

# Optimism for the World's Future versus the Personal Future: Application to Environmental Attitudes

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**Abstract** Optimism and pessimism for the future have been widely studied, but little is known about distinctions among types of optimism. In the present work optimism for the personal future and optimism for a more global world's future were shown to be related yet distinct variables among responses from 156 undergraduate students. Furthermore, World Optimism predicted lower levels of pro-environmental attitudes (the New Ecological Paradigm) whereas Personal Optimism did not after its shared variance with World Optimism was removed. Personal Optimism (but not World Optimism) was associated with Consideration of Future Consequences, a measure of locus of control, and other measures of optimism and pessimism. Discussion addresses this distinction and its implications for understanding environmental attitudes and other individual differences.

**Keywords** Environmental attitudes · Environmental concern · Optimism and pessimism · Locus of control · Consideration of future consequences

How likely is it that the next year will be terrific for you? How likely is it that the next year will be terrific for the world? Though relatively little research has been conducted to explore this difference, available evidence suggests that people are more optimistic for their own personal future than they are for the world's future (Wengler and Rosen 2000). This and other distinctions between these domains of optimism raise important questions about their relation to personality and attitudinal variables. Of particular interest here are the relations of optimism for the personal and for the world's future to environmental attitudes.

Psychologists have a unique role and responsibility to contribute knowledge about people's environmental attitudes and behaviors because many of the world's most serious ecological challenges (such as climate change and resource depletion) are due to human action (cf. Oskamp 2000); these environmentally-relevant

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behaviors are linked to environmental attitudes (cf. Dunlap et al. 2000; Hines et al. 1986/1987). In addition to this very pragmatic responsibility, there are questions here of theoretical interest. Optimism about the world's future may be more strongly linked to views of a broad, nonpersonal domain such as the environment than is optimism about the personal future due to the former type also being more broad-based and nonpersonal. Wengler and Rosen (2000) proposed different processes or roots for these types of optimism: personal optimism may reflect more of a positive attitude toward the self and one's ability to cope with challenges, whereas world optimism may reflect a more general attitude toward the state of the world. Because the attitude objects are different (self versus the world), levels of optimism may also differ, reflecting an underlying conception of optimism as not just the positivity of the view of the "general" future but dependent upon the attitude toward the object/domain. To date, little research has explored the distinction between these types of optimism and the link to another outcome variable, in particular the important one of environmental attitudes. This article reports a study designed to address these issues.

Because of our interest in both environmental attitudes specifically and in comparing whether broader-based optimism versus more personal optimism would relate in targeted ways to other measures of broad versus personal worldview, we selected as our measure of environmental attitudes the New Ecological Paradigm (NEP) scale (Dunlap et al. 2000). One of the most widely used measures of environmental attitudes and concern, it measures general attitudes toward humans' relations and interdependence with the global ecosystem. Attitudes as measured by the NEP have been linked to pro-environmental behaviors and intentions such as attitudes toward purchasing and using environmentally-friendly products (Cordano et al. 2003; Roberts and Bacon 1997). The NEP was selected for use in this study because it is a measure of general attitude toward the human relationship with the environment and the accompanying susceptibility of the ecosystem (Dunlap et al. 2000). This is a component of people's worldview that allows an exploration of the hypothesis that people's broad attitudes in the environmental domain will be linked more so to their optimism for the world's future than to the personal future.

The rose-colored glasses that many people wear when considering the future (Newby-Clark and Ross 2003) seem to apply more to the personal future than to the world's future. In an international survey of college students from seven nations about the biggest problems facing the world, Zaleski et al. (1994) found that of 32 potential problems listed (e.g., terrorism, industrial accidents leading to pollution, earthquakes), 26 were expected to worsen in the next 100 years, with the largest threat coming from environmentally-related events.

