Chapter 6
Ecological Challenges, Materialistic Values, and Social Change

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The environmental sciences have increasingly warned informed citizens and political leaders about the multiple crises affecting our one and only home planet. The percentage of species expected to go extinct in the next couple of decades is on par with the massive die-offs historically due to cataclysms such as asteroids. The levels of pollution in our air and of garbage in our water are so extensive that babies are born with toxic chemicals in their blood-streams and huge areas of the Pacific Ocean and the Gulf of Mexico can no longer support sea life. And the rise in atmospheric carbon dioxide levels foretells extensive climate disruptions that threaten to create massive numbers of refugees whose homes will be underwater, shortages in food and potable water, and international conflicts over the resources necessary to sustain life.

The response to these data by citizens and leaders in wealthy countries has thus far not risen to the challenges ahead for humanity. Citizens continue to place environmental problems relatively low in their rank-orderings of national priorities. Politicos' negotiations about climate disruption at international conferences are still often derailed by concerns about their nations' economic growth (such as occurred in Copenhagen in the winter of 2009), and continue to be influenced largely by the idea that businesses have a "right" to pollute (i.e., cap-and-trade policies). To the extent a consistent message regarding social change has been promoted, it is that "consumers" (nee citizens) can do their part to save the Earth by switching their light bulbs from incandescents to compact fluorescents or by driving hybrid automobiles. Unfortunately, most environmental research does not suggest that these approaches will come close to meeting the environmental challenges ahead, or that such small behavioral changes will generalize to the types of life style changes that are likely to be required of the citizenry (Thogerson & Crompton, 2009).

From the perspective of a psychologist interested in social change, it seems to me that what remains largely unspoken, but ultimately necessary, is to recognize that our world's ecological crisis is a deeply *internal* crisis of *values.* Values

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R. Biswas-Diener (ed.), *Positive Psychology as Social Change*,
DOI 10.1007/978-90-481-9938-9_6,

are the psychological representations of what people believe is important in life (Rokeach, 1973), and one particular set of values is clearly relevant to the ecological crises humanity faces: the self-enhancing, materialistic concerns for money, wealth, possessions, status, and an appealing image.

Self-Enhancing, Materialistic Values

Substantial cross-cultural psychological research documents that self-enhancing, materialistic values are indeed a crucial component of people's motivational systems. In these studies, individuals around the world have been presented with a variety of different aims they might value or goals they might have, and have been asked to rate how important these values and goals are to them. Using statistical techniques such as factor analysis, smallest space analysis, multidimensional scaling analysis, and circular stochastic modeling, researchers have been able to identify smaller subsets of particular values and goals that cluster together as coherent groups. For example, Shalom Schwartz's (1992, 2006) seminal work has identified 10 types of basic priorities held by people in dozens of nations around the world. Two of these types of priorities cluster together as what Schwartz calls the "self-enhancement" values, for they concern the attempt to stand out from others through the acquisition of money, status, and the like. Specifically, the first self-enhancement value, *power*, concerns the desire to obtain resources and wealth, whereas the second, *achievement*, concerns the desire to stand out as particularly excellent and successful by the definitions of one's society. The cross-cultural research my colleagues and I have conducted (Grouzet et al., 2005; Kasser & Ryan, 1996; Ryan et al., 1999; Schmuck, Kasser, & Ryan, 2000) similarly yields an "extrinsic" or "materialistic" cluster consisting of three types of goals: *financial success*, which concerns the desire for money and possessions; *image*, which concerns the desire to have an appealing appearance; and *status*, which concerns the desire to be popular and admired by others.

In addition to documenting the existence of these self-enhancing, materialistic values, a variety of types of studies support the proposal that these types of aims in life contribute to the environmental difficulties that humanity now faces.

For example, studies show that the more people care about self-enhancing, materialistic values and goals, the more likely they are to hold attitudes and values that are inconsistent with good environmental stewardship. Studies in Australia (Saunders & Munro, 2000) and the United States (Good, 2007) document that materialistic values and a strong consumer orientation are associated with lower biophilia (i.e., the love of all living things; Kellert & Wilson, 1993) and worse environmental attitudes. The cross-cultural research of Schwartz (1992, 2006) similarly reveals that the self-enhancing values of *power* and *achievement* are associated with caring less about values such as "protecting the environment," "attaining unity with nature," and having "a world of beauty." Additionally, a study of almost 1,000 undergraduates from Brazil, the Czech Republic, Germany, India, New Zealand, and Russia showed that worse environmental attitudes were associated with high power

values in five nations and with higher achievement values in two nations (Schultz et al., 2005).

Self-enhancing, materialistic values have also been associated with *behaving* in less ecologically sustainable ways. Materialistic values have been negatively correlated with how much American adults engage in ecologically friendly behaviors such as buying second-hand, recycling, riding a bicycle, reusing paper, etc. (Richins & Dawson, 1992; Brown & Kasser, 2005); such results have been replicated in samples of US and UK adolescents (Gatersleben, Meadows, Abrahamse, & Jackson, 2008; Kasser, 2005). Brown and Kasser (2005) also examined how materialistic values are associated with ecological footprints, a measure that quantifies the amount of ecological resources necessary to support one's lifestyle via self-reports of one's behaviors in the realms of transportation (e.g., riding a bicycle vs. driving an SUV), housing (e.g., living in a small vs. large home), and food (e.g., eating a vegetarian diet vs. eating a meat-based one). The findings from 400 North American adults showed that those who cared more about materialistic values had substantially higher ecological footprints than did those who were less focused on such aims.

