

A Brief History of Conservation Psychology

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A Place to Begin

Beyond the front gates, past the ticket counter, and a short distance to the right stood a modern brick building with what looked to me like antique arches above each door. While there was something intriguing about the building's external architecture, what brought me to the Hamill Family Play Zoo (HFPZ) at Brookfield Zoo in Brookfield, Illinois, that day was the unique approach to environmental sustainability that had been happening inside since 1997.

In 1997, the Brookfield Zoo implemented psychological theory to design a children's zoo that would encourage the development of sustainable relationships between the next generation of zoo visitors and the nature they came there to experience. This human-focused approach to environmental sustainability played an important role in the emergence of what would later be considered a pioneering network of scholars and practitioners with the same goal. My trip to Brookfield Zoo—and their children's zoo, the HFPZ—was a part of my historical research of that pioneering network.

While studying the academic theory that came together to form conservation psychology (CP), my imagination had run wild a few times with thoughts of what I would find inside a place like the HFPZ. I envisioned psychologists in traditional white lab coats on the heels of zoo staff, making tic marks on their clipboards each time a psychological principle was properly used in practice. While I knew the reality would not be half as surreal as this scenario, I did wonder if many people conjured a similar image when they were first introduced to the idea of conservation psychology.

For this very reason, understanding the history of CP is central to the efficient materialization of its future potential. Having a clearer picture of how psychological theory was implemented as a practical approach to environmental sustainability in the past might offer future scholars and practitioners a metaphorical instruction manual for conservation psychology's future implementation. Walking through the HFPZ archway that day, my musings of lab coats and clipboards were put to rest, and a deeper appreciation for the potential of conservation psychology emerged.

Brookfield Zoo: A Breeding Ground of Innovation

Before it was considered a fledgling network of scholars and practitioners, conservation psychology was the practical solution to a real-world problem at a zoo with a big mission. The Chicago Zoological Society (CZS) and Brookfield Zoo, located just outside the city of Chicago in Brookfield, Illinois, are two parts of the same whole that has been internationally recognized as a virtual (and sometimes literal) breeding ground of innovation in the field of conservation. Founded in 1921, Brookfield Zoo has a long history of meeting pioneering goals with the use of extraordinary tools.

In the early 1970's, Brookfield was one of the first zoos in the United States to display animals in cage-less exhibits with only moats separating nature's non-human animals from zoo visitorsⁱ. As much as is possible in a zoo setting, these moats allowed visitors to literally view non-human animals on common ground and it could be argued that this aspect offered a unique relational perspective of exhibited animals that was rare at other zoological parks at the time. Due to this and their many other accomplishments, Brookfield was known as one of the first American zoos to venture away from exhibiting animals as bizarre caged wildness and remains among the few today that continue to actively encourage a stronger connection between humans and the rest of nature.

Brookfield's ethos of helping visitors relate to nature was prominent when the zoo redefined its mission in 1991 under the guidance of Director Dr. George Rabb. In this 1991 reincarnation, the mission of the Chicago Zoological Society was "to help people develop a sustainable and harmonious relationship with nature. In so doing, the Society (would) provide for the recreation and education of the people, the conservation of wild life, and the discovery of biological knowledge"ⁱⁱ. Perhaps rather predictably, an important piece of this redefined mission—the idea of helping people develop a sustainable and harmonious relationship with nature—was far outside the lines of the objectives set by many American zoos in the late twentieth century.

Traditional Approach to Conservation

Traditionally, American zoos in the late twentieth century, like many other conservation organizations at the time, approached the protection of nature from a biological or educational perspective, focusing primarily on using knowledge of the complexities of other animals and habitats to strengthen conservation efforts. In 1980, the Species Survival Program (SSP) encouraged zoos like Brookfield to “breed endangered species...in order to maintain demographically and genetically healthy populations...in case the wild population is suddenly threatened or wiped out.”ⁱⁱⁱ Brookfield’s participation in the SSP was a strong step towards using zoological, ecological, and biological knowledge of other animals and habitats to conserve wildlife.

Just as important as biological conservation in the late twentieth century was the education of Brookfield visitors. Within the zoo, educational experts trained zoo staff to use the intriguing details of how other animals and habitats functioned to better inform visitors about the need for conservation. The idea of education as an important piece of conservation was reinforced by a theory popularized in the 1980’s known as the knowledge-deficit model. “Related to this (model) was the idea that...providing sufficient information about (endangered species and habitats would) overcome (a) lack of knowledge — or 'knowledge deficit' — and the public would change its mind and decide that both (endangered species and habitat were worth saving).”^{iv}

Human-Focused Approach to Conservation

It was clear through these continued efforts that Brookfield appreciated the value of using educational and biological methods to encourage conservation of the natural world. By supplementing these efforts in 1991 with the goal of helping people develop a sustainable and harmonious relationship with nature, Brookfield demonstrated an appreciation for a less traditional approach to conservation, as well.

