Toward a Framework for Construction Ethics Education:  
A Meta-Framework of Construction Ethics Education Topics

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ABSTRACT
Research suggests that certain practices of the construction industry have left the construction profession with an unethical stigma. In order to curb such behavior, construction programs should provide students with an awareness of unethical practices of the profession as the first step towards ethical decision-making. The intent of this study is to suggest a topic-based meta-framework for teaching ethics to construction students, highlighting what non-educational construction research considers ethical topics.

This study uses qualitative textual analysis to extract ethical topics from non-educational research from 65 research papers that closely relates themes of construction and ethical issues of the profession. Emergent themes (modules) based on topic extraction groups into two categories of ethical issues in construction practice i.e., professional issues and societal issues. It is the authors’ hopes that the list of ethical topics and modules developed are a source of inspiration for those educators honored with the duty to instruct.

INTRODUCTION

Nature of Ethics in the Construction Industry

Unethical practices of the construction industry are so prevalent that Transparency International (2005) reveals that the construction industry is more corrupt than any other sector of international economy. Furthermore, a study performed by FMI (2004) surveyed unethical practices of the construction industry and states, “the construction industry, in general, is tainted by prevalent acts that are considered unethical,” adding that it is “tainted by illegal acts.”

The construction industry is considered one of the most susceptible to unethical practices, which can take place at every phase of a construction project, i.e. during planning and design, pre-qualification, tender [bidding], project execution, and operation and maintenance (Adnan et al. 2012). Such practices can result in unnecessary, unsuitable, overly complex, delayed, and/or overpriced construction projects (Adnan et al. 2012). Factors that make the construction sector so prone to unethical behavior can include: competition for contracts, bureaucracy for obtaining
Ethics and Morality as a Concept

Ethics, relative to morals and moral science, can be defined by the moral principles or system of a particular school of thought. It can also be thought of as the moral principles by which any particular person is guided; the rules of conduct recognized in a particular profession or area of human life, or the system of moral values by which the rights and wrongs of behavior are judged (Fellows 2003).

An alternative definition asserts that ethics is a branch of philosophy for the study and understanding of morality, moral principles, and the moral decision-making process. In particular the varieties of thinking by which human conduct is guided and may be appraised. Ethics refers to a code or set of principles by which people live (Fan and Fox 2009) and morality is not a simple set of rules, but a complex struggle of conflicting patterns of values.

Alternatively, ethics deals with the good and bad or right and wrong in human conduct (Ray et al. 1999). It is very hard to define a standard way to become a “good” person. The standards of ethics tend to change in different environments and different times. You can claim that you do something ethical in one situation, but it may be unethical in another. Therefore, one who battles over the conflict of right and wrong is a philosopher of ethics (Fan and Fox 2009), even students.

Ethics and the Profession

From its philosophical foundation, and beyond individual ethical philosophy, the general concepts of ethics are applicable in business. Business exists not solely to suit certain individuals, but it serves society and meets collective and individual needs of society and the environment in general (Vee and Skitmore 2003), even in the business of construction.

The unique nature of the construction industry lends itself to cross many ethical branches. Some of these various branches include environmental ethics (King 2008), professional ethics (Abdul-Rahman et. al 2010), rule ethics, social and social
contract ethics (Dabson et al. 2007), and business ethics (Ho 2010) among others. The variety in ethical philosophy can help students understand the foundation of ethical theory, but the instruction of philosophy cannot assist students in the awareness of construction related ethical dilemmas.

PURPOSE STATEMENT

The purpose of this exploratory qualitative research study is to extract the array of ethical topics related to the construction industry, and to contribute to the conversation and body of knowledge on global construction ethics education, with an added aim of inspiring educators honored with the duty to influence student morality.

CONSTRUCTION ETHICS EDUCATION

The purpose of higher education in the field of construction is to prepare future practitioners for the construction professional environment, however it is just as important that students possess the knowledge of their moral obligations to society (Robertson 1987). Unfortunately, “ethics education of young professionals within the built environment is perhaps not recognized as fundamentally important and thus receives less attention than it should [in construction curriculum]” (Archer and Verster 2011). This belief is misaligned with a study by Ahn et al. (2012) where 14 key competencies of construction graduates are ranked by U.S. construction organizations where competency in ethical issues were highly ranked by construction organizations. Supporting this, Scalza (2008) affirms that our students graduating into this 21st century global market must understand ethics in the construction industry and Kang et al. (2006) highlights that [construction] organizations, particularly those operating internationally are increasingly recognizing the importance of ethics to their workplace and business dealings.