The role of materialistic values in ecological destruction is also supported by research using resource dilemma games (Dechesne et al., 2003; Kasser & Sheldon, 2000; Sheldon & McGregor, 2000). For example, Sheldon and McGregor assessed college students' values and then assigned them to one of three kinds of groups based on their scores: a group with four subjects who all scored high in materialism, a group with four subjects who all scored low in materialism, or a group with two members who scored high and two who scored low in materialism. Subjects then played a "forest-management game" in which they were asked to imagine that they were in charge of a company that would bid against three other companies (i.e., their other group members) to harvest timber from a state forest. All subjects in a group made an initial bid for how much they wanted to harvest; the total amount of the four bids in the group was then subtracted from the existing forest acreage, another 10% was added back (to represent regrowth in the forest), and then a second year of bidding commenced. This process continued either until 25 "years" of bidding had passed or until no forest remained. Sheldon and McGregor found that materialistic individuals reported being more motivated by "greed," or the desire to profit more than other companies, and, importantly, that the groups composed of four materialistic individuals were significantly less likely to have a forest remaining at the 25th year of bidding.

Similar dynamics appear to play out on a national scale. Kasser (in press) obtained measures of the CO_2 emissions (per capita) of 20 wealthy, capitalistic nations and correlated these with how much the citizens in those nations cared about *mastery* values, which are aimed at manipulating the world to serve one's own interest. Even after controlling for a nation's Gross Domestic Product (per capita), the more mastery was valued by citizens of a nation, the more CO_2 that nation emitted, and thus the more it was contributing to climate disruption.

To summarize, the body of literature just reviewed suggests that to the extent individuals value self-enhancing, materialistic aims in life, they are more likely to have negative attitudes about the environment, are less likely to engage in

relatively simple behaviors that benefit the environment, and are more likely to make behavioral choices that contribute to environmental degradation. Further, evidence suggests that when nations strongly value self-enhancing, materialistic values, they emit more greenhouse gases. Such findings, although admittedly correlational, are consistent with the proposal that society's focus on the acquisition of more and more wealth and consumer goods, on economic growth, and on financial profit contribute both to the environmental degradation threatening humanity's only liveable habitat and to the thus far weak responses of citizens, businesses, and politicians to this threat.

A Strategy to Enhance Sustainability by Decreasing Materialistic Values

In this section, I lay out a two-armed strategy for social change that is aimed at promoting sustainability by decreasing the extent to which people and society focus on the self-enhancing, materialistic values known to be associated with ecological degradation. The first arm of this strategy is to identify and remove the root causes of self-enhancing, materialistic values, thereby decreasing the likelihood that people will focus on the kinds of aims in life that interfere with an ecologically sustainable world. The second arm of the strategy is to encourage alternative values that both oppose the self-enhancing, materialistic values and that promote ecological sustainability. The remainder of this section provides a brief overview of each of these two approaches and the empirical basis for them.

Addressing the Causes of Self-enhancing, Materialistic Values

The research suggests that there are two primary pathways that lead individuals to place a relatively high importance on materialistic values (Kasser, Ryan, Couchman, & Sheldon, 2004). The first pathway is the rather obvious influence of social modeling and the second is the subtler route of responses to felt threats and insecurity.

Social modeling occurs when individuals are exposed to people or messages in their environment suggesting that money, power, possessions, achievement, image, and status are important aims to strive for in life. The empirical evidence clearly documents that people's levels of materialism are positively associated with the extent that their parents, friends, and peers also espouse such values (Ahuvia & Wong, 2002; Banerjee & Dittmar, 2008; Kasser, Ryan, Zax, & Sameroff, 1995). Television also plays an important role in encouraging materialistic values, as documented by numerous studies (Cheung & Chan, 1996; Good, 2007; Kasser & Ryan, 2001; Rahtz, Sirgy, & Meadow, 1989; Schor, 2004). Another piece of evidence supporting a social modeling explanation is that children exposed to advertising in school have a stronger materialistic orientation (Brand & Greenberg, 1994).

The second pathway that tends to increase materialism is that of insecurity. When people experience threats to their survival, their safety and security, and their perceived likelihood of satisfying their psychological needs, the empirical literature suggests that they tend to orient toward materialistic aims. For example, children's materialism is higher when they grow up in a family with a cold, controlling mother, when their parents divorce, and when they experience poverty (Cohen & Cohen, 1996; Kasser et al., 1995; Rindfleisch, Burroughs, & Denton, 1997; Williams, Cox, Hedberg, & Deci, 2000). Experimental manipulations also support a causal role of insecurity in increasing materialistic values. For example, when people consider economic hardship, poor interpersonal relationships, and even their own death, they increase the priority they place on materialistic aims and they tend to act in more ecologically destructive ways (Dechesne et al., 2003; Kasser & Sheldon, 2000; Kasser & Sheldon, 2008). Further, experimental manipulations that have induced feelings of hunger (Briers, Pandelaere, Dewitte, & Warlop, 2006), personal self-doubt (Chang & Arkin, 2002), and social exclusion (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007) have also resulted in increases in selfish, materialistic behavior.

