Ethics in Project Management --
Research on Values-Based Leadership in Project Driven Arenas

By William A Moylan, PhD, PMP, and, Loran W Walker, PhD, PMP

Abstract

The paper addresses the values-based leadership skills, values and concepts of ethical project management professionals, and, considers the applicability of this leadership construct to the processes of managing major projects in different industries and applications. The research study on which the paper is based addresses the suitability of a values-based leadership approach for leading project teams, with a focus on improving the partnerships within project-driven industries. The project-driven industries for this research include a) facility construction & design, b) information technology (both systems development and telecommunications), c) new product development related programs, and d) manufacturing related areas.

The main research question addressed is: "Can the application of values-based leadership skills, values and concepts improve the processes of project management, especially within project-driven industries?" A follow on to this research question is the hypothesis of: "Values-based leadership skills, values, and concepts are highly applicable to the processes of project management, in particular, in the leading of programs from concept through completion." The paper on this research assesses the eleven leadership values postulated in the Malcolm Baldrige National Quality Award, as means to establish an ethical rubric within project-driven industries.

The research used a quantitative approach to assess the critical elements of this topic. On previous research on this topic, a mixed methods approach was found appropriate to identify the values shared between the leader and followers (qualitative), review the values-base for the particular application (quantitative), and compare the leader’s ethical values with the organization (mixed methods).

Introduction

Research on values-based leadership [VBL] and ethics in project-based industries and applications pose interesting challenges. In the past decade, ethics and professional conduct has become a very “hot” topic in academia (especially in graduate level programs of business, engineering and management), within professional society discussion circles, and, throughout all levels of government. Unfortunately there is a

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paucity of substantial research available that points the way for professional conduct improvement.

In performing research on ethics in construction and VBL (Moylan, 2005), one of the major areas that emerged requiring additional study is the topic of this research paper. The author considered expanding the research study on the applicability of values-based leadership to other project-driven industries in order to show the relevance of ethics and professional conduct across the spectrum of project-driven industries. Suggested project-driven industries include information systems / telecommunications, new product development, and manufacturing. Further, the quantitative portion should continue to use a similar survey instrument following the Malcolm Baldrige (2004) criteria on interrelated core values and concepts of leadership, so that industry comparisons could be made.

Therefore this paper expands the application arena on research on ethics in project management based on using VBL as the analysis rubric. Key project-driven industries and applications are considered with the results being compared and contrasted with the original research on construction industry results.

The paper summarizes the background of the previous VBL study on ethics in construction and offers a literature review on VBL and ethics applicable to project management applications. In addition this paper summarizes the research process followed for the current study, and the results to date of the ongoing research study conducted by the authors.

**Background to the Values-Based Leadership Study on Ethics in Construction**

A variety of research on this topic of ethics and values in the construction industry has been conducted using different research methodologies. This includes empirical studies (Park, 1992), qualitative research (Kirk, 2000), systems theory (Lemark, Henderson, and Wenger, 2004), and, case studies (Welling, 2003). Several quantitative studies have used the criteria of the Malcolm Baldrige National Quality Award (2004) to study different aspects of VBL as an ethical leadership construct, and which has yielded very positive results. Morris (2000) used this approach to study executive perceptions on delivering value to customers, customer satisfaction, and creating employee partnerships. A study by Bell and Elkins (2004) used the Baldrige criteria as the scorecard to assess leadership performance, especially the upward influences of ethics. A quantitative survey by Doran (2004) on ethical practices in the construction industry considered issues that the industry executives claim have the greatest impact on their business.

The author (Moylan, 2005) performed mixed methods research on the applicability of utilizing the values-based leadership [VBL] theory to improve the construction industry. The research considered several critical items, including the discovery and assessment of construction executive perceptions, the use of the theoretical VBL construct of
leadership that would appeal to a pragmatic audience, and the difficulty of introducing social changes intended to assist the construction industry. Moreover, focusing on critical topics that interest the business sense of the respondents and using an accepted quality model to assess interest in a leadership construct, such as the Baldrige criteria, was demonstrated as essential.

The author’s research on VBL and ethics in construction (Moylan, 2005) demonstrated a strong correlation between values-based leadership concepts, values, skills, and sound ethical conduct as critical performance components in the astute managing of constructed facilities projects. The results of the mixed methods research (quantitative and qualitative) supported the main question addressed in the study, “Can the application of values-based leadership skills, values and concepts improve the processes of project management, especially within the construction industry?” The research showed that values-based leadership traits of trust, integrity, and people-orientation are critical to success in the construction industry. In addition, the research exhibited the suitability of values-based leadership for improving the business partnerships within the construction industry (hypothesis) and the applicability of this approach to the leading of constructed facilities programs from concept through completion.

The next section addresses important background information on values-based leadership (VBL) and its applicability to project-driven industries and applications.

Review of Literature and Research on Values-Based Leadership

The literature on leadership has evolved from a focus on the actions of a heroic leader to a broader view that considers leadership as an influential exercise in any interpersonal relationship and as a social function required to achieve organizational goals (Nirenberg, 2001). During the 1990s, the types of scholarly articles on leadership have transitioned from a strong emphasis on empirical research and some theoretical discussions to a balance of empirical and theoretical with some discussion on leadership methods. The concepts, values, and skills of Values-Based Leadership emerged from the path-goal theory and subsequently the transformational leadership approach that requires a strong trusting and ethical partnership between the leader and team members (Northouse, 2001). The following section overviews the concepts, values and skills of Values-Based Leadership.

