



Living Earth Community

Multiple Ways of Being and Knowing

EDITED BY

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II. Science, Storytelling, and Students

The National Geographic Society's On Campus Initiative

Timothy Brown

In the winter of 1905, Gilbert Grosvenor faced a critical decision—whether or not to publish photographs in the *National Geographic* magazine. Today, photography and *National Geographic* are synonymous. At that time, however, many intellectuals considered photographs superficial or even vulgar. Since its founding in 1888, the National Geographic Society had printed a dense, scientific journal featuring lengthy articles by the leading scientists, geographers, explorers, and intellectuals of the day. Grosvenor, the magazine's first full-time editor, was well aware that his decision could potentially anger the Society's Board and alienate its members.

But Alexander Graham Bell, the visionary scientist and former president of the National Geographic Society, had instilled in Grosvenor a strong belief that the relevance of the *National Geographic* magazine depended on publishing stories that were readable by 'ordinary people'. Otherwise, Bell said, they should 'shut up shop' and become a 'strict, technical scientific journal for high class geographers and geological experts'.¹ Grosvenor ultimately decided to print several

1 Alexander Graham Bell, 'Letter to Gilbert H. Grosvenor, 5 March 1900', Grosvenor Family Papers, Library of Congress, Washington, DC.

photographs of Lhasa, Tibet in the January 1905 issue. Even more radically, Grosvenor wrote captions that supported the photos, not the other way around, making the images the center of the story. His decision did indeed irritate several Board members. But the public loved the pictures just as Bell had predicted. Grosvenor continued to publish photographs, transforming the identity of the magazine and attracting new readers. In just two years, the Society's membership grew from 3,000 to 20,000. Today, photography is at the heart of who we are as a mission driven organization. When I tell people that I work for National Geographic, invariably the first question I'm asked is whether I am a photographer.

In 2018, on the 130th anniversary of our founding, the National Geographic Society recommitted itself to innovative storytelling. The Society launched a Media Innovation division that will fund year-long projects by several storytelling Fellows who are pushing the boundaries of what stories we tell — and how we tell them. The 2018 class included science photographer Anand Varma, environmental writer Emma Marris, digital storyteller Xaquín G. V., and Evgenia Arbugaeva, who grew up north of the Arctic Circle and whose project documents how people who inhabit the coastal stretch of land along the Northern Sea Route in Russia are adapting to political, economic, and climate changes.

The National Geographic Society has also revolutionized the museum experience by employing VR (virtual reality) technology in its popular Tomb of Christ exhibition, allowing museum visitors to more fully experience the Church of the Sepulchre. The Society also launched the first VR theater in Washington, DC, with programs that offer audiences more immersive experiences, such as diving with leopard seals in Antarctica and exploring Bears Ears National Monument in Utah. Wearing individual VR headsets, 450 people simultaneously experience what our explorers saw and heard in the field. This new technology has the potential to not only increase an audience's appreciation of what the speaker is presenting on stage, but also to develop greater emotional attachment to the places, people, and life that comprise the subjects of their talks.

In addition, in November 2018, we premiered National Geographic On Campus, a series of live science and storytelling events designed

specifically for university audiences.² As program manager, my goal is to complement what students are learning in the classroom and to provide opportunities for students to amplify their impact by connecting them with the National Geographic Society's worldwide community of scientists, storytellers, educators, and explorers. These university-based events — open to all undergraduate and graduate students regardless of their field of study — center around two day-long programs: the Science and Storytelling Symposium; and a series of storytelling workshops led by National Geographic in areas such as conservation photography, investigative journalism, and transmedia storytelling.

The Science and Storytelling Symposium features dynamic talks and panel discussions that bring together National Geographic Explorers in conversation with university scholars and local thought leaders. The symposium highlights interdisciplinary thinking, science and storytelling collaborations, and the connections between research and storytelling. Program themes and panel topics center around regional issues and the university's disciplinary strengths and are developed in full partnership with each host university. For example, our pilot program at the University of Miami — World Without Borders — focused on sea level rise, freshwater scarcity, species conservation, wildlife trafficking, human migration, and cultural identity in an increasingly globalized world. Each symposium also features a panel called Storytellers for Change, which explores how storytellers are helping to create a more peaceful, just, and sustainable planet.

