EXECUTIVE SUMMARY: As protected areas continue to be subjected to visitor impacts it is common to find that academics and land managers routinely turn to minimal impact education programs of Western origin, like Leave No Trace, to lessen impacts. However, Western conceptions of nature and conservation are not shared in all corners of the globe. Our research in Garhwal, Uttarakhand, India was inspired by the notion that unique societal conditions may be instrumental in spurring an individual’s actions toward the environment and there may be drawbacks to reliance on minimal impact programs that were not developed in the locale where impacts are occurring. This paper is a reflection of meaning from our recently published research on implementing minimal impact programs in non-Western contexts. With caution, we differentiate between Western and non-Western to emphasize five lessons learned from our research analyzing the bridges between knowledge and action—guides. These lessons provide the keys to a better understanding of how minimal impact education efforts may be ineffective or improved in non-Western protected area contexts. We examined the degree to which the antecedents of the theory of planned behavior mediated cognitive relationships between adventure guides and pro-environmental behavior. This inquiry gave us the ability to compare the reality of guides operating in a non-Western context with assumptions made about nature guides in general. We also explored the cross-cultural efficacy of American minimal impact programs when introduced to populations with different environmental ethics and conceptions about nature and conservation. Triangulating the survey results, field observations, extensive literature search, and dialog with one of the research members who has spent many summer seasons (equating to years) in India, we are able to extract five lessons to better understand the implications for cross-cultural transfer of minimal impact knowledge. We found that although adventure guides appear to hold a type of Western conception of nature, there are a number of unexplored factors stemming from their residence within a unique non-Western society and cultures that may dictate how guides actually behave while guiding, such as societal norms, internal beliefs, and external influences. The lessons learned and shared in this paper will hopefully foster an evaluation.
of minimal impact programs as they are currently globally exported. We posit that since the application and scope of minimal impact programs is now global the conversation with respect to objectives, techniques, and curriculum should be expanded based on a sound understanding of non-Western populations being served to decipher how these programs help and hinder protected area management efforts in non-Western contexts.

KEYWORDS: Cross-cultural transfer, tourism, recreation, impact, guides, India, protected areas

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Concerns over visitor impacts within protected areas led to the development of outdoor travel creeds that range from “take only pictures, leave nothing but footprints,” “leave no trace,” and “pack it in, pack it out.” These philosophies and creeds are chiefly propagated through educational programs we hereafter call minimal (i.e., low) impact programs. These programs include Leave No Trace (LNT), Tread Lightly!, and the Hunter’s Pledge and provide turn-key education that can efficiently disseminate knowledge and skills required to alleviate impacts on natural and cultural resources due to visitor use (Buckley & Littlefair, 2007; Marion & Reid, 2007).

The expansion of these programs across the globe has resulted in attempts to transfer minimal impact ethics, norms, concepts, and skills cross-culturally. Several “Western” countries (United States, Australia, New Zealand, and western Europe in particular) share like environmental values (Aoyagi-Usui, Vinken, & Kuribayashi, 2003; Franzen & Meyer, 2010) and have dominated the development of minimal impact programs. Though these programs target behavioral change during outdoor travel in order to minimize environmental and cultural impacts, Ryan (2002) found that advocacy for pro-environmental behavior while simultaneously pronouncing that all actions in the outdoors cause impacts “raises the question of which impacts are negative and how these are determined” (p. 268). The exportation of these programs creates a space to explore this question internationally, particularly whether the archetypes that shape minimal impact programs are vulnerable to misunderstanding or rejection when confronted by other forms of knowing (Hofstede, Neuijen, Ohayv, & Sanders, 1990). This gap in understanding, in concurrence with steady rise in tourism and recreation in non-Western geographies, presents a special and timely need to address the cross-cultural transfer of minimal impact programs.

