Preface

This book is about understanding organization and management from a perspective of organizational informing agents. Informing agents are cognitive and technological in character; the former refers to knowledge, data, meaning, and wisdom, and the latter to information and communication technologies (the acronym “IT” is used for both). Interaction between informing agents and organization triggers differentiation in organizational design and reflects on organizational economy. The goal of the book is to introduce a new view of organization that places informing agents at the organization nexus—Informing View of Organization (IVO). IVO draws on the academic fields of Information Systems (IS) along with and cognate areas of study (information, information science, and communication theory), organization (organization theory, management, organizational sociology, and psychology), cognitive theory, and semiotics. This endeavor is motivated by the intention to increase cross-pollination between academic fields, while contributions are expected to accrue particularly for the fields of IS and of organization. From the practical perspective, IVO aims at improving management and utilization of informing agents.

With organizational documentation expanding on the daily basis, knowledge resources, IT installations underpinning various IS, data flows, and communication channels resemble the nervous system of an organization. One can extend this metaphor to incorporate connections between nervous systems of individual organizations. Whether internal or externally extended, these nervous systems deploy flows of electronic data that are instantaneous, shareable, malleable, adaptable, and expandable. If informing agents are properly used and managed, these capabilities contribute to creating organizations that behave intelligently in their operations and strategies. In the opposite case, intellectual maturity remains unaccomplished and organizations are cases for a pediatric or geriatric therapy.

Ours is a world in which the only certain thing is uncertainty. What may appear vastly diverse can, on a closer look, manifest a remarkable uniformity. However, as soon as one trades a curious inquiry for self-assured certainty, one is in for a rude awakening. The only constant thing is change, again with uncertain direction and outcomes. These changes are driven by a set of intertwined economic, political, technological, and demographic factors. In Europe and Asia, huge changes have been looming in the domains of politics and economy. Winds of change pave parts of Latin America, and Africa is awakening after decades of dormancy. The globalization of business operations and of supply and consumer markets has been unfolding on a historically unprecedented scale. The accelerated development of IT has increased the capabilities of using and managing electronic data and organization members’ knowledge that make or support core business operations and strategies. Moving the data and communicating knowledge around the globe is possible owing to the development of global computer networks (public and private) where the Internet/Web plays a prominent role in the public domain. Organizations are moved into the space created by computer networks and systems—cyberspace—in various industries.
and sectors, including services, manufacturing, high technology, education, government, entertainment, science, arts, and religion. Today, one can grow business operations through electronic networking rather than by employing more people and increasing the material resources owned. Opportunities incomensurable with any preceding period have been created for the development, growth, innovation, and advancement of knowledge, and for propelling creative forces and processes.

On the other side, the values and practices of stability, certainty, predictability, security, familiarity, and control have been shaken. Some researchers of organization have admitted that we live in a time of change and even “chaos,” and they call for facing the challenge (Clegg & Hardy, 1996; Davidow & Malone, 1992; Hatch, 1997; Heckscher & Donnellon, 1994; Morton, 1991). Others warn about the unpredictable and uncontrollable character of the changes. Ours is a time of “unreason” (Handy, 1989) in spite of possibilities and initial promises (Chossudovsky, 2003; Klein, 2008; Stiglitz, 2003). Instead of clarity, ambiguity has poured in. Owing to the electronically networked character of today’s global economy, the social forces influencing our lives now evade our comprehension and control more than ever before (Castells, 1996). Developments since the mid-1990s just confirmed this diagnosis even more dramatically (Castells, et al., 2012). Waves of depression and crisis have stricken many economies, while globalization has delivered outcomes that at best can be deemed contradictory or resembling a zero-sum game. Money can be pushed rapidly via electronic channels into national and regional economies, and also quickly pulled out. The nanosecond financial markets are wherever computer networks reach, assuming the power of revitalizing some economies and marginalizing others. The instability in core economies produces rapid ripple effects in economies in outer circles, while disturbances of energy sources and labor markets in the outer circles shake up the core. And nobody seems to be in full control.