The relative lack of optimism for the world's future was also seen in a study directly comparing optimism for a personal future with optimism for the world's future. Wengler and Rosen (2000) found that people are notably more optimistic for their personal futures than for the world's future. They created measures to assess optimism for a personal future separately from optimism for a more general or world future. This measure, adapted for use in the present study, listed 40 events that could occur in the future. Twenty of the events were of a personal nature (e. g., "you will have gifted and healthy children") and 20 were of a nonpersonal nature (e. g., "a third world war within the next 15 years"). Respondents rated each item twice,

indicating valence and perceived likelihood. Each respondent's optimism score was the correlation between valence and likelihood: if positive events were seen as relatively likely and negative events were seen as relatively less likely, the responses yielded a positive correlation indicating optimism. A correlation of zero indicated neither optimism nor pessimism while a negative correlation between valence and likelihood indicated pessimism (that is, unwanted events are more likely to occur).

Wenglert and Rosen's (2000) results indicated that participants exhibited greater optimism for the personal future than for the general or world future, and that the two measures showed a positive but weak association with each other, with a shared variance coefficient of about 7.5%. The authors suggested that the distinction may be due to a feeling of control over personal events but not world events, a root difference also suggested by Zaleski et al. (1994). Wenglert and Rosen (2000) also suggested a parallel between their measure of personal optimism and the more common measures of dispositional optimism such as the Life Orientation Test, in which respondents indicate agreement with statements such as "Overall, I expect more good things to happen to me than bad" (LOT; Scheier and Carver, 1985). Indeed, Wenglert and Rosen (1995) found a significant correlation between the LOT and their measure of personal optimism but not their measure of world optimism, and also reported that only personal optimism was associated with other individual difference variables including mood and self-satisfaction. Together these results provide compelling evidence that personal and world optimism are distinct variables that relate to other psychological variables in distinct ways.

Has optimism been linked to environmental orientation measures? Evidence is extremely limited. The most direct evidence comes from Iwata (2002), who found that people higher in a coping style termed "self-deceptive optimism" (agreement with three statements such as "As a rule, I tend to think of the future optimistically") reported higher levels of pro-environmental behaviors such as purchasing items made with recycled materials and not taking plastic bags from stores when shopping. Some work on comparative optimism has addressed environmental attitudes. For example, Hatfield and Job (2001) and Pahl et al. (2005) documented that people tend to think that others are at more risk of certain types of environmental threat than they themselves are, a phenomenon termed unrealistic optimism. Denial of threat to self from environmental degradation is associated with lower environmental concern (Hatfield and Job 2001). As shown by Fridgen (1994) as well, people do not tend to think of themselves as vulnerable, even if environmental problems are seen as significant. However, comparative optimism, in which one's risk is seen as less than others' risks, is distinct from dispositional optimism; in an exhaustive literature search, we found no studies examining the link between dispositional optimism and environmental attitudes. Because dispositional optimism is an indicator of one's general worldview (Scheier and Carver 1985), its relation to environmental attitudes may be important pragmatically and interesting theoretically, given the present distinction between personal and world optimism.

Although this distinction and its relation to environmental attitudes is of central interest in the present manuscript, two additional personality attributes believed to relate to one's general worldview are measured as well. One is locus of control. People with an internal locus of control believe that their actions affect outcomes in their lives and/or in the world, whereas those with an external locus of control feel

that chance or powerful others are responsible and that outcomes are at the whim of these other forces (Paulhus 1983). Research overall finds that people with an internal locus of control are more likely to exhibit pro-environmental attitudes and behaviors (see Bamberg and Moser 2007, for a recent review; also Hines et al. 1986/1987). Consistent with the thesis that one's general worldview will relate to more specific attitudes, if people feel that they can control some feature of the external world, they will be more likely to care about that feature and to work actively toward improving it (Cleveland et al. 2005). For example, people who reported that individuals can influence sociopolitical outcomes were more likely to report that recycling is important (McCarty and Shrum 2001). This is consistent with the suggestion from Wengler and Rosen (2000) and Zaleski and colleagues (1994) that people may be more optimistic for a personal than world future because of greater feelings of control in the personal realm.

