

Bill Gates the Digital Author

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Target Audience

Target audience is any manager with responsibility for an organization, researchers with an interest in either information technology or organizational behavior, and anybody interested in either Bill Gates as a person or Microsoft as an organization.

Purpose of this Paper

The purpose of this article is to review Bill Gates' book and put it in both a business and global context to establish the relevance, as well as the reliability of the content.

Executive Summary

This article concludes that Bill Gates' book, *Business @ the Speed of Thought*, is highly relevant for today's managers. The book allows the reader to glance into the "mind of Microsoft" as well as Bill Gates' vision for the 2000s, which he refers to as the knowledge age. The only weakness of the book is that it does little to bring the reader to a holistic global view on information technology.

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Introduction

I have chosen to title this article “Bill Gates the digital author” for two reasons: first of all, Bill Gates has written two bestsellers on the subject of how the digital age will change the world as we know it. Secondly, his entire business success is based on the idea that software should be considered an artwork of an author, thus should be protected by copyright (Lesinski, 2000:p32). This is the reason that Microsoft never sold the so-called “source code” to any of their programs; rather Microsoft sold a non-exclusive right to *use* its programs. Since founding Microsoft in 1976, authoring has made Bill Gates one of the world’s largest success stories in the computer industry.

Bill Gates’ latest book, *Business @ the Speed of Thought*, is a practical book for managers that will walk them through the opportunities based on information technology. This book will allow managers throughout the world to prepare for and get the upper hand in the knowledge age.¹

I have had contact with the IT industry for the past 16 years, either from a software developer or a customer perspective; I currently hold the position as Senior Vice President, R&D in the business intelligence software company TARGIT. Over the years I have seen the rise and fall of different companies, whether in the hardware or software business; the key to success or failure appears to lie in the preparedness for rapid changes.

In the early days such changes could be new production techniques that drastically reduced the production prices of microchips, an earthquake in Taiwan that had a huge impact on the global supply of microchips and memory modules, or a competition between operating systems such as Microsoft’s Windows and IBM’s OS/2 where no one could tell who would win. The latter was actually very hard for my company in particular, but based on a gut feeling I bet on the underdog Microsoft in 1995 that subsequently lead to a close relationship. Today our company is a Gold Partner with Microsoft among less than 100 other companies worldwide.

Having worked with Microsoft from the outside makes it interesting to be allowed a peek inside the mind of Microsoft.

¹ Classifying the book according to kind and subject matter is recommended as good practice. (Adler & Van Doren, 1972: p163)

Bill Gates – The Digital Author

Bill Gates is the wealthiest man in the world. He is also the chairman of one of the world's largest information technology providers. From this perspective, he has an interest in keeping himself an icon in order to keep credibility in the market; however his motivation for this book appears to lie deeper than just this. In his enthusiasm of new technology, and using a rich amount of examples that reveal deep insight, he demonstrates a true passion for technology.

According to Jeanne M. Lesinski's biography on him, he fell in love with computers at the age of thirteen, and made his first program, a program that could play "tic-tac-toe" (Lesinski, 2000:p7, p18). This passion is probably what got him to found Microsoft in the first place, but it is interesting to note that he has been able to fuel this spark despite his success. In his authoring, this spark takes us through an interesting journey through insights in many successful projects of enterprises and organizations; it takes the reader through thought provoking examples that must wake the attention of most with a responsibility to run a business.

Being a visionary in an age of mainframes, where many could not grasp his vision of "*one computer at every desk and in every home*" seems only to have encouraged him more. Writing software for the first personal computer, the Altair 8800, was the first step in founding Microsoft. The breakthrough however, was the contract with IBM in which Microsoft would deliver the operating system for the first PC based on standard components; Microsoft would license to IBM under the same logic as an author would to a publisher.

The production of a PC based on standard industrial components would forever change the way computers would be used. The price of a PC dropped as an effect of this production strategy, but additionally so-called PC clones, which were PC's manufactured by IBM's competitors using the same standard industrial components, started to emerge. These PC-clones also needed the right to "publish" Gates' work. Today Microsoft is the leading provider of operating systems in the world...

Bill Gates is in essence a digital author; but one could wonder why he would be trading the time where he could be writing successful software for time writing books?

One answer for this could be that Bill Gates is an adventurer; for inspiration Bill Gates has traveled on educational vacations to Africa and South America. While in Brazil he studied biochemistry and in Africa he studied evolution. His former girlfriend, Ann Winblad, recalls: "To Bill life is school... there's always something more to learn" (Lesinski, 2000:p46). In other words, he isn't a narrow-minded computer geek.

Another answer could be that Bill Gates sees himself as a visionary artist. This could be inspired by Leonardo da Vinci, whom he believes is one of the most interesting people who have ever lived, according to Jeanne M. Lesinski. (Lesinski, 2000:p74).

