

# SOCIAL PSYCHOLOGY'S CONTRIBUTION TO A SUSTAINABLE FUTURE\*

DAVID G. MYERS

*Hope College*

*Holland, Michigan, U.S.A.*

*myers@hope.edu*

John Houghton (2011), the past chair of the Intergovernmental Panel on Climate Change (IPCC) scientific assessment committee, contends that global climate change is now “the greatest problem the world faces.” The IPCC conclusions—supported by the national science academies of the eleven most developed countries in the world—are undergirded by the most “thoroughly researched and reviewed” scientific effort in human history. The consensus facts are as follows:

- A warming greenhouse gas blanket is growing.
- Sea and air temperatures are rising.
- Various plant and animal species are migrating.
- The polar sea ice is melting.
- The seas are rising.
- Extreme weather and related disaster losses are increasing.

## PSYCHOLOGY AND CLIMATE CHANGE

Throughout its history, social psychology has responded to human events—to the civil rights era with studies of stereotyping and prejudice, to civil unrest and crime with studies of aggression, to the women’s movement with studies of gender development and gender-related attitudes. The looming threat of climate change is now prompting studies of

---

\*Abbreviated and updated, with permission, from Chapter 16: “Social Psychology and the Sustainable Future,” in *Social Psychology*, 11<sup>th</sup> Ed. New York: McGraw-Hill.

- its effects on human behavior,
- public opinion about climate change, and
- ways to modify the human sources of climate change.

### *Psychological Effects of Climate Change*

It is a national security issue: terrorist bombs and climate change are weapons of mass destruction. “If we learned that Al Qaeda was secretly developing a new terrorist technique that could disrupt water supplies around the globe, force tens of millions from their homes and potentially endanger our entire planet, we would be aroused into a frenzy and deploy every possible asset to neutralize the threat,” noted Nicholas Kristof (2007). “Yet that is precisely the threat that we’re creating ourselves, with our greenhouse gases.” Consider the psychology-relevant human consequences:

**Displacement and Trauma.** In 2010, 42 million people were forced by natural disasters to leave their homes—up from 17 million in 2009. More than 90% of these displacements were caused by weather-related hazards, making climate-related displacement “the defining challenge of our times,” according to Antonio Guerres, the U.N. High Commissioner for Refugees (Amland, 2011).

If temperatures increase by the expected 2° to 4°C this century, the resulting changes in water availability, agriculture, disaster risk, and sea level will necessitate massive resettlement (de Sherbinin et al., 2011). When drought or floods force people to leave their land, shelter, and work, as when sub-Saharan African farming and grazing lands become desert, the frequent result is increased poverty and hunger, earlier death, and loss of cultural identity. When an extreme weather event or climate change disrupts ties to one’s place and its people, the frequent result is grief, anxiety, and a sense of loss (Doherty & Clayton, 2011). For social and mental health, climate matters.

**Climate and Conflict.** Got war? Blame the climate. Such is often the case, notes Jeffrey Sachs (2006). The deadly carnage in Darfur, for example, had its roots in drought and the competition for water, and so it has happened across history. Many human maladies—from economic downturns to wars—have been traced to climate fluctuations (Zhang et al., 2011). When climate changes, agriculture often suffers, leading to increased famine, epidemics, and overall misery. Poorer countries, with fewer resources, are especially vulnerable to climate-produced misery (Fischer & Van de Vliert, 2011), and when miserable, people become more

prone to anger with their governments and with each other, leading to war. For social stability, climate matters.

Social psychological studies in both the laboratory and in everyday life reveal that heat also amplifies short-term aggression. On hot days, neighborhood violence, and even hit batters in baseball games, become more frequent. Violence is also more common in hotter seasons of the year, hotter summers, hotter years, hotter cities, and hotter regions (Anderson & Delisi, 2010). Craig Anderson and his colleagues project that if a 4-degree-Fahrenheit (about 2°C) warming occurs, the United States will suffer at least 50,000 more serious assaults each year.

### *Public Opinion about Climate Change*

Is the earth getting warmer? Are humans responsible? Will it matter to our grandchildren? Yes, yes, and yes, say published climate scientists—97% of whom agree that climate change is occurring and is human-caused (Anderegg, Prall, Harold, & Schneider, 2010). As one report in *Science* explained, “Almost all climate scientists are of one mind about the threat of global warming: It’s real, it’s dangerous, and the world needs to take action immediately” (Kerr, 2009).

In response, Europe, Australia, and India have all passed either a carbon tax on coal or a carbon emissions trading system, and even China now has a limited plan that will make polluters pay for excess pollution. In China, India, and South Korea, a 2010 Pew survey found more than 70% of people willing to address climate change by paying more for energy—compared to only 38% in the United States (Rosenthal, 2011c). In 2011, only 38% of Americans likewise agreed that there is “solid evidence” of human-caused global warming (Pew Research Center, 2011), and in the same year, their doubts supported a 240 to 184 U.S. House of Representatives’ vote *defeating* a resolution stating that “climate change is occurring, is caused largely by human activities, and poses significant risks for public health and welfare” (McKibben, 2011).

The enormous gulf between scientific and U.S. public understandings of climate change intrigues social psychologists. Why the gap? Why is global warming not a hotter topic, and what might be done to align scientific and public understandings?

**Personal Experience and the Availability Heuristic.** It is a familiar lesson by now: vivid and recent experiences often overwhelm abstract statistics. Despite knowing the statistical rarity of shark attacks and plane crashes, vivid images of such—being readily available in memory—often hijack our emotions and distort our judgments. We make our

intuitive judgments under the influence of this “availability heuristic,” and thus we often fear the wrong things. If an airline misplaces our bag, we likely will overweight our immediate experience; ignoring data on the airline’s overall lost-bag rate, we belittle the airline. Our ancient brains come designed to attend to the immediate situation, not out-of-sight data and beyond-the-horizon dangers (Gifford, 2011).

