

Ethical Values and Long-term Orientation

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ABSTRACT. Lapses in ethical conduct by those in corporate and public authority worldwide have given business researchers and practitioners alike cause to re-examine the antecedents to personal ethical values. We explore the relationship between ethical values and an individual's long-term orientation or LTO, defined as the degree to which one plans for and considers the future, as well as values traditions of the past. Our study also examines the role of work ethic and conservative attitudes in the formation of a person's long-term orientation and consequent ethical beliefs. Empirically testing these hypothesized relationships using data from 292 subjects, we find that long-term perspectives on tradition and planning indeed engender higher levels of ethical values. The results also support work ethic's role in fostering

tradition and planning, as well as conservatism's positive association with planning. Additionally, we report how tradition and planning mediate the influence of conservatism and work ethic on the formation of ethical values. Limitations of the study and future research directions, as well as implications for business managers and academics, are also discussed.

KEY WORDS: time orientation, planning, tradition, formation of ethical beliefs, measurement

"It appears many executives based their business decisions on how they could quickly build, and then protect, their own personal fortunes – and cared less about the long-term growth and profitability of their company." – Associated Press
(Clendenning, 2002) on the Enron collapse

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How personal ethical values are formed and manifest is an ongoing subject of academic and public interest. The spectacular, well-publicized moral lapses among corporate executive officers in Enron, Adelphia, HealthSouth, Parmalat, MCI/WorldCom, and Tyco, to name only a few, have captured headlines worldwide (Padgett, 2005). These events occur because value differences in individuals lead to variance in behavior that is offensive to what society deems as moral and just (Rawls, 1999). Indeed, in stages of cognitive moral development (Kohlberg, 1981), values become the driving force behind the formation of ethical standards, whether they be high or low. Even early business and moral philosophers, such as Adam Smith (Smith, 1759) and Kant (Bowie, 2002), postulated that morality standards are set and manifest within the bounds that individuals form in a collective consciousness of society, i.e., moral boundaries around how we treat our neighbors and friends and, in a business sense, our customers, employees, shareholders, and the public at large. Ethical business behavior, or lack thereof, is

consequently an outgrowth of managers' personal values (Hemingway and MacLagan, 2004).

While the range of types of values that impact ethical behavior is vast, the current research focuses on how the specific value of time orientation influences the formation of ethical beliefs. That is, we examine how people view time horizons along the continuum of short-term versus long-term, and how those views are related to their ethical beliefs. As the opening quote demonstrates, long-term thinking is not salient in the minds of executives in the midst of an ethical collapse. Indeed, ethical lapses in corporate business behavior have specifically been attributed to short-term thinking on the part of the executives involved (Barnes et al., 2002). American business is renowned for its focus on short-term profits at the expense of long-term financial health (Googins, 2002), regardless of its fiduciary responsibilities to stakeholders or the detriment to society at large. According to Millman (2002), "What drives it is the unwillingness of [these people] to incur short-term pain in order to get long-term gain" (p. 18).

The motivation of our study, then, is to investigate the relationship between ethical values and long-term orientation (hereafter referred to as LTO) with two of its antecedents (conservatism and work ethic) and the two sub-dimensions of LTO, basically (1) a respect for traditions of the past as well as (2) the value of planning for the future. In brief, extant literature is used to predict that higher levels of LTO in individuals lead to higher levels of ethical values. Furthermore, we test the relationships between these constructs with empirical data.

Overarching conceptual support for such an assertion is demonstrated by the theory of moral development (Kohlberg, 1981), seminal to modern ethics research. The theory holds that one's circle of concern regarding ethical issues gradually widens as life progresses to encompass more people – beginning with one's self and expanding through the immediate family to eventually encircle the wider community and all society at large. That is, one may be first concerned about how his/her behavior may affect only those close to him/her. As life continues, s/he becomes concerned for members of the community and then the entire human race. It may follow that this pattern of ever-widening circles over time applies not only "spatially," or to increasingly more people,

but "longitudinally" as well, i.e., to time. One's moral concerns grow from the short-term "here-and-now" to gradually encompass an awareness of and affinity for long-term thinking – planning for the future and valuing the traditions and "old ways" of the past. Both of these views would be consistent with recent indications that older U.S. adults are much more concerned about the moral and ethical climate of America than the country's youth (Gallup, 2004).

