Localizing Environmental Ethics

Religio-social Constructions of the Environment at the Ganges River

A Thesis submitted to the
Saint Mary's University, Halifax, Nova Scotia

In Partial Fulfillment of the Requirements for
the Degree of Master of Arts in Theology and Religious Studies

December, 2013, Halifax, Nova Scotia

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Date: December 11, 2013

ACKNOWLEDGEMENTS

Firstly, I would like to thank my advisor, Dr. Anne Marie Dalton, who continues to inspire me. I surely could not have completed this project without your constant guidance, patience, support, and encouragement. Thank you for sparking my interest in religion and ecology, and for sharing your knowledge and passion of this topic with me. You are a woman I both admire, and look up to.

I must extend my sincere gratitude to Dr. Mary Hale, my external examiner for this project, who has always been a friendly face and a voice of encouragement when I was feeling discouraged and to my reader, Dr. Thomas Parkhill, for taking an interest in this project, sharing you knowledge, and for personally making the journey to Halifax to show your support.

I would not be here without the support and encouragement of my family. I would especially like to thank my Mom and Dad, who have believed in my since I was a little girl and who have always taken an interest in everything that I do.

I would also like to thank the entire faculty of the Religious Studies Department at Saint Mary's University. Our department has an amazing group of professors, each of whom is both extremely knowledgeable and welcoming, and who has been a mentor to me in some way. It is a wonderful thing to be able to walk into the department, have everyone know you and greet you, and feel comfortable seeking advice from any one of them. I have never been turned away from seeking academic guidance, encouragement, or a friendly chat. I would like to extend this gratitude to the other students in the department, many of whom have become my good friends over the years. I have learned a great deal from each of you, and have made many good memories. This department has truly been my second home during my time at SMU.

Finally, I want to thank my friends, without whom this thesis would have been completed much sooner. I thank you for helping me to maintain a balance between work and life, and also for upsetting that balance from time to time when you felt I needed it. You have truly made these years memorable.

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By Lori-Anne Corkum

ABSTRACT

This study engages the conversations between religion and ecology, and contributes two points to this conversation. Firstly, that the environment is as much constructed as it is apprehended, and religio-social understandings influence interactions with the environment. Secondly, environmental concerns are best addressed within their local contexts. These points are examined against the situation of the Ganges River in India. This study works primarily with academic texts, science-based reports, government reports, news articles, and other media in an attempt to recover and reengage topics such as pollution, purity, and womanhood to speak to the ecological crisis. Theories of constructivism are applied to environmental issues. The Ganges is employed as a case study that is used to illustrate a specific instance where environmental constructions have an important impact upon environmental concerns. Religio-social constructions of the Ganges are engaged as an example of the influence of these constructs on environmental issues.

Submitted December 11th, 2013

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INTRODUCTION

The last thirty years have witnessed an exponential increase in popular and academic interest in the relationships between religion, ecology, and environmentalism[1]. A growing number of scholars, environmental activists, development groups, religious critics and devout are recognizing the important influences of worldview upon individual and cultural approaches to the environment. As indicated by Dwivedi in her article discussing the relationship between religion and ecology:

> During the past three decades, it has been amply demonstrated that if environmental problems are to be solved, then a change in the way that individuals think about and interact with nature must occur. It is for this reason that a society's cultural and spiritual underpinnings of environmental stewardship can be a solid source of strength as well as benefit to that society[2]

The religion and ecology conversation was born of this recognition, and an appreciation for the role played by religion in the development of worldview and ecological perspective.

This study will contribute two points to this conversation. Firstly, I will illustrate that spiritual and social understandings impact our interactions with the environment. This will provide the foundation for the second contribution to be made here, that ecological issues are best understood within their local contexts; hence environmental concerns are

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[1] Gottlieb, R. S. (2006). Introduction: Religion and Ecology - What is the connection and Why Does it Matter? In R. S. Gottlieb (Ed.), *The Oxford Handbook of Religion and Ecology* New York: Oxford University Press, (pp. 3-21).

[2] Dwivedi, O. (2006). Hindu Religion and Environmental Well-Being. In R. S. Gottlieb (Ed.), *The Oxford Handbook of Religion and Ecology* (pp. 160-183). New York: Oxford University Press. P 161

best addressed within those contexts. These points will be examined against the situation of the Ganges River in India, which is used to provide a lived context to the theoretical groundwork to be discussed here. The context of the Ganges River provides an obvious example of religion impacting constructions of the environment.

It is often extremely difficult in any context to define religion as a completely separate entity from society and culture. The relationship between religious, social, and cultural factors is often so integrated that an attempt to separate them would lose part of the picture. Hinduism, in particular, is such an integrated part of life along the Ganges River that it would not be beneficial to attempt to tease out religious factors from social factors. It is for this reason that I will work with the religio-social constructs of the environment, recognizing the relationship between these influences to create a larger lived context.

This study looks specifically at the government sponsored initiatives to address the pollution levels in the Ganges, examining the ways in which these projects pushed against the religio-social context of the Ganges and how this contributed to their perceived failure. This will provide the foundation for the second contribution to be made here, that ecological issues are best understood within their broader contexts; hence environmental concerns are best addressed within those contexts. I will be arguing the religio-social influences impact environmental concerns, but that these influences are not inherently beneficial or detrimental. Rather, that it is important to recognize the impact of these influences, and that environmental concerns are best addressed while working with these influences instead of pushing against them.

This study applies theories of constructivism against environmental issues. The Ganges is also employed as a case study that is used to illustrate a specific instance where environmental constructions have an important impact upon environmental concerns, and provides a lived context for the theoretical arguments made here. This study works primarily with academic texts and science-based reports, as well as government reports, religious texts, news articles, and other media in an attempt to recover, reinterpret, and reengage topics such as pollution, purity, and womanhood to speak to the ecological crisis. This reengaging and reinterpreting of religious concepts in light of modern problems, in this case the environmental crisis, has been taking place throughout the religion and ecology discussion and reflects the methodologies of modern and post-modern feminists and liberation theologians who were similarly concerned about the impacts of religious truths in the modern context.

Chapter one works with the arguments of social constructivism and environmental issues, to establish that the environment is constructed through religio-social understandings that have a significant impact on environmental concerns. It begins with a brief history of the conversation pertaining to religion and environmental issues, and a review of the current literature. This is followed by a review of the social constructivism theories, and an examination of the constructivist positions. Also explored is the use of language and symbol in the construction of place, and an examination of how these constructions influence our interactions with nature.

Chapter Two introduces the Ganges River in India as a case study, indicating the current environmental situation of the Ganges. This section begins with a survey of the Ganges River, its geography and pollution levels. This is followed by an overview of the attempts

made by the Indian government to address the environmental degradation of the Ganges, and address pollution levels.

Chapter Three examines how religio-social factors in India have influenced the ecological situation of the Ganges. Religio-social elements of the river are examined against the Government sponsored projects, to indicate areas of conflict between the approach of these projects, and the religio-social context of the River. This section illustrates the type of difficulties that are encountered when environmental approaches push against religio-social concerns.

The concluding chapter will draw together these discussions as indications that spiritual and social understandings impact our interactions with the environment, ecological issues are best understood within their social and religious contexts, and environmental concerns are best addressed when the approach works with these contexts rather than against them. This is why I believe that 'imported' methods and attempts to clean up the river have led to feelings of mistrust and failure. I will illustrate the Ganges River as an indication that ecological issues are best understood within their broader religio-social contexts because the environment and our interactions with it are socially constructed. The perceived failure of the government programs was the result of its attempt to push against the religio-social influences, rather than to work within them. Emphasis is given here to the fact that religio-social contexts are not indicated to be inherently dangerous or beneficial to the environment, nor are they static. It is because context is fluid, and traditions and worldviews reinterpreted, that we are able to work with them to develop a beneficial environmental ethic. It is only by operating within these constructions that a

genuine Hindu environmental ethic can be proposed or developed. Otherwise it will fail to be realized as it will not resonate with the lived reality of the rivers.

CHAPTER ONE

Religion and the Environment

It is now widely accepted across the globe that humanity is facing an ecological crisis. As John Cort has written, this crisis is the direct result of human actions, occurring as "the net result of centuries of human impact – and in particular, of the past several centuries of rapid population and economic growth"[3]. Over-population, over-production, over-consumption, pollution, and destruction and depletion of natural resources have all resulted in and continue to exacerbate the global environmental crisis. Over the last several decades this crisis has gained increasing attention from the media, scholars, religious groups, governments, and NGOs. As the global climate shifts, glaciers are melting, resources are diminishing, species are dropping at an alarming rate, and entire ecosystems are in danger. Now, more people are questioning the sustainability of current practices and the viability of the human species is recognized as being at risk. These concerns gave rise to a conversation about humanity's relationship with the environment, and a push for more sustainable practices.

Ecological discussion and debate has given emphasis to the role to be played by science and technology. Scholars, corporations, politicians, and environmentalists frequently turn to scientific studies and methods to demonstrate that a) we are experiencing a global ecological crisis, and b) the solution lies in scientific and technological advancement. In his popular book "An Inconvenient Truth; the planetary emergency of global warming and what we can do about it", Al Gore promotes this approach to the environmental

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[3] Cort, John E. "Green Jainism? Notes and Queries toward a Possible Jain Environmental Ethic." Chapple, Christopher Key. Jainism and Ecology; Nonviolence in the web of life. Cambridge: Harvard University Press, 2002. 63-94. Page 63

crisis. Gore suggests that we already have the solutions, the tools needed to save our planet and ourselves, pointing to solar panels, hybrid vehicles, and other supposedly 'green' technologies[4]. This approach supported by Gore and others assumes that human ingenuity and technological advancement can discover a solution to the ecological crisis; they assume a way in which humanity, and the notion of progress, will continue in the present fashion and humanity will not have to worry about environmental degradation. There is value to be found in this approach, and it has brought important changes such as those cited in Gore's book.

However, in the nineteen sixties and seventies, authors such as Thomas Berry and Rosemary Radford Ruether began to challenge the assumption that the approach much of humanity was taking towards the environment, and towards the environmental crisis, was viable or sustainable; they questioned whether a solution could be found solely through scientific or technological advancement. Over the decades more and more writers, scholars, and organizations also began asking questions about the causes of the environmental crisis, such as the perspectives, motivations, behaviors and assumptions that got us here in the first place. Lawrence Sullivan, for example, points out that the dominant technological approach left unexplored sources of motivation and concern, and inhibited the environmental movement from achieving its goals[5]. If humanity were to fail to address the causes of environmental problems, if our attitudes and approaches to the environment continued unchanged, the problem would persist. Science and technology may find stop-gap solutions or innovative detours around current issues, but the

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[4] Gore, Al. An Inconvenient Truth; the planetary emergency of global warming and what we can do about it. New York: Rodale, 2006.
[5] Sullivan, Lawrence E. "Preface." Chapple, Christopher Key. Jainism and Ecology; nonviolence in the web of life. Cambridge: Harvard University Press, 2002. ix-xii.

underlying and fundamental problem would continue. New issues would then arise, demanding further advancement and innovation, in an ongoing process.

As mentioned above, we have seen an increasing effort in the last thirty years to address religious understandings of the natural environment and to renegotiate and reevaluate the ways in which these worldviews can offer to threaten or sustain the environment. A growing number of scholars, secular institutions, and religious groups alike are acknowledging the connections between worldview and our engagement with the environment. There is increased recognition that the way we perceive the environment influences the ways in which we interact with the environment, and that these interactions in part shape our environment. These connections become increasingly significant in light of the ecological crisis.