These developments are in relation to contemporary organizations, for they are both the subject and object of the dynamics. Business and other organizations are the engines of these developments as much as these affect them. They are the carriers of advances in informing practices and in innovative uses of IT. To be able to act in this complex global environment, contemporary organizations invent new ways of manipulating electronic data, while still coping with the persistent paper trail; organizations learn how to communicate, make decisions, plan, organize work, and deal with customers and trading partners by relying on continuously evolving IS. Struggling to survive and succeed, organizations have to shift from mere manipulation of data and routine informing to focusing on the cognitive processes of perception, thinking, memorizing, and learning. These cognitive processes pertain to all levels—individual, group, and macro-organizational. Organizations need to metamorphose into a form of creative intelligence.

The rapidly advancing electronic IT offers tremendous opportunities in this regard, but it also raises significant challenges in the realm of use and management. Here is where organization in itself becomes a generator of uncertainty. Organization members need to adopt new IS, and organizations need to modify their workings; in the process, individual and group users can always do or think of something nobody could predict. The strain from dealing with unpredictable consequences of IS deployment becomes part of the job. Management challenges abound too. By opting for advanced and potent IS, managers must accept a rope of spiraling costs around their neck. The choices are limited and high-risk: one can break out of the game (and likely lose it all) or stay in the game (and perhaps gain, but certainly absorb more cost and pressure). Via strategic deployments of IS for e-commerce, one can enter new markets but also miss them and weaken its position in old markets. In financial operations, executives can use the control power of IT wisely, and they can also misuse this power to consistently distort reports until a corporate scandal breaks out. New financial instruments, whose creation and management is eased and inspired by technological capabilities, can create economic value but also damage a firm’s financial health.
Even understanding the character and possible implications of contemporary IT and IS is the feat. In spite of all the academic and consulting efforts, predicting the changes and effects associated with new IS resembles the Sisyphus job. This is particularly true for measurement of related benefits. IS are part of the organizational processes that usually do not deliver products that directly generate revenues for a company. Apart from the still-limited automation that supplants labor, IS primarily support document management, communication, decision making, and limited knowledge processes. These do not create directly a monetary value but are part of professional, managerial and clerical work, which altogether hinge on “intangible human thought process” (Roach, 1998). The implication is clear: consequences of IS development and deployment are less certain and difficult to control.

Contemporary informing agents apparently constitute a crucial and demanding part of organization. Managing these resembles the task of operating a rocket: one can reach the stars or get killed. A pragmatic, survivalist option also exists. IVO reflects this reality by placing informing agents at the nexus of organization. They intersect with well-known facets of organization, thus creating new IVO aspects. A similar idea underlies the information ecology approach (Davenport & Prusak, 1997). Congruent with the complexity of phenomena studied, IVO follows a theoretically broad-based path that characterizes the interdisciplinary approaches, such as informing science (Gill & Cohen, 2009). In practice, IVO endorses the goal of mindful and reliable organization (Weick, et al., 1999) to prevent organizational accidents related to IS.

ASSUMPTIONS BEHIND INFORMING VIEW OF ORGANIZATION

IVO draws on several assumptions. First, IVO places informing agents at the nexus of organization and proposes a new organizational “view” comparable to the classical ones. Much like a notion of social structure is at the center of the structural view of organization, IVO makes informing agents a centerpiece in viewing organization. Informing agents are together called “organizational informing agents” and both of them are treated in a balanced way. This balanced approach differs from IS-related streams of research that are exclusively focused on either of the agents.

Second, technological informing agents are approached from a broad perspective. IT is understood in terms of the physical means (e.g., tools and machines) of manipulating data. IVO assumes that these can be in different states of complexity (e.g., devices vs. machines) and of different generations (pre-electronic, electronic, different stages of electronic).

Third, IVO intends to overcome black-boxed approaches that address IT and IS in abstract terms. The black-box optics usually do not differentiate between IT and IS and neglect specific characteristics of these. In contrast, IVO views IT as part of IS and concentrates on their specifics.