Likewise, people will often scorn global warming in the face of a winter freeze. One climate skeptic declared a record East Coast blizzard “a coup de grace” for global warming (Breckler, 2010). In a May, 2011 survey, 47% of Americans agreed that “the record snowstorms this winter in the eastern United States make me question whether global warming is occurring” (Leiserowitz, Maibach, Roser-Renouf, & Smith, 2011). But then after the ensuing blistering summer, 67% of Americans agreed that global warming worsened the “record high summer temperatures in the U.S. in 2011” (Leiserowitz, 2011). Much as the Newton, Connecticut child massacre altered public opinion about gun control, so the vivid reality of the summer drought of 2012 nudged American public opinion about climate change, with 67% (up from 57% in 2009 saying “there is solid evidence” the earth is warming [Pew Research Center, 2012]) and 74% (up from 69% in March before the drought) agreeing that “global warming is affecting weather in the United States” (Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Howe, 2012), and those Fall surveys were *before* the late October destruction wreaked by Hurricane Sandy.

Current weather also colors people’s beliefs about long-term climate. In studies in the U.S. and Australia, people have expressed more belief in global warming, and more willingness to donate to a global warming charity, on warmer-than-usual days than on cooler-than-usual days (Egan & Mullin, 2012; Li, Johnson, & Zaval, 2011). As in so many life realms, our local experience distorts our global judgments.

**Persuasion.** Persuasive messages must first be understood. Thanks in part to the media’s mixed messages—its framing of two opposing sides: those concerned about and those dismissive of climate change—only 39% of Americans in 2011 believed that “most scientists think global warming is happening.” More perceived “a lot of disagreement among scientists” or did not know enough to say (Leiserowitz et al., 2011). Perceiving uncertainty, and reassured by the natural human optimism bias, people discount the threat (Gifford, 2011).

People also exhibit a “system justification” tendency—a tendency to believe in and justify the way things are in their culture. When comfortable, we are not inclined to change the familiar status quo (Feygina, Jost, & Goldsmith, 2010). We tend to like our habitual ways of living—of traveling, of eating, and of heating and cooling our spaces.

It helps to frame energy savings in attention-getting ways. An information sheet or store sign might say, "If you do not install CFL light bulbs, you will lose \$\_\_\_\_\_." Use long time periods. Instead of saying, "This Energy Star refrigerator will save you \$120 a year on your electric bills," say it "will save you \$2400 in wasted energy bills over the next 20 years" (Hofmeister, 2010).

## ENABLING SUSTAINABLE LIVING

What shall we do? Eat, drink, and be merry, for tomorrow is doom? Behave as have so many participants in prisoners' dilemma games by pursuing self-interest to our collective detriment ("Heck, on a global scale, my consumption is infinitesimal; it makes my life comfortable and costs the world practically nothing.")? Wring our hands, dreading that fertility plus prosperity equals calamity, and vow never to bring children into a doomed world?

Those more optimistic about the future see two routes to sustainable lifestyles: a) increasing technological efficiency and agricultural productivity, and b) moderating consumption and population. Social psychology's contribution is to the latter.

Unless we argue that today's less-developed countries are somehow less deserving of an improved standard of living, we must anticipate that their consumption will increase. As it does, the United States and other developed countries must consume less.

Given that humans have already overshot the earth's carrying capacity (WWF, 2012), with population projected to grow from 7 to 9 billion by 2050 (Bureau of the Census, 2013), consumption must moderate. With our material appetites continually swelling—as more people seek personal computers, refrigeration, air-conditioning, jet travel, what can be done to curb consumption by those who can afford to over-consume? Given that most humans care more about their own immediate interests than their descendants' futures, how might we increase concern for future generations?

**Incentives.** One way is through public policies that harness the motivating power of incentives. As a general rule, we get less of what we tax, and more of what we reward. Many cities are using tax monies to build bike lanes and subsidize improved mass transportation, thus encouraging alternatives to cars. On jammed highways, high-occupancy vehicle lanes reward carpooling and penalize driving solo. Gregg Easterbrook (2004) noted that if the United States had raised its gasoline tax by 50 cents a decade ago, the country would now have smaller, more fuel-efficient cars

(as do the Europeans, with their higher petrol taxes) and would therefore import less oil. This, in turn, would have led to lower oil consumption, less global warming, lower gas prices, less money flowing to petro-dictators, and a smaller trade deficit weighing down the economy.

Europe leads the way in incentivizing mass transit over personal vehicle use. In addition to the small vehicles incentivized by high fuel taxes, cities such as Vienna, Munich, Zurich, and Copenhagen have closed many city center streets to car traffic. London and Stockholm drivers pay congestion fees when entering the heart of the city. Amsterdam is a bicycle haven. Dozens of German cities have “environmental zones” where only low CO<sub>2</sub> cars may enter (Rosenthal, 2011a). The Netherlands has even experimented with a car meter that would tax drivers a fee for miles driven, rather like paying a phone fee for minutes talked (Rosenthal, 2011b).

Some free-market proponents object to use or carbon taxes because they are taxes. Others respond that carbon taxes are simply payment for external damage to today’s health and tomorrow’s environment. If not today’s CO<sub>2</sub> emitters, who should pay for the cost of tomorrow’s more intense floods, tornadoes, hurricanes, droughts, and sea rise? “Markets are truly free only when everyone pays the full price for his or her actions,” contends Environmental Defense Fund economist Gernot Wagner (2011). “Anything else is socialism.”

**Feedback.** Another way to encourage greener homes and businesses is to harness the power of immediate feedback by installing “smart meters” that provide a continuous readout of electricity use and its cost. Turn off a computer monitor or the lights in an empty room, and the meter displays the decreased wattage. Turn on the air-conditioning, and the usage and cost are immediately known. In Britain, where smart meters are being installed in businesses, Conservative Party leader David Cameron has supported a plan to have them installed in all homes. “Smart meters have the power to revolutionize people’s relationship with the energy they use,” he said to Parliament (Rosenthal, 2008).

In U.S. studies, sticking a “smiley” or “frowny” face on home energy bills when their energy use is less or more than the neighborhood average has led to energy reductions (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007; Van Vugt, 2009). Sacramento’s Municipal Utility District has sent bills to randomly selected customers, rating their energy use compared with neighbors in similar-sized homes and with their most efficient neighbors, and giving suggestions for energy savings. By the second year, high consumption households were using nearly 3% less electricity (Provencher & Klos, 2010).

**Identity.** In one survey, the top reason people gave for buying a Prius hybrid car was that it “makes a statement about me” (Clayton & Myers, 2009). Indeed, argue Tom Crompton and Tim Kasser (2010), our sense of who we are—our identity—has profound implications for our climate-related behaviors. Does our social identity, the ingroup that defines our circle of concern, include only those around us now? Or does it encompass vulnerable people in places unseen, our descendants and others in the future, and even the creatures in the planet’s natural environment?