Primer on Values-Based Leadership

The first major underpinning of ethical leadership is the inherent values shared between the leader and their followers. The values-base, which the leader advocates for the subordinates' benefit, is a function of the leader’s personal ethical values and a reflection of the organization's structure and systems (Daft, 1999). For example, the "duty-honor-country" code of the US Military Academy at West Point is the life blood of all the brave women and men who form the thin gray line (Donnithorne, 1993). The
leader acts to form a supportive team culture that leads to collective progress, enhanced personal esteem, and improved self-determination (Fairholm, 1994). The core principles of values-based leadership meld on the loyalty the followers develop for their cause, each other, and their leader.

**Core Principles of Values-Based Leadership**

Fairholm (1997) notes six centric principles of values-based leadership. The first principle relates to the leader’s role in stakeholder development to transform himself, his followers, and the organization to focus on accomplishing the vision with creativity and enthusiasm. The second principle considers the leader’s role in creating this vision that epitomizes the core values of the leader and helps target the follower’s actions. The third principle relates how the leader creates a culture supportive of the core values that contribute to the team achieving its personal and group goals. The fourth principle of this sextet correlates the leader’s preparation for the personalized relationships with his or her followers that amalgamate the personal values, self-purpose, and methods with each other in a council-like, two-way exchange (as opposed to a one-way counseling exercise). The next principle requires the values-based leader to be a teacher of his or her followers, coaching on improving personal relationships, work skills, and attitudes to enable, empower, and energize them to greater performance. The sixth principle concludes with the values-based leader’s dual goal of producing high-performance and self-directed followers with an inherent loyalty to the organization and the group mission. These six principles constitute the philosophical base for values-based leadership (Fairholm, 1998). Although values-based leadership is appropriate for many situations, it is most applicable to leading transformational change initiatives, which require changes in corporate culture and personal behavior to be effective.

**Leading Transformational Change**

Kotter (1999) contends that the primary role of leaders is leading transformational change, conscious that the typical over managed and under led American firms today (Bennis, 1989) are not up to the challenge. O’Toole (1996) argues for value-based leadership as the preferred method for leading change. Values-based leaders consciously choose to follow a servant style of leadership, who lead by example and trust rather than command and fear, coupled with the unbridled moral courage, constant respect and desire to serve others. Values-based leaders are the most successful in implementing holistic, ongoing change efforts in which they gain top executive support without the need for strict definition of requirements. During the pre-launch phase of a change initiative, it is imperative for the leader to "walk the talk" in extolling their personal values with the organizational vision, especially in articulating the needs for the particular change (Burke, 2002). The necessary influencing by the leaders of their followers to perform what they consider to satisfy her/his own values while serving the needs of the group mission becomes the most challenging aspect of vision-based leadership. The change leader acts positively on the follower’s values, perceptions, and behavior to elicit the appropriate response/s that consequently satisfy the group mission.
and organizational vision (Dwyer, 2003). Values-based leaders conscripted to lead transformational changes in fast-paced industries will require a broad network of colleagues and cohorts.

**Value Confederations**

The hyper-competitive pressures, strains on resources, and emerging market requirements beyond the capabilities of many firms cause the nimble company to form closer relationships and alliances with its customers and suppliers. The benefits of improved coordination and information flow, disciplined product development, and system-wide solutions require access to vital knowledge and competencies not widely available. A web-like constellation of the necessary expertise, suppliers, distributors, and customers is essential to creating the extended enterprise, with its own set of core values that will meld all of the talents to satisfy the overarching vision (Lei, 2003). The emergence of the “value confederation” of networked companies based on their shared values allows each entity to specialize on its core competencies, leveraging its strengths, and gaining advantage for its weaknesses (Evans & Wurster, 1997). From a values-based leadership perspective, this construct of a value confederation affords each component firm the opportunity to satisfy its individual needs and desires (building personal esteem) while working toward the group vision, goals, and mission (shared values). Moreover, the protective umbrella of the networked enterprise allows the assembled project team to share in the glory (gaining intrinsic goal satisfaction) without having to suffer the risks entirely on its own (creating meaningful team work). Trustworthiness, the fifth element of values-based leadership, forms the defining culture for managing and leading complex organizations.

The section reviews and critiques the recent research, related studies and scholarly writings that pertain to values-based leadership skills, values, and concepts.

**Research, Studies and Scholarly Writings on VBL**

Since 1999, a significant number of the scholarly publications and topical books on leadership have identified values and ethics as key topics. A database search for the scholarly articles using "leadership, values and ethics" as the key words, and published between January 2001 and August 2004, as the search criteria using the ABI/Inform Global (ProQuest) and the Business Source Premier Library tools, yielded a rather astounding number of 1,000-plus articles. Many of the topical books on leadership published in the last five years identify values and ethics as critical discussion elements. A database search of the UMI ProQuest Digital Dissertations library system yielded ten Ph.D. dissertations on leadership with the terms "values, ethics, and construction" in their manuscript abstract, published between 1990 and 2004. A database search of newswire articles on "leadership, values, ethics, construction industry" since January 2002 in LexisNexis Academic library system topped over 125 articles.
The next subsections are a compilation of the salient points found in the major publications that address Values-Based Leadership (VBL). These sections are arranged in terms of the leadership concepts related to VBL, VBL leadership style and leader / follower values inherent to VBL.