In this précis of our findings, we formulate five lessons learned based on our recent research (Serenari, Bosak, & Attarian, 2013; Serenari, Leung, Attarian, & Franck, 2012) in Garhwal, Uttarkhand, India. We believe this case helps us unpack the desire to export minimal impact programs to new geographic frontiers, particularly non-Western ones. We employ the label non-Western here for the sake of making our argument; all the while, we maintain our vigilance of the potentially problematic use of this dichotomy in that it creates and blurs cultural boundaries (Dabashi, 2012; Handwerker, 2001). We crafted these lessons by combining results from a quantitative and qualitative survey based on the theory of planned behavior (Ajzen, 1991), field observations, conversations with a research team member who has spent years in the field in India, and an extensive literature review.

The lessons presented here help address the cross-cultural transfer of minimal impact programs phenomenon and achieve two objectives. First, we concur with Alagona and Simon (2012) that there is a need to better integrate “critical humanistic scholarship
into land management and environmental education research” (p. 119). We feel this is necessary to empirically evaluate minimal impact programs because they are argued to employ the acceptable impact level concept to dictate what wild nature is and should be, and consequently, override other ways of deriving a fundamental base for minimum impact practices (Ryan, 2002). Second, we wish to inform those who seek to deploy these programs in non-Western countries (land managers, guide trainers, tour operators, and so on) of the limits and opportunities of cross-cultural transfer, as identified by guides, who serve as links between minimal impact policy/programs and the recreationist/tourist (UNESCO, 2009). Through achievement of these two objectives, we hope to reveal and surmount latent impediments and foster practicable and socially just results in the field.

Cross-Cultural Transfer

Cross-cultural transfer has been a growing and important area of study for a variety of research disciplines. Studies have addressed this topic in the fields of human resource development (Hansen, 2003), corporate growth and management (García-Almeida, Bernardo-Vilamitjana, Hormiga, & Valls-Pasola, 2011), education (Ziguras, 2001; Kanu, 2005), protected area management (Wang & Buckley, 2010), among others. Few studies outside of Buckley’s work on cross-cultural (Buckley, Cater, Linsheng, & Chen, 2008; Wang & Buckley, 2010) and tacit-knowledge transfer (Buckley & Ollenburg, 2013) have attempted to broach cross-cultural transfer in regards to minimal impact education or explicitly addressed the efficacy of Western minimal impact programs in non-Western contexts. By paying attention to efficacy, we unearth possible sociocultural factors and conditions that underlie the difficulties of cross-cultural transfer.

The aforementioned studies on cross-cultural transfer tend to emphasize three concepts: the importance of the individually constructed nature of “culture” through complex dynamics and processes that can take root as early as childhood, an emphasis on reconsiderations of methods and means of transfer, and a caution against ethnocentrism (Handwerker, 2001; Hansen, 2003). These studies also offer overlapping themes such as program expansion, educational techniques and curriculum, ethics, and a need for management strategies that inform the study of the cross-cultural transfer.

A Privileged Discourse

Our results (Serenari, et al., 2013; Serenari, et al., 2012) point to the relevance of Clark’s (2002) principle of contextuality, where the parts are interconnected and meaning of anything is dependent on the context in which it all occurs. However, this principle may be ignored through what Ryan (2002) calls “discursive manoeuvres” that “establish a fixity of meaning” and extend “legitimation of ‘reality’” (p. 266). Related discourses that “can claim such a connection to reality become privileged and can exercise greater power to fix meaning in ever wider circles” (p. 266). Writing within the influential American wilderness discourse, Marion and Reid (2001) wrote that “America’s public lands are finite resource whose social and ecological values are linked to the integrity of their natural conditions and processes” (p. 1). American wilderness values have been crystallized over centuries and reified in recreation resource policy and programming on America’s public lands. Unlike the clearly delineated social and ecological values in America, however, discursively constructed wilderness values in many non-Western contexts have not been sufficiently documented, let alone linked to minimal impact programs, despite the exportation of these programs (e.g., Government of Taiwan, 2010; Marion & Reid, 2001; New Zealand Outdoor, 2008; Rolston III, 2000; van den Berg & Swain 2007). Rather, a global network of protected area decision makers have privileged a Western constructed minimal impact discourse that encourages visitors to engage in behaviors that minimize environmental impacts, even if such a practice is foreign to the land manager or the visitor.

