
MAKING CONNECTIONS: NEW APPROACHES TO COMMUNICATE AND EDUCATE ABOUT LIFE ON EARTH

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COMMUNICATIONS AND EDUCATION are essential tools in building public constituencies for biodiversity conservation and other large-scale environmental challenges. It is hard to think of any serious discussion about action to address loss of habitat, climate change, environmental quality, *etc.*, where someone doesn't make a statement along the lines of "We need more education! The public needs to understand X!" Education is important, as is high quality communication. But, approaches need to be smart and sophisticated, or they will miss the mark.

It may be helpful to consider what that mark is to begin with. A hierarchy arising from environmental education frameworks identifies one list of multiple objectives for education:

- awareness,
- knowledge,
- concern/caring,
- motivation to act,
- capability to act.

At the initial level, educational efforts might focus on building **awareness** about a particular topic or issue. Using the biodiversity example, an awareness building project might focus on raising the visibility of species on the brink of extinction, the scale of habitat loss, and even the overall need for some sort of responsive action. Many environmental campaigns have been designed around raising awareness, but we shouldn't assume that awareness leads to action.

Knowledge is another level – what some call eco-literacy. Knowledge implies that information and concepts are transmitted with the intent of developing the tools to better understand a particular issue and develop critical thinking that supports good decisions; however, one can still be aware and knowledgeable, yet not engage in an issue.

So how can we bridge the gap to action? We need to engage at a deeper level, starting with engendering **concern** or a sense of caring about an issue. Caring means that we are engaged emotionally. We have made a

personal connection between our interests, values, worries, etc., and the issue at hand. It *means* something to us. Still, many of us care about a wide range of issues, from health care to neighborhood safety to food prices. We may care, but still not be moved to act.

Motivation to act comes from deep concern (sometimes expressed as outrage or opportunism), and influences that range from social norms and peer actions, to confidence that our action will have impact. Even so, one can be aware, informed, concerned and motivated, but still held back from action. The barriers might be lacking a clear sense of *how* to act, or the resources to be engaged, or other barriers that get in the way of actually taking action. Motivation is necessary, whether it is the impetus for showing up to vote, or writing a letter to a public official, or installing a compact fluorescent light bulb. However, the **capacity to take action**—skills, access, confidence, and other factors—is another critical step along the pathway to engagement that requires education and communication to attain.

So, when we talk about public awareness or public education campaigns, it behooves a strategist to know which endpoint they are pursuing, and to be realistic about how much to expect if the objective is merely awareness. Awareness isn't a bad thing, but it may not get you very far in a society saturated with information.

Given the scale and pace of many of the environmental issues we are grappling with, there is probably another important objective to add beyond the first five, and that is **wisdom**. We don't seem to have much time for wisdom, but isn't it one of the things we are most in need of when it comes to grappling with today's complex environmental and social challenges? On a topic like biodiversity loss, the kind of wisdom we need includes understanding the context for decision-making, understanding the drivers behind biodiversity loss and not just the symptoms we can see, but also the social, cultural and ethical dimensions of the issue. Moreover, in a complicated and interdependent world, we need what Frances Westley¹ calls trans-disciplinary skills, which allow us to communicate and solve problems by bridging and connecting the wisdom of various disciplines. We also need to cultivate systems-thinking skills. Finally, we need the wisdom that comprehends and make use of the way we make meaning through subjective experience, such as the arts, or through story-telling, spiritual practices, cultural traditions, *etc.*

Across the spectrum from awareness to wisdom, we have many approaches at our disposal. This overview will look at successful

strategies in environmental education and also strategic approaches to social change communications. Specifically, I will touch on frames, values, story or narrative communications, and social marketing. I will also briefly discuss messages and message delivery tactics.