For billions of people across the globe, religion contributes significantly to the structure and foundation of their worldview, helping to cultivate an understanding of the environment and humanity's relationship to it. Thomas Berry, a cultural historian, was among the first scholars to seriously consider the significance of the potential of religion for helping to find a solution to the ecological crisis. He noted that the Earth has not been as drastically devastated by humans as it has during the modern period in the West[6]. Berry identified the roots of the ecological crisis to be a cultural problem, a fundamental flaw in the relationship between humanity and the environment[7]. Berry was influenced by a group of scholars who developed a counter-Enlightenment movement, which began to

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[6] The term "The West" is problematic. When Berry wrote of the West he was referring to what is now referred to as the developed nations, the Global North, or the One-Third World in current scholarship.
[7] Dalton, A. M. (1999). A Theology for the Earth; the Contributions of Thomas Berry and Bernard Lonergan. Ottawa: University of Ottawa Press

question the values and motives held in Western science and concreted in social

consciousness during the Enlightenment[8]. Rather than obtaining value from its potential

for human gain, Ecologists such as Donald Worster[9], Holmes Rolston[10], and Baird

Callicott[11] began to argue for the recognition of the inherent value of nature. The myth of

progress, which dominated the social consciousness, was brought in to question, as was

the attitude of conquering nature.

Daniel Maguire and Larry Rasmussen captured the essence of this movement when they

wrote "We have to redo humanity to survive. If current trends continue, we will not.

Cleverness will not save us. Cleverness has brought us to our knees. Wisdom is our need

and the heart of wisdom is awe. Ethics is awe's strategy"[12]. Instead of using technology

and scientific cleverness to "save" ourselves from a damaged ecology, authors such as

Berry, Maguire, and Rasmussen saw the need to alter the global environmental

imagination in to one that fosters a sustainable future. The interdependence between

humanity and the environment was at the forefront of this movement, and the need to

change our thinking about how humanity fits into, and not outside of, the ecological

framework. Recognizing the potential impact of religion for the help or harm of the

environment, the voice of religion in the environmental conversation became louder as

religious groups joined the conversation and began looking within themselves, reflecting

on and reinterpreting traditional teachings in light of the ecological crisis.

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[8] Ibid.

[9] Worster, D. (1980) "The Intrinsic Value of Nature" Environmental Review, 4, 43-59

[10] Rolston, H. (1986). Philosophy Gone Wild: Essays in Environmental Ethics. Amherst, NY: Prometheus

[11] Callicott, B (1989). *In Defense of the Land Ethic: Essays in Environmental Philosophy*. Albany, NY: State University Press of New York Press

[12] Maguire, D. C., & Rasmussen, L. L. (1998). Ethics for a Small Planet; New Horizons on Population, Consumption, and Ecology. Albany: State University of New York Press. P.48

This self-reflection and reinterpretation of religious traditions was prompted in part by critiques and criticisms of religious ideology, in particular that of Christianity, to the environmental crisis. In 1967 Lynn White offered an argument for the effects of cultural notions of the human-nature relationship upon the environment in his well-known critique of the roots of the ecological crisis, in which he held Christianity accountable[13]. White argued that the pervading Christian culture allowed for advancements in technology, urbanism and a pervading attitude of dominance over nature beginning in the 19th century allowed for environmental destruction, and notes that human impacts on their environment increased dramatically during this time. White cites Christianity as the most anthropocentric religion, and claims that the destruction of pagan animistic beliefs led to a mood of indifference to nature and natural objects. By removing the inherent sacredness of nature previously held to exist independent of humanity the exploitation of nature was made possible. Christian understandings insisted that this creation was made by God explicitly for man's benefit and rule.

White's critique was met with criticism and response from writers from Christian and other religious traditions. Thomas Derr responded by asking:

> Even if Christian doctrine has produced technological culture and its
> environmental troubles, one would be at a loss to understand the absence of
> the same result in equally Christian Eastern Europe. And conversely, if
> ecological disaster is a particularly Christian habit, how can one explain the
> disasters non-Christian cultures have visited upon their environment?[14]

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[13] White, L. (1967). "The Historical Roots of our Ecologic Crisis". Science, 155, 1203-120
[14] Thomas S. Derr, "Religions Responsibility for the Ecological Crisis: An Argument Run Amok", World View 18 (1975): p.43

Derr's Critique of White's argument illustrates an important notion: environmental perspectives and issues are highly localized conversations between religion, culture, and individual environments. White responded to this criticism, noting that he is speaking to the roots of "Our" environmental crisis in the West. He elaborated by saying that the context in which Christianity arose in the West made the implications particularly strong here, and commented that the attitude which he outlined as having resulted in the exploitation of nature is no longer strictly connected to Christianity but has become ingrained as part of Western culture. Further, White did not call for the abandonment of Christianity, nor did he propose a solution from outside of the Christian (or Western) context. White contended that individualized activisms, or seeking a return to a romanticized past, are insufficient to solve the ecological problem. He saw that it was necessary to reconsider the current and historical axiom, and urged for a conscious rethinking of the notions that led to an indifference towards nature, an alternate Christian view. Cantrill & Oravec similarly insisted that "the only hope we have of ever preserving our environment is collectively to understand and alter the fundamental ways we discuss what we continually re-create"[15]. To change our ecological situation, we need to change the way we talk about, understand, and construct our environment and our place in it, in a way that still makes sense to us.

A similar reevaluation of religious concepts in light of the environmental crisis has taken place in other traditions including Buddhism, Islam, and Hinduism. Christopher Chapple explores how Hindu understandings of the relationship between the body, divinity and the world, and ritual activities foster an intimacy with nature. Similarly, Marvin Harris

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[15] Cantrill, J. G., & Oravec, C. L. (1996). Introduction. In J. G. Cantrill, & C. L. Oravec (Eds), The Symbolic Earth (pp. 1-5). Lexington: University Press of Kentucky; p.2

defends the Hindu veneration of sacred cows, and assesses the positive ecological

implications of this practice[16]. Scholars from inside and outside of the Hindu tradition

take the position in defense of Hinduism as an inherently ecologically friendly tradition,

while accusing globalization, modernization and the influx of technology of causing a

deviation from historical, ecological roots. T. S Rukmani writes that "Ideally, in

Hinduism, life is regulated by the notion of dharma, a concept which is overriding and

which governs all aspects of life and which is basically a friendly, ecological approach

to nature"[17]. O.P Dwivedi asserts that "there is no doubt" that Hinduism has a pre-

existing environmental ethic, which was lived in ancient and medieval times by all

Hindus from kings to commoners[18]. He attributes the decline of Hindu

environmentalism, and the detriment of the Indian environment, to the influx of alien

cultures and values as well as the rapid growth of industrialization and materialism in

the country.

Hinduism has also had to meet with criticisms in light of the environmental crisis.

Emma Tomalin for example, criticizes the assumption that recognition of "bio-divinity"

assumes religious environmentalism, and questions the "straightforward equation

between the recognition of bio-divinity and a concern for environmental

sustainability"[19]. Lance Nelson consents to this opinion, adding that sacralizing nature

may provide the impetus to protect it, or it may itself serve as a deterrent of

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[16] Harris, M. (1974). Cows, Pigs, Wars, and Witches. Random House, Inc.

[17] Rukmani, T. (2000). Literary Foundations for an Ecological Aesthetic: Dharma, Ayurveda, the Arts, and Abhijnanasakuntalam. In C. K. Chapple, & M. E. Tucker (Eds.), Hinduism and Ecology (pp. 101-125). Cambridge: Harvard University Press. P.102

[18] Dwivedi, O. P. (2000). Dharmic Ecology. In C. K. Chapple, & M. E. Tucker (Eds.), Hinduism and Ecology (pp. 3-22). Cambridge: Harvard University Press. P.18

[19] Tomalin, E. (2004). Bio-Divinity and Biodiversity: Perspectives on Religion and Environmental Conservation in India. *Numen*, 265-295. P. 267

environmental action[20]. The sacralization of nature may separate it from human responsibility, or control. As Tomalin indicates, when nature is sacred or divine it is no longer affected by profane acts. This idea is explored later, when we will examine the relationship between ritual purity and pollution as it relates to the Ganges.

Nonetheless, Derr poses a valid question when he asks how we are to explain the roots of *their* ecological crises; how do we understand the ecological crisis in non-Christian, or non-western cultures? I contend that the roots of the ecological crisis in any locale can only be understood within the context in which it arises. Similarly, viable solutions to particular ecological problems can only arise from the context in which the problem exists. The context used in this study to situate the theoretical discussion is the Ganges River in India.

Religio-social Construction of the Environment

I must demonstrate firstly that the way individuals and societies think about and understand their environment is significant to ecological issues, and secondly that it is possible to work within these contexts to enact environmental change. This study is set against the backdrop of the Ganges River in India, which later situates this theoretical position in a lived reality by exploring the interactions between Hinduism and the environment. The present discussion is largely theoretical and explores the first of the above assertions, to establish that religious and social understandings impact interactions

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[20] Nelson, L. E. (1998). Conclusion. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 331-344). Albany: State University of New York Press.

with the environment in a significant way. It begins with a look at the constructed nature of reality and the environment before moving towards an examination of how these constructions influence our interactions with nature and help to physically shape the environment.

Realism assumes the existence of a distinct reality that exists independent of the observer. This view is dualistic in its approach to the human-nature relationship, and suggests a stark separation between humans and an external environment; nature is presumed to exist independent of, and separate from, humanity. Further, realist positions assert that this external reality is objectively quantifiable and knowable. The scientist, the observer, is removed from that which is observed and the knowledge acquired from such observation is acknowledged to be separate and unique, distinct from the observer. Any individual, in any context, should expect the same observed knowledge as the knowledge comes from the external source and exists independent of the observer.

The Enlightenment ushered in an era when realism and objectivity were romanticized, and this attitude dominated Western science and academia, having been raised up as the dominant idea about the nature of reality and remaining largely unquestioned in the biological and physical sciences for several decades[21]. Ian Simmons summarized this view stating that "the present power of pure science has come from its representation of **consensual** knowledge: statements are tested and agreed independently of any personal characteristics of the observer", adding that as a result "science has a reputation for producing knowledge of an altogether different quality from any other methodology.

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[21] Proctor, J. D. (2004). Resolving Multiple Visions of Nature, Science, and Religion. *Zygon; Journal of Religion and Science* , 637-657

Indeed it has been elevated by some of its practitioners to the heights of being the only knowledge worth having"[22]. This Realist perspective assumes the existence of a distinct reality that exists separate from the individual and humanity. This is dualistic in its approach to the human-nature relationship, and suggests a stark separation between humans, or the mind, and a distinct and independent environment.

The dominance of this position does not entitle it to freedom from criticism. In contrast to certain affirmations of realism, constructivist arguments challenge such extreme separation between reality and the observer. These positions criticize the realists for denying the human component of understanding, the way in which our thoughts, actions, and the mere act of observation influence the nature of reality. The constructivist position suggests that reality is at least in part subjective, and constructed in the mind of the observer. One of the primary criticisms to this approach is the risk of complete relativism. From the realist position knowledge and meaning are ascribed based upon a reference to an external world, suggesting a relationship between understanding and truth or fact. Or at least the potential for this relationship exists. The constructivist position however, is argued to lack this external reference point. Instead there are a multitude of individual reference points. Human knowledge and understanding is ascribed with reference only to the mind and other pre-existing systems of meaning, or a pre-existing understanding.[23] There is no opportunity for a relationship between human understanding and an independently existing truth. To this end all meaning arguably becomes purely relative and speculative.

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[22] Simmons, I. G. (1993). *Interpreting Nature; Cultural Constructions of the Environemtn.* New York: Routledge; 18
[23] Dilley, R. (1999). Introduction: The Problem of Context. In R. Dilley (Ed.), *The Problem of Context* (pp. 1-46). New York: Berghahn Books

This criticism against the constructivist stance relies upon the denial of the existence of an external reality, or the absence of an external reference or truth. At its extreme end some constructivist arguments do contend that reality is entirely subjective and does not exist outside of human mind. The act of observation arguably creates reality and without this act reality ceases to exist, or ceases to exist in the same state. To this end the act of observation creates or stabilizes reality. Simmons states that from this position, "what we call 'environment' only exists in the human mind; it is an artifact of mental processes and therefore is quite inseparable from the human"[24].

