Are We Becoming Greener?

Trends in Environmental Desire

The question of whether humanity's environmental attitudes are changing lies at the heart of environmental policy choices.

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Do you care more about the environment now than when you were a kid? Do you care more than your parents did? You may think that the answer to both is an obvious yes. After all, people used to litter, live with dirtier air and water, and not recycle. Our grandparents probably never uttered the word "sustainability." But does society as a whole, including people in other countries, care more than a generation ago?

The strength of our environmental desires is of central importance to developing efficient and effective environmental policies. Yet the typical assumption in economics is that our desires don't change over time. We think about our behavior and choices changing as environmental, technological, and economic conditions change. But economists operate as if our deeper environmental desires—our fundamental attitudes, beliefs, and values—are static. Might our hearts and minds be as changeable as those other conditions?

The discussion matters because it goes to the core of basic questions: Are we over- or underprotecting the environment? Are we protecting the right things and doing so in the best ways?

How Do Desires, Behavior, and Preferences Differ?

Our environmental behavior and choices have certainly changed a lot over the last few decades. We recycle, drive hybrid cars, and buy organic food. It's tempting to view these behavior changes as evidence that something has changed in our desires—that is, our beliefs, psychology, values, or ethics—that makes us more environmental. But behaviors and preferences can change for other reasons. The distinction between preferences and desires is important because it highlights that preferences and behavior can change—without a change in underlying desires.

Consider people who buy hybrid cars. Many do so out of altruism, a desire to express one's green values, or to conform to their community's norms. But others may prefer hybrids simply because they think gas prices will rise.

Technological development is another confounding factor. We may buy hybrid cars, energy-efficient laundry machines, and renewable power for environmental reasons, but technological advancement is what makes those purchases possible. Similarly, people may increasingly buy those things simply because their incomes have risen.

Changing desires can change behavior, but changing preferences, choices, and behavior do not necessarily imply a change in desires.

What Makes Desires Change?

What does it mean when our beliefs, psychology, values, and ethics do, in fact, change? To tackle that question, we introduce three related concepts: taste formation, experience and learning, and norms.

Taste formation describes how and why we like or dislike certain things. Half a trillion dollars is spent on marketing every year in the belief that tastes not only change, but that they can be changed deliberately. But unlike fashion and fads, some environmental tastes may be particularly resistant to manipulation because they're hardwired into our psychology, much like our tastes for certain foods. Several studies have shown that consistently and across cultures, people tend to aesthetically prefer

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open landscapes dotted with visible water and patches of forest to other types of landscapes. Open landscapes allow us to see predators and prey; water is fundamental to survival; and forests signal shelter and food.

None of this means that our environmental tastes don't change, just that these changes may be harder to spot.

Experience and learning refers to the acquisition of new concepts, facts, and skills. Learning implies change, at least in our knowledge and understanding, but potentially also in our beliefs and values. Does learning about the environment strengthen or change our environmental desires? Does experiencing nature change our desire for it?

Indeed, a number of economic studies and surveys show that direct experience with a natural resource tends to have a positive impact on the value given to the resource. And there is evidence that childhood experiences can condition people's preferences for certain environmental settings. However, our sense is that much more empirical work would have to be done to make strong causal predictions.

Norms (or "crowd knowledge") relate to collective knowledge and experience as well as a collective understanding of what is right or wrong and desirable or undesirable in a community. They can be thought of loosely as the social version of (individual) tastes and, like tastes, can change over time. Changes in crowd knowledge and environmental norms can drive changes in our environmental desires. For example, a deeper empirical understanding of nature's role in our health, psychology, and economy reinforces our more fundamental environmental beliefs and attitudes.

Can We Measure—and Predict—Changing Environmental Desires?

It seems obvious that desires and tastes change. Taste in art, food and drink, personal aesthetics, and political attitudes suggest that our deeper beliefs and attitudes can and do shift. We've described a variety of ways desires change, but careful empirical

evidence is scant. That's particularly true of environmental desires and tastes. Why?