Our research contributes to the body of knowledge on ethics in two ways. First, we widen the theoretical perspective on how ethical values are formed, that is, ethical values are fostered by the value of LTO with its sub-dimensions of planning and tradition through antecedents of work ethic and conservatism. Second, with data from nearly 300 subjects, we test our hypothesized model (defined below) and contribute empirical findings regarding the relationship between ethical values and LTO. Given the well-placed and often heated debate over whether ethics can or should be taught to business school students (Burnett et al., 2003; Byrne, 1992), the implications of our study are important to business managers and academics alike. For example, the field of marketing would benefit by increased knowledge about the relationship between long-term orientation and ethics. The moral implications of how consumers choose between short and long-term consumption alternatives (Prelec and Loewenstein, 1998), the social responsibility implications of marketers' short-term versus long-term strategy choices (Abratt and Sacks, 1988), and, designing incentive systems for salespeople and other marketing professionals that include long-term ethical considerations (Singhapakdi et al., 2001) would all be of interest to marketing researchers, teachers, and practitioners. Ethical values and LTO are also relevant to how global business is accomplished across national and cultural boundaries, in that LTO values and resulting ethical choices consumers and managers make may vary from country to country (Babakus et al., 2004).

The paper is organized as follows. First, the components of our conceptual model are defined and explored, with hypotheses developed from the literature on LTO and ethics. Second, the methods, sample, and analyses are described for our empirical study, for which results, as tests of our hypotheses,

are then presented. We then discuss the study's limitations and present implications for academics and business practitioners. Finally, possible directions for future research are explored.

Conceptual background and hypothesis development

In brief, as shown in Figure 1, our theoretical model proposes that work ethic and conservatism both function as antecedents to long-term orientation. That is, higher levels of work ethic and conservatism lead to higher levels of LTO, i.e., planning and tradition. We also theorize that higher levels of planning and tradition, in turn, positively influence the level of ethical values that an individual holds.

Time orientation and LTO

How individuals deal with time horizons is one of the most salient values they develop in their personal or professional lives. Much business literature has been devoted to the study of time orientation of individuals and managers worldwide (Mosakowski and Earley, 2000; Spears et al., 2001). For example, in a consumer setting some consumers prefer immediate gratification in their purchases, in a "buy it now" mentality. Others enjoy the anticipation of consumption, postponing purchases in order to savor the experience (Loewenstein and Prelec, 1993; Prelec and Loewenstein, 1998). Still others, with a time-is-money philosophy, mentally calculate a type of "net present value" of consumption, which may make future consumption less desirable than present purchases (Leclerc et al.,

1995). Such could be the cause of historically low savings rates for Americans (Katzner, 2002). In a business setting, differences in how managers value time lead to various approaches to general business strategy, employee incentives, and handling deadlines (Saunders et al., 2004).

Several frameworks have been forwarded for the study of time orientation in individuals. One is the "monochronic" versus "polychronic" distinction (Hall and Hall, 1990; Kaufman et al., 1991). Monochronic people view time as a series of discrete, sequential blocks, each to be pursued in its due course; they prefer meetings by agenda and shopping with a list, taking a linear approach to life. Polychronic individuals, on the other hand, view life as a collection of inter-connected events to be dealt with simultaneously; they tolerate, even prefer, departure from the planned sequence, returning holistically to matters of company or personal business later, if needed. Similarly, another time-orientation framework is that of Trompenaars and Hampden-Turner (1998), who posit that individuals view time as either "sequential," i.e., a series of events passing one after the other, or "synchronic:" the past, present, and the future are all related – they cannot and should not be disengaged from each other.

The most widely-cited framework of how people value time, however, is long-term orientation, or LTO, which is the focus of the current study. Originally developed by Hofstede and his colleagues (Hofstede, 1980; Hofstede and Bond, 1988) as part of a five-dimension cultural values framework, LTO was originally labeled "Confucian dynamism," reflective of Confucian values, such as perseverance and face-saving in relationships. The construct was originally conceptualized as an orientation towards the present versus the future, as a basis for the theory that Confucian values drive economic growth in developing countries (Hofstede and Bond, 1988; Yeh and Lawrence, 1995). However, many teachings of Confucius also encompass the values of the past, such as respect for tradition and age, leading to some confusion in the use of the term and measurement of the LTO/Confucian dynamic value in individuals (Fang, 2003). Hofstede himself, in later work, stopped using the terms interchangeably and refers to the value as simply "long-term orientation" (Hofstede, 2001). In sum, researchers eventually have come to use the construct as a long-term versus