Thus, one means of promoting sustainability is to decrease the factors known to encourage self-interested, materialistic values and behaviors. This might be done by (a) reducing the extent to which self-enhancing, materialistic values are modeled in society; (b) increasing the extent to which people feel secure; and/or (c) helping people respond to feelings of threat and insecurity in ways other than orienting toward self-enhancing, materialistic values.

Promoting an Alternative Set of Values

The second arm of the theoretical strategy for promoting sustainability relies on the fact that self-enhancing, materialistic values and goals exist within broader systems of personal goals and values. That is, people strive for a variety of different aims, some of which are materialistic and self-enhancing, and some of which concern other values and goals. Cross-cultural research provides a fairly consistent picture of the organization of these goal systems, showing that some values and goals are typically experienced as psychologically consistent with each other, whereas other values and goals are experienced by most people as in opposition to each other. The extent of consistency or conflict among value and goal types can be statistically represented by a "circumplex" structure, in which goals that are psychologically consistent are placed next to each other in a circular arrangement whereas goals that are in psychological conflict are placed on opposite sides of the circumplex; Figs. 6.1 and 6.2 present two such circumplex models of values and goals that have been well-validated cross-culturally.

Schwartz's (1992, 2006) model, presented in Fig. 6.1, shows that the self-enhancing values of *achievement* and *power* lie next to each other, representing their psychological compatibility; similarly my colleagues and I have shown that

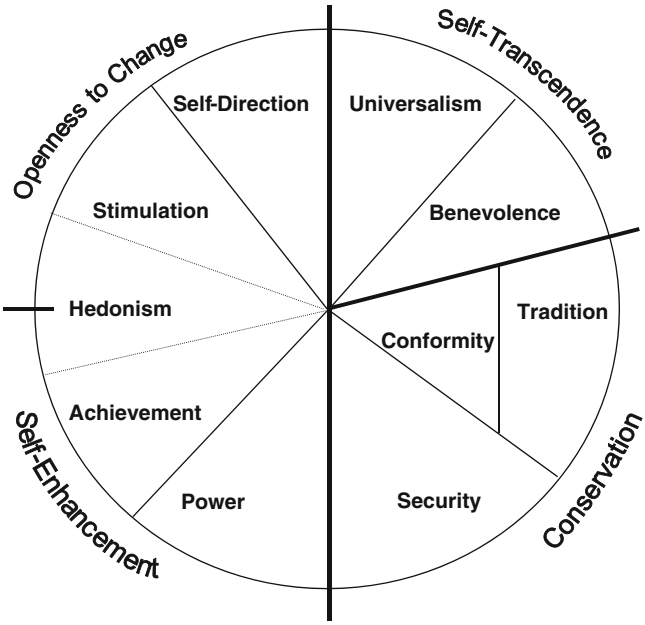

Fig. 6.1 Circumplex model of values (Schwartz, 2006). Figure printed with the permission of the publisher

the materialistic aims of financial success, image, and popularity cluster together as a consistent set of goals (Grouzet et al., 2005; see Fig. 6.2).

Importantly, these circumplex models also reveal the values and goals that lie in opposition to the self-enhancing, materialistic values. Figure 6.1 shows that the self-enhancing values are opposed by two "self-transcendent" values, *benevolence*, which concerns acting in ways that help the people to whom one is especially close, and *universalism*, which concerns acting in ways that improve the broader world. Figure 6.2 similarly shows that materialistic goals are opposed by a set of three "intrinsic" goals: *self-acceptance* (or understanding one's self and striving to feel free), *affiliation* (or having good relationships with family and friends), and *community feeling* (or trying to make the wider world a better place).

These models, based on data from thousands of individuals across dozens of nations, thus suggest another strategy for reducing self-enhancing, materialistic values: encourage the values that stand in psychological opposition to the ecologically destructive values of self-enhancement and materialism. Because it is relatively difficult for people to simultaneously pursue both sets of values (Schwartz, 1992) and because activating one set of values diminishes the likelihood of behaving on the basis of opposing sets of values (Maio, Pakizeh, Cheung, & Rees, 2009), efforts to increase the importance people place on values such as benevolence and universalism and goals such as self-acceptance, affiliation, and community feeling should

