

NEXUS OF CHANGE: AT THE INTERSECTION OF CONSERVATION, EDUCATION,
SOCIAL JUSTICE, & VISUAL CULTURE

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Introduction

How do we reconcile the tremendous strides the human race has taken to build and better the world in the last millennium with the intense and inefaceable consequences of its relentless drive for dominance over the natural world? We are living in a time marked by industry, innovation, and interconnectedness, where energy is incessantly harvested and exhausted on a titanic scale, cutting-edge technology is leveraged to overcome the world's greatest challenges, and information flits across digital screens at meteoric velocity. We are also living in a time marred by ecological collapse, wildlife endangerment, extinction, and energy crises. Reconciling progress and sustainability is a simply stated problem that does not lend itself to simple solutions.

This complexity demands nothing less than an integrative approach that mines public, private, and nonprofit sectors, not only for what works, but what works in tandem. This investigation dives deep into the creative, artistic, and philanthropic measures that can be taken to address glaring environmental problems that plague and pervade our planet today. It places a keen emphasis on how the issue of environmental conservation can be inclusively presented and marketed to a diverse, young audience to inspire and mobilize a new generation of activists and advocates. The purpose of this report is to examine the critical nexus of conservation, visual culture, social philanthropy, socio-economic status, and youth-focused education by evaluating case studies, examples, and strategies that traverse and typify these key areas.

The objective of this study is to assess how an actionable amalgam of solutions comprising compelling visual messaging and nondiscriminatory campaigns can achieve enduring change in communities. Invoking these interdisciplinary studies and assessments generates a constructive approach to solving these problems. A thorough appraisal of this integrative tapestry

of scholarly articles, books, and journals enables the formulation of holistic strategies to combat ecological imbalance and deterioration.

Conservation at a Glance

_____Our foundation for this work comes from the conservation objectives given in The World Conservation Strategy published by the International Union for Conservation of Nature's (IUCN) in 1980: To maintain essential ecological processes and life support systems; to preserve genetic diversity; and to ensure the sustainable utilization of species and ecosystems. Conservation is most fundamentally the protection and preservation of plants, animals, and places.¹ Scholars within the environmental community continue to grapple with conservation's exact definition; I ascribe a special urgency, however, to making conservation more actionable in order to make it more describable. This leap from the theoretical to the tangible use of conservation will be a decisive factor in achieving ecological restoration and sustainable development.

Action drives meaning when it comes to these conservation objectives, but the sheer magnitude of the needed impact can cause its own inertia. It seems as though our planet, according to the news we see and read, is suffering in a new, acute way every day: the prevailing and emerging threats to climate change are worsening by the minute, the rate of species extinction is skyrocketing, and natural disasters are levelling cities with mounting magnitude. With these somber stories permeating the media, it is very easy to feel like conservationists and environmentalists are fighting a losing battle. However, as natural as these reactions are, they are not always productive and only confirm how adept mass communication is in swaying public sentiment (for better or worse). Although the overarching state of environmental affairs is

¹ Stuart, Simon. "What Is Conservation?" Synchronicity Earth. October 16, 2018. <https://www.synchronicityearth.org/thinking-about-conservation/>.

deteriorating, the truth is that conservation, when grounded in pragmatism, can yield successful outcomes and can make a difference. The proof is that it already does.

Practical conservation, even on a small scale, can serve as a deterrent by decelerating the pace at which the damage is being done. According to an article by Simon Stewart that appeared in *Synchronicity Earth*, “In 2017, researchers were able to quantify how conservation investments made between 1996 and 2008 reduced biodiversity loss in 109 countries by 29% per country on average.” Similarly, a research study conducted by the IUCN Species Survival Commission found that without the conscious conservation efforts focused on the world’s ungulates (which included deer, antelopes, and cattle) over a period of 12 years (from 1996 to 2008) their conservation status on the IUCN Red List Index would have been nearly eight times worse.² These impacts prove that certain conservation actions speak louder than the dire words of certain mass messaging.

Not only does the ability of targeted and strategic human intervention demonstrate its potential to save endangered species, it also demonstrates that we are living in a time when the collective impacts of human-dominated and human-operated systems far outweigh the natural processes of ecosystems. As Simon L. Lewis and Mark A. Maslin observed in their paper *Defining the Anthropocene* (2015), “The magnitude, variety and longevity of human-induced changes, including land surface transformation and changing the composition of the atmosphere, has led to the suggestion that we should refer to the present, not as within the Holocene Epoch (as it is currently formally referred to), but instead as within the Anthropocene Epoch.”³

² Hoffmann, Michael P., J.w. S.I. Duckworth, Katharine N. Holmes, David Undefined Mallon, Ana Undefined Rodrigues, and Simon Undefined Stuart. "The Difference Conservation Makes to Extinction Risk of the Worlds Ungulates." *Conservation Biology* 29, no. 5 (2015), 1303.

³ Lewis, S., Maslin, M. “Defining the Anthropocene.” *Nature* 519, (2015), 171.

