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Claremont McKenna College

Rice, Reciprocity, and Generosity:
Embedded Ecologies in Hindu Women's Rituals

submitted to
Professor Daniel Michon
and
Professor Jay Ramesh

by
Zoe Carlson

for
Religious Studies
Senior Thesis
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Introduction

Hindu women's perspectives of the more-than-human world are illuminated through ritual. Researching ecological actions millions of people of different faiths across the world partake in every day, in the context of the climate crisis of our present time, is a vital project I undertake in this thesis. I look to Hinduism, which has traditionally been called an "ecological" religion, but without a clear definition of what "ecological" means. I use Vijaya Nagarajan's theories about Hinduism, women, and ecology as a theoretical guide. I apply her theory of "embedded ecologies" to analyze how knowledge about the environment is layered in cultural, aesthetic, and religious practices. By studying the spiritual reciprocity between Hindu women and goddesses, I investigate how ecological knowledge and practices are embedded in the Hindu women's rituals of kolam drawing, Pongala, and rituals associated with Mother Ten, Sitala, and Yamuna goddess worship. I analyze considering the interactions of gender, class, capitalism, indigenous worldviews, and development with faith through ritual performance, observation, and ethnography.

The implications for Nagarajan's research are vast and pertain to ongoing debates among scholars of Religion and Ecology, as well as larger universal questions of how we as humans are enmeshed with nature. An essential question scholars are asking is: how do religious beliefs and practices promote an environmental ethic and incline practitioners to behave ecologically?¹ The practices that qualify as "ecological behavior" depend on the cultural perspective. I reference the scholarship of Vijaya Nagarajan, A.K. Ramanujan, David Haberman, and more to guide the connections I make between Hindu devotional practices and environmentalism.

It is necessary to define what I mean by 'ecological.' Merriam Webster offers this meaning of ecological: "of or relating to the environments of living things or to the relationships

¹ Baugh, "Explicit and Embedded Environmentalism," 93.

between living things and their environments.”² Western usage of the word “ecological” has implications that go beyond its dictionary definition; ecological behavior is not simply behavior relating to the environment or relationships between living things and the environment, but instead behavior that is beneficial for the environment and living things. This presupposes ecological destruction, whereby ecological behavior is reactionary, sometimes obliged or coming from a place of guilt. Giving *back* to the earth implies a taking, which is understood to be the ecological destruction inflicted upon the earth by centuries of exponential growth of industry, capitalism, and exploitation of the earth’s natural resources driven by Western powers.

Ecological behavior exhibited by people in a non-Western religious context differs because of the ontological perspective from which the act is performed. Hindu goddesses like Bhudevi and Sitala protect the earth and are believed to have purifying powers, thus ecological behaviors do not necessitate environmentally *beneficial* action. Because the Goddess is believed to *be* the natural world, it is not instinctual to try to “save her.” She is able to heal herself and devotees who call upon her for blessing. There is reciprocity involved in these devotees’ relationships with their goddess. Their ecological behaviors—those which connect the devotee to the earth goddess, and therefore, nature—likely arose out of cultural, practical, aesthetic, and religious purposes (agricultural, medicinal, art, worship, etc.), rather than a drive to heal the earth. In this sense, embedded ecologies are knowledge and behaviors that have arisen organically through how humans interact with, use, and make sense of their environments. The latter description of ecological behavior is my interpretation of how Nagarajan defines “ecologies” in the context of “embedded ecologies.” From here forward, this meaning will be implied for all usage of the words “ecological” or “ecologies” unless otherwise specified.

² Merriam-Webster Dictionary, “ecological.”

This thesis rejects anthropocentrism as a framework for approaching the world, and instead looks at humans as inseparable from flora, fauna, and the world's ecological processes. This is not meant to be a romantic vision of a pre-anthropocene existence projected onto the present, but instead an understanding that we are inherently embedded in the environment by being born. The cyclical nature of birth in Hinduism and the possibility of being reborn as any being until one has reached moksha implies a spirit's long existence on this earth, and a consequent familiarity. These different conceptions of birth underlie an important dissonance between Indian and Western belief. In Hinduism, divinities are embodied in natural elements such as stones, rivers, mountains, rain, etc. A *svarupa* is the earthly form in which a particular god may appear to a worshiper. This may be a *linga*, a stone embodying a god such as Shiva. Or it could be the Yamuna River, an embodied form of the goddess Yamuna. For many Hindus, the nature of their relationship with their divinity is one of love. Devotees will worship a *svarupa*, an embodied form of the particular divinity to which a devotee feels most close. David Haberman argues that this relationship is the foundation for *seva*—loving acts of ecological beneficence toward a practitioner's *svarupa*.³ An important clarification to make here is Haberman's usage of "beneficence." Some of these actions benefit the environment in ways the West would invalidate for lacking empirical evidence of their positive environmental outcomes. These actions, such as kolam drawing or Pongala, deserve consideration for their cultural significance, rich history, and living practice, having been developed and passed on for centuries. Some expressions of *seva* can also be considered traditional ecological knowledge with the presence of empirical ecological beneficence, such as techniques used in agriculture for maintaining healthy soil while yielding large harvests. Haberman also claims that Western environmentalism would mislabel these actions (such as ritual, pilgrimage, festivals) as "environmental activism." This label is

³ Haberman, "Hinduism: Devotional Love of the World," 38.

insufficient for describing this manifestation of love. The environmentalist movement has mixed motivations. Some activists are moved to act out of anger, fear, or guilt. Here is where the idea of embedded ecologies helps us understand *seva*, for which environmentalism lacks the sufficient language. Through analyzing *seva* in ritual, where human-divine relationships are manifested, we can better understand how the ecological behaviors embedded within ritual reveal women's orientations toward the environment.

In today's climate crisis, all ideas that encourage people towards behaving more ecologically—in all senses of the word—are worthy of attention. My intention here is not to extract a devotional practice from Hinduism and encourage people of all faiths to adopt it in order to make a more environmentally-friendly society. It would not work because these practices have evolved from a specific ontology and cosmology of South Indian Hinduism. “Hinduism” itself is a designation encompassing a great diversity of practices and beliefs. It is called the oldest religion.⁴ With a history stretching back 4000 years and over one billion people identifying as Hindu, it is very difficult to make generalizations about Hinduism. The religion was first labeled as “Hinduism” less than two centuries ago. Moving forward, I try to specify Hinduism by location and class, as these are two major factors which account for the diversity of beliefs.

Environmentalism is a set of beliefs, practices, and a movement—some claim with its own religious overtones—within Western society.⁵ It is not always adopted smoothly when its principles are applied to non-Western societies. I do not intend to approach this research from an environmentalist angle. I must contextualize my own perspective, however, which is influenced by the objectives of environmentalism. I see the climate emergency as the most pressing issue

⁴ Dimock et al., “Hinduism.”

⁵ Morriss and Cramer, “Disestablishing Environmentalism,” 309.

our world is facing right now. Despite this thesis being submitted in fulfillment of a religious studies major, I hope it is also contributing to a body of scholarship about human and nature relations.

I. Embedded Ecological Theory Drawn from Kolam Ritual Art

Vijaya Rettakudi Nagarajan’s 2019 book *Feeding a Thousand Souls: Women, Ritual, and Ecology in India—An Exploration of the Kolam* guides my analysis of Hindu women’s rituals connected to nature through goddesses.⁶ Nagarajan’s core chapters explore the knowledge that is ritualized, passed down, and integral to the process of creating the ritual art of kolam. In her final chapters, she proposes interconnected theories of embedded ecologies, intermittent sacrality, and rituals of generosity as ways of interpreting and understanding the ritual of kolam drawing. Her book does not focus narrowly on answering a certain question. Instead, Nagarajan draws on textual analysis, scholarly conversations, childhood memory, intergenerational wisdom, ethnographic observations, and lived experiences in her research: a self-described pilgrimage toward “knowing” the kolam.⁷

Nagarajan’s subtitle of her book is “an exploration of the kolam.” Kolam drawing is a ritual done by an estimated 20 million women in Tamil Nadu every morning. Its origins come from the poet-saint Āṇṭāl. Her poetry refers to the creation of “auspicious diagrams” drawn on the ground with sand.⁸ Āṇṭāl was worshiping Vishnu through creating what she variously refers to as kolam, mandala, and sandcastle. Today, the kolam is an offering to the earth goddess Bhudevi and Lakshmi, the goddess of wealth, luck, and good fortune. It is drawn at the threshold just outside the front door of a house. It is ritually created with the intention to invite the goddesses into the house and to feed a thousand souls. The drawings represent the state of the household, the woman performing it, and her hopes and challenges. The designs can vary widely. The general process of kolam making begins with washing the space where the design will be

⁶ Nagarajan, “Feeding a Thousand Souls: Women, Ritual, and Ecology in India—An Exploration of the Kōlam.”

⁷ Nagarajan, 18.

⁸ Nagarajan, 111.

drawn. Water and sometimes cow dung will be mixed and spread across the surface, creating a clean, purified space to begin drawing. Kolams are traditionally drawn using rice flour that is carefully dispensed by hand in a steady stream. Some designs start with creating a grid of dots, then following practiced patterns that can be simple or complex. Nagarajan devotes a chapter to the mathematics of kolams because of the intricate patterns, shapes, and labyrinths women create.

One significant aspect sets kolam drawing in Tamil Nadu apart from the similar forms of art elsewhere in India. Tamil women draw kolams every morning. With few exceptions when it is not drawn—during inauspicious times such as menstruation, mourning, illness—women perform this ritual daily. Historically, women would draw at dawn, considered to be an auspicious time when gods’ attention was drawn toward the earth. The threshold of the day holds great potential. Even after spending all morning creating a beautiful design, a kolam is fleeting. After the sacred space has been created through the drawing process, the kolam becomes part of the earth. Bikes ride over it. People walk on it. Passersby actually activate auspicious powers that radiate out through the ground into the community. As the space is desacralized, it continues to fulfill one of its purposes—it feeds insects and small animals. These are the “thousand souls” the kolam feeds. However, it is becoming more common to use kolam powder, ground stone chemically dyed a range of bright colors. There are plastic stick-on decals which are also used by some, but can be difficult to remove and contradict the essence of the kolam as an ephemeral creation. Women with less time to spare also use tools like rolling pin stencils and pattern templates which make “instant kolams.”⁹ The use of these new materials stray from the original ritual purpose of the kolam and mark a transition in the cultural practice. At the same time, they

⁹ Nagarajan, 144.

call in to question what the practice actually values. Is the relationship women have with kolam drawing changing? Is this changing women's relationships with nature?

