



How to Create a New Narrative for Sustainability That Will Work: And Why It Matters

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Introduction

This is Part 1 of a two-part article explaining why we need a new narrative for sustainability, one grounded in how humans make decisions and also in how the world we live in works. The narratives we develop to make sense of the world play a central role in shaping our decisions about how to solve problems, and they determine whether or not a topic is even put on the table for consideration. Environmental narratives that focus exclusively on the harm humans are causing to the biosphere without equal consideration for human needs, are insufficient. Narratives that offer up simple causal models—all we need to do is stop or lower CO₂ emissions—are incomplete because they fail to deal with the interactions among social equity, the economy, and the environment. Sustainability is a complex phenomenon that does not yield itself to a simple solution or explanation, but achieving a sustainable future is possible—if we can change how we think about it. We need to move beyond crisis explanations to ones that focus on our ability to develop scientifically based, adaptive management systems. In Part 1 the authors explore the historical, biological, and social aspects of today's sustainability narrative in order to create more effective and robust narratives for success. In Part 2 (to be featured in a forthcoming issue) the authors draw on examples of how social change happens, from frame-extension to frame-transformation, to highlight pathways forward and to identify the requirements for success. A set of guidelines are offered to help reframe sustainability into a more effective and engaging narrative.

In September of 2013, there were two prominent news stories of the planet which put many climate scientists on the defensive. One was that Earth was not heating up as rapidly as expected, and the other was that Arctic Sea ice, instead of retreating as predicted, had actually grown during the summer of 2013. The UN's Intergovernmental Panel on Climate Change (IPCC) held their report, while they figured out how best to explain to the general public

that even though the Earth was not heating up as expected, it really was, if one just understood the data. But we don't need to abandon climate science; we need to focus on how we move toward a sustainable future. If the narrative is all about the planet is heating up, and then the evidence seems to contradict this, we simply lurch from one crisis to the next. Climate science is, of course, based on robust and complex system models, but the narrative that many have seized upon is limiting and it discourages citizen engagement and has immobilized national governments.

Little has been done to slow the buildup of CO₂ in the atmosphere. Treaties have been signed, such as the 1997 Kyoto Protocol, which called for all 191 signatory nations to reduce their overall carbon emissions by 5 percent. However, the United States and other key nations did not sign the protocol, viewing it as too great a threat to economic production. After Kyoto, other treaties were advanced and conventions called, but governments have made no meaningful commitments. In fact, more carbon is now being released than before the protocol, as countries such as China and India bring coal-fired plants on line, and as new polluting energy sources are developed worldwide.

Why? Why don't we act to reduce carbon emissions? Why do the magnitude of global warming and its potential for undermining human life support systems not move us to swift and decisive action? One reason is that we are telling a story that doesn't make sense to many in the world, including those in developed nations. Many people's concerns revolve around energy needs and costs, employment, population growth, immigration, and urbanization. We also don't really understand the risks we are running by not acting.

The "Story" of Risk

One reason people have not acted in concert is that organized fossil-fuel interests have mount-

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ed a political lobbying campaign to discredit the science of climate change. Conservative think tanks brought forth their own “experts,” who argued that the findings of climate scientists were not conclusive and could be wrong. Even if the climate was changing, humans were not responsible. Journalists contributed to public confusion by trying to work a local or human interest angle into their reporting rather than explaining the evidence that was emerging. A simplistic notion of “fair and balanced” reporting led them to seek out contrarians whose ill-founded conclusions appeared to represent the “other side of the story.” The focus on just how fast the Earth is warming and sea levels rising also causes people to overlook problems of greater or equal importance to the sustainability agenda. For example, growing global inequality within and between countries is absolutely unsustainable and politically destabilizing. The problem of providing affordable and renewable energy for emerging nations is central to the issue of climate change and sustainability, though seldom included in discussions about climate change.

Although reporting of “contrary views” has diminished, it remains hard to get people to focus on and grasp the import of climate change. Research scientist Suzanne Moser¹ has written about the challenges of communicating the “story” (i.e., the causes and consequences) of climate change. Physical scientists are very good at communicating their research to their peers, but most are much less skillful in engaging the larger public in answering their critics. Both U.S. and international agencies have tried to lay out clearly why there is a problem and what is likely to happen if it is not addressed. Still, they appear to make little impression on either journalists or organizations that have the ability to communicate effectively with the public.

Part of the difficulty lies in the fact that we cannot see the buildup of greenhouse gases, and we seldom see dramatic effects that can be linked directly to planetary warming. We don’t see the larger, stronger, more frequent, or longer hurricanes, tornadoes, floods, and droughts of recent years as unambiguously conveying an urgent message. We imagine vaguely that whatever happens will take place far in the future or in a place far away. We may know that sea levels will rise by four feet or more by the year 2100, but we do not connect that with the property damage and displacement of millions of people in the United States alone caused by storm surges combined with a much higher sea level. A rise of 12 to 30 feet that would submerge hundreds of coastal cities around the globe,

displacing hundreds of millions of people, appears to be beyond comprehension. As Moser says, “. . . these temporally and spatially distant and disconnected issues have to compete for attention with immediately felt physical needs, professional demands, economic necessities, or social obligations.”¹ The here and now, our daily experiences, trump the future. Appeals to future generations or our grandchildren have limited potential to mobilize people. Humans are hardwired to respond to the danger in front of them, not the danger on the horizon.