From the invention of agriculture, to the collision of the Old and New Worlds, to the Industrial Age, humans have exerted and expanded their ecological control throughout history, which refutes notions that widespread pollution, deforestation, extinction, and other environmental tragedies caused by humans are relatively recent developments. This realization, while exposing the negative consequences of human activities, should show that humans are not “passive observers of Earth’s functioning” and can play an active role in its ecological recovery. Lewis and Maslin explained that “the power that humans wield is unlike any other force of nature, because it is reflexive and therefore can be used, withdrawn or modified.”⁴ There are as-yet-untapped ways to harness this power further by applying cross-disciplinary methods.

In addition to acknowledging the permanence of human presence on our surroundings, it is also salient to challenge longstanding perceptions of land and material deeply entrenched in our social and industrial institutions. As noted in an article written by Michael Jenkins that appeared in *HuffPost*, indigenous peoples in Brazil “mastered sustainability in all its forms long before it was fashionable and practiced environmental values that Western society has adopted only in recent decades -- like ‘save the rainforest’; ‘eat local’; and ‘reduce, reuse, recycle’.”⁵ Environmental stewardship, which balances human agency with environmental reverence, likens human beings occupying an area to custodians that safeguard and nurture their land. It is this sense of accountability and appreciation for an environment and its resources that has infused the creed of so many indigenous groups -- it is the marriage of both ecological and cultural preservation that has deservedly earned them the title of the “Original Conservationists.” Rather than just valuing resources as natural capital that are used to support human services, we should

⁴ Lewis & Maslin, “Defining the Anthropocene.” 178.

⁵ Jenkins, Michael. "To Protect Our Planet's Resources, Look No Further than Indigenous Peoples." *HuffPost*. February 22, 2017.

https://www.huffpost.com/entry/to-protect-our-planets-resources-look-no-further_b_58adac45e4b0598627a55eee.

also embrace the environmental ideology of indigenous groups and adopt these ideas in both philosophy and practice. Indigenous and traditional communities in North and South America champion their own distinctive forms of environmental stewardship, by passing down and maintaining sustainable and responsible customs that are rooted in faith and tradition.⁶

Conservation as a Call to Action

Paradoxically, both progress and problems get passed down, and each generation defines itself somewhat by how it uses the former to combat the latter. Imparting the teachings and wisdom of older generations to their younger counterparts is the vital bedrock of many indigenous belief systems, insuring the preservation of our home and heritage against the erasure of time. Younger generations build upon the foundations their predecessors have laid down to elevate their communities while upholding cherished cultural values.

However, the effects of the Industrial Revolution, the World Wars, the Oil Boom Era, and other landmark events have been unprecedented in the extent of damage they have caused and the relative speed with which they have caused them. Although the context was more likely to be about calculus than conservation, physicist Isaac Newton famously framed the metaphor about standing on the “shoulders of Giants.” Young people today are charged with the Herculean task of addressing ecological damage that they have inherited by building upon the very arsenal of solutions that they have also inherited. Taking Newton’s metaphor further, the “shoulders” upon which this generation is standing provide them powerful vision, but hardly a firm foundation.

When it comes to reversing environmental damage, this generation is the first to fully realize that they are the last hope.

⁶ Gurria, Eva. "Celebrating Indigenous Peoples as Nature's Stewards." UNDP. May 02, 2017. <https://www.undp.org/content/undp/en/home/blog/2017/5/2/Celebrating-Indigenous-Peoples-as-nature-s-stewards-.html>.

How do we go about equipping younger generations with resources and readiness to fix the ecological problems left by decades and decades of deforestation, pollution, resource depletion, and inaction? Most importantly, how do we instill, from the earliest age, a strong sense of environmental accountability and philanthropic purpose? The answers may lie in youth-focused community and citizen science (CSS) programming.

Citizen science encompasses “activities or programs in which members of the public collaborate with professional scientists on scientific research and monitoring in either scientist-led or community-led endeavors.”⁷ A detailed study by Heidi L. Ballard, Colin G.H. Dixon, and Emily M. Harris, used a two-pronged approach to youth education that combined CSS and environmental science agency (ESA) participation. From their close evaluation of two educational programs in the San Francisco Bay Area, they were able to recognize key conditions and curricula that fostered active learning from middle-school and high-school students. The researchers defined three chief processes through which many of the youth developed an appreciation and awareness of their environment: “ensuring rigorous data collection, disseminating scientific findings to authentic external audiences, and investigating complex social-ecological systems.”⁸

Program outcomes were enriched by meaningful, hands-on projects that had immediate real-world applications and were tailored to nearby locales. Program educators and supervisors balanced instruction with independence, and guidance with self-reliance. They facilitated an open, dynamic educational environment where students felt supported in their research but also free to make their own decisions. From experiential and experimental learning, Ballard, Dixon,

⁷ Ballard, Heidi L., Colin G.H. Dixon, and Emily M. Harris. “Youth-focused Citizen Science: Examining the Role of Environmental Science Learning and Agency for Conservation.” *Biological Conservation* 208 (April 2017): 65.