While employing educational and genetic methods meant utilizing knowledge of the intricacies of other animals and habitats, working to develop relationships between people and nature would require a new level of insight into inner-workings of the human

mind. By committing to this people-centered approach to conservation in the 1991 mission, Brookfield reached over the lines of tradition and straight into a new world of possibility.

Real-World Application: The Hamill Family Play Zoo Challenge

While this outside-of-the-box thinking was something Brookfield staff had come to expect from their visionary leaders, understandably less familiar were the tools needed to implement such a human-centered plan. Entering this unfamiliar territory became a real-world challenge in 1996 when a children's zoo was under construction in the southeast zone of Brookfield Zoo. In honor of The Zoo's redefined mission, Director Rabb challenged zoo staff to propose an exhibit design for the children's zoo that considered what children needed to strengthen their relationships with the rest of nature.^v

In early 1997, the Southeast Zone Design Team accepted this challenge. Melinda Pruett-Jones, director of the Southeast Zone Design Team, led her team of content supervisors, engineers, designers, and advisors in the development of the children's zoo that is now known as the HFPZ^{vi}. While it was not clear yet how the Southeast Zone Design Team was going to design the HFPZ to encourage the development of conservation-minded attitudes in children, it soon did become clear that consultation with social science experts from outside the zoo was needed.

Design Charrette: Developing and Promoting Caring Attitudes

As an inside advisor for the Southeast Zone Design Team, Dr. Carol Saunders had an idea for where to find the required outside experts. With a Master's in Psychology from the University of Virginia and a Ph.D. in Behavioral Biology from Cornell University, Saunders benefited from having one foot in the world of conservation practice and the other in the world of social science^{vii}. From this vantage point, Saunders saw an opportunity for collaboration and suggested the Southeast Zone Design Team invite a

group of respected scholars from the field of psychology to the zoo for a brainstorming session.

In January of 1997, Brookfield Zoo and Minnesota Zoo co-hosted a portion of that brainstorming session in the form of the Developing and Promoting Caring Attitudes Toward The Natural World Planning Charrette. During the proceedings, environmental psychologists, developmental psychologists, environmental educators, early childhood learning specialists, informal learning specialists, and exhibit developers worked with zoo staff in small sub-groups on various issues and questions related to fostering a caring ethic in a children's zoo environment.^{viii} Discussion in these sub-groups occurred in the form of a problem-advocate panel; zoo practitioners would explain a certain goal (or, problem) they wished to accomplish (or, solve) and the panel members would share insights about how to strategically accomplish those goals from the perspective of their areas of expertise.

An important product of these discussions was a written document that compiled the planning principles and related ideas regarding the application of psychological theory in developing and promoting a caring attitude toward the natural world^{ix}. For Brookfield Zoo, this document played a crucial role in the design of the HFPZ. For the network of scholars and practitioners that would later be known as conservation psychologists, the meeting also emphasized a gap that was begging to be filled between the academic world of psychology and practical pursuit of conservation.

Mind the Gap^x

As Brookfield Zoo continued to invite social scientists to weigh in on the design of the HFPZ and other exhibits, people began paying attention to the real gap that seemed to separate conservation work and the social sciences outside of the zoo. While there was little published research about psychological approaches to sustainability at the time, it was clear there were scholars and practitioners on both sides of the initial divide interested in joining forces. Later, pioneering members of the CP network would remember how those forces eventually came together. "Along the way, the need for

additional basic research became clear...In the process, a critical mass of experts began to form...productive collaborations developed...(and) it became useful to describe this mission-driven (study) as conservation psychology.”^{xi}

Conservation Psychology Goes to Print

As these collaborations developed, scholarly interest in conservation psychology emerged from several special issue academic journals. The May 2000 edition of *American Psychologist* featured articles about environmental sustainability by noted social scientists Stuart Oskamp^{xii}, Deborah Winter^{xiii}, Paul Stern^{xiv}, and Doug McKenzie-Mohr^{xv}. In the fall of 2000, psychologists Wesley Schultz and Lynnette Zelezny from California State University edited a piece about promoting environmentalism in the *Journal of Social Issues*.^{xvi} These issues were a few of the many texts in early 2000 that signaled a mounting interest in peer-reviewed literature about psychological research toward the mission of conservation.

Critical Mass Mixer

Ideas for expanding the study and application of conservation psychology were further explored in June 2000 at the 8th International Symposium on Society and Resource Management (ISSRM) at Western Washington University^{xvii}. At the ISSRM symposium, thirty-five papers were dedicated to exploring the roles of psychology in understanding and encouraging conservation attitudes and behaviors. CP leaders, Carol Saunders and Gene Myers, organized several discussion forums around these topics, as well.

