

Commitment, Ethics & Compliance

A Look at Perceptions in the SH&E Profession

By John W. Wells Jr.

Awareness of ethical business practices is becoming a focal point in business and academia. Therefore, the level of ethics among current safety professionals must be established. This article attempts to raise readers' awareness of this subject by investigating the level of ethics found among safety professionals in an attempt to answer these questions:

- Does a predictive relationship exist between professional commitment, ethical reasoning and the belief in regulatory compliance?
- Do differences exist in professional commitment among safety professionals dependent on each generation?
- Do safety professionals demonstrate higher reasoning when faced with moral and ethical dilemmas?
- Can leaders in higher education use this information to focus on areas of need within safety curricula to better prepare future safety professionals?

IN BRIEF

• Trends indicate that career success in safety will demand a higher level of professional commitment and a concerted focus on becoming better business managers.

• This study examined predictive relationships between professional commitment, ethical reasoning and the belief in regulatory compliance among ASSE's professional members.

Background

As cross-cultural growth expands due to globalization, awareness and scrutiny of ethical practices in the business setting are increasing, particularly as society witnesses corruption and financial loss throughout the global markets. Ahmed, Chung and Eichenseher (2003) note that the perception of reasonably acceptable ethical behavior among different cultures varies, and that national and international business practices tend to follow these perceptions. According to the Institute of Medicine (2000), globalization and cross-cultural interaction will continue to affect industry as the American worker becomes more diverse in age,

gender, race and nationality. The institute reports that changes in demographics will continue to complicate the implementation of workplace safety and health programs.

This changing diversity and globalization challenges SH&E professionals' expertise, professional commitment and ethical reasoning ability while they attempt to meet the demands of globalization. Likewise, leaders of higher education institutions must prepare future safety professionals to meet daily industry demands as they effectively foresee and interact with the broader aspect of cross-cultural globalization.

Today's occupational safety and health professional faces new and changing workplace demands as the global community evolves. Sherrard (2007b) raises concerns that reduced budgets and fewer resources positioned against an ever-increasing regulatory presence have many safety professionals reevaluating their career goals. Trends indicate that their future success will demand a higher level of professional commitment, and many professionals feel the pressure to perform. Likewise, Ferrante (2006) states that safety professionals must become better business managers, demonstrating the ability to link their capabilities and potential to an organization's bottom line.

Global demand for occupational safety and health during the past century has shifted from a reactive effort based on incident reduction to a proactive focus on developing safer working conditions in industry. As industry grows around the world, so does the need for qualified safety professionals. In the safety profession, the shift from reactive to proactive will be influenced by the newest generation of students and employees entering the workforce (Guillemin, 2006).

The newest generation currently entering the global market, those born after 1980, is labeled the Millennial Generation. It is the largest and most diverse generation to attend college (Strauss & Howe, 1991). According to Monaco and Martin (2007), this generation can work under less supervision with more responsibility for making complex decisions. In general, Millennials are team oriented, conventional and confident, and they have a desire to achieve.

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Those currently enrolled in higher education have a different set of characteristics and values than previous generations. As such, educators must create learning-centered environments focused on ethical reasoning and professional competence in addition to the profession's traditional curricula. The effectiveness of educators in developing a learning-centered environment focused on ethical reasoning and professional commitment may determine how the Millennial Generation will affect the profession.

To understand the relevant impact of ethics on the safety profession, one must understand how ethical reasoning is applied. Professional commitment involves an individual's duty to the profession. Wang and Armstrong (2004) define *duty to the profession* as "an individual's accumulation of additional training and advanced education supplemented by investing time, resources, and the willingness or commitment to continually practice the knowledge acquired" (p. 378). Ultimately, through ethical reasoning and professional commitment, safety professionals are held to the highest levels of professionalism while interpreting, navigating and applying the tenets of regulatory compliance. Therefore, higher education leaders must construct curricula that instill the professional ethics and commitment safety professionals need to meet the demands of the global community.

Ethics in SH&E

Research on professional ethics has become more prevalent over the past 40 years as regulatory compliance and litigation continue to influence various occupations. Changes in the global market validate the need to examine professional commitment and ethical reasoning among safety professionals.

Despite the focus on ethics in many professions, ethics studies involving the safety profession are lacking. Without a body of research literature in this area, higher education leaders cannot determine the curricula needed to ensure that future professionals are prepared to make the ethical decisions that will be expected of them.