Closer examination, however, reveals that important questions remain about the relation of locus of control to environmental attitudes. Locus of control has been linked to environmentally responsible behavioral intentions and choices (Balderjahn 1988; Schwepker and Cornwall 1991) more so than to environmental concern or general environmental attitudes. Furthermore, research in this domain has been clouded by a wide variety of operational definitions of locus of control, ranging from Rotter's original measure (Schwepker and Cornwall 1991) to environment-specific measures (see Allen and Ferrand 1999; Cleveland et al. 2005). In the present work, we explore locus of control in two domains, one relating to perceived personal control and the other relating to perceived individual impact on broader social, economic, and political events and climates. Paulhus (1983) documented important differences in a sense of control in these divergent realms and developed measures of personal efficacy and sociopolitical control. Here, we predicted that perceived sociopolitical control would be more strongly related to environmental attitudes and to world optimism than would perceived personal efficacy, while personal efficacy would be more strongly related to measures of optimism in the personal realm. Numerous studies link other measures of personal locus of control to the environmental attitudes and behavior (Iwata 2004) but its relation to the NEP has not been reported to our knowledge. Similarly, in one study Paulhus' sociopolitical control measure predicted attitudes toward recycling (McCarty and Shrum 2001) but has not been studied in relation to environmental attitudes or the NEP. Thus, there exists a dearth of information about differences in these types of locus of control and general environmental attitudes.

In addition to locus of control, the second personality attribute studied in relation to world optimism, personal optimism and environmental attitudes is consideration of future consequences. Concern for the environment may reflect not just one's current impressions of the ecosystem but also may reflect concern for future worsening of the environment, and hence this may be an important individual difference variable. As McCarty and Shrum (2001) suggested, pro-environmental behaviors have an inherent future-oriented quality, as typically the behaviors have short-term costs (like inconvenience) and benefits that only become apparent much later (perhaps not even in one's lifetime). Consideration of Future Consequences (CFC; Strathman et al. 1994) is an individual difference variable that assesses the extent to which people habitually consider possible distant outcomes when deciding on a course of action or whether they are concerned with more immediate benefits. It

has been associated with pro-environmental behaviors such as turning off lights, recycling, and using public transportation (Joireman et al. 2003; Strathman et al. 1994) and with pro-environmental attitudes such as concern for the biosphere (Joireman et al. 2001). However, to our knowledge the relationship between CFC and the NEP is not yet documented; Kortenkamp and Moore (2006) used the NEP in their study but created a composite environmental attitudes measure and did not report the correlation between the NEP and CFC. Again, this personality variable is of pragmatic and theoretical interest because it is reflective of one's general worldview.

## Overview of the Present Study

Two complementary goals guided the present study. First, of theoretical interest is the distinction between the personal domain and the world domain in optimism and perceived control. Are measures within the personal sphere more interrelated with other personal measures, whereas measures in the global sphere are more interrelated with other global measures? Second, of applied interest is the relation of the personal versus world realms to environmental attitudes.

We present a study that further documents the distinction between optimism for the personal and world future and explores correlates of this distinction. We examined the relation of personal versus sociopolitical control to personal and world optimism and examined the relation between these two forms of optimism and a more typical personality based self-report measure of optimism as well as to a measure of Consideration of Future Consequences. We predicted that Personal Optimism would correlate more closely with a typical measure of dispositional optimism and pessimism, the Extended Life Orientation Test (Chang et al. 1997), similar to the LOT but yielding separate scores for optimism and pessimism, than would World Optimism. We also predicted that Personal Optimism would correlate more closely with a measure of Personal Efficacy, assessing a sense of control in the personal realm, whereas World Optimism would correlate more closely with Sociopolitical Control, as both concern the larger, more global realm.