Environmental education has grown as a field and practice over the last 40 years, and recent evaluations shed light on the most effective and promising approaches. The National Environmental Education Foundation (NEEF) study, *Environmental Literacy in America*ⁱⁱ cites work by Hungerford and Volk (1990)ⁱⁱⁱ, which notes that educators are able to change learners' behaviors when they:

- Teach environmentally significant ecological concepts and the environmental interrelationships that exist within these concepts.
- Provide carefully designed and in-depth opportunities for learners to achieve some level of environmental sensitivity that will promote a desire to behave in appropriate ways.
- Provide a curriculum that will result in an in-depth knowledge of issues.
- Provide a curriculum that will teach learners the skills of issue analysis and investigation as well as provide the time needed for the application of these skills.
- Provide curriculum that teach learners the citizenship skills needed for issue remediation as well as the time needed for the application of these skills, and
- Provide an instructional setting that increases the learner's expectancy of reinforcement for acting in a responsible way; *i.e.*, attempt to develop an internal locus of control in learners.

Growing consensus in the field concludes that environmental education that focused on information and science alone has little impact of behavior and attitudes. However, when investigational skills such as inquiry skills and problem-solving are added to the mix, along with contextual information, such as social impacts, belief systems, etc., research is showing deeper learning, more lasting behavior change, more involved behaviors, and critical thinking.^{iv}

Other findings from the NEEF study, which are consistent with much of the current thinking in environmental education, conclude that experiential learning and place-based learning are among the most potent approaches. Learning by doing and “hands-on” experiences deepen context, build skills, and often have social dimension. Humans also relate

to places—home, or a place with a special experience—more than abstract concepts. The combination of place and experience can create a “one-two” punch for making lasting impressions on learners.

Environmental education can play an important role in achieving multiple objectives along the awareness spectrum. Social change communications play a different but critical role in shaping public attitudes, knowledge, *etc.* Some people distinguish between education and communication by describing education as value-neutral and focused on developing critical thinking, while describing communications as having a persuasive element, and the intent to change behavior or policy. Rather than a bright line of distinction between the fields, it might be seen as a fluid continuum with clear distinctions on either end of the spectrum, and some blur closer to the middle. In life, we are exposed to both educational and persuasive information, and the approaches have the capability to be complementary and synergistic.

Social change communications include a variety of approaches from persuasion and agenda-setting strategies to behavior change campaigns.^v Several approaches show considerable promise for engaging wider public audiences as more than consumers of information. These include framing strategies, values-based communications, story-based strategies, and social marketing.

Framing

Framing or framework strategy is a potent approach to public communications. Framing works from the premise that people rely on concepts and values and established cognitive processes to assign meaning to information. By communicating in a way that provides clear links between these concepts and values and the issue at hand, the communicator helps establish an overall framework through which the issue is perceived and understood. Framing argues that understanding is frame-based, not fact based. A story must first make sense through a thought process we understand or rely on, and then the facts are assimilated. A frame shapes cognition for individuals, but can also structure the public discourse around a particular topic or issue, and thus it can shape social change strategies and actions.

The Frameworks Institute describes three levels of a frame.^{vi} The broadest level, level 1, is what they call “the big idea” level which helps an individual determine what this issue is all about. Those big ideas are often about values, *i.e.*, is it about fairness, freedom, responsibility, or

other widely held human values. The second tier sorts out what kind of issue this is, such as an environmental issue, a health care issue, and economic issue, *etc.* These two levels of cognitive sorting and storage create a map of sorts for thinking about the issue. Once we unsuspectingly file an issue through a particular set of primary and secondary level frames, we have shaped the way we will think and feel about this issue, and it is difficult to re-set this pattern once established. At the third level, the frame is “what is this particular issue?” An example would be the *Endangered Species Act* reauthorization, or the UN Convention on Biodiversity. If, for example, my impression of these specific policies is that they are about responsibility to future generations and they are quality of life issues, I will consider them differently than if I think they are about personal freedom and property rights, and national sovereignty.

Metaphors play an important role in framing because they align an issue with an established cognitive path. If an issue is *like* something we already know and understand we can more readily assign meaning to it.

