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## **Adaptive Co-Management Thresholds: Understanding Protected Areas Policy as Normative Conflict**

*Jonathan Liljeblad, J.D., Ph.D.\**

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### **Abstract**

Protected areas have increasingly become a policy tool in biodiversity conservation. The popularity of these areas is reflected by increases in both the absolute number and geographic extent of the protection granted. In implementing policy, modern protected areas have turned to adaptive co-management strategies to resolve frequent issues between environmental welfare and human interests. Adaptive co-management is perceived as an effective policy strategy to resolve such problems in that it appears to allow a greater degree of procedural justice by calling for greater participation by local communities in policy decisions, thereby enabling a greater likelihood for distributive justice in locating nature-human interdependencies responsive to diverse affected interests.

This discussion, however, posits that adaptive co-management as a policy strategy is flawed because its inherent dynamic destabilizes its capacity to resolve potential conflicts between protected areas and local communities. This paper construes such situations epistemologically, asserting that the dynamic of adaptive co-management extends beyond law and policy to an essential normative conflict. Hence, the adaptive co-management model should be viewed as a normative subject requiring a normative analysis.

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## I. Adaptive Co-Management Thresholds: Understanding Protected Areas Policy as Normative Conflict

Protected areas have increasingly become a policy tool in biodiversity conservation. The popularity of these areas is reflected by increases in both the absolute number and geographic extent of the protection granted. The World Database on Protected Areas, a joint project of the United Nations Environment Programme and the World Conservation Monitoring Centre, observes that the total number of protected areas in the world over the 100-year span from 1911 to 2011 increased from 154 to more than 155,000.<sup>1</sup> This increase represents an expansion in area from approximately 113,00 acres to more than 24 million acres of marine and terrestrial space.<sup>2</sup>

When implementing policy, modern protected areas have turned to adaptive co-management strategies to resolve frequent issues between environmental welfare and human interests. Protected areas have been charged with creating or exacerbating tensions in environment-human relationships, because they often seek to conserve natural resources by altering the behavior of local communities. To the degree that this goal involves constricting local communities from their historical use of the environment, affected groups may feel marginalized and antagonized by the granting of protection to these areas.

Adaptive co-management is perceived as an effective policy strategy to resolve such problems because it appears to allow a greater degree of procedural justice by supporting greater local community participation in policy decisions. Such participation enables a greater likelihood for distributive justice by supporting nature-human interdependencies that are responsive to diverse affected interests. These aspects of adaptive co-management are believed to ameliorate the disjuncture between conservation concerns and human activity, and thereby prevent antagonism against protected areas.

This discussion, however, asserts that adaptive co-management as a policy strategy is flawed because it has an inherent dynamic that threatens its capacity to resolve potential conflicts between protected areas and local communities. This dynamic arises from adaptive co-management's use of "thresholds of potential concern" (alternatively called "thresholds of probable concern"),<sup>3</sup> which can operate to generate an internal contradiction

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1. WORLD DATABASE ON PROTECTED AREAS, *Growth in global number of protected areas* (1911-2011), <http://www.wdpa.org/Statistics.aspx> (2012).

2. *Id.*

3. NATIONAL RESEARCH COUNCIL, *ADAPTIVE MANAGEMENT FOR WATER RESOURCES PLANNING* (2004); Byron Williams, *Passive and Active Adaptive Management: Approaches and an Example*, 92 J. ENV'T'L MGMT. 1371, 1371 (2010) [hereinafter cited as Williams, *Passive and Active Adaptive Management*]; Byron Williams, *Adaptive Management of Natural Resources*

that leaves it vulnerable to the same historical criticisms of nature-human dichotomies that have afflicted past protected areas policies.

This paper analyses this situation as one of epistemology, in that the dynamic in adaptive co-management extends beneath law and policy to an underlying normative conflict and hence should be viewed as a normative issue requiring normative responses. This calls for resolution through greater attention to the normative discourse underlying adaptive co-management. This paper identifies various epistemological approaches that would allow policy-makers to engage adaptive co-management as a normative discourse, and thereby better respond to the challenge of the model's internal conflict.

This discussion uses the term "protected area" in keeping with the definitions popularized by the International Union for the Conservation of Nature ("IUCN") and the Convention on Biological Diversity ("CBD"). The IUCN definition defines a protected area as a "clearly defined geographical space, recognised [sic], dedicated, and managed through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values."<sup>4</sup> Similarly, the CBD defines a protected area as a "geographically defined area which is designated or regulated and managed to achieve specific conservation objectives."<sup>5</sup> It should be noted that despite such definitions, the term has experienced a fluid and expansive nature over history.<sup>6</sup>

In addition, for purposes of this discussion the terms "protected areas model" and "protected areas paradigm" are seen as interchangeable. Both refer to philosophical approaches to the underlying protected areas policy with respect to environmental welfare, human interests, and nature-human relationships. The terms are also seen as encompassing "protected areas practices" associated with each philosophy in terms of laws, rules, institutions, and principles.