Importantly, we also examined the relation of these forms of optimism to environmental attitudes. As McCarty and Shrum (2001) and Wenglert and Rosen (2000) posited, people's general attitudes toward the world are likely to be reflected in more specific attitudes and behaviors; here, we propose that people's optimism for the world's future and beliefs about individual control in the larger sociopolitical realm will be associated with levels of environmental concern. As suggested by Wenglert and Rosen (2000), optimism about an outcome may be important for motivation to work toward that outcome. As applied to environmental issues, if one feels the environment is indubitably doomed, there would be no point in working to improve it. On the other hand, if one is confident that the environment can sustain any insult humans inflict upon it, one is free to act as selfishly as one wishes and there is no need to be environmentally concerned. The relation of world optimism to environmental attitudes is unknown and may be important for understanding behavior. We predicted that World Optimism would correlate more strongly with environmental attitudes than would Personal Optimism due to the commonality of

the environment and the world's future in other domains. The New Ecological Paradigm (Dunlap et al. 2000) views the environment as fragile and subject to threat from human activity, thus requiring recognition of human susceptibility to the laws of nature and the need for humans to balance their existence with the existence of other animals and plants. Thus, a view of the future that "everything will turn out all right" as might correspond with World Optimism is expected to be negatively correlated with a pro-environmental attitude, since adherence to the New Ecological Paradigm viewpoint is not consistent with a Pollyannaish view of the future.

## Method

### Participants

One hundred fifty-six students (82 women, 74 men) enrolled in psychology courses at Rowan University participated in this study in exchange for course credit. Of these students, 73.7% were European-American; 14.7% were African-American, 7.7% were Latino/a, 1.3% were Asian and 1.9% were "other" or did not respond. Ages ranged from 17 to 35 with a mean of 19.71 ( $SD=2.37$ ) and a median of 19.00.

### Materials and Procedure

Participants reported to the lab in groups of up to 20 members to complete questionnaire booklets.

*New Ecological Paradigm Scale (NEP; Dunlap et al. 2000)* This 15-item measure assesses individual differences in the degree of pro-environmental attitudes, with an emphasis on a view of the impact of humans on the global ecology. Five domains considered to be part of an ecological worldview were included; these domains, which guided item development but do not form formal subscales, include avoidance of anthropomorphism, acknowledging realistic limits to growth, threat of an ecocrisis, the view that humans are subject to nature's laws, and need to protect the balance of nature. Sample items include "Plants and animals have just as much right as humans to exist" and "Humans have the right to modify the natural environment to suit their needs" (reverse scored). Respondents indicate their agreement by circling a response from 1 (*strong disagree*) to 7 (*strongly agree*). Items are reverse coded where appropriate and a single score is computed, with higher scores indicating more pro-ecological viewpoints. In the present study, internal consistency was acceptable,  $\alpha=.81$ .

*Extended Life Orientation Scale (ELOT; Chang et al. 1997)* This scale measures dispositional optimism (six items, such as "In uncertain times, I usually expect the best") and dispositional pessimism (nine items, such as "I rarely count on good things happening to me"). Items from the two scales are interspersed and use a Likert-type rating scale on which respondents indicate their agreement with the statement, from 1 (*disagree strongly*) to 5 (*agree strongly*). In the present data, both scales showed acceptable internal consistency: for Optimism,  $\alpha=.78$ ; for Pessimism,  $\alpha=.87$ .

*Beliefs of Future Events Scale (measuring world and personal optimism)* This scale was developed by the authors as an updated version of the scale originally created by Wengler and Rosen (2000; 1995). Twenty events which could occur in the personal future and 20 events which could occur in the world's future were interspersed; ten of each type were considered by the researchers to be positive and ten were considered to be negative. Events were presented in the form of statements such as "Sustained peace will come to the Middle East" (world, positive) or "You will contract a sexually transmitted disease" (personal, negative). Participants considered each statement twice, once to rate its valence (from -10 for *extremely negative* through +10 for *extremely positive*) and once to rate its likelihood (from 0%, *The event definitely WILL NOT happen*, to 100%, *The event definitely WILL happen*, in increments of ten). Scales were provided and participants circled their responses. Some items were the same as items on Wengler and Rosen's (2000) original version and others were created by the authors. Importantly, none of the items were in the domain of environmental events, to avoid contamination with the NEP.

