

Promoting Global Citizenship: Educational Travel and Study Abroad Programs in the South Pacific

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Abstract

Most institutions of higher education in the U.S. acknowledge that the future workforce of America depends on a citizenry that is sensitive to, and aware of, global issues. The broad assumption in academia is that studying abroad promotes such a worldview, yet there is a lack of theoretical applications supporting this assertion. We propose a conceptual framework (based on the value-belief-norm models of behavior) for exploring the transformational impact of educational-travel study abroad programs on pro-environmental behaviors and global citizenship. The experiential programs, modelled on an approach developed at the University of Georgia (see <http://pacific.uga.edu>) and now offered by several other institutions (through a consortium-based approach), collectively provide study abroad opportunities for ~700 students a year, and aim to foster a respect and humility for the peoples and environments of the world: Building an understanding and awareness of the interaction of cultural diversity (including indigenous perspectives) and environmental conservation.

Keywords *Global citizenship, study abroad, educational travel, South Pacific*

Introduction

The South Pacific studies abroad programs that we offer (in Antarctica, Australia, Fiji, and New Zealand) are short-term (~4 weeks in duration), experiential (25% classroom and 75% field), faculty-led, and interdisciplinary (focusing on issues of sustainable development: Humans and the environment). The overarching mission is to foster a respect and humility for the peoples and environments of the world; in essence, the nurturing of a global citizenry, by building an understanding and awareness of the interaction of cultural diversity (including indigenous perspectives) and environmental conservation. Using a *modus operandi* developed at the University of Georgia, several consortia of institutions have been created that include North Carolina State, Oregon State, Penn State, Environmental School of Forestry, Texas A&M, Florida, Montana, and Virginia Tech. Programs at the University of Georgia alone reach ~350 students per annum (see <http://pacific.uga.edu>) while the number of students from consortia institutions (see www.auip.com) have grown from 151 students in 2006 to over 400 students in 2008. Collectively ~3,000 students have participated in the programs since 2001. Growth in faculty and student interest may be attributed to several factors including educational travel and experiential learning opportunities, a modular-based assessment (which encourages interdisciplinary understanding of real-world issues from the perspectives of social and biophysical sciences: notably, anthropology, biology, education, geography, ecology, natural resources, and political sciences) and opportunities for collegial collaboration in teaching and research for faculty. This paper presents a theoretical framework for nurturing (and assessing) global citizenship in study abroad programs. The framework, presented in Figure 1 and grounded in the value-belief-normative (VBN) model of behavior, proposes that global citizenship may be promoted by modifying beliefs about environmental conditions, influencing pro-environmental behaviors, and stimulating reflective thinking. It is proposed that personal characteristics (demographics, political affiliation, and post-materialism) will mediate the relationship among values, beliefs, norms, and behavior.

Background

Most institutions of higher education in the U.S. acknowledge that the future workforce of America depends on a citizenry that is sensitive to, and aware of, global issues. With an estimated one in every six domestic jobs tied to international trade, the bi-partisan Lincoln Commission in its report to Congress concluded that,

What nations don't know can hurt them. The stakes involved in study abroad are that simple, that straightforward, and that important. For their own future and that of the nation, college graduates today must be internationally competent (Commission on the Abraham Lincoln Study Abroad Fellowship Program 2005).

One response of higher education has been to increase enrolments in study abroad (among promoting other opportunities for international education) and several, including Harvard University, have recently announced that studying abroad will shortly become a degree requirement. While the Institute of International Education Open Doors Report (2007) cites a record level of 223,534 students studying abroad in the academic year 2005/06 (up 8.5% from the previous year), it is proposed that this number increase over four-fold to one million by 2017 with passage of The Senator Paul Simon Study Abroad Foundation Act (H.R. 1469).¹ (Large as it may appear, the current number represents less than a few percent of all students enrolled in post-secondary education having had an international experience before they graduate.)

Two core reasons for promoting study abroad were identified by the Bipartisan Commission: (a) global competence and (b) national needs. It can be argued that the former is in response to increasing claims – both within and outside of academia – that societies respond to the global environmental crisis facing our Earth, which is largely self-induced (United Nations Intergovernmental Panel on Climate Change 2007). The second reason concerns a national security and growing need for U.S. leadership and economic competitiveness in the international community. Both objectives reflect an interest in nurturing a global citizenry that is not only sensitive to, and aware of, complex human - environment relationships but is willing to act in a manner consistent with the new needs and demands facing society. Accordingly, it is imperative that any new/proposed environmental or social/economic agenda, policy, program or intervention strategy recognize how these new values and beliefs are formed and their influence on changing human behavior (Tarrant & Hull 2005).