⁸ Ballard, Dixon & Harris, “Youth-focused Citizen Science.” 65.

and Harris found that “youth participatory action research, in which youth drive the research process, demonstrates how youth can gain capacity, skills and confidence for asking and answering questions collaboratively and enhance their connection to their local place.”⁹

According to Ballard, Dixon, and Harris, the selection of sites in these studies is another major factor in motivating and mobilizing young learners: “The cases where youth explained that they did not feel their CCS work connected to their own social and ecological community, because it wasn't near their own homes, highlight the importance of young people's pre-existing relationship to the places they study in CCS programs.”¹⁰ Encouraging students to engage in creative problem-solving in their own communities reinforces the belief that if you want to change the world, start in your own backyard! Oftentimes, students are discouraged or dissuaded from pursuing (or even considering) professional careers in conservation because they have not witnessed palpable change in their own communities, and they are under the false impression that environmental conservation demands swift, substantial results (and that further tells us we need to reassess how conservation is taught):

“Further, we need a framework for conservation learning and action that addresses issues of power and positionality, rather than being resigned to only typical environmental behaviors such as recycling, minimizing home energy or water use, or picking up trash. Inside and outside of school, youth, especially those from marginalized communities or populations, often don't feel empowered to act, or don't have access to the means through which to take meaningful action in science and conservation.”¹¹

It is clear that when it comes to mobilizing youth through education, agency comes from active learning, that literally meets kids where they are.

⁹ Ballard, Dixon & Harris, “Youth-focused Citizen Science.” 66.

¹⁰ Ballard, Dixon & Harris, “Youth-focused Citizen Science.” 73.

¹¹ Ballard, Dixon & Harris, “Youth-focused Citizen Science.” 66.

The three major points that influenced CSS implementation in this study were: “the time youth spend participating, relationship to the place they are studying, and whether or not youth perceive the science they are doing is real or authentic.”¹² Part of reframing and reimagining youth-focused conservation education, as the researchers stated, is providing an opportunity for students to share their findings with a receptive audience: “we found that the process of disseminating their research findings to an external audience was key to their developing ESA.”¹³ Communicating collected data and research conclusions boosts students’ confidence in their critical faculties and competence as thinkers.

Conservation as a Brand

The advent of information technology in the late-twentieth century catalyzed a viral outbreak of digital dialogue as the Internet exploded. We exist today in a ‘Digital Age’, and the recent introduction of picture-sharing platforms, such as Facebook, Instagram, and Twitter, has further revolutionized the way we witness, share, and absorb information. Communication has re-engineered the world, and the changes will only keep coming. Digital communication is firmly established, not only as a fixture, but as an ever-growing foundation of contemporary society, owing to the confluence of these three signature strengths of information technology: accessibility, mobility, and connectivity.

Younger generations rapidly adopt these communication platforms, and a national study done in February of 2019 showed that 90% of adults between the ages of 18 and 29 years now used social networks.¹⁴ This stunning statistic confirms the ubiquity of digital networking among

¹² Ballard, Dixon & Harris, “Youth-focused Citizen Science.” 73.

¹³ Ballard, Dixon & Harris, “Youth-focused Citizen Science.” 72.

¹⁴ Clement, J. “U.S. Social Reach by Age 2019.” Statista. August 20, 2020. <https://www.statista.com/statistics/471370/us-adults-who-use-social-networks-age/>.

youth, and it is precisely this prevalence that can render it an effective educational tool. Moreover, the proficiency of young people in transmitting information to a diverse and digital network has proven to be indispensable in their quest for conservation. According to a paper written by Lauren P. Serpagli that discussed the incorporation of literacy and youth culture in classroom instruction, Instagram has proven to be an expedient “extension of the classroom space” unhindered by the traditional barriers of “time, location, or teacher availability.”¹⁵ Serpagli further remarked that her findings revealed the ability of Instagram to “ease access for review and reminders, integrate teenage culture into learning, and serve as an effective supplement tool to traditional classroom instruction.”¹⁶ As younger generations are increasingly defined by their digital identity, conventional classroom settings and teaching methods must evolve to make active and experiential learning digital by default.

Likewise, conservationists who recognize the ability of social networking to inspire *and* inform must adopt digital marketing practices to enhance the outcomes and outreach of their campaigns. Visually relaying and relating intimate stories on these social platforms is instrumental in generating sympathy, solidarity, and support from a diverse digital audience. Visual aids, in the context of branding and advertising, are intrinsic to a bankable or productive movement, and, according to a paper by Audrey Verma, Rene van der Wal, and Anke Fischer, this form of conveying information is increasingly being leveraged in environmental advocacy: “New visual technologies are now recognised as being a vital part of the communication and education repertoire employed in the conservation world.”¹⁷ Media that are growing in use, such

¹⁵ Serpagli, Lauren Paola. “Social Media in the Science Classroom: Using Instagram with Young Women to Incorporate Visual Literacy and Youth Culture.” Order No. 10281271, Teachers College, Columbia University, 2017: 4.

¹⁶ Serpagli, “Social Media in the Science Classroom.” 4.