This scale yields scores for Personal Optimism and World Optimism. Following Wengler and Rosen (2000), each individual's ratings of valence on the personal items are correlated with his or her ratings of likelihood on the personal items. The resulting correlation coefficient is the index of optimism for the personal future: if the coefficient is positive, it signifies that the individual believes that more desirable events are more likely to happen and less desirable events are less likely to happen. A similar index is computed for World Optimism by correlating the perceived likelihood of world events with their perceived valence for each participant. Again, a positive correlation indicates an optimistic viewpoint; the more positive, the more optimistic. Thus, this scale contains a more indirect measure of optimism than does the ELOT and other scales on which respondents indicate agreement with statements on Likert-type scales.

*Perceived Personal Efficacy and Sociopolitical Control Indexes (Paulhus 1983)* In Paulhus' (1983) Spheres of Control model of perceived control, separate scales assess respondents' perceived control over the personal, sociopolitical, and interpersonal spheres; only the first two were measured in the present study due to relevance. Each scale is comprised of ten statements such as "One of the major reasons we have wars is because people do not take enough interest in politics" (Sociopolitical Control scale) and "My major accomplishments are entirely due to my hard work and ability" (Personal Efficacy scale). Statements are rated on a seven-point scale from 1 (*disagree*) to 7 (*agree*). In the present data, both scales showed relatively low internal consistency: for Personal Efficacy,  $\alpha=.69$ ; for Sociopolitical Control,  $\alpha=.64$ .

*Consideration of Future Consequences Scale (CFCS; Strathman et al. 1994)* Participants rate the descriptiveness of 12 statements such as "I consider how things might be in the future and try to influence them with my day-to-day behavior" on a scale from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*). In this sample,  $\alpha=.79$ .

Questionnaires were placed into one of three random orders within each booklet; within each of the three orders, two additional forms were created by counter-



balancing whether the likelihood or valence ratings were made first on the Beliefs of Future Events Scale, resulting in six total orders. The final page of the questionnaire requested the participant's age, gender, ethnic background, and year in college. Participants were debriefed and thanked.

## Results

Because Wenglert and Rosen (2000) noted that their index of Personal Optimism (but not World Optimism) was negatively skewed, we began by assessing the normality of the major variables. In the present data, both the Personal and World Optimism indexes were negatively skewed, skew = -1.72 and -1.02, respectively; values between -1.0 and 1.0 are desired (George and Mallery 2002). Thus, we performed inverse transformations on these indices (Myers et al. 2006) to remove the skew prior to conducting further analyses; the transformed scores for Personal Optimism yielded a skew measure of -0.96 and World Optimism yielded -0.28. All analyses below were conducted with the transformed values unless otherwise noted. All other measures yielded skew indices between -0.60 and 0.40 and thus were not transformed.

We then assessed the interrelations among the various measures of optimism and pessimism (see Table 1 for intercorrelations among all variables). To examine the Beliefs of Future Events Scale, recall that Personal Optimism was computed by correlating likelihood ratings with valence ratings for the 20 personal events and World Optimism was computed by correlating likelihood ratings with valence ratings for the 20 world events, as had been done by Wenglert and Rosen (2000) in the original instrument. For World Optimism,  $M$  raw correlation = 0.43,  $SD$  = 0.43; for Personal Optimism,  $M$  raw correlation = 0.74,  $SD$  = 0.24, paired  $t$  (155) = -12.92,  $p$  < .0001,  $d$  = 1.04. Thus, replicating Wenglert and Rosen (2000), Optimism was stronger in the Personal realm than in the World realm, and the two measures were significantly and moderately related,  $r$  (154) = .61,  $p$  < .0001. Note that the shared variance between these forms of optimism was .37, indicating that while optimism in the personal and world realm were related, they are largely independent constructs. It should be noted that 27 participants exhibited negative raw correlations (of any