The broad assumption in higher education is that studying abroad promotes a worldview and awareness of global issues (Dolby 2007); yet, there are relatively few broad-based, empirical studies that (a) test this assumption, especially within a theoretical framework and (b) consider the implications of nurturing such awareness, particularly in the context of pro-environmental behaviors and global citizenship. Our approach applies the social-psychological framework known as the value-belief-norm (VBN) theory (Stern 2000), an extension of Schwartz's (1973; 1977) widely applied norm-activation model of altruism. The VBN proposes that individuals are motivated to act in an environmental responsible manner by (a) beliefs that environmental conditions have adverse consequences for self, for other humans, and/or for other living things and (b) an ascription of obligation (personal norms) for preventing those consequences. In adopting Dobson's (2003) concept of an Earth Citizen (as someone who holds environmental virtuous values and acts in an environmental responsible manner), we plan to investigate the extent to which our study abroad programs in the South Pacific promote global citizenship by modifying beliefs about environmental conditions and influencing pro-environmental behaviors.

Conceptual Orientations

Global Citizenship

Dobson (2003) offers a post-cosmopolitan view of citizenship in which issues of justice, the environment, and civic obligations are key determinants of what it means to be a global (a.k.a Earth) citizen. (The notion that global citizenship is comprised of dimensions similar to that offered by Dobson is consistent with other contemporary thinking; see for example, Dower & Williams 2002; Noddings 2005; Shallcross & Robinson 2006; Westheimer & Kahne 2004; Winn 2006.). The concept of justice is used to distinguish between a community of citizens and that of humans. Accordingly, a "Good Citizen" is one who accepts a political obligation to act in a just and fair manner, in contrast to a "Good Samaritan" who may act out of a duty. This distinction is illustrated using the example of climate change,

if global warming is principally caused by wealthy nations, and if global warming is at least a part cause of strange weather, then monies should be transferred as a matter of compensatory justice rather than as aid or charity ... globalization then changes the source and nature of obligation (Dobson 2003, p.31).

¹ H.R. 1469 passed the House of Representatives on June 5, 2007 and the Senate Foreign Relations Committee on February 13, 2008; the bill is currently with the full Senate.

Under such a scenario, the obligation is not only civic, but is also non-reciprocal; i.e., the obligation benefits people who have no immediate relationship to the self (and typically will be complete strangers) and often live far away. Dobson (2003) and others (see for example, Bryant 2006; Shallcross & Robertson 2006; Winn 2006) also argue that the environment is the context in which global citizenship is best considered. The global nature of many environmental issues such as climate change, ozone depletion, the supply and distribution of renewable and non-renewable resources, and biodiversity and species loss transcend national boundaries with effects distributed across the planet. It follows therefore, that the civic obligation expressed by citizens most appropriately concerns the sustainable consumption and use of earth's resources. As such, global citizens are not simply international by reason of their world travel but as a result of their ecological footprint – the quantity of nature required and consumed to sustain their lifestyle behaviors. To the extent that people hold environmental virtuous (or just) values, obligations of environmental responsible consumptive behaviors will follow, resulting in more sustainable ecological footprints. Dobson also recognizes that other values and character dispositions (such as sympathy, care, and compassion) for others as well as for the living world may have additional influence on environmental responsible consumer behaviors.

Value-Belief-Norm (VBN) Theory of Pro-environmental Behavior

Our approach considers the concept of justice from a social-psychological approach – as something that can only be considered in light of actions that affect specific valued objects (Stern & Dietz 1994; Stern 2000). In other words, for whom, and for what, is justice required or deserved? As such, conflicts of justice arise when the objects are (a) valued differently by individuals and/or (b) the impact of valued objects is differentially distributed across society.² In the context of the environment, an individual's response to environmental threats or issues is dependent on the extent to which the specific object (such as an environmental condition) affects a particular set of things they value (Ajzen & Fishbein 1980; Stern & Dietz 1994). One of the primary value orientations for understanding environmental behaviors and people's response to threats/damage by the environment has been altruism (Schultz & Zelezny 1998; Stern 2000).