Finally, some of the difficulty involved in telling the story of climate change effectively enough to move people to action stems from our insulation, at least in the developed world, from the environment. Most of us have no idea what the world looked like even 50 years ago. Our immediate surroundings are human-built. Viewing the world from behind double-glazed, tinted, low emission window panes, we simply turn the thermostat up or down to keep our controlled, artificial environment at its most comfortable. Given the difficulty of communicating the nature of the complex problems facing us, what would galvanize people to embrace an agenda of sustainability?

The Nature of Human Nature

Joseph Stalin is reported to have said, “One death is a tragedy; one million is a statistic.”² The psychologist Paul Slovic, from the University of Oregon, conducted a series of experiments to determine the willingness of people to help others in need.³ One group of people were asked if they would help raise \$300,000 to save a single child dying from cancer. The response was very positive. Another group of people, matched for the same social and economic characteristics, were asked if they would commit to raising \$300,000 to save eight children dying of cancer. The number who said they would help dropped substantially. Our willingness to help others changes dramatically with both the numbers and with whether or not the person or persons we are helping have a face and a name. In a study by Deborah Small and her colleagues, people leaving a psychological experiment were offered an opportunity to give \$5 of what they had earned to a program called Save the Children, whose purpose was to save millions of starving African children. Another group was offered an opportunity to contribute \$5, but this time specifically to a seven-year old African girl, named Rokia. People were willing to give twice as much to help Rokia than they were to help millions of starving African children.⁴ We are willing to help the one we think we know, not the many we don’t.

Our willingness to help others is bounded by a simple deficiency: our inability to think in large numbers. The anthropologist, Robin Dunbar, has argued that our neocortex sets limits to the number of people we can keep in our heads at any given time.⁵ He observed that nonhuman primates lived in groups of around 150. He then systematically explored the numbers of people who lived in prehistoric villages and tribes and found, for example, that Neolithic farming communities typically had around 150 members. Dunbar's number, as it came to be known, postulates a cognitive limit on the number of individuals with whom we can form and maintain stable relationships, whether in our neighborhood or on our Facebook account. (Interestingly, when people accumulate more than 150 "friends" they start to "unfriend" people.)

Another (and probably related) factor affects our capacity for connecting with others: our ability to determine their trustworthiness. We tend to trust those who are like us, those with whom we interact on a frequent basis, and those who reciprocate our acts of kindness with helpful behavior of their own. Sustainability campaigns, especially those linked to global climate change, must therefore focus on how other people are just like us: the tens or hundreds of millions who could lose their homes and livelihoods because of climate-induced changes in precipitation, growing seasons, and storm damage. They need to have faces and names. We need to be able to identify with them if we are to motivate people to act on behalf of those who will suffer the most from planetary warming.⁶

Given the long time evolution has had to produce our current biological makeup, changing human behavior will not be easy. But attempting social, economic, and political change without taking our nature into account will add to the difficulty. A significant amount of research from the fields of psychology, neuropsychology, and the cognitive sciences has demonstrated that:

- We are hardwired to be unduly optimistic.
- We underestimate risk.
- We resist altering our beliefs, attitudes, and habits.
- We look for facts to confirm what we already know.
- And, we are literally blind to what is happening before our very eyes because we are hardwired to see what we expect to see.⁷

This last example is called inattention blindness. An experiment by two psychologists at the University of Illinois required students to pay close attention to a video of people playing basketball. The students were asked to count the number of times the ball was passed and did very well. However, they missed the gorilla that had walked onto the court during the game; they did not see it because they were not looking for it.⁸ We "see" the weather and the seasons, but we don't see climate change, not just because it is difficult to see it slowly happening in our daily lives, but because we do not expect to see it. Making climate change visible and rendering the need for more sustainable human practices apparent requires that we learn, and then demonstrate, *how* to see. We need to move beyond a narrative that limits what we can see and shift our focus to the future.

To survive and thrive as a species, human beings needed to be self-confident risk takers, able to make decisions quickly. But we've not been good at grasping the long-term consequences of our decisions. Herbert A. Simon developed the theory of bounded rationality to explain the fact that we seldom have the resources or ability to make the very best decision of which we're capable. Instead, we decide on the basis of the (invariably limited) information at our disposal. We instinctively seek simple solutions, which may suit the needs of small bands of hunter-gatherers, but are bound to prove inadequate for the complex problems of the present. We are constitutionally ill-suited to dealing with hyper-complex problems like climate change, which is the result of a century of heavy investment in fossil fuels, exponential population growth, globalization of the economy, urbanization, and new technologies that collectively use increasing amounts of energy. Although the options open to us grow daily by leaps and bounds, our Stone Age brains demand that our choices be structured so that they are clear, simple, and familiar.