In George Lakoff’s 2002 work in this area (see Table I), he describes how distinctive primary frames divide our metaphors for nature according to our primary values. Under his description of the split between the competing “strict father” and “nurturant parent” frames in American culture, one can see how the metaphors for nature are shaped by differing dominant values. And, it is easy to see how these metaphors further shape discourse and reasoning.

STRICT FATHER	NURTURANT PARENT
God’s Dominion (given to man to steward wisely)	A Mother (who provides for us)
A resource (for immediate human use)	A Whole (of which we are inseparable parts)
Property (for the use of owner, and sale and purchase)	A Divine Being (to be revered and respected)
A Work of Art (for human appreciation)	A Living Organism (whose needs must be met if it is to survive)
An Adversary (to be conquered and made to serve us)	A Home (to be maintained and kept clean)
A Wild Animal (to be tamed for our use)	A Victim of Injury (who needs to be healed)
A Mechanical System (to be figured out and put to use)	

Table 1: Lakoff’s Metaphors for the Environment and Nature^{vii}

While framing strategies are powerful, to do them well requires an investment in research and a commitment to its communications practices by the messengers.^{viii} It is not designed for short-term projects or flash-in-the-pan communications.

Values-based communications

As noted, values form the first level of a frame, and widely held cultural values are frequently used in social change communications (as well as product marketing) because they are very effective. Car makers have been doing this for years and many Americans remember the slogan, “It’s not just your car, it’s your freedom”—a classic example of a values-based message. However, the approach isn’t as simple as plunking down a popular value like fairness or freedom into a message. The value needs to be one highly resonant to the audience, and this is where tools such as polling and focus groups come to play, as the strategist attempts to find the most potent values and concerns that speak to a particular audience on a particular issue. That audience is defined by the objectives of a particular communications effort, and might be determined by demographics, attitudes, lifestyle or some combination of these and other characteristics.

Values-based communications is not about trying to persuade an audience to adopt your values. It is about learning what an audience’s values are, and placing your issue in that context. In a sense, it takes one level of the framing approach and uses that as the primary communications tool.

Public opinion research can identify the cultural values most strongly associated with a given issue. Research conducted by the polling firm Belden, Russonello & Stewart for the Biodiversity Project identified values linked to biodiversity.^{ix} The most prominent include, in descending order

- Family and responsibility to family;
- Future generations (leaving them a healthy world that can provide for their needs);
- Respect for God’s Creation

Other values, such as love of natural beauty and personal fulfillment are also linked to protection of biodiversity.

In addition, several “value-like” intangibles have emerged as significant factors in public attitudes about the environment in related research from recent years.

These include:

- Sense of Place/Regional Identity
- Quality of Life
- Pragmatism
- Efficacy

It is important to distinguish between values—deeply held beliefs—and valuation—perceptions of what something is worth, in terms of money or other measures. Some survey techniques, for example, ask respondents to place a dollar value on something intangible like the ability to visit a clean and beautiful beach. However, for most people, their desire to know that such places exist, or their interest in enjoying or protecting them is not motivated by these kinds of valuations, which many consider priceless.

There is also a distinction between values and concerns. Concerns—things we are worried about—are important, and messages should address them, but values such as fairness, accountability, *etc.*, are generally more important in shaping attitudes than concerns. Generally, concerns, such as money, safety, health, *etc.*, are linked to deeper values, such as the need for security, achievement, quality of life, fulfillment, *etc.*

Different issues align with different values, and when a message can describe an issue in ways that resonate with values that are in the first tier of American cultural values, such as freedom or family, it communicates at a level beyond mere information. A values-based message forms the heart of the communication strategy. A good message states why an audience should care about your issue and it speaks to values and concerns. It also describes a threat or problem and who is responsible, provides a solution and describes an action that will address the need and the threat. The best messages also give people something to do to take action. Here is a sample message from the early stages of the campaign to establish the Great Lakes Compact.