Theories of altruism have been used to explain pro-environmental behaviors on the basis that “because environmental quality is a public good, altruistic motives are necessary for an individual to contribute to it in a significant way” (Stern 2000, p.412). In this manner, altruism provides a conceptual link between Dobson's notion of an Earth Citizen and discussions of environmentalism and environmental behavior. Altruism is a form of helping behavior that is motivated by an internal value and occurs without the expectation of anything in return and has provided the conceptual orientation for one of the most widely used social-psychological theories of environmental behavior, the norm-activation model of helping (Schwartz 1973; 1977). Under the norm-activation model an individual who believes that (a) a particular condition has harmful consequences for other people (or for valued objects) and (b) s/he is responsible for those consequences, will be motivated by a personal norm to take action to prevent the expected harm (Stern, Dietz & Guagnano 1995). An extension of this approach is that people with altruistic values will be motivated by an internalized personal norm to respond to environmental issues that threaten the welfare of others (Schultz & Zelezny 1998). Personal norms, characterized by rules that regulate and control individual behavior, create “a feeling of obligation to act in a particular manner in specific situations” (Schultz 2002, p.74) and an “obligation to act to protect whatever is valued” (Nordlund & Garvill 2002, p.745). Norm-activation theory therefore offers a theoretical perspective to explain conditions in which the act of obligation proposed by Dobson in his characterization of an Earth Citizen may be nurtured. We propose that, the Earth Citizen, in accepting an obligation to act in a fair and just manner (e.g., by consuming fewer environmental resources and/or supporting the distribution of resources to less wealthy nations) is arguably motivated by an altruistic value that (a) considers the welfare and concern of other distant people in relation to the unjust consequences of an inequitable distribution of resources and (b) recognizes that s/he can play a role in alleviating the injustice caused by the distribution of resources.

The influence of personal norms on pro-environmental behavior is fairly well supported and reinforces the notion that norms and values are necessary in developing a pro-environmental citizenry. Environmental movements, for example, depend on reshaping and activating personal norms (that are tied to environmental values) in order to create feelings of obligation in building support for their programs (Stern et al. 1999). The role of personal norms in determining an individual's predisposition to pro-environmental actions has been substantiated in several studies including Corral-Verdugo and Frias-Armenta (2006) who found that personal normative beliefs about water conservation have a direct influence on pro-environmental behavior (water conservation practices). Similarly, Nordlund and Garvill (2002) reported that personal norms directly influence pro-environmental behavior and mediate the effect of general values, environmental values, and problem awareness on behavior. Hopper and Nielsen (1991) concluded that personal norms had a greater ability to

² Consistent with Rokeach (1973), values are important life goals or normative standards that serve as guiding principles in life and provide a basis for maintaining and developing attitudes toward relevant objects and situations.

influence recycling behavior if people's awareness of the environmental consequences of behavior was high. Personal norm was also the strongest predictor of three types of pro-environmental behavior in a national survey of respondents from 420 U.S. households (Stern et al. 1999) and the primary predictor of environmentally friendly consumer behavior in a study of household consumers (Minton & Rose 1997).

More recently, the Value-Belief-Norm (VBN) theory has extended Schwartz's norm-activation model to include a concern for the self (egoistic value) and the nonhuman/living world (biospheric value), in addition to a concern for the welfare of others (altruistic value). Once activated, these values generate feelings of obligation to help the self, others, and/or living world (Blamey 1998). In daily life, people face choices between making decisions that have negative or positive consequences for themselves, for others, or for the environment (e.g., when deciding to ride a bike or drive a vehicle to their accountants in the rain). Collectively, the three discrete values identify the reasons why people act in more/less environmental responsible manners (Stern 2000) and also differentiate between people who may express similar levels of environmental concern but do so for very different reasons (Schultz 2000). For example, although egoistic values might be considered antithetical to environmentalism and people with these value orientations are expected to be less concerned about the environment than altruists (i.e., since an egoist values him/herself above other people and the living world), in situations where egoists perceive an adverse consequence or threat to themselves from an environmental issue, they will likely express high environmental concern. In contrast, altruists may express low or high environmental concern based on the extent to which environmental issues impact (cost or benefit) other people. (It does seem likely, however, that biospherists would have a general and broad concern for the environment, regardless of the specific issue.) Schultz (2000) further proposes that these value systems are dependent on the degree to which people view themselves as interconnected with nature and that educational programs that create and foster connectedness with nature will promote an increase in an individual's biospheric concern. Similarly, Ignatow (2006) and Kempton, Boster and Hartley (1995) argue that people interpret environmental conditions from a value system that is based on their personal connections and experiences with nature.

