APPLICATION OF THE VIGNETTE TECHNIQUE FOR EXPLORING MORAL VALUES IN INFRASTRUCTURE PROJECT MANAGEMENT

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Although the importance of understanding the diverse values of participants in global infrastructure projects has been increasingly recognized, research on methods to assess moral values in such contexts is still lacking. This article proposes a method for extracting context-specific moral values in three steps: (1) vignette development, (2) interviews, and (3) data analysis. The article illustrates how the method can be applied to understand the way project members make and rationalize their decisions when faced with moral trade-offs in the management of infrastructure projects.

Key Words : ethical decision-making, infrastructure project management, the vignette technique

1. INTRODUCTION

Infrastructure project clients, architects, engineers, construction managers, general contractors, and subcontractors regularly experience unethical practices1). Frequent disparities between written rules and the ways projects are implemented have been attributed to a lack of internalization of ethical codes by project participants2), 3).

Such integrity issues have been the subject of numerous quantitative studies in the field of business ethics2), 4)-8). The limitation of previous quantitative studies, however, is that they assess professionals’ moral values with predetermined categories, whereas the mechanism through which their moral values translate to their actions remains unexplored9). On the other hand, although qualitative studies distinguish themselves from quantitative studies in terms of their openness, the typical limitation of qualitative interview studies is that they do not assess moral values and norms in a contextualized manner10).

One way to overcome these limitations is to employ the vignette technique—a research method that uses short stories about hypothetical situations to explore moral values and norms in specific contexts10), 11). These moral values extracted under specific social circumstances are referred to as context-specific moral values in this study.

The vignette technique has been applied in previous studies to explore context-specific moral values in ethical decision-making9), 12). Many of those studies focused primarily on the helping and medical professions but rarely focused on engineers in infrastructure projects. An infrastructure project is distinctive in that it takes place in various socio-environmental situations with multiple stakeholders, each of whom has a different position and role13). This situation requires further modification of the vignette technique to make it applicable to ethical decision-making specifically in infrastructure projects.

This article presents a method for the extraction of context-specific moral values in three steps: (1) vignette development, (2) interviews, and (3) data analysis. It illustrates how the method can be applied to understand the way project members make and rationalize their decisions when faced with moral trade-offs in the management of infrastructure projects.
2. THEORETICAL CONSIDERATIONS

This section provides a theoretical background for the proposed method. First, previous vignette studies are reviewed, and the limitations of their format are discussed. Second, an enhancement of the vignette technique using a specific visual formatting is discussed.

(1) Qualitative vignettes

The vignette technique utilizes short stories about hypothetical situations to elicit respondents’ perceptions, beliefs, and attitudes\(^{10}\). Participants are asked to respond to a situation illustrated in a vignette by stating what they would do or how they imagine a third person—generally, a character in the story—would react\(^{11}, 14\). The story may entail some form of moral dilemma.

Due to its fictitious nature, which enhances de-personalization, the vignette technique removes personal disclosure and eases difficulty for the respondent. Thus, the vignette technique can be used to study sensitive topics\(^{15}, 16\). Respondents can discuss issues arising from the illustrated scenario from a non-personal, and hence, less threatening perspective\(^{14}\).

Vignettes have been used in both quantitative and qualitative research\(^{11}\). Quantitative vignettes have been proposed by psychologists to replace experimental research and extract factors with predeter-mined categories that affect decision-making processes\(^{14}, 15, 17\). Hatori et al.\(^{18}\) used vignettes incorporating moral dilemmas followed by question items to assess the ethical levels of civil engineers. In addition to its quantitative nature, it is worth noting that Hatori et al. regard the ethical level as an intrinsic attribute representing the specific ability of an individual, whereas this study regards moral value as an extrinsic attribute attached to an individual through internalization.