¹⁷ Verma, Audrey, Rene E’ Van Der Wal, and Anke Fischer. “Microscope and Spectacle: On the Complexities of Using New Visual Technologies to Communicate about Wildlife Conservation.” *The Royal Swedish Academy of Sciences* 44 (2015): 649.

as satellite imaging and web cameras, are being adapted for eco-educational purposes that serve two important functions: enhancing the data collection for biodiversity research and monitoring, and “public engagement, allowing users ever-more intimate views of nature through remote electronic means.”¹⁸ Visual messaging in conservation is no longer a specialty, it is a strategy.

I spoke with Ann Thomas, Client Services Manager at Propper Daley, the first social impact agency in the U.S., about how campaigns can channel commercial concepts and visual communication in their efforts to maximize their influence.¹⁹ Propper Daley, a leading organization that consults with prominent companies and individuals to build impactful, philanthropic movements, has a shrewd and strategic alchemy that operationally effects real change. The agency champions change as a social and corporate science, and its team of researchers, marketers, advisors, and consultants are invested in every step of the changemaking process, from conception to application, to guarantee that the objectives of the client’s campaign resonate with the needs and perceptions of a target audience. Ann discussed several entrepreneurial philosophies that sustain foundational, nascent processes that are critical to forming marketable and profitable operations. One of these, extensively used by Propper Daley, is “air cover,” defined by business executive Guillaume Hervé as a leader’s ability to cover a subordinate long enough for that person to move an initiative far enough along so as to be able to stand on its own.²⁰ Ann further commented that the agency oftens posts information on social media channels and collaborates with “influencers,” individuals who have cultivated a large,

¹⁸ Verma, Van Der Wal & Fischer, “Microscope and Spectacle.” 649.

¹⁹ Authority Magazine. "Social Impact Heroes: How Greg Propper & Propper Daley Are Empowering People to Create a Social..." Medium. June 14, 2020. <https://medium.com/authority-magazine/social-impact-heroes-how-greg-propper-propper-daley-a-re-empowering-people-to-create-a-social-4020e597c25d>.

²⁰ Hervé, Guillaume. "5 Elements for Leaders to Provide Effective Air Cover." LinkedIn. April 26, 2015. <https://www.linkedin.com/pulse/5-elements-leaders-provide-effective-air-cover-guillaume-hervé/>

specific follower base, to pierce public consciousness in a digital domain. Propper Daley designs visual communication to provide an emotional pull that amplifies the programmatic part of social change. Moreover, a tactical advantage of a digital presence is that it is inherently iterative, enabling organizations to recalibrate their campaigns as public trends and preferences invariably wax and wane.

Furthermore, ecologists and environmentalists have employed other marketing maneuvers, such as the creation of mascots, to improve the appeal of their conservation efforts. An advertising icon in the environmental sphere for decades, U.S. National Forestry Service's mascot Smokey the Bear, along with his memorable catchphrase, "Only You Can Prevent Wildfires," illustrates a successful attempt by environmental agencies to raise awareness about unplanned human-caused wildfires and enter into mainstream culture. The symbolic Smokey, along with his signature saying, instills a sense of pride and responsibility in consumers that encourages them to achieve a more sustainable standard of behavior. According to a 1993 article written by Charles E. Little in *American Forests*, when the U.S. government's fire prevention campaign officially began in the 1940s, fires burned an average of 30 million acres. By 1988, that average was reduced by 75% to 7.4 acres.²¹

Paradoxically, however, the success of the campaign is also its greatest shortcoming. Namely, Smokey the Bear's slogan neglects to express that not all fires are injurious to forests' health. The resounding success of this campaign in fostering forest fire hypervigilance among citizens, some scientists say, has, in fact, weakened the ecological resilience of these ecosystems, escalating the severity and spread of these fires.²² This so-called "Smokey the Bear Effect" is a

²¹ Swenson, Kyle. "Was Smokey Bear Wrong? How a Beloved Character May Have Helped Fuel Catastrophic Fires." *The Washington Post*. April 29, 2019. <https://www.washingtonpost.com/news/morning-mix/wp/2018/08/15/was-smokey-bear-wrong-how-a-beloved-character-may-have-helped-fuel-catastrophic-fires/>.

²² Swenson, "Was Smokey Bear Wrong?."

reminder that conservation campaigns should exercise extreme prudence in their mascots' messaging to avoid fueling the very fires that they try to prevent.