It follows therefore that the VBN theory also include a measure of general environmental concern, defined as "the degree to which people are aware of environmental problems and support efforts to solve them and/or indicate a willingness to contribute personally to their solution" (Dunlap & Jones 2003, p.365). Such general environmental concern is considered an important link in the VBN model by tapping into 'primitive beliefs' about human – environment relations and constituting a general worldview that predisposes individuals to accept more specific beliefs (about awareness of consequences) and behavioral intentions about specific environmental issues (Stern 2000; Stern et al. 1999; Stern et al. 1995; Tarrant & Cordell 1997). The most widely cited and applied measure of general environmental concern is the New Environmental Paradigm (NEP) which focuses on beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature (Dunlap & Van Liere 1978; 1984). Dunlap and his colleagues maintain that the rise of the environmental movement is linked to a growing awareness and support for this worldview. More recently, a revised scale, the 15-item New Ecological Paradigm (Dunlap et al. 2000; Dunlap & Jones 2002) has been developed that supersedes the original NEP and provides a contemporary measure of beliefs about the negative consequences of human impacts on the environment. It is unclear however, if the revised NEP constitutes a single dimension/paradigm or whether multiple dimensions exist; specifically factors that tap into the reality of limits to growth, anti-anthropocentrism, the fragility of nature's balance, rejection of exemptionalism, and the possibility of an eco-crisis (Dunlap et al. 2000). Indeed, the authors advocate that, "if meaningful dimensions do not emerge and the entire set of items (or at least a majority of them) is found to produce an internally consistent measure, then we recommend treating the NEP Scale as a single variable..... [and this decision] should not be made beforehand but ought to be based on the results of the particular study" (Dunlap et al. 2000, p.431).

Figure 1 is a schematic application of the VBN theory to examine the impact of study abroad programs on pro-environmental behaviors characterized by three measures (a) environmental citizenship, (b) willingness to support environmental policies, and (c) ecological conscious consumer behavior. The behavior types are adapted from Stern et al. (1999) who suggest the environmental movement is characterized by three types of non-active behaviors: low-commitment active citizenship (e.g., writing letters to political officials, joining environmental organizations, reading environmental literature), support for public policies requiring material sacrifice (e.g., mandatory recycling, bans on watering), and changes in environmental responsible consumer behavior (e.g., reductions in energy use, purchases of environmentally friendly products and goods). Consistent with VBN theory, Figure 1 assumes that (a) pro-environmental behaviors (both intention to act and the self-reported behavior) are a function of beliefs and values; (b) values are antecedent to beliefs (including general primitive worldviews or beliefs about specific environmental issues) because they are formed earlier in life and more stable over the life course; (c) general primitive beliefs about human-environment relations (such as the revised NEP) influence beliefs toward more specific environmental issues (and the consequences of those threats); and (d) individuals experience a sense of obligation (personal norm) to act (or intend to act) in environmental responsible ways by (i) an awareness/belief that specific environmental conditions threaten or have adverse

consequences (Awareness of Consequences) for the things that they value (including themselves, others, and/or the living world) and (ii) an awareness/belief that the individual can act to reduce the specific threat(s) (Awareness of Responsibility) (Stern 2000).

One modification to the VBN is the inclusion of “citizen-type” (Westheimer & Kahne 2004) identified as (a) personally responsible citizens (someone who acts responsibly in his/her community, recycles, gives blood, volunteers in times of crisis); (b) participatory citizens (someone who is an active member of civic and community organizations); and (c) justice-oriented citizens (someone who critically assesses social, political and economic structures to see beyond surfaces and challenges injustice, knows about social movements, and explores the root causes of problems). The distinction among the three citizen types is described as follows, “if participatory citizens are organizing the food drive and personally responsible citizens are donating food, justice-oriented citizens are asking why people are hungry and acting on what they discover” (Westheimer & Kahne 2004, p.3). These authors maintain that traditional education programs have generally failed to foster political engagement and interest, resulting in a student body apathetic to the politics of democracy and global citizenship. While students may gain the practical skills (and concerns) of personally responsible citizenship (e.g., recycling, park and river clean-ups, donating blood) and of participatory citizenship (participating in civic and community groups and organizations), they rarely empower students to address social problems through a critical assessment, with the goal of achieving real social change and justice. Consistent with Dobson’s view of an Earth Citizen, there is less emphasis on charity and volunteerism as ends in themselves and more attention given to questioning the justice issues surrounding environmental problems and acting to redress the injustices. We propose that citizen-type will influence specific pro-environmental behavior; i.e., students who consider themselves as personally responsible citizens will score higher on ecologically conscious consumer behaviors, participatory citizens will focus on support for policy initiatives, and justice-oriented citizens will tend to score higher on environmental citizenship, than their respective cohorts.