With the insight of Ahn et al.’s (2012) study and the assertion by Scalza (2008) and Kang et al. (2006), construction educators need to have a source outlining the ethical issues that face the construction industry. This source needs to help educators make students aware of ethical issues they may encounter in the profession, this to the betterment of the construction organization at large. The task to make students aware of construction related ethical issues is “particularly difficult given the traditional mindset of technically trained professionals who may view social impact and ethical issues as ancillary topics compared to foundational material” (Sinha et al. 2007). Various construction researchers have focused on adding to the construction ethics education body of knowledge, not only providing ways to include ethics in construction curriculum, but also attempting to present important topics.

Ethical Issues per Construction Ethics Education Research

A collection of prior literature that grounds itself in construction ethics education introduce various ways to teach ethics in a construction curriculum. Included in the research are various topics that may be part of included in a construction program, as part of its ethics education (see Table 1).
Table 1. Ethics Topics Provides Construction Ethics Education Research

<table>
<thead>
<tr>
<th>Reference(s)</th>
<th>Topic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degn and Miller 2003; Ohrn 2002; Scalza 2008</td>
<td>Bid Shopping;</td>
</tr>
<tr>
<td></td>
<td>Bid Peddling; Front-End Loading; Payment Delays; Modification of Lab Results;</td>
</tr>
<tr>
<td>Ohrn 2002;</td>
<td></td>
</tr>
<tr>
<td>Scalza 2008;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bid Rigging/Collusion/Price Fixing; Owners Duty to Act in Good Faith; Work Schedule Games Tied to Payment Schedule; Change Order Games; Licensure; Privileged Info;</td>
</tr>
<tr>
<td>Scalza 2008; Tepper 1994</td>
<td>Safety;</td>
</tr>
<tr>
<td>Darwish et al. 2010; Darwish et al. 2011;</td>
<td>Sustainability;</td>
</tr>
<tr>
<td>Killingsworth 1992; Ohrn 2002; Robertson 1987; Slattery 2006</td>
<td>Codes of Ethical Conduct/ Practice;</td>
</tr>
<tr>
<td>Sinha 2007</td>
<td>Codes of Ethical Conduct/ Practice;</td>
</tr>
<tr>
<td>Mulligan 1991;</td>
<td>Construction Law and Contracts; Legal Systems &amp; Maxims of Law; Societal Values and Morality; Professional Practice and Employer Obligations;</td>
</tr>
<tr>
<td>Mulligan 1991; Kang et al. 2006</td>
<td>Construction Law and Contracts; Legal Systems &amp; Maxims of Law; Societal Values and Morality; Professional Practice and Employer Obligations;</td>
</tr>
<tr>
<td>Scalza 2008;</td>
<td>Construction Law and Contracts; Legal Systems &amp; Maxims of Law; Societal Values and Morality; Professional Practice and Employer Obligations;</td>
</tr>
<tr>
<td>Jackson and Murphy 1998;</td>
<td>Construction Law and Contracts; Legal Systems &amp; Maxims of Law; Societal Values and Morality; Professional Practice and Employer Obligations;</td>
</tr>
<tr>
<td>King et al. 2008</td>
<td>Construction Law and Contracts; Legal Systems &amp; Maxims of Law; Societal Values and Morality; Professional Practice and Employer Obligations;</td>
</tr>
</tbody>
</table>

Moving Forward

The various ethical topics presented in Table 1. are not consolidated into such a source for construction ethics education research which may be found useful for educators. Thus, following the steps of construction ethics implementation by Killingsworth (1992), researchers must first “canvas industry and faculty to identify appropriate ethical topics and standards.” To address this, the authors seek to answer the question: what are the global ethical topics included in non-instructional/educational ethics research, which can serve as topics to teach ethics in a construction curriculum?

Answering this question will address the first stage to canvassing the industry by investigating research studies that relate to construction industry ethical issues on a non-educational/instructional basis. An additional effort will be necessary to survey faculty and industry partners to identify appropriate ethical topics and standards.
RESEARCH DESIGN

Theoretical Framing

The theoretical framework for the broader study is based on Rest’s (1984) four-component ethical decision making model that draws heavily on theories of cognitive moral development (CMD) and includes:

- **Moral Sensitivity** – interpreting the situation as being moral
- **Moral Judgment** – deciding which course of action is morally right
- **Moral Intent** – prioritizing moral values over other values and
- **Moral Behavior** – executing and implementing the moral intention

This study focuses on the **moral sensitivity** component of Rest’s (1984) model. Moral sensitivity in essence involves “imaginatively constructing possible scenarios, and knowing cause-consequence chain of events in the real world; it involves empathy and role-taking skills” (Rest 1994). This paper serves as the first step toward the attempt to increase students’ ability at moral imagination and recognition.