Purpose of the Study

This study was designed to examine predictive relationships between professional commitment, ethical reasoning and the belief in regulatory compliance among ASSE's professional members. It also sought to examine differences in professional commitment among safety professionals of various birth years. By examining these relationships and differences, educators will be able to focus on deficiencies within safety curricula in order to better prepare future safety professionals.

Research Hypotheses

- 1) There is a significant difference in professional commitment of safety professionals based on birth year, as measured by the Jeffrey and Weatherholt (1994) Professional Commitment Scale.
- 2) There is a predictive relationship between professional commitment, as measured by the Jeffrey

and Weatherholt (1994) Professional Commitment Scale, and belief in regulatory compliance, as measured by the Jeffrey and Weatherholt (1994) Rules Observance Scale, among safety professionals.

- 3) There is a predictive relationship between years of safety experience and professional commitment, as measured by the Jeffrey and Weatherholt (1994) Professional Commitment Scale, among safety professionals.

- 4) There is a predictive relationship between ethical reasoning, as measured by the Moral Reasoning Inventory (MRI; Weber & McGivern, 2010), and the belief in regulatory compliance, as measured by the Jeffrey and Weatherholt (1994) Rules Observance Scale, among safety professionals.

- 5) There is a predictive relationship between ethical reasoning, as measured by the MRI (Weber & McGivern, 2010), and professional commitment, as measured by the Jeffrey and Weatherholt (1994) Professional Commitment Scale, among safety professionals.

Definition of Terms

For this study, these definitions were used:

- Analysis of variance (ANOVA)*. This analysis is used to determine whether any significant difference exists between more than two group means indicating the possible overall mean effect on statistical research (BarCharts, 2002).

- Ethical reasoning*. Weber and McGivern (2010) define ethical reasoning as "the weighing and filtering of information within an ethical cognitive decision process leading toward a preferred behavior" (p. 149).

- Multiple regression analysis*. The method used to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable in statistics (BarCharts, 2002).

- Professional commitment*. Jeffery and Weatherholt (1994) define professional commitment as an individual's ability to identify with and interact within a profession while demonstrating the belief and acceptance of the goals and values of the profession.

- Regulatory compliance*. Regulatory compliance is the process by which corporations or public agencies aspire to follow applicable local, state and federal rules/regulations (Global World Check, 2011).

- Rules observance*. Jeffery and Weatherholt (1994) define rules observance as a component of professional commitment as characterized by an individual's attitude toward following rules affecting ethical reasoning and the application of organizational policy/guidelines.

Participant Population

Participation was solicited by ASSE from 11,189 members who were designated professional members at the time of this study. Professional members were identified from the general membership roster by ASSE to ensure contact with the target population. Participants were solicited by ASSE via e-mail to complete the online survey in Qualtrics, which collected and compiled participants' responses.

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ASSE Professional Membership

To learn more about the qualifications for professional membership in ASSE, visit www.asse.org/membership/qualifications.php.

Table 1

Demographic Levels of Respondents

Variable	No. of respondents	Percentage
Gender		
Male	833	84.0
Female	158	15.9
Generation		
Silent Generation (born 1925 to 1945)	43	4.3
Baby Boomer (born 1946 to 1963)	652	65.8
Generation X (born 1964 to 1978)	284	28.7
Millennials (born 1979 to 2002)	12	1.2
Highest degree		
High school or GED	10	1.0
Baccalaureate degree	454	45.8
Master's degree	426	42.9
Doctorate	58	5.9
Other	43	4.3
Degree(s) held		
Safety and health	459	NA
Industrial hygiene	160	NA
Business/management	172	NA
Engineering	164	NA
Environmental engineering	87	NA
Other	335	NA
Years of experience		
5 to 10	145	14.6
11 to 20	355	35.8
21 to 30	353	35.6
31 to 40	130	13.1
41 to 50	8	0.8
Type of organization employed		
Manufacturing	195	19.7
Consulting services	150	15.1
Insurance	115	11.6
Government	109	11.0
Education	46	4.6
Petrochemical	89	9.0
Construction	96	9.7
Other	191	19.3

Note. N = 991.

Study Limitations

This study used a survey instrument link distributed by ASSE to its professional members. ASSE was selected due to the population of active safety professionals and its ability to distribute the survey instrument to the target population. The scope of this study was limited to the level of survey participation and response. Second, it cannot be determined how many members solicited did not receive the invitation to participate due to computer firewalls, spam interception and system server delivery errors. Therefore, the true response rate is unknown. Finally, it is assumed that all answers to survey questions were honest, professional and complete.