Overall, the model proposes that values and worldviews act as filters for new information in the development and formation of congruent beliefs and attitudes which, in turn, predispose behavioral intentions and ultimately pro-environmental behaviors (Tarrant & Cordell 1997; 2002). The formation of such beliefs and values is critical to addressing the global environmental crisis in which a change in human behavior is recognized as a fundamental part of any strategic plan or policy to redress the threats posed by current activities (Oskamp 2000; Zeleny & Schultz 2000). Consistent with norm-activation theory, the value – belief – norm - behavior chain of causality occurs because personal norms/obligations to act arise when the consequences that matter to people are perceived as adversary to their values system. “Thus, people who value other species highly will be concerned about environmental conditions that threaten those valued objects, just as altruists who care about other people will be concerned about environmental conditions that threaten the other people’s health or well-being” (Stern 2000, p.413). Generally, individuals who believe that objects they value are threatened, and that they ascribe some responsibility for reducing that threat, experience an obligation (personal norm) to act in a manner to reduce the threat. Schultz and Zeleny (1998) offer support for this reasoning in their study of students across multiple countries in which pro-environmental behaviors were associated with respondents who exhibited high biospheric value orientation when they were aware of the environmental damages (which they valued) and ascribed responsibility to themselves for this damage.

In addition to attitudinal variables, pro-environmental behaviors have also been found to be influenced by personal characteristics including (a) demographics such as age, gender, and residence in which women, younger and urban people demonstrate more pro-environmental beliefs and behaviors than their cohorts (e.g., Cordell & Tarrant 2003; Tarrant & Cordell 1997; Van Liere & Dunlap 1980) and (b) cultural variables such as political affiliation (Dunlap et al. 2000; Kilbourne et al. 2001) and post-materialism (Beck 2000; Inglehart 1997; Oreg & Katz-Gerro 2006) in which those toward the left of the political spectrum and those with post-materialistic views are more pro-environmental. Post-materialism maintains that increasing affluence has contributed to the emergence of a new set of (post-material) values that emphasize quality of life, self-expression, and environmental concern as contrasts to the traditional (material) goals of economic well-being and personal security (Inglehart 1997). We propose that the personal characteristics described above moderate the causal relationship among values, beliefs, and behavior. A moderating effect occurs when the predictor-criterion relationship changes as a function of an external factor (Baron & Kenny 1986). For example, gender may be considered a moderator if the relations between values, beliefs, and/or behavior are significantly different (in magnitude and/ or direction) for males versus females. Ideally, the moderator should be uncorrelated with the predictor and the criterion (Baron & Kenny, 1986). Moderating effects in the environmental value – belief relationship have been reported in previous studies (Tarrant, Bright & Cordell 1997).

Transformational Learning

Clearly “good citizens” are made and not born (Galston 2001). But how and under what conditions can global citizenship (and the environmental values, beliefs, and behaviors associated with it) be nurtured and promoted?

A range of evidence suggests that experiential education plays a critical role (e.g., Bryant 2006; Noddings 2005; Shallcross & Robinson 2006). However, study abroad programs that simply incorporate a field component in the delivery of its instruction are arguably little more than token contributors or “service tourism,” where the greatest benefit to the host community is the tourist dollars spent in providing students with an ‘international education’ (Susnowitz 2006). Rather, to nurture global citizenship requires a delivery mechanism that engages students with the real world and enables them to think beyond their own immediate needs. We maintain that this mechanism is dependent upon a transformational learning process in which new values, beliefs, and meanings are created and formed (Hower 2006) and one in which the ideals of justice-oriented citizenship are promoted; “the step toward intense [environmental] activism involves a substantial and transformational commitment” (Stern et al. 1999, p.84). This is substantiated by Whalley (1996) who argues that profound learning occurs when it involves the transformation of meaning perspectives that are most often associated with a fundamental shift in values and beliefs toward the object.

The academic theme common to all of our South Pacific study abroad programs is sustainable development: Sustaining human societies and the natural environment. This educational focus not only establishes an experiential base on which to build new beliefs about human – environment connections (following Ignatow 2006; Kempton et al. 1995; Schultz 2000), but also provides a platform for interpreting the academic content of the programs in light of our research goal of nurturing justice-oriented (Earth) citizens. Sagoff (1988), for example, argues that sustainability is only possible if we act as citizens rather than consumers since, “as a ‘citizen’, I am concerned with the public interest rather than my own interest; with the good of the community rather than simply the well-being of my family.... as a ‘consumer’, I concern myself with personal or self-regarding wants and interests; I pursue the goals I have as an individual” (p.8). This extension of obligation (from self to others) arguably requires a fundamental transformation in the way individuals think and behave.