In these discussion forums, scholars and practitioners from across many sub-disciplines of social science along with those from the field of conservation science discussed the psychology of sense of self, sense of place, perceptions of the environment, environmental experience and development, relational caring, ethic of care, cultural aspects of caring, cultural constructions of nature, meaning and values of nature, caring for nature, and conservation behaviors^{xviii}. These discussion forums were

some of the first in the United States to physically bring together scholars and practitioners to explore the potential of collaborating across sub-disciplines of psychology toward the common mission of conservation.

An Interdisciplinary Invitation

The conservation psychology network continued to grow in September of 2000 with the activation of the CP online listserv^{xix}. This listserv offered a virtual location for the members of the CP network to exchange ideas, questions, and suggestions about their shared interest on a daily basis. A leading CP researcher, Dr. Gene Myers, described the purposeful attempt to use the listserv as an invitation for a diverse group of scholars and practitioners to join the network.

"In addition to psychologists, we welcome sociologists, anthropologists, economists and anyone else doing research on the interdisciplinary topic of "Conservation Psychology." We hope that this open, (unmediated) list will be a forum for researchers, practitioners, and graduate students to share research ideas and questions about the connections between psychology and conservation issues; make announcements about conferences, special journal issues and new publications, and facilitate collaborative research and application efforts."^{xx}

An Appeal to the American Psychological Association

With the success of CP collaboration growing in print, at conferences and now online, participants from the ISSRM sent a message figuratively and literally to one of the academic organization whose divisions they were connecting. In a petition to the American Psychological Association (APA), the group gathered at the 2000 ISSRM symposium clarified their stance.

"We support in the strongest possible terms the call by Oskamp (2000), Winter (2000), Howard (2000), and Stern (2000) for psychologists to take an active role in the urgently needed transformations of human attitudes, values, and behaviors from a destructive to a sustainable way of life. Our profession has been culpably

slow to mobilize in this cause, but we believe that psychologists in every discipline and setting have a contribution to make... Such a shift in values could strengthen respect for APA as an organization taking a leadership role in the most important issue of our time.”^{xxi}

A form of this message was figuratively delivered at the August 2000 American Psychological Association meeting in Washington, DC^{xxii}. At the 2000 APA meeting, authors of the early CP literature unofficially mingled with participants from the 2000 ISSRM Symposium among a sea of interested APA attendees^{xxiii}. In the midst of all this knowledge and enthusiasm, CP’s potential began to be realized by a diverse network of scholars and practitioners.

A Response from the American Psychological Association

Between 2000 and 2002, the CP network continued to collaborate from a distance and within localized communities. Academic literature and real-world application of conservation psychology continued to build strong interest from both sides as the initial divide between these two worlds began to close.

In 2002, the American Psychological Association held an official discussion session for conservation psychology at their annual conference. This session was complimented with the American Psychological Association’s continued efforts to become an environmentally responsible organization through changes to its own operations^{xxiv}.

APA’s participation in environmentally friendly endeavors coupled with its recognition of CP research in 2002 indicated that scholarly discourse and practical issues surrounding the topic of sustainability could no longer remain in separate silos. In the early twenty-first century, the urgency to mitigate human impact on environmental degradation created a favorable climate for mission-focused, interdisciplinary pursuits like CP to earn the respect of scholars and practitioners.

Conservation Psychology Dialogue: A Problem-Advocate Framework

Within this climate, a growing network of respected scholars and practitioners

returned to Brookfield Zoo in May 2002 for the network's first American conference, The Conservation Psychology Dialogue. To encourage efficient collaboration on important issues, The Dialogue borrowed the problem-advocate framework from Brookfield's 1997 Developing and Promoting Caring Attitudes Toward The Natural World Planning Charrette^{xxv}. While the framework remained the same, the plan was to cultivate psychologist collaboration toward a broader spectrum of conservation issues than those addressed in the 1997 charette.

During The Conservation Psychology Dialogue, a group of sixty-five of the world's leading psychologists, sociologists, philosophers, environmental educators, and conservation biologists convened on Brookfield Zoo property to gain psychological insight into environmental problems. Using the 1997 charette discussion model, "The conference was organized around four problem areas. Each panel consisted of problem advocates and researchers. The problem advocates were asked to describe certain conservation initiatives in need of social science research, and the researchers provided thoughts about how their research perspective could inform those practical issues. Then the discussion was opened up to the entire invited audience."^{xxvi}

Human Connection to Animals

The four problem areas were based on conservation initiatives from leading conservation organizations that were in need of social science input. The first panel addressed the American Association of Zoos and Aquariums Multi-Institutional Research Project (MIRP) interest in creating educational and interpretive programs to enhance visitor connection to the natural world through animals^{xxvii}. This topic was the most similar to those addressed at the 1997 charette and many of the same experts contributed to this extended conversation regarding methods to encourage the connection between people and animals. Due to their positions as mainstream gatekeepers between humans and nature, zoos and aquariums seemed to retain their posts as hotspots of opportunity for CP research.