1We use the Random House Dictionary definition of “efficacy” here, “the capacity for producing a desired result of effect.”
Thus, we posit there may be potential drawbacks to reliance on minimal impact programs that touch this contradiction. Contrary to most studies on the minimal impact topic which explore the improved crafting of minimal impact discourse, this work emphasizes the need to unpack the Western constructed and privileged reality in which these programs are created. In the following text, we hope to stimulate a quest for the goodness-of-fit of minimal impact programs that are deployed in diverse sociocultural contexts where protected areas reside.

Guides and Discourse

We believe an analysis of guides is fruitful here because their minimal impact training 1) follows the aforesaid privileged discourse and 2) adheres to assumptions about the role of guides; guides have been homogenized by ignoring the influence of the sociocultural conditions with which they reside (Black, Ham, & Weiler, 2001; Muñoz, 1995; UNESCO, 2009). The potential drawbacks of overlooking this “discursive manoeuvre” include a loss of programmatic efficacy, perceptions of neocolonialist predispositions, and inadequate transfer of knowledge and processes (Serenari et al., 2013; Ziguras, 2001).

Problematizing Minimal Impact Programs in Non-Western Contexts

There is little variation in the types of visitor impacts that occur in natural areas in Western and non-Western contexts (Buckley, 2009). Vegetation removal and waste accumulation, seen in the United States, for example, also occurs with abundance on Indian landscapes (e.g., Bisht, 1994; Farooquee, Budal, & Maikhuri, 2008; Gupta, 1998; Kuniyal, 2002; Madan & Rawat, 2000, Mahapatra, Vasishta, & Pandey, 2010; Nigam, 2002; Rai & Sundriyal, 1997; Silori, 2004, Singh, Mal, & Kala, 2009). The notable difference, however, is that those impacts can occur in dissimilar societal and cultural milieus. The idea for this research began when we noticed that Indian scholars appealed for the implementation of environmental education, like the popular LNT program, to mitigate visitor impacts due to tourism (e.g., Kuniyal, 2002; Madan & Rawat, 2000; Nigam, 2002; Singh, et al., 2009).

Minimal impact programs are used to check and manage visitor impacts to protected areas that result in changes to resource or social conditions that are less than desirable by land managers and visitors to the area (Marion & Reid, 2007). These programs have been effective in changing individual behavior and curbing visitor impacts in the Western contexts in which they were formulated (Buckley & Littlefair, 2007; Marion & Reid, 2007). However, the universal efficacy of these programs is largely assumed. To illustrate this argument, we emphasize that LNT was created to be an education-based response to expansion of public land use that resulted in degradation of recreational areas and land management challenges in the United States (Marion & Reid, 2007). LNT is arguably the most popular and effective program of its kind in the world, but it has been exported to countries with an array of historical, cultural, social, and environmental contexts than in which the program was created (Serenari, et al., 2013). In an interview with a senior official at a premier guide training school in India, the use of LNT as the program to train future mountain guides was telling (permission to see the actual curriculum was not responded to). The visit to the mountaineering institute affirmed that the best and most influential guide instructors in India have found merit to base their outdoor travel behavior training in accord with the Western minimal impact discourse.

We also observe this reliance on Western rationale, experience, science, and logic, which comprises the minimal impact discourse, to address visitor-protected area management issues elsewhere around the world. For example, scholars have documented the application of planning and managing frameworks such as Limits of Acceptable Change and Visitors Experience and Resource Protection in Thailand and Goa (Roman, Dearden, & Rollins, 2007; Akhtar & Shah, 2012), Protected Area Visitor Impact Management (PAVIM) framework in Latin America (Farrell & Marion, 2002), and LNT in Malaysia (Abdullah & Weng, 2011).

Problematically, our literature search unearthed three assumptions that support the implicit belief that the use of minimal impact programs to train, educate, and change
behavior will be successful anywhere they are deployed. First, mobilization and assimilation of minimal impact program practices, systems, and knowledge will transfer regardless of the audience and the cultural context (García-Almeida et al., 2011). Second, neocolonialist predispositions will not hinder uptake of the information and skills presented (Ziguras, 2001). Lastly, Western conceptions of “perfect nature” (Vance, 1997) and the wilderness experience (Ryan, 2002)—both crystallized as land management policy in Western contexts—are either already engrained in non-Western societies or is not perceived as an obstacle.