However, there are a variety of perspectives within the constructivist viewpoint, not all of which make such an extreme claim. A more moderate constructionist position might accept the existence of an external reality, while maintaining that any knowledge we can posses about this reality is shaped through human experience and understood in the mind. The external reference point exists as an anchor for truth, but our ability to secure an understanding of this reality is limited and shaped by our mind. Reality, or the environment, exists separate from and outside of the human mind, but not entirely independent of it. It is known, shaped, and altered through human understanding and interactions. The way humans understand their environment, and their interactions with it, are determined with reference to pre-existing systems of meaning. As William Cronan argues, to say that the environment is socially constructed "is not to say that the nonhuman world is somehow unreal or a mere figment of our imaginations – far from it. But the way that we describe and understand that world is so entangled with our own

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[24] ibid; 1

values that the two can never be fully separated"[25]. Anne Spirn affirms this position, and insists that while humans construct their environment, it is necessary to also recognize and respect the autonomy of the nonhuman world. She warns that

> To deny the dynamic reality of the nonhuman world is also misleading and potentially destructive. Rain, rivers, mountains, trees, and birds are not just figments of human imagination; they *exist*. We perceive them only through our own human senses, refer to them by names we have given them, and employ them to tell our own stories, but they also have an existence outside that which *we* grant them. Failure to appreciate the dynamic, autonomous role of nonhuman features and phenomena promotes the illusion that humans can construct and control everything[26].

At their extremes, the positions of realism and constructivism are necessarily exclusive and in contradiction to one another due to their opposing opinions on the existing of an external reference point. Nevertheless, I have demonstrated that constructivist positions do not necessarily deny the existence of an external reference. If one avoids speaking in absolute terms and accepts a more moderate position, a dualistic separation of these two positions is unnecessary. As James Proctor writes, it is possible to interpret the constructivist argument as making an epistemological assertion, and not a metaphysical or ontological one, arguing that

> Constructivism (also called social constructivism or constructionism) is not, as its detractors charge, a metaphysical position that reality only exists in the

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[25] Cronon, W. (1996). Introduction; In Search of Nature. In W. Cronon (Ed.), *Uncommon Ground; Rethinking the Human Place in Nature* (pp. 23-68). New York: W.W. Norton & Company; 25.

[26] Spirn, A. W. (1996). Constructing Nature: The legacy of Frederick Law Olmsted. In W. Cronon (Ed.), *Uncommon Ground; Rethinking the Human Place in Nature* (pp. 91-113). New York: W. W. Norton & Company; 112

form of ideas in our heads, but rather an epistemological position asserting
that there is no other way to make sense of this reality than by invoking ideas,
and that these ideas have a significant though generally overlooked human
(cultural, political, and so forth) dimension to them.[27].

Proctor's position does not deny the existence of an independent environment, but states

that our access to nature, and our knowledge of it, is socially prescribed. Ian Simmons

also asserts that we should "accept that there is indeed a 'real' cosmos but that we are too

limited to comprehend its true nature"[28], later adding that:

> A modified realism appeals: that the cosmos exists in its own terms. Humans
> cannot know what it is like because of our perceptual inadequacies, even with
> science and technology to help us. The models we thus construct are
> imperfect and provisional[29].

A hybridization of these two positions is both possible and favorable. We have

seen that some constructivists even insist upon the existence of an autonomous

nonhuman environment.

The mental processes through which the environment is understood create the context in

which the external environment is known. Simmons illustrates the impact of these mental

processes using a technological metaphor, describing that "the mind is not an empty

computer memory in which observations can simply be stored but has of necessity a pre-

existing program which sorts and orders the observations"[30]. This stance does not deny

the existence of an external world or reference point, nor does it insist that the

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[27] Proctor, J. D. (2001). Nature, Concepts of: Environmental and Ecological. *International Encyclopedia of the Social and Behavioral Sciences* , 10399
[28] Simmons, I. G. (1993). *Interpreting Nature; Cultural Constructions of the Environment.* New York: Routledge; 3
[29] ibid; 160
[30] ibid; 19

environment is entirely unknowable. It claims merely that our knowledge of reality is an artifact of mental processes. It is impossible to know reality in a truly objective manner, as all knowledge is understood in the human mind and shaped by subjective experiences. This modified realism[31] described by Simmons and others will be the position from which I will establish that ecological issues are best understood by taking in to account their religious and social contexts.

Roy Dilley raises questions about the context for the construction of these systems of meaning attribution and narratives. Returning to the above metaphor, he ponders the creation of the computer software; the context in which the reference is created. He argues that it is fair to say that this context is at least in part created in, and with reference to, the external world in which it forms. Assuming the natural environment exists independent of humanity and human meaning, it provides a foundation for the development of human meaning systems. Bruno Latour affirms this idea, stating in his book *Politics of Nature*:

> There is the human history of nature on the one hand, and on the other, the natural nonhistory of nature, made up of electrons, particles, raw, causal, objective things, completely indifferent to the first list. Even if, through work, knowledge, and ecological transformations, human history can modify nature in a lasting way, can disturb, transform, and perform it, the fact remains that

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[31] The approach employed in this study, which Simmons refers to as a "modified realism" is equivalent to the critical realist position, as described by Philosopher Roy Bhaskar. And Theologian Bernard Lonergan. See;

    I.   Archer, M; Bhaskar, R; Collier, A; Lawson, T; and Norrie, A (Eds). (1998). *Critical Realism; Essential Readings*. New York, NY. Routledge

    II.   Lonergan, B (1972) *Method in Theology*. Minneapolis, MN. The Seabury Press

there are two histories, or rather one history full of sound and fury that unfolds *within a framework* that itself has no history, or creates no history.[32]

In this way the environment itself acts as an external reference point, an anchor for knowledge, shared by a group of individuals. As discussed below, the way the environment is understood by individuals greatly impacts the way in which they interact with, and shape, their environment. This in turn has a significant physical impact upon the external environment. As such, the natural environment and the human systems of meaning are in negotiation with each other[33].

This context in which we shape our knowledge of the environment is influenced by social influences as well as physical surroundings, which together impact individual and societal understandings and experiences. To this end, it can be said that we occupy not only a physical, ecological environment, but a psychological one as well, one that is as much constructed as it is apprehended[34]. While we can obtain some quasi-objective consensus, or generally applicable, knowledge about a particular environmental situation by attempting to look at its independent qualities, the more complete picture is gained when that knowledge is situated within the social context of that particular environment.

While maintaining the constructivist position that meaning is attributed with reference to mental processes, to the context in which it arises, these mental processes are themselves developed in the context of the external environment, an environment which has the

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[32] Latour, B. (2004). *Politics of Nature; how to bring the sciences into democracy.* Cambridge: Harvard University Press.

[33] Dilley, R. (1999). Introduction: The Problem of Context. In R. Dilley (Ed.), *The Problem of Context* (pp. 1-46). New York: Berghahn Books

[34] The Regents of the University of California. (2003). *Nature as Culture*. Retrieved September 2011, from Visions of Nature:
http://www.newvisions.ucsb.edu/visions/nature_as_culture/index.html

potential to exist independently of human understanding and influence. In this way meaning is accountable to both the human system of meaning and the external world.

One of the most significant ways in which our knowledge of reality, and consequently the environment, is socially transferred is through language and communication. Donal Carbaugh observes that "communication occurs in places, cultivates intelligent senses of those places, and thus naturally guides natural ways of living within them"[35]. Again we can see the negotiation between the external environment and human meaning taking place. Carbaugh continues to describe humans as symbol-using creatures who sustain what is understood as reality through this act of communication. The way people talk to one another within and about a given environment determines and reinforces the accepted notions of that environment. In this way the environment is both captured and confined in the mind by this communication, and nature becomes a social creation. Communication also influences the human-environment relationship and establishes the accepted ways to use and interact with one's environment. By communicating with one another, people cultivate ideas of what constitutes the environment and natural ways of acting and living within it. This process normalizes ideas and perceptions about the environment in which they live.

Carbaugh describes how particular communicative forms, such as place-names, evoke a particular set of depictive, social, and cultural understandings. When someone uses a particular place-name or other communicative form, it draws upon a particular image of

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[35] Carbaugh, D. (1996). Naturalizing Communication and Culture. In J. G. Cantrill, & C. L. Oravec (Eds.), *The Symbolic Earth; Discourse and Our Creation of the Environment* (pp. 38-57). Lexington: University Press of Kentucky; 38.

what is being described, the physical reference point. Carbaugh describes this as the depictive aspect of communication. The social dimension is evoked based upon the context of the communication – who is communicating to whom, where, in what manner, and for what purpose. Finally, a cultural understanding is evoked, a held consensus of the ethos of what is being described, its place as part of a larger symbolic system, and a notion of what that place should or should not be.[36]

Of the three types of understanding Carbaugh describes as being evoked by communicative forms, it is the impact of cultural aspects of communication on motivations and actions related to the environment that this thesis is concerned with. Cultural aspects describe and determine the role of a particular place or environmental feature in the lives of individuals in a society. They also develop a sense of appropriate behaviors towards, and interactions with, said location. The ways people envision themselves in relation to their environment, their role in environmental preservation, and what the environment should or should not be are largely influenced by this dimension. As we will explore in more detail in a later section of this discussion, to speak of the Ganges in India evokes much more than the depictive aspect, the physical image of the river. Lance E. Nelson also draws upon the Indian example to indicate that environments are more than their physical existence. Nelson points out that in India people think about the environment with "a kind of bilevel or even multilevel cognition, under which things like rivers and mountains, as also the earth in front of one's own home, are perceived in different ways – sacred and mundane, pure and impure- successively or even

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[36] ibid

simultaneously, without dissonance"[37]. In addition to the image of the river, The Ganges also brings up images of divinity in connection with the mythology of the Ganges and her place in a larger mythology and symbolic system. There is a particular way in which one understands their relationship to the Ganges, and how they are expected to interact with her. The river, like many other features of any environment, occupies both a physical and cultural landscape. The location and purpose of the communication, as well the relationship between those communicating, indicates the social aspect.

One important communicative form that possesses a significant cultural dimension is symbols. Symbols are a communicative form by which something is collectively, or culturally, understood to represent or stand for something else. Further, symbols evoke meanings that are situated within a larger system of cultural meanings, codes, and practices. Anthropologist Victor Turner described that the ways in which individuals of a society use and interpret symbols rely upon two distinct poles of meaning, one based upon the physical world and the other based in the social and moral values of the context in which they are found[38]. Carbaugh claims that symbols, perhaps more than any other communicative form, "are significant only within natural environments and larger systems of practices, within physical places and the clusters of symbols, contrastive agons, and mediating terms used there"[39]. Symbols exist as part of a natural environment,

[37] Nelson, L. E. (1998). Conclusion. In L. E. Nelson (Ed.), *Purifying the Earthly Body of God; Religion and Ecology in Hindu India* (pp. 331-344). New York: State University of New York Press; 332.

[38] Turner, V. (1967). *Forest of Symbols; aspects of Ndembu Ritual.* Ithaca: Cornell University Press

[39] Carbaugh, D. (1996). Naturalizing Communication and Culture. In J. G. Cantrill, & C. L. Oravec (Eds.), *The Symbolic Earth; Discourse and Our Creation of the Environment* (pp. 38-57). Lexington: University Press of Kentucky; 45.

and larger network of symbols, meanings, and relationships and rely upon these networks for meaning. They are therefore best understood in relationship to these networks.