The Great Lakes are one of the natural wonders of the world and it is our responsibility to protect them. They are a place we call home and a resource for us to use and protect — they are the heart of the ecosystems that we rely on for life. They are a gift of nature, whose beauty and bounty enrich our lives and identify our region. Yet, there are those who would sell Great Lakes water for profit, like oil or lumber. And the region is using Great Lakes groundwater faster than nature can replenish it. There is currently no regional policy that will prevent exports or overuse

within the ecosystem. We all have a responsibility to protect and conserve the lakes, not for a single interest, but for our families, for wildlife, and for the future. We cannot wait for a disaster to happen. We can all take steps now to help keep the lakes healthy forever.

You can help by conserving water to take pressure off groundwater sources that supply the Great Lakes, not buying bottled water from groundwater sources, and telling your legislators to approve the eight-state agreement to conserve Great Lakes water.

A message like this forms the basis of other communications, and may rarely be used as a stand alone argument. However, it identifies key values, the core rationale, and solutions.

As with other strategic approaches, the message itself is only one piece of a larger strategy that includes audience identification (usually as a first step), messengers, means of getting the message out to target audiences or placement tactics, images that support the message, anticipating counter-messages, and tracking and measuring the impact of various communications.

Story-based communication

Stories are perhaps the oldest form of mass communication, and remain one of our most effective approaches. The SmartMeme group has developed a strategic approach to story-telling to communicate about issues. Like framing and values, this strategy uses tools to create context and meaning. In this case, they use elements of classic story-telling as conventions to shape a campaign narrative. These include: 1) a conflict drama or plot that frames the issue, 2) sympathetic characters, heroes, and villains, 3) an emphasis on values over data, and 4) foreshadowing the future by offering a vision of how things could be.^x By redefining power dynamics and using cultural symbols that hold meaning, narrative communications helps to shape new ways to think and talk about an issue.

Similar to the way framing uses metaphors to help explain what an issue is like, story-based communications draws on familiar cultural myths/stories to draw parallels to issues of the day. One simple comparison for environmental issues is whether the story of the issue is more like *The Little Engine that Could* or “The Sky is Falling.” The deep objective is to use these techniques to develop and grow self-replicating cultural meaning/practice, around an issue, e.g. a “meme.”

Social Marketing

Social marketing uses the tools and strategies of marketing, informed by behavioral psychology and sociology to achieve social change – especially individual behavior change. Instead of selling a product, social marketing “sells” a particular behavior or set of behaviors, such as water conservation, home weatherization, recycling, *etc.* The methods include strategies that

- Identify and overcome barriers to the desired behavior;
- Obtain commitments (pledges, signatures, *etc.*);
- Model behavior;
- Provide prompts (to take action and adopt behaviors);
- Point of experience communication (the parallel to point of purchase);
- Establish norms;
- Create financial incentives & disincentives (or other rewards);
- Personalized communications.^{xi}

Common elements of strong approaches

While these approaches to strategic communications differ, they share some important elements. Most of these approaches are not focused only on a single issue, but have broader strategic goals that include cultivating receptivity to future messages and longer-term objectives within a field. They are audience-based—designed to meet the needs of the audience, and to speak to the audience in a way that resonates with existing values and cognitive processes. Moreover, they are designed to communicate through both cognition and affect (thinking and feeling processes) to create meaning. This means that the issue is placed in a personal context, which increases saliency. These strategies also anticipate barriers and address them, and encourage evaluation and reflection over the course of a communications campaign to make sure objectives are being reached.

Tactical challenges and needs

Strategies are often only as effective as the tactics employed within them. From more than a decade of communications efforts centered on the topic of biodiversity, there are many tactical lessons that can inform future efforts on biodiversity and other issues.

Like many other environmental issues, biodiversity communications can be characterized from the public perspective as fragmented, bad news from people we don't know. The communications are fragmented, or what the Frameworks Institute describes as “episodic communications.”^{xiii} For example, in the media, biodiversity's story is told in what seem to be unrelated episodes of various events—an extinction one day, ocean acidification on another, invasive species wreaking havoc in the Great Lakes the next week, *etc.* The broader theme rarely carries across these isolated stories. Thematic communication that tells the big story, including the big, policy-level solutions, is harder to do, but on conceptually complex, long-term challenges, it becomes essential to connect the dots, or the core issue is lost in pieces among the background noise.