India was an ideal place to examine these assumptions and guides an ideal unit of analysis. We also found that unlike within the North American literature, there is a scarcity of information on what domestic visitors, including outdoor professionals from non-Western countries believe are desirable conditions as they visit protected areas. This is especially an interesting area of research in a country like India, which has seen a rise in the middle-class that has made up the majority of visitors to India’s protected areas (Indian Council, 2008). Without such information, we wondered how use of minimal impact programs could be justified. India served as inspiration to ask, What is desired and expected when visitors travel to protected areas in their own countries or outside of ecotourism? What impacts are normative, acceptable, and negative? What is “nature” and who defines it? Should the landscape in protected areas be managed in a manner that reflects the ideal types of Western countries? If so, what is the best method of influencing behavior and beliefs to promote desired behavior? We currently have few answers to these questions.

Summary of Design, Methods, and Motivation for Reflections

Design and methods. We studied adventure (whitewater rafting and trekking), rather than ecotour guides to explore some of these questions using the theory of planned behavior (Ajzen, 1991). It was important to our study that our convenient sample (n = 68) contained guides who may or may not engage in pro-environmental behavior. Adventure guides are not bound to particular set of behaviors like ecotour guides; but we argue because they are nature guides, they have been assumed to be (Serenari et al., 2012).

We conducted exploratory research on adventure tour guides and pro-environmental behaviors in Garhwal, Uttarakhand, India over five weeks from late May through the end of June 2009. Garhwal harbors numerous protected areas, wildlife sanctuaries, and reserves. Several of these protected areas, such as Gangotri National Park, Nanda Devi Biosphere Reserve, Valley of Flowers National Park, and Govind Pashu Vihar are in the middle and high peaks regions of the Indian Himalaya, where we conducted our study. We used content analysis, survey, and observation methods. In this paper, we draw much from our literature search and observations in the field to present the lessons learned in this paper. Of the 68 guides surveyed, most were employed as whitewater rafting guides (36.8%), followed by trekking guides (29.4%) and those who were both whitewater rafting and trekking guides (26.5%). Most of the quantitative and qualitative findings from these studies are not presented here since they merely provide the impetus to describe a cautionary tale concerning the implementation of minimal impact programs in a non-Western protected area context. We refer the reader to Serenari et al. (2012) and Serenari et al. (2013) for additional analysis of the data on intention to perform pro-environmental behavior and related salient beliefs, respectively. We do not present that data here, but use those works as a springboard for fresh insights that inform our lessons learned.

We employed an individual psychological perspective in our work because minimal impact programs are designed to change the belief system of the individual (Jones & Bruyere, 2004). We employed a survey design and distributed a paper questionnaire (administered...
in Hindi and English) that was categorized into two sections. In the first section, we asked 25 questions using a semantic differential scale to measure guide intention, attitude, social norms and perceived behavior control regarding the performance of three visitor behaviors that are environmentally significant (Serenari et al., 2013; Serenari et al., 2012): (1) packing out trash (to collect throughout the trip and carry out of the jungle), (2) burying human waste during the trip and (3) cutting living trees for firewood. The second section comprised 18 open-ended questions used to elicit salient beliefs that included the same three behaviors, save for the rephrasing of the aforementioned number (3), re-written so that guides refrain from cutting living trees for firewood. Questionnaires were administered by frequenting adventure tour operators and guide agencies in Joshimath, Rishikesh, and Uttarkashi, India, and asked guides present to participate in the study or to ask someone they knew if they would like to participate. Several guides also agreed to be observed for research purposes during rafting and trekking trips to provide further insights into the behavior of guides in the field. Subjects were not made aware why they were being observed.