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– *Framework and Issues*, 92 J. OF ENV'T'L MGMT. 1346 (2010) [hereinafter cited as Williams, *Adaptive Management of Natural Resources*].

4. INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE, *What Is a Protected Area?*, [http://www.iucn.org/about/work/programmes/gpap\\_home/pas\\_gpap/](http://www.iucn.org/about/work/programmes/gpap_home/pas_gpap/).

5. CONVENTION ON BIOLOGICAL DIVERSITY, *Article 2 – Terms*, available at <http://www.cbd.int/convention/articles/?a=cbd-02>.

6. See generally Michelle Kalamandeen & Lindsey Gillson, *Demything "wilderness": Implications for Protected Areas Designation and Management*, 16 BIODIVERSITY CONSERVATION 165 (2007); Harvey Locke & Philip Dearden, *Rethinking Protected Area Categories and the New Paradigm*, 32 ENV'T'L CONSERVATION 1 (2005); Adrian Phillips, *Turning Ideas on Their Head: The New Paradigm for Protected Areas*, 20 THE GEORGE WRIGHT FORUM 8 (2003).

## **A. Background**

Adaptive co-management is a strategy to implement protected areas policy. To understand the issues with adaptive co-management vis-à-vis the tensions between protected areas and local communities, it is useful to place it within a historical context of protected areas paradigms.

The literature on protected areas is extensive, with the relationships between protected areas and local communities having received substantial study. This scholarship traces the historical development of protected areas to nineteenth century antecedents in North America, Australia, New Zealand, and South Africa, but note that the creation of Yellowstone National Park in the United States was the inspiration for the modern model of protected areas.<sup>7</sup> This model was adopted by Western empires and propagated throughout colonial possessions. [Cite Needed] <sup>8</sup>Michelle Kalamandeen and Lindsey Gillson, along with Jules Pretty and Michel Pimbert, argue that protected areas formed along the U.S. national parks model are characterized by policies that seek to remove the human presence from the natural environment, frequently through “top-down” management structures where policy is set by the state and transnational entities, under the assumptions that human activity is harmful to the environment and that there is a pristine, static state of “wilderness” wherein nature is devoid of humans.<sup>9</sup>

This model, however, has been subject to criticism. Critics argue that the archetype of pristine nature absent human activity is wrong, noting research that asserts the environment is in constant flux and that it has a legacy of human interaction.<sup>10</sup> In addition, critics contend that management

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7. See generally DAN BROCKINGTON, et al., *NATURE UNBOUND: CONSERVATION, CAPITAL, AND THE FUTURE OF PROTECTED AREAS* (2008); Wolfram Dressler, et al., *From Hope to Crisis and Back Again? A Critical History of the Global CBNRM Narrative*, 37 ENV'T'L CONSERVATION 5-15 (2010); Kalamandeen & Gillson, *supra* note 6; Locke & Dearde, *supra* note 6; Phillips, *supra* note 6.

8. *Id.*; Jules Pretty and Michel Pimbert, *Beyond Conservation Ideology and the Wilderness Myth*, 19 NAT. RES. FORUM 5 (1995).

9. See Kalamandeen & Gillson, *supra* note 6; Phillips, *supra* note 6; Pretty & Pimbert, *supra* note 8.

10. See generally D.R. Foster & G. Motzkin, *Interpreting and Conserving the Openland Habitats of Coastal New England: Insights from Landscape History*, FOREST ECOL. MGMT. 127(2003) [hereinafter cited as Foster & Motzkin, *Interpreting and Conserving*]; Lindsey Gillson, “As Earth’s Testimonies Tell”: *Wilderness Conservation in a Changing World*, 7 ECOLOGY LETTERS 990-998 (2004) [hereinafter cited as Gillson, *As Earth’s Testimonies Tell*]; Lindsey Gillson, et al., *Representing Environments in Flux: Case Studies from East Africa*, 35 AREA 371 (2003) [hereinafter cited as Gillson, et al., *Nothing Endures*]; John Kricher, *Nothing Endures But Change: Ecology’s Newly Emerging Paradigm*, 5 NORTHEASTERN

structures based on such assumptions are problematic, because they marginalize local communities.<sup>11</sup> By centralizing decision-making, they restrict the political power of local communities. By disrupting access to natural resources, they constrain the economic utility of those resources to local people. By altering behavior towards the environment, they force social and cultural changes among affected communities. As a result, protected areas that follow the historical U.S. national park model are accused of fostering antagonism between protected areas and affected human populations.<sup>12</sup> Critics also claim that such nature-human dichotomies go so far as to threaten human rights, and that the emphasis on a natural environment independent of humanity acts to suppress local human populations, including their international social, economic, and cultural rights, rights to self-determination, and rights to sovereignty.<sup>13</sup>