Human Connection to Place

The second panel focused on the conservation initiatives of Chicago Wilderness, an alliance of organizations in the Chicago area focused on enriching urban life while protecting nature^{xxviii}. Social scientists on this panel advised practitioners on the power of place-based environmental identity and suggested social marketing techniques that could strengthen conservation behavior at the community-level^{xxix}. In this forum, researchers teamed with Chicago Wilderness representatives to expand upon psychology's role in fostering harmonious relationships between urban communities and the rest of nature. This project seemed to be a perfect fit at the 2002 Conservation Psychology Dialogue as CP was becoming known for its ability to bridge gaps between worlds that could have once been mistakenly perceived as dichotomous.

Environmentally Friendly Behavior

The third panel helped address the multiple levels upon which psychology could be used to encourage environmentally friendly behavior in mainstream America^{xxx}. Practitioners from the Center for a New American Dream asked for specific input on the task of encouraging the American public to consume responsibly. With this initiative as an example, social scientists were able to illustrate how to use an array of theoretical models to affect sustainable behavior change at the individual, corporate, and governmental levels. This exchange grounded behavior change theory within different levels of real-world application toward the goal of supporting an environmentally responsible America and alluded to the possibility of large-scale implementation.

Value-Based Communication

The fourth and final panel at the 2002 Conservation Psychology Dialogue recognized the importance of using social science techniques to successfully engage a diverse American public in environmental issues through strategic communication. Representing this component of conservation work were practitioners from the Biodiversity Project, an environmental organization that works to effectively communicate with the public to encourage the conservation of biodiversity^{xxxi}. The social scientists on the panel helped the Biodiversity Project explore various human value systems that might underlie environmental concern. This exploration emphasized that

psychology-inspired environmental communication could help people recognize stronger correlations between a healthy environment and their personal values and goals.

Whether it was how to use psychology to design value-based communication, foster environmentally friendly behavior, encourage harmonious relationships with place, or strengthen human connection to animals, few conservation practitioners left the 2002 Conservation Psychology Dialogue without learning something new. Among other lessons, the social scientists in attendance learned that reaching across sub-discipline lines towards a common mission develops real solutions to complex issues and engenders a unique sense of community along the way. Later, in an online discussion of the emerging field, a participant exclaimed, "If this is what a conservation psychologist does, then I'm a conservation psychologist!"^{xxxii}

Human Ecology Review Forum

To extend this enthusiasm to practitioners and researchers beyond the conference walls, Saunders and Myers edited a special issue of the *Human Ecology Review* in 2003 that elaborated on the four discussion topics from the 2002 Conservation Psychology Dialogue^{xxxiii}. While the goal of this issue was not to capture the minutes of the four conference panels, it did include four separate papers that presented a synthesis of the theory and application issues related to each problem-advocate panel.

These papers, along with a central *Human Ecology Forum* article written by Saunders, attempted to officially define the emerging field of CP for the first time.

"Conservation psychology is the scientific study of the reciprocal relationships between humans and the rest of nature, with a particular focus on how to encourage conservation of the natural world. Conservation psychology is an applied field that uses psychological principles, theories, or methods to understand and solve issues related to human aspects of conservation. It has a strong mission focus in that it is motivated by the need to encourage people to care about and take care of the natural world. In addition to being a field of study, conservation psychology is also the actual network of researchers and

practitioners who work together to understand and promote a sustainable and harmonious relationship between people and the natural environment”^{xxxiv}

In this *Human Ecology Forum* target article,^{xxxv} Saunders also offered two helpful diagrams—one that compared CP to the established field of conservation biology and one that proposed a possible framework for future CP research.

In Figure 1 (see below), conservation biology and conservation psychology were both depicted as “synthetic fields that mobilize contributions from other fields and sub-disciplines toward conservation-