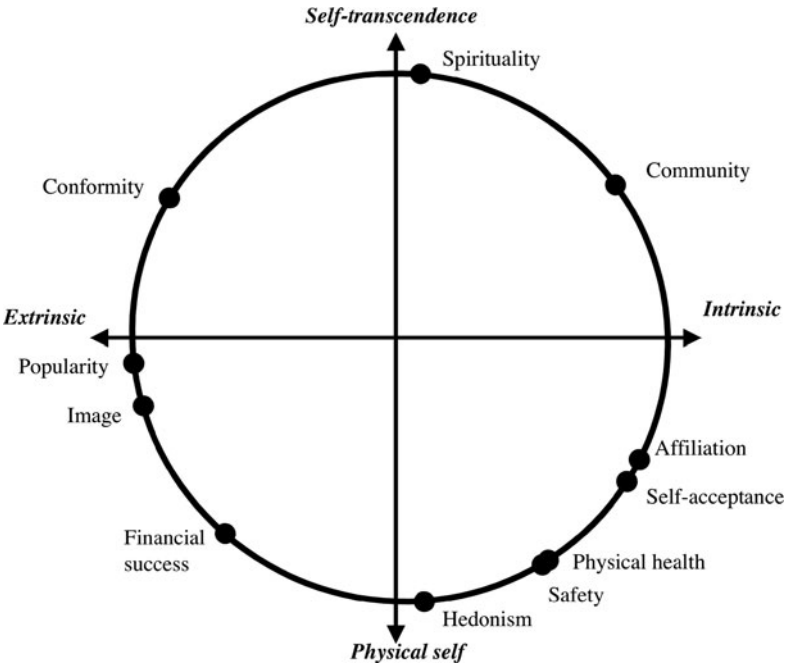

Fig. 6.2 Circumplex model of goals (Grouzet et al., 2005). Figure printed with the permission of the publisher

result in a relative de-emphasis on the self-enhancing, materialistic aims that are associated with ecological degradation.

The potential usefulness of encouraging these alternative values is further bolstered by the fact that empirical research demonstrates that the self-transcendent, intrinsic values are associated with more positive ecological outcomes. For example, Schultz et al.'s (2005) cross-cultural study documented that in each of the six nations studied, self-transcendent values such as benevolence and universalism were significant positive predictors of having engaged in a set of 12 environmentally helpful behaviors (ranging from recycling to picking up litter to environmental political actions). Generosity (which is akin to the *universalism* and *community feeling* values) also predicts more positive environmental attitudes and behaviors in UK and US adolescents (Gatersleben et al., 2008; Kasser, 2005). Further, the more people focus on intrinsic values (relative to materialistic values), the more sustainable and less greedy their behaviors are in both resource dilemma games (Sheldon & McGregor, 2000) and in their own lives (Brown & Kasser, 2005). Finally, nations have significantly lower CO_2 emissions when their citizens place a strong importance on *harmony* values (which are akin to the universalism values and community feeling goals; Kasser, in press).

Encouraging intrinsic goals can have other salutary effects as well. The research consistently shows, for example, that people who place a relatively high value on

intrinsic goals in comparison to extrinsic, materialistic goals report higher personal well-being (e.g., more self-actualization and vitality) and lower personal distress (e.g., less depression and anxiety; see Kasser, 2002 for a review, and see Twenge et al., 2010, for evidence across time in the United States). And people who place a relatively high value on intrinsic goals in comparison to extrinsic, materialistic goals behave in more cooperative, pro-social ways, sharing more and being more empathic and less manipulative (see Kasser et al., 2004). Thus, not only do the self-transcendent, intrinsic values oppose self-enhancing, materialistic values, and not only do they support more positive ecological behaviors, but they also seem to provide greater personal well-being and promote the kinds of cooperative, pro-social behaviors that will be necessary to solve the social and ecological crises humanity is likely to face.

Four Applications of the Strategy for Social Change

The values-based perspective I have been describing here suggests that our present ecological difficulties derive in part from the fact that people often give high priority to a set of self-enhancing, materialistic values that contribute to ecologically destructive attitudes and behaviors. This diagnosis, in combination with empirical research and psychological theorizing, yields two basic approaches for promoting the types of social changes that will support ecological sustainability. First, because people act in more materialistic ways when they are exposed to social models that encourage materialism and when they feel threatened and insecure, it may be useful to remove the social models and to diminish the feelings of insecurity that create and maintain self-enhancing, materialistic values, and to help people find other, less ecologically destructive means of responding to threats when they feel insecure. Second, because self-enhancing, materialistic values exist in broader value systems and are opposed by transcendent, intrinsic values that promote pro-ecological attitudes and behaviors, it may be useful to develop means of encouraging people to prioritize and act consistently with these values.

In the four sections that follow, I describe more concrete avenues for applying this strategy.

Voluntary Simplicity

American history has been dominated by the dream of material prosperity and consequent attempts to "tame" (i.e., economically develop) a vast continent. At the same time, however, some Americans have questioned the nation's focus on economic growth, consumption, and material acquisition, and instead have tried to live a "simpler" life. The historian David Shi (1985) has documented this countervailing trend from the time of the early Puritans and Quakers, through the American Revolution and Transcendentalism, and into the counter-cultural movement of the 1960s. These days, individuals who pursue such alternative lifestyles have been

labeled "cultural creatives," "downshifters," and, probably most widely, "voluntary simplifiers" (VSrs). The commonality across these various labels is the conscious decision to reject the mainstream work-spend-work-some-more lifestyle and instead focus on obtaining "inner riches," by prioritizing personal growth, family, volunteering, and spiritual development (see the qualitative interviews of Elgin, 1993 and Pierce, 2000). What's more, many VSrs report that they are highly motivated by ecological concerns.

One of the first quantitative scientific studies on VS was conducted by Brown & Kasser (2005), who obtained a sample of 200 self-identified VSrs (through a variety of list-servs and publications) and matched them with 200 mainstream Americans on gender, age, and zip code. Several interesting differences between the groups emerged. First, compared to the mainstream group, the VS group was significantly more likely to report engaging in positive environmental behaviors and to be living in ways that decreased their ecological footprints. Second, compared to the mainstream group, the VS group reported significantly higher levels of life satisfaction and a preponderance of pleasant versus unpleasant emotion in their daily lives. (This finding is particularly noteworthy given that the VS group's average annual income was about two-thirds that of the mainstream group's). Third, structural equation modeling demonstrated that the VS group's greater happiness and more ecologically responsible behavior could be partially explained by the fact that the VS group had a value system that was significantly more oriented toward intrinsic goals and less oriented toward extrinsic, materialistic goals than that of the mainstream Americans.