Nagarajan's knowledge of kolam drawing is intimate. She grew up watching her mother draw kolams every day outside her family home in Southern India to their New Delhi flat to their home in Washington D.C. She learned to draw kolams from watching her grandmother and mother move in the dance of ritual drawing. She incorporates this ancestral knowledge passed down through oral storytelling and ritual teachings in her writing. She combines this maternal, intimate understanding with three years cumulatively spent in India interviewing Tamil women. She recounts her journey to rediscovering a curiosity about kolams from childhood. Eventually, she travels back to India to pursue these questions after having lived in the United States since age eleven. She goes to Tamil Nadu, the place of her ancestry, to learn all she can.

Ethnography

Oral and visual knowledge sources are key to understanding the ecologies in these non-textual based traditions, where there is no historical text that can be referenced for explicit mention of ecological concepts. Ecologies could be understood more explicitly for Brahmanic traditions based in Sanskrit texts and other written historical accounts. In her book, Nagarajan examines the "philosophical underpinnings of oral and visual knowledge of...Hindu women."¹⁰ Through conducting extensive research, she identified Tamil women's synthesis of belief, daily practice, and inner and outer life in the kolam. She describes this synthesis through ethnographic observation of this daily ritual in which drawing is the method, kolam design is the form/medium, and the earth is both the material (in the form of rice powder) and canvas. Because Nagarajan relies heavily on ethnographic research for this book, I review her

¹⁰ Nagarajan, FORE Spotlights ~ Episode 16 Interview by Yale Forum on Religion and Ecology.

methodology to understand how she was able to come to the conclusions she did and develop her theories.

Research Methods

Nagarajan's book, *Feeding a Thousand Souls*, traces her research journey, relationship with the kolam, and rediscovery of an ancestral practice which fascinated her as a child. Nagarajan dives into the many different aspects of the kolam through an ethnographic lens. In Tamil Nadu, she interviews women practicing on the street, women drawing ritually during festivals, discusses kolam drawing with elders, and travels to find patterns in the practice across South India. This research, as well as her own muscle memory from practicing kolam drawing in her youth in India, enables Nagarajan to give an embodied, living understanding of the ritual. She then uses religious theory, Hindu mythology, anthropology, history, mathematics, ecological theory, literature, and the matrilineal ancestral knowledge she was taught by her mother and grandmother to analyze the ritual. In her ethnographic research in India, she strikes a balance between passive and interventional observation, so that she can connect with the women drawing kolam before, during, and after the ritual, without stimulating or manipulating them.¹¹ Doing so could lead to skewed observations and inaccurate subsequent analyses. Nagarajan engages with her research subjects by striking up conversations with women drawing kolam in the streets. She seeks out local experts who are willing to share their knowledge. Within anthropological research methods, participant observation is ideal because the researcher is immersed in the culture they study. Typically, the researcher must insert themselves into the culture to access the privileged vantage point as participant-observer. Nagarajan grew up in a household where the daily kolam drawing ritual was practiced. She herself is a Tamil woman, lived there as a child,

¹¹ Adler & Adler, "Observational Techniques," 380.

speaks the language, and has spent many years in Tamil Nadu conducting research. She shares these aspects of her identity with the Tamil women whom she observes and interviews. This results in fewer cultural barriers to overcome as compared to those barriers a white male scholar, for example, might face when trying to establish rapport with Tamil women research subjects. She has access to the community and culture in a way which puts her in a great position to conduct this research.

Positionality

Nagarajan approaches her topic and research subjects from a perspective sensitive to her own positionality. For example, she goes to see a locally famous astrologer and healer to seek out information. He doesn't respond by email, and she decides to visit him in person. When she arrives in his village, there are people lined up outside of his home, waiting to receive his consultation. She waits in line with everyone else, showing respect to his professional obligations and the community that relies on his wisdom. She does not allow her scholarly pursuits to be valued over the concerns of the villagers who seek advice and wait in line to see him, and demonstrates so by taking her place at the end of the line.¹² She is also cognizant of the cultural differences from her own comfortable, secure lifestyle and the culture she researches which exists in a different state of insecurity. This "environment of scarcity" as Nagarajan calls it, heightens the potency of healing medicines because there is often no alternative.

Nagarajan's Findings

Chapters Nine and Ten move into the theoretical. Nine is "Embedded Ecologies and the Earth Goddess" and Chapter Ten is "Marrying Trees and Global Warming." These chapters

¹² Nagarajan, 229.

explain the theory which I will be taking as my starting framework for approaching the rituals I study. In chapter nine, Nagarajan describes the earth goddess Bhūdevi's place in kolam drawings as an "embedded ecology." The kolam is in a state of "intermittent sacrality," which is directly connected to Bhudevi's presence and intertwined with the theory of embedded ecologies. She extends her study in the chapter ten to frame the kolam as a ritual of generosity when embedded in the "larger context of auspiciousness of plants and trees."¹³ There are many aspects of kolam drawing and Tamil women's virtues which revolve around generosity. Nagarajan connects these aspects as being part of a structured "ritual of generosity," which she investigates. In chapter 11, *Feeding a Thousand Souls*, Nagarajan considers the purpose behind each kolam drawing: to feed a thousand souls. This is the part of the ritual of generosity which most directly connects women with the earth. I discuss the ideal of reciprocity embedded in the ritual and in Nagarajan's study of kolam drawing. Her layered analyses produce a set of theories which will form the foundation of the ritual interpretations I will make in the following chapters.

Embedded Ecologies

Nagarajan defines embedded ecologies as "cultural, aesthetic, and religious conceptions [that] orient perceptions of natural spaces."¹⁴ She develops this definition through her research, then applies it as a theory to analyze how the 20 million Tamil women who draw kolams every morning behave ecologically. I find Nagarajan's definition useful. To rephrase, embedded ecologies (EE) are the concepts and beliefs that help us make sense of the world and ultimately influence how we view nature. I dissect how she employs this theory in analyzing rituals to figure out how to employ it in analyzing different rituals in the subsequent chapters. One

¹³ Nagarajan, 19.

¹⁴ Nagarajan, "The Earth Goddess Bhū Devī: Toward a Theory of "Embedded Ecologies" in Folk Hinduism," 270.

embedded ecology is the conception of the earth as a goddess. Believing the earth is the goddess Bhudevi orients how one perceives nature. Nagarajan describes the kolam as “the enactment of a ritual relationship with the world as a whole; it invites and solidifies in a visible and aesthetic form the relationship of a Tamil woman to the earth she walks on.”¹⁵ The obligation felt by women to perform this ritual derives from feeling indebted toward the earth goddess for bearing the burden of all human actions on earth “with endless patience.”¹⁶ This debt is repaid not by practitioners responding out of guilt or self-sacrifice, but by the loving creation of a kolam.

Intermittent Sacrality

In outlining these theories, Nagarajan aims to answer: “How can we be more precise in illuminating the contradictions between an imagined ideal behavior and what actually happens in everyday life?”¹⁷ Her theory addressing this question is called “intermittent sacrality.” She coins this theory connected to EE to explain the phenomena she saw in the transformation of the kolam over the course of any given day. In the morning while the kolam is created, it is the goddess’s seat. It is meant to catch her eye. Eventually, it ceases to be a sacred space. The kolam is stepped on, trash is thrown on it, and it fades throughout the day as animals eating the rice and people’s footsteps disfigure the drawing. This breaks the Western conservationist logic which interprets sacred ecological practices like kolam drawing as indicative of future environmentally conscious behavior. This is one of the conclusions that I am mindful to resist making in my analysis of other women’s rituals. The theory of embedded ecologies should aid in resisting the tendency to essentialize by Western scholars analyzing Hinduism and other non-Western religions. Embedded ecologies are not a romantic vision of a harmonious environmental behavior. EEs are

¹⁵ Nagarajan, “Feeding a Thousand Souls,” 55.

¹⁶ Nagarajan, 204.

¹⁷ Nagarajan, 270.

culturally and historically specific to the practice being analyzed. For example, Nagarajan problematizes kolam drawing as an ecological practice (in the Western meaning of the term) by explaining how the designs are more commonly being made with dyed stone powder and plastic stick-on decals. These materials cannot fulfill the intention of feeding a thousand souls, however, these inedible and synthetic materials are becoming more available than ever before.

Convenience and a shift toward the artistic focus of kolam drawing have normalized their use.

Nagarajan explains that this shift has not gone unnoticed by older women who have stayed devoted to the traditional methods and materials.¹⁸

Context Sensitivity

When analyzing this apparent gap between religious belief and individual behavior, Nagarajan cites A.K. Ramanujan's concept of context-sensitive thinking to clarify the meaning of embedded ecologies and intermittent sacrality. When interacting with the world, different people have different tolerances for how strictly they stand by their morals and values in their behavior. Some will abide by their rules context-free, that is, sticking to one's principles no matter the situation. Ramanujan writes that Indian behavior is guided by context-sensitive rules.¹⁹ This allows for contradictions between belief and behavior. It is the phenomenological idiosyncrasy which causes intermittent sacrality. In some contexts—such as during its creation—a kolam is sacred, a seat for the divine. In other contexts—throughout the rest of the day following the creation—the kolam is not sacred anymore. The creator's orientation toward the kolam changes and they may step on the kolam or throw trash on it, for example. If viewed through a context-free lens, this latter behavior would appear illogical. However, using context-sensitive thinking, the behavior is acceptable. Time has passed and the goddess has

¹⁸ Nagarajan, 210.

¹⁹ A.K. Ramanujan, "Is there an Indian Way of Thinking?" 47.

moved on to her next duties, thus the kolam is desacralized. Ramanujan’s essay investigates the generalized notion of Indian thought as hypocritical, and proposes context-sensitive thinking as the response to those who would delegitimize Hinduism for the contradictions they perceive within the beliefs and practices.

Auspiciousness

Nagarajan describes attending a tree marriage ceremony in 1990 where a man is married to a tree. Marrying their child to a tree is one approach families will take if their son or daughter is experiencing difficulty finding a partner. This suffering of not being able to find a spouse, she explains, is often attributed to strained relationships between the human and natural worlds.²⁰ The ecological knowledge here becomes evident in the ceremonial reaffirmation of kinship between the family and the natural world, connected through the tree spouse. The tree becomes family and is understood to have an immense ability to absorb the suffering of their human mate. Trees “have an abundance of auspiciousness, goodwill, and generosity.”²¹ They are used as tools for fulfilling desires and bestowing blessings. Women drawing kolam express these “positive intentionalities,” or blessings, through methodical creation of each curve and the overall beauty of their design. These positive intentionalities are transferred through the natural material—rice flour—and dispersed outward through the earth to others in the community through their feet. The kolams, drawn at the threshold of the inner and outer worlds, also attract the goddesses’ attention for the fulfillment of positive intentionalities inward, for the woman artist, for her home, and family.