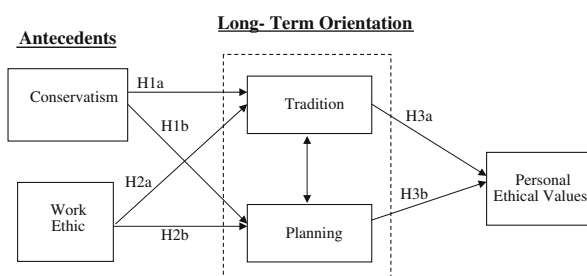


Figure 1. Conceptual model and hypothesized relationships.

short-term outlook on life, that is, a here-and-now orientation versus valuing the present and the past, which outlook likely has ethical implications (Millman, 2002). Consistent with this present usage and conceptualization of LTO as a time-oriented construct (Bearden et al., 2006; Earley, 1997), *we define LTO as the value of viewing time both in the past and future rather than in the “here-and-now” present. Individuals with a high level of LTO value planning, tradition, perseverance and hard work in the present for future reward.* Specifically, we conceptualize LTO with two sub-dimensions, planning and tradition, consistent with an LTO scale developed by Bearden et al. (2006). We believe that people high in the planning and tradition aspects of LTO will also hold high levels of ethical values.

Antecedents to LTO

The literature suggests that time orientation has been widely studied and measured. What has not been examined extensively is the relation between time orientation, specifically LTO, and ethical values. Before developing our own hypothesis regarding that relationship, two antecedents, conservatism and work ethic, are linked conceptually to LTO, showing how they may, through the formation of the LTO value, eventually influence how ethical values are formed.

Conservatism

We define conservatism in terms of business, society and general welfare policies and attitudes that favor increasing the common good (Sturdivant et al., 1985). We realize and acknowledge that views traditionally labeled as “liberal” may not be in direct conflict with such values, depending also on how the term “liberal” is defined and applied. In general, the literature on what we define as conservatism supports a relationship with long-term views on time.

As defined, conservative views are more long-term oriented, as demonstrated in several previous studies on a variety of types of conservative values. For example, Seo (2004) found that people who are more traditionally conservative in their political views and behavior generally are also long-term oriented in their thinking. In the business world, researchers have examined how conservatism in top managers influences decision-making in response to

corporate change (Sturdivant et al., 1985), a process that happens more slowly in conservative, tradition-bound companies. We expect that such methodical processes also manifest themselves in ethical behavior, as managers consider the long-term implications of their decisions. Likewise, conservatism has been found to have a significant relationship with long-term planning policies regarding corporate social responsiveness (Angelidis and Ibrahim, 2004), behavior with ethical implications. Thus, through LTO (tradition and planning), conservatism influences the formation of ethical values, as demonstrated by Wicks (1990), who explored the relationship between ethical behavior and conservative values enshrined in the traditional *status quo*, arguing that the formation of an ethical framework derives from internal (rather than external) codification of practices and norms. In general, although counter-examples exist (Conroy and Emerson, 2004), traditional conservative religious views have been tied with high levels of ethical reasoning (Babakus et al., 2004; Vitell et al., 2005), even over a wide range of religious beliefs (Kennedy and Lawton, 1998). These religions include what have been termed both Eastern (e.g., Islam and Hinduism) and Western faiths (e.g., the “Judeo-Christian tradition”). In this way, we propose that conservative beliefs, as an antecedent to the tradition and planning embodied in LTO, influence the formation of ethical values. Stated formally as hypotheses:

H1a: Conservatism is positively associated with the tradition aspects of long-term orientation.

H1b: Conservatism is positively associated with the planning aspects of long-term orientation.