Instrumentation

The surveys were used to measure the variables of professional commitment, regulatory compliance and ethical reasoning. The four instruments (demographic questionnaire, Professional Commitment Scale, Rules Observance Scale, MRI) were recognized to be separate instruments for data collection and analysis. However, for ease of collection and

communication with participants, the instruments are collectively referred to as *the survey*.

Professional Commitment

Professional commitment was measured using the Jeffrey and Weatherholt (1994) Professional Commitment Scale. The scale had response options consisting of 5-point Likert-type scales ranging from 1 = strongly agree to 5 = strongly disagree. The scale contained 14 short questions.

Regulatory Compliance

Belief in regulatory compliance was measured using a modified Jeffrey and Weatherholt (1994) Rules Observance Scale. The scale response options consisted of a 5-point Likert-type scale ranging from 1 = strongly agree to 5 = strongly disagree. The scale contained five short questions.

Ethical Reasoning

The final instrument, MRI (Weber & McGivern, 2010), was used to measure participants' self-reported level of ethical reasoning. The instrument was based on research by Kohlberg (1981, 1984) and Rest (1986). It consists of two moral dilemma scenarios, with each followed by a simple, binary choice (yes or no) moral judgment question to establish the participant's belief in how the character should respond to the scenario.

Following the moral judgment question, the researchers presented two moral reasoning statements. Participant responses to those statements were measured using two different scales to determine 1) their level of belief in the reason represented by each statement (10-point Likert-type scale); and 2) their perception of the importance of those reasons concerning how the participant felt the dilemma should be resolved (5-point Likert-type scale). The range of responses was 1 = strongly agree to 5 = strongly disagree, or 0 = no feeling to 10 = strongest feeling. Using Weber and McGivern's (2010) methodology, the total belief (B) score was calculated by using the belief in higher reasoning percentage and belief in lower reasoning percentage in a formula provided by the instrument authors.

Data Collection

ASSE professional members were invited to participate in the research study. As noted, ASSE identified potential participants through its database.

Data collected were quantitatively analyzed. These data were used to measure possible differences and relationships among demographic variables and levels of ethical reasoning, professional commitment and belief in regulatory compliance of safety professionals. Anonymity was maintained using the online survey system (Qualtrics), which did not collect IP addresses; in addition, the instruments did not include school name, work name, respondent's name, region, state or comprehensive program descriptions.

Participant Demographics

Among the respondents, there were 833 males

(84%) and 158 females (15.9%). Of the 991 respondents who completed the survey, 938 (94.7%) held a baccalaureate degree or higher, 10 (1%) held a GED and 43 (4.3%) held other degrees (e.g., associate of science, certificate of completion). The degree disciplines were safety, industrial hygiene, environmental sciences and other disciplines such as business or engineering.

Respondents' years of safety experience ranged from 5 to 44 years. Work settings in which they were employed included manufacturing (19.7%), consulting services (15.1%), insurance (11.6%), government (11.0%), education (4.6%), petrochemical (9.0%), construction (9.7%) and other (19.3%). Respondent birth years ranged from 1931 to 1984. Table 1 provides additional demographic details.

Statistical Results

Respondents completed the survey over a 6-week period from January 2012 to February 2012. The data for research hypothesis 1 were analyzed using a one-way ANOVA. The data for research hypotheses 2, 3, 4 and 5 were analyzed using multiple regression analyses. Due to the sample size ($N = 991$), the demographic category of birth year was collapsed for statistical analysis. Specifically, birth years were collapsed into the birth generations of Millennials (born 1979 to 2002), Generation X (born 1964 to 1978), Baby Boomers (born 1946 to 1963) and the Silent Generation (born 1927 to 1945). When collapsed into these generational categories, results showed that most respondents fell in the Baby Boomer category ($n = 652$), followed by the Generation X category ($n = 284$). Few respondents represented either end of the birth year continuum categories: the Silent Generation ($n = 43$) and the Millennial Generation ($n = 12$).

A one-way ANOVA was conducted to determine whether a significant difference existed in respondents' professional commitment based on the independent variable of birth year, which was measured categorically by birth generation. Descriptive analysis of participants' responses indicated that the Silent Generation exhibited the highest level of professional commitment ($\bar{x} = 49.95$), followed by the Millennial Generation ($\bar{x} = 48.50$), Baby Boomers ($\bar{x} = 47.79$) and Generation X ($\bar{x} = 46.93$).