One idea Nagarajan highlights in her discussion of the workings of kolam drawing is auspiciousness. Auspiciousness in the Hindu context transcends the English translation.

²⁰ Nagarajan, 236.

²¹ Nagarajan, 237.

Auspiciousness is not merely favorability or luckiness, but it is a cosmically aligned quality. Hindu daily life and ritual is guided by creating circumstances which bring about the greatest auspiciousness. This is not superstition, but instead an orientation toward worldly phenomena which understands that varying levels of goodness are imbued in everything. Therefore, it is obvious to structure one's decisions to bring about the greatest auspiciousness in your own life, which extends to your household and family.

Ritual of Generosity

Women ritually draw the kolam because it is an auspicious way to begin the day. It is a practice of *danam* (Sanskrit *dana*), an act of giving, of generosity. To begin the day drawing a kolam, women create an orientation toward the day through a ritual of generosity.²² This orientation is a moral and ethical guide to how the day will proceed. Women may not continue to practice generosity throughout the rest of the day, but the kolam acts as a reminder of the auspiciousness generated by generosity in the first ritual act setting the day into motion. Kolam drawing holds embedded ecologies because of what it offers the creator. By interacting with the natural environment—through water and dung used to prepare the kolam surface, rice flour, the earth, and critters who come to eat the kolam—auspiciousness is generated. Nature is recognized as a potent source for auspiciousness/positive intentionalities.²³ These are powerful social exchanges. This is a ritual validating the ecological knowledge of the mutual beneficence of humans and nature. Nagarajan coins these types of rituals establishing relationships with the natural world “rituals of generosity.”²⁴

²² Nagarajan, 242.

²³ Haberman, “Hinduism: Devotional Love of the World,” 41.

²⁴ Nagarajan, 239.

Reproduction and Fertility

Kolam drawing, among many other rituals, can be a resource used by women to increase fertility. There are a few steps that go into this process, which Nagarajan lays out. First, she clarifies that the motivation behind rituals like marrying trees and kolam drawing is the desire to create relationships with auspicious elements in the natural world. Auspiciousness can be linked with the ritual principle of productivity and reproductivity, or generation and regeneration. “Rituals of generosity” are established at auspicious sites, such as trees and rivers, using auspicious powders like kumkum and turmeric. These rituals enable one to gain fertility or potentially fertile states found in marriage or pregnancy. The auspicious forces are transferred to the individual through rituals of generosity.²⁵ Layered in the meanings of auspiciousness is potentiality. This is why festivals and rituals are not often fixed to one calendar day, but instead will be chosen to be celebrated on the most auspicious date and time. The factors going into making such a decision include astrology, history, other festivals, seasonal fluctuations, the discretion of an astrologist or other knowledgeable elder with experience, and consensus of the community. These considerations uphold the ritual principles Nagarajan refers to. These are mutually reinforcing phenomena: auspiciousness and (re)productivity; auspiciousness and (re)generation.

Reciprocity

Nagarajan’s book is titled *Feeding a Thousand Souls*, which is one of the intentions in drawing the kolam. This is the responsibility of women, even though feeding that many human souls would be almost impossible unless one possessed a great fortune. Instead, it is the souls of animals and bugs who are the recipients of nourishment from the rice flour. This is one of the

²⁵ Nagarajan, 239.

ways that women materially reciprocate care for Bhudevi, who has withstood all human activity and extraction. This reciprocity is an indicator of the ritual's embedded ecology. The embedded ecology is the way women kolam practitioners perceive the natural world, as one of reciprocal relationships requiring daily upkeep. This understanding of reciprocity, reverence, relationality, and respect is found within indigenous orientations toward nature worldwide. A healthy relationship with the land enables prosperity and good fortune in every facet of life.

Nagarajan describes the example of sacred relationships established through kolam drawing and human-tree relationships of generosity established through divine residence, as:

...an interesting congruence between ritual form and intention. As in any social exchange, these relationships are predicated on the expectation of *mutual* ritual generosity—that is, one gives freely and then receives gifts in return. Just as we can have generous relationships with human beings, so humans can have generous relationships with trees, rocks, rivers, and other aspects of the natural world.”²⁶

Mutuality is the principle here, no matter who or what is enacting it. While some rituals include animal sacrifice, for example, the ritual form does not, to an outsider, seem in congruence to the intention. The form: killing an animal as an offering does not represent the intention on a surface level. The ritual performers are most likely not asking for more death of animals or any life. Instead, they might be performing the ritual to maintain favor of a deity or to ask a deity to fulfill certain boons. In the case of kolam drawing or tree marriage, the humans are providing nourishment to the ground, insects, animals, and trees through rice flour, water, turmeric, kumkum, flower garlands, and other decorative adornments hung on trees during marriages. In doing this, they ask goddesses Bhudevi and Lakshmi for nourishment, protection, health, fertility, and good fortune.

²⁶ Nagarajan, 238.

Prosperity in an Environment of Scarcity

Let us not forget that kolam drawing is often calling on two goddesses—not just Bhudevi but also Lakshmi, goddess of wealth. Rituals like the kolam are done with devotion, every single day, within an environment of scarcity. Using the context-sensitive thinking encouraged by A.K. Ramanujan, we can understand these practices to be practical, sincere, and creative. Using their knowledge of these goddesses' powers, women develop rituals like the kolam to bring about changes they desire but are unable to achieve otherwise. An environment of scarcity—where women face food or housing insecurity, lack access to healthcare, or employment with living wages—can breed by necessity a reliance on a higher power. For these women, this system is comprised of gods that have influenced countless lives for many yugas. Knowing that Lakshmi is the goddess of wealth and prosperity, women will invoke her through their ritual, imagining her presence in the kolam, drawing a lotus—which she is often depicted as standing upon while holding in her hands two lotus flowers. Creativity animates women's drawings and attracts the attention of the goddesses for whom they have performed the ritual. Some may believe that their wellbeing depends on receiving blessings from the goddess.

Haberman “seva” Theory

Seva means selfless service and is the highest dharmic activity one can do. It is acts done for the practitioner's deity without expectation for any outcome or returned favors. Haberman describes *seva* as a potential source of motivation for environmental protection in India.²⁷ He extends the concept to include loving acts of *ecological* beneficence toward a practitioner's preferred deity. Though kolam drawing may seem like *seva*, it is not entirely because the kolam expresses a desire to receive in return good fortune for the ritual practitioner and their household

²⁷ Haberman, “Hinduism: Devotional Love of the World,” 38-39.

from the deity for whom it is being drawn. There is an exchange taking place. This does not diminish, I do not think, the potential ecological benefit when compared to acts of seva. Kolam drawing and other rituals of generosity are arguably more fulfilling for a human in that there is a generosity shown in return to the ritual practitioner. The generosity may not be immediately felt or directly given, but it accrues good karma with the gods, which will inevitably manifest.

“License to Pollute”

A significant belief in Hinduism is the feminization of the earth’s natural elements, as well as the earth herself. The river goddess Ganga and earth goddess Bhudevi are highly associated with feminine powers of purification. These truths lead some traditional Hindus to believe that they need not ascribe to the conservationist movement because the rivers and the earth are protected *by* the goddesses and *are* Ganga and Bhudevi, respectively. Nagarajan calls this belief a “license to pollute.”²⁸ This problematizes the label given by Westerners to Hinduism: an “ecological religion.” The connection of divinity with nature here poses a threat to the environment because of the belief that the river is protected by the self-purifying powers of the goddess. This belief becomes harmful when accompanied by inaction and complicity in the pollution of these rivers.

With a solid understanding of the theory’s origin, we move into the application portion of this thesis. In the following chapters I apply Nagarajan’s theories to other rituals. The following chapters are generative scholarship and it is through my own research that I chose these specific rituals to analyze.

²⁸ Nagarajan, 222.

II. Pongala for the Goddess: Rice, Reciprocity and Fertility Boil Over

I explore in this chapter another example of ecological knowledge layered in a ritual performed by women. I analyze an ethnographic account of the Pongala ritual, Dianne Jenett's work, *A Million "Shaktis" Rising: Pongala, a Women's Festival in Kerala, India*, first discussing its origins, ritual mechanics, themes, and engagement with the natural world. Using Nagarajan's theories of embedded ecologies and ritual generosity, I discuss how this ritual connects women to the Goddess, earth, and to one another. Jenett's work is was a culmination of ethnographic research over four years at the Attukal Temple in Kerala, conducting observation, participating in the ritual, and interviewing women practicing. I apply Nagarajan's theory of embedded ecologies to Jenett's account. I look at its characterization as a ritual of generosity, another element of Nagarajan's theory. Finally, I reflect on how we can use theories like Nagarajan's to promote the use of traditional ecological knowledge for the survival of the world.

About Pongala

Pongala has gained huge popularity over the past three decades. The offering of Pongala is practiced all over India, called by different names, all in dedication to the Goddess.²⁹ Women call the Goddess different names in Jenett's work, but all refer to a divinity known for her power to bring justice and retribution for women who have been wronged. The women ritualist refer to the Goddess as Devi, Bhagavati, Bhadrakali, and Amma. The latter three names are each attached to a story of the Goddess in three life stages. All are within the Shakta tradition. Shakti is the cosmological power which animates the world. It's feminized and embodied as a goddess. The Shakta tradition recognizes the necessity of the divine feminine principle in the

²⁹ I capitalize Goddess to refer to the specific divinity to which each woman is devoted. The goddesses' names would be capitalized like the divinity for Christians would be capitalized as God.

cosmological conception. Without Shakti, the god Shiva is *shava* (a corpse—think *savasana*). With this context of Shaktism, we will identify how ecological knowledge is intimately connected to increasing Shakti.