Work ethic

Similarly, we propose that individual work ethic assists in forming LTO, which, in turn, positively influences the level of ethical values individuals hold. Varying levels of work ethic have been tied to different perspectives on time and its passage, in particular, the effect of interrupting “contractual time” on employees’ work ethic (Herman, 2002). Catholic church social teachings, granted to have traditional

oriented values, include work ethic as part of their moral guidance to parishioners (McCann, 1997). Other religious groups, including Protestants and Muslims, espouse similar ties between traditional values and work ethic (Arsian, 2001). Furthermore, Ng and Ng (2003) found that work ethic is negatively correlated with short-term (“need it now”) views on welfare assistance and consumption. Employees with lower levels of work ethic values have been found to have higher absenteeism and contribute less to team cohesiveness – manifestations of short-term views on attendance, productivity, and relations with others (Sanders, 2004), who would likely view such behavior as unethical. It follows that people with such short-term views are poor planners, both in a career and personal sense. Similar to conservatism, we also propose that higher levels of work ethic lead to higher levels of the planning and tradition sub-dimensions of LTO (and eventually ethical values):

H2a: Work ethic is positively associated with the tradition aspects of long-term orientation.

H2b: Work ethic is positively associated with the planning aspects of long-term orientation.

LTO and ethics

While both conservatism (e.g., Kennedy and Lawton, 1998) and work ethic (e.g. Luna-Arocas and Li-Ping Tang, 2004) have been linked directly to high levels of ethical values, few studies have shown the link between conservatism and work ethic as antecedents to time orientation, which we hypothesize as influential on the formation of ethics. We therefore now turn to the positive influence of LTO and its two sub-dimensions on the formation of ethical values. While past studies have examined the concepts of time and ethics together, few have treated long- versus short-term time horizons, and fewer still have examined the specific construct of LTO and ethics. Ethical behavior in marketing managers has been examined generally from the viewpoint of keeping customers satisfied as well as behaving as a socially responsible company, both long-term business values (Abratt and Sacks, 1988) engendered by high levels of tradition and planning. The ethics

literature shows that time orientation has an impact on a firm’s ethical behavior; that is, managers with a sequential, short-term view of time “tend to see outcomes less directly connected to actions in the present; this underpins...a myopic focus on the immediate near-term effects on one’s actions” (Thorne and Saunders, 2002, p. 7). Corporations low in long-term perspectives of tradition and planning would be less likely to view questionable accounting practices and polluting the environment as ethical dilemmas. For example, in the highly publicized case of the Enron collapse, employees’ compensation was tied to profits on deals that would have never made a profit if subjected to conservative accounting standards, accruing losses year-by-year. Employees “would routinely pad their profits...to increase their share of the take” (Chaffin and Fidler, 2002, p. 30). Said another, “You lived an entire life in a 90-day cycle” (Barnes et al., 2002, p. 26), referring to the quest to post ever-improving quarterly profits.

These conceptual and anecdotal examples, while supporting the connection between LTO and ethics, do not offer a specific theorized relationship between the two, as do very few of the studies that use Hofstede’s Confucian dynamic and/or LTO in their conceptual base. Using the Hofstede typology, countries which have been theorized to have higher LTO, such as those in Asia, have been shown to have high levels of ethical values (Moon and Franke, 2000; Tsui and Windsr, 2001), e.g., Japanese consumers who prize conservative, traditional societal-focused values in evaluating companies’ brands (Dordrecht et al., 1999), and Chinese business managers who have been found to have high standards of business ethics, particularly among state-owned enterprises (Ip, 2003), known for their long-term planning practices. Long-term orientation has also been examined for its relation to corporate attitudes towards environmental responsibility, gender discrimination, and integrity (Christie et al., 2003), as well as how LTO may engender more emphasis on the well-being and the interests of the company and fellow employees (Lu et al., 1999). Even these studies, some of which mention LTO by name, are for the most part conceptually driven by general cultural groupings or nationality, not an examination at the individual level, nor do they theorize that a person’s LTO actually leads to higher levels of his or her ethical values.

Rather, our theoretical model (as well as its measurement described below) offers a richer conceptualization of LTO, including its antecedents and sub-dimensions. Regarding our two sub-dimensions of LTO, planning and tradition, we expect that a high degree of LTO would produce a corresponding high level of ethical values (Singhapakdi et al., 2001). In the case of planning, unethical behaviors are dangerous for those who count on a “clean record” for future success. Such behavior holds very negative consequences, especially if one gets caught, which forward-thinking individuals see as a major deterrent to lying, cheating, stealing, and so forth. Likewise, for the second LTO sub-dimension of tradition, those who place a high degree of importance on tradition do so, we propose, because unethical actions violate the traditional values of integrity and honesty that high-LTO individuals prize. We therefore expect that individuals who value LTO, specifically our two sub-dimensions of planning and tradition, will possess a high degree of ethical values. Based then on the preceding conceptual argument and examples, we expect:

H3a: The tradition dimension of long-term orientation is positively associated with personal ethical values.