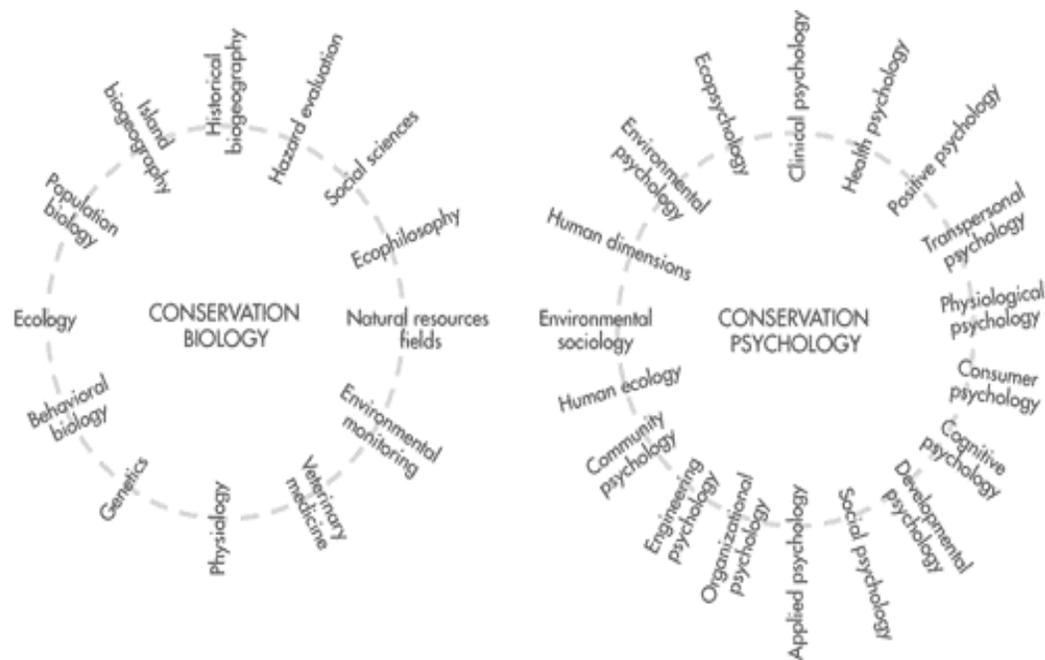


Figure 1. A comparison of conservation biology and conservation psychology.

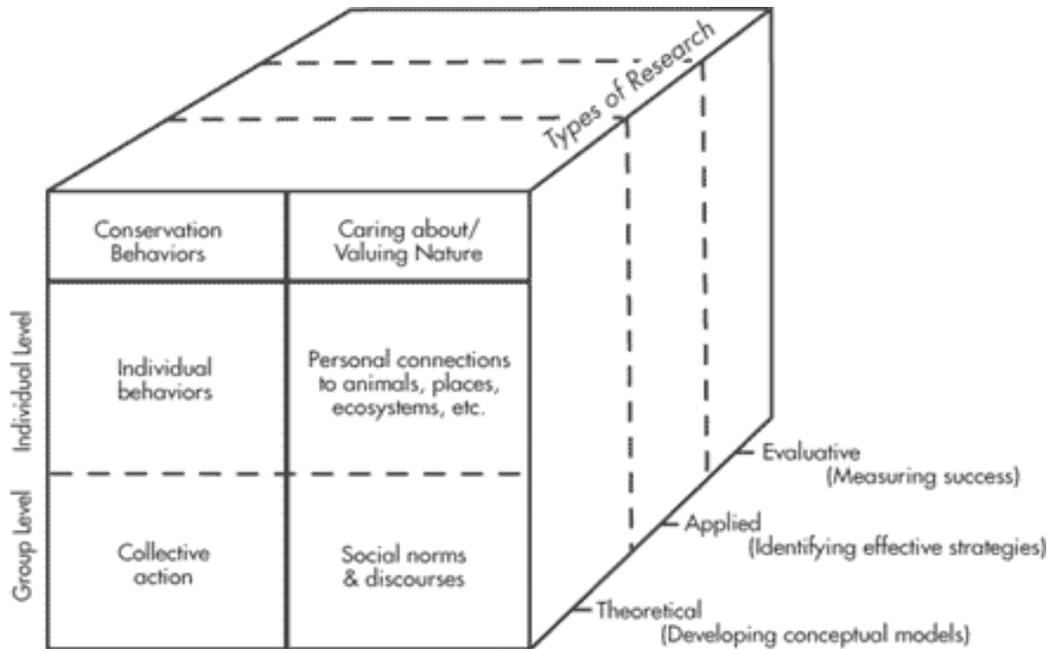


Figure 2. Options for the structure of conservation psychology research. related missions.”^{xxxvi} In an attempt to further “organize possible conservation psychology research areas”^{xxxvii} Saunders also offered Figure 2 (see above). These two figures combined with Saunders’ detailed definition of CP goals and methods amounted to a thirteen-page manifesto that helped scholars and practitioners “better understand the promise of conservation psychology”^{xxxviii}.

Commentary on the Originality, Scope, and Value of Conservation Psychology Research

In the commentary that followed Saunders’ *Human Ecology Forum* article, seventeen respected social and conservation scientists considered many characteristics of conservation psychology research in the context of a larger body of academic and practical work towards environmental sustainability. Opinions expressed regarding CP characteristics ranged from enthusiastic to doubtful, with many responses resting in between these two ends. Regardless of their enthusiasm for the emerging field, all of the responses to Saunders’ article offered observations and recommendations that added to

the further understanding of the promise of CP. The originality, usefulness, and scope of Saunders' proposed research framework were popular topics throughout the commentary.