**Table 1** Correlations among individual difference measures

	NEP	PersOpt	WorldOpt	E-Opt	E-Pess	PersEff	SocioPol
Optimism/pessimism							
Pers. Opt.	-.17*						
World Opt.	-.24**	.61**					
ELOT: Opt.	-.18*	.31**	.18*				
ELOT: Pess.	.04	-.27**	-.07	-.46**			
Control measures							
Pers. Eff.	-.03	.34**	.10	.53**	-.41**		
Sociopolit.	.07	-.04	.05	.12	-.13	.01	
CFCS	-.05	.19*	.05	.24**	-.20*	.29**	.20*

\* $p$  < .05, \*\* $p$  < .01



magnitude) for world events, indicating relative pessimism, whereas only two participants did so for personal events, also replicating the earlier work.

When correlated with the Optimism and Pessimism subscales of the ELOT (which indicate mean agreement with generally optimistic or pessimistic statements), Personal Optimism as measured by the Beliefs of Future Events Scale correlated more strongly with the ELOT scales,  $r=.31$  for the Optimism subscale and  $r=-.27$  for the Pessimism subscale,  $ps \leq .01$ , than did the World Optimism measure of the Beliefs of Future Events Scale,  $r=.18$ ,  $p < .03$ , for the Optimism subscale and  $r=-.07$ ,  $p=.38$ , for the Pessimism subscale, all  $dfs$  for correlations reported in this article = 154 unless otherwise specified. Testing the significance of the difference between the correlations with the World and Personal Optimism scale with the ELOT Optimism scale showed a marginally significant difference,  $t(153)=1.91$ ,  $p < .06$  and a significant difference for the ELOT Pessimism scale,  $t(153)=-2.93$ ,  $p < .01$ , indicating that the ELOT subscales are more closely related to the Personal Optimism measure than the World Optimism measure. In fact, in a multiple regression factoring out the common variance in World and Personal Optimism, only Personal Optimism continued to be associated with the Optimism subscale of the ELOT,  $\beta=0.31$ ,  $t(153)=3.19$ ,  $p < .01$ , whereas World Optimism did not,  $\beta=-0.01$ ,  $t < 1$ .

Correlations were also computed between each of the four optimism/pessimism measures and the two measures of perceived control and the Consideration of Future Consequences Scale. The Sociopolitical Control scale did not correlate significantly with any of the four optimism/pessimism measures,  $rs < .14$ ,  $ps > .12$ . The Personal Efficacy scale correlated with the ELOT Optimism scale,  $r=.53$ , and Pessimism scale,  $r=-.41$ , and with the Personal Optimism index of the Beliefs of Future Events scale,  $r=.34$ , all  $ps < .001$ . It did not correlate significantly with the World Optimism index,  $r=.10$ ,  $p=.22$ . The CFCS showed the same pattern of results: significant correlations with the ELOT Optimism and Pessimism subscales and the Personal Optimism index,  $rs=.24$ ,  $-.20$ , and  $.19$ , respectively, all  $ps < .03$ , but not with the World Optimism index,  $r=.05$ .