**Leadership Concepts of VBL**

Although the topics of leadership and values-based concepts were peripheral to the research on project-based applications in the early 1990s, a decade later the research horizon changed to a more potent field for values-based leadership concepts. Research by White (2001) on using a soft systems approach to inspire change in an organization used a case study on a major construction company interested in increasing their minority hiring to study the effect of shared values on this process. White found the company to be a monolithic culture with homogeneous values, as described by the Myers Briggs Type Indicators, which were the inherent roadblocks to the case study company’s desires to recruit, hire and maintain a more diverse workforce. The research concluded that understanding the values-alignment between the minority recruit and the company culture, and a proper support network that satisfies the participant needs, as essential for the case study company to successfully meet their goals in terms of minority enrichment.

Research by Plunkett (2004) on the consultative approach to the management and leadership studied the metropolitan New York construction industry to test the evidence and the effectiveness of a particular method called the "Bah Model of Consultation." Plunkett found strong evidence within the case industry of the "management by consultation" process, which requires a strong affinity to shared values among the business owners and construction managers to be effective.

**VBL-Style of Leadership**

Research studies on leadership with a strong grounding in VBL concepts showed applicability to a broad range of situations. A qualitative research study by Harris-Payne (2000) on the relationship between gender, self-perception of effectiveness, and leadership style among senior corporate executives explored the leadership style, self-perception of effectiveness, and the important leadership traits and behaviors of the six executive level respondents. Each of the respondents described their leadership style as a combination of the transformational and transactional leadership, which is a strong indication of a VBL style of leadership. In addition, another VBL element expounded by the executive respondents in this study by Harris-Payne (2000) considered moral values and traits, such as ethics, commitment, and loyalty as most critical to ensure success in the business world. A quantitative study by Frew (2000) on the stressors, strain and spirituality at work correlates these issues with VBL concepts. The research indicates that many employees integrate spirituality with their work, and concludes that employee spirituality may have implications for leadership roles, meaningful work, well being, and
the expression of values, ethics, and integrity, which are VBL concepts in regard to value development.

These conclusions compliment a qualitative research study by Morgan (2002) on the moral ethos of managing in an engineering culture. The researcher noted her inability to explore properly the social construction of values of an engineer culture because the stated values of the participants (engineers and lower level managers) did not correlate with her observations of their work and her limited interviews with upper level management. Moreover, the engineering organization that provided the research site scenario of this study was fraught unfortunately with a heavily bureaucratic culture. A VBL-style of leadership would serve well the project manager at such an engineering organization to effectively lead their team members, by balancing their professional job satisfaction needs for technical challenge (personal values) with the mission and goals of the enterprise for business effectiveness and profit (organization values).

**Leader / Follower Values**

Other recent literature relating to the effective leading that embodies VBL concepts includes the doctrine of enduring, core values of the corporation that must never change although times and conditions may cause the company to modify its strategies, mission, and possibly its purpose. The VBL principals of communicating a clear vision and obtaining buy-in from all levels (values congruence), and then establishing complimentary businesses processes and interactions with customers around that vision (values alignment) are essential for leading with the appropriate conviction in a turbulent world (Eskew, 2004). Further on this point of aligning the corporate vision with customer satisfaction, this concept of values-based leadership is important in establishing an ethical corporate reputation and its relationship to the success and credibility of the corporation (Pruzan, 2001). In addition, the VBL concept of the chief executive spreading their enduring values to permeate the mission and goals of the entire enterprise and then outward to its stakeholders are important for basic business success and personal life satisfaction (Blanchard, 2004). For a manager to implement these VBL concepts, she/he needs to follow a prescriptive model of leadership based on the Confucian fundamental values of consideration for others and a deep sense of justice. In following this "leadership by values" code of Confucius, the leader brings harmony and peace to their organization by their example of leading through the force of their values (Fernandez, 2004).

Several recently published books on leadership incorporate the concepts of VBL. In *Authentic Leadership*, Bill George (2003) postulates that to rediscover the secrets to creating lasting value, corporate executives must demonstrate five key qualities, which includes practicing solid values. The other qualities of authentic leaders include understanding their purpose, leading with heart, establishing connected relationships, and demonstrating self-discipline. George concludes that "only through a sense of purpose can companies realize their potential, [and], that the best path to long-term growth in shareholder value comes from having a well-articulated mission that inspires
employee commitment” (p. 62), both of which are VBL concepts; i.e., articulated mission and values congruence. In his book of the same name, London (1999) notes that these two major concepts of Principled Leadership and Business Diplomacy are "values-based management strategies [with the] underlying premise [of] being ethical, tactful, and showing concern for others are positive, effective business strategies” (Preface). Hatcher (2002) envisions sustainable organizations with the moral imperatives for action and the sound ethical values to address the world malaise that is at the "crossroads of values and beliefs [to] engage in active dialog and learning [to] make the tough decisions about the world” (p. 16). Hatcher considers the VBL concepts of strong mission, value alignment, and ethical congruence as the best approach to leading responsible organizations.

The Research Study

The subject research study used a quantitative approach to assess the critical elements of this topic. In researching values-based leadership as described by Daft (1999), a quantitative approach is considered appropriate to review the values-base for the several project-type applications, and subsequently to compare and contrast the results with past VBL studies using a similar survey instrument.