In contrast to quantitative vignettes, qualitative vignettes allow respondents to redefine the complex circumstances of a situation through interviews\(^{10}, 11\). In this sense, the vignette method also overcomes some of the methodological limitations imposed by typical qualitative interviews. Although qualitative interviews are distinguished from quantitative surveys based on their openness, moral values and norms are elicited in a non-contextualized way\(^{10}\). Therefore, the way that those moral values or principles actually guide professionals remains unexamined. The use of vignettes limits the openness of qualitative interviews to some extent, but they allow us to elucidate moral values in specific contexts.

(2) Video vignettes

Although vignettes are most commonly presented in written text, research has also used vignettes in audio, picture, or video formats\(^{11}, 19\).

In fact, an optimal vignette format depends on the aim of the study\(^{14}\). If the research intends to explore, for example, general issues of morality, then a hypothetical vignette is recommended. If the research aims to explore contextual factors that affect ethical decision-making, then the relevance and realism of the vignette are important\(^{14}\).

Another aspect to consider is the participants’ attention span during the presentation of the vignette because long text is not administrable\(^{19}\). To increase the realism of the story and to make the interview process less burdensome for the participants, some researchers have employed audio and visual vignette formats instead of text formats\(^{11}, 19-21\).

In this study, we incorporate a video component—including both narration and visual images—into a vignette to create a video vignette. The aim was to richly illustrate the specific project management context given that an infrastructure project takes place in various socio-environmental situations with multiple stakeholders. Because video vignettes contain both narration and visual images, the amount of information could be increased substantially compared to vignettes in text format. Moreover, respondents are more likely to consider contextual information rather than simply referring to general moral principles when the psychological distance to the presented case is decreased by presenting a more authentic vignette\(^{22}, 23\).

3. PROPOSED METHOD

This section describes the three main steps for extracting context-specific moral values.

(1) Vignette development

First, a situation must be chosen that involves a moral dilemma. Ideally, the situation should reflect the features of the infrastructure project. In particular, the moral dilemma must be related to various stakeholders that arise from a specific socio-environmental context. A suitable topic can be obtained from a literature review or from practical experiences\(^{12}\).

Second, a scenario is written according to information obtained in the previous step. The scenario centers on a protagonist who has to make a moral decision. The scenario should not refer to a specific person or organization to ensure anonymity. In this phase, consultation with practitioners helps to improve the relevance and the authenticity of the scenario. Finally, the narration and the visual component are created.
Box 1 Summary of the vignette scenario.

<table>
<thead>
<tr>
<th>Vignette Scenario (Summary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A professional in a multilateral development bank received a bid evaluation report from a government counterpart regarding construction work in a developing country. In the bid evaluation report, the professional noticed that one of the bidders submitted a bid after the bid submission deadline. The guidelines for the bidding process mentioned that late bidders should be excluded. The government counterpart clarified this issue, saying that the late bidder should be accepted.</td>
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</tbody>
</table>

Fig. 1 Clipping of video vignette.

(2) Interview

After determining an appropriate sample for the purpose of the study, the video vignette is presented to individual respondents. The vignette presentation is followed by semi-structured interviews. The initial question of the interviews is a short, open-ended prompt, such as, “How would you advise the character presented in the vignette to act?” During the process, the interviewer inquires about the reasons for the claims made by the respondents. If the respondent indicates that his or her knowledge of context is insufficient (e.g., “It depends”), the interviewer needs to provide additional information (e.g., “Well then, what if …”).

The vignette can be gradually modified in terms of its scenario and the amount of information it contains for more effective future use.

(3) Data analysis

The interviews should be recorded with the permission of the interviewees and transcribed for analysis. The transcripts can be analyzed using Steps for Coding and Theorization (SCAT) proposed by Otani and structured according to Rest’s model of moral decision-making.

SCAT enables us to obtain categories of moral values that emerge from the decision-making process. The analytical process in SCAT is explicit and transparent so that the validity of the process and the results are open to evaluation, unlike most qualitative data analysis methods.