Did World and Personal Optimism differentially predict environmental attitudes as measured by the New Ecological Paradigm scale? They did: World Optimism was more strongly correlated with NEP scores,  $r=-.24$ ,  $p < .01$ , than was Personal Optimism,  $r=-.17$ ,  $p < .05$  but this difference in magnitude was not significant,  $t(153)=-1.14$ , *ns*. A multiple regression analysis in which NEP scores were regressed onto World and Personal Optimism indexes revealed overall  $R^2=.06$ ,  $F(2, 153)=4.89$ ,  $p < .001$ , and that only World Optimism was independently predictive of NEP scores,  $\beta=-0.23$ ,  $t=-2.31$ ,  $p < .02$ ; Personal Optimism was not a significant predictor,  $\beta=-0.02$ ,  $t < 1$ . Correlating the subscales of the ELOT with NEP scores revealed that the Optimism subscale was predictive of NEP scores,  $r=-.18$ ,  $p=.03$ , but the Pessimism subscale was not,  $r=.04$ ,  $p > .60$ . Adding the ELOT subscales to the multiple regression with the Personal and World Optimism yielded  $R^2=.08$ ,  $F(4, 151)=3.24$ ,  $p < .02$ , which was not a significant increase in  $R^2$  from the initial model,  $F(2, 151)=1.57$ ,  $p=.21$ ; again the only independently-significant regressor was World Optimism,  $\beta=-.23$ ,  $t=-2.25$ ,  $p < .03$ ; the Optimism subscale on the ELOT was marginally significant,  $\beta=-.16$ ,  $t=-1.75$ ,  $p < .09$ ; for the other two regressors,  $ts < 1$ . In sum, of the four measures of optimism/pessimism in this study only the World Optimism index from the Beliefs of Future Events Scale significantly and

independently predicted environmental attitudes as measured by the NEP. Specifically, greater World Optimism was associated with lower levels of environmental concern. However, NEP scores were not significantly correlated with either measure of perceived control: for the Personal Efficacy scale,  $r=-.03$ , and for the Sociopolitical Control scale,  $r=.07$ , nor with the Consideration of Future Consequences Scale,  $r=-.05$ , all  $ps>.40$ .

In sum, the pattern of results shows that the World Optimism index alone predicted environmental attitudes (and correlated significantly only with the Personal Optimism subscale of the Beliefs of Future Events Scale), whereas the Personal Optimism index, Optimism and Pessimism subscales of the ELOT, Personal Efficacy Scale, and Consideration of Future Consequences scale showed interrelations with each other.

## Discussion

A 2007 poll of American adults by the Yale Center for Environmental Law and Policy found that people continue to increase the seriousness with which they consider environmental threat (Global Strategy Group 2007). In that survey, 83% of respondents considered global warming a serious threat (up from 70% just 3 years earlier) and 68% expressed a belief that people can control climate change. However, not all data yield cause for optimism about a pro-environmental shift in American culture: some people who purport to value environmentally-conscious behaviors such as recycling are easily swayed from their position if their motive was largely to espouse a socially-accepted viewpoint (Koestner et al. 2001). Furthermore, people's self-views as environmentalists are heavily context-dependent: they can be weakened by framing the issue as actively helping improve environmental conditions rather than not actively harming the environment and by asking respondents about specific domains of environmental behaviors rather than general concern for the environment (Wade-Benzoni et al. 2007). As Wade and colleagues (2007) concluded, there are some signs that Americans are shifting toward more environmentally-concerned viewpoints and lifestyles, but not nearly quickly enough given the continued and rapid degradation of the ecosystem.

The present study aimed to learn more about the foundational worldview associated with pro-environmental attitudes. Using the New Ecological Paradigm, in which humans' relation and responsibility to the ecosystem is emphasized (Dunlap et al. 2000), we explored whether environmental attitudes can be better explained as a component of a broader cognitive and affective orientation to the world than as a reflection of a more narrow, personal orientation. Participants completed individual difference measures assessing Personal and World Optimism via the degree of association between the valence and likelihood of possible future events; measures of personal and sociopolitical locus of control; and a dispositional measure of optimism and pessimism as well as the Consideration of Future Consequences Scale. The data supported our hypothesis that environmental attitudes would be more strongly associated with World Optimism than with Personal Optimism; indeed, only World Optimism predicted environmental attitudes after removing shared variance in regression analyses. Conversely, in the personal realm, measures of optimism, personal efficacy, and consideration of future consequences were significantly

associated with each other but not with World Optimism or environmental attitudes. These data are supportive of the notion that a global domain such as environmental attitudes is more strongly connected to other global attitudes (in this case, a measure of optimism for the world's future).