Transformational learning involves a change in thinking from an emphasis on concrete facts to the abstract: A change in *what we know* to *how we know* (Kegan 2000). Such an epistemological shift requires thinking about general, thematic questions and the political contexts of the issues; to consider the underlying meanings in the construction of knowledge. Transformational learning then is cultivated and nurtured through a process of reflective thinking and the generation of new frames of reference (Meirow 2000) or new worldviews (King 2003). More specifically, the transformational learning that occurs through our experiential, module-based study abroad programs requires students to change the way in which they understand themselves, their worldview, and the relationship between the two; in essence, to behave as citizens rather than consumers. As such, our programs may be analogous to a pilgrimage in which students are venturing overseas on an extended journey, on their own (i.e., without their immediate family), and often for the first time. According to Daloz et al. (1996), the transformational learning associated with such travel occurs as a result of the opportunity for reflection and elaboration:

A good pilgrimage leads to discovery and transformation, but it isn’t complete until you have returned home and told your story. Home is where someone hears and cares about the story, helps you sort out what you have seen, heard, and done. Whether it be a triumph, a defeat, a high adventure, or a wash (p.38).

As in the educational travel, tourism, and recreation fields generally (Tarrant 1996; Tarrant, Manfredo & Driver 1994), the recollection or reflection of past events is clearly a key component of study abroad programs. It is through such interpretation that students, perhaps for the very first time, begin to understand their country and their role in that country vis-à-vis other nations and peoples of the world. By forming new values, beliefs, and meanings, students essentially create a new identity for themselves that does not necessarily lead them to reject their former sense of national pride or patriotism (as suggested by Calhoun (2002), but one that stimulates questions about their relationship to nation and of what it means to be an American (Dolby 2007). Such reflection therefore becomes not only an important goal of study abroad but a critical step in creating a new identity of national belonging and ultimately a sense of global citizenship.

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References

Ajzen, I & Fishbein, M 1980, *Understanding attitudes and predicting social behavior*, Englewood Cliffs, NJ: Prentice Hall.

- Baron, R M & Kenny, D A 1986, The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations, *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Beck, U 2000, The cosmopolitan perspective: Sociology of the second age of modernity, *British Journal of Sociology*, 51, 79-105.
- Blamey, R 1998, The activation of environmental norms: Extending Schwartz's model, *Environment and Behavior*, 30, 676-708.
- Bryant, D 2006, The everyone, everywhere: Global dimensions of citizenship, in B Holland & J Meeropol (eds), *A more perfect vision: The future of campus engagement*, Providence, RI: Campus Compact, viewed 14 February, 2008, <www.compact.org/20th/papers>
- Calhoun, C 2002, Imagining solidarity: Cosmopolitanism, constitutional patriotism, and the public sphere, *Public Culture*, 14, 147-171.
- Commission on the Abraham Lincoln Study Abroad Fellowship Program 2005, *Global competence and national needs*, Washington, DC: Lincoln Commission.
- Cordell, H K & Tarrant, M A 2003, The Southern Forest Resource Assessment highlights: Changing demographics, outdoor recreation, values and attitudes, *Journal of Forestry*, 107, 28-33.
- Corral-Verdugo, V & Frias-Armenta, M 2006, Personal normative beliefs, antisocial behavior, and residential water conservation, *Environment and Behavior*, 38, 406-421.
- Daloz, L, Keen, C, Keen, J & Parks, S 1996, *Common fire: leading lives of commitment in a complex world*, Boston: Beacon Press.
- Dobson, A 2003, *Citizenship and the environment*, Oxford, UK: Oxford University Press.
- Dolby, N 2007, Reflections on nation: American undergraduates and education abroad, *Journal of Studies in International Education*, 11, 141-156.
- Dower, N & Williams, J 2002, *Global citizenship: A critical reader*, Edinburgh, UK: Edinburgh University Press.
- Dunlap, R E & Jones, R E 2002, Environmental concern: conceptual and measurement issues, in R E Dunlap & W Michelson (eds), *Handbook of environmental sociology*, pp. 482-524, Westport, CT: Greenwood.
- Dunlap, R E & Jones, R E 2003, Environmental attitudes and values, in R Fernández-Ballesteros (ed), *Encyclopedia of Psychological Assessment*, Vol. 1, pp. 364-369, London: Sage.
- Dunlap, R E & Van Liere, K D 1978, The "new environmental paradigm," *Journal of Environmental Education*, 9, 10-19.
- Dunlap, R E & Van Liere, K D 1984, Commitment to the dominant social paradigm and concern for environmental quality, *Social Science Quarterly*, 65, 1013-1028.
- Dunlap, R E, Van Liere, K D, Mertig, A G, & Jones, R E 2000, Measuring endorsement of the new ecological paradigm: A reversed NEP scale, *Society for the Psychological Study of Social Issues*, 56, 425-442.
- Galston, W A 2001, Political knowledge, political engagement, and civic education, *Annual Review of Political Science*, 4, 217-234.
- Hower, M 2006, The making of a global citizen, in B Holland & J Meeropol (eds), *A more perfect vision: The future of campus engagement*, Providence, RI: Campus Compact, viewed 14 February, 2008, <www.compact.org/20th/papers>
- Ignatow, G 2006, Cultural models of nature and society: reconsidering environmental attitudes and concern, *Environment and Behavior*, 38, 441-461.
- Inglehart, R 1997, *Modernization and post-modernization: Cultural, economic, and political change in 43 societies*, Princeton, NJ: Princeton University Press.
- Kegan, R 2000, What 'form' transforms? A constructive-developmental approach to transformational learning, in J Mezirow (ed), *Learning as transformation: Critical perspectives on a theory in progress*, pp. 35-69, San Francisco: Jossey-Bass.
- Kempton, W, Boster, J & Hartley, J 1995, *Environmental values in American culture*, Cambridge, MA: MIT Press.