Public policies such as a carbon tax on the goods societies produce can render more visible the consequences of our actions, such as unsustainable methods of production and consumption. Policy arguments are a sensible way both to explain complex problems and to recommend ways of dealing with them. But persuading people to choose a socially responsible policy solution to a complex problem is not a simple, straightforward political task.

Human Narratives

Indeed, communicating possible solutions and their consequences is an art. The messages

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we send each other must take a certain form. Human beings are storytelling creatures. For most of our history, stories have been the most effective and efficient mode for conveying information. The science writer Michael Shermer describes our brains as pattern-seeking belief engines.⁹ We assume there is a relationship between cause and effect, which gives our own lives meaning, and makes sense out of seemingly random events. We are hardwired to pay attention to narrative, not to cost-benefit analysis. If a Paleolithic hunter was successful, he reported his success in gestures, pictures, or words. And if it was words he used, they weren't abstractions, but rather concrete descriptions and explanations. When they didn't suffice, he used familiar ideas to introduce new ones—he used metaphors.

We are hardwired for narrative,¹⁰ and the narratives we craft make use of metaphors. Metaphors are figures of speech that help us understand and explain the world we experience. In their influential book, *Metaphors We Live By*, George Lakoff and Mark Johnson argue that metaphors (a comparison between unlike objects) are rooted in our basic biology, specifically our five senses. Primary metaphors provide the link between concrete (sensory) experiences and abstract reasoning.¹¹ For example, we speak of people as being “warm” or “cold.” We say time “passes” or “flows.” Because it does, it has been linked to the idea of progress. But time can appear threatening: “We are running out of time.” If the amount of time is diminishing, we must be losing something else: land, oil, water, freedom, money, the future.

Metaphors are rooted in our biology and they are also about things that matter to us. Consider just a few of the metaphors that deal with the family: the mother of invention, the family of man, the international brotherhood of steelworkers, the fatherland, or sisterhood.

There are two points to make about primary metaphors. First, an adaptive strategy that developed thousands of years ago (for example, equating large size with value, desirability, or importance) may be maladaptive in the modern world. Not only is big not necessarily better, “more” may be “too much.” That metaphors matter is revealed in struggles over their “real” meaning. Democrats argue that strong government must counter the power of “big” business, to protect people from the predations of “big” oil, “big” pharma, and the “big” banks that were too “big” to fail. Conversely, Republicans claim that “big” government is bad, implying that “bigness” in itself is undesirable, making “bigness” into bureaucratic complexity, leading to

inflexibility, inertia, and the death of entrepreneurship.

The desire of political parties to make and sustain emotional associations with words in order to shape a story illustrates a second point about metaphors: They can galvanize action, both positively and negatively. Because we're predisposed to believe a good story, we need to craft narratives that make effective use of primary metaphors to spur people to (desirable) action.

Narrative + Emotion = Action

It is important to remember that not only do members of different polity parties require different narratives to mobilize but so do different generations. Today's 20-somethings (18-29 years of age) or millennials as they are sometimes called, have a different worldview than their parents or grandparents. Millennials are confident, connected, and open to change.¹² This means they understand the need for constant adaptation, an essential requirement if we are to achieve a sustainable future. They identify their use of technology as one of things that distinguishes them from past generations. But it is not just that they use technology; their social lives are fused with it. Over 75 percent of this group have created a profile on a networking site and describe themselves as close to others because of that. They are the most liberal generation of all. They think the government needs to provide financial help to those who need it and unlike those 30 and older, they are much more satisfied with the overall direction of the country, even though they are entering a difficult job market. Generally, they think they'll be Okay. However, they tend to get their news from comedians like Stephen Colbert and Jon Stewart. Humor serves as an antidote to daily news that reports on drought, starvation, global social injustices, and war.¹³ Millennials are skeptical and do not want to hear all of the reasons things are falling apart. They need positive stories for them to engage, and issues need to be framed to connect with values they already hold.

Creating Narratives That Make a Difference

Not all narratives lead to effective actions. As the foregoing discussion indicates, narratives capable of mobilizing people need to be framed in a manner that reinforces the values and beliefs people already have. Virtually all human societies value the notion of community and family, and the meeting of basic human needs. New narratives must embrace such values. New narratives must have a positive focus, on what

can be accomplished rather than the doom that will follow if people fail to act. New narratives must tell people: Your actions can make a difference right now and they will make a difference for the future of your children and grandchildren. Effective narratives must imbue people with a sense of empowerment. We must create a civic space that permits people to act. In order to succeed in transforming the world, people need resources, whether material or human. Finally, the story people are buying into must establish a clear link between the actions people can take and the goals to be achieved. No, this will not be easy, but it is possible.

In crafting stories about the human condition and our future we must remember that humans have proven themselves to be resilient, creative, and adaptable over millennia. Based on the science of the known world, humans have been able to solve innumerable problems, when they understood what the problem to be solved was and they had the resources to solve it. There are also numerous examples to draw on in terms of how people mobilized to change their circumstances, what permitted them to do so, and what led to success and failure. In Part 2 of this article, the authors will draw on these examples to craft a set of guidelines for the development of a new sustainability narrative that can make a difference.

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