The second day features a series of National Geographic-led workshops that offer students an opportunity to learn and hone their storytelling skills with our Explorers and staff, including veteran Magazine reporters. It's one thing to be inspired by reading the *National Geographic*, or watching our films; it's another thing to see an Explorer live on stage, to hear the passion in their voice and to have the opportunity to ask them a question. But it's an incredibly unique opportunity for a student to spend a day working with a *National Geographic* photographer or journalist, gaining practical and conceptual storytelling skills that will enhance their work and impact regardless of their field of study. The goal is to both inspire and educate the students, and in the process,

2 'On Campus', *National Geographic*, <https://www.nationalgeographic.org/on-campus/>

cultivate informal mentor relationships for students in a variety of fields. All programs are offered free of charge to currently enrolled students.

The On Campus program is an outgrowth of the Science and Storytelling Symposium, a two-day event hosted by the Yale School of Forestry and Environmental Studies (F&ES) in partnership with the National Geographic Society in April 2016. As the curator of the symposium, my goal was to create the kind of experience that I wish had existed when I was a student — one that not only pushed me to think more deeply about storytelling, but also provided hands-on instruction and connections to professional storytellers. In addition to the daylong symposium that explored such topics as Artistic Representations of Nature, Meaning and Morality in a Contested Landscape, and Making Science Accessible through Storytelling, the event, conceived and developed with the support of Peter Crane, the Dean of F&ES at that time, featured a special presentation on Greater Yellowstone Migrations — a science-storytelling collaboration by ecologist Arthur Middleton, wildlife photojournalist Joe Riis, artist James Prosek, and filmmaker Jenny Nichols. This on-going project documents ungulate migrations in the Greater Yellowstone Ecosystem through a combination of quantitative science, cartography, and visual storytelling. We sponsored an art show featuring Prosek's and Riis's works, hosted an intimate fireside chat by science writer David Quammen, and held an exclusive dinner at the Peabody Museum of Natural History, with a special keynote address by Thomas E. Lovejoy. The National Geographic Society also hosted a workshop for their Young Explorers Grants program, which was open to students from throughout Yale.

The On Campus program seeks to replicate and upscale this student program. In addition to highlighting the work of *National Geographic* Explorers and Grantees, each live event will feature a range of scholars from the sciences, social sciences, arts, humanities, communications, business, and law. The National Geographic Society has always supported education; we develop curricula for middle school teachers and host a national geography bee competition, for example. And since our founding, the Society has sponsored live events, starting with the very first National Geographic Society lecture by John Wesley Powell in 1888. But On Campus is the first live National Geographic Society program specifically tailored to university audiences. Our inaugural

event, held at the University of Miami, 9–10 November 2018, was followed by a second three-day student event at the University of Virginia in early March 2019, with a third planned for the University of Southern California. As we upscale the program, our hope is to partner with four schools a year (two each semester) — from liberal arts colleges and state universities, to historically black colleges and universities (HBCUs) and tech and engineering schools. We want to engage students from across the university in dialogues around science and storytelling, encourage them to think critically about interdisciplinary collaborations, and provide with them with storytelling tools to amplify their mark on the world.

In this twenty-first century, a degree is no guarantee of a job, or even of meaningful work. Students must not only develop deep theoretical understanding and demonstrated research in their chosen field, but also understand how to apply their knowledge and skills outside of the academy. Thomas Katsouleas, Provost at the University of Virginia, has referred to this as ‘PhD Plus’. A program like On Campus can make a lasting impact on a student by marrying the disciplinary expertise they gained in the classroom with the storytelling skills, opportunities, and reach that the National Geographic Society can provide. Even the pioneering primatologist Jane Goodall has said that Louis Leakey made her a scientist, but National Geographic made her ‘Jane’.

While On Campus is primarily intended for undergraduate and graduate students, a secondary goal of the program is to highlight alternative measures of impact for academic scholars. Despite the technological and cultural advancements in storytelling over the past century, many academics still dismiss photography and other storytelling media as illegitimate. Too often, scholars prioritize writing for an academic audience simply out of necessity because tenure is tied to publishing in peer-reviewed journals. Given the numerous demands placed on university professors — teaching, conducting research, writing, advising, giving lectures, and serving on committees, just to name a few — it’s difficult at best (and, at worst, a liability) for scholars to spend time engaged in non-academic storytelling media, such as photography, film, podcasting, or digital storytelling. Publishing in scientific journals is undeniably a difficult and noble achievement, and engaging in meaningful dialogue with other academics can expand theoretical boundaries, generate research, and foster innovation and

new ways of thinking. But scholars should also be allowed to pursue various storytelling media, and rewarded not only for the number of journal articles they publish, but also for the impact of their work beyond the academy.