Fourth, cognitive informing agents are thought of in broader terms—as data, knowledge, meaning, and wisdom. The commonly used (and overused) term “information” is substituted by the term “meaning” in order to emphasize that no informing occurs unless data are transformed into meaning in the human brain with the indispensable assistance of knowledge. Drawing on ideas from communication theory and semiotics, this concept of information emphasizes process and knowledge. It differs from alternatives that pervade both theory and everyday discourse, which presume that data (possibly organized in some manner) are readily understood by a recipient.
Fifth, IVO anchors informing agents in the organizational (and inter-organizational) context in a particular analytical manner. Informing agents can impact on organization, as well as be influenced by the action of organizational members and organizational structure, culture, politics, and other facets. This interaction or intersection is captured in new aspects called *infostructure, infoprocess, infoculture, infopolitics,* and *infoeconomics.* These neologisms are the staple of IVO.

Sixth, IVO concentrates on specific deployments of informing agents in business and other organizations at the level of task and process (interconnected tasks leading to a particular deliverable). The process approach in particular is interesting since it is inherent to IS: IS support processes and tasks, and the effects of IS are particularly recognizable in the design and performance of organizational processes. IVO combines ideas of traditional process approaches (e.g., those used in quality management) and contemporary ones (e.g., business process management). The process thinking is also instrumental to the concept of information used in IVO.

Seventh, IVO emphasizes the importance of individuals and groups that create, use, or possess informing agents. An individual organization member is presumed to be an active creator and user of data, knowledge, and IS. The word *homo informaticus* is supposed to convey this complex role. Work groups coupled with phenomena of knowledge, meaning, memory, group support systems, and so on constitute a distinct type of user. Informing practices that work in the individual context may not work in the same way or at all in the work group context. For example, groups can shape functionality of group systems in unique ways. The term *group informatics* (or *groupomatics*) is supposed to signify these distinct organizational and IS phenomena pertaining to work groups.

Eighth, IVO critically reexamines some traditional and deeply entrenched assumptions concerning informing agents. Their teleology varies with different ontologies of organization and often is viewed in terms of uncertainty reduction and control. However, IVO posits that both technological and cognitive informing agents can have different purposes, including uncertainty *creation* and control *reduction*.

Ninth, the philosophical stand of IVO is broad and liberal. In the literature considered relevant for IVO, philosophy of IT/IS ranges from materialistic to idealistic, from structural and action to structurational. Different ontologies of organization are also endorsed, including modernist (functionalist), constructionist, and postmodern. The plurality of philosophies resonates with the complexity of contemporary theoretical discourse.

Tenth, IVO intends to broaden the bridge between different disciplines that can learn from each other. A particular focus is on bridging the disciplines of information systems and organization/management theory. The former refers to management information systems/information systems, information science, information studies, informatics, systems analysis and design, computer information systems, telecommunications, and human communication. The corpus of organization/management theory includes organizational sociology, psychology, decision-making, as well as various domains of management theory (e.g., organizational strategy, management of human resources, operations and processes, supply chain, marketing, and finance). A strong connection between the IS and organizational/management disciplines is assumed because organizations are a natural habitat for informing agents. Certain parts of IVO draw considerably on cognitive psychology and semiotics.
INTENDED AUDIENCE

The primary audience of this book is expected to be academics—students and researchers in the fields of information systems and organization/management theory as well as all those interested in the relationship between IS and organization. This book is also for practitioners, such as managers in various domains, IS experts, and other professionals. In addition, consultants may read this book as a guide for helping organizations to build and effectively manage IT, IS, knowledge, and data.

PLAN OF THE BOOK

The book will proceed in the following manner.

Chapter 1 will expand the discussion on the assumptions and theoretical foundations of the IVO framework.

Chapter 2 will discuss individual organizational members in their roles of users and creators of documents, communications, knowledge, and IS. Most of the work in contemporary societies revolves around knowledge and collecting and interpreting data to make sense of organizational issues, make decisions, and to perform work. The actor performing in these roles is *homo informaticus*—human agency defined by its primary activity, as it has been done in other social realms (homo economicus, homo politicus, etc.). Figure 1 shows *homo informaticus* at the top of the IVO concepts orbit. This aspect brings to the fore behavioral and cognitive aspects of individuals and the relationships between individuals and IT/IS.