These results suggest that part of the promise of the VS lifestyle concerns the second arm of the strategy described above. That is, VS seems to promote (or at least be consistent with) the kinds of intrinsic goals that oppose ecologically damaging extrinsic, materialistic goals. But a VS lifestyle might also help to work against the factors known to cause materialistic values. For example, interviews (Elgin, 1993; Pierce, 2000) and first-person accounts (Holst, 2007), reveal that many VSrs eliminate television and other sources of advertising from their families' lives, choose friends who support their values, and work for and with organizations that do not pressure them to prioritize financial profit and work excessively long hours. All of these behaviors would limit how much VSrs are exposed to the social models that encourage materialistic values. Other anecdotal data suggest that a VS lifestyle might enhance a sense of personal security by encouraging self-sufficiency. VSrs often learn how to make their own clothes, grow their own food, repair their own possessions, entertain themselves without reliance on costly electronic equipment, and even build their own homes; such skills surely promote a sense of personal security and confidence that one can deal with various types of hassles and threats. What's more, some evidence suggests that VSrs are especially interested in pursuing the types of meditative and spiritual practices known to be effective ways of addressing one's own personal insecurities (Elgin, 1993). The fact that Brown and Kasser (2005) found that the VS group was significantly happier than mainstream Americans suggests that such efforts may have met with some success. Future research might follow up on these qualitative, anecdotal findings to more

systematically determine the role these factors might play both in sustaining the VS lifestyle and in promoting ecologically responsible behavior.

Only about 10–20% of the American population seems to pursue anything approaching a VS lifestyle (Brown & Kasser, 2005; Elgin, 1993; Ray, 1997). Given the promise that VS might hold for promoting intrinsic values, ecologically sustainable behavior, and happiness, how might those interested in social change work to increase this percentage?

First, my conversations with many people suggest that one of the clear barriers to pursuing a VS lifestyle in the United States is the concerns people have about living without health insurance if they only have a part-time job, or do not work for pay at all; this anecdotal evidence is consistent with the findings that death anxiety can shift people away from intrinsic values and towards materialistic values (e.g., Kasser & Sheldon, 2008). More formal studies are needed to determine whether concerns about health care access do indeed lead people to give up on desires for a more materially simple lifestyle, but if such evidence is forthcoming, it would be another reason for having reformed the US health care system so that health insurance is not provided primarily through one's full time employer.

Another roadblock to the adoption of a VS lifestyle is likely the stress of living "outside the mainstream." Current American social norms suggest that a happy, successful, meaningful, and even patriotic life entails working long hours and consuming at high levels, and some VSrs have indeed reported feeling ostracized by friends and families who do not understand their lifestyle choices; others have even been called "subversive" for refusing to follow the standard American work-hard-and-consume lifestyle (Elgin, 1993; Pierce, 2000). Another effect of these social norms is that some people have a rather distorted view of what VS might entail; I've met more than a few people who say that while a simpler life appeals to them, they can't imagine "becoming Amish" or "living like the Unabomber." If these are people's primary understanding of what it means to live more simply, and if they worry that they will be seen as "odd" by their neighbors and friends for even considering such a lifestyle, it is no wonder that many people interested in simplifying their lives go no further than subscribing to magazines such as *Simple Living* where they can view hundreds of advertisements and articles about products aimed at this "market segment." Thus, such individuals are channeled back into the mainstream norms of consumption rather than toward the kinds of fundamental lifestyle changes necessary to reach ecological sustainability.

These norms could of course be addressed through concerted public education efforts designed to change social perceptions about what "the good life" is and what "simplicity" means. Another educational approach could entail the creation of community-sponsored "simplicity circles" (Andrews, 1998), which are small groups that meet to provide members with information about and support for living in materially simpler ways. Having the opportunity to read such material and talk with others who are attempting to live a lifestyle more consistent with intrinsic values is likely to help establish new sets of norms that make it somewhat easier to live in a materially simpler manner.

Time Affluence

As we have seen, contemporary culture encourages a conception of "the good life" that is defined largely via a concept of "material affluence," i.e., whether one has wealth and the high levels of possessions and consumption that accompany wealth. Creating a more ecologically sustainable world will be difficult so long as this materialistically dominant definition of the good life holds sway, especially since material affluence is one of the three primary factors known to influence ecological degradation (see Ehrlich & Holdren's (1971) classic *IPAT* model). As such, it seems necessary to develop other, less ecologically damaging conceptions of the good life around which people can orient their lives. One promising alternative is to decrease work hours and maximize "time affluence" (deGraaf, 2003; Jackson, 2009; Kasser & Sheldon, 2008; Schor, 2010). That is, rather than attempting to become as wealthy as possible (which often entails working more), people might instead strive to reduce their work hours and have more time available to pursue other, less materialistically oriented, interests.