Economic Measurement

The focus of environmental economics is on the measurement of behavior and choices. People's behavior and choices provide evidence about their preferences for one thing over another. (Do they prefer clean air to cheap energy, or bald eagles to land development?) Economists take this approach because it is relatively easy to get data on behavior and choices and because the goal of most environmental economic analyses is to reveal the trade-offs associated with those behaviors and choices as a guide to public policy.

One explanation for the lack of empirical study of "taste change" within economics is the difficulty of isolating taste change from other factors affecting preferences. Studies must employ methods and data to control for changes over time in supply, scarcity, and substitutes. Illustrative exceptions that prove the rule are studies of changing food consumption patterns. For example, economists have empirically explored changes in US beef consumption and tried to isolate the effect of changes in the taste for beef from other factors affecting consumption, such as prices, household income, and demographic change. When these latter factors are controlled for, the residual change in consumption can be attributed to a change in taste (in this case, perhaps arising from changed attitudes toward health).

Could environmental economists conduct analogous studies to detect environmental taste changes? In principle, yes. In practice, data limitations currently make it nearly impossible. Taste change studies of market commodities like beef can make use of a variety of data on prices and consumption. These data are collected consistently at regular intervals over time (allowing for time-series analysis). Such data are relatively abundant because the goods in question are market goods, and markets generate a great deal of routinely collected information on prices and consumption. Environmental goods and services, however, are usually not market goods and thus lack price and consumption data. To be sure, environmental economists spend much of their time deriving "virtual prices" and gathering data on environmental consumption related to things such as outdoor recreation. But environmental goods lack the routine, consistent collection of data associated with market commodities. As a consequence, environmental economics has, to date, produced few, if any, studies of how virtual environmental prices or consumption change over time—let alone analyses designed to isolate taste change from supply, scarcity, and substitutes.

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One way to move forward (which, to our knowledge, has not been attempted) is to create and repeatedly administer over time a national or global environmental preference survey designed to detect environmental taste change. Any such study would require a long-term financial and institutional commitment. It would also require a design that reflects best practice stated preference methods, which are used to get around

the "missing prices" problem associated with nonmarket environmental goods. They involve the construction of realistic, plausible decision scenarios that ask respondents to make (simulated) choices. By comparing people's choices between nonmarket environmental goods and money or goods with a known market value, the value or preference for environmental goods can be inferred. (For example, would you rather have a new park or a lower property tax bill?) To be clear, such an endeavor would involve more than simply conducting repeated experiments because, as noted earlier, detection of taste change requires careful attention to confounding factors, such as changes in supply, scarcity, and the availability of substitutes.

Another approach would be to examine how environmental desires vary cross-sectionally in response to different conditions. For example, research has been undertaken in experimental economics to examine cross-country differences in variables such as trust and reciprocity. These studies have participants play economic games designed to examine certain types of behavior and compare how outcomes differ around the world. We could imagine something similar being done to compare environmental desires in different countries. Although it would be challenging to isolate the factors that are the underlying causes for differences, useful patterns could emerge showing correlations between variables such as income, education, or various institutional structures and environmental desires.

Opinion Polls

Forget about complicated economic methods; can't we just look at opinion polls to tell us about our changing environmental attitudes? Not really. Although opinion polling has its uses (predicting near-term voting patterns, for example), it does a poor job of revealing our underlying beliefs, desires, and attitudes and how they change over time.

To begin with, it's rare for environmental polls to be conducted consistently over long periods of time, which makes it hard to see changes. Gallup polls are one exception; several extend back to the 1970s and 1980s (almost no environmental polling existed prior to that time).

Figure 1. Prioritizing Environmental Protection versus Economic Growth, 1984–2014

With which one of these statements about the environment and the economy do you most agree—protection of the environment should be given priority, even at the risk of curbing economic growth (or) economic growth should be given a priority, even if the environment suffers to some extent?