Results also indicated that a significant difference existed in professional commitment based on birth generation ($p = .001$); therefore, a post hoc analysis was performed. A Tukey post hoc test revealed statistically significant differences in professional commitment between the Silent Generation and Baby Boomer Generation ($p = .014$); Silent Generation and Generation X ($p = .000$); and Baby Boomers and Generation X ($p = .041$). No statistically significant differences were found between the Millennial Generation and any other group: Silent Generation ($p = .764$), Baby Boomers ($p = .951$) or Generation X ($p = .649$).

Next, a multiple regression analysis was performed to determine whether a predictive relationship existed between the level of belief in regulatory compliance, ethical reasoning and pro-

fessional commitment among safety professionals. Predictors found to be positively related to the level of belief in regulatory compliance were professional commitment ($\beta = .28, p = .000$) and gender ($\beta = .07, p = .013$). These results support DeSiervo's (2004) belief that safety professionals use a system of deductive reasoning to evaluate hazards to determine the probability of incidents or failure, eliminating the potential loss through ethical reasoning and regulatory compliance.

As a predictor, higher levels of professional commitment would indicate a stronger perceived ethical duty toward regulatory compliance. Gender, however, did not demonstrate a strong predictive relationship to professional commitment. Significance was indicated, but could not be defined through regression analysis due to the limited population of females responding to the survey. Table 2 provides the summary of multiple regression analysis.

Finally, a multiple regression analysis was performed to determine whether a predictive relationship existed between the dependent variable professional commitment and the independent variables years of safety experience and ethical reasoning. Predictors found to be positively related to the level of professional commitment were years' experience ($\beta = .08, p = .012$) and the type of organization employed ($\beta = .112, p = .000$). Both factors were significant.

Years' experience, given a presumed strong ethical foundation formed while in college, would explain the lower impact of beta ($\beta = .08$). Despite the number of years' experience, professional commitment remains consistently high among the respondents. The type of organization of employment being highly significant indicates that company safety philosophy or practices could be directly related to the level of hazards present. For example, an individual employed in general manufacturing who is not exposed to the hazards found in a petrochemical operation might score lower in regulatory compliance. Conversely, the safety professional in a petrochemical facility where poor decision making could result in a catastrophic event would be less likely to discount regulatory compliance.

Rest (1979) argues that ethical judgments are a

Table 2

Multiple Regression Analysis for Regulatory Compliance

Variable	B	SE(B)	β	<i>t</i>	<i>p</i>
Professional commitment	.228	.02	.28	9.39	.00
Years of experience	-.023	.01	-.05	-1.86	.06
Gender	.743	.30	.07	2.47	.01
Type of industry	-.061	.04	-.04	-1.46	.14
Highest educational degree	-.063	.13	-.01	-.45	.65
Ethical reasoning	.038	.54	.00	.06	.94

Note. $R^2 = .131$.

Table 3

Multiple Regression Analysis for Professional Commitment

Variable	B	SE(B)	β	t	p
Years of experience	.04	.01	.08	2.50	.01
Gender	.55	.40	.04	1.39	.16
Type of industry	.19	.05	.11	3.56	.00
Highest educational degree	.29	.18	.05	1.56	.11
Ethical reasoning	-.56	.73	-.02	-.77	.44

Note. $R^2 = .023$.

strong predictor of behavioral intent. However, individuals do not always form behavioral intentions that are indicative of their judgments, as external factors such as organizational philosophies can influence the individual's thought process. Following Kohlberg's research, Rest developed a four-stage model of individual ethical decision making: ethical issue recognition, ethical judgment, ethical intent and ethical behavior. When presented with a decision, Rest believes individuals must first recognize the ethical components of the issue before any standards of ethical philosophy can be applied.

The ethical decision-making process is set in motion by awareness of an ethical dilemma. Rest (1979) recognized that the level of recognition depends on an individual's sensitivity to the potential ethical problem. When confronted with an issue recognized as having an ethical component or posing an ethical dilemma, an individual typically forms some impression or judgment based on personal constructs of right and wrong. Once an ethical judgment is formulated, an individual forms a behavioral intent. That is, the individual decides what actions to take (or not take) in response to the perceived ethical dilemma. Table 3 provides the summary of multiple regression analysis.

Conclusions

The first hypothesis examined whether a significant difference existed in professional commitment among safety professionals based on their year of birth. Results determined that the Silent Generation exhibited the highest level of professional commitment, followed by the Millennial Generation, Baby Boomers and Generation X. Results also indicated that a significant difference exists based on birth generation. A Tukey post hoc test revealed statistically significant differences in professional commitment between the Silent Generation, Baby Boomers and Generation X. However, no statistically significant differences were found between Millennials and any other group.