Rare, an international conservation nonprofit, is another example of how social marketing techniques have been espoused by environmental initiatives. In a paper by Daniel Hayden and Benjamin Dills, the authors affirm the significance of marketing in conservation:

“While successful conservation ensures the long-term viability of these local communities and resources, change often requires communities to make short-term investments to reposition their relationship with natural resources from one of exploitation to sustainability.”²³

Pride campaigns represent one of the key processes Rare applies to its marketing model. This social marketing innovation uses “mascots of flagship species, marine or terrestrial species, anthropomorphized into fuzzy, relatable, characters to act as an axis for the marketing intervention.”²⁴ Pride campaigns are designed by Rare “to create a tangible conservation result through the implementation of threat reductions such as the creation of no-take zones in marine sanctuaries, a measured reduction in wildfires caused by human activity, or the adoption of agroforestry practices.” Since 1988, Rare has led over 150 Pride campaigns (with 120 of them occurring since 2001), and nearly all of them adhere to the same tried and true conservation configuration: research and development, community engagement, social marketing, and post-campaign evaluation.²⁵ This faithful framework allows campaigns to earnestly pinpoint and present the “costs and benefits of alternative behaviors” that are conducive to sustainable results

²³ Hayden, Daniel, and Benjamin Dills. "Smokey the Bear Should Come to the Beach." *Social Marketing Quarterly* 21, no. 1 (2015): 4.

²⁴ Hayden & Dills, “"Smokey the Bear Should Come to the Beach.” 3.

²⁵ Hayden & Dills, “"Smokey the Bear Should Come to the Beach.” 9.

to a population while nurturing a localized, long-term community plan that tackles social, political, and technical barriers to change.²⁶

Another force that Hayden and Dills cite in Rare's creation of compelling mascots is the attention to locality:

“... The mascot species must be a species found locally, and preferably is endemic to the site. Localism heightens the sense of community pride and ownership and therefore brands the campaign as authentic and local. If done well, the mascot species can become a symbol for the community.”²⁷

This statement attests to the impact local communities have in achieving meaningful change by preserving their distinctive identity while bettering the environmental habits of their constituents. This dynamic can be observed in the selected mascot species for Pemba Island in Tanzania. The threatened Pemba flying fox served as an effective mascot for this community due to its importance in local folklore and culture.²⁸ While the species was also valued for its meat (note that Hayden and Dills caution against choosing a species that is harvested as food), the Pemba flying fox was named as a flagship ambassador of Pemba Island largely because of how the species resonated with the targeted population.²⁹

Conservation as a brand assumes other forms as well, such as ecotourism and green marketing. Sustainable business practices and products are being increasingly codified by a coalition of corporate industries, committing their employees and their operations to greener standards. Marketing and consumer culture, here, too, play a role in the conception, implementation, and distribution of these services. Organizations realize that they can strengthen

²⁶ Hayden & Dills, “Smokey the Bear Should Come to the Beach.” 9.

²⁷ Hayden & Dills, “Smokey the Bear Should Come to the Beach.” 4.

²⁸ Hayden & Dills, “Smokey the Bear Should Come to the Beach.” 5.

²⁹ Hayden & Dills, “Smokey the Bear Should Come to the Beach.” 5.

brand loyalty, attract new customers, and reduce operating costs (including packaging and transportation expenses) by authentically branding themselves as more socially responsible and environmentally conscious.³⁰ According to an article published by Susan Ward in *Small Business*, “going green will typically cost more upfront, but generate great rewards in the long run.”³¹ Moreover, a profound shift to note is that ‘going green’ is not merely advocated anymore -- *not* ‘going green’ is no longer tolerated anymore!

Companies and organizations that call themselves “eco-friendly” must maintain integrity and remain ethical in their brand. Organizations that convey a false or misleading impression of their products to deceive consumers into thinking that their brands are non-polluting, organic, or energy efficient are guilty of greenwashing, performatively spinning their marketing to increase revenue. In order for honest, green companies to thrive and help consumers recognize which industries to support, Ward asserts that green marketing has to “fit with (their) brand.”³² Many consumers are wary of “green” industries because of their susceptibility to greenwashing. In other words, simply selling one product that is “green” is not enough to convince consumers that a brand is trustworthy; a company has to devote their *entire* image, line of services, and multifaceted execution to the ideals of conservation and environmental sustainability. When it comes to ‘going green’, there are no shades of gray.

Conservation as a Social Class

_____ Companies and campaigns that align themselves with green causes must not only uphold their brand’s integrity, they have an obligation to make their efforts accessible, affordable, and

³⁰ Ward, Susan. “What Is Green Marketing?” The Balance Small Business. <https://www.thebalancesmb.com/green-marketing-2948347>.

³¹ Ward, “What Is Green Marketing?”

³² Ward, “What Is Green Marketing?”

all-inclusive. Historically, environmental organizations and movements have fallen short of this promise, overlooking racial realities and under-leveraging input from marginalized populations. Despite the consequences of environmental deterioration acutely and adversely affecting BIPOC (Black, Indigenous, People of Color) communities, their plight and perspective have been largely underrepresented in conservation.³³ For numerous organizations, problems of inequity and penury are secondary to fossil fuel consumption, pollution, and overcrowding. Disregarding these socio-economic dilemmas is a fatal flaw, as race and poverty are inextricably linked to ecological issues, and, therefore, ecological improvement. The persisting notion of elitism and lack of ethnic representation as well as cross pollination in environmental movements need to be urgently addressed. Expanding the racial purview of environmentalism will not only help *what* gets accomplished, but *who* can accomplish it.