Support for new energy policies will require a shift in public consciousness not unlike that which occurred during the 1960s civil rights movement and the 1970s women’s movement. Yale University environmental science dean James Gustave Speth (2008) called for an enlarged identity—a “new consciousness”—in which people

- see humanity as part of nature,
- see nature as having intrinsic value that we must steward,
- value the future and its inhabitants as well as our present,
- appreciate our human interdependence by thinking “we” and not just “me,”
- define quality of life in relational and spiritual rather than materialistic terms, and
- value equity, justice, and the human community.

Is there any hope that human priorities might shift from accumulating money to finding meaning, and from aggressive consumption to nurturing connections? The British government’s plan for achieving sustainable development includes an emphasis on promoting personal well-being and social health. Perhaps social psychology can help point the way to greater well-being by suggesting *ways to reduce consumption*—and also by documenting *materialism*, by informing people that *economic growth does not automatically improve human morale*, by helping people understand *why materialism and money fail to satisfy*, and by *encouraging alternative intrinsic values*.

## THE SOCIAL PSYCHOLOGY OF MATERIALISM AND WEALTH

Despite the recent economic recession, life for most people in Western countries is good. Today the average North American enjoys luxuries

unknown even to royalty in centuries past: hot showers, flush toilets, central air-conditioning, microwave ovens, jet travel, wintertime fresh fruit, big-screen digital television, e-mail, and Post-it notes. Does money—and such associated luxuries—buy happiness? Few of us would answer yes. But ask a different question—“Would a little more money make you a little happier?”—and most of us will say yes. There is, we believe, a connection between wealth and well-being, and that belief feeds what Juliet Schor (1998) has called the “cycle of work and spend”—working more to buy more.

### *Increased Materialism*

Although the earth asks that we live more lightly upon it, materialism has surged, most clearly in the United States. Think of it as today’s American dream: life, liberty, and the purchase of happiness.

Such materialism surged during the 1970s and 1980s. The most dramatic evidence comes from the UCLA/American Council on Education annual survey of nearly a quarter million entering collegians. The proportion considering it “very important or essential” that they become “very well off financially” rose from 39% in 1970 to 81% in 2012 (Figure 1). These proportions virtually flip-flopped with those who considered it very important to “develop a meaningful philosophy of life.” Materialism was up, spirituality was down.

What a change in values! Among 19 listed objectives, new American collegians in most recent years have ranked becoming “very well off financially” number 1. That outranks not only developing a life philosophy but also “becoming an authority in my own field,” “helping others in difficulty,” and “raising a family.”

### *Wealth and Well-Being*

Does sustainable consumption indeed enable “the good life?” Does being well-off produce—or at least correlate with—psychological well-being? Would people be happier if they could exchange a simple lifestyle for one with palatial surroundings, ski vacations in the Alps, and executive-class travel? Would you be happier if you won a sweepstakes and could choose from its suggested indulgences: a 40-foot yacht, deluxe motor home, designer wardrobe, luxury car, or private housekeeper? Social-psychological theory and evidence offer some answers.



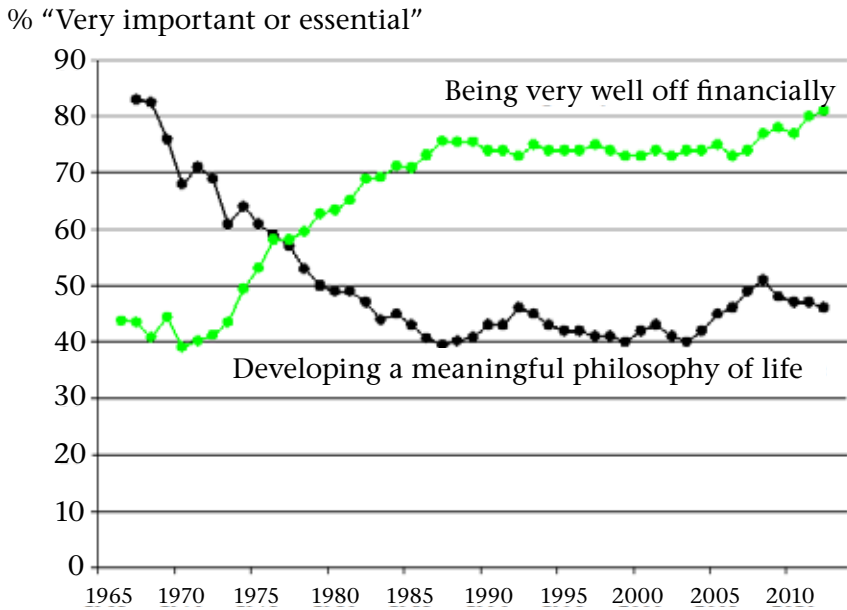


Figure 1. Changing values among entering American collegians (more than 200,000 surveyed annually). Source: Dey, Astin, & Korn (1991) and subsequent American Freshman annual reports.

**Are wealthy countries happier?** We can observe the traffic between wealth and well-being by asking, first, if rich nations are happier places. There is, indeed, some correlation between national wealth and well-being (measured as self-reported happiness and life satisfaction). The Scandinavians have been mostly prosperous and satisfied; the Bulgarians are neither. But once nations reached above \$20,000 GDP per person, higher levels of national wealth are not predictive of increased life satisfaction (Di Tella & MacCullough, 2008).

**Are wealthier individuals happier?** We can ask, second, whether within any given nation, rich people are happier. Are people who drive their BMWs to work happier than those who take the bus? In poor countries—where low income threatens basic needs, being relatively well-off does predict greater well-being (Howell & Howell, 2008). In affluent countries, where most can afford life’s necessities, affluence still matters—partly because people with more money perceive more control over their lives (Johnson & Krueger, 2006). But once a comfortable income level is reached, more and more money produces diminishing long-term returns—a point illustrated by economists who find a linear relationship between log (rather than real dollar) income and happiness

(Sacks, Stevenson, & Wolfers, 2012). In Gallup surveys of more than 450,000 Americans during 2008 and 2009, daily positive feelings (the average of self-reported happiness, enjoyment, and frequent smiling and laughter) increased with income up to, but not beyond, \$75,000 (Kahneman & Deaton, 2010). The same was true for the absence of negative feelings of worry and sadness. In worldwide Gallup surveys across 123 countries, close relationships and feeling empowered and competent predict subjective well-being (Tay & Diener, 2011). When those basic needs are met, more money adds less.