The main research question addressed in the study is “Can the application of values-based leadership skills, values and concepts improve the processes of project management for a variety of industries and applications?” A follow on to this research question is the hypothesis of “Values-based leadership skills, values, and concepts are highly applicable to the processes of project management, in particular, in the leading of programs from concept through completion.”

The criteria for performance excellence embodied in the Malcolm Baldrige National Quality Award (2004) offered a framework to develop the list of questions for the quantitative survey. Leadership, one of the seven categories that make up the core values and concepts, “examines how the organization’s senior leaders address values, directions, and performance expectations, as well as a focus on customers and other stakeholders, empowerment, innovation, and learning” (Baldrige, p. 13). (The other categories include strategic planning, customer and market focus, measurement, analysis and knowledge management, human resources focus, process management, and business results.)

From the Baldrige (2004) criteria on the interrelated core values and concepts, the authors developed a list of the respondent items that addressed the skills, values, and concepts of values-based leadership. These items include the following quantitative elements: (1) visionary leadership, (2) customer-driven excellence, (3) organizational and personal learning, (4) value of employees and partners, (5) agility, (6) focus on the future, (7) management for innovation, (8) management by fact, (9) social responsibility, (10) focus on results and creating value, and (11) systems perspective. These items formed the core of the survey instrument.
Sampling Design

The sample design considered the needs of the quantitative (survey) and the comparison with historical data and the results of previous research performed on this topic [ethics in project management].

The source for the survey sample was members of the Project Management Institute, specifically, the New Practitioners Community of Practice and the Ethics Community of Practice.

This august group brought a broad-based perspective from the different stakeholders in the project management process. The respondents “spoke” from the dual points of view for both the requirements for appropriate professional conduct as prescribed in their respective code of ethics and their current and past industry position and project experiences.

Measures

The key independent variable (defined as the "presumed cause") of the study is the successful project management professional who practices values-based leadership skills, values and concepts. The dependent variable (considered as the "presumed effect") was improvements in project execution performance (e.g., quality, schedule, budget, and customer satisfaction). Relevant intervening variables included the company, the typical project size, years of professional experience of the individual, types of project delivery (i.e., lump sum, cost reimbursable, or, unit rate), the industry sector (Information Technology, manufacturing, new product development, etc.), and, the economic conditions facing their industry (e.g., price and availability of resources) (Cooper & Schindler, 2003).

Data Collection Procedures

In constructing the quantitative data collection plan for the topic on values-based leadership, the authors followed the Creswell (2003) prescription and start by setting the boundaries for the study. The broad focus was project-driven industries other than the construction industry (which was already measured), with responses from the various project management professionals who perform project planning, execution and control activities.

The next step involved determining the appropriate sources for accessing these stakeholder groups. The project management arena is both very large and fractionated with many "players" involved, as opposed to a few important industry drivers. Associated professional societies within the project management profession were an important source for their classified membership lists.
The next major activity in developing the data collection plan was determining the appropriate means for the research study. The quantitative portion will utilize a structured survey. The study required having a robust coding structure that will allow the researchers to identify patterns, cite trends, and discover nuances contained in the quantitative data. The coding scheme identified the a) data source medium (person, prose, etc.), b) type of data (ordinal, reflective, historical, etc.), c) collection method (data review, survey, etc.), and d) analysis scheme (inference, question and answer, judgment, etc.) (Creswell, 2003).

The data gathering methods that were considered included the quantitative schemes of surveys, and analysis of data mining of historical industry information. The quantitative survey was sent to members of the Project Management Institute who are involved in specific Communities of Practice [CoP], including the New Practitioners CoP and Ethics CoP.

The data coding for the quantitative survey first addressed the key population of the survey – the project management professionals. The survey captured important biographic data on the individual respondent to help equate the responses to their level of experience and maturity within the industry, both by current position and total years in project management. For instance, the survey coded for entry-level novice, up-and-coming associate, professional grade, seasoned veteran, executive level, seasoned veteran, etc. Additional data coding fields captured the respondents’ experiential level, professional society membership, trade association affiliation/s, the type projects they participate, and current job classification / position description. Lastly, the data-coding schemes identified the circumstance/s the researcher uses to gather the data, both through e-mailed survey and test group (Cooper & Schindler, 2003).

The data recording instrument for the quantitative portion used an electronic survey form of multiple choice data replies for the survey questions and questionnaire information. The use of an on-line survey system to gather and record the replies to same questions and information was considered appropriate for the sample population; i.e., project management professionals whom are a rather technical savvy lot.

The data display techniques the research used will be heavy on the "visual" to augment the data tables. Pie-charts, Pareto diagrams, histograms, bar charts, and other graphical displays of the data are essential to the surveyed audience; i.e., the project management professional, who have a disdain for reading data and making sense of contextual data to reach a conjectural conclusion. The limitation of the potential data analysis approach is rooted with the attempt to use high-level data to reach sustain a suitable conclusion and hypothesis. Herein the research needs to focus on the right questions posed to the right sample (Cooper & Schindler, 2003).