A critical misconception that is often (and inadvertently) perpetuated by environmentalists' campaigns is the "pristine myth," a quixotic ideal that portrays nature as a majestic, untouched wilderness. The danger of "privileging spectacular nonurban locales such as Yellowstone as representing a mythic, essential nature," scholars Alan C. Braddock and Karl Kusserow note, is that it "distracts attention from cities and other settled environments, effectively stigmatizing them as 'unnatural' because they are densely populated and visibly transformed by human activity."³⁴ This misleading 'pristine vision' limits the scope of possible environmental solutions, projecting a narrow, distorted image of environmentalism that vilifies urban settings. Braddock and Kusserow provide evidence to the contrary, suggesting that cities are now recognized by ecologists as being "the most efficient, environmentally sound places for

³³ Farman, Emily. "Exclusivity within Environmental Movements." The Carbon Literacy Project. July 29, 2020. <https://carbonliteracy.com/exclusivity-within-environmental-movements/>.

³⁴ Kusserow, Karl, and Alan C. Braddock. *Natures Nation: American Art and Environment*. Princeton, NJ: Princeton University Art Museum, 2018. 20.

people to inhabit, despite daunting problems facing urban communities.”³⁵ The “pristine myth” is just one hindrance to the development of inclusive, accommodating movements, and demonstrates how environmentalists should be very mindful of their messaging.

Another pitfall of romanticized environmental thinking that Braddock and Kusserow identify is “the way in which it has fostered an unspoken norm and unacknowledged assumption that ‘wilderness’ naturally belongs to, or is best understood by, educated white people.”³⁶ Government-sponsored efforts to claim and designate land as national parks displaced Native American groups while subtly supporting the motives of Manifest Destiny and embracing American exceptionalism. Similar attitudes appear to be channeled in state-sponsored sustainable urban development, according to a paper written by scholar Melissa Checker. Checker observed that environmental gentrification, “which builds on the material and discursive successes of the environmental justice movement and appropriates them to serve high-end development,” actually does a disservice to the very communities it aims to improve by subordinating “equity to profit-minded development.”³⁷

Environmental gentrification, while having an a-political agenda and devising urban development strategies informed by eco-friendly practices (characterized by “the removal of environmental burdens and the installation of environmental benefits”), raises the cost of living of neighborhoods, attracting affluent clients and displacing low income residents. Environmental gentrification, according to Checker, “selectively adopts a language of sustainability” that unintentionally restricts the advantages of ‘green’ urban revitalization and renewal to a wealthy few.³⁸ The prolonged patterns of a neighborhood’s ‘greening’ and its consequential ‘whitening’

³⁵ Kusserow & Braddock, *Natures Nation*. 20.

³⁶ Kusserow & Braddock, *Natures Nation*. 21.

³⁷ Checker, Melissa. “Wiped Out by the “Greenwave”: Environmental Gentrification and the Paradoxical Politics of Urban Sustainability.” *City & Society* 23, no. 2 (2011): 210.

³⁸ Checker, “Wiped Out by the ‘Greenwave’.” 212.

need to be checked, and one way to curb this tendency, Checker proposes, is to focus on conservation on a micro- instead of macro-level:

“... As sustainability becomes a pervasive framework, it concentrates increasingly on issues such as climate change, and environmental amenities (i.e., parks, trees, open spaces). These policies, however, eclipse the long-standing issue of unequally distributed environmental burdens (i.e., toxic waste facilities, bus depots, waste producing industries) in low income neighborhoods and communities of color.”³⁹

The sustainable synergy between regional and national governing bodies creates consciously- and conscientiously-designed reformative solutions, and widens the appeal of environmentalism. Mustafa Ali, a community organizer and former head of the Environmental Protection Agency (EPA) environmental justice program, reinforces the agency local communities can have in diffusing sustainable habits: “Environmental justice is about communities being able to reclaim their power ...”⁴⁰ Ali also describes what environmental justice is not:

“Environmental injustice is about [the state] creating sacrifice zones where we place everything which no one else wants. The justification is always an economic one, that it makes sense to build chemical plants on so-called cheap lands where poor people and people of color live, but which are only cheap because all the wealth and economic opportunities have been stripped out. The people who live in these areas are unseen, unheard and undervalued.”⁴¹

³⁹ Checker, “Wiped Out by the ‘Greenwave’.” 214.

⁴⁰ Lakhani, Nina. “‘Racism Dictates Who Gets Dumped On’: How Environmental Injustice Divides the World.” *The Guardian*. October 21, 2019. <https://www.theguardian.com/environment/2019/oct/21/what-is-environmental-injustice-and-why-is-the-guardian-covering-it>.

⁴¹ Lakhani, “‘Racism Dictates Who Gets Dumped On’.”

To empower these populations that are “unheard” and “undervalued” we should not only assess what measures can be taken to substantially reduce waste and emissions -- we have to assess *who* should take those measures. According to a 2015 study, the world’s richest 10% are responsible for fully 50% of carbon emissions.⁴² Driving electric cars, installing solar panels, and even keeping a “100-mile diet” are sustainable, alternative options that are not affordable to a majority of people. Original, innovative, inclusive solutions need to be devised so that environmentalism is no longer a luxury, but a routine. Accordingly, we must also reprogram and reframe the way we think about conservation, as it is naive, divisive, and therefore dangerous, to believe that environmental problems affect us equally when they clearly do not.