Even the super-rich—the Forbes 100 wealthiest Americans—have reported only slightly greater happiness than average (Diener, Horwitz, & Emmons, 1985). Even winning a state lottery seems not to enduringly elevate well-being (Brickman, Coates, & Janoff-Bulman, 1978). Such jolts of joy have “a short half-life,” notes Richard Ryan (1999).

***Is the wealthier 21<sup>st</sup> century happier?*** We can ask, third, whether a culture’s happiness rises with its affluence over time. Does our collective well-being float upward with a rising economic tide?

In 1957, as economist John Kenneth Galbraith was describing the United States as The Affluent Society (1998), Americans’ per-person income was (in 2005 dollars) about \$12,000. Today, as Figure 2 indicates, the United States is a doubly affluent society. Although this rising tide has lifted the yachts faster than the dinghies, nearly all boats have risen. With double the spending power, thanks partly to the surge in married women’s employment, we now own twice as many cars per person, eat out twice as often, and are supported by a whole new world of technology. Since 1960, we have also seen the proportion of households with dishwashers rise from 7% to 60%, with clothes dryers rise from 20% to 74%, and with air-conditioning rise from 15% to 86% (Bureau of the Census, 2009).

So, believing that it is “very important” to “be very well-off financially,” and having become better off financially, are today’s Americans happier? Are they happier with espresso coffee, caller ID, camera cell phones, and suitcases on wheels compared to before?

They are not. Since 1957, the number of Americans who say they are “very happy” has declined slightly: from 35% to 29%. Twice as rich and apparently no happier. The same has been true of many other countries as well (Easterlin, McVey, Switek, Sawangfa, & Zweig, 2010). After a decade of extraordinary economic growth in China, from few owning a phone and 40% owning a color television to most people now having such things, Gallup surveys revealed a decreasing proportion of people satisfied “with the way things are going in your life today” (Burkholder, 2005).

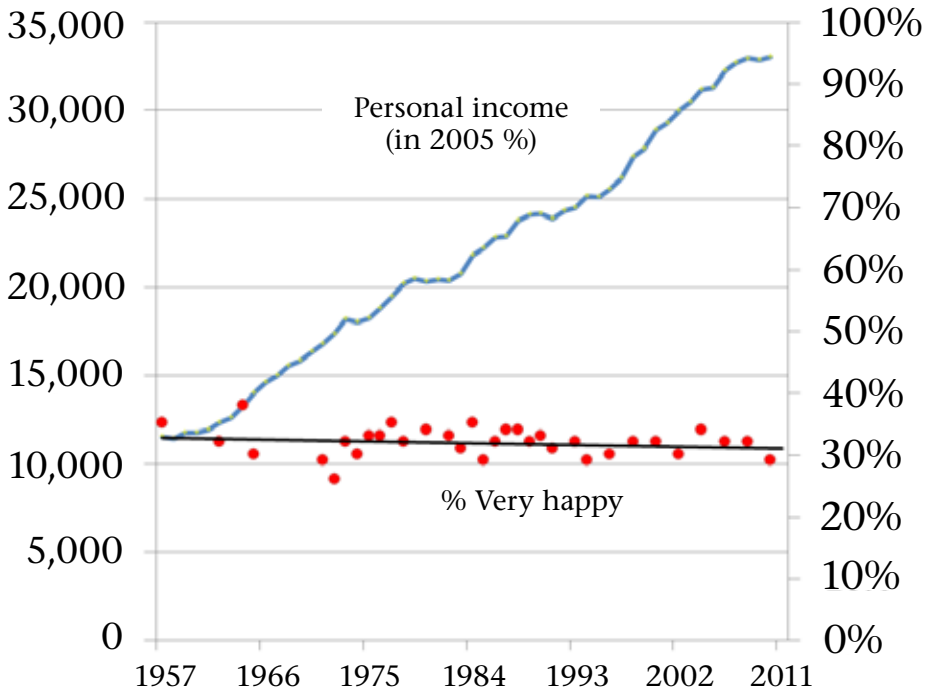


Figure 2. Economic growth and human morale. Source: Happiness data from General Social Surveys, National Opinion Research Center. Income data from Bureau of the Census (1975) and *Economic Indicators*.

The findings are startling because they challenge modern materialism: economic growth has provided no apparent boost to human growth. More than ever, we have big houses and broken homes, high incomes and modest happiness. We excel at making a living but often fail at making a life. We celebrate our prosperity but yearn for purpose. We cherish our freedoms but long for connection.

### *Materialism Fails to Satisfy*

It is striking that economic growth in affluent countries has failed to satisfy. It is further striking that individuals who strive most for wealth tend to live with lower well-being. This finding “comes through very strongly in every culture I’ve looked at,” reported Richard Ryan (1999). Seek *extrinsic* goals—wealth, beauty, popularity, prestige, or anything else centered on external rewards or approval—and you may find anxiety, depression, and psychosomatic ills (Eckersley, 2005; Sheldon, Ryan,

Deci, & Kasser, 2004). Those who instead strive for *intrinsic* goals such as “intimacy, personal growth, and contribution to the community” experience a higher quality of life, concludes Tim Kasser (2000, 2002). Intrinsic values, Kasser (2011) adds, promote personal and social well-being and help immunize people against materialistic values. Those focused on close relationships, meaningful work, and concern for others enjoy inherent rewards that often prove elusive to those more focused on things or on their status and image.

Pause for a moment and think: What is the most personally satisfying event that you experienced in the last month? Kennon Sheldon and his colleagues (2001) put that question (and similar questions about the last week and semester) to samples of university students, and then asked them to rate the extent to which 10 different needs were met by the satisfying event. The students rated self-esteem, relatedness (feeling connected with others), and autonomy (feeling in control) as the emotional needs that most strongly accompanied the satisfying event, while money and luxury were at the bottom of the list of factors predicting satisfaction.