To reduce bias and increase validity the research canvassed a broad base of sources including both the "medium" (i.e., professionals in project management) and their "message" (i.e., collection methods). The use of consistent collection methods,
including pre-constructed electronic survey forms for capturing observations and structured questionnaires asking common questions of all interviewees, also helped improve the study validity. Lastly, the research identified the component leadership and their web sites of the survey target audience (i.e., the PMI-New Practitioners CoP and the PMI-Ethics CoP) as purposely-selected sites for data collection. These events offered a very tightly select group of related project management professionals (high quality sample) of randomly selected respondents (low bias) (Cooper & Schindler, 2003).

Pilot Testing

A pilot test of the quantitative survey instrument was conducted within the context of a test sample. This allowed the research to gain immediate feedback on the content of the survey, the context of the questions and possible improvements. The research was able to solicit information to gain a broader inquiry prior to sending out the survey (Creswell, 2003).

Data Analysis Procedures

The research approach entailed data analysis methods appropriate for quantitative research. All completed quantitative surveys, both from the test sample and the e-survey, were counted and tabulated. Since this is a "k" samples case, the statistical techniques considered for testing and analyzing the related samples will include Cochran Q (nominal), Friedman two-way ANOVA (ordinal), and repeated measures ANOVA (interval and ratio) (Cooper & Schindler, 2003; Denzin & Lincoln, 2003).

Limitations of Methodology

Three limitations of the intended methodology were foreseen, which are the data gathering scheme, the data analysis strategy, and, the research validity. Each limitation is addressed.

Data Gathering Scheme. The chosen scheme to research values-based leadership entailed data gathering methods appropriate for quantitative research. The quantitative research used a survey instrument to gather the data on efforts to improve leadership and project performance, with a focus on values-based leadership methods.

The experiment used the membership base of the PMI-New Practitioners CoP and the PMI-Ethics CoP as the test arena. The broad population of this study was the global project management profession (Leedy & Ormrod, 2001).

The data gathering instrument was a quantitative survey sent electronically to noted PMI members. The circumstances for the quantitative data collection entailed the
voluntary participation in the survey by the recipients. The data recording for the quantitative survey used an electronic encoded form of multiple choice data replies for the survey and questionnaire information (Denzin & Lincoln, 2003).

**Data Analysis Strategy.** The analysis of the data included comparisons with established industry norms and previous research on values-based leadership, internal analysis of the data points using SPSS, and the personal judgment of the researcher, comparing the results with known field practices. The data validation procedures included soliciting the same data from multiple sources and using different collection methods (Denzin & Lincoln, 2003).

The techniques available for the chosen quantitative research strategy required the data collection to include compiling respondent personal information, and, respondent answers through survey questionnaires. The analysis strategy for the quantitative data compared the compiled project industry data against theoretical norms for leadership applications. Data from the survey questionnaires used a 5-point Likert Scale to assess respondent answers to the applicability of a values-based leadership in project management (Rea & Parker, 1997). Moreover, the research compared and contrasted the results with previous studies to be referred to as "construction management" (author, 2005).

The researcher anticipated several potential problems with the data analysis portion. The theoretical norms for leadership were considered to be likely suspect by members of project-based industries, who will question the suitability of any quantitative analysis comparing their hallowed Project Management Book of Knowledge PMbok® processes to general social and behavioral norms. The survey questionnaire did not allow the respondents to voice their opinions. The timing and logistics for the research study did not allow for personal interviews, which would have been a possible venue for venting. The research was aware that certain sectors of the project management profession will likely distrust the thought of a qualitative research method as offering value (Cooper & Schindler, 2003; Denzin & Lincoln, 2003: Thomas, 2003).

**Research Validity.** As noted, the chosen research method is quantitative. The data gathering methods included questionnaires and the analysis of data mining of historical industry information. To ensure the validity of the research, the research started with the analysis of historical data on similar research on VBL and ethics in construction project management. In addition, the research had identified the appropriate stakeholders within the project management communities. As a practical matter, the research used the membership of PMI Communities of Practice with which the researchers are associated and considered as representative of the industry sectors under study. To ensure the reliability of this research, the research canvassed PMI members of various industry sectors, applications and affiliations. Professional societies are considered representative of the project management profession (i.e., PMI), which were subdivided by project type and locale (Denzin & Lincoln, 2003).
Expected Findings

The research surmised that the quantitative survey among the project management professionals would show a strong interest in using a values-based leadership approach. Secondly, the research had the inkling that there would be mixed results on the use of the VBL, both past and present, on projects. Lastly, there would be a general uncertainty on how to change the current situation to improve the ethical practices on projects.

Quantitative Research on Ethics in Construction Project Management

This section summarizes the similar quantitative research (Moylan, 2005) performed on ethics in project management for the construction industry, which was used as the comparative baseline for the research of the present study.

Quantitative Data Review and Analysis

This section reviews the data collected from the quantitative survey and analyzes the results of each item and composite results for different scenarios.

Quantitative Survey Results

A total of 86 respondents completed the quantitative survey. This included 55 responses from the 358 surveys sent to the construction management firms, design builders, and general contractors listed in the CAM 2004 Construction Buyers Guide. Another 17 responses were received from the 41 surveys mailed to the membership of the ESD-sponsored Construction and Design Summit. In addition, 14 persons who were part of the focus group discussions were allowed to complete the survey.