Is it good to be optimistic? In many ways, yes. As Wengler and Rosen (2000) suggested, if one foresees a negative future, it may be hard to work to improve it. On the other hand, if the future does not look too bad, perhaps there is no need to take precautions (see Hatfield and Job 2001). Note that in the present study the relationship between World Optimism and environment attitudes was negative: respondent who were less optimistic reported more concern with the environment. This finding supported our idea that environmental concern is part of a worldview that acknowledges problems and challenges; taken to the extreme, a view that "everything will work out fine" is likely to be dangerously detrimental to environmental concern and action. We encourage further research on this link; are people who are overly optimistic in the global domain less likely to engage in environmentally-friendly behaviors? What are their coping strategies for handling information about ecocrisis? As was shown by Homburg et al. (2007) in their work on coping strategies for environmental threat, people who show more active problem-solving approaches as opposed to de-emphasizing the seriousness of problems are better able to handle stress and are more likely to engage in ecological behaviors such as using public transportation and conserving water. Future research could profitably explore whether and the degree to which a denial of the seriousness of problems in the world may lead to avoidance of pro-environmental behaviors (Hatfield and Job 2001; Homburg et al. 2007). Indeed, dispositional optimists have been shown to preferentially process positive rather than threat-related information (Karademas et al. 2007), suggesting possible future research examining information-source preference for optimists and pessimists. Would people who are optimistic about the world's future tend to avoid information about environmental threat more so than would people who are relatively more pessimistic? Learning more about how people who view the future of the world as basically okay (or even as positively rosy) interact with environmental information and behaviors is important; we are actively pursuing this line of research in our lab.

The present work raises issues of refinement of psychology's knowledge of pro-environmental behaviors versus attitudes and how these may be related to other individual difference variables such as locus of control and consideration of future consequences. As reviewed earlier, both of these personality attributes have been shown to predict pro-environmental behaviors such as transportation choices and recycling in previous research. However, in the present study they were found to be unrelated to environmental concern as measured by NEP scores. This result suggests that these personality attributes may not have stable relationships with pro-environmental attitudes, or perhaps that the ecological behaviors as measured in most relevant studies (for example, Schwepker and Cornwall 1991; Strathman et al. 1994) are less tied to the general worldview assessed by the NEP and thus the behaviors are predicted by future orientation and perceived control whereas a pro-ecological worldview is not. This too is an area ripe for future research and refinement.

The difference between the personal and global domain is of central interest in the present work. This study documents important distinctions between Personal and

World Optimism. As had been suggested by Zaleski et al. (1994) and further documented by Wengler and Rosen (2000), the very large positivity bias seen for Personal Optimism is considerably reduced for World Optimism. This is shown in the present study both by the significantly higher mean correlation between valence and perceived likelihood of possible future events for Personal Optimism as well as the greatly more skewed distribution for Personal than for World Optimism. Additionally supportive of this important distinction is the pattern of associations with other individual difference measures: only Personal Optimism was associated with Personal Efficacy, Consideration of Future Consequences, and a dispositional measure of pessimism, whereas only World Optimism was independently associated with environmental attitudes. Because so much research in personality and social psychology has addressed the concept of optimism, further study of this largely-undocumented distinction and its relation to other outcome variables is needed.

It has been nearly a decade since Oskamp (2000) in a special issue of *American Psychologist* called for the involvement of psychologists in understanding and combating the destruction of the environment through human behavior. In his explanation of environmental threats such as overpopulation and carbon emissions, he made clear the central role of human behavior in causing these threats and the need to reverse these consequences through changes in behavior. Behavior, of course, does not occur in a vacuum; Oskamp (2000) detailed some situational factors such as the lack of availability of electric cars that prevent people from behaving in more environmentally-friendly ways. However, environmentally responsible behavior has also been linked to pro-environmental attitudes. Both for this very pragmatic reason as well as for theoretical clarification, we encourage further study of these issues.

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