The communication of ideas, symbols, and meanings come together to create the stories, or narratives, describing the shared cultural experiences of the environment. The symbols themselves help to create the narratives on which they rely for meaning. Narratives situate the ideas, symbols and meanings being communicated, in a co-dependent and circular relationship. As Jerome Bruner indicates, narratives are written according to the rules of the culture, but also shape and determine those rules in a collective negotiation between the culture and the narratives which accrue to "create something variously called a 'culture' or a 'history'"[40]. While these narratives reference the external environment, and are anchored to it, they are also humanly constructed as William Cronan stresses:

> We must never forget that these stories are ours, not nature's. The natural world does not organize itself into parables. Only people do that, because this is our particularly human method for making the world make sense. And because people differ in their beliefs, because their visions of the true, the good, and the beautiful are not always the same, they inevitably differ as well in their understanding of what nature means and how it should be used-because nature is so often the place where we go searching for the fulfillment of our desires.[41]

One important implication of this for the purposes of this study is that the environment is communicated, symbolized, and understood locally. This communication can occur differently and in different ways in different places. Narratives are best understood

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[40] Bruner, J. (1991). The Narrative Construction of Reality. *Critical Inquiry, 18*(1), 1-21; 18
[41] Cronon, W. (1996). Introduction; In Search of Nature. In W. Cronon (Ed.), *Uncommon Ground; Rethinking the Human Place in Nature* (pp. 23-68). New York: W.W. Norton & Company; 50-51.

according to local use and understanding much in the way we learn to use language and tools. Brown, Collins and Duguid stress the importance of situated understanding in their article "Situated Cognition and the Culture of Learning". They argue that knowledge must be situated and understood in the context and culture that creates and uses it, pointing out that the abstraction of knowledge- removing it from its context- perpetuates an incomplete understanding[42]. The authors substantiate their claim by pointing out that the process through which one learns to properly use a word involves significantly more than can be obtained through a definition, and requires information derived from context and situations particular to each community and their way of seeing the world. They demonstrate this argument using the analogy of a tool, stating that a tool's use is determined as much by the community using the tool as by the tool itself. Someone from outside the culture may come across the tool and be able to understand its properties or use to some degree, but full knowledge can only be obtained through its context and use. "The culture and use of a tool act together to determine the way practitioners see the world; and the way the world appears to them determines the culture's understanding of the world and of tools"[43]. The same tool may be used differently by different communities. The authors add that "It is not possible to use a tool appropriately without understanding the community or culture in which it is used"[44]. In this regard, we can look at words as the 'tools' of communicating ideas, which similarly are also constructed by

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[42] Brown, J. S., Collins, A., & Duguid, P. (1989, Jan-Feb). Situated Cognition and the Culture of Learning. Educational Researcher, 18(1), 32-42.

[43] Brown, J. S., Collins, A., & Duguid, P. (1989, Jan-Feb). Situated Cognition and the Culture of Learning. Educational Researcher, 18(1), 32-42. P. 33
[44] Ibid.

the language itself and must be understood according to their contextual use and understanding.

It is similarly risky to assume one can fully understand an environmental artifact, such as a river, based upon abstract knowledge or an application of knowledge from another locale. The environmental situation is particular to a particular community and context, and different communities will negotiate, understand, and use the environment in different ways. Therefore full knowledge of the environment can only be obtained through the sort of situated learning described by Brown et al. Some knowledge of the river may be "universal" and can be abstracted or taken from rivers in other contexts. The depictive, or physical, elements of a river may be identical across cultural, religious, and political boundaries. However, this knowledge would be incomplete as the lived reality – the cultural existence of the river and its place in human society – may be vastly different. The cultural aspects of a river, or other natural object, will be best understood in the context of larger narratives to which they belong. Religion relies heavily on symbols, and its symbols are incorporated in to the larger narratives of the environment, and peoples' relationship to it. In this manner religions and their symbols enter in to the environmental discourse.

In the nineteen eighties, psychologists began recognizing that narratives not only represent reality, but shape it.[45] Jerome Bruner describes narratives as the versions of reality whose acceptability is derived from convention: the stories, myth, excuses and reasons that are transmitted and constrained by culture that individuals use to organize

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[45] Bruner, J. (1991). The Narrative Construction of Reality. *Critical Inquiry, 18*(1), 1-21

the shared experience of reality.[46] The ways in which environment is culturally and religiously communicated and interpreted is intimately connected to how the human-nature relationship is understood. Are humans understood as separate from nature, part of nature, at the mercy of, or dominant over nature? Lynn White pointed out that "What people do about their ecology depends on what they think about themselves in relation to things around them. Human ecology is deeply conditioned by beliefs about our nature and destiny – that is, by religion."[47] This raises a second consequence of the subjectivity of human-environment experience; our interactions with the environment are determined by the way we communicate and understand our relationship to the environment.

All living things, in particular humans, alter their ecological systems through their actions, both deliberately and inadvertently. As human beings we are both shaped by, and shape, our environment. The way the human-environment relationship is understood plays a significant role in shaping individual and cultural actions towards the environment.

The human-environment relationship is often established through religious narratives. Lynn White examined the Christian narrative against the environmental crisis, indicating that a narrative which established a human dominance over nature resulted in the destruction of natural world[48]. A human community which understands itself as dominant over the environment is more likely to be comfortable with using it for its own purposes than one who interprets itself as sharing a co-dependent relationship with their environment. Emily Tomalin similarly looks at the human-environment relationship in

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[46] Ibid; pg. 4
[47] White, L. (1967). "The Historical Roots of our Ecologic Crisis". Science, 155, 1203-120; 1207
[48] White, L. (1967). "The Historical Roots of our Ecologic Crisis". Science, 155, 1203-120

Hinduism, a narrative which describes the natural world as sacred and divine, and as a result determines it to be impervious to the mundane acts of humanity.[49]

The way we think about and understand the world, our worldview, influences our motivations and our actions. Our understanding of the environment to at least some degree motivates our actions, which come to physically shape our environment. In a very physical way the natural environment is shaped through human interaction. The environment is as much physically constructed as it is mentally understood through the human experience. As William Cronan describes, "'nature' is not nearly as natural as it seems. Instead, it is a profoundly human construction"[50]

Some landscapes are more obviously physically constructed than others. Anne Whiston Spirn looks at the construction of 'natural' landscapes such as Yosemite and Niagara falls, both of which were designed and shaped by landscape designer Frederick Law Olmsted, and which are now seldom recognized as built landscapes. Both landscapes were very intentionally designed and sculpted to fit a particular idea of the environment, and what a 'natural' landscape should look like[51]. The construction of landscapes also occurs in more subtle ways. Christine Oravec illustrates this point quite well when she writes about the convention of the "sublime" and its consequences for the ways in which nature and landscapes have been conceived and interacted with in the West during the

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[49] Tomalin, E. (2004). Bio-Divinity and Biodiversity: Perspectives on Religion and Environmental Conservation in India. *Numen* , 265-295

[50] Cronon, W. (1996). Introduction; In Search of Nature. In W. Cronon (Ed.), *Uncommon Ground; Rethinking the Human Place in Nature* (pp. 23-68). New York: W.W. Norton & Company; 25.

[51] Spirn, A. W. (1996). Constructing Nature: The legacy of Frederick Law Olmsted. In W. Cronon (Ed.), *Uncommon Ground; Rethinking the Human Place in Nature* (pp. 91-113). New York: W. W. Norton & Company

eighteenth through twentieth centuries. Drawing on the works of artists, photographers, and writers who produced visual and written representations of sublime landscapes in the United States, Oravec shows how particular notions of the sublime have shaped shared preconceptions of landscapes, the emotions associated with such locations, and perhaps most importantly how we attempt to shape these locations and our experiences with them to conform to these notions. Oravec uses the poignant examples of landscape photography and environmental activism. She describes the determined photographer who strives to attain nearly impossible angles and vantage points, to obtain the perfect shot and capture the "true" depiction of the location, sometimes altering it to achieve this image (for example clearing away branches or growth).

Oravec later highlights how, as the nineteenth century wore on, previously wild land became increasingly developed and urbanized, and in turn landscape representations of the sublime became increasingly separated from actual depictions of landscapes and shifted to more *idealized* and abstract representations. These representations came to represent the idealized model for preserving the natural landscape that remained and would later be used in environmental movements and appeals to protect what remained of 'sublime' landscapes. Images, and the feelings associated with these were employed to provoke actions towards the protection and preservation of such places.

> From a rhetorical viewpoint, as well, activism requires at the minimum a shared basis of understanding and a practice that implements that understanding. Regardless of its other uses, the sublime did establish a set of beliefs about nature in the nineteenth and twentieth centuries that were then used as major premises by environmental activists to argue for the

preservation of nature. These activists exploited the tension between the presence of the sublime wilderness and its imminent destruction.[52]

Oravec's conclusion resonates with the principle argument of this chapter: the way individuals and societies think about, understand, and subsequently shape their environments is significant to ecological issues. Oravec's statement that "activism requires at the minimum a shared basis of understanding and a practice that implements that understanding"[53] illustrates the connection between cultural narrative, ecological discourse, and environmental activism that this chapter establishes. Narratives provide the shared basis of understanding of the environment necessary for environmental activism, and are transmitted and constrained by the cultural landscape. Religious narratives, such as those depicting the relationship between humanity and the natural world, are significant to environmental discourse. These narratives are constructed by repeated communication and use of cultural ideas, symbols, and notions about the environment and are responsible to specific cultural networks and shared environments. In this way, they are culturally and locally specific.

It is for this reason that ecological issues are best understood by taking in to account their religious and social contexts, and that it is only by operating within this context that a genuinely effective solution can be determined. Lance E. Nelson is therefore correct in his conclusion that "It must surely be true, then, that anyone wishing to understand the relation between religion and ecology in India, or to think or act ecologically in an authentically Hindu context, must come to grips with the mythic and sacral dimensions

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[52] Oravec, C. L. (1996). To Stand Outside Oneself: The Sublime in the Discourse of Natural Scenery. In J. G. Cantrill, & C. L. Oravec (Eds.), *The Symbolic Earth* (pp. 58-75). Lexington: the University Press of Kentucky.
[53] Ibid.

within which Hindus function – and the ecological implications thereof"[54] .The

subsequent section introduces the Ganges River in India as a case study, indicating the

current environmental situation of the Ganges followed by a brief overview of the clean-

up attempts made by the Indian government.

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[54] Nelson, L. E. (1998). Conclusion. In L. E. Nelson (Ed.), *Purifying the Earthly Body of God; Religion and Ecology in Hindu India* (pp. 331-344). Albany: State University of New York Press; 332

CHAPTER TWO

Overview of the Ganges

The Ganges begins her earthly descent high in Himalayas at the Gangotri Glacier. From there, she makes her descent down through Rishikesh, to Hardwar, and through the city of Kanpur before joining with the Yamuna at Allahabad and passing through the holy city of Varanasi. In total, her waters flow some 2500 kilometers through India, passing through 29 cities, 70 towns, and thousands of villages, before reaching the Bay of Bangal[55]. All along this journey, the Ganges meets with multiple tributaries and distributaries that influence, and are influenced by, the ecological state of the Ganges herself. Approximately 37% of India's population lives along the Ganga Basin, and more than half a billion people are estimated to be affected by the Ganges in some way.[56]

Following the Ganges 2500 km journey through eight Indian states, raw sewage and pharmaceutical waste begin to enter the river at the town of Rishikesh, located in the foothills of the Himalayas in Uttarakhand. Continuing downstream the Ganges passes by Kanpur where an additional 400 million litres daily of sewage is discharged into her waters. Additionally, tanneries in Kanpur further contribute to the pollution of the Ganges and "The chromium [from the tanneries] lends a greenish hue to the drinking water the city draws from the river. Organic wastes –hair, flesh, and other animal remains- are

[55] Sampat, P. (1996, Jul/Aug). The River Ganges' Long Decline; In the basin of a half-billion souls, purification and pollution swim together in unholy wedlock. World Watch, p26.
[56] Markandya, A., & Murty, M. (2000). Cleaning-up the Ganges a Cost-Benefit Analysis of the Ganga Action Plan. New Delhi: Oxford University Press.

thrown into the river, giving it a fetid stench".[57] Further downstream, at Allahabad, the Ganges joins with the Yamuna River.