Rest’s four-component model explains the process by which individuals make judgments: interpretation, judgment, selection, and implementation. In the interpretation phase, the decision-maker interprets the situation in terms of how his or her actions affect the welfare of others. In the judgment phase, he or she decides on the moral ideal in this specific situation. In the selection phase, the decision-maker selects among competing value outcomes of ideals to act on. Finally, in the implementation phase, he or she executes the chosen option of how to act.

4. CASE STUDY

This section provides an example of the proposed process in a case of infrastructure project management. This case focuses on a multilateral development bank that provides financial aid to infrastructure projects in developing countries. The participants are involved directly or indirectly in ethical dilemmas related to the procurement process. We specifically focused on the bid-evaluation phase because bid assessors frequently need to make difficult moral decisions.

(1) Vignette development

The first scenario was developed around issues highlighted in previous research about the procurement process. This is because the moral dilemma during the procurement process involves various stakeholders, and the nature of the problem differs depending on the specific socio-environmental situation of the project. Subsequently, feedback was sought from experienced practitioners in the bank to determine whether the scenarios were relevant to their work and whether they were realistic. This is a crucial step because consultation with the practitioners improves the realism and relevance of the scenario, which are closely related to the validity of the results. The produced vignette illustrates a moral dilemma in which a professional is bounded by the organizational rules and the client’s demands during the bid evaluation process.

Based on the scenario, an automatic slideshow was created with visual images and narrations. This is regarded as a video vignette in this case study. A scene from the video vignette is shown in Fig. 1.

(2) Interview

Purposive sampling was employed to identify bank employees with professional involvement in the bidding process of infrastructure projects. Guided by the principle of maximum variation sampling, individuals with diverse levels of seniority and fields of expertise were selected. The list of the selected eight
respondents is presented in Table 1.

In the data collection phase, the video vignette was presented. This was followed by semi-structured interviews with an initial question: “How would you advise the character presented in the vignette to act?” The next part of the interview, probing, was conducted according to the interview guide.

After each interview, the video vignette was modified in terms of its scenario and the amount of information it contained to achieve the “best practice” for extracting the respondents’ context-specific moral values.

(3) Results

The results for two participants are discussed below together with the effectiveness of employing the vignette technique to extract context-specific moral values. The results of the analysis are structured according to Rest’s model. The terms in brackets (<> ) indicate categories extracted through analysis.

a) Participant 3

After presenting the video vignette, the interview was initiated with a prompt: “How would you advise the character presented in the vignette to act?”

The participant first emphasized the following concern:

[M]y first concern is enforcing, or not enforcing but safeguarding, of the five core principles that are listed. Economy, efficiency, fairness, transparency and so on.

This category was named <principle-based> because it addresses value principles when making a judgment. The <principle-based> category can be understood as a moral value used to draw out the judgment by evaluating it against the prescribed principles, such as those depicted in the guidelines, to determine whether they are being met.

The vignette illustrated opinions provided by informants from an operations department (Table 1).

Participant 3 reacted to the vignette and explained his/her understanding of his/her role as follows:

I understand why for the         (name of the operations department) director, […] from the business perspective, this is why the director thinks that way. I understand, but his job is to think like this, my job is to think differently. […] I consider my responsibility, to give advice on the basis of the five core principles.

The participant belongs to a compliance department, and s/he contrasted the role imposed by his/her department with that of an operations department. It can be inferred that the <principle-based> category is understood by the participant as a value imposed by the respective departments.

Although the <principle-based> category is a crucial moral value that induces a final judgment, the participant also emphasized the importance of taking the circumstances into account when making the final decision.

[T]hese five core principles have to be weighed against the circumstances of the case. And we need to look at it all together.

This category is named <circumstances> and corresponds to the selection phase. From the response, we can observe that the <principle-based> category and the <circumstances> category sometimes coexist, but they may also conflict with each other. In other words, circumstances create exceptions to general principles.

The participant explained that s/he takes <circumstances> into account because making decisions based solely on the principles may not move the project forward. This understanding is represented by the category <pragmatism>.