People who identify themselves with expensive possessions experience fewer positive moods, report Emily Solberg, Ed Diener, and Michael Robinson (2003). Such materialists tend to report a relatively large gap between what they want and what they have, and to enjoy fewer close, fulfilling relationships. Wealthier people also tend to savor life’s simpler pleasures less (Quoidbach, Dunn, Petrides, & Mikolajczak, 2010); sipping tea with a friend, savoring a chocolate, finishing a project, and discovering a waterfall while hiking may pale alongside the luxuries enabled by wealth.

People focused on extrinsic and material goals also “focus less on caring for the Earth,” reports Kasser (2011). “As materialistic values go up, concern for nature tends to go down .... When people strongly endorse money, image, and status, they are less likely to engage in ecologically beneficial activities like riding bikes, recycling, and re-using things in new ways.”

But why do yesterday’s luxuries such as air-conditioning and television so quickly become today’s requirements? Two principles drive this psychology of consumption.

**Our Human Capacity for Adaptation.** The *adaptation-level phenomenon* is our tendency to judge our experience (for example, of sounds, temperatures, or income) relative to a neutral level defined by our prior experience. We adjust our neutral levels—the points at which sounds seem neither loud nor soft, temperatures neither hot nor cold,

events neither pleasant nor unpleasant—on the basis of our experience. We then notice and react to up or down changes from those levels.

Thus, as our achievements rise above past levels, we feel successful and satisfied. As our social prestige, income, or in-home technology improves, we feel pleasure. Before long, however, we adapt. What once felt good comes to register as neutral, and what formerly was neutral now feels like deprivation.

Would it ever then be possible to create a social paradise? Donald Campbell (1975) answered no: if you woke up tomorrow to your utopia—perhaps a world with no bills, no ills, and someone who loves you unreservedly, you would feel euphoric for a time. Yet before long, you would recalibrate your adaptation level and, once again, sometimes feel gratified (when achievements surpass expectations), sometimes feel deprived (when they fall below), and sometimes feel neutral.

To be sure, adaptation to some events, such as the death of a spouse, may be incomplete as the sense of loss lingers (Diener, Lucas, & Scollon, 2006), yet we generally underestimate our adaptive capacity. People have difficulty predicting the intensity and duration of their future positive and negative emotions (Wilson & Gilbert, 2003). The elation from getting what we want—riches, top exam scores, the Chicago Cubs winning the World Series—evaporates more rapidly than we expect.

We also sometimes “miswant.” When first-year university students predicted their satisfaction with various housing possibilities shortly before entering their school’s housing lottery, they focused on physical features. “I’ll be happiest in a beautiful and well-located dorm,” many students seemed to think. But they were wrong. When contacted a year later, it was the social features, such as a sense of community, that predicted happiness, report Elizabeth Dunn and her colleagues (2003). Likewise, Leaf Van Boven and Thomas Gilovich (2003) report from their surveys and experiments that positive experiences (often social experiences) leave us happier. The best things in life are not things.

**Our Wanting to Compare.** Much of life revolves around *social comparison*, a point made by the old joke about two hikers who meet a bear. One reaches into his backpack and pulls out a pair of sneakers. “Why bother putting those on?” asks the other. “You can’t outrun a bear.” “I don’t have to outrun the bear,” answers the first. “I just have to outrun you.”

In similar fashion, happiness is relative to our comparisons with others, especially those within our own groups (Lyubomirsky, 2001; Zagefka

& Brown, 2005). Whether we feel good or bad depends on whom we are comparing ourselves with. We are slow-witted or clumsy only when others are smart or agile. Let one professional athlete sign a new contract for \$15 million a year and an \$8-million-a-year teammate may now feel less satisfied. “Our poverty became a reality. Not because of our having less, but by our neighbors having more,” recalled Will Campbell (2000) in *Brother to a Dragonfly* (39).

Further feeding our luxury fever is the tendency to compare upward: as we climb the ladder of success or affluence, we mostly compare ourselves with peers who are at or above our current level, not with those who have less. People living in communities where a few residents are very wealthy tend to feel envy and less satisfaction as they compare upward (Fiske, 2011).

In developed and emerging economies worldwide, inequality has grown in recent years. In the 34 Organisation for Economic Co-operation and Development (OECD, 2011) countries, the richest 10% now average nine times the income of the poorest 10% (the gap is less in the Scandinavian countries, and substantially greater in Israel, Turkey, the U.S., Mexico, and Chile). Countries with greater inequality not only have greater health and social problems, but also higher rates of mental illness (Pickett & Wilkinson, 2011). Likewise, American states with greater inequality have higher rates of depression (Messias, Eaton, & Grooms, 2011). Over time, years with more income inequality—and associated increases in perceived unfairness and lack of trust—correlate with less happiness among those with lower incomes (Oishi, Kesebir, & Diener, 2011).

Although people often prefer the economic policies in place, a national survey found that Americans overwhelmingly preferred an income distribution that just happened to be that of the United States'. Moreover, people preferred (in an ideal world) the top 20% income share ranging between 30 and 40% (rather than the actual 84%), with modest differences between Republicans and Democrats and between those making less than \$50,000 and more than \$100,000 (Norton & Ariely, 2011).

Even in China, income inequality has grown. This helps explain why rising affluence has not produced increased happiness—there or elsewhere. Rising income inequality, notes Michael Hagerty (2000), makes for more people who have rich neighbors. Television’s modeling of the lifestyles of the wealthy also serves to accentuate feelings of “relative deprivation” and desires for more (Schor, 1998).

The adaptation-level and social comparison phenomena give us pause. They imply that the quest for happiness through material achieve-

ment requires continually expanding affluence. But the good news is that adaptation to simpler lives can also happen. If we shrink our consumption by choice or by necessity, we will initially feel a pinch, but the pain will likely pass. "Weeping may tarry for the night, but joy comes with the morning," reflected the Psalmist (Psalm 30: 5). Indeed, thanks to our capacity to adapt and to adjust comparisons, the emotional impact of significant life events—losing a job or even a disabling accident—dissipates sooner than most people suppose (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998).

## **TOWARD SUSTAINABILITY AND SURVIVAL**

As individuals and as a global society, we face difficult social and political issues. How might a democratic society induce people to adopt values that emphasize psychological well-being over materialism? How might a thriving market economy mix incentives for prosperity with restraints that preserve a habitable planet? To what extent can we depend on technological innovations, such as alternative energy sources, to reduce our ecological footprints? To what extent does the superordinate goal of preserving the earth for our grandchildren call us each to limit our own liberties—our freedom to drive, burn, and dump whatever we wish?