Methodology

The research methodology employs Glaser and Strauss’ grounded theory approach and its textual analysis subset to identify and extract key topics of ethics in the construction (Glaser and Strauss 2009). The use of this methodology allows for the presentation of a three-tier framework exemplifying three of the four stages of grounded theory research methodology, being open coding (topic extraction), conceptual grouping (module development), and broader category emergence.

Sampling

The sample for this research study was obtained by identifying non-educational/instructional ethics research papers that are specifically tied to themes of construction and ethical issues of the profession. The sample was garnered randomly from database searches of construction related journals, and additionally via Google Scholar using the keywords: construction, industry, ethic, and moral. Of this search, 91 scholarly articles were identified. Of the scholarly papers, 26 were negated from the analysis because of papers’ inability to concatenate the themes of the construction industry and its ethical issues. Additionally, papers were negated from the analysis if they were not obtained from a reliable source such as a peer-reviewed journal, or a conference proceeding etc. Thus, 65 non-educational/instructional research papers were used for this study.

The papers used for analysis presents topics that span the globe. Studies on ethical topics in the construction industry came from the majority of continental regions. This ensures global representation of construction industry related ethical topics. The papers sampled highlights global issues impacted by unethical behaviors of the construction industry through various forms of ethical perception studies, ethical ranking studies, case studies, and various discussions papers.

Analysis

The authors used Atlas.ti, a Computer-Assisted Qualitative Data Analysis Software (CAQDAS) in order to code for descriptors i.e. type & regional orientation
of the study, and ethical topics. First level open-coding was performed for descriptors, then for ethical topics (extraction). Topics extracted were coded once per research paper, as numerical occurrence was irrelevant to the study.

Initial codes/extracted topics were consolidated and reduced to thematic codes (modules) that were of similar context (Creswell 2012; Miles and Huberman 1994) via subjective reasoning. The qualitative analysis ended at the third (categorical) phase of the grounded theory process.

**CONTENT-BASED META-FRAMEWORK**

The content-based meta-framework posited to add to the larger framework of teaching ethics to construction students is based on construction related issues that should be covered in a construction curriculum, i.e. a profession specific framework. The meta-framework lists the major categories, concepts, and topics that lend itself to inclusion in construction curriculum via two categories of topics, societal (see Table 2) and professional (see Table 3).

**Table 2. Meta-Framework of Societal Construction Ethics Education**

<table>
<thead>
<tr>
<th>Category</th>
<th>Module</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Responsibility</td>
<td>Social Environment</td>
<td>Benevolence; Consideration of Public Welfare; Waste of Public Resources; Deterioration of Public Economy;</td>
</tr>
<tr>
<td>Societal</td>
<td></td>
<td>Minority, Race, &amp; Gender Discrimination; Harassment (in general e.g. sexual or otherwise);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Derogatory Name Calling; Disrespectful Behavior; Racist Graffiti; Racist Jokes; Rumors;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cultural Norms &amp; Divides;</td>
</tr>
<tr>
<td>Sustainability &amp; The Environment</td>
<td></td>
<td>Carbon Footprint; Global Warming; Degradation of Urban, Suburban, and Rural, Environments;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ecological Sustainability; Energy Efficiency; Water Use; Environmental Protection; Pollution;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Global Warming; Ethical Construction Products; Recycling; Toxic Waste Dumping; The Triple Bottom Line of Business;</td>
</tr>
<tr>
<td>Safety &amp; Health</td>
<td></td>
<td>Occupational Health; Injury and Fatalities (direct and indirect result of immediate practice);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dangerous Working Conditions; Safe Products;</td>
</tr>
<tr>
<td>Human Resources</td>
<td></td>
<td>Child Labor; Employee Substance Abuse; Employee Use of Company Resources for Personal Gain; Illegal Migrant Work; Internal Fraud by Employees; Unfair Labor Practices</td>
</tr>
</tbody>
</table>
### Table 3. Meta-Framework of Professional Construction Ethics Education