If you do strict interpretation, you don’t look at circumstances, you just look at the rule, […] you cannot manage the world. It’s not practical. It’s not pragmatic enough.

After a probing question, “Can you provide any examples?”, the participant suggested an example in which the <circumstances> category took precedence over the <principle-based> category.

You have our rule that says a firm to win a contract, a firm cannot be a government owned entity. If you look in the railway sector in       (country A), in the railway sector all of them are owned by the state. […] The guidelines are very strict, the guideline says “cannot do it.” What do we do? We don’t invest in the railway sector? […] So we have to find an accommodation. Now, this is in          (country A). In         (country B), the railway sector, there are private sector companies. So I’m prepared to accept more flexibility in          (country A), in the railway sector, with the particular EA [Executing Agency], because it is          (country A).          (country B) is different.

Regarding the situation provided in the vignette, the interviewee indicated that <principle-based>
considerations take precedence over <circumstances>.

I would say “no,” […] you have to defend the integrity of the process.

Fig. 2 shows how the elicited categories affect the justification process of moral judgment. First, the participant provided <principle-based> considerations as a crucial category in making a judgment. The five core principles are economy, efficiency, fairness, transparency, and eligibility. Second, <circumstances> and <pragmatism> were extracted as exceptions to <principle-based> judgments.

b) Participant 8

After presenting the video vignette, the interview was initiated with a prompt: “How would you advise the character presented in the vignette to act?”

Participant 8 cited two key categories that affect his/her judgment: <quick delivery> and <following the rules>. In this case, the latter category works as a constraint for the former. The two issues can present a moral dilemma because the pursuit of one goal may hamper the attainment of the other.

I think there is no right and wrong answer with in regard to making decisions. […] We just have to find the limit of […] how quickly we can disburse but without breaking any of our procurement guidelines. […] So those are, I think at the end of the day, we just want do what the EA wants but within the boundary of the rules.

It can also be noted that the category <following the rules> is related to the <principle-based> category extracted from Participant 3. The <following the rules> category, however, can be considered a narrower concept because it refers to specifically prescribed rules.

I think in this case, they have to reject the late bid on the basis that there is no record that they submitted on time. And we are very strict on our procurement guideline.

In contrast, <principle-based> refers to abstract principles, which are often more vague.

Another category, <reputational risk>, is distinct from all other categories. The respondent recognizes the possible complaints against the executing agency and the organization as a reputational risk.

I think that could raise issues from other bidders who attend the public bid opening, and it can also lead to credibility issues for the government and for ___ (name of the organization) as well. […] If we are breaking our procurement guidelines and giving grounds for contractors to make complaints against the EA as well as ___ (name of the organization), then I think we have to consider our reputational risks.

Although the participant expressed his/her suggestion to reject the late bid in the case of the vignette, another category was proposed that may affect the selection process: <market environment>.

I encountered a case where [it] was 5 minutes late, and they didn’t sign […] , the first round of bidding. And we rejected it. And we went for second rebidding, and again he was the only qualified [bidder]. […] I think the important part is the market environment in the country that you are working in.

This category is related to <circumstances> raised by Participant 3, which creates exceptions with regard to making <principle-based> judgments. Similarly, the <market environment> can moderate a judgment that is based on moral values such as <following the rules> and <reputational risk>.

Fig. 3 summarizes how the elicited categories affect the justification process of moral judgments. <Quick delivery>, <following the rules>, and <reputational risk> are primary aspects in the development bank employees’ decisions. However, the ultimate actions are always affected by the particular
The structure of the elicited moral values.

<circumstances> of each project, such as the <market environment>.

Fig. 4 summarizes the results of the case study and shows the moral values extracted from Participant 3 and Participant 8.

(4) Evaluation

The aim of our study was to explore the factors that affect ethical reasoning in infrastructure project management. The validity of the proposed underlying constructs of the process was assessed by comparison with previous studies.