A shift to postmaterialist values will gain momentum as people, governments, and corporations take these steps:

- Face the implications of population and consumption growth for climate change and environmental destruction.
- Realize that extrinsic, materialist values make for less happy lives.
- Identify and promote the things in life that can enable sustainable human flourishing.

"If the world is to change for the better it must have a change in human consciousness," said Czech poet-president Vaclav Havel (1990). We must discover "a deeper sense of responsibility toward the world, which means responsibility toward something higher than self." If people were to believe that ever-bigger houses, closets full of seldom-worn clothes, and garages with luxury cars do not define the good life, then might a shift in consciousness become possible? Instead of being an indicator of social status, might conspicuous consumption become gauche?

Social psychology's contribution to a sustainable, flourishing future will come partly through its consciousness-transforming insights into adaptation and comparison. These insights also come from experiments that lower people's comparison standards and thereby cool luxury fever and renew contentment. In two such experiments, Marshall Dermer and his colleagues (1979) put university women through imaginative exercises in deprivation. After viewing depictions of the grimness of Milwaukee life in 1900, or after imagining and writing about being burned and disfigured, the women expressed greater satisfaction with their own lives.

In another experiment, Jennifer Crocker and Lisa Gallo (1985) found that people who five times completed the sentence "I'm glad I'm not a ..." afterward felt less depressed and more satisfied with their lives than did those who completed sentences beginning with "I wish I were a ...." Realizing that others have it worse helps us count our blessings. "I cried because I had no shoes," says a Persian proverb, "until I met a man who had no feet." Downward social comparison facilitates contentment.

Downward comparison to a hypothetical worse-off self also enhances contentment. In one experiment, Minkyung Koo and her colleagues (2008) invited people to write about how they might never have met their romantic partner. Compared to others who wrote about meeting their partner, those who imagined not having the relationship expressed more satisfaction with it. Can you likewise imagine how some good things in your life might never have happened?

Social psychology also contributes to a sustainable and survivable future through its explorations of the good life. If materialism does not enhance life quality, what does?

- *Close, supportive relationships.* Our deep "need to belong" is satisfied by close, supportive relationships. People who are supported by intimate friendships or a committed marriage are much more likely to declare themselves "very happy."
- *Faith communities and voluntary organizations* are often a source of such connections, as well as of meaning and hope. This helps explain a finding from National Opinion Research Center surveys of nearly 50,000 Americans since 1972: 26% of those rarely or never attending religious services declared themselves very happy, as did 48% of those attending multiple times weekly.



- *Positive thinking habits.* Optimism, self-esteem, perceived control, and extraversion also mark happy experiences and happy lives. One analysis of 638 studies of 420,000+ people in 63 countries found that a sense of autonomy—feeling free and independent—consistently influences people's sense of well-being more than does wealth (Fischer & Boer, 2011).
- *Experiencing nature.* Carleton University students randomly assigned to a 17-minute nature walk near their campus ended up (to their and others' surprise) much happier than students who took a similar-length walk through campus walking tunnels (Nisbet & Zelenski, 2011). Japanese researchers report that “forest bathing”—walks in the woods—also helps lower stress hormones and blood pressure (Phillips, 2011).
- *Flow.* Work and leisure experiences that engage one's skills mark happy lives. Mihaly Csikszentmihalyi (1990, 1999) notes that between the anxiety of being overwhelmed and stressed, and the apathy of being underwhelmed and bored, there lies a zone in which people experience flow. Flow is an optimal state in which, absorbed in an activity, we lose consciousness of self and time. When people's experience is sampled using electronic pagers, they report greatest enjoyment not when mindlessly passive but when unself-consciously absorbed in a mindful challenge. In fact, the less expensive (and generally more involving) a leisure activity, the happier people are while doing it. Most people are happier gardening than power boating, or talking to friends than watching TV. Low-consumption recreations prove most satisfying.

That is good news indeed. Those things that make for the genuinely good life—close relationships, social networks based on belief, positive thinking habits, engaging activity—are enduringly sustainable, and that is an idea close to the heart of Jigme Singye Wangchuck, former King of Bhutan. “Gross national happiness is more important than gross national product,” he said (Priesner, 1999). Writing from the Center of Bhutan Studies in Bhutan, Sander Tideman (2004) explained: “Gross National Happiness ... aims to promote real progress and sustainability by measuring the quality of life, rather than the mere sum of production and consumption.” Now other nations, too, are assessing national quality of life.

## REFERENCES

- Amland, B. H. 2011. Millions displaced by natural disasters last year. *Associated Press*, June 6.
- Anderegg, W. R. L., Prall, J. W., Harold, J., & Schneider, S. H. 2010. Expert credibility in climate change. *PNAS*, 107: 12107–12109.
- Anderson, C. A., & Delisi, M. 2010. Implications of global climate change for violence in developed and developing countries. In J. Forgas, A. Kruglanski, & K. Williams (Eds.), *The psychology of social conflict and aggression*: 249–266. New York: Psychology Press.
- Breckler, S. J. 2010. In the heat of the moment. *Monitor on Psychology*, 41(4): 39.
- Brickman, P., Coates, D., & Janoff-Bulman, R. J. 1978. Lottery winners and accident victims: Is happiness relative? *Journal of Personality and Social Psychology*, 36: 917–927.
- Bureau of the Census. 1975. *Historical abstract of the United States: Colonial times to 1970*. Washington, DC: Superintendent of Documents.
- Bureau of the Census. 2009. *The 2009 statistical abstract. Table 946*, www.census.gov.
- Bureau of the Census. 2013. *International data base: World population: 1950–2050* (from June 2011 update). Washington, DC: U.S. Census Bureau, census.gov/population/international/data/idb/worldpopgraph.php (accessed May 11, 2013).
- Burkholder, R. 2005. Chinese far wealthier than a decade ago, but are they happier? Gallup Poll. January 11, www.poll.gallup.com.
- Campbell, D. T. 1975. On the conflicts between biological and social evolution and between psychology and moral tradition. *American Psychologist*, 30: 1103–1126.
- Campbell, W. D. 2000. *Brother to a dragonfly* (25th anniversary ed.). New York: Continuum.
- Clayton, S., & Myers, G. 2009. *Conservation psychology: Understanding and promoting human care for nature*. Hoboken, NJ: Wiley-Blackwell.
- Crocker, J., & Gallo, L. 1985. *The self-enhancing effect of downward comparison*. Paper presented at the American Psychological Association convention.
- Crompton, T., & Kasser, T. 2010. Human identity: A missing link in environmental campaigning. *Environment Magazine*, July/August: 23–33.
- Csikszentmihalyi, M. 1990. *Flow: The psychology of optimal experience*. New York: Harper & Row.
- Csikszentmihalyi, M. 1999. If we are so rich, why aren't we happy? *American Psychologist*, 54: 821–827.
- de Sherbinin, A. & 17 others. 2011. Preparing for resettlement associated with climate change. *Science*, 334: 456–457.

