

Column 68: Exploring Mysteries of Living: Interdisciplinary Developments



Copyright © 2019 by **Stephen F. Ledoux**

A Los Alamos member of The International Behaviorology Institute

Why these Columns? Because human behavior causes global problems, and solving these problems requires changes in human behavior... So *everyone* benefits from knowing something about the natural science of human behavior (called behaviorology) that these columns relate. Having first appeared as newspaper columns, these columns began appearing on **BehaviorInfo.com** starting in 2020.

We can share and apply more than morals about what we have discovered regarding human nature and human behavior. We may finally be arriving at some scientifically, as well as emotionally, satisfactory and difference-making answers across science disciplines working to solve human problems.

In addition to experimental and practical components, behaviorology also features a philosophy of science that we call *Behavioral Naturalism* and that is an extension of Naturalism, the philosophy of science of the natural sciences (see the reference). Based on its philosophy of science, and beyond experimental and practical contributions in general, behaviorology makes other important contributions.

Some of those contributions pertain to the capabilities of traditional natural scientists. One major current area involves working together on *green engineering* projects, an area we can also call *green contingency engineering* (for example, working on overpopulation concerns as a foundation for achieving sustainable lifestyles).

Behaviorological scientists and practitioners already work in this area, but not many because there aren't many, and won't be many until more behaviorology departments and programs are available.

Again, so many of the seemingly intractable problems facing humanity today involve problems of human behavior as much as problems of physics or chemistry or biology. Examples include out-of-control population levels, increasing climate extremes from global warming, water and air pollution, potable water depletion and the rising risks of water wars, resources depletion, and loss of species through higher extinction rates due to habitat destruction and so on.

The *solutions* to those intractable problems also involve human behavior. A special

section in the fall 2010 issue of *The Behavior Analyst* begins to address this consideration with ten articles on “The Human Response to Climate Change.” (See the reference for a list of these articles.)

In 2011 another researcher, Grant, extended those topics with good data on the negative effects of overpopulation and consumerism. While he relies unnecessarily on agential terms, something that you can take as the verbal shortcuts that they must be, he includes a range of positive and broadly scaled solution activities that go beyond individualistic interventions.

After the introductory remarks in that Special Section, paleo-climatologist Lonnie Thompson sets the stage for the other papers with his article entitled “Climate change: The evidence and our options.” After reviewing the evidence and discussing the relative merits of mitigation, adaptation, and suffering, Thompson stresses the connection between human behavior and global problems, and their solutions.

He concludes that “There are currently no technological quick fixes for global warming. *Our only hope is to change our behavior* in ways that significantly slow the rate of global warming, thereby giving the engineers time to devise, develop, and deploy technological solutions *where possible*” (p. 168, emphases added).

Others have also made the crucial behavior–connection point, in some cases even earlier than Thompson. For example, in a 2007 speech, Frederick A. O. Schwarz Jr., the 17–year leader of the Natural Resources Defense Council (NRDC), said, “Global warming is the greatest threat we face, but it is not the only threat... Too many wild places are disappearing, too many species are being snuffed out, and too many babies are being born with bodies and brains damaged by man–made chemicals and pollution... To win [these battles]... *we must change how people think—and how they act*” (from the Spring 2008 issue of *Onearth*; emphasis added).

In acknowledging the importance of changing people’s behavior as part of solving world problems, Schwarz was implicitly encouraging the traditional natural sciences to coordinate with an effective natural science of human behavior in green engineering efforts and the movement toward sustainable lifestyles.

Completing such tasks must be a team effort. The players are the natural sciences of energy, matter, life forms, and life functions (physics, chemistry, biology, and behaviorology) as well as all the natural sciences and engineering disciplines related to these, because the complex problems facing humanity, and hence the complex solutions, involve aspects of *all* these disciplines.

Will we cooperate in time? In his paper Lonnie Thompson also pointed out, “... our future may not be a steady, gradual change in the world’s climate, but an abrupt and devastating deterioration from which we cannot recover” (p. 165).

As Thompson describes, we must mitigate the problems while that is still an option, or we will be stuck with adaptation and suffering. The message is clear. Time is running out for efforts to solve world problems, including developing programs to train more people in *all* the relevant natural sciences including, and perhaps especially, because it is starting late, behaviorology, so that they can work together more effectively on solutions.

How much time remains before we are stuck with adaptation and suffering? Research continually shows estimates to be overly optimistic. The *more* than 100 years that behaviorologists presumed, as they moved on formal independence in 1987, shrank to *less* than 100 years about a decade later, and more recently to 50 years *or less!*

In a special article for Earth Day 2010, with the subtitle, “Want peace? Solve the energy crisis,” Walter Simpson makes this point: “Climatologist Jim Hansen said in 2006 that he believed we had just ten years to make substantial progress reversing current carbon dioxide emission trends or we would be unable to avoid the worst consequences of climate change.” According to that math, we have until 2016. Hmmm...

However, the question can no longer merely be how much time is left to fix overpopulation and global warming before the worst effects overtake us. Various media reports can leave readers with the distinct impression that the worst effects are *already* beginning to overtake us. The resulting scenario could lead to some rather ultimate, previously mentioned results including a series of deep and inhumane population reductions leaving survivors with another millennium—long dark age or worse.

Then, our best tool, scientific knowledge, will likely all but disappear and need reinventing, while the many unhelpful mysticisms endure with perhaps only some changes in flavor. So asking “How long do we have?” retains little value. Instead the reality that, in any case, “*We are running out of time!*” must prompt us continually to move ahead on solutions.

Those solutions require all natural scientists to work together. “STEM” must include behaviorology. In part behaviorologists moved decisively for formal independence when they did, so that their science could contribute its share to the expertise and coordinated efforts needed to solve such problems within the necessary time frame.

Under those circumstances, they considered that their *not* declaring independence, and instead spending much energy over many more, likely fruitless years in further efforts to change psychology into a natural science, would be essentially an irresponsible mistake. In agreement, other natural scientists are welcoming behaviorologists to the roundtable of basic sciences for the coordinated efforts that solving major problems requires.

The next column includes some benefits that behaviorology provides to other natural scientists.

For a list of the articles on “The Human Response to Climate Change,” which cover a range of related topics, along with the reference to the Grant article, see pages 393–394 of my 2017 general–audience primer, *What Causes Human Behavior—Stars, Selves, or Contingencies?* The “Books” page at www.behaviorology.org has a full description. You can find some background for the term, *Behavioral Naturalism*, in my article in the Spring 2020 issue of *Journal of Behaviorology* (on the “Journal” page at www.behaviorology.org).

Writing these columns occurs separately from membership in The International Behaviorology Institute (TIBI, at www.behaviorology.org where you can always find more information and resources). The author is not speaking for TIBI, and the author and TIBI need not be in agreement. TIBI welcomes feedback, members, and donations (501.c.3). This is column 68 of 72.