The tone of dominant discourse on biodiversity tends to be despairing, which places the narrative in the “sky is falling” story and conveys a sense of hopelessness and futility, none of which contributes to motivation to act or meaningful solutions. It is important to acknowledge there have been some very valuable communication and education efforts that do use a “can do” tone, but the extinction/loss/catastrophe frame is almost by definition, one of despair, and it tends to be one of more recognizable faces of biodiversity.

The messengers for biodiversity tend to be experts, primarily known by those knowledgeable in the field, but not by wider audiences. Neither the messenger nor the message has been top of mind for wider audiences, or deeply resonant. Here too, there are some notable exceptions to general trends. When religious leaders evoked the Noah's ark story to describe the importance of the *Endangered Species Act*, they provided an important narrative and metaphor and were an unexpected and credible voice for life on earth. Similarly, communications about food diversity by messengers such as food magazine editors, Food Channel celebrities, and writers such as Michael Pollen and Barbara Kingsolver (see amazon.com) are other examples of communications with significant impact. From heirloom varieties to the health of soil, to sustainable farming practices, food has provided a pathway to create meaning for natural diversity, and resilience, connecting it to health, and at a deeper level, values such as quality of life, authenticity, community, and personal fulfillment.

These two examples point to another important lesson, which is to break issues like biodiversity out of the “science box” frame. Issues that are viewed as “science issues” are easily discounted by many segments of

the public as issues for experts to wrestle with, which means that they don't have to engage and figure out what to do themselves.

We need to resist the temptation to rely on primarily utilitarian frames, *e.g.* “nature provides medicine” therefore it is worth saving. While the research shows that some people respond to utilitarian arguments, it isn't the strongest argument or the most compelling reason for most people. The stronger, more resonant rationales are at the values level – protecting the natural world to ensure our family's health, quality of life, and productivity, and that of our future generations.

The language of biodiversity is itself problematic. The word is a Latin-based scientific construct (an instant cognitive stop sign). Moreover, it attempts to describe multiple concepts (diversity of genes, individuals, populations, species, habitats, *etc.*) and speaks to many issues (extinction, habitat loss, ecosystem function, resilience, *etc.*). As a word, biodiversity suffers from the need to describe the vastness of all live on Earth (everything) and at the same time, all its little pieces, right down to gene variations. Because it is everything, it also can vanish into being nothing, or close to nothing, as it disappears into the background fabric of life—an unseen connective tissue of sorts that we may know is there, but pay little attention to.

The all and nothing trap also gets in the way of shaping and describing solutions and strategies, and engaging allies. For example, an organization can describe its work as protecting forests, but argue that they don't work on biodiversity. We have not successfully communicated an agenda for biodiversity conservation, although there are myriad agendas that address pieces of the whole.

More accessible language that describes biodiversity starts with the term “nature,” and for many audiences with a high school education, “ecosystem” also has communication value. Additional, positive language for biodiversity includes these options: life on Earth, life itself, creation care, Earth's life support systems, and maintaining a healthy balance of nature. While the imprecision of these terms may give pause to some scientists, by and large, they communicate the scope and value of protecting the living biosphere.

Moving Forward

As we look toward future communications efforts, there are some guideposts we can follow based on our experience so far. To reach non-

expert audiences, we need to simplify biodiversity to core concepts like “life on Earth,” and define biodiversity within particular contexts and settings (*e.g.*, how people experience it, such as food, experiences in nature, health, *etc.*). We need to describe the big picture and how specific threats or actions connect. This includes describing and offering core solutions and bridging to specific actions. At the same time, it means always circling back to the large scale policy solutions (building the central themes) even when promoting local actions or individual behavior change.