At least three empirical studies support the promise that time affluence holds for reducing ecological degradation. At the level of the individual person, Kasser and Brown (2003) found that people had lower ecological footprints and engaged in more beneficial environmental behaviors when they worked fewer hours per week. Hayden and Shandra (2009) replicated these results in a sample of 50 nations: after controlling for other nation-level variables (such as work output per hour, population, and urbanization), nations whose citizens worked fewer hours per year had lower ecological footprints. Finally, among economically developed nations, average work hours are associated with lower energy use, thus diminishing CO_2 emissions (Rosnick & Weisbrot, 2006). Indeed, analyses from this study suggested that if the United States were to follow the European Union's model of lowered work hours, its energy usage would decline about 20% and its carbon emissions would decline about 3%. In contrast, "a worldwide choice of American work hours over European levels could result in 1–2 degrees Celsius of additional warming. . ." (p. 7).

Schor (2010) provides two primary explanations for why lowering work hours can promote ecological sustainability. First, working fewer hours results in lower income levels, and thus less consumption, especially of the kinds that are particularly bad for the environment (e.g., taking luxury vacations, enlarging one's home, eating exotic produce). Second, people who work fewer hours have more time available to engage in ecologically beneficial activities that are more time intensive, such as riding one's bike to work, baking one's own bread, and hanging laundry out to dry; indeed, these are some of the very behaviors Kasser and Brown (2003) found people engaged in more when they worked less.

If people are going to switch their conceptions of the good life from an ecologically damaging one based on material affluence to a more ecologically sustainable one based on time affluence, this alternative conception of affluence will need to strongly appeal to individuals. Some evidence suggests that it might. First, at present, many people do indeed report that they want higher levels of time affluence. For instance, a 2003 nationally representative survey of Americans found that

a majority feel a pressure to work and would give up a day's pay per week if they could take that day off of work. And in 1998, Danes went on strike for a *sixth* week of vacation! Second, some research suggests that feelings of time affluence may promote higher levels of well-being. For example, Kasser and Sheldon (2009) conducted four studies in which adults and college students reported on both their levels of material affluence (through reports of their income and/or their endorsement of statements such as "I have had enough money to buy what I need to buy") and their levels of time affluence (through reports of hours worked and/or their endorsement of statements such as "I have had enough time to do what I need to do"). Even after controlling for perceived material affluence, time affluence was a significant positive predictor of people's subjective well-being in all four studies. Such findings suggest that people's happiness may increase if their feelings of time affluence also increase, as, of course, sufficient time is the "resource" necessary for the kinds of experiential activities that Lyubomirksy, Sheldon, & Schkade (2005) claim account for nearly 50% of the variance in people's subjective well-being.

There are at least two ways in which attempts to maximize time affluence fit the model of change described in this chapter. First, time affluence might help promote the intrinsic values that stand in opposition to materialistic values. Pursuing one's hobbies (self-acceptance aspirations), loving and caring for others (affiliation aspirations), and volunteering (community feeling aspirations) all take time to do, and being too busy can interfere with all of these kinds of activities. Indeed, Study 4 of Kasser and Sheldon (2009) revealed that adults with higher levels of time affluence reported engaging more frequently in activities consistent with their intrinsic values, which, in turn, partially explained the positive association between time affluence and subjective well-being.

A second important reason to promote time affluence is that doing so may help undermine the dominant social models that prioritize material affluence. Consider, for example, that the United States is one of the very few nations in the world, rich or poor, that has no laws that mandate a minimum paid vacation for all workers or that mandate that mothers receive paid leave from work after they give birth to a child. In contrast, most other nations in the world require that workers receive at least some minimum amount of paid vacation per year (e.g., 4 weeks in the EU, 3 weeks in China) and that new mothers receive adequate paid leave (e.g., the option of 14 weeks of full leave at full wages or of 52 weeks of leave at half wages). If the United States were to pass laws that provided mandatory paid vacation and paid maternal leave, workers would receive a very different message (i.e., time is important) than what they receive now (i.e., work is important). Thus, they would be exposed less to social models encouraging materialistic pursuits, and instead leisure and family would be promoted as more important.

Restrictions on Advertising

Corporations spend millions of dollars yearly to pay researchers (including psychologists) to investigate how to maximize the effectiveness of advertising messages and

billions of dollars more to pay for-profit media corporations to deliver these messages to children, adolescents, and adults. Nowadays advertising messages appear in almost every possible media venue, proclaiming that consumption can provide a happy, fun, meaningful life, a sense of self-worth, and the chance for love; through developments in stealth marketing, ads are now even covertly placed in songs, books, and conversations people have with friends and strangers (Schor, 2004; Walker, 2004).

I have already reviewed evidence showing that people place more priority on materialistic values when they watch more television. One study (Good, 2007) has explicitly extended this work into the environmental domain by providing evidence for a mediational model in which television viewing increases people's materialistic values, which in turn accounts for more negative attitudes about the environment. Such correlations are of course consistent with the straightforward social modeling explanation for why people prioritize the types of materialistic values known to undermine positive ecological attitudes.