- Dermer, M., Cohen, S. J., Jacobsen, E., & Anderson, E. A. 1979. Evaluative judgments of aspects of life as a function of vicarious exposure to hedonic extremes. *Journal of Personality and Social Psychology*, 37: 247–260.
- Dey, E. L., Astin, A. W., & Korn, W. S. 1991. *The American freshman: Twenty-five year trends*. Los Angeles: Higher Education Research Institute, UCLA.
- Di Tella, R., & MacCullough, R. 2008. *Happiness adaptation to income beyond "basic needs,"* Working Paper 14539. National Bureau of Economic Research. [nber.org/papers/w14539](http://nber.org/papers/w14539).
- Diener, E., Horwitz, J., & Emmons, R. A. 1985. Happiness of the very wealthy. *Social Indicators*, 16: 263–274.
- Diener, E., Lucas, R. E., & Scollon, C. N. 2006. Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, 61: 305–314.
- Doherty, T. J., & Clayton, S. 2011. The psychological impacts of global climate change. *American Psychologist*, 66: 265–276.
- Dunn, E. W., Wilson, T. D., & Gilbert, D. T. 2003. Location, location, location: The misprediction of satisfaction in housing lotteries. *Personality and Social Psychology Bulletin*, 29: 1421–1432.
- Easterbrook, G. 2004. The 50 cents-a-gallon solution. *New York Times*, May 25, [www.nytimes.com](http://www.nytimes.com).
- Easterlin, R. A., McVey, L. A., Switek, M., Sawangfa, O., & Zweig, J. S. 2010. The happiness-income paradox revisited. *PNAS*, 107: 22463–22468.
- Eckersley, R. 2005. Is modern Western culture a health hazard? *International Journal of Epidemiology*, November 22, <http://ije.oxfordjournals.org/content/35/2/252.full>.
- Egan, P. J., & Mullin, M. 2012. Turning personal experience into political attitudes: The effect of local weather on Americans' perceptions about global warming. *Journal of Politics*, 74: 796–809.
- Feygina, I., Jost, J. T., & Goldsmith, R. E. 2010. System justification, the denial of global warming, and the possibility of "system-sanctioned change." *Personality and Social Psychology Bulletin*, 36: 326–338.
- Fischer, R., & Boer, D. 2011. What is more important for national well-being: Money or autonomy? A meta-analysis of well-being, burnout, and anxiety across 63 societies. *Journal of Personality and Social Psychology*, 101: 164–184.
- Fischer, R., & Van de Vliert, E. 2011. Does climate undermine subjective well-being? A 58-nation study. *Personality and Social Psychology Bulletin*, 37: 1031–1041.
- Fiske, S. T. 2011. *Envy up, scorn down: How status divides us*. New York: Sage Foundation.
- Galbraith, J. K. 1998. *The affluent society*. Boston: Mariner Books.
- Gifford, R. 2011. The dragons of inaction: Psychological barriers that limit climate change mitigation and adaptation. *American Psychologist*, 66: 290–302.
- Gilbert, D. T., Pinel, E. C., Wilson, T. D., Blumberg, S. J., & Wheatley, T. P. 1998. Immune neglect: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology*, 75: 617–638.

- Hagerty, M. R. 2000. Social comparisons of income in one's community: Evidence from national surveys of income and happiness. *Journal of Personality and Social Psychology*, 78: 764–771.
- Havel, V. 1990. *Disturbing the peace*. New York: Knopf.
- Hofmeister, B. 2010. Bridging the gap: Using social psychology to design market interventions to overcome the energy efficiency gap in residential energy markets. *Southeastern Environmental Law Journal*, 19: 1ff. Available at SSRN: <http://ssrn.com/abstract=1892906>.
- Houghton, J. 2011. *Global warming, climate change and sustainability: A challenge to scientists, policymakers and religious believers*. Cambridge, England: The International Society for Science and Religion, [www.issr.org.uk/latest-news/global-warming](http://www.issr.org.uk/latest-news/global-warming).
- Howell, R. T., & Howell, C. J. 2008. The relation of economic status to subjective well-being in developing countries: A meta-analysis. *Psychological Bulletin*, 134: 536–560.
- Johnson, W., & Krueger, R. F. 2006. How money buys happiness: Genetic and environmental processes linking finances and life satisfaction. *Journal of Personality and Social Psychology*, 90: 680–691.
- Kahneman, D., & Deaton, A. 2010. High income improves evaluation of life but not emotional well-being. *PNAS*, 107: 16489–16493.
- Kasser, T. 2000. Two versions of the American dream: Which goals and values make for a high quality of life? In E. Diener & D. Rahtz (Eds.), *Advances in quality of life: Theory and Research*: 3–12. Dordrecht, Netherlands: Kluwer.
- Kasser, T. 2002. *The high price of materialism*. Cambridge, MA: MIT Press.
- Kasser, T. 2011. *High price of materialism*. Animated video. Center for the New American Dream, [www.newdream.org](http://www.newdream.org).
- Kerr, R. A. 2009. Amid worrisome signs of warming, “climate fatigue” sets in. *Science*, 326: 926–928.
- Koo, M., Algoe, S. B., Wilson, T. D., & Gilbert, D. T. 2008. It's a wonderful life: Mentally subtracting positive events improves people's affective states, contrary to their affective forecasts. *Journal of Personality and Social Psychology*, 95: 1217–1224.
- Kristof, N. D. 2007. The big melt. *New York Times*, August 16, [www.nytimes.com](http://www.nytimes.com).
- Leiserowitz, A. 2011. *Do Americans connect climate change and extreme weather events?* E-mail of Yale/GMU survey, from Yale Project on Climate Change Communication. Dated November 17.
- Leiserowitz, A., Maibach, E., Roser-Renouf, C., Feinberg, G., & Howe, P. 2012. *Extreme weather and climate change in the American mind*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication.
- Leiserowitz, A., Maibach, E., Roser-Renouf, C., & Smith, N. 2011. *Climate change in the American mind: Americans' global warming beliefs and attitudes in May 2011*. Yale University and George Mason University. New Haven CT: Yale Project on Climate Change Communication.