Analysis of the survey question responses was performed by aggregating the total number of responses for each of the 11 response categories. Then, this same criterion of aggregating the responses was used for series of particular data sorts. These data sorts included “years in the construction industry,” “position,” and “firm’s involvement in the construction industry.” The following subsections discuss each of these composite reviews. The composite of all 11 survey questions, as answered by the 86 respondents, and shows that 95.46% of all responses are in positive agreement. That is, 55.71% “strongly agree,” 32.35% “agree,” 7.4% “sort of agree,” while 3.07% are neutral, 0.85% “sort of disagree,” 0.21% “disagree,” and 0.42% “strongly disagree” as an aggregate of all the questions.

In sorting the responses by the respondents’ years of experience in the construction industry, nine separate cases were established. Separate cases were established at five-year intervals through 40 years of industry experience, with the last case as “40-plus” years. The average number of years’ experience was determined for each case. In sorting the responses by the respondents’ position level in the construction industry,
three major cases were established. Separate cases were established for “executive,” “middle management,” and “project engineer” levels. The average number of years’ experience was included. In sorting the responses by the respondents’ involvement in the construction industry, seven major cases were established. This sort allowed for multiple levels of involvement for the constructors. Separate cases were established for “construction management,” “design build,” “general contractor,” “construction management / general contractor,” “design build / general contractor,” “construction management / design build / general contractor,” and “other.” The average number of years’ experience was included for each case. In addition, although a “construction management / design build” case is possible, no responses were received from this sector.

**Analysis of Quantitative Results**

The construction industry holds these values in the following order of importance. Strongly held beliefs (greater than 95% agreement) include a focus on results and creating value (100%); valuing employees/partners and a focus on the future (both 98.84%); organizational/personal learning and social responsibility (97.68%); management by fact (97.67%); and visionary leadership and management for innovation (95.35%). Well-held beliefs (greater than 90% agreement) include customer-driven excellence (91.86%) and agility (90.69%). A held belief (greater than 85% agreement) is systems perspective (86.04%).

In review of the “years in the construction industry” cases, the data shows a balanced increase up to an ultimate plateau, or Gaussian distribution, of complete agreement with the Baldrige (2004) ethical values. In review of the composite responses for the “position level in construction industry” cases, the distribution is an inverted “V” shape. The Project Engineer experience-level case (98%) dips by 6% to the Middle Management level case (92%) then rises up by 4% to the Executive level case (96%). By visual inspection, the survey responses show the greatest dispersion in the replies among those who hold middle management positions and are “new” to the construction industry - for example, a human resources manager for a general contractor. Those positions with the tightest affinity (i.e., all responses at “strongly agree”) to the ethical leadership values are distributed somewhat evenly throughout the position classifications and by years of experience.

The review of the composite survey results for the “involvement in the construction industry” cases showed the greatest difference between a single case and all the other cases. The construction management firms, with 80% of the responses in positive agreement, are radically different from the other cases. The data shows a 15% difference with the construction management / general contractor case (at 95%), a 16% difference with the general contractor and the CM/DB/GC cases (both at 96%), and a 18% difference with the design build, DB/GC and other cases (each at 98%). The author attributes this situation as causation with the nature of the different entities’ involvement with the construction process. The “sole” construction management firm
typically functions only on an agency basis for the facility owner. The other involvement cases include elements that have a stronger affinity to the ethical leadership values. These are the companies that make up the design build, the design build/general contractor, and the other cases (many of which were architectural/engineering firms), each of which has a 98% “creative” element of design genres. The general contractor, construction management /general contractor, and the construction management / design build / general contractor firms all have the “business acumen” of competitive bidding, as found in the general contractor firms.

Conclusions from Quantitative Research Results on Ethics in Construction

The quantitative research data show strong but not overwhelming support of the main research question, “Can the application of values-based leadership skills, values, and concepts improve the processes of project management, especially within the construction industry?” The quantitative survey results, with an average composite 95+% agreement with the 11 survey questions, show strong but not overwhelming support of the values-based leadership construct by the construction industry. The following sub-sections evaluate, in rank order, each of the Baldrige (2004) criteria on interrelated core values and concepts of leadership, which were used as the basis for the 11 survey questions, and discuss the author’s conclusions.

Focus on Results and Creating Value

The survey data show 100% agreement by all respondents with a unanimous belief that their organizations’ performance measurements need to focus on key results. This research result shows conclusively that construction people value pragmatic, practical, and results-driven leaders. Likewise, the research results strongly imply that successful construction project managers would be considered astute in design and construction operations, shrewd in contract negotiations, and no-nonsense in business dealings.

Valuing Employees and Partners / Focus on the Future

The survey data show almost a 99% agreement by respondents with both of these beliefs. The research results show a very strong belief that a construction organization’s success depends increasingly on the diverse knowledge, skills, creativity, and motivation of all of its employees and partners. That is, constructors consider the diversity of the industry workforce, in general, and the membership of the particular construction project team crucial to project and company success. In addition, the research results show an equally, very strong belief that, in today’s competitive environment, a focus on the future requires an understanding of the short- and longer-term factors that affect an organization’s business and marketplace. Although projects do end, construction leaders must consider the immediate situation, as well as the long-term implications and the ultimate effects on all project stakeholders, when making critical decisions.
Organizational and Personal Learning / Social Responsibility / Management by Fact

The survey data show nearly a 98% agreement by the respondents with these three beliefs. First, the research results exhibit a very strong belief by constructors that achieving the highest levels of business performance requires a well-executed approach to organizational and personal learning. Implementing formalized training programs to improve job skills and developing a learning organization are highly valued by the construction industry. Second, of equal value, the research results show a very strong belief that a construction organization’s leaders should stress responsibilities to the public, ethical behavior, and the need to practice good citizenship. Constructors value ethical conduct by their members and being a good business neighbor within their communities. Thirdly, of nearly equal value, the research results conclude a very strong belief by constructors that their organizational successes depend on the measurement and analysis of performance. Success of both construction projects and their respective company organizations is based on their ability to plan the work and then work the plan.