But watching television is probably only part of the story regarding how advertisements contribute to materialistic values via social modeling. The fact that marketing messages are present in so many arenas of life (i.e., on the Internet, along highways, on buses and subways, in schools) surely helps to establish a set of social norms suggesting that consumption and materialism are acceptable, and perhaps even admirable. Similarly, the omnipresence of advertisements in contemporary culture probably contributes to "the norm of self-interest," i.e., the belief that it is right and good to engage in behaviors that primarily benefit one's self (Miller, 1999). If this is so, the presence of advertising in so many aspects of people's lives may contribute to beliefs such as "high levels of consumption are normal," "everyone purchases a lot," and "good people buy stuff." None of these are beliefs likely to promote ecological sustainability.

Advertisements may also undermine the intrinsic and self-transcendent values that research shows promote more ecologically sustainable behaviors and attitudes. Recall that the value and goal circumplexes presented in Figs. 6.1 and 6.2 reflect both compatibility and conflict between different aims in life. Recent research suggests that when certain values are activated in people's minds, people become more likely to engage in behaviors consistent with compatible values, and less likely to engage in behaviors reflective of values that are in conflict with the value that was activated (see, e.g., Vohs, Mead, & Goode, 2006; Maio et al., 2009). Thus, if encountering advertisements does indeed activate the self-enhancing, materialistic portions of people's value and goal systems, the consequence is likely to be suppression of the self-transcendent and intrinsic portions of people's motivational systems. These are of course the aims in life known to be most consistent with positive ecological attitudes and behaviors.

Another problem with advertisements is that they are likely to contribute to the promotion of materialistic values via the creation of feelings of insecurity (Kasser et al., 2004). The prototypical advertisement narrative, for example, presents people lacking the advertised product as unhappy, unsuccessful, socially outcast, or otherwise insufficient humans, whereas individuals with the product are happy, beautiful,

loved, and/or successful. As Richins (1991, 1995) has suggested, such advertisements play on humans' tendency to compare themselves to others and can lead them to wonder whether they too are insufficient. Of course, these advertisements give an easy, and materialistic, solution to such insecurities: imitate those in the advertisement and purchase the product or service.

These arguments suggest that changing society toward greater ecological sustainability is likely to require dethroning advertising from the current place it enjoys in contemporary Western cultures. Quite a number of directions are available toward these ends. Individuals, of course, can choose to stop watching commercial television and cancel their subscriptions to magazines laden with advertisements. Given the extent to which commercial marketing suffuses contemporary culture, however, this will probably be insufficient as an approach. Broader efforts could follow the lead of some localities that have removed all outdoor advertisements (including billboards on highways and business signs over a certain size) and all advertising in public spaces (including subways, buses, and schools); by doing so, people would no longer be forced to view advertising as they went about their daily lives and thus they would be less likely to be exposed to social models promoting materialism and consumerism. Banning all forms of marketing to children under the age of 12 would also be a particularly forceful policy to pursue, as it would end advertisers' ability to prey on youth whose cognitive development makes it difficult for them to understand persuasive intent and whose identities are still in the process of formation. Another important policy would be to tax all expenses that businesses spend on marketing and advertising; in the United States, these expenses are currently tax deductions, and therefore represent huge subsidies to corporations, marketing firms, and for-profit media corporations. If advertising were taxed, businesses would have less incentive and more of a disincentive to advertise. Further, a fundamentally different social norm would be established about the worth of ads. That is, the current norm suggests that ads are essentially equivalent to charitable donations (which are also deductible), whereas taxing advertisements would help create a social norm that views advertisements more akin to a form of materialistic pollution. Imagine for a moment further that revenues from a tax on advertisements were used to fund educational projects that promote intrinsically oriented values, ecologically sustainable activities, and a materially simpler lifestyle.

Changing the Economic System

Imagine next the reactions of governmental officials, corporate leaders, and perhaps a good number of citizens to the proposals described above to encourage a Voluntarily Simple and time-affluent lifestyle and to restrict and/or heavily tax advertising. It seems likely that many people might respond to such proposals with the rejoinder that corporate profits and economic growth would be dampened. They may be right, but whenever proposals to help the environment are met with statements such as "it might create higher prices for consumers," "it might diminish corporate profits," or "it might interfere with economic growth," these counter

arguments must be recognized for what they are: counter arguments based in the self-enhancing, materialistic values that are required for the maintenance of an economic system that strives to maximize levels of consumption, corporate profit, and economic growth.

This economic system is, of course, capitalism. As with any other system composing a society, the smooth functioning of the capitalist economic system requires that the people living under it hold certain beliefs, act in certain ways, and support certain institutions (Kasser, Cohn, Kanner, & Ryan, 2007). That is, just as a religion needs its followers to believe in its tenets, to engage in the practices it prescribes, to attend its places of worship, and to listen to its ministers and priests, a capitalistic economic system needs its followers to believe its tenets (i.e., economic growth, free market competition, and high levels of consumption are important), to engage in its practices (i.e., work long hours and consume a lot), to attend its places of worship (i.e., the mall and the couch in front of the television), and to listen to its leaders (i.e., the CEOs and politicians whose job it is to create economic growth and things to buy).

The two pathways toward materialistic values described earlier in this chapter help explain how corporate capitalism has been so successful in integrating itself into the fabric of American life (Kasser et al., 2004). First, self-interested, materialistic values have been encouraged through multiple social models, including, for example, tax laws that create incentives to advertise, policies that allow for-profit companies to own most of the media airways (McChesney, 1997), laws that have given corporations rights associated with personhood (Kelly, 2003; Korten, 1995), international laws that elevate a corporation's right to make a profit over the laws of a particular nation (Cavanagh, Welch, & Retallack, 2001; Cavanagh & Mander, 2004), and government policies that emphasize economic growth at most every turn.