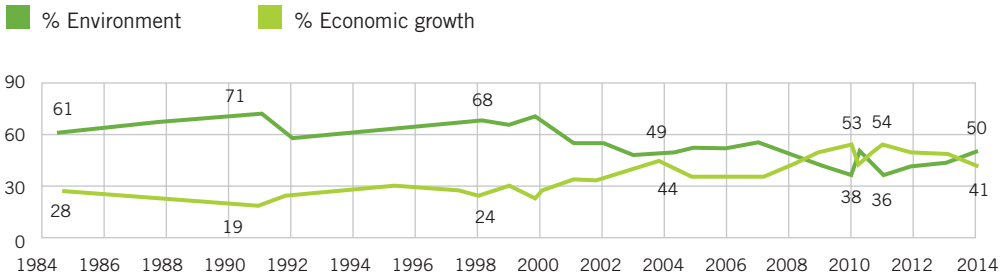
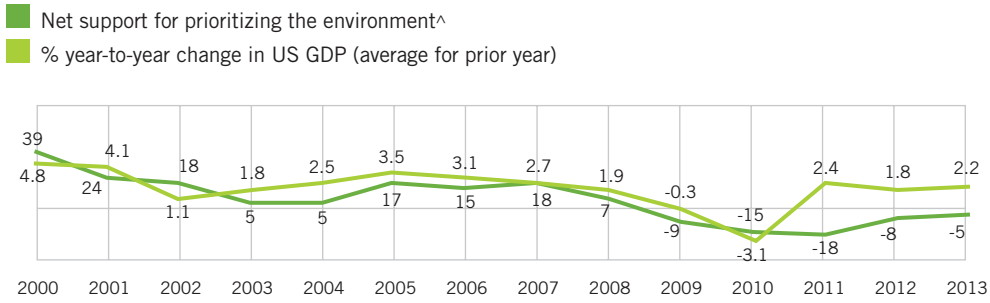


Figure 2. Americans' Support for Prioritizing the Environment over the Economy versus Annual US GDP Growth, 2000–2013



^Net = % who would make protecting the environment the priority minus % who would make economic growth the priority.

Since 1984, Gallup has been asking Americans about whether they place higher priority on economic growth or environmental protection. The results and precise wording of the question are depicted in Figure 1.

Through the 1980s and 1990s a significant majority of respondents favored environmental protection. The gap narrows beginning around 2000 and, in fact, in 2009 and 2011–2013 a majority prefers economic growth. Does this imply that Americans' environmental preferences are weakening? No, for at least two reasons.

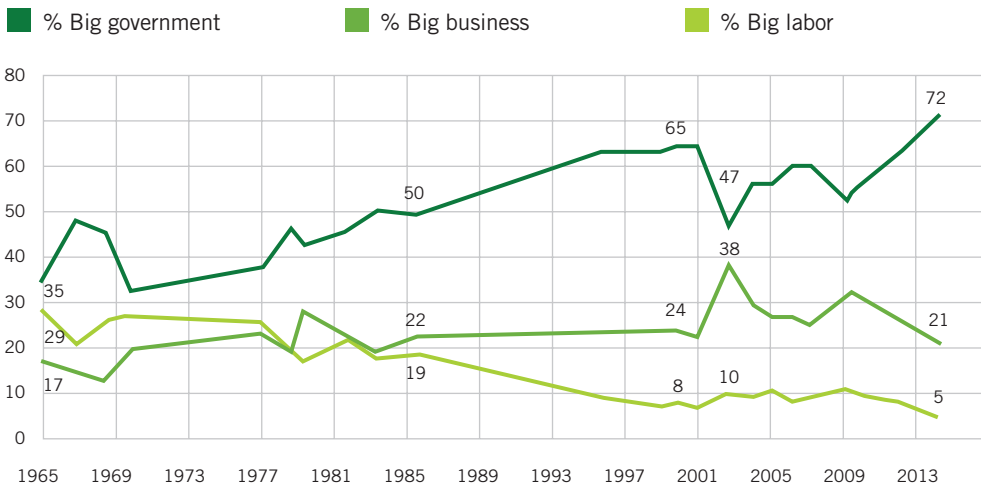
First, legislation, regulation, and investment in environmental protection expanded significantly over the 30-year period. In the 1980s, the major environmental laws in the United States were just beginning to be implemented, following a surge of legislation and regulatory change beginning in the 1970s. In other words, baseline "environmental protection" increased over the period. With status quo levels of environmental protection getting stronger, it's not surprising for people to give additional environmental protections a lower priority over time. Rather than evidence of weaker environmental desires, the numbers may just reflect the increased satisfaction of our desires over those 30 years.