H3b: The planning dimension of long-term orientation is positively associated with personal ethical values.

Methods

Data were collected from 292 undergraduate students enrolled in business schools from two major U.S. universities. This sample population is important as it represents a “flashpoint” of the debate over whether ethics should or can be taught in the classroom. That is, the output of business schools (i.e., business school graduates) become the managers who eventually make the decisions by which corporate conduct is deemed ethically appropriate or not (Burnett et al., 2003; Kennedy and Lawton, 1998). Survey participants were given modest extra course credit for their participation. Of the sample 49% was female; 95% worked at least part-time.

Measures of the five constructs included in our model were operationalized using existing measures. Responses to the items were assessed using a seven-place strongly disagree (1) to strongly agree (7) format. The intervening scale points were also labeled in terms of extent of agreement. The two exogenous variables were assessed as follows. First, respondent conservatism regarding opinions toward government, business and general welfare was assessed using a six-item scale comprised of items proposed originally by Sturdivant et al. (1985). Scale items included the following example: “The disadvantaged in our society suffer because of the economic power exerted by corporations.” Second, work ethic was measured using the nine-item scale of Cherrington (1977). These items included statements such as: “A good indication of a person’s worth is how well they do their job.” The coefficient alpha estimates of internal consistency reliability were 0.72 and 0.73 for the conservatism and work ethic measures, respectively.

The two intervening long-term orientation factors, planning and tradition, were measured using the 2-factor, 8-item scale developed and validated by Bearden et al. (2006). Specifically, the tradition factor of long-term orientation was assessed using four items represented by the following example: “Respect for tradition is important for me.” The planning dimension was measured using four items similar to: “I work hard for success in the future”. The coefficient alpha reliability estimates for the tradition and planning LTO measures were 0.80 and 0.74.

Ethical values were measured using the 4-item “general honesty and integrity” dimension of the marketing norms scale developed by Vitell et al. (1993). The marketing norms scale reflects deontological norms, or guidelines that represent personal values. Marketing activities form the interface between the firm and the consumer (Vitell et al., 1993), so measures of marketing norms may reflect values from both a business and consumer perspective. Further, the scale is appropriate given our sample frame composed of future business leaders, as well as the previously highlighted focus on ethical concerns in business. Our aim in this research is to investigate the relationship between LTO and ethical values. We focus specifically on the general honesty and integrity dimension of the marketing

norms scale, reasoning that individuals with high levels of these values would act more ethically in all areas of their business behavior – regardless of the specific area of business in which they may find themselves faced with an ethical dilemma. In addition, the brevity of the 4-item measure enhances its usefulness by minimizing demands on respondents, while also encouraging use of the measure in our survey along with measures of other constructs (Richins, 2004). The reliability estimate for the personal ethical values measure was 0.73.

Factor analysis of the items comprising each scale used in our study revealed that the five measures were unidimensional. Mean scores, standard deviations, reliability estimates, and variable intercorrelations are depicted in Table I.

Analysis and results

Measure validation

Several confirmatory factor analyses were employed to investigate the discriminant and construct validity of the variables, using the procedures recommended by Fornell and Larcker (1981) and Anderson and Gerbing (1988). First, confirmatory factor analysis models were run with two factors for each pair of variables. In the first model, the phi estimate reflecting the correlation between each pair of constructs was constrained to 1.00. In the second model, the phi coefficient was freely estimated. In all comparisons, the correlated two-factor model with the free phi coefficient was superior as evidenced by chi-square difference tests with one degree of freedom that exceeded 23.00 ($p < 0.01$). Second,

evidence of discriminant validity was also provided in that the variance extracted estimates for both constructs exceeded the square of the phi coefficient between the factors comprising each pair (Fornell and Larcker, 1981).

Models estimated

Consistent with the analyses of Andrews et al. (2004), structural equation methods were employed in tests of the hypotheses. For the five multi-item variables which comprise the model being investigated, average scores were used to reflect each of the constructs. To account for measurement error, construct error terms were based upon Cronbach's coefficient alpha for each scale (MacKenzie et al., 1998).