Varanasi (sometimes known as Benares) is one of the most sacred cities along the Ganges. It is home to a great concentration of religious sites, such as its many temples and ghats, and is visited by a large number of religious pilgrims, priests, and devotees. It is also one of the most polluted regions of the river. In addition to an average of 200 million liters of raw human sewage discharged into the Ganges every day in Varanasi, large amounts of crematory ash, human and animal remains, and religious wastes also enter the river here. There are approximately forty thousand traditional Hindu funerals performed in Varanasi each year, on the banks of the Ganges, with the crematory remains then being dispersed into the river.[58] From Varanasi the Ganges enters West Bengal, where she branches in to the Hooghly and the Padma before dividing further into several branches and ultimately emptying in to the Indian Ocean.

When the Ganges begins her descent at Gangotri and Rishikesh her waters are clear and clean enough to drink. However, by the time she reaches Varanasi her waters become polluted, discoloured, foul smelling and unfit for drinking or bathing.[59] By this point the Ganges is one of the most polluted rivers in the world. Despite international interest in cleaning this sacred river, and numerous attempts to address the pollution in the Ganges – including the large government sponsored Ganga Action Plan, human and animal

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[57] Sampat, P. (1996, Jul/Aug). The River Ganges' Long Decline; In the basin of a half-billion souls, purification and pollution swim together in unholy wedlock. World Watch , p 30
[58] Stille, Alexander (1998). "The Ganges' Next Life". The New Yorker, 73, 58-67.
[59] Ibid.

corpses, sewage, religious waste, industrial waste, chemical toxins, heavy metals, and garbage all continue to run in to the Ganges on a daily basis.

Domestic, religious, and industrial wastes, sewage, solid garbage, animal and human remains, defecation directly in the river, mass bathing and ritual, agricultural runoff, climate change, damming, deforestation and soil erosion all contribute to the degrading ecological situation of the Ganga. More than eighty percent of the organic pollution that enters the Ganges comes from domestic sources, not industry.[60] Untreated municipal sewage is a major contributor of domestic organic pollution. Over the last several decades massive population growth and urbanization have dramatically increased the amount of urban waste – from sewage, garbage, industry, etc. – being carried downstream.[61] Only a small percentage of India's cities have any kind of sewage treatment facility[62], and approximately 3/4th of India's wastewater ends up in its lakes and rivers[63]. As a result of these factors, an estimated 1.3 billion litres of untreated sewage enters the Ganges River each day[64], as well as an additional 260 million liters of industrial waste and, 6 million and 9000 tons of runoff from fertilizers and pesticides

[60] Sharma, Y. (1997). Water Pollution Control - A Guide to the Use of Water Quality Management; Case Study 1- The Ganga, India. WHO. Published on behalf of the United Nations Environment Programme, the Water Supply & Sanitation Collaborative Council and the World Health Organization by E. & F. Spon

[61] Sharma, Y. (1997). Water Pollution Control - A Guide to the Use of Water Quality Management; Case Study 1- The Ganga, India. WHO. Published on behalf of the United Nations Environment Programme, the Water Supply & Sanitation Collaborative Council and the World Health Organization by E. & F. Spon

[62] (Less than 7% of cities as of 1996) Sampat, P. (1996, Jul/Aug). The River Ganges' Long Decline; In the basin of a half-billion souls, purification and pollution swim together in unholy wedlock. World Watch , pp. 24-32

63 Sampat, P. (1996, Jul/Aug). The River Ganges' Long Decline; In the basin of a hal-billion souls, purification and pollution swim together in unholy wedlock. World Watch, 24-32.

[64] Ibid.

respectively.[65] While the Ganges crosses eight Indian states during her 2500 km journey, half of the total pollution entering her waters comes from Uttar Pradesh, which includes the holy cities of Kanpur, Allahabad, and Varanasi.[66]

Cleaning the Ganges River

One of the most prominent initiatives of the Indian government to address pollution levels in the Ganges was the Ganges Action Plan (GAP). In 1986 Indian Prime Minister Rajiv Gandhi launched the Ganga Action Plan, a widespread project spanning multiple Indian states that intended to address the pollution entering the Ganges. The GAP spanned several decades and cost over $300 US million (2000 crore Indian Rupees)[67]. The GAP consisted of several phases. GAP Phase I, launched in 1986, focused on the Ganga alone and was in place until March of 2000[68]. In 1993 the GAP Phase II was announced, as a concurrent project alongside the GAP Phase I, and included tributaries of the Ganges such as the Yamuna. The GAP Phase II continued until the end of 2001. In 1995, both phases of the GAP became a part of the National River Conservation Plan (NRCP), which included a number of rivers throughout India. The GAP had several goals regarding the Ganges River, including; to reduce the amount of pollution entering the river, to restore Ganges water to a minimum class B (bathing level) quality along the entire length of the river, to promote the conservation of aquatic species,

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[65] Markandya, A., & Murty, M. (2000). Cleaning-up the Ganges a Cost-Benefit Analysis of the Ganga Action Plan. New Delhi: Oxford University Press

[66] Sampat, P. (1996, Jul/Aug). The River Ganges' Long Decline; In the basin of a half-billion souls, purification and pollution swim together in unholy wedlock. World Watch , pp. 24-32

[67] Jaiswal, R. K. (2007). Ganga Action Plan - A Critical Analysis. Kanpur: Eco Friends

[68] Government of India. National River Conservation Directorate. Retrieved November 2013, from Ganga Action Plan Phase I: http://moef.nic.in/sites/default/files/NRCD/status1.html

to implement self-sufficient projects, and to develop a model for addressing environmental concerns of other rivers in India. The GAP included more than 250 sub-projects across 25 different riverfront towns, each with a population of 100,000 people or more[69]. Sub-projects included sewage treatment plants and interception/diversion schemes for untreated sewage, awareness campaigns, the construction of electric crematoria, improvement of bathing ghats, and plans for the control and monitoring of industrial waste.

The success of the Ganga Action Plan is questionable, and largely criticized. Critics of the GAP often cite the large economic costs of the Ganges, paired with the lack of substantial, measurable, improvement in pollution levels. In response to these accusations, defenders of the GAP argue that while measureable improvement in water quality along the Ganges hasn't been great, these results must be considered against the projected water qualities had these initiatives never been implemented, taking in to consideration the GAP's 15 year span. The Gap has also been criticized for a lack of public interest and involvement in projects and campaigns implemented under the Plan. This failure to incur public support has most often been attributed to one of two reasons: the public's failure to understand and appreciate the importance of cleaning up the Ganga[70], and a lack of trust in GAP officials[71].

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[69] Sampat, P. (1996, Jul/Aug). The River Ganges' Long Decline; In the basin of a half-billion souls, purification and pollution swim together in unholy wedlock. World Watch , pp. 24-32
[70] The World Bank. (2011, May 27). News. Retrieved November 2013, from National Ganga River Basin Project: http://www.worldbank.org/en/news/feature/2011/05/27/india-the-national-ganga-river-basin-project
[71] Alley, K. D. (1998). Idioms of Degeneracy: Assessing Ganga's Purity and Pollution. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 297-330). Albany: State University of New York Press

In her article titled "Idioms of Degeneracy: Assessing Ganga's Purity and Pollution",

Kelly Alley explores the ways in which various groups of Indian citizens assess the

conditions of the Ganges River, based upon field observations in the Holy city of

Varanasi. As a result of differing worldviews, the residents of Varanasi described the

situation of the Ganges in different ways. The perspective of government officials, and

members of the local NGO Clean Ganga Campaign (CGC), expressed concern for the

ecological degradation of the Ganga while the Hindu leaders were primarily concerned

with the spiritual degradation of the current age. Hindu leaders identified the Ganga as a

source of purity in a polluted age. As a Goddess, the Ganga is divine, spiritual, pure and

un-pollutable. This idea of spiritual pollution, as opposed to ecological pollution, is

explored in more detail in the next chapter. I mention it here briefly as an indication of

the popular understanding of the Ganges as spiritually pure, and the importance placed on

this spiritual purity, that is often referenced to indicate a lack of public understanding of

the importance of addressing the ecological degradation of the Ganga.

However, Alley found that these understandings often existed alongside one another,

even among individual residents[72]. We will recall what Lance Nelson referred to as a bi-

level cognition that persisted in the Indian worldview, where such a place as the Ganges

River could be understood as both pure and polluted[73]. Alley brings out the interesting

dynamics between the two dominant worldviews in Varanasi, repeatedly emphasizing

that Hindus, who worship the Ganga as a goddess and an incorruptible, unpollutable

source of purity, recognize the material waste in the river and the Ganga as physically

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[72] Ibid; P 301

[73] Nelson, L. E. (1998). Conclusion. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 331-344). New York: State University of New York Press; 332.

unclean[74]. Similarly Alley indicates that those who align most closely with the ecological interpretation of pollution, the officials and members of the CGC, would also recognize the sacredness of the river. She comments that "Most residents of Banaras[75], whether they work in government service or private business, emphasize the sacred purity of the Ganga" (301).

Alley concludes that the largest hurdle facing initiatives attempting to address the pollution in the Ganges does not seem to result from a lack of understanding, as indicated by the Hindus acknowledgement of the material pollution. Rather, the greatest challenge and barrier lies in the mistrust that divided the groups and blocked communication[76].

Though the various groups represented in Alley's article were able to understand the position held by the other, with individuals of each group holding both views simultaneously, there remained an air of mistrust among the residents. Alley does an impressive job of bringing out this tension throughout her discussion, stating that "each group is skeptical of the others' desire to respect the Ganga's purity or prevent her from being polluted"[77], whether they are describing spiritual or ecological pollution. "There is a sense on all sides that concern for the Ganga is more often than not rhetorically staged to obfuscate other, more self-interested motives"[78]. A particular example includes the Hindu leaders' mistrust of government officials and members of the CGC, This mistrust

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[74] Alley, K. D. (1998). Idioms of Degeneracy: Assessing Ganga's Purity and Pollution. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 297-330). Albany: State University of New York Press. P 331

[75] Benares is another name for the city of Varanasi

[76] Alley, K. D. (1998). Idioms of Degeneracy: Assessing Ganga's Purity and Pollution. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 297-330). Albany: State University of New York Press

[77] Ibid; P 332

[78] ibid

stems partially from suspicion of corruption from individual officials, whom they believe used the money for personal gains and did not implement effective measures. However, Alley also finds that feelings of mistrust and anger towards official programs results from a feeling of disrespect for Hindu traditions in government sponsored pollution projects[79]. As part of the Ganga Action Program an electric crematorium was constructed, as a less expensive alternative to wood burning pyres, to reduce the pollution entering the Ganges in the form of half-cremated and uncremated corpses. These electric crematoria were met with mixed opinions from Hindu Leaders. Dr. Veer Bhadra Mishra, the Mahant of the Sankat Mochan Temple in Varanasi, saw these crematoria as evidence of India's adaptability in light of the environmental crisis[80]. However, several Hindu leaders in Varanasi that spoke with Kelly Alley were openly opposed to the use of an electric crematorium, claiming that it indicated a lack of respect for traditional Hindu practices of using a wood burning pyre.[81]

Hindu leaders have a significant influence on public opinion, and are a strong voice in the Hindu community. Mistrust from these Hindu leaders, and their open contempt for government projects, reduced the amount of public support and involvement. Alley comments that "residents engage in constant verbal resistance to the government's ineffectual campaign to combat pollution"[82]

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[79] Ibid; p. 311
[80] Stille, Alexander (1998). "The Ganges' Next Life". The New Yorker, 73, 58-67
[81] Alley, K. D. (1998). Idioms of Degeneracy: Assessing Ganga's Purity and Pollution. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 297-330). Albany: State University of New York Press
[82] Ibid; 321

Despite the closure of the GAP in 2001, the Indian government continues to display a

commitment to cleaning up the Ganges River. The National Ganga River Basin Authority

was established by the Indian Government in February of 2009, as a governing authority

for the Ganges River under the Ministry of Environment[83]. The NGBRA has declared its

intention that no untreated municipal sewage, or industrial effluents, will be discharged

into the Ganga by the year 2020[84]. A project of the NGRBA is the National Ganga River