Our messengers must be authentic and credible to specific audiences, and include voices beyond prominent scientists in order to mainstream this issue as one that affects daily life and well-being. Our images and stories must reinforce our message, which itself needs to convey urgency, efficacy of solutions and hope.

While facts are always important, notice that this discussion didn’t start with facts. Facts should support the rationale, and be straightforward and related to people’s daily lives and experience, but they are insufficient on their own. Lead with values; follow with facts.

The word “biodiversity” isn’t the only language challenge. We tend to talk about it through complex terms and numbers, and in insider jargon and acronyms. These have their place in scientific circles, but all create barriers to reaching wider audiences.

In summary, what we can gather from all these approaches is that we need to reach people through what they value and what they’re concerned about, in a context that provides personal meaning and a logical map for thinking about the topic. We need to reach out through the mediums and the circles of contacts that our audiences use and trust. We need to show that there is something positive that they can do to make a difference, and the action (at least at the beginning) needs to be easy, authentic, painless and rewarding. We need to tell a credible human story about a human endeavor to safeguard our future and that of the living planet. And, while we are telling this story, remember that communication is a two-way process that involves listening between parties. Otherwise, it is just lecturing or preaching, no matter how eloquent.

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- ⁱ Frances Westley holds the JW McConnell Chair in Social Innovation at the University of Waterloo and is the author of several books.
- ⁱⁱ “Environmental Literacy in America”, Kevin Coyle, pages 53-54 National Environmental Education Foundation, 2005 <http://www.neefusa.org/>
- ⁱⁱⁱ Hungerford H.R. and T. Volk. 1990. Changing learner behavior through environmental education. *Journal of Environmental Education*. 21(3): 8-21.
- ^{iv} *Ibid*, page 60.
- ^v A helpful discussion of various social change communications approaches can be found in *Communications for Social Good*, by Susan Nall Bales and Franklin D. Gilliam, a paper prepared for *Practice Matters*, The Improving Philanthropy Project in 2004. http://foundationcenter.org/gainknowledge/research/pdf/practicematters_08_paper.pdf (Accessed September 30, 2009). Also see *Breakthrough Strategies for Engaging the Public Emerging Trends in Communications and Social Science* by Marian Farrior, 2005. <http://www.biodiversityproject.org/docs/publicationsandtipsheets/breakthroughstrategiesforengagingthepublic.pdf> (accessed on September 30, 2009).
- ^{vi} Framing Public Issues, a toolkit produced by The Frameworks Institute (a think tank in Washington, DC). See page 5 for a discussion of the three levels within a frame. <http://www.frameworksinstitute.org/assets/files/PDF/FramingPublicIssuesfinal.pdf>
- ^{vii} This table was derived from information in *Moral Politics, How Liberals and Conservatives Think*, Second Edition, by G. Lakoff, University of Chicago Press, 2002, pages 212-216.
- ^{viii} For a deeper discussion on this topic, the *Toolkit Framing Public Issues* included in note *x* is an excellent resource for communicators and strategists.
- ^{ix} “Human Values and Nature’s Future: American’s Attitudes on Biological Diversity”, 1996, and “Americans and Biodiversity: New Perspectives in 2002”, 2002, a survey conducted by Belden Russonello & Stewart, <http://www.brspoll.com/>, for The Biodiversity Project <http://www.biodiversityproject.org/html/resources/publicopinionresearch.htm>
- ^x SmartMeme. 2007. Battle of the Story or Story of the Battle? Available from: <http://www.smartmeme.com/downloads/BattleoftheStoryExplain.pdf> (accessed February 29 2008)
- ^{xi} McKenzie-Mohr, D., and W. Smith. 1999. *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing*. Canada: New Society Publishers.
- ^{xii} *Framing Public Issues*, a toolkit produced by The Frameworks Institute. Pages 2-3, and 16-18. <http://www.frameworksinstitute.org/assets/files/PDF/FramingPublicIssuesfinal.pdf>

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