To investigate the relationships between the antecedents of conservatism and work ethic, the two intervening measures of long-term orientation, and personal ethics, three path analysis models were estimated (cf. Andrews et al., 2004). The results of these model estimations are summarized in Table II. First, the hypothesized Model 1 depicted in Figure 1, in which the two long-term orientation factors (i.e., tradition and planning) mediate the effects of the two antecedent variables on personal ethics, was estimated. Two additional models were estimated to investigate the extent to which the relationships between the conservatism and work ethic antecedents and personal ethics are mediated by the LTO planning and tradition factors. Specifically, Model 2, which was comprised of only the direct effects of the two antecedents on personal ethics, was estimated. Lastly, Model 3 (i.e., the direct and indirect effects model) was estimated. In this latter

TABLE I
Means, standard deviations, and correlations among constructs

Variable	Mean	Standard deviation	Items	1	2	3	4	5
1. Conservatism	4.40	0.96	6	<i>0.72</i>				
2. Work ethic	5.80	0.56	9	−0.06	<i>0.72</i>			
3. Tradition	5.66	0.88	4	−0.05	0.32**	<i>0.80</i>		
4. Planning	5.88	0.74	4	0.15**	0.36**	0.31**	<i>0.74</i>	
5. Personal ethics	5.95	0.77	4	−0.03	0.33**	0.26**	0.23**	<i>0.73</i>

$n = 292$. ** $p < 0.01$. All constructs measured using 7-point scales. Italicized numbers on the diagonals are coefficient alpha estimates of internal consistency reliability.

TABLE II
Results of model estimations

	χ^2	d.f.	CFI	GFI	NFI	RMSEA
Model 1: Hypothesized model	14.87	3	0.91	0.98	0.90	0.12
Model 2: Direct antecedent effects	110.70	8	0.23	0.86	0.23	0.22
Model 3: Direct and indirect effects	1.01	1	1.0	1.0	0.99	0.01
	Model 1: Hypothesized model	Model 2: Direct anteced. effects	Model 3: Direct and indirect effects			
Conservatism – Tradition	– 0.04		– 0.04			
Conservatism – Planning	0.20***		0.20***			
Work ethic – Tradition	0.39***		0.38***			
Work ethic – Planning	0.43***		0.43***			
Conservatism – Personal ethics		– 0.02	– 0.03			
Work ethic – Personal ethics		0.39***	0.28***			
Tradition – Personal ethics	0.26***		0.17**			
Planning – Personal ethics	0.19***		0.10*			
R^2 :						
Tradition	0.10		0.09			
Planning	0.16		0.16			
Personal ethics	0.06	0.11	0.14			

* $p < 0.10$.

** $p < 0.05$.

*** $p < 0.01$.

Fit difference between Models 1 and 3 is χ^2 13.86, df difference = 2, $p < 0.001$.

analysis, the direct effects of the antecedents, as well as the effects of the two hypothesized intervening variables, were included. For the estimations of Models 1 and 3, the two dimensions of the long-term orientation construct were allowed to correlate.

Tests of hypotheses: Model 1

The overall fit statistics for the three models investigated are presented in the top portion of Table II. As shown by these summary statistics, the direct and indirect effects Model 3 provided the best representation of the data. However, prior to describing these results, tests of the hypotheses and Model 1 are presented next.

H1 and H2

As summarized by the estimates in the top section of the Table II column for Model 1 and as depicted

graphically in Figure 2, estimation of Model 1 revealed that three of the four hypothesized paths regarding the effects of conservatism and work ethic on the tradition and planning long-term orientation measures were significant. In support of H1b, conservatism was positively correlated with planning as

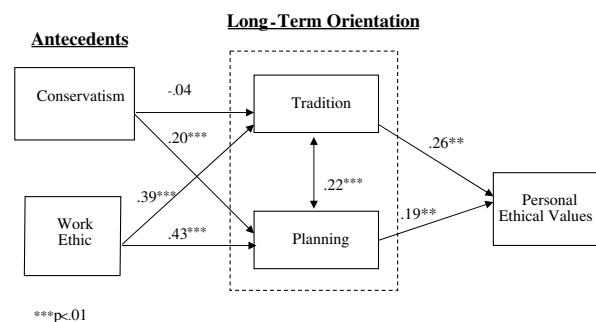


Figure 2. Path analysis results.

predicted ($\beta = 0.20, p < 0.01$). However, the path between conservatism and the tradition measure was not significant. As such, H1a was not supported. For H2, work ethic was positively related to both the tradition ($\beta = 0.39, p < 0.01$) and planning ($\beta = 0.43, p < 0.01$) aspects of long-term orientation. These results then provide support for both H2a and H2b and the predicted positive relationships between the work ethic antecedent variable and the two long-term orientation measures reflecting tradition and planning values.