<table>
<thead>
<tr>
<th>Category</th>
<th>Module</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>Project Administration</td>
<td>Absenteeism; Abuse of Client Resources; Corner Cutting; Defective Works; Use of Inferior Material/Equipment (Poor Quality Control); Front-End Loading; Improper Inspections (overlooking defects in work by jurisdiction); Negligence; Poor Documentation; Project Abandonment; Under Delivery of Work; Use of Unqualified Subcontractors/Suppliers; Use of Specialist Knowledge to Mislead Client;</td>
</tr>
<tr>
<td></td>
<td>Procurement</td>
<td>Biased Bid/Tender Evaluation System; Bid Cutting; Bid Rigging/Collusion (Price Fixing); Price Gouging; Bid Peddling; Bid Shopping; Compensation of Bid/Tender Cost; Cover Pricing; Bid Withdrawal; Deceptive Advertisements; Use of Joint Ventures to Increase Satisfaction of Prequalification Requirements; Over-Promising; Unfair Competition; Unfair Contract Terms with Subcontractors;</td>
</tr>
<tr>
<td></td>
<td>Owner Influenced</td>
<td>Bid/Tender Acceptance after Closing Date; Wasted Bid/Tender Expenses from Owner/Contractor Abuse of Services; Rejection of Low Qualified Bid; Reverse Auctions; Unfair Contract Terms with Contractor;</td>
</tr>
<tr>
<td></td>
<td>Legal/Legislative</td>
<td>Asset Misappropriation; Theft; Embezzlement; Compliance with Law; Criminal Activities/Law &amp; Prosecutions; Federal Antitrust Laws; Construction Quality Assurance Act;</td>
</tr>
<tr>
<td></td>
<td>Fraud</td>
<td>No/Low Competence of Work/Falsification of Experience; Overstating Capacity;</td>
</tr>
<tr>
<td></td>
<td>Financial Corruption</td>
<td>Payment Game; Change Order Game; Claims Games; Fictitious Invoices (Payment Application/Certificates of Payment); Hidden Fees and Commissions; Over-Claiming Expense; Overcharging;</td>
</tr>
<tr>
<td></td>
<td>General Corruption</td>
<td>Blackmail; Bribery; Client Entertaining/Improper Relations with Client; Coercion &amp; Threats; Kickbacks; Conflicts of Interest/Improper Political and Community Involvement; Non-Transparency; Political Lobbying; Reciprocity; Greed; Self-Centrism; Trade Secrets;</td>
</tr>
<tr>
<td></td>
<td>Remediation</td>
<td>Whistleblowing; Maintaining Ethical Standards; Ethical Corporate Culture; Quality Driven Agenda; Trust Based Partnering; 'Uberrimae Fidei’; Honesty</td>
</tr>
</tbody>
</table>
DISCUSSION

Findings

The study yields a variety of unethical topics that may be experienced by future construction practitioners, which can be societal and professional in nature. Societal topics are those that impact society, whether it is internal to the company (i.e. human resources) or external (i.e. environmental considerations). Professional topics are those that can or may be experienced because of organizational behavior, such as during the course of business. Each category breaks down into various associated thematic codes/modules and even further into topics.

The five societal modules include social responsibility, social environment, sustainability, safety and health, and human resources. Exemplar topics these modules develop out of include benevolence, discrimination, pollution, occupational health, and child labor use. Additionally, eight modules of professional practice emerge that include unethical topics of project administration, procurement, owner influenced behavior, legal/legislative issues, general corruption, fraud, finance, and remediation of professional ethical issues. Exemplar topics which modules develop out of include negligence, bid shopping, rejection of low qualified bid, asset misappropriation, falsification of experience, payment games, bribery, and whistleblowing.

Conclusion

Construction education must make students aware of ethical issues of the construction industry. To behave ethically, students must possess the ability to interpret ethical situations. Educators are not certain of employment designation and global location of future practitioners. It is important to make students aware of global ethical issues in all construction employment capacities.

A plethora of topics have been identified that can equally qualify as topics in ethics for a construction curriculum, ranging from absenteeism to unfair labor practices. Important to this study is the emergence of the various modules (themes), as each individual topic of these modules cannot be covered to saturation in a tight curriculum. These modules highlight concepts useful to course development as a checklist to educators who share the opinion that construction ethics education is continuous and should be spread throughout various courses in curriculum.

Final Thought & Future Research

The authors anticipate that this study will provide inspiration for construction educators and intends to be a benchmark toward the development of a framework of construction ethics education in the professional environment. The difficulty lies in answering, how to implement these topics in a construction curriculum, and with what depth and time should topics be presented? Additionally, what pedagogical techniques are best to present these topics? Further investigation is necessary to answer the above questions. Additionally, the identification of the unique aspects of stakeholder consideration, additional ways to curb unethical behavior in construction practice, ethical leadership in the construction industry, and general ethical philosophy are necessary studies to follow and add to this framework.
REFERENCES