- Kilbourne, W E, Beckmann, S C, Lewis, A & van Dam, Y 2001, A multinational examination of the role of the dominant social paradigm in environmental attitudes of university students, *Environment and Behavior*, 332, 209-228.
- King, K P 2003, Keeping pace with technology: Educational technology that transforms, Vol. 2: *The challenge and promise for higher education faculty*, Cresskill, NJ: Hampton Press.
- Meirow, J (ed) 2000, *Learning as transformation: Critical perspectives on a theory in progress*, San Francisco: Jossey-Bass.
- Minton, A P & Rose, R L 1997, The effects of environmental concern on environmentally friendly consumer behavior: An exploratory study, *Journal of Business Research*, 40, 37-48.
- Noddings, N 2005, Global citizenship: promises and problems, in N Noddings (ed), *Educating citizens for global awareness*, pp. 1-21, New York, NY: Teachers College Press.
- Nordlund, A M & Garvill, J 2002, Value structures behind pro-environmental behavior, *Environment and Behavior*, 346, 740-756.
- Oreg, S & Katz-Gerro, T 2006, Predicting pro-environmental behavior cross-nationally, *Environment and Behavior*, 384, 462-483.
- Oskamp, S 2000, A sustainable future for humanity? How can psychology help? *American Psychologist*, 55, 496-508.
- Rokeach, M 1973, *The nature of human values*, New York: Free Press.
- Sagoff, M 1988, *The economy of the Earth: Philosophy, law, and the environment*, New York: Cambridge University Press
- Schultz, P W 2000, Empathizing with nature: The effects of perspective taking on concern for environmental issues, *Journal of Social Issues*, 563, 391-406.
- Schultz, P W 2002, Knowledge, information, and household recycling: Examining the knowledge-deficit model of behavior change, in T Dietz & P Stern (eds), *New tools for environmental protection: Education, information, and voluntary measures*, pp. 67-82, Washington, DC: National Academy Press.
- Schultz, P W & Zelezny, L 1999, Values as predictors of environmental attitudes: Evidence for consistency across 14 countries, *Journal of Environmental Psychology*, 19, 255-265.
- Schultz, P W 2000, Empathizing with nature: The effects of perspective taking on concern for environmental issues, *Journal of Social Issues*, 563, 391-406.
- Schwartz, S H 1973, Normative explanations of helping behavior: A critique, proposal, and empirical test, *Journal of Experimental Social Psychology*, 9, 349-364.
- Schwartz, S 1977, Normative influences on altruism, in L. Berkowitz (ed), *Advances in Experimental Social Psychology*, Vol. 10, pp. 221-279, New York: Academic Press.
- Shallcross, T & Robinson, J 2006, Education for sustainable development as applied global citizenship and environmental justice, in T Shallcross and J Robinson (eds), *Global citizenship and environmental justice*, New York, NY: Rodopi.
- Stern, P C 2000, Toward a coherent theory of environmentally significant behavior, *Journal of Social Issues*, 56, 407-424.
- Stern, P C & Dietz, T 1994, The value basis of environmental concern, *Journal of Social Issues*, 503, 65-84.
- Stern, P C, Dietz, T, Abel, T, Guagnano, G. A & Kalof, L 1999, A value-belief-norm theory of support for social movements: The case of environmentalism, *Human Ecology Review*, 6, 81-97.
- Stern, P C, Dietz, T & Guagnano, G A 1995, The new ecological paradigm in social psychological context, *Environment and Behavior*, 27, 723-743.
- Susnowitz, S 2006, Transforming students into global change agents, in B Holland & J Meeropol (eds), *A more perfect vision: The future of campus engagement*, Providence, RI: Campus Compact, viewed 14 February, 2008, <www.compact.org/20th/papers>
- Tarrant, M A 1996, Attending to past outdoor recreation experiences: Symptom reporting and changes in affect, *Journal of Leisure Research*, 281, 1-17.