Basin Project, or NGRBP, currently set to be completed by 2020. The World Bank

approved a US$ 1 Billion loan to the Government of India in 2011 to fund initiatives

under the NSGRBP.[85]An Environmental and Social Analysis (ESA) of the NGRBP was

carried out to encourage an understanding of possible environmental and social impacts

of the project. The framework for this analysis included a look at the environmental

characteristics of the Ganges, and the Ganga Basin, as well as the demographic

characteristics, economic profiles, and cultural significance of the Ganges[86]. This

assessment considers environmental impacts which could potentially arise from poor

design and execution of sub-projects of the NCRBP, and social impacts that center

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[83] The World Bank. (2011, May 27). News. Retrieved November 2013, from National Ganga River Basin Project FAQ: http://www.worldbank.org/en/news/feature/2011/05/27/india-ganga-river-basin-faq

[84] The World Bank. (2011, March). Documents & Reports. Retrieved November 2013, from India - National Ganga River Basin Project : environmental assessment (Vol. 3 of 3) : Environmental and Social analysis and management framework : executive summary (English): http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/03/24/000333038_20110324011539/Rendered/PDF/E26650v301publ1B0SAR1ESMF1P119085v1.pdf

[85] The World Bank. (2013). Projects & Operations. Retrieved November 2013, from National Ganga River Basin Project: http://www.worldbank.org/projects/P119085/national-ganga-river-basin-project?lang=en

[86] The World Bank. (2011, March). Documents & Reports. Retrieved November 2013, from India - National Ganga River Basin Project : environmental assessment (Vol. 3 of 3) : Environmental and Social analysis and management framework : executive summary (English): http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/03/24/000333038_20110324011539/Rendered/PDF/E26650v301publ1B0SAR1ESMF1P119085v1.pdf

largely around loss of property, income, and property values[87]. However, while the assessment includes a brief overview of the cultural significance of the Ganges to the communities along the Basin, it does not formally consider the potential socio-religious impacts of NGRBP initiatives.

Considering the lack of public support and involvement with the GAP, it would seem significant that religio-social impacts be a consideration for future initiatives. Further, it would be of great benefit of the NGRBP to not only recognize the potential challenges caused by the religio-social significance of the Ganges, but to harness the significance of the River in the lives of the millions of Hindus living along the Ganges River Basin. Put another way, the NGRBP could work with Hindu tradition, using it as a foundation for public support and involvement in the initiatives, rather than finding ways to work around or against Hindu traditions. The following chapter looks at the intersection of Hinduism and Ecology at the Ganges, to consider the religio-social impacts of projects such as the GAP and the NGRBP. This discussion will help to understand the challenges faced by ecological projects, as well as the possible ways environmental projects can work within these religio-social understandings to be more successful.

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[87] Ibid

CHAPTER THREE

The Ganges offers a relevant and appropriate location for this discussion as it is currently in a state of ecological crisis, ranking among the most polluted rivers in the world. The Ganges is also significantly impacted by the unique cultural and religious context in which it exists, and exploring this relationship between worldview and ecology will help to ground the theoretical discussion. The government of India, through the National Ganges River Basin Authority (NGRBA) continues to present the cleanup of the Ganges as a priority. It has declared its intention that no untreated municipal sewage, or industrial effluents, will be discharged into the Ganga by the year 2020[88], and recently launched a new program, the National Ganges River Basin Project (NGRBA). This makes the issues discussed here relevant and important for the Ganges River as they move forward with new projects and plans for addressing pollution in the Ganges. Finally, in addition to the high levels of pollution the ecological situation of the Ganges is a pertinent discussion due to its importance as part of India's ecology, affecting the lives of millions of people who live directly along her banks or are indirectly affected by the river.

At the same time, no situation is ideal and it is important to recognize that there are some challenges that arise when discussing the context of the Ganges, particularly as it pertains to Hinduism. One such challenge results from the difficulties and discourses surrounding

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[88] The World Bank. (2011, March). Documents & Reports. Retrieved November 2013, from India - National Ganga River Basin Project : environmental assessment (Vol. 3 of 3) : Environmental and Social analysis and management framework : executive summary (English): http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/03/24/000333038_2011 0324011539/Rendered/PDF/E26650v301publ1B0SAR1ESMF1P119085v1.pdf

the definition of Hinduism,including the internal variation and what counts as Hinduism, its deep embeddedness in all aspects of Indian life, and the debate over who determines the boundaries of Hinduism. These issues make defining what it means to use the term "Hinduism" problematic. Richard King commented in *Orientalism and Religion: Post-Colonial Theory*, India and "The Mystic East" that the term "Hindu" functioned primarily as a "catch-all designation for the 'Other'"[89]. The term "Hinduism" is not indigenous to the multitude of philosophies, mythologies, approaches, and lived practices which it has come to describe. It is foreign term that was employed by outsiders to describe the religious practices of the Indian people. Hindu was first employed by the Persians, who adopted the Sanskrit word *Sindhu* used in reference to the Indus River, to refer to the people living near the river. 18th century British administrators later added the –ism, and used "Hinduism" on census records to designate the religion of India's majority population; everyone who didn't fit into any of the other "established" religions[90]. A consequence of this pattern of collectively labeling everyone who 'didn't fit' under the category of "Hinduism" was that the term came to encompass a great diversity of religious practice and belief. Klaus Klostermaier comments in his book *A Survey of Hinduism* that the "long history, and the heterogeneity of Hinduism offer enormous challenges to each and every description of the tradition"[91] . For the purposes of this study, I will adopt Klostermaier's approach to the task of defining Hinduism, and use

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[89] King, R. (1999). *Orientalism and Religion: Post Colonial Theory, India and "The Mystic East"*. London: Routledge; 99

[90] Oddie, G. A. (2010). Hindu Religious Identity with Special Reference to the Origin and Significance of the Term 'Hinduism', c. 1787-1947. In E. Bloch, M. Keppens, & R. Hegde (Eds.), *Rethinking Religion in India; the colonial construction of Hinduism* (pp. 41-55). New York: Routledge; 47

[91] Klostermaier, K. K. (2007). *A Survey of Hinduism.* Albany: State University of New Your Press; 15

"the widely introduced term Hinduism in describing the majority religio-cultural[92] tradition of India in spite of the impossibility of defining it in any precise manner"[93].

I feel it is also pertinent to once again highlight that the purpose of this discussion is not to defend or prosecute Hinduism as an ecologically friendly religion. Religion, and religio-social contexts are diverse and fluid and I consider it important to stress that they cannot be determined to be inherently dangerous or beneficial to the environment. It is precisely because context is fluid, and traditions and worldviews reinterpreted, that we are able to work with them to develop a beneficial environmental ethic. The intention of this discussion, and of indicating the Ganges as an instance of the argument made here, is to demonstrate that religious perspectives do impact the way individuals and societies approach and treat the environment. Whether environmental groups choose to acknowledge or discuss these contexts, they exist and are important. I am arguing that by recognizing these contexts environmental plans can work with these contexts rather that pushing against them. In this way, they will be more successful and resonate with the experiences of the people living in the environments. The religio-social context at the Ganges is applied here as the case study of a particular instance, for something that applies generally to all environments/locals, with the purpose of providing a real-life example of the theories discussed above.

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[92] Klostermaier uses the term religio-cultural in the same manner I am using religio-social in this context. Both terms highlight the interwoven nature of social, cultural, and religious influences.
[93] Klostermaier, K. K. (2007). *A Survey of Hinduism.* Albany: State University of New Your Press; 17

Water in Hindu Myth and Ritual

The important role of water in Hindu mythology is at least in part reflective of the critical role which water it plays to the material existence in India. In the plains of the Ganges valley, water is crucial to determining the abundance or scarcity of food, and of life. Water is the source of life and nourishment; it is an agent of creation and preservation. Darian writes that "among the many symbols of India endowed with spirituality, water is the most sacred, at once the purifier and the origin of the mystery. It is the real and imagined source of life"[94]. Rivers are often the source of life-giving water, making barren land fertile, and staving off drought and starvation. Rivers such as the Ganges provide the source of physical and spiritual life and abundance. It then seems appropriate that as symbols they commonly represent fertility, life, and the nurturing mother.

Rivers in India are not only respected for the life-giving nourishment they provide, but worshipped as divine realities. While there are other rivers in India, such as the Yamuna, which are worshipped in this way, the Ganges River is one of the most important religious sites in India, holding a central and essential role in the religious lives of millions of Hindus. Her source is believed to be divine and her waters are pure and cleansing. To billions of Hindus, the Ganges is more than a river; she is a Goddess, divine, spiritual, pure and unpollutable. In *The Ganges in Myth and History,* Steven Darian describes a couple of ways in which the ecological importance of the Ganges River is reflected.

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[94] Darian, S. G. (2001). The Ganges in Myth and History. New Delhi: Motilal Banarsidas. P.24

At the start of the plowing season, before the seeds are sown, farmers put Ganga water in to a pot and set it in a special place in the field to ensure good harvest. Among those who live along the river, a newly married woman unfolds her hari to Ganga and prays for children and the long life of her husband[95].

Water is used in daily rituals, such as ritual bathing that is undertaken before offering devotion to God, the offering of water to the divine that is particularly important in Shiva worship, and the use of water as a representation of the divine. Additionally, worship, rites, and large festivals are held in celebration and reverence of water.

As mentioned above, water is frequently used in Hindu rituals as a representation of the divine, much in the way a clay idol might be. Water is viewed as a material representation of the divine, as witnessed both in the sacred rivers of India and the use of a jar or pitcher, filled with water, as the simplest representation of the divine. Water is frequently associated with the divine in a number of ways, and often plays an important role in the mythos of popular Hindu gods. The Hindu god Vishnu, in some representations described as the preserver of the universe- in conjunction with Brahma the creator and Shiva the Destroyer- is sometimes believed by his devotees to be the supreme procreator of the universe, encompassing both Brahma and Shiva. He is also richly associated with water, and the fresh water blossom, the lotus. In one myth, a lotus blossom grows from his navel and gives rise to Brahma. In a number of popular myths and images he is associated with his consort, Lakshmi, who is in some instances known also as Padma, meaning lotus. Hindu mythology also speaks of his resting and residing upon the primordial waters, or even as himself encompassing the primordial waters.

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[95] ibid. p.37

Other deities, including the lotus-born Brahma, are also associated with water imagery. Beyond representing the divine, and having an important association with other Hindu deities, water itself is popularly understood in India as an incarnation of the divine; rivers themselves are understood as goddesses.

India however, is prone to both droughts and floods, and the scarcity and abundance of water each have the potential to destroy crops, livelihoods, and life itself. This is not only a potential danger, but an actual reality. Darian describes that "a shortage [of crops] occurs roughly every five years in limited areas. Every ten years, famine breaks out over a wider region. Every fifty or a hundred years witnesses a major disaster extending over several states"[96]. In this manner, water is also the agent of destruction. The absence or excess of water can be devastating.

Images of water in Hindu mythology reflect this duality of life and death; of creation and destruction. All life, all creation, begins with in the waters and eventually, all things will die or be destroyed and return to the waters.

> "Boundless and imperishable, the cosmic waters are at once the immaculate source of all things and the dreadful grave… For a time it nourishes and sustains these with a vivifying sap. Then it dissolves them again, without mercy or distinction, back in to the anonymous energy out of which they arose"[97].

Darian contends that this is consistent with the cyclical, agricultural worldview held in India that water would be viewed as both a source of life and of death, as womb and

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[96] ibid p.15
[97] Zimmer, H. (1962). Myths and Symbols in Indian Art and Civilization. New York & Evanston: Harper & Rowp.34

grave. He writes that "it reflects the belief that human fertility and fertility of the soil are in some mysterious way, bound together, that death must precede the coming of grain"[98].

