

Ethical Computing Continues From Problem to Solution

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INTRODUCTION

Ethical Computing (Lee, 2015a) is instrumental in identifying and reaching a near-ideal solution to the problems arising from an environment that is *technology-driven information-intensive*. These problems raise techno-ethical issues, particularly information security concerns. *Post-implementation* and *post-contract* problems are cases in point. Many of these problems could have been avoided, occur; because we are either insensitive to or ignorant of their ethical implications. As a result, we could reach only a partial, compromised solution at best.

Ideally, the solution is not only technically efficient, financially viable and legal admissible, but also ethically acceptable, socially desirable, and in many situations environmental-friendly (the so-called *hexa-dimension criteria*) (Lee, 2015b & 2015d). In addition, the solutions sought must be capable of balancing the potential inter-conflicts among these demands or satisfying the five or six criteria. Given the conditions, a deep understanding of the basic ethical principles and the requisite technical know-how (the *requisite competence*) are necessary, and shifting our view on risk culminating in a new type of risk called techno-ethical risk or simply *ethical risk* and adopting a new tool of analysis to cater for the new risk (the *additive*) are also required (Lee, 2015c).

BACKGROUND

The Problem

Symptoms

Contemporary business organizations rely increasingly on information technology to accumulate and process the data needed to advertise their services and products, aiming at, for example, capturing market share and attracting customers. As a result, the marketplace becomes more transparent, and the consumers are better-informed thus more demanding. Consequently, more information is required, technology is increasingly relied upon to handle the increased amount of information generated and demanded, and new technological facilities such as call center and weblining (for marketing), and Big Data, Internet of Things, Cloud Computing (for communication and data management) are developed to aid business, to provide the processing power and contain the information explosion. This forms a vicious circle: *increase in demand for information leads to increase in reliance on technology, and increase in use of technology consumes and generates more information, culminating in the so-called technology-driven information-intensive phenomenon* (Lee, 2015d), raises ethical issues, and creates techno-ethical problems. Of these problems, many are commonly found in post-implementation and post-contract situations.

The one described below is typical of techno-ethical problems in post-implementation situations:

An online monitoring system was implemented successfully to replace an existing offline help-desk platform a high-tech facilities distributor. The new system enables help-desk staff to see exactly what is on the users' screens and to respond to users' requests for assistance quickly. Impressed by the fast response time and the increased user satisfaction, the executive vice president (EVP) asks the chief information officer (CIO) to have a copy of the system installed in her office for she wants to use this surveillance function to track down drug dealing allegedly occurring on company premises. The EVP's request raises indeed ethical dilemma for the Chief Information Officer (CIO).

Described in the following is another example of techno-ethical problems in post-contract situations:

The system specification (spec) was approved by the provider and client, and a contract duly signed. A senior project consultant assigned to the project discovered a fault in the inventory control function in the spec. The client is a fashion boutique so the fault is critical. The fault was confirmed after the consultant's site visit. Keep quiet or tell the boss or the client or both is a dilemma the consultant faces.

Causes

What causes this kind of problem is not the technology because the technology per se is neutral. What creates techno-ethical risks is the use of the technology. Two major reasons are cited here to make the point. First, we are insensitive to or ignorant of the ethical aspect of the problems and its ramifications because mainly of our lack of deep appreciation of the ethical principles. Second, we have hitherto treated risk as a technical, corporate/

personal matter when it is in fact a managerial, social concern under the influence of the so-called *flawed education across science and technology* and *misinterpretation of risk*. Three cases are described in the following to exemplify situations where techno-ethical risks arise:

First: Planning to replace a corporate legacy system by a web-based facility but concentrating on potential economic efficiency such as improved speed, elimination of redundancy or even reduced head-counts only, will miss such adverse consequences as deterioration in morale and end-user dissatisfaction (due to the disturbance to inertia).

Second: Evaluating information governance of a computer-based system but failing to include an audit of or a check for ethical issues will run the risk of a deficient information security management review.

Third: Assessing softlifting (the software equivalent of shoplifting) by focusing on the economic and legal impact such as infringement of copyright law and leaving out the social impact such as personal use of sensitive proprietary information will result in a risk of an incomplete assessment.

An Ideal Solution

As alluded earlier, an ideal solution is required to satisfy the hexa-dimension criteria, and is structured around, requisite competence and additive to supplement the requisite competence which alone is not sufficient.

REQUISITE COMPETENCE

Technical Know-How

Professional practitioners and layman users of IT presumably possess the basic rudiments. So this primary competence can be safely assumed.

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