pulled it from around the waist of the world and draped it over her shoulder.

--Zora Neale Hurston, *Their Eyes Were Watching God*