H3

Tests of the hypothesized Model 1 also supported the dual predictions of H3. That is, both the tradition and planning long-term orientation measures were positively related with personal ethics as hypothesized. Specifically, the significant beta coefficients for the relationships between tradition long-term orientation values and planning long-term orientation values were 0.26 ($p < 0.01$) and 0.19 ($p < 0.01$), respectively.

Direct and indirect effects: Models 2 and 3

In an effort to investigate the direct and indirect effects of the two antecedents (i.e., conservatism and work ethic), two additional models were estimated. These results are also summarized in Table II. First, in tests of the direct effects of the two antecedents on personal ethics (i.e., Model 2), two paths were estimated. While a significant relationship was observed between work ethic and personal ethics ($\beta = 0.39, p < 0.01$), the overall model fit for Model 2 and the direct effects of the two antecedents was inadequate.

Model 3, in which both the direct and indirect effects of the antecedents and the two long-term orientation variables on personal ethics were estimated, provided the best overall model fit. The path coefficients associated with the estimation of Model 3 are summarized in the third column of Table II. While some attenuation of the direct effects of tradition and planning values on personal ethics was observed, the same paths significant in the tests of Models 1 and 2 remained significant. That is, support for H1b, H2a and H2b, and H3 was again evident.

Finally, modest evidence of mediation of the direct effects of conservatism and work ethic by the two intervening long-term orientation measures was also observed. Specifically, the direct relationship between work ethic and personal ethics revealed in the estimation of Model 2 ($\beta = 0.39, p < 0.01$) was attenuated with the inclusion of the two intervening long-term orientation measures as shown in the estimation of Model 3 ($\beta = 0.28, p < 0.01$).

To further investigate the mediating role of the tradition and planning factors of long-term orientation, we examined each LTO dimension and independent variable combination separately using the Sobel (1982) mediation test. The Sobel test calculates a z -score to determine whether the effect of the predictor on the outcome variable, by way of the mediator, is significant. Separate path models were run incorporating the effects of conservatism and work ethic, mediated by tradition, on personal ethics. Similar models were run incorporating the effects of planning as the mediator between the two predictors and personal ethics. From each model run, path coefficients and standard errors were used to compute a z -score, the significance of which indicates whether the indirect effects of the predictors on personal ethics via the mediators (tradition and planning) are significantly different from zero (Preacher and Leonardelli, 2001).

The tradition dimension of LTO did not exhibit a significant mediating effect of conservatism on personal ethics, consistent with our results from the tests of hypotheses (Sobel z -value $-0.84, p = 0.40$). Tradition did, however, exhibit a significant result when mediating the influence of work ethic on personal ethics (Sobel z -value $2.40, p = 0.02$). When planning was examined as the mediator between the conservatism and personal ethics, the z -score supported a significant mediating effect (Sobel z -value $2.18, p = 0.03$).¹ Modest support was obtained for a mediated effect of work ethic on personal ethics, via planning (Sobel z -value $1.92, p = 0.06$). Examined in isolation, the Sobel tests thus suggest that both the tradition and planning aspects of long-term orientation serve to mediate the effects of the antecedents on personal ethics. However, the individual model runs, as well as the combined model (Model 3) in Table II, indicate that even in the presence of the mediators, significant direct effects of work ethic on personal ethics were still

observed, suggesting a partially mediated model (Baron and Kenny, 1986).