The manuscripts and field notes produced have led us to reflect on what changes might be made to minimal impact programs now that the content of such programs has been globally exported. We discovered that although guides appear to hold a semblance of Western conceptions of nature, there are a number of unexplored factors stemming from their residence within a unique non-Western society and cultures that may dictate how guides actually behave while guiding. This includes societal norms, internal beliefs, and external influences. We therefore posit that since the application and scope of minimal impact programs is now global, with respect to objectives, techniques, and curriculum, the conversation on this topic should be expanded based on a sound preliminary understanding of non-Western populations being served. The lessons that follow lead to a greater appreciation for how minimal impact programs can help and hinder protected area management efforts in non-Western countries. Some of these lessons overlap, but all exercise special attention to the principal of contextuality as it relates to cross-cultural transfer of minimal impact knowledge.

Lessons Learned

Lesson 1: Environmental impacts still occur in Garhwal in abundance despite an appeal to pro-environmental behavior. In India, where tourism and recreation are growing and protected area infrastructure is relatively inadequate, resultant impacts have been documented and continue to persist (Bisht, 1994; Farooque et al., 2008; Gupta, 1998; Silori, 2004; Kuniyal, 2002 & 2005; Singh et al., 2009). These authors commonly detailed intense deforestation and rampant garbage. Deforestation has been largely attributed to religious tourists and pilgrims, while the accumulation of organic and inorganic waste has been attributed to mountaineers, religious tourists and pilgrims, and trekkers. Field observations in Garhwal and a literature search revealed that environmental impacts in protected areas were still occurring intensely despite formal efforts to educate visitors and guides through signage, regulations, and training. For instance, camping permits forbid cutting trees for fires and plastic bags and bottles were explicitly banned in the popular Gangotri National Park (Figure 1). The former behavior has been discouraged in the park by employing visitor limits and display of a large afforestation project that began in 2001. The latter policy was not well heeded by park visitors as evidence by the enormous quantity of full sacks used by the trail crews to collect plastic (Figure 2). Human fecal waste accumulation was also observed to be in abundance (Figure 3) though not explicitly addressed by park policy. Decrepit steel trash bins and campfires were set ablaze to lessen trash but resulted in the wide dispersal of inorganic waste. One behavior observation during a whitewater rafting trip proved to be revealing and highlighted the overlooked influence of power dynamics in performance of pro-environmental behavior (Harrison, 2001). An Indian rafting participant on another rafting trip tossed in empty plastic bottle onto the rocks along the Ganges during a break. The rafter’s guide quietly retrieved the bottle, sans

4 Researcher notes based on field observations and conversations with guides.
reprimand of the bottle-tosser. The casual outsider would likely surmise that there was no pre-trip expectation set or minimal impact training given. However, analysis of Indian society revealed that other factors, including a historical and deep rooted power imbalance that stems from the outlawed, but viable, caste system, may trump dominant minimal impact discourse.

Figure 1. Plastic is banned in Gangotri National Park.

Figure 2. Burlap sacks full of plastic
Lesson 2: A problematic paucity of domestic perceptions of acceptable environmental behavior and conceptions of nature exists. After an extensive literature search and many summer seasons (equating to years) spent in Garhwal by one member of our research team, we find that minimal impact education programs in Garhwal have been put in place without much consideration for domestic visitor perceptions of acceptable behavior or problems associated with competing conceptions of nature (Bosak, 2008). The end result could be an undermining of efforts to curb visitor impacts. Use restrictions and bans on certain behaviors have addressed impacts to Gangotri and Valley of Flowers National Parks, for example, and strive to bring Garhwal’s national parks up to Western standards. Yet, impacts still occur with abundance despite efforts to curb environmental impacts. We ask why?

