Mr. Andriole writes an interesting book about an interesting topic at an interesting time in the history of business computing. The subtitle of the book should be something like “When information technology (IT) finally becomes strategic”, if we understand the basic premise. Or, in the author’s own words, “from ‘tactics’ or ‘operations’ to ‘strategy’ marks the beginning of the 2nd digital revolution” (page 1 of the Preface).

So, the last 40 plus years of business computing and all of those years of “data processing” were not strategic? Were we led astray, all those many years ago, while sitting in an MBA classroom of a top 20 program when they put up that famous pyramid in the Introduction to MIS course and began talking about transaction processing systems, reporting systems, decision support systems, and executive information systems? By 1980, wasn’t the IT function already making significant strides into the executive suite and having strategic impact? Well, maybe.

It’s clear that technology has come a long way since the first main frames were developed. One of us actually held a summer job in the 1970s while an undergrad working for a steel company. This mid-sized steel fabrication and erection company managed two payrolls, and estimating tasks using a UNIVAC with 32 KB (that’s kilobytes) main memory and lots of punch cards. Yes, estimating — doing all the estimating calculations required for every steel beam and bolt required by a bridge or a 20 story building. To Mr. Czapla, their main programmer, you’re the man and remain our idol. But was his job and the information technology he provided strategic? But we digress….

In the preface, Mr. Andriole states that this book is a departure from his normal style of writing. For The 2nd Digital Revolution, he intentionally adopted a conversational, colloquial approach. And after reading the book, we agree that the book is, in fact, written in a conversational and colloquial manner. Acronyms abound. Although many are defined prior to use, some are defined later in the text. It is clear
that Mr. Andriole was writing the book for: (1) upper-level managers, presidents and CEO’s, and (2) an American, corporate audience. The latter may prove problematic for an international audience, and he’s gambled that the former will like the informal writing style.

In addition to the preface, the book contains eight chapters and is, in fact, well-organized and presented in a logical sequence, taking the reader on a linear path from the broad to the specific. A summary review of each chapter ensues.

CHAPTER I: WHO’S HERE?

Mr. Andriole does an excellent job of summing up the reasons why corporations should make achieving business technology convergence one of their guiding goals. And although some may find the list of characters (and characterizations) simplistic or offensive, his description of the organization’s cast of characters is accurate to a fault. Here are the “players”: Big Guns, Bean Counters, Techies (Propeller Heads), Hype-Sters, Protection, Consigliore, Other Chiefs, Worker Bees and Constituents.

Be prepared for acronym overload. But, if you can handle the characterizations and the plethora of business acronyms, you can get through the chapter PDQ (;-)).

CHAPTER II: CONVERGENCE CONVERSATION

The explanation of the components of convergence (business, technology and management) comes later in the chapter. Mr. Andriole begins with a preview of the chapter’s contents and brings up some interesting contentions. First and foremost is that we’ve misinterpreted the impact and focus of capital spending in technology over the past 15 years. Mr. Andriole contends that the digital revolution was actually driven by three factors: Year 2000 compliance efforts, the e-business frenzy, and the “zero” cost of capital for IT investment.

Consistent with Chapter I, American business colloquialisms abound (C-level executive, herding cats, etc.). It is at the end of this chapter that Mr. Andriole introduces us to a hypothetical scenario that continues at the end of each successive chapter, ending with Chapter VII.

CHAPTER III: THE BUSINESS CONVERSATION

The chapter mostly discusses the different kinds of collaboration that are or soon will be available to business — continuous transactions, instant communication and coordination up and down the supply chain, customization, real-time analytics, automation (e.g., through intelligent agents), trust, and CPFR — collaborative planning, forecasting and replenishment.

Effective collaboration will begin with a business model that doesn’t “suck” (p. 67), how good (and integrated) your data is, and how well you can analyze the data (yes, that means business intelligence).

CHAPTER IV: THE TECHNOLOGY CONVERSATION

This chapter shifts to the technology pieces — applications, data, communications, infrastructure, and security/privacy — and a sense of the depth of the problem. For example, from pages 91 and 93, “Some companies — perhaps yours — have thousands of applications running on thousands of computers . . . and they all have to integrate”. Chapter IV serves as an introduction to the technical world that provides means for accomplishing that — including XML, Java, and .net. — as well as data storage issues, analytics (e.g., OLAP, OLTP, data mining), and UDA (universal data access). And that is quickly followed by another stream of acronyms around collaborative communication technologies along with predicted impacts of the trends that will affect business the most — the “wireless tsunami” (p.104), broadband adoption, and the integration of voice and data on Internet networks.

Then, . . . well, you get the picture.
CHAPTER V: THE TURF CONVERSATION

The next stop is organizational structure. New forms of collaboration and integration can only take hold if your organization supports collaboration and integration. Mr. Andriole recommends and explores a new organizational model and discusses how 21st century management may well tilt back to the command and control style often shunned in the empowerment-focused end of the 20th century. Also, he wisely recommends staying aware from being an early adopter of technology.

CHAPTER VI: THE MANAGEMENT CONVERSATION

In the spirit of the book, and of our review, this is the “meat and potatoes” of the book. In this chapter, Mr. Andriole offers almost too much to think about. He discusses and provides different measurements and metrics to use, offers a “sanity-check” 25 question survey to determine how much you know about your company’s IT efforts, and presents a series of meaningful measurement requirement and planning matrices.

In addition, a good discussion of standardization and outsourcing is provided. Rarely do you find such valuable, applied resources in a business book. In Mr. Andriole’s terms, the “Take-Aways” from this chapter alone are worth the price of admission.