As both womb and grave, the Ganges offers a connection, a passageway, between earth and heaven, and between humanity and the divine. Popular descent mythologies pronounce a heavenly origin of the Ganges, and highlight her divine nature. Darian writes that according to ancient texts the Ganges originated in Heaven, and her home was the Milky Way. He describes her descent to Earth as having been evoked by Bhagiratha, the son of a royal family, who after winning the favor of the gods through years of asceticism and penance wished for the Ganges to descend from Heaven and purify the ashes of his sixty thousand ancestors and lift them to paradise. The gods agreed to bring forth the Ganges from heaven, and Lord Shiva agreed to catch the river in his hair as she fell from heaven, as the force of her uninterrupted descent would certainly have destroyed the Earth upon impact. The Ganges is therefore understood to be a direct link between the material world, and Heaven where the gods reside. It is the Ganges whose waters bring purity and the passage in to heaven upon death. Hindu devout will often arrange to have their ashes brought to the Ganges following their death, often at Varanasi.

Purity and Pollution

In her book *Purity and Danger,* Mary Douglas argued that "there is no such thing as absolute dirt: it exists in the eye of the beholder"[99], and that pollution[100] exists as a

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[98] Darian, S. G. (2001). The Ganges in Myth and History. New Delhi: Motilal Banarsidas p.74
[99] Douglas, M. (1978). *Purity and Danger; An Analysis of the concepts of pollution and taboo.* London: Routledge & Kegan Paul; 2

constructed phenomenon. Douglas' work is frequently viewed as one of the most important and influential works on anthropological interpretations of pollution and the vast majority of scholarship concurs with Douglas that pollution exists as a constructed phenomenon. David Haberman, who writes on the Yamuna River in the region of Braj in India, agrees with Douglas that "like most notions, 'pollution' is a cultural concept viewed differently in different cultures"[101]. Douglas agreed that Pollution conceptions vary across religions, cultures, and societies, and that "the only way in which pollution ideas make sense is in reference to a total structure of thought"[102]. Nonetheless, while Douglass contended that the specifics regarding pollution and pollution behaviors differ across traditions and locations, she believes the framework is the same. Douglas comments that "ideas of dirt also express symbolic systems and that the difference between pollution behavior in one part of the world and another is only a matter of detail"[103] She describes dirt as being matter out of place, the things that didn't fit into a prescribed social order, and thus by their very existence threatened that ordered and were considered to be polluting.[104]

William Ian Miller responds to Douglas' definition of pollution as matter out of place in his book *Anatomy of Disgust*. Miller insists that:

[100] In this section I am speaking of religio-social understandings of pollution and purity, which differ from the scientific and ecological understandings and measures of pollution.
[101] Haberman, D. L. (2006). *River of Love in an Age of Pollution; the yamuna river of northern India.* Los Angeles: University of California Press; 131
[102] Douglas, M. (1978). *Purity and Danger; An Analysis of the concepts of pollution and taboo.* London: Routledge & Kegan Paul; 41
[103] [103] Douglas, M. (1978). *Purity and Danger; An Analysis of the concepts of pollution and taboo.* London: Routledge & Kegan Paul; 35
[104] ibid

The real problem is with the notion of fit itself. There are things that are uncanny or disgust because they don't fit, like deformed people. But most things that disgust fit rather well. Excrement is hardly anomalous; it is a necessary condition of living. It is not that things don't fit; it is that they fit right at the bottom of the conceptual grid. Yet this doesn't explain everything either, for not all lowness is polluting, as long as it knows its place and behaves. And that is precisely it: the low by virtue of being low are always a risk to threaten and misbehave, to harm and contaminate the high who know they are high because the low are there to provide the necessary contrast[105]

An important aspect of Miller's description fits quite well with the Hindu pollution/purity construct. While Douglas argued that the source of pollution was that which did not fit in to a prescribed organizational pattern, Miller insists that while dirt, or pollution, may fit in to an organizational hierarchy it becomes pollution when it is removed from its proper place within that hierarchy. An example from the Hindu construct is bodily fluids, which are not considered to be pollution when they are inside the body- in their proper place within the conceptual framework. However, when these fluids leave the body they are considered to be pollution; they are now out of place and a risk to an individual's purity. Another important quality of this construction of pollution is that that which is higher in the hierarchy does not pollute that which belongs lower on the conceptual grid. It is only when the low becomes 'out of place' or as William says 'misbehaves' and comes in to contact with that which is higher, that it is pollution. This is in agreement with the Hindu construct of pollution.

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[105] Miller, W. I. (1997). The Anatomy of Disgust. Massachusetts: Harvard University Press; p. 45

As discussed in the previous section, Kelly Alley found that religio-social understandings of pollution often exist alongside material (or scientific) understandings of pollution[106], each contributing to what Lance Nelson described as a multi-level cognition of pollution.[107] As a result of these multiple understandings of pollution existing alongside one another, the terms sometimes get conflated with one another, and it can be challenging to determine which understanding is being referred to. Alley indicates that conceptions of material pollution are often wrapped-up in discussions, and understandings, of spiritual pollution or impurity. Similarly, conceptions of purity become interwoven with notions of physical cleanliness and vice versa.

The issue is further confused because ritual purity and physical cleanliness are not always synonymous. Though residents of Varanasi understand material pollution and spiritual pollution, the two do not necessarily describe the same things. The physically unclean can be spiritually pure, as is the case with the Ganges, and the physically clean can be impure. English conceptions of pollution, purity, and impurity, as well as in the Hindi term gandagi, referring to filth or dirtiness all have a unique relationship to the ecological situation of the Ganges. Alley emphasizes that gandagi "must be understood in its own terms, as something somewhat different from the scientific/official notion of environmental pollution"[108]. Gandagi can be used to describe both material filth – waste

[106] Alley, K. D. (1998). Idioms of Degeneracy: Assessing Ganga's Purity and Pollution. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 297-330). Albany: State University of New York Press
[107] Nelson, L. E. (1998). Conclusion. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 331-344). New York: State University of New York Press; 332.
[108] Alley, K. D. (1998). Idioms of Degeneracy: Assessing Ganga's Purity and Pollution. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 297-330). Albany: State University of New York Press; 304

and human excretion – as well as metaphoric dirt or filth describing religious, social and political corruption[109]. In her discussion, Alley clearly indicates her use of terms and designates pollution as denoting environmental conditions, impurity and purity for spiritual conditions, and gandagi in its own right as a term used for both material and metaphoric degeneracy for the purpose of clarity in her discussion. Government programs aimed at addressing the ecological degradation of the Ganges must make a similar effort to be clear about what they are speaking of when they talk of pollution or gandagi.

Pertinent to this discussion is the behaviors which result from the religio-social understandings of pollution at the Ganges. Alley comments that differing worldviews and conceptions of pollution and impurity impact ways of approaching the pollution in the Ganga. While there is no direct disincentive in Hinduism for cleaning up the river Ganga, the assurance of the continuing protection and spiritual purity of the river allows for continuation of ritual along the banks of the Ganga. The Ganges is considered to be spiritually pure and unpollutable, and is considered to have a purifying quality.

When the established order is broken, and pollution occurs, water is one of the most common means used to 'deal' with pollution that has already been incurred. In the context of ritual or religious purity-pollution complexes, purity is frequently sought through the avoidance of pollutants, or taboos. However, if avoidance is not possible, and one does incur pollution through contact, then the pollution must be properly 'dealt with' to alleviate the associated dangers. This is carried out through purification rituals that, in Hinduism, often involve the 'washing away' of pollution via water.

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[109] ibid

Water is used in a number of Hindu rituals as the medium of purification. As mentioned above, water is used in daily Hindu rituals, such as ritual bathing that is undertaken to remove pollution before offering devotion to God. Upon death an individual's ashes are frequently placed into the Ganges to ensure salvation and there are numerous festivals and holidays dedicated to the various river goddesses in India. The Kumbh Mela, which is the grandest of all religious pilgrimage, occurs every twelve years, drawing millions of pilgrims and devotees seeking purification, salvation, and offering their devotions along the banks of the Ganges. Water carries away impurities, transforming the individual from a state of pollution to one of purity

Water and Womanhood

As such, she possesses the romanticized characteristics of the Mother. She epitomizes the qualities of motherhood in Hinduism; she is perfectly nurturing, forgiving, selfless, caring, and compassionate.

The Yamuna River joins with the Ganges at Allahabad, and it is also worshiped by a vast number of Hindus in her own right. David Haberman has spent more than twenty years studying the Yamuna in the region of Braj and writes about the Yamuna River in this region in his book *River of Love in an Age of Pollution*. Haberman found himself drawn to the contrasting images of the Yamuna River as described in the "most beautiful poetic and theological literature ever written about a river goddess and alarming scientific reports about the current water conditions of the Yamuna"[110]. Allahabad, where these two rivers meet, is thought by many Hindus to be one of the most sacred sites in all of

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[110] Ibid. P.3

India.[111] Haberman's experiences with the Yamuna, as they relate to the religious and social context of the river, are relevant to our discussion on several points and can be applied to the context of the Ganges. Haberman describes that for the residents of Braj, and Hindus across India, the Yamuna is the producer and protector of life, of her children, and of the world[112]. The very nature of both the Ganges and the Yamuna, two eminent goddesses in the Hindu pantheon, is of loving generosity. Taking without asking for anything in return, these goddesses nurture and shelter their children in the way any mother would.

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[111] Ibid p.12

[112] Haberman, D. L. (2006). River of Love in an Age of Pollution; the Yamuna River of northern India. Los Angeles: University of California Press

CONCLUSION

This thesis argues that the environment is as much constructed as it is apprehended, and religio-social understandings influence interactions with the environment. Constructionist theories have been examined in Chapter One, as they apply to the environment. This section demonstrated that all knowledge if the environment, and reality, is shaped by human experience and meaning systems as they are understood in the mind. The environment does exist as an external reference point for the input of information, but our ability to secure an understanding of this reality is limited and shaped by our mind. The way people think about and understand the world is important because it determines the appropriate behaviors towards their environments. These understanding motivate their actions, which come to physically shape the environment. In a very physical way the natural environment is shaped through human interaction and accordingly, by the religio-social constructions of that environment.

One important way in which meaning systems are constructed and shared is through he communication of ideas, symbols, and meanings that come together to create the stories, or narratives, describing the shared cultural experiences of the environment. This communication occurs differently and in different ways in different places. One important implication of this for the purposes of this study is that the environment is communicated, symbolized, and understood locally. This brings us to the second argument made here, that ecological issues are best understood through *local* constructions, and environmental concerns are best addressed within those contexts.

Chapter Two introduced The Ganges as a case study to demonstrate the relationship between religio-social constructs and environmental issues to offer a real example of the theoretical arguments made in chapter one. The Ganges is also impacted by the unique cultural and religious context in which it exists. Exploring the relationship between these contexts and environmental efforts offered a poignant example of these arguments. The government of India has invested a considerable amount of time and resources into addressing the pollution at the Ganges, and continues to present the cleanup of the Ganges as a priority, having recently launched the National Ganges River Basin Project. Despite these efforts, however, there has not been much success in the prevention and clean-up of the pollution entering the Ganges. This is in part a result of a lack of public interest, support, and involvement in official projects resulting from a feeling that the government projects did not respect Hindu traditions. The case study examined here indicated some of the challenges that arise when the religio-social context of an area is not engaged, and offered support for these arguments. Issues of motherhood and ritual purity were also examined.

Rivers in India are commonly construed as representations of the feminine aspects of the divine, most commonly as mother goddesses, which is an important characteristic in relation to their roles as purifiers. Chapter Three discusses the relationship between the Ganges and those who depend upon her, as that of a mother and her children. The Ganges is conceptualized as a mother, and as such the characteristics and traits associated with motherhood in India are imposed upon the river. Additionally, as both a mother and a goddess, the Ganges represents the ideal of motherhood. As a loving mother, she is viewed as forgiving of the sins of their children. It is believed that the rivers are capable

of washing their impurities away, while remaining themselves unaffected by these impurities. This ideal poses a risk to the ecological status of the river, as pollution that is put in to the river is not considered to be harmful to her as a goddess. Even though it may harm her ecologically, the Ganges will be forgiving of her children for this discretion, and continue to welcome them and wash away their impurities.