It is common to fault poor planning and infrastructure for the litany of environmental impacts from visitor use in Garhwal (Gupta, 1998). Our observations concur with this declaration. However, India’s protected area decision makers have found it necessary to advocate outdoor travel norms that coincide with societal religious norms. For example, littering, but not other behaviors that are equally problematic by LNT standards (e.g., burying human waste, feeding animals), is in conflict with (Hindu or Buddhist) spirituality (Figure 4). In fact, some behavioral norms coveted by LNT and required by Indian protected area policy to leave the area “cleaner” than it was found (Uttarakhand Forest Department, 2011) contradict those norms we observed in the field or found in our data. Guides needed to create beach campfires and leave them burning all night for protection from leopards, despite policy stating fires only being permitted on a metallic plate and not beyond 11p.m. (Mahapatra et al., 2010). Guides also deliberately left food scraps for animals to eat, as one guide stated, “to feed the animals.” Guides observed in Gangotri National Park and along the protected banks of the Ganges River also did not dig cat holes to cover up their human waste, while some guides surveyed believed human waste would not go away or it would spread if buried. Others indicated that performance of pro-environmental behavior depended on the situation (e.g., weather, fatigue). On the other hand, some guides packed out some of their trash (following policy and guidelines), reprimanded porters for littering, covered the ashes left behind from a fire, or collected only downed wood for fires (explicitly followed forest department policy).

Determining the magnitude, ecological and social significance, and acceptability of recreation impacts among visitors in America helped spur the usefulness of LNT. This was achieved through rigorous study of visitor perceptions and preferences to help provide a baseline public for land managers and was helped by coinciding land manager and visitor conceptions of nature (Marion & Reid, 2007; Guha, 1989). Conversely, qualification
of social acceptability and desirability of protected area resource impacts and behavior (Borrie, McCool, & Stankey, 1998), from the perspectives of the Garhwal visitors, has gone largely unaddressed. Without input from visitors, including guides, protected area management decisions predicated on unilateral and authoritarian decision making and grounded in Western minimal impact discourse may not be effective to achieving resource protection goals in Garhwal.

**Figure 4.** A cultural bent to resource management

**Lesson 3: Prescriptive natural resource policy should be assessed for contextual practicality, efficacy, and impacts on visitors, including guides.** In Indian society, it is not uncommon to see empty plastic water bottles tossed out of rafts or bus windows, burlap sacks of trash thrown into ravines, or view a civilian relieve themselves alongside a road. We wish to emphasize here that many perceived environmentally unfriendly behaviors (especially to non-Indians) are compulsory and normative in Garhwal and embedded within a much larger societal context that is not fully understood in the scholarly literature or by those who seek to deploy minimal impact programs. Support for this observation comes from triangulation of our data: 1) our review of literature, 2) years spent working in India, and 3) survey responses by guides (e.g., leaving food scraps for animals, not burying waste). In Garhwal, morality, economic organization, constitution, and characteristics make guides and the society in which they reside a unique collective that needs to be understood on its own merits (Durkheim, 1982) and in a recreation and tourism context. Is it practicable or just to place the Western pro-environmental behavior ideal type superjacent to those of Indians? Our research indicates that because it is not fully understood how the majority of visitors to India’s protected areas (India’s citizens) treat or think about the environment on a daily basis or how those conceptions materialize during outdoor travel, caution should be exercised. How frequent do Indian guides and visitors consider “how small (they) are in front of nature” and does such a mentality translate to bottle-throwing or packing out trash, for example.

Moreover, our research discovered personal barriers and constraints for guides that might result in status quo behavior, despite policy, guidelines, and advocating minimal
impact practices. Some of our findings are similar to those noted by Marion and Reid (2007) who also found that certain considerations (e.g., desire for a clean environment, adherence to policy, and limitations) may dictate behavior during travel in the outdoors. For instance, guides stated that level of “environmental literacy,” presence of predators (leopards commonly), guide-client relationships, insufficient means to pack out trash/bury waste, and inhospitable weather and terrain may influence them to disregard policy (Serenari et al., 2013). Scholars should investigate the origin of these considerations and limitations in the context of the Garhwal guide and tourist to distinguish how guides may deal with constraints and overcome barriers. As social theorists like Weber, Durkheim, and Goffman have detailed, society plays an important part in how individuals think and desire to act. Likewise, land managers, tour operators, and clients play a role in influencing whether guides perform certain environmental behaviors in Garhwal. Still, guide behavior may be more in line with specific laws or customs (e.g., tour operator policy to pack out trash, but not bury human waste) that are unique to the guide population, associated with repeated behavior and habit, and based on certain considerations and limitations. In this case, we do not feel merely providing “compelling rationales that resonate with target audiences” (Marion & Reid, 2007, p. 22) will be solely effective in this or other geographies where context matters. We do feel our findings speak to the need for clarifying the practicality, efficacy, and outcomes of resource management policies given this highly complex and dynamic social environment that guides operate in.