I first began to appreciate the importance of storytelling while conducting a baseline presence survey of Canada lynx (*Lynx canadensis*), which had recently received federal protection under the Endangered Species Act, for the US Fish and Wildlife Service in Washington's Cascade Mountains. I had already conducted extensive field research on forest carnivores at Mt Rainier National Park as an undergraduate at the Evergreen State College, where I had learned to think of nature in terms of interdependent systems. Like other 'Greeners' (as we were known), I was required to attend weekly seminars where I read works of fiction and gained an appreciation for the role of the humanities in ecological thought. But although Evergreen is well known for its fine arts and documentary film programs, I did not pursue courses in storytelling that would have complimented my scientific skills. Moreover, I was not encouraged to develop creative ways to communicate my own scientific research; nor was I taught to conceive of scientific research as one story amidst a sea of stories about how the world works. Story, myth, legend — those were areas for the humanities, religious scholars, and philosophers. Film and photography — those were areas for artists and journalists. Science, on the other hand was empirical, objective, fact. Science, I had been taught, was not only the language of power when it came to the natural world, it was the correct worldview.

As a federal wildlife biologist, I was asked to attend a town hall meeting in southwestern Washington to discuss what the listing of the lynx meant for land owners and other local residents. I prepared my talking points and slides for a formal presentation. But upon arrival to the meeting, I was confronted by loggers, hunters, ranchers, and others who were angry that a small cat was threatening their livelihoods. As a federal employee, I was seen as the enemy. A veteran colleague who had anticipated such a reaction, however, arranged several round tables to promote dialogue between the local community and various stakeholders, including us government officials. I had come prepared to *talk* to the group about lynx. But, sitting there across the table from men and women who lived in this community, I found myself *listening*

to their stories. I heard stories about their families, their grandparents, their neighbors. I heard stories about the woods, about their logging and hunting. I heard stories about how they had been down this road before with the spotted owl. I heard stories about how much the land meant to them.

As a field biologist, I had spent considerable time in those woods, but I didn't live there. I had never hunted, and I was a poor fisherman. I didn't know how to use a chainsaw. I didn't personally know any locals who actually lived there. In fact, I was born and raised on the domesticated prairie of north-central Iowa, not the mountains of western Washington. In short, I had no personal connections to the land beyond my field work and belief in the inherent value of the lynx. I had no real stake in the game, only data points and the confidence that comes with having science on your side.

Their stories made a deep impression on me. Not only did I not have a very compelling narrative, it was clear that their stories were about *them*, not lynx. Their stories were about their identity, which was deeply connected to the land. I wanted to hear more of their stories, and felt that somehow those stories were key to the protection of endangered species.

Some years later, as a graduate student at the University of Montana, I conducted an oral history project with the Confederated Salish and Kootenai Tribes who were at the time pursuing co-management of the National Bison Range, which is located in the heart of their reservation. Their efforts had generated a strong backlash by surrounding communities, including television commercials, newspaper ads, and town hall meetings where people angrily protested against co-management. I wanted to know why co-management was so important to the Tribes. I conducted dozens of interviews with tribal members, from the tribal chairman to elders to high school students. The Tribes had long accepted science as the language of power and developed a strong natural resource management program that included, for example, one of the first grizzly bear habitat management plans in the West. The stories I heard were once again about them as a confederation, about their history, about their deep cultural relationship with bison that went straight to the heart of their identity as a people.

When I later became a ninth-grade environmental science teacher, I came into contact with the actual beliefs of many young people, and

with the ways in which popular culture uses stories to promote external values such as money, fame, and physical appearance as the ultimate measure of success. I saw how students gravitated toward those narratives, and identified the need to create curricula that encouraged students to not only think about science as a story, but also encouraged them to develop storytelling projects of their own. I incorporated art and roleplay into my climate change curriculum so that students would better understand different cultural perspectives and the complexity of global warming. Students produced short videos with their cell phones and created paintings that represented complex biogeochemical cycles. And during our field research, in addition to their data collection, I required students to keep a field journal of their qualitative observations that included both written reflections and drawings. I wanted my students to understand that science is more than a collection of data or even a systematic process of inquiry; it is a collection of stories about how the world works that says as much about who we are in this time and space as it does about that which we study.

The importance of storytelling is not a novel idea. Stories are how we make sense of the world, each other, and ourselves, and the world's greatest scientists are often powerful storytellers. But, in recent years, there has been greater attention to how we think about, create, and tell effective stories, particularly in the sciences, along with an explosion of new storytelling technologies. The climate movement, for example, has largely recognized the importance of storytelling to change people's hearts, minds, and behaviors, rebooting a fatalistic narrative to one of hope and action focused on people, not just polar bears. It is crucial for scholars and other researchers to consider the role that storytelling plays in their work, and to develop storytelling skills and interdisciplinary storytelling collaborations that engage, inspire, and educate the public not only about their research, but critically what it means for humanity.

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