Such critiques have led to a different model of protected areas driven by a desire to integrate improved scientific understanding of ecology, to offer greater sensitivity to social and cultural contexts, to match developments in environmental and human rights law, and to respond to calls for decentralization and devolution in government.<sup>14</sup> The new model sees interdependent relationships between environmental conservation and the socio-economic welfare of local communities, and seeks to align the interests of both to generate policy structures that involve local communities and resolve their potential tensions with environmental

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NATURALIST 165 (1998); G.W. Luck, et al., *Alleviating Spatial Conflict Between People and Biodiversity*, 101 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 182 (2004); G. Motzkin and D.R. Foster, *Grasslands, Healthlands, and Shrublands in Coastal New England: Historical Interpretations and Approaches to Conservation*, 29 J. OF BIOGEOGRAPHY 1569 (2002) [hereinafter cited as Motzkin & Foster, *Grasslands*]; CLAUDIA PAHL-WOSTL, *THE DYNAMIC NATURE OF ECOSYSTEMS* (1995); Pretty & Pimbert, *supra* note 8; Jianguo Wu & Orie Loucks, *From Balance of Nature to Hierarchical Patch Dynamics: A Paradigm Shift in Ecology*, 70 Q. REV. OF BIOLOGY 439 (1995).

11. See generally William Adams, et al., *Biodiversity Conservation and the Eradication of Poverty*, 306 SCI. 1146, 1147 (2004); BROCKINGTON, *supra* note 7; Dressler, *supra* note 7; Elizabeth Garland, *The Elephant in the Room: Confronting the Colonial Character of Wildlife Conservation in Africa*, 51 AFRICAN STUDIES REV. 51 (2008); Kalamandeen & Gillson, *supra* note 6; Locke & Dearden, *supra* note 6; Phillips, *supra* note 6.

12. *Id.*

13. STEVEN BRECHIN, et al., *CONTESTED NATURE: PROMOTING INTERNATIONAL BIODIVERSITY WITH SOCIAL JUSTICE IN THE TWENTY-FIRST CENTURY* (2003); JIMIGOE, *CONSERVATION AND GLOBALIZATION: A STUDY OF NATIONAL PARKS AND INDIGENOUS COMMUNITIES FROM EAST AFRICA TO SOUTH DAKOTA* (2004); MONIQUE BORGERHOFF & PETER COPPOLILLO, *CONSERVATION: LINKING ECOLOGY, ECONOMICS, AND CULTURE* (2005).

14. BROCKINGTON, *supra* note 7; Dressler, *supra* note 7; Phillips, *supra* note 6.

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objectives.<sup>15</sup> Among the strategies utilized to support this model of protected areas is the concept of adaptive co-management.

Adaptive co-management was designed to address a combination of protected areas problems and can be seen as a confluence of two different strategies: adaptive management and co-management. “Adaptive management” appears in scholarly literature in fields as diverse as business, science, systems theory, and ecology. It involves theories that call for an iterative decision-making process of repeated learning and adaptation of policy to better respond to the dynamic complexity of the environment.<sup>16</sup> “Co-management,” alternatively called “cooperative management,” involves a range of approaches that seek to devolve decision-making away from the national government and international entities towards local communities, with the belief that this will alleviate conflicts between the natural ecosystem and human interests.<sup>17</sup> The convergence of these strategies into “adaptive co-management” enables a greater range of environmental and human perspectives, with management integrating scientific and experiential knowledge as well as bridging different interests at international, national, and local levels.<sup>18</sup>

Adaptive co-management, however, has come under criticism of its own, with charges that its dual goals of environmental protection and local development have resulted in policies that have done neither.<sup>19</sup> In particular, the literature has identified several major issues in the application of adaptive co-management. Critics argue that in practice it results in slow decision-making, creates compromises that harm both

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15. BROCKINGTON, *supra* note 7; Phillips, *supra* note 6; Pretty & Pimbert, *Wilderness Myth*, *supra* note 8; Donna Sheppard, et al., *Ten Years of Adaptive Community-Governed Conservation: Evaluating Biodiversity Protection and Poverty Alleviation in a West African Hippopotamus Reserve*, 37 ENV'T'L CONSERVATION 270, 270 (2010).