American corporate capitalism also has features that work to create the feelings of insecurity known to enhance people's concern for materialistic values. For example, under American corporate capitalism, the extended social networks from which many people derive support have been in decline, levels of inequality around the world have increased, and a competitive mentality in which a few "winners" profit at the expense of a larger group of "losers" has become common (Kanner & Soule, 2004; Kasser et al., 2004). On top of these, add the fears that common citizens experience about potentially losing their job during corporate takeovers or layoffs, losing their retirement savings in stock market downturns, and losing their habitat to global climate disruption.

Kasser et al. (2007) suggested that one consequence of the privileging of self-enhancing, materialistic values in the US economy is that self-transcendent, intrinsic values are likely to be suppressed. Schwartz (2007) tested this claim by examining how citizens' values in 20 wealthy capitalistic nations were associated with how much the institutions in those nations were oriented in a more cooperative, strategic fashion, (e.g., Germany and Austria) versus a more liberal market fashion (e.g., the United States and the UK; Hall & Gingerich, 2004). Consistent with predictions, the more that nations had liberal market economic organizations (vs. cooperative

organizations), the more their citizens valued self-enhancing aims (particularly achievement) and the less they cared about self-transcendent aims (particularly universalism). These, of course, are the very aims that are differentially associated with ecological outcomes, including CO_2 emissions (Kasser, in press).

Thus, it seems that ecological sustainability may only be possible if the juggernaut of capitalism is directly confronted (see also Speth, 2008). Although many directions and approaches could be discussed, I will only discuss one popular approach here, which is to revise national indicators of progress.

In most nations today, national progress and success are predominantly measured by how the stock market is doing, where consumer confidence is this month, and, primarily, the size of their Gross National Product (i.e., the overall amount of economic activity in the nation). Such measures obviously privilege materialistic values. Consider, for example, a case in which a company finds that it achieves higher profits (and thus contributes more to GNP increases) if it manufactures a product in a way that pollutes a nearby river than if it uses ecologically sustainable methods. If the pollution poisons the water in the river, further increases in overall GNP may result when people in the community get sick from drinking that water (i.e., hospital costs) and even if they die (i.e., funeral costs). If community members decide to hire lawyers to sue the company, GNP increases more. And if the company loses the suit and is forced to hire an environmental engineer to clean up the river, GNP goes up further still. People who determine their nation's health on the basis of GNP are thus using an entirely materialistic metric, and one that actually discounts the benefits of health, sustainability, and the like.

Because of these and other problems with GNP, several organizations have proposed a variety of alternative indicators for nations to use. These include Redefining Progress' Genuine Progress Indicator, the nation of Bhutan's Gross National Happiness measures, and the new economic foundation's Happy Planet Index. Others have suggested supplementing GNP measures with direct assessments of citizens' subjective well-being (Diener & Seligman, 2004; Layard, 2005). While each of these indicators has its own idiosyncratic computational formulas and assumptions, common to them all is that the privilege GNP accords to materialistic aims is revoked, and other values (typically self-transcendent, intrinsic ones) are injected into the calculations.

If nations were to adopt such alternative indicators alongside, or even instead of GNP, and if these alternative indicators received nearly as much attention from politicians, the media, and citizens as the Dow Jones Index and the GNP currently receive, then social models of what is important would shift substantially: rather than being told what matters most is economic activity, citizens would be encouraged to think about the self-transcendent, intrinsic values embodied in these alternative indices. What's more, as citizens begin to recognize that increases in GNP do not generally improve national well-being (at least in economically developed nations) and are generally associated with greater ecological damage (Jackson, 2009), they might begin to insist that government officials develop policies and laws aimed at promoting the aspects of these alternative indicators that reflect intrinsic, self-transcendent aims (e.g., caring for others, leisure time, etc.,).

Conclusion

In this chapter I have tried to demonstrate the problematic ecological outcomes associated with strongly valuing self-enhancing, materialistic values and to present an empirically supported, two-pronged model for social change based on (a) understanding and eliminating the causes of materialistic values; and (b) understanding and encouraging the values that stand in opposition to materialistic values. My focus in this chapter on materialistic values should not be taken as suggesting that these values are the only aspect of human functioning that contribute to ecological degradation. The recent American Psychological Association Task Force report on global climate change reviews a variety of other features of human functioning that influence people's ecological attitudes, thinking, and behavior (Swim et al., 2009). And Crompton and Kasser (2009) have shown that the ways humans define themselves relative to non-human nature and the ways that they cope with threats (including environmental threats) bear important associations with ecological outcomes.

The basic philosophy of the two-pronged model presented here might be fruitfully applied to these other environmentally problematic aspects of human behavior as well. Indeed, Crompton and Kasser (2009) identified and made suggestions about how to eliminate the causes of ecologically damaging self-definitions and coping strategies, and identified and made suggestions about how to encourage the kinds of alternative self-definitions and coping strategies that promote ecological sustainability. My hope is that psychologists interested in social change can apply the two-pronged strategy that I've exemplified here with materialistic values to the variety of other aspects of human functioning that threaten future generations and non-human species' chances of living in a healthy habitat here on Earth.

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