Pongala grew out of Dravidian agricultural practices.³⁰ It originated in ceremonies held in sacred groves (*kavu*).³¹ The practice is deeply rooted in ancient South Indian mythologies. The current status of women in Kerala differs from the time of Pongala's inception, when being gendered "female" was auspicious and powerful.³² The Pongala offering is connected to Kannaki, a woman who, through her chastity became deified in Southern India. She is most widely known through the fifth century Tamil text, *Silappatikaram*, "The Epic of the Anklet." In Kerala, Jenett describes Kannaki's identity merging with the goddess Bhadrakali in the oral stories of Pongala's origins. Kannaki confronts the king who has wrongly accused and executed her husband. Right after she does this, the king collapses, dead. In anguish and fury, Kannaki rips off her breast and hurls it into Madurai, where it causes the city to catch on fire. Taking this story as its initiation point, the Pongala fires are set aflame by the priests at Attukal temple who pass the flame to the women closest to the temple to light their own fires. The flame is passed along from woman to woman, one by one lighting their fires until the city of Trivandrum is "set aflame" with the fires of Pongala pots.³³

First, an explanation of the ritual process. Pongal is a dish created by women during a variety of festivals around India. Jenett's research is on a specific ritual commonly known in Southern India and Sri Lanka as *Pongala*. This ritual is unique in comparison to the connected festival, *Pongal*, celebrated elsewhere in South Asia as *Sankranti*.³⁴ In Southern India, this

³⁰ Dravidian refers to a group encompassing Southern India and parts of Sri Lanka. It is not associated with the Sanskrit texts and developed its own religious practices and Tantric literature independent of the Vedas.

³¹ Jenett, 36.

³² Jenett, 38.

³³ Jenett, 44.

³⁴ Dallapiccola, "Festivals," *Dictionary of Hindu Lore and Legend*.

Pongal festival is celebrated as a transition into a new year. The last day of the inauspicious month of Margali is marked by a day in which old belongings are burned in a fire. The rest of the festival consists of festivities celebrating the Sun God.³⁵ The Pongala ritual is observed on the first day of Tai, the month which begins the brighter part of the year. On a chosen auspicious day usually in January—this year on January 14, 2022—at the end of the Pongal festival, women prepare and offer the ritual dish to Devi. On the other hand, Attukal Pongala, the festival Jenett studied, is celebrated typically in February or March. What differentiates this celebration from other Pongala rituals is its timing, focus on the Goddess, and concentrated gathering of women around one temple. On the final day of the ten day Pongala festival in Kerala, the most anticipated day arrives. Women gather in the streets to cook outside over basic fires constructed from three bricks, using coconut palm leaves as fuel. In a newly purchased clay pot, women make the dish from milk, rice, jaggery (unrefined sweetener made from sugarcane or date palm), and a variety of other ingredients like spices, bananas, and raisins.³⁶ The dish prepared is called pongal.

Ritual Mechanics

Jenett gives detailed description of Pongala ritual mechanics from the ten day Pongala festival celebrating the Goddess at Attukal Temple in Trivandrum, Kerala. The first eight days are continually celebrated with Thottampattu, a devotional song telling the story of Kannaki from the *Silappatikaram*. Men sit in a thatched coconut leaf hut and continuously sing her story.³⁷ On the ninth day, an offering of a sweet milky rice dish, pongala, is prepared by women. The Attukal Bhagavathy Temple is the centerpoint of this festival. Women prepare their cooking stations as

³⁵ Hinduism Today, “Sankranti or Pongal: To Earth, a Festival of Thankfulness.”

³⁶ Village Cooking Channel, “PONGAL CELEBRATION in Village by farmers.”

³⁷ IndiaVideo, “Thottam Pattu at Attukal Temple, Thiruvananthapuram.”

close to the temple as possible. They radiate out, filling every surrounding street and stretching all around the capital city of Kerala. The festival brings together millions of women each year performing this ritual. The day of the Pongala ritual at the Attukal Temple was recognized as the largest gathering of women in the world (2.5 million) in 2009.³⁸ The festival has not always been such a large cultural phenomenon, but has gained popularity in the past two decades.³⁹

Themes: Interdependence, Unity, Equality

The offering of the dish is to Devi. There are certain themes emphasized in practice which are meant for pleasing the goddess, who is worshiped in many forms. Pleasing her does not just win her favor, but increases her power (or *shakti*), thus increasing her capacity to help all people everywhere. As mentioned in the previous chapter, increasing and amplifying Shakti is a common goal in non-Sanskritic traditions. The first set of values Jenett references is “interdependence, unity, and equality.” This contradicts how a Western analysis might understand this festival, gathering from it themes of “female leadership, *independence*, and religious creativity.”⁴⁰ This figures, considering the tendency Western scholarship and culture has toward valuing individualism. The independence illusion comes from the appearance of women becoming autonomous individuals while offering Pongala,, temporarily unfettered by the duties of caring for a household. However, *interdependence* is much more emphasized in the ritual. Women insist that everything must be shared with each other and no woman has dominion over her resources. This is consistent with another unique aspect to this ritual, which is that it is practiced together by women of all classes. Despite its origins with agricultural castes and poorer Dalit communities in Kerala, the festival creates an opportunity for unity, with women working

³⁸ Guinness World Records, “Largest Gathering of Women.”

³⁹ Jenett, 39.

⁴⁰ Jenett, 46; 51-52.

together, communally. Ingredients are shared, as is space. It is auspicious to be close to the Attukal Bhagavathy temple, so women pack the streets, lining every block surrounding the temple. This ritual is also not restricted to Hindu women. Buddhist, Muslim, and Christian women also gather to offer Pongala.

Embedded Ecologies

Embedded ecologies are those ecological knowledges expressed within areas of culture not considered from a Western perspective as “scientific,” such as dance, religious practice, art, music, etc. These knowledges reveal a perspective through which, in this case, Hindu women of Kerala understand and relate to nature. Embedded ecologies can be identified in almost every part of the Pongala ritual, in both the symbolic meanings and in the material aspects of the ritual. This ritual is a good candidate for applying Nagarajan’s theory of embedded ecologies because of its comparability to

kolam drawing—a specifically women’s ritual using natural materials to create something for the Goddess. Kolam drawing often is how women begin the day of Pongala, ritually preparing their cooking site, as shown in this image. The



Pongal Kolam (Perungudi, Tamil Nadu, Jan. 15, 2003). Photo courtesy Alagu.

ritual art of kolam drawing is representative. It is meant to be looked at, enjoyed, and is more readily open for analysis. The preparation of a dish more subtly expresses ecological knowledge.

These ecological orientations are recognized primarily in the cooking and preparation process. Jenett's descriptions of the process and dish offer insight, but do not compare with the photographs and sketches in Nagarajan's book. I use Jenett's ethnographic account recognizing that there is not nearly as much to work with in the twenty-two page article as there are in Nagarajan's three-hundred thirty-seven pages. Drawing on Jenett's article, as well as information, photos, and videos I have found online of the festival, Nagarajan's theories reveal EEs in many aspects of the festival, which I will discuss below.

Reciprocity

Reciprocity is an integral part of a healthy relationship between human and nature. I see its presence in this ritual as an indicator of embedded ecologies. As with kolam drawing, Pongala is performed by women for the Goddess with a reciprocal understanding of their relationship. This is evident from the vow which women make to offer Pongala. Jenett gives examples of these vows, such as “If you give my husband a job...if my son recovers...if my daughter passes her exam...” then the woman will offer Pongala.⁴¹ The Goddess is seen as an agent of good fortune capable of influencing the women's lives. This relationship with the Goddess is mirrored with the reciprocal relationship women have with the earth. Reciprocity with the earth is a basic understanding for women who carry ancestral knowledge of how to relate to the natural world.

Rice

I will begin with the core element of the ritual, the pongal dish. It is made with rice, like kolams are, but is cooked rather than ground and used for drawing material. I view the preparation of food as inherently enacting a relationship with nature. The growing, gathering, and consumption of food bound us to the land, first as hunter-gatherers, then as agrarian people.

⁴¹ Jenett, 46.

During Pongala, the preparation of the dish is slowed and ritualized. Our innate relationship with the land is reiterated through the ritual. It is through this preparation that reverence for the Goddess is embedded. I will break down the rice preparation to illuminate these embedded ecologies. To begin, women wash the rice. Jenett observes that some take as long as ten minutes for this part, being mindful not to drop a single grain. The Goddess is believed to reside in every single grain. Grains are associated with fertility and offered to the Goddess to bring it about.⁴² Embedded in this washing practice is an awareness of interconnection through the rice. The belief expressed is ecological—rice does not go to waste because the Goddess must be respected. Her body is sacred, so the rice is prepared with the utmost care. Women add three handfuls of rice to the Pongala pot, each time circling the rice around the pot before letting it pour out of their hands. This is called *arti*, a circular motion performed during Hindu ritual that praises the deity who is being worshiped. Usually, *arti* is performed holding a candle or lamp, but in this example, the rice is what is held. This indicates the power the rice has and respect with which it must be handled.. The ecological knowledge is regarding the sanctity of rice, its staple as a food, and how essential it is to the people who rely on it for nourishment and financial sustenance. The understanding is that food security will increase when the family’s relationship with the Goddess is secure and maintained.

Vashuda Narayan discusses how ritual foods carry deep intention in every stage of preparation, serving, and eating. There is great auspiciousness in the creation of ritual mixtures of milk, ghee, soma, and more. Milk, imbued with sacredness and suggestive of godly seminal fluid, makes contact with rice, in which each grain the goddess is present. This is divine union. The fertility potential of the rice imbued with the sacred liquid is suggestive of procreation. Milk, in the context of river goddess worship, has maternal connotations. David Haberman defines

⁴² Narayanan, “Ritual Food,” *Brill’s Encyclopedia of Hinduism Online*.

payas, meaning water or milk, which is used in relation to the Yamuna River, “who sustains her children, all people, with water like mothers sustain their babies with breastmilk.”⁴³ Milk is inherently connected with motherhood through breastmilk. *Bij*, the word for seed in Hindi and Sanskrit, refers to the germ of a plant and to semen.⁴⁴ These understandings of the combination of milk and rice lead to the conclusion that they can increase the chances of fertility. The knowledge of reproductive and divine ecologies are embedded in the combination of these ingredients into the pongal dish.

Boiling Over

Pongala means “to boil over.” It is consistent then, that one of the most important moments during the ritual is the moment when the rice and milk have been boiling, causing the foam to expand until it finally spills over the edge of the pot. This moment of boiling over indicates the Goddess has accepted the offering. This “climax” of the ritual is suggestive of procreation. This contributes toward the positive association of Pongala with fertility. The ritual, taking place on the full moon day also resonates with the image of white foam filling a circular clay pot. Like the moon moves the tides, the power of the full moon, often associated with feminine energy, pulls the offering out of the pot. The ecologies embedded here are knowledges of the connection between lunar cycles, astrology, and auspiciousness.

Jenett observed that Brahmin women generally do not let the pot boil over. Instead, they stir it to prevent it from spilling. Jenett cites Deborah Neff’s ethnography and her observations that Sanskritic traditions (with which Brahmins are likely more familiar) aim to control and contain Shakti, while non-Sanskritic (such as the kavu traditions) try to increase and amplify

⁴³ Haberman, “River of Love in an Age of Pollution: The Yamuna River of Northern India,” 60.