In Chapter 3, the analysis will shift to the group level, looking at work groups in organizations. The group context renders informing agents in a new light. Groups can obtain cognitive characteristics resembling those of individuals, such as perception, memorizing, and thinking. Groups are also users of specialized IS whose purposes and uses are subject to the group’s shaping. IVO captures these specifics of groups by the concept of *group informatics* or *groupomatics*.

*Figure 1. Dimensions of informing view of organization*
IVO intends to complement the traditional views of organization (structural, cultural, and political) as well as the more recent process approach by shifting the focus on informing agents. Chapter 4 introduces the first of these shifts through the discussion on informing structure or *infostructure*. While acknowledging merit of the structural view, IVO proposes that structuring of data and IT is a necessary condition if not antecedent to social structure of organizations. The discussion will introduce several infostructural dimensions. Then, informal organizational structure will be discussed, which became important with the advent of computer-mediated communication and social media. The second part of the chapter explores the theorizing of technology and IT in organization theory, in the IS field, and in IVO. A review of ontologies of IT closes the chapter.

The theme of Chapter 5 is the concept of culture of informing or *infoculture*—the segment of organizational culture that revolves around informing agents. Examples of infoculture include cultural values attached to a proper management of data and generation and use of knowledge; work and social rituals emerge around new kinds of IT; computers can be celebrated, condemned, or taken pragmatically as tools with certain capabilities and limitations; the Internet features in stories of new enterprises; and so on. Different infocultures can exist in the same organization, and these may affect the management of informing agents, from IS adoption through successive stages in the life cycle of IS. Case evidence of infocultures will be presented.

The theme of Chapter 6 is politics of informing or *infopolitics*. This is a particular domain of organizational politics: access to IT and data, possession of valuable knowledge, and the capability of manipulating meaning constitute the bases of social power. Self-interests, struggles, and coalition building revolve around various types of IS. Drawing on the literature on organization and on IS, the concept of infopolitics explains the dependency and autonomy relationships of power, which make hot topics in organizations. Case evidence of infopolitics will be presented.

The topical area of informing processes or *infoprocesses* is discussed in Chapter 7. This topic is directly related to the IS field, drawing on the philosophical background of general systems theory and a more applied process approach to management and organization. Infoprocess is a subset of or an entire organizational process; it consists of interrelated informing activities that deliver an outcome to a customer inside or outside a company. The discussion addresses the issues of organizational design in general and new organizational forms, in particular, coordination, business process reengineering, enterprise systems, process-centered organization, virtual forms, mobile enterprise, and cloud computing. In the end, potential perils of the process approach are examined from the stance of different concepts of time and their collision.

Chapter 8 is about the economics of informing or *infoeconomics*. This theme synthesizes much of the previous discussion. It explores the issues of informing agents’ costing, valuing, and of organizational performance associated with informing agents and other IVO aspects. The management audience might find this chapter particularly interesting.

Chapter 9 explores issues of IS life cycle management. This is another take on synthesizing the previous discussion on IVO aspects and their relationships. The focus is on the phases of systems design/development, adoption and use in the production phase, and operational and strategic management of IS. These topics have traditionally been studied in the field of management information systems. The IS audience of students and practitioners may draw a particular value from the discussion. The discussion will explore relationships between the IS life cycle management and IVO aspects. Case evidence will be brought up.

Chapter 10 concludes the discussion, pointing to limitations of the discussion presented in the book and to directions for prospective research.
Throughout the book, the discussion uses a voluminous literature from the IS field, organization theory, and other disciplines, as well as empirical studies this author has conducted over years. An effort is made to balance academic concerns with practical implications. Although there is some linearity in the discussion that follows, the reader may also choose to go directly to topics of interest (see Figure 1 for a visual depiction of the dimensions of the informing view of organization).

Bob Travica
University of Manitoba, Canada

REFERENCES