Discussion

We have explored the relationship between ethical values and long-term orientation with its sub-dimensions of planning and tradition, as influenced and mediated by antecedents of work ethic and conservatism. Using empirical data from a large sample of implication-relevant business school students, we tested hypotheses emergent from these relationships. Our findings support the proposed effects: Individuals who prize planning and tradition, the components of LTO, indeed possess higher levels of ethical values. Also (with the exception of conservatism influencing tradition), stronger beliefs towards work ethic and conservatism lead to more strongly held values of tradition and planning. Furthermore, we find additional evidence of these effects through several tests of mediation—tradition and planning (again with the exception of the link through conservatism) mediate the effect of conservatism and work ethic on the formation of ethical values. That is, conservatism and work ethic indirectly influence the formation of ethical values through their effects on LTO's sub-dimensions.

Implications

How individuals come to form higher levels of ethical values holds important implications for academics and practitioners alike. In our study, we have explored new conceptual and empirical relationships among two time orientation dimensions and ethical values, finding that high levels of LTO produce stronger ethical values. For researchers, our study adds LTO and its sub-dimensions of tradition and planning, as well as conservatism and work ethic, to the conceptual base of what may explain the formation of ethical values. We have done so through tests of hypotheses with empirical data. Also, business school teachers and students of ethics can benefit through increased understanding of how differences in people's view of time may lead to widely varying ethical manifestations in their

decisions. Applying this understanding in the workplace could lead to better ethical choices among future business leaders.

Related to our study's empiricism, managers of businesses and public institutions also may benefit from the results and implications of our study. Executives in these organizations need to understand how employees, customers, vendors, public constituencies, and other stakeholders come to formulate and deal with their personal ethical values. For example, those who design motivation and compensation plans may do well to understand the influence of time orientation on sales people, managers, and other employees (Baucus and Beck-Dudley, 2005). Indeed, some companies have found that linking compensation to short-term profits produces behavior inconsistent with high ethical standards (Chaffin and Fidler, 2002).

Limitations and future research

Similar to other ethics studies that use business school students (Burnett et al., 2003; McNichols and Zimmerer, 1985), our samples are drawn from student populations. As a limitation to our study, this sample may be justifiably untested in confronting business ethical dilemmas; additionally, their beliefs regarding long-term orientation may not yet be well formulated, on account of their relatively young age and experience levels. Future studies may produce more generalizable results by expanding the sample demographics to include general populations. At least a comparison study between the long-term values of older versus younger populations, such as students, may yield interesting cross-generational differences and similarities regarding ethics and long-term orientation. Growing evidence suggests teens may be returning to traditional ethical values (Gallup, 2002). In addition, our data were correlational and any implications for causality are subject to question.

Also, future research could expand on our limited set of constructs to test their relationships to conservatism, work ethic, long-term orientation, and ethical values. Such additional constructs might include consumer frugality (Lastovicka et al., 1999), materialism (Richins, 2004), susceptibility to personal influence (Bearden et al., 1989), or

propensity to acquire consumer debt (Manning, 2000). In addition to LTO in consumer settings, the LTO construct, with its tradition and planning sub-dimensions, could be applied in future research in a business setting, since managers are individuals set in corporate situations. Such investigation would forward the knowledge surrounding the current debate and relevant media headlines over corporate ethical behavior (Googins, 2002). That is, how do managers make decisions that may have ethical implications against the backdrop of their own values? The way managers deal with inside and outside constituencies, that is, employees, suppliers, and customers, certainly presents many circumstances that, combined with long-term or short-term perspectives (Dyer, 2000; Ganesan, 1994), may imply a host of business-related ethical considerations.

Note

¹ Baron and Kenny's (1986) first step in tests of mediation stipulates that a relationship between the predictor and the dependent variable must be established. Once this first step (1) is met, relationships between the (2) predictor and the mediator, and (3) the mediator and the dependent variables are examined. Readers may note that our correlational and regression results do not indicate a significant relationship between conservatism and personal ethics, thus questioning how a significant mediation can occur. However, scholars have recently begun to question the necessity of establishing a relationship between the independent and dependent variable as a prerequisite to mediation, arguing that a direct path from the independent to the dependent variable is implied if steps 2 and 3 of Baron and Kenny are satisfied. Such would be the case, for instance in sequential relationships and/or in instances of moderated-mediation. See, for example, Collins, et al. (1998) and Langfred (2004) for discussion regarding alternatives to the traditional Baron and Kenny (1986) approach. In light of these recent discussions, examination of the mediated influence of conservatism on personal ethics, via planning, is warranted.

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