Chapter 8.3
Good and Evil in the Garden of Emerging Information Technologies

Kenneth E. Kendall
Rutgers University, USA

Julie E. Kendall
Rutgers University, USA

ABSTRACT

This chapter explores the social, organizational, and individual impacts of emerging information technologies using the advent of recent technologies including push and pull technologies; DSS dashboards for decision makers complete with widgets and gadgets; and mashups that join together preprogrammed Web-based applications in new ways as examples to explore the question of good and evil as it applies to technology. The design, purchase, and use of emerging information technologies offers a double-edged sword; in that they can be deliberately designed and used for either good or evil purposes, however sometimes their use provokes unintended consequences. While many emerging technologies purport to improve the lives of workers, the quality of their work, and the overall productiveness of society, there are other consequences that belie grimmer, multifaceted impacts that can create malevolent outcomes or even disastrous consequences for their users. Our practical contribution is to formulate a series of questions to assist designers, users, and managers who purchase IT in considering the helpful or harmful consequences of emerging technology design decisions.

Good and evil are essential differences of the act of the will. For good and evil pertain essentially to the will; just as truth and falsehood pertain to the reason, the act of which is distinguished essentially by the difference of truth and falsehood (according as we say that

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an opinion is true or false.) Consequently, good and evil volition are acts differing in species.
—Thomas Aquinas (c. 1225-1274).
Summa Theologiae, I-II [i.e., "First Part of the Second Part."] q. 19, art. 1 (c. 1077-1078).

INTRODUCTION

In this chapter we explore ideas of good and evil as they play out in the arena of several emerging information technologies; we explore their intended applications and uses, as well as their unintended uses and consequences, and we compare and contrast potential good and malevolent impacts of innovations on individuals, organizations, and societies.

Many new technologies have been introduced in the last decade. To begin, we take the example of pull technology, or seeking out information on the Web. The term pull technology can simply indicate surfing the Internet or it can refer to an advanced technology that permits an ever changing, independent evolutionary agent to explore the Web for you. Push technology describes a range of information activities that send or push information to the user ranging from well-understood models such as broadcasting to selective content delivery via sophisticated evolutionary filtering using data mining techniques.

We will also detail the emerging information technology of dashboards, which are often designed to support individuals. A dashboard displays information in the form of metrics to help support a decision maker. We consider the deliberately designed uses and impacts of dashboards on individual decision makers, as well as the consequences of bias and unintended consequences of other display deficiencies on the organization and society. With the advent of customizability for many DSS dashboard displays, the potential for good as well as evil influences from these new technologies are increasingly unpredictable, but bear exploration.

New software innovations often termed "widgets" or "gadgets," are now available to systems designers for designing desktops and dashboards. They can be user-customized, or they can be placed on a desktop without any user intervention. While the usefulness of calculators, clocks, "sticky notes," weather forecasters and so on are superficially apparent, the discovery of how these items are useful, whether they serve as distractions to organizational goals, or slip by unnoticed as hosts of spyware, will also be explored.

Mashups are applications that take one preprogrammed Web-based application and join it with another to create a new application. There are five key areas that hold potential for good or evil in the design and use of mashups. They include reliability, legal concerns, the dynamic nature of the Web itself, the availability of user support for mashups, and the way in which development occurs (spontaneously versus systematically).

This paper is practically grounded by examining specific examples of emerging information technology design, use, and evolution. While we believe that emerging information technology is similar to other types of technology, there are two compelling views of what the future holds for designers and users of technology. The British author George Orwell feared that what we hate will ruin us. But his compatriot, Aldous Huxley, believed that what we love will be our ruin (Postman, 1985). This chapter explores the paradoxical possibility of negative and positive consequences, as well as deliberate and unintended consequences of the use of emerging information technologies. We offer questions for designers, users, and those who purchase IT for organizations to assist them in mindfully confronting the larger questions of good and evil precipitated by new technologies.

We take an approach labeled by Graber (1976) as the intuitive method of verbal analysis. (Verbal here refers to both oral and written material.) Our steps in analysis include establishing a goal for the investigation, sampling written and oral material for relevant clues, piecing together a picture and