⁴⁴ Gold, “Seeds in South Asia.”

Shakti.⁴⁵ A Muslim woman who was trained by Brahmin women in preparing Pongala, interviewed by Jenett during the ritual, explained that the spilling over of the pot would be wasteful. The embedded ecology in the differing viewpoints here is interesting and connects to a larger pattern of generosity among humans, in which the less one has to give, the more one is willing to share. The Brahmin women, who are generally wealthier than the women of the kavu traditions, believe that none of the offering should be “wasted” by boiling over. They also fear that it could boil over in an inauspicious cardinal direction, or fear that it may not boil over at all. While this is merely a symbolic part of the ritual, it could be read as Brahmin women hesitating to fully relinquish the offering to Devi and trying to control shakti. Most women practicing Pongala are less wealthy than the Brahmin women, and coming from a context of scarcity, they have more reason to follow the ritual in a way that will attract the attention of the Goddess who may bring them good fortune.

Ritual of Generosity

This ritual is one that emphasizes reciprocity with the Goddess, but also generosity among one another. There is an imperative for generosity because it is favorable in the eyes of the Goddess. This necessitates that the prepared food must be shared. The embedded ecology within this practice of generosity demonstrates an accurate perception, replication, and promotion of communally functioning ecosystems. The food is transformed when it is accepted by Devi at the moment of pongala. A woman giving away the blessed offering to another person replicates the reciprocal relationship between Goddess and devotee, in which the Goddess is providing sustenance to the women she protects. Usha, one of the women interviewed, gave strangers Pongala on her way home to her village from Trivandrum. She said “I have

⁴⁵ Deborah Neff, “The Social Construction of Infertility: The Case of the Matrilineal Nāyars in South India,” 483.

satisfaction. I have peace of mind. I distributed Pongala on the way with the firm belief that things will turn out better.”⁴⁶ I consider these beliefs around generosity to be embedded ecologies because they demonstrate an understanding of how communities thrive: not through competition, but collaboration. This is deep ecological wisdom. Ecology itself is the study of relationships between organisms in an environment. Healthier environments have stronger, more mutualistic relationships among their organisms. Rituals like Pongala contribute toward fostering healthier communities in numerous ways, such as emphasizing helping others in your immediate surroundings.

Localized generosity

Generosity is prioritized to the locality. Nagarajan connects how rituals for divinities foster generosity among humans within these boundaries:

Through the form of *pūja*, or ritual offerings, one enacts the hope for a particular type of relationship with the divinities. In evoking a generous heart, rituals of generosity circumscribe human relationships in both cultural and natural contexts. According to the classical Tamil text the *Tirukkural*, giving hospitality from the household to those who ask is one of the ways of attracting the goddess of prosperity.⁴⁷

Women often choose to build their hearth for cooking in the same place year after year.

Reconnecting with women who cook nearby is part of the ritual, as the preparation takes a long time. The women who live in the houses along the street where Pongala is practiced are expected to be courteous hostesses to the women who have gathered in front of their house to cook. The women cook where intricate kolams would have been drawn by the women of the house that morning of Pongala.⁴⁸ These women are expected to feed and care for the Pongala ritualists. Devi offers her protection and healing power through fostering relationships among women.

⁴⁶ Jenett, 50.

⁴⁷ Nagarajan, 238.

⁴⁸ See image on p. 27.

These relationships are strengthened because women know that their generosity pleases the Goddess.

Physical Experience

During Pongala, in addition to the central offering dish, food shaped as different body parts is prepared.⁴⁹ Cooking this body part-shaped food helps ask for healing. There is an embedded ecology here, knowledge of the connection between cooking, intentionality, and Devi's healing power. The shape of the body parts is significant as we will find out in the section on Fertility, in which the pot also carries embedded knowledge in its womb shape and symbolization. Women endure the heat and smoke of the fire because it is believed to prevent disease and protect them. Women stay attending to their pots throughout the cooking time in the thick white smoke that the coconut fire produces. While smoke exposure may seem unnecessary at first, understanding the embedded ecological knowledge clarifies the practice to a Western audience. The smoke's purifying, healing powers outweigh the potential harms of breathing smoke.

Some women who can afford it will pay a Brahmin priest to offer Pongala for them, however, the women interviewed by Jenett preferred preparing the offering with their own hands.⁵⁰ Doing it themselves brings about a greater satisfaction and is a means for strengthening the relationships these women have with the Goddess. Being inundated with smoke from the fire, enduring its heat compounded with the heat of the sun, and preparing Pongala by hand all provide physical access to the greatest protective and healing power the Goddess can offer. The Goddess's existence in the smoke, in the heat, in each grain of rice represents how she is believed to be fully enmeshed in the natural world. Women actualize this belief through offering

⁴⁹ Jenett, 43.

⁵⁰ Jenett, 50.

Pongala and purposefully carrying out a ritual which engages her shakti through physical and ephemeral mediums.

Purity

It is significant that the women taking part in this ritual come from a variety of backgrounds. The boundaries of the caste system usually restrict this kind of interaction. There is a suspension of social rules during the ritual. Jenett notes that fifty years ago, the women practicing this ritual side by side today would not be allowed to drink from the same well.⁵¹ The notions of purity and pollution are significant in these interactions between women from different communities. People from lower castes are often viewed as impure and certain forms of contact with them can “pollute” the upper class people.⁵² There are specific rules by which purity must be maintained especially when preparing food. Embedded in the communal aspect of the ritual is a new understanding of a greater equality of women. This is not meant to be romanticized—harmful divisions based on community are still entrenched in certain aspects of Indian society, but it is notable that certain discriminatory beliefs around pollution are not preventing women from practicing Pongala together.

Time

On the day of the offering, women wake up early in the moonlight to prepare themselves for the ritual. They will bathe, rub their hair with oil, some will fast, and if available, they will harvest rice to use for the dish.⁵³ Like most Hindu festivals, this one is in sync with earth’s timekeeper, the moon. It is celebrated when the moon is full. January through February is the harvest season for rice in Kerala, while in the rest of Southern India, harvest ranges generally

⁵¹ Jenett, 42-43.

⁵² Jodhka, “Caste in Contemporary India,” 21.

⁵³ Village Cooking Channel, “PONGAL CELEBRATION in Village by farmers.”

from November through January.⁵⁴ These differing harvest cycles are the reason why the Pongala festival takes place a few months later in Kerala than it does elsewhere in South India. The timing of the ritual during Attukal Pongala is planned according to the rhythm of the seasons to create the ideal setting for contacting the Goddess.

Fertility

In analyzing the dynamic relationship of the pot, the fire, and the Shakti energy which this ritual is meant to increase, themes of fertility, procreation, and abundance become apparent. The Pongala festival honors Devi for her contribution to the fertility of the land seen in the concurrent harvest. Pongala is offered in the month of Kumbham (February-March). Kumbham means “earthen pot.” This pot is used for cooking Pongala and symbolizes the Goddess and her “generative capacity.”⁵⁵ The pot (*khumba*) also symbolizes the womb and the divine. It is a container of “life, sustenance and fertility.”⁵⁶ Sexual power is the flame that fuels Pongala and leads to the boiling over. Embedded in this ritual formation is the ecological wisdom that sexual power is a sustainer of life through feeding—preparing the Pongala dish to share—and anatomically, through procreation. The reciprocity between the devotee and the Goddess is demonstrated in Pongala, when a woman prepares the bounty of the fertile land as a reciprocal offering for Devi.

Nagarajan’s Theory

Using Nagarajan’s theory was vital for unpacking Pongala’s ecological knowledge. It helped illuminate the non-Western science embodied and embedded in this ritual. My aim here is to make visible the wisdom and intentionality which goes into Pongala. Applying Nagarajan’s

⁵⁴ Govt. of India, “Status Paper on Rice,” 32, Table 7.15.4.

⁵⁵ Jenett, 40.

⁵⁶ Dallapiccola, “kumbha,” *Dictionary of Hindu Lore and Legend*.

theory was helpful because it was crafted from a Western academic context, as Jenett's article was written. What the theory provides—which Jenett lacks—is an intimate knowledge of South Indian women's ritual culture. I am not not an expert on the Attukal Pongala ritual, but I want to demonstrate the theory's transferability and the potential for Western readers to understand South Indian women's rituals in a context of their own. Non-Western ecological knowledge is embedded in areas of culture that we don't recognize as legitimate sources. The work to legitimize non-Western science and ecological knowledge is challenging because it must cater to an academic community that requires reason, evidence, and scholarly writing. This can be problematic, especially in the face of climate change. Adopting ecological knowledges developed by indigenous peoples over millennia is vital to not only the flourishing of our environment but to our very survival as humans. This chapter is an attempt at translation, with an overarching goal of increasing recognition and reciprocity, not extraction. There is a sense of urgency, however, to implement changes necessary for our survival. Legislation which could influence widespread ecological practices requires scholarly work to be considered. Religious Studies scholars and anthropologists are in the privileged position to share traditional ecological knowledge to a broader audience. This audience must include scientists who, in the context of our current power structures, must extract this knowledge, experiment, and present empirical evidence to people in positions of power for precedent, recognition, and implementation of these ecological knowledges on a wider scale.

III. Widening Theory, Scope, and Possibilities

After studying Pongala, I realized the potential for studying rituals that did not fit into the analysis framework and criteria I set for this thesis. In looking for more rituals to which I could apply the framework of embedded ecologies, I encountered a gap in ethnographic accounts that fit the general criteria of being enacted by women, for a goddess, and having something to do with the natural world. I came across many goddess-worshipping traditions carried out by men, women's rituals for goddesses with little connection to the natural world, and others in which I could not find embedded ecologies (EE). This made me understand the limitations and specificity of my study of women's rituals in South India. Now, it is not the case that these kinds of rituals do not exist, but rather, they have not been the focus of scholarly study. Oral traditions are much less likely to be researched because of the intensive ethnographic study required. This gap in research helped catalyze an expansion of Nagarajan's theory. With limited scholarship coming from South India, I let go of one of my criterion and explored rituals outside of South India. Knowing there is a wide range of religious beliefs and practices within Hinduism, I was unsure about transferring the EE theory to practices coming from different cultural contexts. This led to the decision to redirect this chapter's focus. My challenge has been to broaden my undertaking in applying EE theory, finding its limitations and where it can be expanded. I have chosen to do this through examples of rituals in which the application of Nagarajan's theory stretches to accommodate cultural idiosyncracies. The scholarship I chose is Ann Gold's ethnographic account of the Rajasthani Sitala goddess festival and Mother Ten worship. I also apply EE theory to David Haberman's account of worship at the source of the Yamuna River. I first discuss the layered ethnographic, scholarly, and personal challenges present in this project overall and specifically in widening theory.