**Lesson 4: Conduct goodness-of-fit test on minimal impact program curriculum and delivery mechanism.** The tendency among scholars to supersede other minimal impacts practices, knowledge, or guidelines through the advocacy of the dominant minimal impact discourse piqued our curiosity. This is even more intriguing when we consider Ryan (2002), who highlighted the difficulty of altering perceptions of ourselves and relations with the environment as our subjectivities are derived from “powerful and complex processes that work beyond a single person’s agency” (p. 281). As noted earlier, we find that what are acceptable and unacceptable outdoor norms to Americans, Europeans, and other commonly studied tourism and recreation locations may not be applicable to many other geographic areas, particularly non-Western ones, at this time. This is especially the case if subjectivities are based on a rich and unique environmental ethic that has been sculpted and embedded over decades and centuries.

We thus hypothesize that the current minimal impact curriculum and delivery process will need to attend to this quandary and bring to light any ambiguities between relevant factors, conditions, and variables. One example in practice that can serve as a guide is the creation of the PAVIM framework (Farrell & Marion, 2002) that was crafted with special attention to a specific Latin American context. There is a dearth of research on this topic, however, and further research is necessary to test our hypothesis. Yet, in addition to the compelling rationales mentioned earlier, our findings lead us to believe that it should behoove trainers of minimal impacts principles to make guides aware of their current constraints, barriers, and facilitators to pro-environmental behavior based on the composition of the guide’s sociocultural setting. Accordingly, an appeal to modify behavior may be achieved by first analyzing and considering guides as a collective entity rather than individually. These rationales may be grounded in topics of cultural specificity, including the socio-cultural, economic, and political factors that dictate societal and individual behavior. These factors would include the influence of religious beliefs, social organization, and difference in tourist expectations based on their origin. It seems desirable to work with and develop “cultural experts” and “insiders” (Handwerker, 2001) who understand the limitations and opportunities associated with minimal impact programming.

**Lesson 5: Cross-cultural research must continue to provide insights and options for decision makers.** Natural and social science research must attempt to address the gaps in the literature and build models and frameworks to inform theory and better understand
domestic visitors to outdoor destinations and professionals serving those areas. Extensive research on indicators and standards has laid the foundation for contemporary Western park and land use planning and management frameworks. Limits of Acceptable Change (LAC) (Stankey, Cole, Lucas, Peterson, & Frissell 1985), Visitor Impact Management (VIM) (Graefe, Kuss, & Vaske, 1990), and Visitor Experience and Resource Protection (VERP) (Manning, 2001) are products of years of data collection and partnerships with U.S. land managers. Land managers and researchers should attempt to initiate a similar collaborative effort and create a body of knowledge in India and other non-Western countries that will help achieve protected area objectives, but also complement user perspectives.

Final Observations

How do these lessons apply to the protected areas of the world? Using the case study presented here, we can extrapolate our lessons to those who desire to employ minimal impact programs in new geographic frontiers, particularly as protected area-based tourism and recreation continues to expand in less industrialized countries (Buckley, 2009). However, we believe decision making is at a fork in the road: programs can reflect dominant minimal impact discourse, unfazed by the challenges of cross-cultural transfer, or they may be constructed to address the concerns outlined in this paper in an effort to create just and practicable minimal impact programs around the world. We now name two dimensions we feel this research directly impacts and bring the two together with an outline of the larger picture.

Protected area management. Many that struggle to manage environmental impacts related to increased tourism and recreation in protected areas, or countries new to protected area management, have turned to Western expertise and programs to mitigate such impacts. We have studied a portion of one such country, India, where citizens are increasingly moving out of peasant life and, through globalization, acquiring the material means to travel into protected areas as tourists or outdoor recreationists. Consequently, India’s protected areas have experienced an increase in visitors and visitor impacts. Many visitors are bringing with them behaviors that are undesirable by land managers and global protected area standards, but are normative in their society. India does not stand alone in this example. China, for example, may be inserted in its place. We have, however, problematized the cross-cultural transfer of Western experience, ideology, and values that have served as the foundation for a global minimal impact discourse. Through the use of minimal impact programs, this discourse has been deployed as a protected area management strategy to curb undesirable visitor behavior. Our research revealed that the attempt to cross cultures has lacked context and has failed to address the deep philosophical issues associated with environmental knowledge production and deployment. We posit that these are the chief reasons impacts are still occurring in protected areas in non-Western geographies despite the best efforts of land managers and trainers.