16. NATIONAL RESEARCH COUNCIL, *ADAPTIVE MANAGEMENT FOR WATER RESOURCES PLANNING* (2004); Byron Williams, *Passive and Active Adaptive Management: Approaches and an Example*, 92 J. ENV'T'L MGMT. 1371, 1371 (2010) [hereinafter cited as Williams, *Passive and Active Adaptive Management*]; Byron Williams, *Adaptive Management of Natural Resources – Framework and Issues*, 92 J. OF ENV'T'L MGMT. 1346 (2010) [hereinafter cited as Williams, *Adaptive Management of Natural Resources*].

17. Fikret Berkes, *Devolution of Environment and Resources Governance: Trends and Future*, 37 ENV'T'L CONSERVATION 489, 489-90 (2010); Lisen Schultz, et al., *Participation, Adaptive Co-Management, and Management Performance in the World Network of Biosphere Reserves*, 39 WORLD DEV. 662, 662-663 (2010).

18. Berkes, *supra* note 17; Schultz, *supra* note 17.

19. Kai Chan, et al., *When Agendas Collide: Human Welfare and Biological Conservation*, 21 CONSERVATION BIOLOGY 59, 60 (2007); Sheppard, et al., *supra* note 15, at 270.

environmental and human concerns, and dilutes the role of scientific knowledge by frequently acceding to local interests. In addition, critics contend that despite its intentions, adaptive co-management often fails to identify and involve relevant stakeholders, and exacerbates inequality by favoring the influence of some groups over others, creating or buttressing elites who control management processes.<sup>20</sup> It is also seen as ignoring the continuum of human interactions with the environment that differ depending on both human and environmental contexts, and as risking a “people-centric” orientation that misdirects protected areas away from the goal of protecting the environment.<sup>21</sup>

These critiques are comprehensive in their assessments of the issues arising from the implementation of adaptive co-management strategies, and they highlight the challenges that arise when addressing the historical tension between protected areas and affected communities. There is, however, another issue in adaptive co-management strategies that threatens its goal of accommodating an interdependent relationship between environmental conservation and human welfare. This paper focuses on this issue, and argues that there is an *internal* dynamic within the concept of adaptive co-management that exposes it to the friction associated with the human-nature dichotomy of historical protected areas management practices.

## II. THE PERSISTENCE OF A HUMAN-NATURE CONFLICT

The modern paradigm of protected areas, with its employment of strategies like adaptive co-management, is ostensibly intended to address the policy conflicts arising from the environment-human dichotomy fostered by the historical U.S. national park model. The convergence, however, of adaptive management and co-management creates an internal tension of constraints on the human-nature relationship which have the potential to result in a conflict between protected areas and local communities, and thus frustrate its ability to escape the criticisms charged against past protected areas models. This problem is best understood by focusing first on adaptive management and co-management separately, so as to identify the tensions between them when they are combined as adaptive co-management.

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20. See generally Chan, *supra* note 19; Dressler, *supra* note 7; Schultz, *supra* note 17; Paige West, et al., *Parks and Peoples: The Social Impact of Protected Areas*, 35 ANN. REV. ANTHROPOLOGY 251 (2006).

21. David Brunckhorst, *Using Context in Novel Community-Based Natural Resource Management: Landscapes of Property, Policy, and Place*, 37 ENV'TL CONSERVATION 16, 21 (2010); Locke & Dearden, *supra* note 6.



### A. Adaptive Management Practices

Viewed separately from co-management, adaptive management avers static conceptions of the environment and recognizes it as being in constant flux by accommodating natural variation within “thresholds of potential concern” or “thresholds of probable concern” (hereinafter “TPC”).<sup>22</sup> These TPCs represent the boundaries of allowed environmental variation. Within the boundaries, management practices allow variation, but variation beyond the boundaries prompts management practices to identify and engage requisite corrective action to return the environment to states within TPCs.<sup>23</sup> Examples of these thresholds include situations of imminent species extinction, natural disasters, permanent ecological change, and ecosystem collapse. Examples of corrective action can be measures upon the physical environment as well as actions upon anthropic stresses affecting the environment.<sup>24</sup>

Adaptive management is intended to be a flexible, experiential decision-making process, which uses feedback about ongoing environmental conditions to adjust management actions.<sup>25</sup> The intent is to accommodate not only developments in scientific understanding, but also changes in decision-making processes made in response to the current science.<sup>26</sup> Under this reasoning, TPCs are not fixed and can be adjusted over time to reflect changes in the preferences of actors involved in management processes.