Challenges

Ethnographic Prisms

One challenge I have faced in this project stems from the necessity of using scholarly ethnographic work that are “secondary-source” documents. I am relying on their descriptions of ritual to be accurate. I am parsing out objective ritual description from scholars’ interpretations. There are a series of prisms through which the ethnographic accounts I am relying on have passed. First, through the ritual practitioners themselves. They are the experts in the work of Nagarajan and Jenett. They each speak from their own experiences, thus the generalizations extrapolated from each of their personal accounts have the potential to essentialize. The ethnographers were responsible here in challenging this by interviewing many women and drawing larger conclusions from a wider pool of knowledge. There is also the lens of the ritual practitioner’s own interpretation of their actions versus what their actions actually express. The EE can be identified in the embodied practices of the ritualists. However, the ethnographer’s interpretations of what the ritual movements express may contradict verbal articulations of the ritual given during interviews or in conversation.

Participant Observation

The ethnographers were not only interviewing and observing, but also engaged in these rituals as participants. This lens has both potential benefits and drawbacks. As religious studies scholars, I believe that their perspectives were undoubtedly deepened by ritual enactment. Jenett describes the physical experience of the pongala ritual. “We all cry from the smoke, the wind is blowing into our eyes, and at times it seems we might suffocate. Finally my pot boils over and I

feel the tension release in my body.”⁵⁷ The description of the ritual would have been weakened if Jenett had just been a witness. Her somatic response at the ritual’s climax is sensory data contributing toward understanding the Pongala ritual, which is grounded in the body. While this is valuable description, we are also understanding the experience through the perspective of a white, American, cis-gender woman. The tone in which she writes about the embodied experience may not match the true feelings of women as their pongala pot boils over. Or, it may. This brings up another question about religious studies scholarly research. Where is the line between embodied and religious experience in conducting fieldwork? Reflecting on this calls back to a paper I wrote on Robert Orsi’s chapter situating the field of religious studies and its scholars somewhere along the spectrum of religiosity. I disagree with the idea that secularity is equivalent to objectivity, which is how religious studies scholars may try to present their work. Instead, “Good ethnographers concede all relevant positionality which could affect the presentation of their subject of inquiry, but religious identity appears to be particularly threatening to the accuracy of research on a religious group. Similarly, Orsi explains the skepticism that will damage any religious studies professor exposed to ‘charges of subjectivism.’”⁵⁸ Jenett does not elaborate on her positionality in giving her account of Pongala. It is obvious to the reader that she is not part of the community about which she writes. However, taking part in the ritual initiates her into the community. Taking on some aspect of religious identity by enacting this ritual for the goddess, she opens up her work to “charges of subjectivism.” Does her account become theological when she crosses that line and participates in the ritual? If so, the language of religious studies scholarship she uses throughout the article hides any theological underpinnings. I elaborate on this potentiality to explore the ways Jenett’s

⁵⁷ Jenett, “A Million Shaktis Rising,” 46.

⁵⁸ Carlson, “Personal Reflection,” 5; Orsi, “Between Heaven and Earth,” 192.

participation in Pongala could have influenced her writing. I do not disagree with her choice to participate. I believe it strengthened her writing through vivid, experiential details that bring the reader into the women ritualist's point of view.

Western Bias

The other prism which skews the ritual accounts is Jenett and Nagarajan's training as Western scholars. Their tools of analysis are developed from theories emerging from the West. The discipline of anthropology and ethnography were developed in the west and much of the foundational scholarship is by westerners. Nagarajan's identity is rooted in Tamil Nadu, but she is writing as a scholar at the University of California, Berkeley. Jenett is writing from the graduate program at the California Institute of Integral Studies, which has roots in Buddhist and Yogic beliefs, but is comprised of mostly white Westerners. Through academia, the rituals performed are interpreted in a scholarly voice, for an academic context. This written word deviates greatly from the source of this ritual knowledge, which has always been orally transmitted and physically performed. Inherent in translating embodied practices into written language is loss. Inherent in translating oral knowledge into written language is misinterpretation. The women interviewed by Jenett and Nagarajan were often illiterate, therefore the scholarship produced from their stories became completely out of their control once translated.⁵⁹ English, the language of these written ethnographies, may not be an accessible language, therefore those performing the rituals lose the ability to validate the accuracy of their own depiction in this Western scholarship. Furthermore, religious studies and anthropological writing requires a vocabulary that is often only understood by other scholars with formal academic training.

⁵⁹ For further consideration of the issue of scholarly responsibility in studying religion, see McCutcheon, "Critics not Caretakers."

As a Western scholar, I am aware of the harm I risk doing through my application of embedded ecological theory to Hindu women's rituals other than kolam drawing, the practice through which the theory developed. I risk misinterpreting the ritual accounts and projecting my Western ecological orientation onto practices which do not fit in the framework I am trying to use. This was one of the significant factors which contributed toward my challenge finding more rituals to analyze. I was also concerned with extraction, and how to responsibly convey the practices I have been studying. Because I am not in a position of power and have no way to monetize, patent, or even apply much of this ecological knowledge I am identifying, I have let go of this concern I had about being extractive. I believe there is little harm done in terms of extraction by identifying and writing about these rituals as an undergraduate scholar of religious studies. The harm that I may be doing is in what I have been unable to identify. There is undoubtedly embedded ecological knowledge that I have missed in my reading of these ethnographic accounts. It is likely there is embedded ecological knowledge that I have identified which is inaccurate. I may have read into ritual aspects which are not as substantive as I make them out to be. Despite these risks, I have continued this project and venture into this final chapter cautiously, as I explore traditions beyond the cultural context in which the theory I am applying was developed.

Personal Challenge

I saw this thesis in three straightforward chapters: first, the exploration of Vijaya Nagarajan's book *Feeding a Thousand Souls*, and her theory of embedded ecologies. The second and third, and possibly fourth chapter were to be applications of the embedded ecologies theory to other Hindu women's rituals. I would test to see if the theory "worked" in analyzing other rituals. However, without a deep or personal knowledge of the practices, I am unable to

definitively conclude whether or not Nagarajan's theory is "successful" in its application to other rituals. I would have been able to make more conclusive findings if I had studied abroad in India as planned, and conducted my own research. I was accepted into a program for the Fall of 2020 in Bodh Gaya with Carleton College. There, I would have been able to conduct my own research into rituals. Another barrier to writing the tight, definitive thesis I imagined is that my study of the religions of India only began in "Introduction to South Asian Religions," Professor Daniel Michon's class, which I took in the fall of 2019. Over the past two and a half years, I have challenged myself to learn more about dharmic religion, my interests lying primarily in Hinduism and Buddhism. Learning the cultural intricacies of Hinduism through more classes and through this research process, I have realized that this curiosity of mine will find no end. I will never understand 'Hinduism' because it is such a deep and wide set of beliefs that vary across India. Learning specifically about Tamil culture and beliefs through Nagarajan's in-depth work made me hesitate to try to connect rituals from different parts of India, in fear of equivalating beliefs which are disparate. Also, having learned about Hinduism in an academic setting, my knowledge has been gathered primarily from text, historically accessible to Brahmins and wealthier classes of India. Looking at middle and lower class religious practices in this thesis has made me wary of what connections I can make to my preexisting knowledge of Hindu literature. In choosing a thesis topic, one typically explores something with which they are familiar. This is what I thought I would be doing in looking at Hindu rituals. Except, the rituals I was drawn to studying were not Brahmin rituals—for which I have more knowledge of the cultural context—but those practiced by middle and lower class women. These rituals were more often tied to traditional ecological knowledge, which remains a major interest of mine. Finding the

book *Feeding a Thousand Souls* gave my thesis direction and purpose. It was exactly what I was looking for—a ritual performed by women, for a goddess, with an ecological lens.

While these ethnographic, Western, and personal challenges pose a barrier to a fuller, in-depth exploration of another ritual in this chapter, I have endeavored to widen both Nagarajan’s theory of embedded ecologies and stretch my own limitations that ruled out a number of rituals from being able to qualify for analysis.

Rituals

Nagarajan’s theory of embedded ecologies can be applied to rituals coming from outside the South Indian context, however, they require readapting the theory. I rely heavily on the scholarship of Ann Gold, whose work I trust. In communicating via email with her, she was able to answer my questions and assist my exploration of Sitala worship. I feel confident in applying Nagarajan’s theory to her accounts. David Haberman is another scholar with extensive field experience. His book, *River of Love in an Age of Pollution*, is an in-depth study with detailed accounts of the pilgrimage to Yamunotri, which I focus on as the final example, stretching embedded ecological theory as far as it goes.

Sitala Day

In her chapter “From Demon Aunt to Gorgeous Bride: Women Portray Female Power in a North Indian Festival Cycle,” Ann Gold writes through a lens which recognizes the marginalized identities of the women she studies while exploring the ways women challenge the patriarchy in speech, story, song, and ritual. Gold looks at four different festivals which occur sequentially and all are dedicated to female beings: Holi, Sitala Mata, Dasā Mātā, and Gangaur. Her essay is an accumulation of her participant observation in the festivals, oral texts, and

interviews with both men and women on ritual and textual meanings.⁶⁰ I focus on the festival celebrating Sitala Mother, the goddess of smallpox, children's illness and health, and both newlywed and agricultural fertility.⁶¹

To prepare for Sitala's festival, some women do not bathe for seven days. Collecting grime on their bodies connects to Sitala's identity as the 'Cool Mother,' capable of rescuing children from the heat of fevers, which resonates with a ritually enacted rescue of a 'darling boy' from fire during the festival of Holi. The dirt is women's sacrifice as caretakers. With the arrival of Sitala's day, they can bathe and be blessed with good health by the goddess.⁶² Gold also recounts that Sitala likes being worshiped by menstruating women. This contradicts the typical exclusion of menstruating women from participating in worship or even, for example, drawing kolam. The belief that menstruation causes ritual pollution is inverted during Sitala worship.

Women also prepare for this ritual by cooking food the day before. Since Sitala is the Cool Mother, there must be no cooking fire lit on the day of her celebration. Specifically cooling foods are prepared, along with figures of the goddess and other accessories made from wheat flour bread dough for decorating a small form of the goddess. A tray is prepared for the main ceremony with a piece of cloth, a brass jar for water, henna powder, colored string, and a pile of seeds including wheat, barley, millet, large millet, white beans, and corn.⁶³ On the day of worship, the people of the Gujar community with whom Gold participated in the ritual proceeded to the goddess's shrine, singing a devotional song. At the temple, women bathe a small aniconic stone form of the goddess, cover her with henna, stick string to her muddied form, sprinkle grain over her, and add the dough accessories and other auspicious items. They place yellow cloth on

⁶⁰ Gold, "From Demon Aunt to Gorgeous Bride," 211-12.