The key to reframing this change is to invoke what is known in organizational management as the ‘advice process’: big decisions involving change require not only expert insight but also the insight of non-experts who are the people who have to live with the consequences of that change.⁴³ Inclusion thereby is a prerequisite to sound, organizational decision-making, and it is no different in conservation. In other words, when people weigh in, they buy in. A recent and powerful example of large-scale societal change that involved agency from a socio-economically disadvantaged majority is Indian prime minister Narendra Modi’s 2014 “Clean India Mission.” The mission was a massive, multi-billion dollar investment that confronted a terrible and pervasive problem: before 2014, over 500 million Indians had been engaging in open defecation.⁴⁴ The lack of adequate sanitation across much of India drove

⁴² Somerville, Madeleine. "Inequality of Environmentalism: Is Green Movement Exclusionary by Nature?" *The Guardian*. April 26, 2016. <https://www.theguardian.com/lifeandstyle/2016/apr/26/environmentalism-inequality-farmers-market-go-green>.

⁴³ Laloux, Frederic, and David Grabijn. *Reinventing Organizations: De Nederlandse Editie*. Leuven: LannooCampus, 2019.

⁴⁴ Bicchieri, Cristina. "Clean India Mission Shows That Flexibility Is Key to Even Poo Healthy." *Quartz India*. <https://qz.com/india/1718798/why-narendra-modis-swachh-bharat-mission-is-working-in-india/>.

millions of people to relieve themselves in the open, unleashing a cascade of environmental- and health-related challenges: high transmission of diseases, malnutrition, and contamination of resources.⁴⁵

Prime minister Modi's plan involved a comprehensive network of educators, researchers, and sanitation workers who cooperated with state and local governments to dispatch materials and manpower to communities. The campaign studied the cultural and behavioral factors that encouraged open defecation and worked with regional experts and workers to stage carefully-crafted interventions that generated awareness about the harmful effects of open defecation, and made it harder and less socially acceptable to do so.⁴⁶ Moreover, the United Nations passed a resolution recognizing November 19 as World Toilet Day, and the occasion is commemorated in India by conducting sanitation activities and evaluations nationwide.⁴⁷ The campaign has been productive in its operations, increasing sanitation coverage from 38% in 2014 to an astonishing 96% in 2018, and constructing over 93 million sustainable toilets in rural areas.⁴⁸ The Clean India Mission transformed a vicious cycle of poverty and pollution into a more virtuous one based on grassroots hygiene and government-boosted reform. In a sense, problems, like a glaring lack of sanitation and conservation, can be looked at through the lens of the criminological 'broken window theory' in urban planning, which states that when people stop caring about what seem to be minor problems, they soon find themselves facing bigger problems arising from neglect. Movements like Modi's show that the antidote to the broken window theory is, unsurprisingly, to focus on fixing the 'broken windows' first and foremost. Applied to the

⁴⁵ Bicchieri, "Clean India Mission."

⁴⁶ Bicchieri, "Clean India Mission."

⁴⁷ Bhatia, Anisha. "On World Toilet Day, Prime Minister Narendra Modi Reaffirms India's Commitment To Improve Sanitation Facilities." NDTV. November 19, 2018.

<https://swachhindia.ndtv.com/world-toilet-day-prime-minister-narendra-modi-message-28022/>

⁴⁸ Bhatia, "On World Toilet Day."

environment, we should ask ourselves what the ‘broken windows’ of conservation are (the minor infractions that often go unchecked), and how we should go about repairing these so that our ‘micro-changes’ catalyze seismic macro-level shifts.

Conservation as an Integrative Framework

Based on the collective research and recommendations cited in this paper, I put forward an integrative solution framework to help us reimagine how to interconnect current and proposed conservation practices.

1. *Change Starts in the Classroom.* Active and authentic learning that is adapted to the unique needs of each student and educational environment has the power to groom the next generation of environmental advocates and ambassadors. Similar to indigenous communities in North and South America inheriting the eco-conscious teachings and beliefs of their ancestors, we must revitalize our learning institutions to encourage environmental stewardship in young people. Youth-focused education that blends technology and communication to build a dynamic, responsive atmosphere is the key to securing and safeguarding our ecological future. In principle, it should no longer be possible to graduate from elementary school without being a junior resident expert on conservation. Conservation needs to become a core, universal school curriculum in the same way that math and reading are.

Call to Action: Emulate the *MasterClass*, expert-taught education platform and partner with high profile ‘influencers’ and organizations like Teach for America and Khan Academy to create a Conservation *MasterClass* Curriculum (CMCC); integrate this

curricula into schools, with a provision that students who demonstrate both completion and contribution can earn tuition aid or college credit.