Visionary Leadership / Managing for Innovation

The survey data show that over 95% of the respondents agree with these tenets of leading and managing. The research results show a strong belief that the senior leaders must set the directions of their construction/design organization, create the proper customer focus, articulate clear and visible organizational values, and establish high expectations for everyone to follow. These transactional leadership traits of direction setting, customer focusing, setting values, and establishing clear expectations are considered as the most important visionary duties of a construction/design organization’s executives. In tandem with the visionary leadership requirements, the research results show an equally strong management belief that innovation means making meaningful change to improve a construction organization’s products, services, and processes in order to create new value for the organization’s stakeholders. Although the architect/engineer designs their “product”, the constructors innovate in their “methods and means” (processes) in bringing the facility to completion within cost budget, schedule, quality, and performance requirements (services).

Customer-Driven Excellence

The survey data show that almost 92% of the respondents have a well-held belief that the construction organization’s customers are the judge of quality and performance. These research results exhibit a strong desire by constructors to meet the needs and expectations of the facility owner (customer) as a measure of their success. Conversely, the research result implies a guarded skepticism by some constructors (over 8% of the survey respondents) in the ability and sophistication of the facility owner to assess properly the quality and performance of a constructor’s work.
 Agility

The survey data show that almost 91% of the respondents have a well-held belief that their organizations’ success in globally competitive markets demands agility. These research results demonstrate that a construction organization’s capacity for rapid change and flexibility is a prime determiner of success on projects where the constant is change. On the contrary, the research result implies an attitude by some constructors (almost 9% of the survey respondents) that adhering strictly to the original terms and conditions of the construction contract is appropriate in executing their work.

 Systems Perspective

The survey data show just over 86% of the respondents hold a belief that the successful management of their organizations’ overall performance requires organization-specific synthesis, alignment, and integration. These research results underscore the decentralized nature of construction project execution, in which each project team operates as its own business entity and functions independently from the other construction projects undertaken by the “home” construction organization. Moreover, the research results imply that a fair number of construction project managers (that is, about 14% of the respondents) prefer to “go with their gut” in making decisions and manage by “the seat of their pants,” even though modern project management systems are available for their use. Old warriors can be rather die-hard.

 New Quantitative Research on Ethics in Project Management

This section summarizes the quantitative research results performed on ethics in project management for several industries, which will be compared with the “ethics in construction” study.

 Initial Results from Test Survey

The key initial finding from the Test Survey is that the survey instrument performed well, and yielded useable results that can be compared with the previous quantitative research study using a similar survey instrument. The survey instrument was not revised except the Lickert Scale was reduced from a 7-option response (Strongly Agree, Agree, Sort of Agree, Neutral, Sort of Disagree, Disagree, and Strongly Disagree) to a 5-option response (Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree).

For comparison purposes a “Sort Of Agree” response will be folded into the “Agree” responses as well as a “Sort of Disagree” response would be added to the “Disagree” responses. Since these response categories are designed to move respondents towards a negative, positive or neutral decision, these two response options are adjacent to each other and closest in intent.
Findings from Expanded Group Survey

The Expanded Group Survey was completed by 184 respondents from the PMI-New Practitioners Community of Practice. The members of this member-subscriber group number over 3,000 and comprise of many project managers with different skill sets, backgrounds, industries/organizations served, and years of experience.

Group Profile

The profile of the Group respondents by “Industry Category” and by “Years of Experience” is as follows:

<table>
<thead>
<tr>
<th>Industry Category</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace &amp; Defense</td>
<td>2</td>
</tr>
<tr>
<td>Construction</td>
<td>8</td>
</tr>
<tr>
<td>Consulting</td>
<td>10</td>
</tr>
<tr>
<td>Education</td>
<td>8</td>
</tr>
<tr>
<td>Finance</td>
<td>16</td>
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<tr>
<td>Government</td>
<td>11</td>
</tr>
<tr>
<td>Healthcare</td>
<td>10</td>
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<tr>
<td>Human Resources</td>
<td>3</td>
</tr>
<tr>
<td>Information Systems</td>
<td>58</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>5</td>
</tr>
<tr>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Mining, Oil &amp; Gas</td>
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</tr>
<tr>
<td>Pharmaceutical</td>
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<td>Retail</td>
<td>1</td>
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<tr>
<td>Service Industry</td>
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<tr>
<td>Transportation</td>
<td>3</td>
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Survey Results

The 184 responses from the Group Survey yielded the response results to the eleven survey questions concerning Project Management Values and Beliefs, shown on the next page as Exhibit 1.
Exhibit 1 – Overall Data New Survey
General Overview of Data Finding
As in the original research survey the majority agree on all Baldrige Quality Award criteria. All eleven questions point to an engaged management team, valued employees, innovation, learning, with the reason for existence being excellent products or services rendered to the customer.