⁶¹ Gold, 212.

⁶² Gold, 219.

⁶³ Gold, 220.

the shrine. Traditionally yellow wraps are worn by women after childbirth, another connection to the goddess' powers of fertility.

Next, women engage in a part of the ritual layered with embedded ecologies. They go behind the temple, bringing with them whatever seeds they have left over. They plow furrows creating “fields” with their fingers. Then they sow the remaining seeds, appropriate for the upcoming



Ritual ploughing and planting, worship of Sitala Mother, Jahazpur 2011. Photo courtesy Ann Gold.

planting season. Though women may take part in sowing seeds, plowing is not typically performed by women in agricultural societies in Rajasthan. The women Gold interviewed explained that it was neither appropriate nor auspicious, and lacked decorum. It infringed on the customary division of labor. Gold paraphrased one woman who said, “Were a woman to drive the plough...it would be as if she were to sit on her husband’s head.”⁶⁴ This photograph above depicts the plowing ritual in action. Women reverse societal rules in a context where it is safe to do so. The atmosphere is merry. More gender roles were challenged in this part of the ritual. Gold recounts one woman covering another woman’s eyes from behind. The woman whose eyes were covered then requested that if she were to die, to show her children this buried treasure. This refers to ancient lore in which rulers would hide large containers of grain in the ground (buried treasure) for their progeny to use in case of famine. Through ritual, women put

⁶⁴ Gold, 221.

themselves in the position of the king in this narrative, giving their children an inheritance of grain. Gold remarks that this contradicts normal inheritance practices, just as plowing contradicts normal farming roles. She posits that these women do these practices to stake their claim in the fertility of the earth herself. This is connected to sexual activity in the ritual action that follows. As women leave their “fields” and return to the shrine, then proceed together back to the main goddess temple, they burst into suggestive songs called *keśyā*. Women sing these songs which playfully call each other out for being sexually voracious. They finally return to the temple, sing five songs of worship for the goddess, and the ritual ends.⁶⁵

The embedded ecologies here combine knowledge of environmental systems and women’s reproductive ecology. The relationship between illness and health, menstruation and fertility, heat and coolness are all embodied by the goddess Sitala. The women’s ritual actions express an awareness of these dichotomies and the rituals are carried out to maintain a stable relationship with the goddess, so she might grant them health, fertility, and respite from the heat. The grime they let accumulate on their bodies, one woman said, pleases Sitala because she was the butcher’s wife.⁶⁶ Women imitate the goddess by getting dirty and not bathing until her day of celebration has arrived. They are doing the opposite of the traditional pre-ritual practice of bathing. I am not sure what embedded ecological knowledge may exist here as poor hygiene can lead to illness. However, pleasing the goddess can only offer benefits in the minds of her devotees.

This is the same logic by which menstruating women are able to participate in Sitala worship. The belief that Sitala likes being praised by menstruating women extinguishes the taboo enough to welcome and include these women in the celebration. Associations exist between

⁶⁵ Gold, 222.

⁶⁶ Gold, 219.

menstrual blood and fertility, manifesting on the day celebrating the goddess of newlywed and agricultural fertility. This is reproductive ecological knowledge. While it may not have to do explicitly with environmental concerns, this example shows a more accurate understanding of women's fertility than how fertility is understood in the greater Indian culture. In India, semen is thought of as providing seed, while women's reproductive systems are viewed as fields.⁶⁷ In this model, women are passive, merely a holding vessel for the male's seed. Of course, this is not how reproduction works, as understood through Western science. Semen fertilizes the egg released from the ovaries. The fertilized egg becomes attached to the inside of the uterus, and growth ensues. Children are born with half of their genes coming from their father and half from their mother. The worship of Sitala by menstruating women recognizes the fertility of women in a more biologically accurate way.

The part of the ritual in which the stone forms of the goddess are worshiped are more straightforward as far as understanding their meaning. Stones are a common way to represent deities in Hinduism (one common example being Shiva linga). The icons are then covered with materials that would commonly adorn a temple shrine or other iconic representation of a deity. The henna, string, and yellow cloth are typical accessories for a goddess. The seeds and the baked dough pieces are more unique, though we have seen dough fashioned into body parts as a method for healing during Pongala.⁶⁸ The seeds resonate with Sitala's identity as the goddess of agricultural fertility, and play an even more significant part in the following ritual step. The plowing of fields with fingers and sowing seeds behind the temple that houses Sitala's shrine has obvious ecological knowledge expressed. The action is a microcosm of the agricultural planting process, which these women take part in regularly. They are putting their hopes into the ground.

⁶⁷ Gold, "Seeds in South Asia," *The Encyclopedia of Religion and Nature*.

⁶⁸ See p. 33.

Connected with the fertility of the earth, Sitala is present in the soil in which they bury the seeds. The plowing and planting is done with joy. The women are taking part in the plowing, a part of agriculture from which they are usually excluded. While it would be improper for women to plow the fields their husbands or fathers or brothers tend, they can here for Sitala, where it is acceptable to do so. They have agency, power, and a say in the agricultural success of their families, even though their actions may appear only symbolic. Through plowing and planting, they earn the blessings of Sitala.

Mother Ten Worship

In “Mother Ten’s Stories,” Ann Gold recounts scenes from the festival season marking the harvest of winter grain crops and beginning of the hot season. The ten day worship of the goddess Dasā Mātā begins after the celebration of Holī on the last day of the month Phālgun (March-April). Dasā Mātā is known for her ability to change the condition (*dasā*; *dasā*) of a person for the worse or for the better. She is associated with the number ten, as her name sounds similar to the auspicious number (*das*; *das*). Her celebration is marked by ten days of worship, ten stories, a ten-pointed design, and a string with ten knots. Gold refers to her as Mother Ten.⁶⁹ Her worship coincides with festivals for a number of different goddesses, including Sītālā, Gangaur, Durga, and more.

Gold discusses the traditions surrounding the worship of Mother Ten to frame three of the ten stories she heard about the goddess recounted during her ethnographic research in Ghatiyali village, Ajmer District, Rajasthan. These stories were told by Shobhag Kanvar, an acknowledged religious expert in her village. A multi-step ritual surrounded the oral recitation of these stories at Shobhag Kanvar’s house each day of the festival.⁷⁰ To receive the maximum benefit from the

⁶⁹ Gold, “Mother Ten’s Stories,” 434.

⁷⁰ Gold, 436.

ritual, women would engage in a communal *vrata* (fast) and they would bathe in the morning. To prepare the area for worship each day, Shobhag Kanvar drew by hand a brown ten pointed figure with cowdung paste and decorated it carefully with red dots made from pure water and a red powder mixed together. These dots were auspicious and the number marked the day of worship (beginning with one on the first and ten drawn on the final day). This art resonates with kolam drawing, which is traditionally created before ritual to call upon the goddess and welcome her into the ritual space. Shobhag Kanvar placed a skein of white cotton yarn and a pile of grains upon the drawing. At the beginning of worship, women picked up a few grains they held in hand during the recitation of the story. Following Shobhag Kavar, women tossed grains in front of them at the conclusion of the story, saying prayers to the goddess. On the tenth and final day of worship, people dressed up, attendance increased at the site of worship, and the fast was broken communally with special festive food offered to the goddess. The white skein of yarn was twisted into necklaces called “Mother Ten’s strings” which were worn throughout the following year. These necklaces were iconic representations of the goddess with ten knots tied in each. They brought good blessings to all women who wore them.

The main goal of Gold’s article is contextualizing and transcribing three of Shobhag Kanvar’s stories about the goddess. She is less focused on the ritual aspect and describes it just as a way of setting the stage for the stories that follow. None of the stories have particularly ecological connections, but the kolam drawing, seeds, and necklaces have resonances of embedded ecologies. In this example, Nagarajan’s theory is stretched to include subtle ecological elements that may not connect directly to ecological knowledge used in practice. Instead, the kolam-like drawing, grains, and yarn are all naturally made materials meant to evoke the auspiciousness of the earth. The ecological knowledge is not obvious, but it is not complex

either: be in contact with natural elements, respect them, wear them, and the goddess will bless you.

Surya Kund

Vijaya Nagarajan offers an essential explanation of what rivers mean in India. She writes, “Hindus see a river not just as a waterway, but also as the embodiment of a goddess who brings to it her own mythologies and experiences and lives in it and protects it.”⁷¹ The river is the goddess and the goddess is the river. David Haberman describes rituals which take place at a pilgrimage location at the head of the Yamuna river in the Himalayas. There is a temple complex built around this sacred site where the river begins flowing freely. This is the central location of worship where thousands of pilgrims trek yearly to visit the goddess Yamuna in her most pure state. It is a treacherous journey to make it up there, to where the water is nearly unpolluted. This clear, free-flowing water is the antithesis to much of the river, which is heavily diverted for agricultural and urban usage, polluted with runoff from industrial plants, and dammed for hydroelectric power.⁷² Those living along the Yamuna River are familiar with this destruction of the river they worship as a goddess. Worship of their sacred river is interrupted by polluted water, lack of water—in the hot season, the river runs dry in many places—and the so-called “death” of the river at dams.⁷³ Even before such destruction began, Yamunotri has been a vital part of pilgrimage.

At the pilgrimage site, glacier water descends the mountain to Yamunotri “the Mouth of Yamuna,” where it mixes with hot springs. From a crack in Divya Shila (divine stone), hot water springs emerge from deep wells below the earth’s surface. Surya Kund “Pond of the Sun” is the

⁷¹ Nagarajan, “Feeding a Thousand Souls,” 205; Alley, “On the Banks of the Ganga.”

⁷² Haberman, “River of Love,” 78.

⁷³ Haberman, 72.

receptacle for the boiling water emerging from the crack in the rock face. Boiling water in the small basin is used by pilgrims to cook rice as a “special *prasad*—grace in an edible form—of this place.”⁷⁴ The pilgrims enact a relationship with the goddess at her source through this ritual. Prasad is a common aspect of many Hindu rituals, but this one is unique in that the dish is made *with* the goddess in her liquid form and is, of course, for the goddess. A priest at the temple told Haberman that “by eating the rice cooked in Surya Kund, one receives the blessings of Yamuna and her protection from her elder brother, Yama, Lord of Death.”⁷⁵ The embedded ecology here is in the relationship established through the co-creation and consumption of ritual food, similar to Pongala. A strong relationship with Yamuna will help protect you from death. Perhaps if the worshiper is a farmer, the ritual will strengthen their relationship and Yamuna will flow readily and provide water to their crops. Blessings of the goddess Yamuna will result in ecological wellbeing—of the earth and of oneself.