Second, the numbers may simply reflect that people's relative desire for economic growth increases when economic growth falls. Consider Figure 2, which relates Figure 1 (now expressed as "support for prioritizing the environment over the economy") to changes in US gross domestic product (GDP). The correlation suggests that what's changing over the period is our desire for economic growth, not our environmental desires.

Another issue with the Gallup polling (which we pick on only because there are so few other examples) is its reliance on the term "environmental protection." The term is vague and thus subject to various interpretations by respondents and readers alike. Our guess is that many respondents reasonably equate "environmental protection" with "environmental regulation by the federal government." If so, the survey may conflate attitudes toward the environment with attitudes toward government. Figure 3 shows why that matters to interpretation of the poll. Over the past 40 years distrust

Figure 3. Views of Biggest Threat to US in Future

In your opinion, which of the following will be the biggest threat to the country in the future—big business, big labor, or big government?



in "big government" (itself a vague term) has grown significantly. This is yet another potential explanation for the decadal decline in the environment versus growth priority ranking.

In fact, viewing the polls together, it is remarkable how strong the preference for environmental protection (Figure 1) remains given the countervailing trends: the improvements over time in baseline environmental protection, dips in economic growth, and increased distrust in government.

Are We Becoming More Environmental?

Given those headwinds, can we conclude that our underlying environmental attitudes have grown stronger over the last 30 years? Yes. Maybe. We hope so. Pertinent data are sparse and over a decadal scale limited to US opinion polling that suffers from a host of interpretive challenges. Although empirical measurement of our underlying environmental attitudes and tastes is possible, assessment of long-term, cross-cultural changes in environmental desires would require a fairly heroic commitment to new data and empirical methods.

Our survey, as well as our own personal intuition, leads us to conclude that our desires change, and in some situations can be changed deliberately. The difficulty for prediction, however, is the variety of factors that drive our psychology and attitudes. Do our childhood experiences trump the norms of our adult community? Are our attitudes more affected by learning and social messaging or by institutions that govern the way we interact with one another?

Consider the pronounced global trend toward urbanization and its effect on our environmental desires. One argument is that urbanization is likely to weaken environmental desires, via our increasing detachment from natural experiences in childhood

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or psychological adaptation to nature's unobtainability. But urbanization is also associated with educational opportunities and social interactions that could strengthen environmental desire.

Given such countervailing winds, prediction requires deliberate strategies to empirically measure trends in our environmental desire. The difficulty of doing so largely explains why the environmental social sciences have so far not provided adequate evidence one way or the other. But difficulty isn't a great excuse for ignoring something so fundamentally pertinent to our environmental policy choices.

Changes in humanity's environmental desires matter. If we predict stronger environmental desires in the future, then policy choices based on our current strength of desire will tend to underprotect the environment. And conversely, if we expect a weakening, current policy will tend to overstate the benefits of environmental improvement. Our hope is to encourage greater attention (particularly among our colleagues in economics) to the way humanity's deeper environmental desires, values, and attitudes may be changing. •

This article is excerpted from a related blog series on *Common Resources*. Read the full series at www.rff.org/blog/environmentaldesire.