This latter quality appears to suggest that adaptive management has an inclusive orientation that makes it compatible with co-management approaches, since it allows for participation by any decision-maker. Moreover, adaptive management appears to allow incorporation of their

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22. Harry Biggs & Kevin Rogers, *An Adaptive System to Link Science, Monitoring, and Management in Practice*, in *THE KRUGER EXPERIENCE: ECOLOGY AND MANAGEMENT OF SAVANNA HETEROGENEITY* (Johan du Toit, Harry Biggs & Kevin Rogers, eds., 2003); Kalamandeen & Gillson, *supra* note 6, at 174; N.A. Rivers-Moore & P.W. Jewitt, *Adaptive Management and Water Temperature Variability Within a South African River System: What Are the Management Options?*, 82 *J. ENVTL MGMT* 39 (2007); Freek Venter, et al., *The Evolution of Conservation Management Philosophy: Science, Environmental Change, and Social Adjustments in Kruger National Park*, 11 *ECOSYSTEMS* 173, 174-189 (2008); Williams, *Passive and Active Adaptive Management*, *supra* note 3; Williams, *Adaptive Management of Natural Resources*, *supra* note 3.

23. *Id.*

24. Kalamandeen & Gillson, *supra* note 6, at 174.

25. Williams, *Passive and Active Adaptive Management*, *supra* note 3; Williams, *Adaptive Management of Natural Resources*, *supra* note 3.

26. Williams, *Adaptive Management of Natural Resources*, *supra* note 3.

worldviews and interests into an ongoing management practice flexible enough to adapt to their preferences.

The argument here, however, is that this apparent compatibility is not assured. Rather, co-management can compound issues facing adaptive management in ways that leave unresolved the tensions historically associated with past protected areas practices. This is because the confluence of co-management with adaptive management ties human issues with environmental ones.

### **B. Co-management Practices**

Co-management seeks to involve participation of local communities affected by protected areas, and so seeks to recognize local interests and their political, economic, social, and cultural welfare. These concerns are not isolated vis-à-vis the environment. In particular, the combination of co-management practices with adaptive management means that anthropic interests are connected environmental objectives.

This is consistent with scholarship that recognizes the interdependent nature of the human-environment relationship.<sup>27</sup> Such literature indicates that as much as the status of the protected areas, the environment itself may affect the welfare of local communities, and conversely the political, economic, social, and cultural behavior of human populations may impact the environment.<sup>28</sup>

The existence of an interdependent relationship, however, means that natural and human conditions may not only sustain each other but may also constrain each other; that is, the constraints on one may operate as constraints on the other. Under adaptive management practices, TPCs are constraints marking the boundaries of allowed environmental variation. Because environmental changes may be driven by anthropic activity, corrective action to return the environment to states within TPCs can be viewed as potentially calling for corresponding changes in human behavior, including restrictions on political, economic, social, or cultural practices found to be negatively impacting the environment. This essentially implies that TPCs are not just environmental constraints, but also anthropic ones.

This scenario, unfortunately, risks contradicting co-management objectives. By constraining both components of the environment-human relationship, TPCs operate to restrict the options available for consideration by co-management decision-making processes, thereby limiting the range of

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27. See Foster & Motzkin, *Interpreting and Conserving* *supra* note 10; Kalamandeen & Gillson, *supra* note 6; Luck, et al., *supra* note 10; Motzkin & Foster, *Grasslands*, *supra* note 10.

28. *Id.*

choice that can be pursued to address the human interests associated with protected areas.

The situation is further complicated by co-management's orientation, which looks to greater inclusion of local interests. This involves an expansion in anthropic actors in decision-making. When combined with adaptive management, this results in a potentially dysfunctional situation, with co-management processes working to increase anthropic interests while at the same time adaptive management processes are operating to reduce the policy options available to respond to them.

### **C. Adaptive Co-Management**

As the result, the merging of adaptive management and co-management into adaptive co-management results in an inherent tension. The tension, in essence, is one between adaptive management TPCs seeking to preserve a desired range of states in nature versus co-management attempts to address affected local anthropic interests. For protected areas where TPCs enable constraints on local human activities for the sake of maintaining desired environmental conditions, the tension between adaptive management and co-management risks becoming a disjuncture between them. This would mean that the confluence of both approaches into a unified adaptive co-management model is vulnerable to internal contradictions that threaten to frustrate its aspirations of creating interdependent nature-human relationships to resolve the conflicts between protected areas and local communities.