In comparing the overall generational characteristics of the Silent Generation to the Millennial Generation, similarities were found that could explain the high level of professional commitment reported in both generations. For example, Thielfoldt and Scheef (2004) explain that members of the Silent and Millennial generations tend to respect authority, value institutions, value accountability, focus on careers, are patriotic, value integrity and respect family. Community, although defined differently by historical events, is a focal criterion for

both generations. With the focus on a multicultural society, such traits may explain the high sense of professional commitment among respondents from these generations. Conversely, many of these traits are either lacking in or perceived as a hindrance by Baby Boomers and Generation X.

It must be noted that 981 of 991 survey respondents had at least a bachelor's degree, although not necessarily in the occupational safety and health discipline. As such, the researcher could not determine whether formal ethics curriculum was included in the earned degree programs.

It must also be noted that the number of responses from the Millennials (12) and the Silent Generation (43) was low. Although statistically significant, this may have affected the findings as increased participation within these two groups would have created greater uniformity of comparative responses. Low Millennial response can be attributed to their age, lack of experience and time required to obtain the professional member designation from ASSE. Most members of the Silent Generation have retired, but many still maintain their ASSE membership.

Despite the low response rate, the Silent Generation mean score ($\bar{x} = 49.95$) was the highest followed by the Millennial Generation ($\bar{x} = 48.50$), Baby Boomers ($\bar{x} = 47.79$) and Generation X with a mean score ($\bar{x} = 46.93$) demonstrating the lowest level of professional commitment. Given the profession's current demographics, members of Generation X will act as mentors, peers and managers on whom future professionals will model their careers.

Given the statistical findings of this survey, this relationship may need further investigation as Generation X demonstrated the lowest level of professional commitment in this study. In the researcher's opinion, this finding supports the need for curricula that helps students form the early tenets of professional commitment, ethical reasoning and regulatory compliance.

The second research hypothesis tested the predictive relationship between professional commitment and the belief in regulatory compliance. The predictors found to be positively related to the level of this belief were professional commitment and gender.

Safety professionals, while demonstrating high professional commitment, are faced with regulatory compliance that is both subjective and situational. The level of compliance may depend on the perceived risk or level of acceptable repercussion as factors in determining the level of compliant behavior applied (Sherrard, 2007a). Meyer and Allen (1987) argue that an individual's occupational background and self-perceived competence within that occupation present the strongest support for affective commitment. The findings of this study support Meyer and Allen, based on the sample population having met the criteria for attaining professional member status in ASSE.

Gender was the second predictor related to the belief in regulatory compliance. Significance was noted, but the predictive relationship was determined to be weak during regression analysis. This could be attributed to low response rate of females.

However, past research supports this finding in that women tend to exhibit a lower tolerance toward risk. In fact, women will avoid risk in favor of rule adherence during critical decision-making events (Hudgens & Fatkin, 1985; Johnson & Powell, 1994; Levin, Snyder & Chapman, 1988; Sexton & Bowman-Upton, 1990). A higher level of belief in regulatory compliance from female safety professionals could be a significant variable when employers are screening potential safety candidates. Nevertheless, future research is needed in this area.

The third hypothesis tested the predictive relationship between the dependent variable professional commitment and the independent variable years' experience. Predictors found to be positively related to professional commitment were years' experience and type of organization of employment. McGlothlin (2006) notes that the safety professional's job has transitioned from a compliance-focused position over the past 4 decades to an integral part of the 21st century management team. Forward-thinking companies realize occupational safety and health practices make good business sense. The type of organization can affect the level of importance placed on regulatory compliance.

Results indicated that safety professionals in this study population had achieved a high level of professional commitment. The mean score for professional commitment was 47.64 out of a possible score of 50. High levels of professional commitment that begin early in an individual's career and are maintained long term could be partially attributed to the institutions that provide the safety degree curricula, as this is where the foundation for the profession is cultivated.

The fourth hypothesis tested the predictive relationship between the level of belief in regulatory compliance and ethical reasoning among safety professionals. Ethical reasoning was not found to be significant in predicting the level of belief in regulatory compliance. Gender was found to be positively related to the level of belief in regulatory compliance.