Originality

Several of the responses identified overlap between Saunders' proposed research and the research of others. Robert Sommer, a psychologist from the University of California, Davis, compared aspects of CP to "action research", where "barriers between research and application (are) brok(en) down"^{xxxix}. In her commentary, Swiss psychologist from University of Zurich, Carmen Tanner, identified similarities between the CP research framework and that of "the Swiss National Science Foundation (SNF) of the Swiss Government's Swiss Priority Programme Environment (SPPE)"^{xl}. These comments improved clarity surrounding the common and diverging methods of CP research and illuminated opportunity for future relationships between researchers working toward similar goals.

Scope

The majority of commentary authors responded with suggestions regarding the scope of specific themes, goals, or methods within the body of CP research. To name only a few, Almut Beringer from La Trobe University in Australia suggested the inclusion of "ecopsychology" and "spirituality" in CP research^{xli} while Louise Chawla from Whitney Young College and Kentucky State University advised adding the goal of "poverty reduction"^{xlii}. Raymond DeYoung from University of Michigan encouraged CP to consider the importance of "citizen participation"^{xliii} in its methods. Comments and recommendations like these from the 2003 *Human Ecology Review Forum* were crucial to the further understanding of the promise of CP.

Value of CP: Leader or Follower?

A few of the responses detailed a set of conditions upon which the value of CP to the established practice and theory of environmental sustainability depended. Paul Stern, from the National Research Council, argued that to "make a detectable improvement in the environment", CP should focus research mainly on conservation behaviors that have

“more impact” like “consumer behavior” and “environmental activism”^{xliv}. In the research of these behaviors, Stern recommended CP researchers “should demonstrate ways they can use psychological insights to challenge, complement, or improve...disciplines that are taken more seriously by decision makers...(like the discipline of) economics”^{xlv}. Stern’s suggested research goals came from a place of experience and comments like his regarding collaboration with other fields reminded readers that a part of CP’s future success would be measured by the extent to which it played well with others.

While some responses encouraged CP to follow established patterns, most authors agreed the value of CP centered on its ability to lead socio-environmental research toward a new horizon. Richard Borden from the College of the Atlantic wrote that CP’s “re-framing of stubborn problems” was similar to the “feminist movements (and) civil rights movement” in that it “illustrates the profound significance of reconceptualizing what lies right before our eyes”^{xlvi}. Borden’s response echoed many in the commentary that seemed to believe in CP’s extraordinary potential.

Further alluding to CP’s revolutionary promise, Mihaly Csikszentmihalyi, world-renowned positive psychologist and expert on scientific paradigm shifts, began his commentary, “It is difficult to imagine a more important and timely document addressed to psychologists than Carol D. Saunders’ manifesto for Conservation Psychology”^{xlvii}. After a few more inspiring words, Csikszentmihalyi offered wisdom regarding the next steps required to launch a CP superfield capable of steering worldwide human/nature relations toward a sustainable future for all.

With support and guidance from experts like these, the tone of the 2003 commentary suggested that the potential power of CP should not be underestimated. It seemed the very debate of CP’s originality, scope, and value served to highlight that a network of diverse minds was vital to conversation regarding the enhancement of sustainable life on this planet.

Inside the Lines of Traditional Academia

Between 2003 and 2006, conservation psychology felt its share of growing pains as its research methods pushed against traditional academic barriers. While the modern importance of integrating conservation and psychology seemed to be recognized by many in academia, not all parties were ready to let go of traditional rules of engagement. In 2006, the journal of *Conservation Biology* published a piece that researched the details of this resistance from the trenches of conventional academia. “The strongest perceived barriers to the integration of social sciences (are) (1) the lack of common vocabulary between biologists and social scientists, (2) the fact that traditional academic reward systems discourage interdisciplinary collaboration and applied problem solving, (3) the lack of funding for collaborative work, and (4) limited opportunities for interdisciplinary collaboration.”^{xlviii} The authors ended with a call to action, and on an almost serendipitous note, reminded readers that the process of identifying perceived barriers is one of the first steps a social scientist can take toward a solution to a difficult situation. From this perspective, avoiding the gallows of academic structure in a mission to bring sub-fields and disciplines together would be one of the barriers CP would have to overcome in the pursuit of its sustainable mission.