Such issues recall the nature-human dichotomy that critics have decried in the historical discourse over protected areas paradigms. On one hand, if TPCs are held to preserve a desired state of nature through constraints on human activity, they expose adaptive co-management to the same critiques made against the historical U.S. Yellowstone National Park model in terms of its risk of antagonizing local communities and threatening their human rights. On the other hand, if TPCs are developed through processes granting deference to human activity, they expose adaptive co-management to the critiques of modern protected areas models, such as risking a "people-centric" orientation that misdirects protected areas away from the goal of protecting the environment.

Admittedly, the extent to which TPCs operate as defining criteria in deciding policy towards protected areas can be a function of the management processes and the actors involved in them. It is conceivable that in some scenarios adaptive co-management may produce decisions to accommodate anthropic activity that drives protected areas outside of environmental TPCs, and it is conversely also conceivable that in other scenarios adaptive co-management may produce decisions that call for the containment of anthropic activity to allow the return of protected areas to conditions within environmental TPCs.

Such actions, however, are a function of preferences regarding to what extent environmental welfare and human lifestyles hold priority relative to each other in decision-making, and hence are a reflection of a deeper normative discourse regarding the connection between the natural environment and humanity. Protected areas scholarship observes that conservation preferences and decisions based on those preferences are primarily driven by the worldviews and interests of the actors involved in designing those preferences and decisions.<sup>29</sup> To the extent that worldviews involve “values,” this suggests that there is a normative conflict in values regarding nature-human relationships, and points to the relevancy of pursuing greater understanding of the normative discourse affecting the outcomes arising from protected areas management practices, including adaptive co-management approaches.

It is possible that the conflict posed by TPCs vis-à-vis local communities may be insignificant in situations where TPCs reflect existing local norms regarding appropriate behavior towards the environment. Critics, however, caution against idealizations of local communities as exercising environmentally sustainable lifestyles, or assumptions that such communities will choose environmentally sensitive activity from a palette of policy options.<sup>30</sup> Moreover, just because people hold sustainable values and practices now does not preclude the possibility that they may develop different, nonsustainable values and practices in the future, since scholarship recognizes that culture, to the extent that it embodies values and practices, is highly fluid and subject to constant change, particularly in the context of states experiencing development pressures.<sup>31</sup> In addition, it is not clear that perceptions of communities as being “sustainable” are to be trusted, with scholars noting that such perceptions, whether or not they are substantively true, change through time.<sup>32</sup>

Even in situations where human behavior supports conservation goals, literature exhibits cases where management practices were influenced by international and national preferences that were inconsistent with local

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29. West, *supra* note 20.

30. Phillips, *supra* note 6, at 23-24.

31. See generally Garland, *supra* note 11; Tom Hill, *A Question of Survival, within ALL ROADS ARE GOOD: NATIVE VOICES ON LIFE AND CULTURE* (Terence Winch ed., 1994); Raymond Williams, *Base and Superstructure in Marxist Cultural Theory*, 82 *NEW LEFT REV.* 3 (1973).

32. W.M. Adams J. Hutton, *People, Parks, and Poverty: Political Ecology and Biodiversity Conservation*, 5 *CONSERVATION & SOC'Y* 147 (2007); A. Agrawal and C.C. Gibson, *Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation*, 27 *WORLD DEV.* 629, 640 (1999); Chloe' Marie, et al., *Taking Into Account Local Practices and Indigenous Knowledge in an Emergency Conservation Context in Madagascar*, 18 *BIODIVERSITY CONSERVATION* 2759 (2009).

practices, suggesting that there is a risk that TPCs may be defined to conform to international and national interests in ways that do not conform with the perception of allowable environmental flux of local communities.<sup>33</sup> In which case, the risk becomes not one of nature-human tensions arising from local populations associated with a given protected area, but instead nature-human tensions arising from populations not local to a given protected area, such that tensions arising from a local nature-human conflict are simply replaced by tensions arising from another, more remote nature-human conflict. Either way, the persistence of the nature-human dichotomy remains.

It is possible to justify TPCs as moderating against potential changes in local community behavior that lead to environmental damage. In essence, TPCs serve as indicators of what may be identified as environmentally sustainable local lifestyles. TPCs, in the context of adaptive co-management approaches, have the potential to operate as demarcations of a “desired state” not only for the environment but also for human populations.

What constitutes “desirable,” however, is again a normative question dependent on preferences of the actors in decision-making processes regarding the appropriate priority of environmental and anthropic interests, and so does little to absolve adaptive co-management from the risk of a nature-human dichotomy.

It is apparent that the practice of TPCs exposes the adaptive co-management model to the issue it seeks to avoid: the human-nature dichotomy. As a result, assertions that adaptive co-management is an alternative to historical protected areas policy paradigms are still subject to many criticisms raised against previously enacted protected areas practices. Further, adaptive co-management risks a return to the same problems former practices encountered when attempting to balance nature and humanity.