In their research on AIDS-related attitudes, Herek and Glunt observed a dimension called Pragmatism/Moralism through survey research with U.S. citizens. Pragmatism represents the willingness to suspend moral judgment in the interest of preventing AIDS, whereas Moralism represents unwillingness to accept unethical practices even in the interest of preventing AIDS.

At the collective (national) level, influential intercultural management researchers have proposed dimensions related to the constructs identified in this study. By referring to the results of Hofstede and Hampden-Turner and Trompenaars, Thorne and Saunders suggested a model with nine categories that are considered to affect the ethical reasoning process. For instance, the model incorporates a category called uncertainty avoidance. According to this category, individuals with high uncertainty avoidance feel a need for clearly written rules, whereas individuals with low uncertainty avoidance are less concerned with codified rules. The model also incorporates a category called universalism/particularism. Universal individuals tend to apply fixed rules to all situations, whereas particularistic individuals recognize obligations to particular circumstances.

The results of the national-level analyses by Hofstede, Hampden-Turner and Trompenaars, and Thorne and Saunders must not be applied to individual decision-making. However, the identification of partially similar constructs at diverse levels of analysis and with diverse methods that utilize entirely different types of data from diverse contexts suggests that the validity of the proposed constructs in the present study extends beyond the cases described in this article. Nevertheless, the actual manifestation of the underlying constructs will always be context dependent. This article attempted to describe a tool to obtain better understanding of specific ethical dilemmas in diverse international projects.

The limitation of the vignette technique proposed in this article is that it addresses the reasoning process of ethical decision-making, which must be distinguished from actual behavior implementation. This is both an advantage and a disadvantage of the method. Whereas the hypothetical nature of vignettes enables us to address sensitive topics, it is not certain whether the respondents would really behave as they state. This caveat may be partially addressed by completing survey data with observations of individuals’ ethical behavior in real situations.

In addition, the method proposed in this study enables researchers to explore moral values at the individual level. It may be informative to apply this method to a representative sample of individuals within an organization as well as to purposively select individuals in leadership positions whose role may be to steer the whole organization and influence the moral compasses of others. Although moral values may differ significantly among individuals within any organization, individual-level results can be aggregated to the collective level and the distribution of personal values within groups may thus be observed. This process could unveil the gaps in moral values between different subgroups or subcultures within an organization or potential divergence between the leaders and other employees.

5. CONCLUSION

The moral values that affect the justification process of decision-making with regard to ethical dilemmas in infrastructure project management has been a black box due to a lack of appropriate methods to elicit these values. Although the vignette technique is an effective method for exploring ethical issues, to our knowledge, this is the first study to apply this method to infrastructure project management. This article illustrates how to extract context-specific moral values in three steps: (1) vignette development, (2) semi-structured interviews, and (3) interview transcript analysis.
The novelty of the current study is, first, it presented three steps as a battery to extract moral values at the categorical level, which are easier in terms of comparing and contrasting among individuals within their departments or organizations. Previous studies with qualitative vignettes often illustrated moral values in descriptive ways.

Second, this study demonstrated the applicability of video vignettes in eliciting moral values rather than the frequently used text format. Video vignettes enhance reality and relevance, thus enabling us to explore context-specific moral values that affect the justification process of ethical decision-making. We used a real case to illustrate that the method is effective in eliciting moral values to which professionals implicitly refer to justify their ethically sensitive decisions. The result can be used to explain conflicting values between people, departments, or organizations.

A possible practical use of the proposed method is its application in the training program provided in each organization. By employing the method, it is not only possible to elicit the gaps in moral values among individuals, but at the same time, the method enables an individual to be reflective of the multidimensional nature of his/her moral values. Thus, the method could be incorporated into the training program with the aim to prevent moral conflict during the infrastructure project.

Possible future research may compare the results obtained through the vignette technique with actual behaviors to verify the consistency of the results. This comparison could provide validity testing for the extracted moral values and could enhance the application of the technique to solve real-life problems if the validity of the method is supported.

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