If You Can't Beat 'em, Connect 'em

The next step conservation psychology leaders took to avoid these barriers and secure the topic's relevance to its practical cause was a familiar one. In November 2007, a mission-focused collaborative meeting called the Conservation Psychology Network Meeting was held at Brookfield Zoo. In this forum, the goal (or, problem) to be accomplished (or, solved) was the development of a Conservation Psychology Network that was able to react quickly to the urgency of this planet's environmental crisis with scientifically tested tools that would help encourage sustainable behavior change. Resulting from this meeting was the “identification of nine critical functions...and a two-pronged strategy for acting on (those) nine functional areas”^{xlix}. Perhaps rather predictably, the resulting strategy continued to blur the lines of traditional academia.

Taking lessons from their own history book, the leaders at the meeting recognized that while scholarly expertise was needed to move forward with CP's mission, the act of working across, not within, academic discipline lines continued to be vital. It was of the utmost importance to avoid academic segmentation for the result of CP's mission-focused research to be efficient in the fight against impending environmental degradation. By intentionally positioning itself as a mission-focused network that connected scholarly disciplines without defining itself as one of them, CP borrowed from its historical 1997 problem-advocate model to lead its critical research away from bureaucratic tradition and toward a more efficient solution of pressing environmental problems.

Turning the Page

As we turn the page from the history to the future of conservation psychology, it seems only time will tell if CP's pioneering approach is actually more efficient than traditional academic approaches to practical issues. Leaving the HFPZ after conducting my historical research, I realized that while I could not predict the future, I was beginning to see a correlation between my view of CP before and after my Brookfield visit and the possible relevance of social science theory in the solution of environmental issues before and after the influence of the conservation psychology network.

At Brookfield Zoo, the influence of CP's out-of-the-box thinking had created an image of psychologically infused conservation work that I had not encountered in my experience with traditional academia. Instead of psychologists with traditional white lab coats and clipboards, I found zoo staff that were fully engaged in their roles as play partners—helping visiting children make environmentally friendly bird feeders to take home or proudly hanging a child's drawing of their favorite zoo animal on the wall. Herds of visiting children were busy jumping from one log to the next pretending to be lemurs or taking care of ailing stuffed animals in the kids-sized veterinarian ward.

There were no therapist chairs or Skinner boxes. The HFPZ staff did not seem to be encumbered by asinine tic marks and the visiting children certainly did not seem to be

under the influence of any type of psychological jujitsu. Yet, this was it—the final product of a community using what was known about the human mind to remove psychological barriers between children and their innate desire to connect with and take care of the rest of nature.

So how does the rest of the world efficiently integrate social and environmental sciences to develop sustainable and harmonious relationships between humans and the rest of nature? I can only hope that in the future the details of CP history might help illuminate a path around restrictive images of academic research and towards the larger scale implementation of conservation psychology.

Notes:

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- ⁱ Andrea Friederici Ross, *Let the Lions Roar! The Evolution of Brookfield Zoo* (Chicago: Chicago Zoological Society, 1997), 156.
- ⁱⁱ Ibid: 217.
- ⁱⁱⁱ Philip Haworth and Kathi Travers, "Changing Stripes", *ASPCA Animal Watch*, Summer (1993): 13-18.
- ^{iv} David Dickson, "The case for a 'deficit model' of science communication", *SciDev.Net*, June (2005), <http://www.scidev.net/en/editorials/the-case-for-a-deficit-model-of-science-communic.html>
- ^v Dr. George Rabb, personal conversation with the author, October 27, 2009.
- ^{vi} Melinda Pruett-Jones, personal conversation with the author, October 28, 2009.
- ^{vii} Conservation Psychology Researcher Profiles: Carol Saunders <http://conservationpsychology.org/profiles/40/>
- ^{viii} Cynthia Vernon, Carol Saunders, and Davida Kalina, ed. "Developing and Promoting Caring Attitudes Toward The Natural World: Selections from the proceedings of a planning charrette hosted by Brookfield Zoo and Minnesota Zoo", *Brookfield Zoo Chicago Zoological Society and Minnesota Zoo*, January 20-22, (1997): vii.
- ^{ix} Dr. Carol Saunders, personal conversation with the author, November 19, 2009.
- ^x Inspiration for this sub-title is taken from Anja Kollmuss and Julin Agyeman, "Mind the Gap: why do people act environmentally and what are barriers to pro-environmental behavior?", *Environmental Education Research* 8, no. 3 (2002).
- ^{xi} Carol D. Saunders and Olin Eugene Myers, Jr., ed., "Exploring the Potential of Conservation Psychology", *Human Ecology Review* 10, no. 2 (2003): iii.
- ^{xii} Stuart Oskamp, "A sustainable future for humanity? How can psychology help?", *American Psychologist*, 55, no. 5 (2000): 496-508.
- ^{xiii} Deborah Winter, "Some big ideas for some big problems," *American Psychologist* 55, no. 5 (2000): 516-522
- ^{xiv} Paul Stern, "Psychology and the science of human-environment interactions," *American Psychologist* 55, no. 5 (2000): 523-530.
- ^{xv} Doug McKenzie-Mohr, "Fostering sustainable behavior through community-based social marketing," *American Psychologist* 55, no. 5 (2000): 531-537.