### **III. APPROACHES TO TPCs AS NORMATIVE DISCOURSE**

The internal conflict associated with TPCs extends beyond law and policy to an underlying normative conundrum affecting procedural and distributive justice components in decision-making about appropriate nature-human relationships. This discussion asserts that the resolution of such a conundrum calls for greater normative understanding of TPC formulation and application. In essence, it asks for an epistemological

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33. See generally Dressler, *supra* note 7; Eun Young Song, *Competing Values in World Culture and the Emergence of Middle Ground*, 7 COMP. SOC. 28 (2008); S. Stoll-Kleeman, et al., *The Role of Community Participation in the Effectiveness of UNESCO Biosphere Reserve Management: Evidence and Reflections from Two Parallel Global Surveys*, 37 ENV'TL CONSERVATION 227 (2010).

change in understanding TPCs as mechanisms of law and policy and instead as an expression of norms. This involves recognition of TPCs as a function of a discourse regarding nature and humanity, in that they involve competing and contested ideas over what are deemed “appropriate” states of nature and what are deemed “appropriate” human interactions with the environment. Understanding such a discourse can enable better identification and action regarding values that drive preferences about what is “appropriate,” and can thereby help orient management processes away from the potential conflicts arising from nature-human dichotomies and instead towards interdependent nature-human relationships sought by adaptive co-management philosophy.

It should be noted that discourses are themselves subject to competing narratives and ideas whose outcomes are often skewed by the power dynamic driving the interactions within the discourse. This has been recognized as a factor in environmental conservation, with literature asserting that perceptions of environmental flux as problematic or acceptable were functions of changing and competing perceptions of nature itself, and that perceptions of nature and appropriate human interactions with it were a function of local and global context in terms of time, place, social relations, politics, and knowledge.<sup>34</sup>

A recognition of the fluid perception of nature-human interaction raises questions as to how a discourse operates, particular in terms of how thresholds are set, to whom they apply, and by whom they are decided. For the concept of TPCs, this would involve examples of questions such as: Which interests are involved in deciding thresholds? How are those interests weighed? Do thresholds apply only to certain aspects of the environment? Do thresholds only apply to certain groups of people?

Guidance with respect to such epistemological questions of normative discourse can be found in social science studies that approach law and policy from political, economic, social, and cultural perspectives.<sup>35</sup> This follows Harvey Locke and Philip Dearden’s call that “there is a critical need for more social science inputs to build greater understanding of people and communities” regarding protected areas,<sup>36</sup> and follows Richard Peterson’s observation that scholars are “utilizing different disciplinary lenses to create constructive dialogue towards better conservation practices.”<sup>37</sup> This

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34. See generally Brunckhorst, *supra* note 21; Garland, *supra* note 11; Gillson, As *Earth’s Testimonies Tell*, *supra* note 10; Gillson, et al., *Nothing Endures*, *supra* note 10; Richard Peterson, et al., *Seeing (and Doing) Conservation Through Cultural Lenses*, 45 *ENVT’L MGMT* 5 (2010); Song, *supra* note 33; West, et al., *supra* note 20.

35. See generally Chan, *supra* note 19; Gillson, et al., *Nothing Endures*, *supra* note 10; Schultz, *supra* note 17; West, et al., *supra* note 20.

36. Locke & Dearden, *supra* note 6, at 5.

37. Petersen, et al., *supra* note 34, at 6.

discussion asserts that it is possible to identify social science approaches that address the normative issues underlying law and policy in a way relevant to the normative conflict within TPCs, and which suggest future directions for normative study to resolve the challenges facing adaptive co-management.

The questions associated with thresholds point to issues of power in that they concern who controls the determination and exercise of thresholds in the discourse of decision-making. Such aspects fall into the perspectives of constructivist and critical studies, particularly those regarding politics and law, where notable authors devote attention to the political discourse involving state and nonstate actors setting policies.<sup>38</sup> To the extent that thresholds represent normative standards of appropriate behavior and such norms are policies created through decision-making processes involving state and non-state actors, thresholds are products of a discourse over norms. Moreover, to the extent that the discourse on thresholds involve different actors, with unequal bargaining power, thresholds are products of power relationships. Because constructivist and critical studies address how the nature of discourse influences the creation and propagation of norms, such studies can lend insight into the values that affect the construction and application of TPCs.

There is also value in rational choice approaches, such as those associated with politics, economics, and sociology scholarship. Thresholds involve assertions of preferences by people about what is allowed in environmental change and human behavior. Rational choice literature deals with the manner in which preferences reflect the interests of actors and the ways such preferences drive decision-making.<sup>39</sup> These contributions can help illuminate how outcomes are generated by adaptive the co-management decision-making process.