- Li, Y., Johnson, E. J., & Zaval, L. 2011. Local warming: Daily temperature change influences belief in global warming. *Psychological Science*, 22: 454–459.
- Lyubomirsky, S. 2001. Why are some people happier than others? The role of cognitive and motivational processes in well-being. *American Psychology*, 56: 239–249.
- McKibben, B. 2011. A link between climate change and Joplin tornadoes? Never! *Washington Post*, May 23, www.washingtonpost.com.
- Messias, E., Eaton, W. W., & Grooms, A. N. 2011. Income inequality and depression prevalence across the United States: An ecological study. *Psychiatric Services*, 62: 710–712.
- Nisbet, E. K., & Zelenski, J. M. 2011. Underestimating nearby nature: Affective forecasting errors obscure the happy path to sustainability. *Psychological Science*, 22: 1101–1106.
- Norton, M. I., & Ariely, D. 2011. Building a better America—one wealth quintile at a time. *Perspectives on Psychological Science*, 6: 9–12.
- OECD (Organisation for Economic Co-operation and Development). 2011. *An overview of growing income inequalities in OECD countries: Main findings*, www.oecd.org/dataoecd/40/12/49170449.pdf.
- Oishi, S., Kesebir, S., & Diener, E. 2011. Income inequality and happiness. *Psychological Science*, 22: 1095–1100.
- Pew Research Center. 2011. *Modest rise in number saying there is “solid evidence” of global warming*. December 1, www.pewresearch.org.
- Pew Research Center. 2012. *More say there is solid evidence of global warming*. October 15. Pew Research Center for the People & the Press, www.people-press.org.
- Phillips, A. L. 2011. A walk in the woods. *American Scientist*, 69: 301–302.
- Pickett, K., & Wilkinson, R. 2011. *The spirit level: Why greater equality makes societies stronger*. New York: Bloomsbury.
- Priesner, S. 1999. Gross national happiness—Bhutan's vision of development and its challenges. *Gross National Happiness*. Discussion papers, Center for Bhutan Studies, Thimphu Bhutan: 24–52.
- Provencher, B., & Klos, M. 2010. *Using social nudges to reduce energy demand: evidence for the long term*. November 17. Conference on Behavior, Energy, and Climate Change (BECC), Sacramento, CA.
- Quoidbach, J., Dunn, E., Petrides, K., & Mikolajczak, M. 2010. Money giveth, money taketh away: The dual effect of wealth on happiness. *Psychological Science*, 21: 759–763.
- Rosenthal, E. 2008. Britons shine a light on energy use at home. *New York Times*, July 15, www.nytimes.com.
- Rosenthal, E. 2011a. Europe stifles drivers in favor of alternatives. *New York Times*, June 26, www.nytimes.com.
- Rosenthal, E. 2011b. In auto test in Europe, meter ticks off miles, and fee to driver. *New York Times*, August 10, www.nytimes.com.
- Rosenthal, E. 2011c. Where did global warming go? *New York Times*, October 15, www.nytimes.com.

- Ryan, R. 1999. Quoted by A. Kohn, In pursuit of affluence, at a high price. *New York Times*, February 2, www.nytimes.com.
- Sachs, J. D. 2006. Ecology and public upheaval. *Scientific American*, 291(July): 37.
- Sacks, D. W., Stevenson, B., & Wolfers, J. 2012. The new stylized facts about income and subjective well-being. *Emotion*, 12: 1181–1187.
- Schor, J. B. 1998. *The overworked American*. New York: Basic Books.
- Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. 2007. The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18: 429–434.
- Sheldon, K. M., Elliot, A. J., Youngmee, K., Kasser, T. 2001. What is satisfying about satisfying events? Testing 10 candidate psychological needs. *Journal of Personality and Social Psychology*, 80: 325–339.
- Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. 2004. The independent effects of goal contents and motives on well-being: It's both what you pursue and why you pursue it. *Personality and Social Psychology Bulletin*, 30: 475–486.
- Solberg, E. C., Diener, E., Robinson, M. D. 2003. Why are materialists less satisfied? In T. Kasser & A. D. Kanner (Eds.), *Psychology and consumer culture: The struggle for a good life in a materialistic world*. Washington, DC: APA Books.
- Speth, J. G. 2008. Foreword. In A. A. Leiserowitz & L. O. Fernandez (Eds.), *Toward a new consciousness: Values to sustain human and natural communities*. New Haven: Yale School of Forestry & Environmental Studies.
- Tay, L., & Diener, E. 2011. Needs and subjective well-being around the world. *Journal of Personality and Social Psychology*, 101: 354–365.
- Tideman, S. 2004. Announcement of operationalizing Gross National Happiness conference, February 18–20. Distributed via the Internet.
- Van Boven, L., & Gilovich, T. 2003. To do or to have? That is the question. *Journal of Personality and Social Psychology*, 85: 1193–1202.
- Van Vugt, M. 2009. Averting the Tragedy of the Commons: Using social psychological science to protect the environment. *Current Directions in Psychological Science*, 18: 169–173.
- Wagner, G. 2011. Going green but getting nowhere. *New York Times*, September 7, www.nytimes.com.
- Wilson, T. D., & Gilbert, D. T. 2003. Affective forecasting. *Advances in Experimental Social Psychology*, 35: 346–413.
- WWF. 2012. *Living planet report 2012: Biodiversity, biocapacity*. Gland, Switzerland: World Wildlife Federation.
- Zagefka, H., & Brown, R. 2005. Comparisons and perceived deprivation in ethnic minority settings. *Personality and Social Psychology Bulletin*, 31: 467–482.
- Zhang, D. D., Lee, H. F., Wong, C., Li, B., Pei, Q., Zhang, J., & An, Y. 2011. The causality analysis of climate change and large-scale human crisis. *PNAS*, 108: 17296–17301.