However, within the data (Exhibit 1.) note there are some weaknesses that need to be discussed. Some of the weak points are:

- Visionary Leadership from the CEO
- Management by Fact
- Systems Perspective

Visionary Leadership
Within this question approximately 70 percent of the respondents believe their chief executive officer is a visionary for the organization however there is 30 percent that is either neutral on the topic or disagree that their CEO is setting the appropriate way forward for the organization.

Management by Fact
Within this question approximately 65 percent of the respondents believe that facts are the basis for understanding success or failure within the organization. However the other 35 percent fall into being neutral or negative on the use of metrics within an organization. This may show an aberration between policy and practice within the organization.

Systems Perspective
Within the question approximately 79 percent of the respondents believe that a systems perspective is needs to be in place for success. Again this integration question shows either respondent are neutral or negative on this type of viewpoint for success within the organization.

The strongest points of the survey are:

- Organizational and Personal Learning
- Valuing Employees and Partners
- Focus on the future
- Managing for innovation

These points could be further placed in two categories, personnel and management. Although the overarching theme of the survey is the management of the organization these 4 questions show that much of the success of an organization stem from engaged personnel and visionary leadership. The ability to learn from each other, from past successes and failures as well as keeping an eye on the future is paramount in sustaining a successful organization.

Comparison of Two Groups: Construction Industry and Information Systems
The largest group represented in the new data is project managers employed in the Information Systems field. When separating this group from the rest and comparing it to the original construction management group (Please see exhibits 2 and 3.) the overall responses are still positive on all eleven Baldrige criteria. However, there are subtle variations that may show how the culture of each industry area may diverge from the overall viewpoint of the group at large.
Figure 2 – Construction Industry Survey with Merged Disagree and Agree Categories
Figure 3 – New Survey – Information Systems Isolated
The information systems group has no neutrality on the value of employees learning and employee value respectively. This employee-centric view may show a cultural perspective on the concept of “knowledge worker” and the ability of information systems specialists to research and come up with solutions to problems that may arise within a project. Also there is more variance on management’s vision and basing the success of the organization on metrics. The information systems group shows more neutrality and negativity toward management vision and metrics being used to rate performance.

Juxtaposed to this the construction group has very little neutrality and negativity on management’s vision and metrics-based performance. This may speak to the construction industry culture in that the final result are tangible assets compared to information systems construction of computer services that reside in the Ether. This may also show a difference in approach to a project where in the construction industry there may be less collaboration and more top-down communication and/or direction to render a structure whereas in the information systems field there is a high amount of collaboration to arrive at solutions to issues that arise during the execution of a project.

It may even be a comparison between a matured industry such as construction and the relatively new information systems industry. Perhaps additional questions along this path may substantiate these conjectures.

**Conclusions**

This research and surveys show that there is broad agreement on the 11 Baldrige Quality Award criteria amongst all the participants no matter the industry they are working in. Because of the sample size of both the earlier and present survey more succinct conclusions cannot be made however some guidance for future research is shown through contrast and comparison of the two samples.

Based on the industry/business there is a divergence in opinion on the quality criteria. In this case there seems to be more questioning of the value of management’s impact on the organization by the information systems groups compared to the construction industry group. Whereas individualism may be more of a part of the information systems group compared to the construction industry group.

Again the new survey moves this research forward and gives the researchers various pathways to pursue on value-based learning. A larger sample is needed to explore more fully the industry-based divergence from the overall view and to see if there is a large divergence with the amount of experience a project manager has on the job. A sample that is more statistically significant is needed to ascertain these questions and to see if the overall viewpoint changes with it.
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<th>ORG learn</th>
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<th>AGILITY</th>
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Exhibit 1: Quantitative Survey Results
References


About the Authors

**William A. Moylan, Ph.D., PMP, FESD**

Co-Author

Dr. William Moylan is an Associate Professor in Construction Management with Eastern Michigan University. In addition, Dr. Bill is a professional trainer, consultant, and expert witness in Construction Engineering and Project Management. He has extensive professional experience in all aspects of program and project management, including over eleven years internationally with the Arabian American Oil Co. Dr. Moylan has degrees from Lawrence Technological University; the Massachusetts Institute of Technology, and Capella University. He is active in a variety of professional societies and civic activities including the Project Management Institute, the Engineering Society of Detroit, Habitat for Humanity, and Toastmasters International. Dr. Moylan can be contacted at wmoynlan@emich.edu.

**Dr. Loran W. Walker DMIT, PMP**

Co-Author

Dr. Loren Walker has worked in the Computer Science and Information Systems fields for over 28 years. He has been an Adjunct and Full-time professor in information systems and the social sciences. He specializes in consulting and teaching High-Level Programming Languages (C, C++, Java, and .Net Technologies), Systems Analysis & Design, Project Management, Web Design, Programming Technologies and Enterprise Architecture. Currently he serves as a Core Faculty and Project Management Lead for the Project Management Program in the School of Undergraduate Studies (SOUS) at Capella University.
Professor Walker is a founder and current leader of the New Practitioners Community of Practice (COP), a project management thought leadership community of The Project Management Institute (PMI). The COP serves new practitioners, “accidental” project managers, students, professors and industry mentors. He has given presentations at the PMI North American Congresses in 2006, 2008, 2010, 2011, the EMEA Congress 2012 in Marseille, France and the upcoming North American Congress in Vancouver, Canada. Dr. Walker can be contacted at Loran.Walker@capella.edu.