The response rate of female participants was 15.9%. Female survey participants scored 94.9% in selecting the correct answer to the moral/ethical judgment question following each scenario; male respondents scored 94.4% in selecting the correct answer. The variation in correct responses supplements the analysis that significance was noted. The positive relation of females to the belief in regulatory compliance based on higher ethical reasoning could indicate that female professional members are more likely to follow the rules.

Though ethically sound, respondents did not exhibit the levels expected when faced with regulatory issues as indicated by the lower scores measured by the Jeffrey and Weatherholt (1994) Rules Observer Scale. This is concerning, as the profession is based on regulatory compliance. Further investigation is warranted to identify factors affecting the reported levels of regulatory compliance.

The fifth hypothesis tested the predictive relationship between the dependent variable professional commitment and the independent variable ethical

reasoning. The predictors found to be positively related to professional commitment were years' experience and the type of organization of employment.

Professional ethics were measured using the MRI (Weber & McGivern, 2010). The instrument scenarios sought to measure each respondent's belief and perceived importance concerning each ethical statement. The MRI indicated that respondents exhibited reasoning abilities that fell in the higher stages of moral development when confronted with ethical and moral decisions. In both scenarios, respondents were in favor of the higher moral decision; this demonstrates strong moral belief in their responses. However, the multiple regression analysis indicated that ethical reasoning was not a predictor of professional commitment.

Implications

Findings from this study indicate that ASSE professional members demonstrated levels of higher reasoning when faced with moral and ethical dilemmas. Those same respondents also exhibited heightened professional commitment. However, no predictive relationship was established between ethical reasoning and professional commitment. Although the results from this study cannot be generalized to all safety practitioners, they provide valuable insight concerning the level of professional ethics among ASSE professional members.

In this study, 95% of respondents reported having earned at least a baccalaureate degree. Given the level of ethical reasoning and decision making necessary in today's global society, educators from all degree programs should realize the importance of ethics and moral reasoning as it applies to all professions. As Frank (2000) notes, the application of ethical reasoning is a learned process that is cultivated throughout the education process, situationally tested and applied without reservation.

Despite demographics, when asked how they would respond to each moral dilemma scenario, most respondents demonstrated a solid grasp of ethical decision making (94% would not destroy evidence, and 94% would contradict the boss's decision despite possible reprisal). Frank (2000) defines ethics as a process of determining what an individual perceives as right or wrong.

When making ethical decisions concerning regulatory compliance, the decision maker must weigh outcomes. At least in part, the survey results may be indicative of well-constructed curricula based on learned higher-reasoning processes, coupled with a reported mean score of 20.28 years' experience among the respondents.

The current and future attrition of safety professionals, primarily due to retirement, warrants concern. The Silent Generation and early Baby Boomers are retiring in increasing numbers. As a result, educators will be challenged to replace the professional experience lost. Curricula must instill the levels of professional commitment and ethical reasoning future safety professionals will need to succeed in their careers. For example, emphasis must be placed on the importance of internship and cooperative learn-

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The full dissertation on which this article is based is available through UMI Dissertation Express at <http://dis.express.umi.com/dxweb>. "Professional Commitment, Ethical Reasoning and the Belief in Regulatory Compliance as Perceived by Safety Professionals," by John Wells Jr., Ed.D., Union University, 2012; 117 pp.; AAT 3535833.

ing programs. Such programs will be critical to the success of future professionals who will otherwise lack the necessary experience early in their careers.

Remaining Baby Boomers and Generation X professionals must begin to mentor and coach Millennial professionals to ensure the profession's future viability. As a cross-generational snapshot of the safety profession, this research can serve as foundational base from which higher education can draw guidance in the evaluation and construction of future curricula.

Future Research

This study examined the levels of professional commitment, ethical reasoning and the belief in regulatory compliance as perceived by safety practitioners who are also ASSE professional members. Future studies could be expanded to include a broader range of safety professionals (e.g., general ASSE membership). This would provide valuable information about the profession and the effect of individuals without formal degrees from occupational safety and health programs or members who have not attained the CSP designation. This would increase the potential sample population by 20,000, which would also allow additional investigation into gender influences. Proportionally, female respondents (15.9%) to this survey mirrored the total female population (12%) who held the CSP designation in 2011 (BCSP), making them eligible to be professional members of ASSE.

Future research by leaders in higher education could utilize the MRI portion of this study to measure levels of ethical reasoning early in a degree program, then again when nearing completion of the program. Educators could then adjust the curricula in an effort to attain the highest levels of professional commitment based on ethical reasoning among graduating students. **PS**

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