Guide training. We also observe that the dominant Western minimal impact discourse serves as the foundation for nature guide (eco and adventure) training to minimize impact during outdoor travel to natural areas and by targeting the individual’s psyche and values. This training has commonly subscribed to assumptions of guides as role models of pro-environmental behavior writ large (Serenari et al., 2012). Similar to a corporation that is expanding practices overseas, however, minimal impact training may result in inadequate uptake if our analysis holds true. Due to contextuality, as well as motivations (Buckley, 2009), even the most prescriptive guide training in minimal impact principles and skills may lead to issues with cross-cultural transfer of environmental education content, dissemination of related information to clients and team members, and manifestation of any change in behavior leading to reduced environmental impacts. Our investigation into a small population of Garhwal adventure guides showed that there is a highly dynamic, complex, and unique society and mix of cultures at work that appear to influence guide behavior.

The larger picture. Researchers and land managers looking to minimal impact discourse and programs in India and other countries that harbor, manage, and protect the
“global commons” under the principle of wild and unspoilt nature are left with questions that will challenge reified (and neo-colonialist?) ways of thinking about how to handle visitor impacts in protected areas. Land managers tacitly depend on guides to steer visitors towards pro-environmental behavior and serve as an example of ideal behavior, though guide commitment to minimal impact travel principles may be deficient (Buckley, 2009). This commitment may be aggravated by socio-cultural factors that have been overlooked thus far in the literature. So, what happens when wild nature does not translate cross culturally, as Han (2008) showed? Should resource managers then rethink the utility of Western-conceived minimal impact programming if further research discovers failures in cross-cultural transfer of minimal impact knowledge or contributes to cultural or moral crises (Han, 2008)? Is Western ideology, logic, and protected area science the best means to steer protected area management decisions universally? What is the outlook for global protected areas if alternative views of nature and pro-environmental behavior guide visitor use planning and management? We can only surmise that a hybrid between Western and non-Western thought, such as the inclusion of the aforementioned “cultural experts,” would be fruitful despite the limited geographic range of our exploratory study.

Future Research and Its Limitations

For the moment, we have shown that it has not been qualified how well Western minimal impact programs fit in non-Western contexts. We also do not know what factors may drive these programs to failure or success, under what conditions they would do so, and the applied implications of this cognizance. With ample resources, Western researchers paying special attention to reflexivity could continue to serve as experts from which this body of research can move ahead. This research should strive for methods that lend to productive comparative analysis among cases to examine factors, variables, and conditions that lead to causes of success and failure. Exploratory studies like ours can help build the foundation on this topic, but we do not advocate that these be the norm.

Naturally, there will be limitations and restrictions that frustrate the completion of this research in non-Western countries. For instance, a creditable understanding of minimal impact program efficacy may take years of sound research that stretches funding and makes little immediate impact. There are also immediate questions that need to be addressed so that the best research may be conducted. One member of our research team, as an American entering into a foreign country for the first time and with a few Indian contacts, had to work closely with the other team members to address questions of appropriate methodology, anticipate logistical complications, and deal with access to supporting documents upon arrival back to the U.S., among other factors, in order to achieve the limited insight we did on this issue. This is not so much of a problem as it is a challenge to future research originating in the West. We do highlight the production of partnerships between committed scholars within participating countries and those with varying degrees of knowledge and tools would help research design, data collection, and analysis go more smoothly and be more productive on this topic. We are optimistic that the lessons we have shared in this paper will help spur ideas and inquiry that result in informed decisions on how minimal impact training can and should proceed in Garhwal and elsewhere around the world.

References