In the context of ritual or religious purity-pollution complexes at the Ganges, ritual pollution is often dealt with through purification rituals that often involve water as the medium of purification. As mentioned above, water is used in daily Hindu rituals, such as ritual bathing that is undertaken to remove pollution before offering devotion to God. The Ganges in particular is considered to have exceptional purifying powers resulting from her heavenly source, and her status as a mother goddess. The Ganges is a goddess of the Hindu pantheon and in this context is considered to be both purifying and unpollutable.

It is for this reason that in some instances, lack of understanding is indicated as the cause for lack of public support for the GAP. However, Alley found that this is not the case while speaking to the residents, religious leaders, and officials at Varanasi. What Alley found was that understandings of ritual purity existed in conjunction with the knowledge of the ecological devastation of the river. Residents held on the Ganges as a purifying mother Goddess, but also understood the risks of ecological pollution. Alley claims that government sponsored clean up initiative failed to achieve any real success not because the residents of Varanasi failed to recognize the ecological pollution as a problem, but in part because the people who live along the Ganges did not feel the projects respected their religious traditions and did not support their initiatives.

The dominant approach to the global environmental crisis, and of the initiative at the Ganges, has been scientifically and technologically driven. This approach assumes that human ingenuity and technological advancement can discover a way in which humanity will be able to continue in the present fashion, with the same level of industry, modernity, and convenience, and humanity will not have to worry about environmental degradation. There is value in this approach, and it has led to the development of a number of beneficial technologies and alternatives. Nonetheless, it is not enough to solve the current ecological crisis. In addition to finding alternatives methods and technologies, we must examine the nature of the human-environment relationship. This requires first understanding these relationships, and then reexamining, reflecting, and reinterpreting these relationships in light of the environmental crisis.

In her article "The Forgotten Factor: The Uneasy Relationship between Religion and Development" Leah Selinger points out that current development strategies ignore, and even marginalizes, religion. She attributes the current failure of development to this ignorance of the social impacts of religion. Selinger further insists that development strategies would possess a greater probability of success if religion were to become recognized and managed properly[113]. Dwivedi agrees that religion must be considered in development planning, adding that

> Their offer to help will remain purely rhetorical unless secular institutions, national governments, and international organizations are willing to acknowledge the role of religion in environmental study and education. And I

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[113] Selinger, L. (2004). The Forgotten Factor: The Uneasy Relationship between Religion and Development. Social Compass, 523-543.

believe that environmental education will remain incomplete until includes cultural values and religious imperatives.[114]

Selinger proposes that development strategies should move away from the understanding of religion as spiritual and private and focuses on the social impacts of religion[115]. Religion is an important aspect of culture that carries great power in establishing the social order, and which is inseparable from social, economic, and environmental development. Selinger is writing about international development programs, but her conclusions apply to environmental development as well.

Environmental programs will achieve greater success when they are working within local contexts, rather than pushing against cultural influences or trying to use foreign approaches; it is best when everyone is speaking the same language. Rita DasGupta Sherma writes that

> Any attempt to redirect entrenched, ecologically destructive behavior patterns without accounting for religious convictions would find resistance among the adherents of established traditions. An ecological agenda supported by faith elicits greater commitment.[116]

Religion can be a powerfully motivating force for environmental and social reform. This is part of the reason why religion is already heavily involved in development, despite being ignored by secular development groups. Across the globe faith-based organizations

[114] Dwivedi, O. P. (1996). Satyagraha for Conservation: Awakening the Spirit of Hinduism. In R. S. Gottlieb (Ed.), This Sacred Earth: Religion, Nature, Environment (pp. 145-157). New York: Routledge; p. 145

[115] Selinger, L. (2004). The Forgotten Factor: The Uneasy Relationship between Religion and Development. Social Compass, 523-543.

[116] Sherma, R. D. (1998). Sacred Immanence: Reflections of Ecofeminism in Hindu Tantra. In L. E. Nelson (Ed.), *Purifrying the Earthly Body of God; Religion and Ecology in Hindu India* (pp. 89-131). Albany: State University of New York Press; 126

are already directly involved environmental projects, as well as social services, and are some of the most relevant groups in development.[117] Conversely, environmentally destructive religious interpretations can be a barrier to ecological projects. As stressed above, no tradition is inherently, or entirely, ecologically beneficial or harmful, and none are static. Religio-social contexts are in constant negotiation with new information from the environment and ideas. What is important is to acknowledge that these influences are there, and work to develop an environmental ethic from within the existing context instead of outside of it. Otherwise, the new environmental rhetoric will exist in opposition to already rooted beliefs and practices, and will not have any meaning to the people living there.

The perceived failure of the Ganga Action Plan and similar government programs was the result of pushing against the religio-social influences, rather than working within them. Hindu leaders and members of the public did not feel that government officials had trustworthy motives and did not believe them to be considerate of the religious traditions at Varanasi. As a result, there was a severe lack of public support and involvement with the GAP.

Recommendations and Further Research

Hinduism is such a diverse and dynamic collection of beliefs, traditions, and approaches that renegotiating an environmental ethic is both possible and favorable. Issues such as ritual purity, biodivinity, and motherhood, can be engaged and reinterpreted to the benefit

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[117] Marshall, Katherine. "Africa: How and why is Faith Important and Relevant for Development." Washington DC: World Bank, paper for Vice-President, Africa Region (2005)

of ecological goals. We have seen similar renegotiations in other contexts, over time. An example is given above from Christianity's approach to nature in the West. Due in part to critiques from writers such as Lynn White, the language and approach to the human environment relationship began to change from one of dominion to stewardship. There are already leaders in the Hindu community who are engaging this renegotiation. Two notable examples are Swami Nigamanand and Dr. Veer Bhadra Mishra. Swami Nigamanand was a Sadhu, and a disciple of Shivanand at Matri Sadan outside Haridwar. In 2011 Swami Nagamand went on a hunger strike in protest of mining on the banks of the Ganges. He began his fast on February 19, 2011 until he was taken to hospital on April 30th, at which point it was reported that he still would not eat, and entered a coma shortly after; he died on June 13th, 2011[118] . Dr. Veer Bhadra Mishra, until his death in March of 2013, was a prominent activist for cleaning up the Ganges in Varanasi. A leader of the Sankat Mochan Temple in Varanasi, Mishra founded the Sankat Mochan Foundation in 1982, which states its mission to include "seeing the spiritual purity of Ganga reflected in the river's physical purity"[119]. Mishra was also a professor of hydraulic engineering at the Banaras Hindu University, and believed that science and religion must work together to save the Ganges River, Mother Ganga, from pollution.[120] Mishra was motivated by his faith to clean up the Ganges out of respect and love, he advocated that "Science and technology are one bank of the river, and religion, tradition and faith are the

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[118] Gasuin, R. (2011, June 14). Sadhu dies after 115-day fast to save Ganga. Retrieved November 2013, from India Today: http://indiatoday.intoday.in/story/swami-nigamanand-dies-after-115-day-fast-to-save-ganga/1/141435.html
[119] Sankat Mochan Foundation. Welcome. Retrieved November 2013, from http://www.sankatmochanfoundationonline.org/index.html
[120] Stille, Alexander (1998). "The Ganges' Next Life". The New Yorker, 73, 58-67.

other bank of the river. Both the banks need to be firm, and only then can the river maintain the flow"[121].

Numerous sub-projects under the GAP and other government projects aim at end of the line solutions, either cleaning/filtering the pollution from the river, or putting up barriers/alternative routes to pollution, instead preventing the act of polluting. The projects do not address the worldviews, motivations, and behaviours that lead to pollution (such as idol submersion, half-burned corpses, and defecation directly into the river. Additionally, the current approach of the GAP and other government sponsored initiatives has been top-down, and secular- failing to engage with the religious beliefs and practices that are central to the lives of so many residents living along the banks of the Ganges. As a result, these initiatives have pushed against these beliefs and led to feelings of mistrust and a lack of public engagement. People do not relate to the solutions and motivations of the GAP and other projects, and so it fails to mean anything to them. They are not their own solutions, not Hindu solutions, and so they do not apply. As Lance Nelson writes:

> Hindu solutions will be inspired in part by motivations that are not local but universal in nature, such as abhorrence of environmental degradation and fear of impending disaster. But just as surely, Hindu solutions must finally be anchored in the mythic cosmography that structures the Hindu world,

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[121] Sankat Mochan Foundation. Foundation Leaders. Retrieved November 2013, from http://www.sankatmochanfoundationonline.org/profile.html

combining the need for action to physically purify with respect for the sacrality already present.[122]

Mishra recognized the importance of the religio-social context along the Ganges River, and appreciated that to successfully motivate people to get involved with clean-up initiatives one must speak to this context. When speaking with Alexander Stille for the New Yorker, he is quoted as saying:

> If you go to people who have a living relationship with Ganga and you say, 'Gangs is polluted, the water is dirty,' they will say, 'Stop saying that. Ganga is not polluted. You are abusing the river.' But if you say 'Ganga is our mother. Come and see what is being thrown on the body of your mother-sewage and filth. Should we tolerate sewage being smeared on the body of our mother?' you will get a very different reaction, and you can harness that energy.[123]

As we have just seen, the founding of these solutions already happening within Hinduism, officials and organizers of the government projects simply need to engage with these individuals and groups, learn from them, and harness their energy. In the case of the Ganges River, future environmental projects should be developed in negotiation with the religio-social context of the Ganges. The National Ganga River Basin Project, or NGRBP, is currently set to be completed by 2020. The religio-social context at the Ganges, and the religio-social impacts of potential NCRBP sub-projects, should be formally considered. Kelly Alley notes that the religio-social issues of purity and

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[122] Nelson, L. E. (1998). Conclusion. In L. E. Nelson (Ed.), Purifying the Earthly Body of God; Religion and Ecology in Hindu India (pp. 331-344). Albany: State University of New York Press; p. 342
[123] Stille, Alexander (1998). "The Ganges' Next Life". The New Yorker, 73, 58-67; p. 65-66

pollution are not discussed during policy debates, despite the fact that officials

themselves privately practice purification rituals with the same faith and devotion as any

other Hindus living along the Ganges[124][125]. Further, it would be of great benefit of the

NGRBP to not only recognize the potential challenges caused by the religio-social

significance of the Ganges, but to harness the significance of the River in the lives of the

millions of Hindus living along the Ganges River Basin. Put another way, the NGRBP

could work with Hindu tradition, using it as a foundation for public support and

involvement in the initiatives, rather than finding ways to work around or against Hindu

traditions.

I have argued that environmental planning and projects need to be localized, and work

within the religio-social context of each environment. Each project and location will

contain understandings, interpretations, and solutions that are shared. However, these will

also differ according to each unique religio-social situation, and these differences are

significant. Greater success will be achieved by researching and understanding each

situation, and engaging with it in a way that makes sense. This study looked at the

Ganges River as a case study, and has brought forth some of the issues and challenges

faced by the GAP and other projects, which failed to engage the religio-social context of

the Ganges. This study has been theoretical and text based, and thus has studied these

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[124] Alley, Kelly D (2002). *On The Banks of the Ganga; When Wastewater Meets a Sacred River*. USA. University of Michigan Press. P. 37

[125] It is worth mentioning here that a contributing factor to the Indian Government overlooking the religio-social context of the Ganges River, despite the reality government officials themselves live within this context, is the secular stance of the State and the history and relationship between religion and the state in India. The nature and origins of Indian secularism are examined by authors Ian Copland, Ian Mabbett, Asim Roy, Kate Brittlebank, and Adam Bowles in their book *History of State and Religion in India*. See:

I. Coplan, I; Mabbett, I; Roy, A; Brittlebank, Kl Bowles, A (2013) *History of State and Religion in India*. New York, NY. Routledge.

issues at a distance. This methodology has its limitations, and further research is needed into existing interpretations along the Ganges, and how they are being, and can be further, engaged and reinterpreted in light of the ecological crisis. This will require speaking to Hindu leaders, activists, and local residents to discover what is already working and what challenges are being encountered.

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