
Chapter III

The Perils of Access and Immediacy: Unintended Consequences of Information Technology

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ABSTRACT

What are the potential issues created by the increased access and immediacy offered by information technology? The following chapter suggests how to anticipate these “perils” by applying a conceptual framework, as well as by understanding specific examples and by anticipating future trends. Implications for developers and users of information technology are discussed with suggestions for leveraging access and immediacy while mitigating their perils.

INTRODUCTION

“It’s not my fault—I didn’t mean to do it!” Whether it is for a fly ball through a window or an information system gone awry, we are held accountable for the consequences—intended or otherwise—of our actions. The key to dealing with

unintended consequences is to anticipate them—beyond realizing that you’re “playing ball” too close to the building. By anticipating potential issues, you can address them before they turn into big problems.

What are the potential issues created by the increased access and immediacy offered by information technology? The following chapter suggests how to anticipate these “perils” by applying a conceptual framework, as well as by understanding specific examples and by anticipating future trends. Implications for developers and users of information technology are discussed.

CONCEPTUAL FRAMEWORK

To develop a general idea of the challenges that can arise from information technology applications, it is helpful to use a conceptual framework for analyzing the impact of technology. Sproull and Kiesler (1991, p. 1) offer that framework:

“Predicting the potential consequences of any new technology is an extremely complex problem. Simply forecasting the direct costs of a new technology can be hard, and that is the easiest step. Understanding how the technology will interact with ongoing routine practices and policies is even more difficult. Imagining how that technology will lead to long-term changes in how people work, treat one another, and structure their organizations is harder still. A two-level perspective on technology change can help in anticipating potential consequences.”

This two-level framework identifies different types of effects: first, in terms of the efficiency of an organization and second, in terms of its social system. Consider a rock thrown into a pond: the first level effect is how far and how deep the rock goes; the second level effect is how extensively the water ripples. Such is the impact of information technology.

Specifically, **first level efficiency effects** of information systems are the ones that are most easily anticipated, e.g., increases in productivity, changes in costs, improvements in value-added. These effects are typically factored into whatever cost justification is required for a new information system.

Productivity improvements result in increases in the ratio of outputs to inputs. This may occur because the organization can achieve the same level of output with less input, or because the organization can achieve greater output with the same level of input (or both). These improvements typically stem from the greater ease afforded by information systems, such as the:

- Ease of access to information and people,
- Ease of revision of work product,
- Ease of distribution of information,

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