2. *Change Lives in Your Own Backyard.* Starting small, and paying close attention to locality strengthens community cooperation and builds a close-knit, robust base of environmental followers. General, ‘blanket’ solutions that aim to address environmental challenges on a grand scale but altogether omit distinct, regional habits and input run the risk of their outcomes being perceived as irrelevant by the very people who need to take action. Organizations and experts must use the ‘advice process’ in their pursuit of change; weaving local culture, local perspectives, and local policies into conservation strategies ensures their longevity and efficacy.

Call to Action: Enrich the CMCC with locally-sourced, regionally-relevant educational content created by local and indigenous environmental activists; in partnership with Girl Scouts and Boy Scouts of America, establish a category of sustainable, local projects funded by eco-grants from influencers’ non-profit foundations.

3. *Change Gets Broadcasted and Branded.* Part of urging people to acknowledge our environmental realities involves harnessing the advantages of our technological realities; so much of what we see and what we know come from our daily interactions with digital media. Organizations must leverage the same proven marketing and branding techniques that go ‘viral’ on platforms like TikTok and YouTube to bring environmentalism into the global mainstream. For example, ‘trending’ social media conservation campaigns such as the National Aeronautics and Space Administration’s (NASA) #AdoptThePlanet and World Wide Fund for Nature’s (WWF) #EndangeredEmoji movements drew the attention

of millions of followers, forming a global, virtual network of environmental supporters.⁴⁹

These campaigns show how persuasive marketing techniques can transcend their domain.

Call to Action: Convene, as part of the World Economic Forum, a conservation technology task force made up of chief technology officers from Fortune 500 companies, along with nonprofit and government environmental-policy thought leaders; the task force should devise an innovation roadmap that uses device screensavers, mobile apps, ‘Uber-ized’ conservation reminders, and a conservation skill set on Smart Home appliances in conjunction with trending social media campaigns that are similar to the Breast Cancer Awareness Pink Ribbon movement.

4. *Change Accelerates Through Inclusion & Diversity.* Extending and diversifying the field of conservation to be more receptive to the critical contributions and insights of ethnic groups is an imperative step that we need to take in order to achieve successful environmental movements. Environmental justice and environmental conservation become more accessible and scalable in practice through multi-organizational coalitions that amplify the voices and authority of BIPOC groups.⁵⁰ A notable example is *Black Mammalogists Week*, tirelessly working to elevate the racial standards of conservation; the purpose of *Black Mammalogists Week* is to “provide opportunities for current and aspiring Black mammalogists across the Diaspora to form conscious, fruitful connections, in addition to illuminating historical and present-day Black contributions to the field

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⁴⁹ Rogers, Nick. "Get Inspired by These Winning Environmental Social Media Campaigns." Meltwater. August 27, 2020.

<https://www.meltwater.com/en/blog/copy-these-winning-environmental-social-media-accounts>.

⁵⁰ Farman, “Exclusivity within Environmental Movements.”

⁵¹ "Black Mammalogists Week." Black Mammalogists Week. <https://blackmammalogists.com/>.

Call to Action: As part of the World Economic Forum, convene a secondary task force of chief diversity officers and chief marketing officers who examine how to use inclusive marketing techniques (like those successfully used by Dove’s “Real Beauty” campaign) to form a strategy that demonstrates how people of all colors can make our planet green.

5. *Change Demands Changing Ourselves.* Lastly, reimagining the future of our planet means reforming our routines to maximize environmental efficiency and minimize environmental harm; after all, we are not (nor should we be) “passive observers of Earth’s functioning.” And, we do not have to completely transform our lifestyle in order to be stewards of our planet. We can forge a brighter, ‘greener’ path ahead by doing things as minor as snipping the plastic rings of beer and soda packs with scissors before disposing of them.⁵² The key is to apply broken window theory deliberately to conservation and determine what small habits need to be reversed on a substantive scale, and what triggers need to be applied as behavioral ‘hacks’ to prompt these changes.

Call to Action: Use the task forces established in conjunction with the CMCC to organize an annual, global conservation Hackathon -- an intensive 72-hour crowdsourcing opportunity for conservation solution innovation; the Hackathon should be designed with categories especially aligned to tiny habits and ‘behavioral hacks’ that leverage proven practices of positive psychology, hospital hygiene, aviation safety, and change management methodologies; formulate case studies based on winning solutions that become part of what is taught in the evolving CMCC.

The inherent integrative nature of conservation is precisely what makes it a powerful nexus of change. Environmental solutions must boldly mix experiential learning, influencer

⁵² Mitrokostas, Sophia, and Caroline Fox. "Today Is World Environmental Health Day - Here Are 15 Easy Things You Can Do to Help the Earth." Insider. September 26, 2020. <https://www.insider.com/easy-ways-to-help-the-environment-2019-3>.

campaigns, digital communications and technology, ‘viral’ visual marketing techniques, radical inclusion, and behavioral science principles. For these integrative solutions to be effective, both skill sets and mindsets must be prioritized. Partnership becomes the most important part of leadership, and experimentation must iteratively inform conservation strategy. In this way, conservation shifts from aspirational to operational when it is truly integrative.

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