CHAPTER VII: THE TOUGH CONVERSATION

We dare you to read this chapter and tell us that you don’t enjoy doing so! In documenting the status-quo of personnel and personnel issues in corporate America today, Mr. Andriole is brutally blunt and honest. Every character mentioned brought up the memory of a colleague or nemesis. And if you’re not careful, you may find yourself included. If this happens, you have a couple of options: (1) put down the book and back away slowly, or (2) modify your behavior to maximize your career potential.

In all seriousness, we appreciated Mr. Andriole’s willingness to address human resource issues and concerns that are too often overlooked. His candor was both shocking and appreciated.

CHAPTER VIII: THERE’S JUST ONE MORE THING...

How can you not like a chapter that consists of four pages? Especially after plodding through some of the previous chapters (Chapter VI is over seventy pages long!)? Mr. Andriole does an excellent job of summing everything up in one figure. Figure 42, Collaboration, Integration, Organization and Management, does an excellent job of bringing the contents of the book, and his main argument, into focus. However, it is not a self-explanatory summary diagram. To understand Figure 42, you have to take the entire journey beginning with the Preface.

OK, so we liked the book and would recommend it to all the various stakeholders mentioned by Mr. Andriole. The book is insightful, thoughtful, and has a lot of useful information for today and tomorrow. It will prove to be a valuable resource for current and future CEOs. But ultimately, we also like the book for a somewhat different reason.

We are all a product of our experience. Mr. Andriole’s world, based upon his book and the information in the “About the Author” section, is mostly in the executive suite and with large government projects (the man has more right to claim responsibility for the development of the Internet than does Al Gore!). Our experience, through research and management education (corporate education programs targeted to “future” executives but who are currently middle management), is a couple of steps closer to the front line.

We deal with many managers who are over one year into an Enterprise Resource Planning (ERP) implementation (not development, implementation), still floundering, and still hav-
ing weekly meetings discussing daily transac-
tions that the application can not handle. Ev-
every one of these managers is trying valiantly,
even after months of deep frustration, to make
the new system function, in spite of not being
included in any meaningful way in either se-
lecting the package or designing the change
management program.
Not to be overly harsh, but our impres-
sion is that too often these ERP (and/or Cus-
tomer Relationship Management (CRM) and
Supply Chain Management (SCM)) applica-
tions — so much of the basis of the 2nd Digital Revo-
lution discussed in the book — have been
rushed to production with inadequate require-
ments and an inadequate, if not sometimes abu-
sive, change management plan that dumps the
residuals of all the shortcuts taken onto the
backs of the front line personnel to sort out,
often after implementation (post hoc). The
“management de jour” among executives re-
garding ERP implementation seems to have
more than a hint of similarity to the hockey
tactic of dumping the puck down the ice and
then scrambling to make something happen.
Only it’s not usually the executives who are
hustling down the ice to touch the puck so that
icing isn’t called — the front line workers and
managers are the ones involved in the mad
scramble.

Another reason that we recommend the
book is that it presents the current mindset of
executives and how, it seems, they are seeing
the IT world today as a noble pursuit: a “revo-
lution” into a “2nd generation” of IT that is
valuable and important to understand. Passion
and enthusiasm, not just a myopic focus on
Return on Investment and Total Cost of Own-
ership, are critical executive characteristics for
someone about to take that dive into the uncer-
tain world of an ERP project. It’s a hell of a
decision to commit $50+ million dollars into a 2-
year IT project that will turn your company
upside down. Believing that you will be altering
the very strategic core of your company is
almost a prerequisite for making such a deci-
sion. (That, and having a golden parachute
securely in place.)

However, this grand view may mostly live
only in the executive suite and with vendors
and supporting consultants. It may not be a
revolution at all. Going back to our introduc-
tion, was IT strategic in the past? Yes. Did IT
help companies survive? Yes. Did IT help com-
panies identify and implement new business
opportunities? Yes. Did IT create value? Yes.

Therefore, we are unconvinced that this
is a 2nd revolution but rather an evolution be-
gun in the 1950s and 1960s. Through ERP sys-
tems (and CRM, SCM, etc.), executives today
are being provided with one more significant
piece of the puzzle — a real chance at a truly
integrated control system. Of course they are
pleased and excited by the prospects. Anything
that serves to reduce uncertainty, increase effi-
ciency and provide a source of competitive
advantage is always welcome in the executive
suite.

In summary, our cautions are two-fold.
First, let’s not, one more time, be victims of tech-
nology hype. Let’s be realistic about where we
are and where we are going. And secondly, as
Al Pacino said in a much different context in a
movie, let’s remain a “fan of man”. Is pushing a
new system through in six months or a year
early enough of a strategic benefit to shortcut
participation in the requirements process or to
make the change process knowingly and sig-
ificantly more painful and stressful for all those
below the executive level?

Read the book. You will learn a lot. It was
a pleasure to read, to review and to parody. The
contents provoked a lot of thought and dis-
cussion among us — and we thank Mr. Andriole
for that. Those of us whose lives are intertwined
with the progress of computer and communi-
cation technology are sharing a roller-coaster ride
with no end in sight. The 2nd Digital Revolu-
tion provides a way to step off the ride for a
little while and think about both — where we
have been and where we are going. Now beam
me up Scotty……
Timothy Shea, DBA, has spent his career in the information technology field — first in industry and management consulting developing large systems applications and early CASE tools, and more recently as an associate professor of information systems at the University of Massachusetts - Dartmouth. He earned his DBA in management information systems from Boston University. Dr. Shea’s research has focused on the delivery and management of Web-based learning and teaching technologies, corporate universities, end-user training, implementation issues around ERPs, and communities of practice. He has more than a dozen journal articles published, four book chapters, four training manuals, and dozens of conference presentations.

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