The Surya Kund and the rituals surrounding worship of the Yamuna river here at Yamunotri fall outside the criteria I created for this thesis. Haberman does not include specific references to women or women’s rituals at Yamunotri. I chose to analyze this ritual anyways for its strong ecological implications and its dedication to the goddess. Obviously, it is missing women as the main ritual enactors and it is told from a male perspective. There is an ancestral knowledge passed down matrilineally that is lost in Haberman’s reliance on stories told strictly by men. It affects the interpretation of the ritual because the knowledge is not passed on by women, but spoken explicitly by priests, who are the knowledge keepers in Haberman’s explanation. These perspectives do not weaken the account, but we must be cognizant of the

⁷⁴ Haberman, 53.

⁷⁵ Haberman, 53.

source of our understanding of the ritual as determined by those with more cultural power. With this in mind, Nagarajan's theory can stretch. It can be applied to rituals with non-female enactors.

In addition to her theory of embedded ecologies, Nagarajan also outlines a phenomenon she calls "intermittent sacrality."⁷⁶ This refers to the tendency for people to treat an entity, like the earth, or a river, as deified figure during ritual and ceremony, but during other times, as profane, part of the world like anything else. Haberman describes the pollution he witnessed at the small bazaar at the entrance to the Yamunotri temple complex: "trash from these shops, dung from the many mules, and even materials used for worshiping Yamuna and then discarded have accumulated on the ground near the river in Yamunotri."⁷⁷ This resonates with the reverence and care with which women create the kolam, and its subsequent de-sacralization. Intermittent sacrality is the inevitable consequence of living in an era where everything comes wrapped in plastic. Though the pilgrims visiting Yamuna's source believe deeply in her sacredness and respect their goddess, it is almost inevitable that they inflict some environmental harm against her. This is the reality not only for pilgrims visiting Yamunotri but the farmers and people living along the banks of the Yamuna, Ganges, and other sacred rivers in India. Many of them are farmers. They may worship Yamuna, but they also must divert her water to feed their fields. The compound impact of this use is that the river runs dry during the hot season.

Another perspective comes from Sunderlal Bahuguna, a well-known Indian environmental activist, who sees Yamuna as constantly sacred. He resists intermittent sacrality.

Haberman quotes Bahuguna explaining that:

There is a basic difference between today's "civilization" and our culture. The basis of our culture is like mother's milk. The message of our culture is milk for us: that God is in all nature...

⁷⁶ Nagarajan, "Feeding a Thousand Souls," 205.

⁷⁷ Haberman, 51.

Living in the company of nature, one learns many things. This river here flows for others. It is a model of loving service [*seva*]. Have you ever seen a river drinking its own water? Thus, nature sets an example for us human beings, and says that, if you want real peace and happiness, be in close contact with me. Living rivers give us so much.⁷⁸

Bahuguna says explicitly the ecological knowledge he has gathered from living and being in ceremony with the river. This is not the kind of identification made from other texts analyzed in this thesis, in which the ecological knowledge is embedded. Unlike Jenett's account of Pongala, where, for example, the meaning of the use of milk in the creation of the dish was extrapolated upon and unearthed as an EE, Bahuguna says exactly what he means about the connection between his culture, Yamuna, and milk. The description Haberman gives of Bahuguna's home on the bank of the Yamuna exemplifies the embodied, constant state of reverence in which the activist relates to the river. There is nothing intermittent about Bahuguna's way of relating to his environment. That said, *River of Love* is less of an ethnographic account, focusing more on the history, culture, and religious beliefs surrounding the Yamuna. The embedded ecologies theory does not fit perfectly with this text, but can be stretched to include the more explicit messages, like Bahuguna's, as well as those embedded in practices, like those at Surya Kund.

Next Steps

Nagarajan's theory of embedded ecologies has been flexible in its application to a variety of rituals. Looking at practices outside of South India proved to be workable within the theory, and just required a shift in the way I applied EE and drew conclusions. This theory could be applied to a wide array of practices, rituals, ceremonies, festivals, and more. I think it works well in analyzing women's rituals specifically, in which knowledge is more likely to be embedded in practice than expressed explicitly. Women are often the unacknowledged wisdom keepers across

⁷⁸ Haberman, 72.

cultures and deserve recognition. Theories like Nagarajan's can help to continue the sharing of this knowledge passed down generations. The theory also helps illuminate these traditions within the broader interest category of nature. People interested in ecology and traditional ecological knowledge, like myself, want to learn about human and environmental relationships around the world. A great example of this is the publication Emergence Magazine, which shares "stories that explore the timeless connections between ecology, culture, and spirituality."⁷⁹ Nagarajan's theory is a potential conduit for connecting people across cultures. It shines light on wisdom inaccessible to those who are looking at a ritual as just a ceremony, instead of the matrix of knowledge, culture, and symbolism she sees it as. There is much to be learned from women's rituals across the world, and Nagarajan's theory of embedded ecologies is an invaluable framework through which to illuminate ecological knowledge.

⁷⁹ Emergence Magazine, "Editorial Note."

Conclusion

Through this thesis, I wanted to learn more about how people relate to their environment. I chose to study accounts where people embody their connection, instead of just speaking or writing their relationships. By researching the articulation of ecological knowledge through ritual action, I learned the symbols and signs through which South Indian Hindu women's relationships and beliefs about the natural world are represented. Finding Vijaya Nagarajan's theory of embedded ecologies helped ground this project in preexisting scholarship and gave me a formula to follow in my analysis of other rituals.

Kolam drawing, the ancient ritual art layered with meaning and intentionality, holds a deep well of knowledge which Nagarajan carefully unearths in her book *Feeding a Thousand Souls*. Through in-depth research, she developed this theory of embedded ecologies and intermittent sacrality that help frame the way I have conceptualized women's relationships with the environment. First, these ecologies are embedded. The way Hindu women (of low to middle class) view the environment is expressed through ceremony honoring the goddesses. One way it is demonstrated through kolam drawing is in the patterning of the designs themselves, which are meant to attract the attention of Lakshmi, the goddess of wealth. Women know that her presence will bring good fortune to the household. The kolam also calls upon Bhudevi, the earth goddess. The relationship between women and Bhudevi is maintained and strengthened every day through the creation of a ritual design on her soil. Nagarajan explains that "Hindus see the earth not merely as a geological formation, or a vast multi-billion-year movement of tectonic plates, but also as an earth goddess."⁸⁰ Her theory identifies the ways in which women build, maintain, and engage in reciprocal, mutualistic relationships with the earth goddess. For this reason, I decided

⁸⁰ Nagarajan, "Feeding a Thousand Souls," 205; Eck, "India: A Sacred Geography."

that applying her theory to other women's rituals dedicated to goddesses would yield findings of ecological knowledge.

In chapter two, I followed the framework for interpreting ritual that Nagarajan demonstrates in her book. First, I did thorough research on embodied ritual practice, paid attention to the stories passed down orally, then extrapolated findings using the theory of embedded ecologies. As I did not have the opportunity to conduct my own ethnographic research, the second chapter relies on Dianne Jenett's article "A Million Shaktis Rising" on the Pongala festival in Kerala. I found resonance between the Pongala ritual and kolam drawing. On the surface, they both originate from South India and are practiced by women for goddesses. Jenett's perspective is further removed from the culture, as she is a white woman ethnographer studying Pongala. She gains access into the community of women she ultimately ends up participating in the ritual alongside, but she is a guest. Nagarajan's work is grounded in knowledge passed down matrilineally through her Tamil family. She grew up witnessing kolam drawing when she lived in India at a young age. In analyzing Jenett's article using Nagarajan's theory, I was cognizant of the greater degrees of separation I have from an accurate understanding of the Pongala ritual and its implications. Writing from a further removed perspective, I was still able to identify embedded ecologies in the Pongala ritual. Through ritual food preparation, women embody their relationships with the goddess. As Nagarajan's quote in the paragraph above explains, these conceptions of the goddess and the environment are one. The goddess resides in each grain of rice in the Pongala dish. Women show their reverence by handling the rice with care through each stage of its preparation.

In chapter three, I write about my study of Ann Gold's work on Sitala shrine worship and Mother Ten ritual storytelling, both in Rajasthan. I also bring in David Haberman's scholarship on rituals coming from the mouth of the Yamuna, where the river goddess is worshiped. In framing my approach to these accounts, I discuss the challenges I ran into in finding these sources. I contended with a lack of scholarship within the specific criteria I was interested in studying, and wrote about how stretching Nagarajan's theory allowed other rituals to find their place alongside kolam drawing and Pongala. I framed my positionality as a white woman writing from a Western scholarly perspective, and considered its implications. I also critically analyzed the specific positionalities of Nagarajan and Jenett as implicated in how they undertook their scholarship. There are a number of ethnographic prisms through which ritual accounts pass, and I explored what could have been skewed at each inflection point. Of particular interest to me is the way the scholars navigate their own subjectivities, religious beliefs, and positionalities, as expressed in their writing style.

If I were to continue this study, I would dive deeper into the human-nature relationship. Is there a productive (i.e. leading to the healing of humans and/or the environment) way to "use" these unearthed embedded ecologies in a non-exploitative, non-appropriative way? How does belief in an earth goddess influence people's attitudes toward the project of environmentalism? How has the influence of Western environmentalism on religious studies scholarship created problematic projections of idealized relationships with the environment in Hinduism and other non-Western religions? How can global environmental efforts encourage environmentalism in the context of individual societies' orientations toward the environment? How do we begin to heal the damage that the severance of human and nature is doing to the earth? How do we heal our individual relationship with nature? How do we heal our collective relationship with nature?

I will continue to explore these questions for the rest of my life. I believe the way I must approach these existential, timely questions is through the means I have. I love teaching and have experience working with children. Beliefs about yourself and the world around you began to form when you were a child. Adults are generally less willing to make major ideological shifts, therefore there is little likelihood of changing the attitude toward nature of the general public—or, critically, the people in power. I believe that learning a multitude of ways of conceiving of nature will naturally lead to healthier relationships between humans and nature, beginning in childhood. If children were presented with the belief that a river *is* a goddess, that animals and plants are our relatives, that ancestral spirits inhabit mountains, they could form their own conclusions about how to relate to nature. This sounds romantic. Perhaps it is. The relationship between humans and nature is a romance, if not one of deep friendship. Love, reciprocity, and generosity, I believe, are still innate to us.

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