- Tarrant, M.A, Bright, A D & Cordell, H K 1997, Attitudes toward wildlife species protection: Assessing moderating and mediating effects in the value - attitude relationship, *Human Dimensions of Wildlife*, 22, 1-20.
- Tarrant, M A & Cordell, H K 1997, The effect of respondent characteristics on environmental attitude-behavior correspondence, *Environment and Behavior*, 295, 618-637.
- Tarrant, M A & Cordell, H K 2002, Amenity values of public and private forests: Examining the value – attitude relationship, *Environmental Management*, 305, 692-703.
- Tarrant, M A & Hull, R B 2005, Forest values and attitudes in the South: Past and future research, in H M Rauscher and K Johnsen (eds), *Southern forest science: Past, present, and future*, pp. 231 – 241, USDA Forest Service, Asheville, NC.
- Tarrant, M A, Manfredi, M J & Driver, B L 1994, Recollections of outdoor recreation experiences: A psychophysiological perspective, *Journal of Leisure Research*, 264, 357-371.
- United Nations Intergovernmental Panel on Climate Change 2007, *IPCC fourth assessment report*, viewed 14 February, 2008, <<http://www.ipcc.ch/ipccreports/ar4-syr.htm>>
- Van Liere, K D & Dunlap, R E 1980, The social bases of environmental concern: A review of hypotheses, explanations and empirical evidence, *Public Opinion Quarterly*, 44, 181-199.
- Weistheimer, J & Kahne, J 2004, *Educating the “good” citizen: Political choices and pedagogical goals*, viewed 14 February, 2008, <www.apsanet.org>
- Whalley, T R 1996, *Toward a theory of culture learning: A study based on journals written by Japanese and Canadian young adults in exchange programs study abroad*, Doctoral Dissertation, Simon Fraser University, Dissertation Abstracts International, 573, 988.
- Winn, J G 2006, Techno-information literacy and global citizenship, *International Journal of Technology, Knowledge, and Society*, 23, 123-127.
- Zeleny, L C & Schultz, P W 2000, Promoting environmentalism, *Journal of Social Issues*, 563, 365-371.

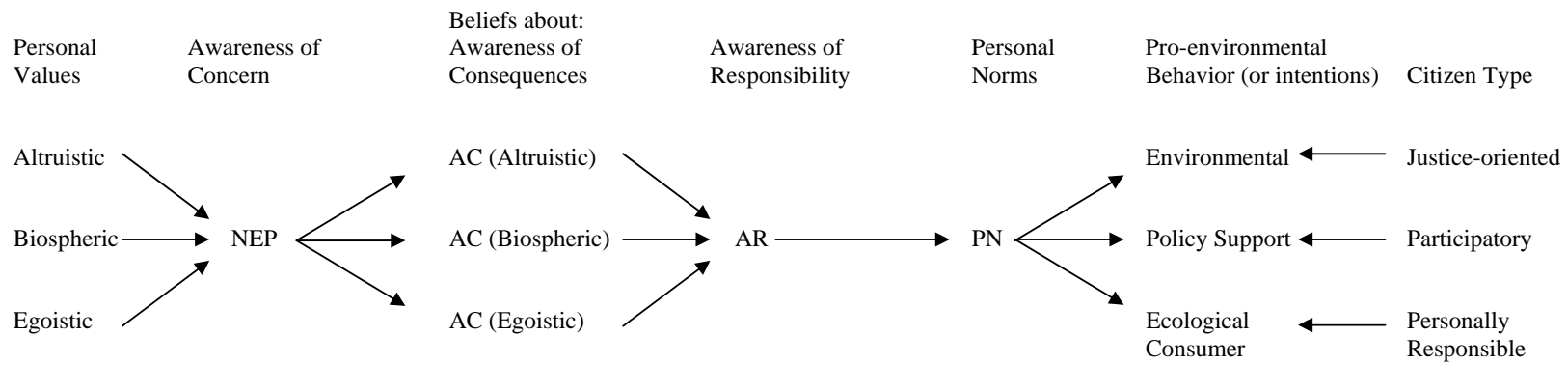


Figure 1. Modified Value-Beliefs-Norms Theory of Global Citizenship