Preferences are also a function of context, and contributions with respect to context can be found in sociocultural perspectives, such as those associated with sociology and anthropology literature. Thresholds are assertions of what is appropriate, and so indicate expectations set by norms. Norms that define expectations of an appropriate human-nature relationship raise questions as to their formation and propagation. Sociological studies approach these issues by looking to the processes that

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38. See generally, RICHARD BAUMAN, *CRITICAL LEGAL STUDIES: A GUIDE TO THE LITERATURE* (1996); COSTAS DOUZINAS, et al., *POLITICS, POSTMODERNITY, AND CRITICAL LEGAL STUDIES* (1994); ERIC ENGLE, *MARXISM, LIBERALISM, AND FEMINISM: LEFTIST LEGAL THOUGHT* (2010).

39. See generally Richard Posner, *Rational Choice, Behaviourial Economics, and the Law*, 50 *STAN. L. REV.* 1551 (1998); Thomas Ulen, *Rational Choice and the Economic Analysis of Law*, 19 *L. & SOC. INQUIRY* 487 (1994).

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socialize members of a population.<sup>40</sup> Cultural approaches address these issues by looking to the endemic identities, practices, and values maintained by members of a specific population.<sup>41</sup> Sociology and anthropology both act to provide a context to the worldviews and modes of behavior underlying norms, and so can inform understanding of these aspects of thresholds.

Additional insight into can be drawn from scholarship on justice, which is encompassed by areas of social science and law. Thresholds can be interpreted as restrictions on rights in that they serve to restrict the exercise of rights claimed by humans associated with protected areas. Scholarship recognizes that rights are not always absolute, and provides extensive literature addressing the balance between rights and restrictions on rights. Associated with this are questions of fairness and equity in determining how, for whom, and by whom rights are allocated and enforced.<sup>42</sup> Justice literature addresses these issues, and so could offer greater understanding into the ways thresholds constrain interests and influence inequality between them.

The preceding approaches offer diverse avenues for further study of TPCs and adaptive co-management as normative discourse. As such, they demonstrate this discussion's assertion that a shift in epistemological understanding can enable policy-makers with a responsive understanding of the normative nature of the internal conflict within TPCs, and hence better address the challenge it poses to implementation of protected areas policy.

#### **IV. Conclusion**

The argument here is not that TPCs should be abandoned or discredited. Rather, TPCs should not be viewed as guarantors of environment-human balance or of success for adaptive co-management practices. TPCs are a component of a particular management model of protected areas policy, and represent an attempt by such a model to resolve the problems that were encountered as the historical U.S. national parks management model was exported from the West to the rest of the world.

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40. See generally SHARYN ANLEU, LAW AND SOCIAL CHANGE (2009); MATHIEU DEFLEM, SOCIOLOGY OF LAW: VISIONS OF A SCHOLARLY TRADITION (2008); A. JAVIER TREVINO, THE SOCIOLOGY OF LAW: CLASSICAL AND CONTEMPORARY PERSPECTIVES (2008).

41. See generally AFTER IDENTITY: A READER IN LAW AND CULTURE (Dan Danielson & Karen Engle, eds., 1995); LAWRENCE HARRISON AND SAMUEL HUNTINGTON, CULTURE MATTERS: HOW VALUES SHAPE HUMAN PROGRESS (2000); PAUL KAHN, THE CULTURAL STUDY OF LAW: RECONSTRUCTING LEGAL SCHOLARSHIP (1999).

42. See generally TOM CAMPBELL, JUSTICE (2000); MICHAEL SANDEL, JUSTICE: A READER (2006); RAYMOND WACKS, UNDERSTANDING JURISPRUDENCE (2009).



Adaptive co-management, however, is subject to its own criticisms. The discussion here adds to the critiques by identifying the issues arising from the internal tensions associated with adaptive co-management's use of TPCs.

TPCs by their very nature may prevent adaptive co-management models from successfully avoiding the criticisms made against previously enacted protected areas practices. Such risks are driven by preferences in the creation and application of TPCs, and so reflect an underlying normative discourse influencing preferences about appropriate nature-human relationships. This paper interprets this as calling for a shift in epistemology, with TPCs and adaptive co-management being not just reflections of law and policy implementation problems but instead as reflections of underlying normative conflicts. Such a shift suggests the relevancy of utilizing studies of normative discourse to better address the challenges facing TPCs, and thereby improving the ability of adaptive co-management models to better achieve their aspirations of having protected areas that avoid the nature-human conflicts of the past.