^{xvi} Lynnette Zelezny and P. Wesley Schultz, “Promoting Environmentalism”, *Journal of Social Issues* 56, no. 3 (2000): 365-371.

^{xvii} Ibid: iii-v.

^{xviii} Caring for and about nature: Papers from the 8th ISSRM on Conservation Psychology <http://www.ac.wvu.edu/~gmyers/cp/cons.psych.abstracts.html>

^{xix} To join the conservation psychology listserv, please visit <https://listserver.itd.umich.edu/cgi-bin/lyris.pl?join=conservation-psychology>

^{xx} Conservation Psychology Listserv

<http://www.ac.wvu.edu/~gmyers/cp/#Conservation%20Psychology%20Lists%20serv>

^{xxi} Forum: The Social Sciences and Conservation Biology: Do we need a field of Conservation Psychology?

<http://www.ac.wvu.edu/~gmyers/cp/forumsum.html>

^{xxii} Carol D. Saunders and Olin Eugene Myers, Jr., ed., “Exploring the Potential of Conservation Psychology”, *Human Ecology Review* 10, no. 2 (2003): iii.

^{xxiii} Dr. Carol Saunders, personal conversation with the author, November 19, 2009.

^{xxiv} History of Conservation Psychology

<http://conservationpsychology.org/about/history/>

^{xxv} Dr. Carol Saunders, personal conversation with the author, November 19, 2009.

^{xxvi} Carol D. Saunders and Olin Eugene Myers, Jr., ed., “Exploring the Potential of Conservation Psychology”, *Human Ecology Review* 10, no. 2 (2003): iv.

^{xxvii} Ibid. iv

^{xxviii} *Vision for the Chicago Wilderness Region*

<http://www.chicagowilderness.org/mission.php>

^{xxix} Carol D. Saunders and Olin Eugene Myers, Jr., ed., “Exploring the Potential of Conservation Psychology”, *Human Ecology Review* 10, no. 2 (2003): iv.

^{xxx} Ibid. iv.

^{xxxi} *Biodiversity Project: Life. Nature. You. Make the connection.*

<http://www.biodiversityproject.org/>

^{xxxii} *Forum: Social Sciences and Conservation Biology: Do we need a field of Conservation Psychology?*

<http://www.ac.wvu.edu/~gmyers/cp/forumsum.html>

^{xxxiii} Carol D. Saunders and Olin Eugene Myers, Jr., ed., “Exploring the Potential of Conservation Psychology”, *Human Ecology Review* 10, no. 2 (2003): iv.

^{xxxiv} Carol D. Saunders, “The Emerging Field of Conservation Psychology”, *Human Ecology Review* 10, no. 2 (2003): 138.

^{xxxv} *Ibid*: 137-149.

^{xxxvi} *Ibid*: 139.

^{xxxvii} *Ibid*: 141.

^{xxxviii} *Ibid*: 137.

^{xxxix} Robert Sommer, “Action Research and Big Fuzzy Concepts” *Human Ecology Review* 10, no. 2 (2003): 176-177.

^{xl} Carmen Tanner, “Steps to Transdisciplinary Sustainability Research” *Human Ecology Review* 10, no. 2 (2003): 180-182.

^{xli} Almut Beringer, “A Conservation Psychology with Heart”, *Human Ecology Review* 10, no. 2 (2003): 150-153.

^{xlii} Louise Chawla, “People to People: A Vital Component of People-Nature Relationships”, *Human Ecology Review* 10, no. 2 (2003): 156-159.

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^{xliv} Paul Stern, “How Can Conservation Psychology Become Influential”, *Human Ecology Review* 10, no. 2 (2003): 177-180.

^{xlv} *Ibid*: 178.

^{xlvi} Richard Borden “Conservation Psychology: The Practice of Compassion” *Human Ecology Review* 10, no. 2 (2003): 155-156.

^{xlvii} Mihaly Csikszentmihalyi, “Creative Disciplinary Transformation and Forging a Planetary Psychology” *Human Ecology Review* 10, no. 2 (2003): 159-161.

^{xlviii} Helen Fox et al. “Perceived Barriers to Integrating Social Science and Conservation”, *Conservation Biology* 20, no. 6 (2006): 1817-1820.

^{xlix} Prepared by Sally Ketchum Alworth and the See Sally Run Company, “Summary Report: Conservation Psychology Network Meeting Brookfield Zoo: November 16-18, 2007”, (2007) page 2.

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