Or it could be from the perspective of a management guru, fuelled by the inspiration of the revolutionary industrialist Henry Ford; Bill Gates has a picture of Henry Ford in his office, Jeanne M. Lesinski states that it is both a picture of an idol and a reminder that the best can be surpassed by competition (Lesinski, 2000:p97).

Looking at Bill Gates' key words such as "Digital Nervous System" and "Business @ the Speed of Thought" seems to reveal just this relation between his fascination of the human mind and his talent for doing business in the digital age. Additionally, Bill Gates seeks to attract management attention to the discipline of knowledge management by labeling the current time as "the knowledge age". This certainly places him in the league of a management guru, and this will undoubtedly leave room for discussions in boardrooms in the time ahead.²

Regardless of the specifics of his motivation, Bill Gates has written another book to follow up on his five-year older book, "The road ahead".

Business @ the Speed of Thought

The book is about how information technology will shape the business environment as well as society as a whole. The impact of information technology is, according to Bill Gates, going to create winners and losers. The winners will be those who adopt information technology as a digital nervous system that allows information to flow through the organization to the right people. A digital nervous system will alert organizations to react to changes in the environment and allow them to take advantage of it.³

Bill Gates attempts to improve organizations' responsiveness to changes by allowing information and knowledge to be used throughout the organization, in other words doing business at the speed of thought⁴. The main thesis of the book is that information should flow through an organization, it should be readily available to those who need it, and it should ideally only be "touched" once. By allowing an organization to do this, it will be able to respond quickly to changes. Bill Gates states "If the 1980s were about quality and the 1990s were about business process reengineering, then the 2000s will be about velocity." (Gates, 2000, introduction) In the world of velocity everyone within an organization should be allowed to work with information that flows through the organizations' digital nervous system. This

² It is good practice to come to terms with the author by interpreting his key words. (Adler & Van Doren, 1972: p163)

³ The review should state what the whole book is about with the utmost brevity. (Adler & Van Doren, 1972: p163)

⁴ Define the problem or problems the author has tried to solve. (Adler & Van Doren, 1972: p163)

nervous system is a number of computers through which the information will be able to be “touched” once eg keyed in, then viewed and analyzed in the context in which it is relevant.

In order for the reader to take the words of Bill Gates seriously, it is important to adopt the vision of the future organization. Bill Gates refers to the current age as “the knowledge age”, which is crucial for grasping the necessity of the digital nervous system. In the knowledge age, any organization is highly dependant on knowledge; this is basically the key competitive asset of any organization. The assumption is that competition is global, thus production facilities, cheap workforce, brand and other assets, are more or less a given for all the companies competing. Information is the facilitator that allows companies to monitor, position and invent these assets (Gates, 2000:p2)

Bill Gates uses several case studies to emphasize his points; companies like Johnson & Johnson, Dell, Coca Cola, McDonalds and GM as well as the US Military and the US public healthcare system. Not surprisingly, Microsoft itself is being used both as an example as well as a way of emphasizing that Bill Gates himself takes this issue seriously.

That fact that Bill Gates gives a lot of insight into the Microsoft organization is interesting in itself; he lets the reader in on details such as his management philosophy in terms of meeting practices and information sharing. If there are more than four people involved in a meeting, chances are that this is a consequence of poor utilization of the digital nervous system.

Another interesting story from the “gut of Microsoft” is the history about how the “internet tidal wave” came, and how Microsoft managed not only to steer clear of it, but, to conquer it! “First of all, we were not as oblivious to the internet as it might have seemed to outside observers” (Gates, 2000:p163), regardless of this statement by Bill Gates, the story about how both development activities were reprioritized and the media was alerted is a legend in the information technology industry. This is exciting reading for anybody that has been involved in a strategic planning process; and it goes to show just how fast it *can* be done...

The major parts⁵ in which organizations can excel, using a digital nervous system, and the lessons learned in this book are:

E-Commerce

According to Bill Gates, the internet will change everything (Gates, 2000:p61), it will facilitate companies in different distribution strategies, it will reduce prices by eliminating the middleman and it will give new possibilities for customer support. The key for companies is to acknowledge the internet as a factor that will change everything, companies should ignore the fact that many companies failed in the first

⁵ The review should enumerate the major parts in their order and relation. (Adler & Van Doren, 1972: p163)

e-commerce wave; this is simply a matter of people expecting the change slightly too early.

Bill Gates believes that the internet will create a state of perfect competition in terms of the traditional 4 P's of marketing: Product, Price, Place and Promotion. This means that all competitors will be able to deliver the same level of the P's; in order to handle competition in a market like this, customer service through the internet is of paramount importance. Using information about customers to tailor services and a high degree of personalization will be the key area for companies in succeeding in the digital economy (Gates, 2000:p67). In order to reach this point, companies will need to adopt digital processes internally to accommodate this.

Data analysis

The ability to slice and dice through any key figures is an ability that has already given Microsoft competitive advantage; Bill Gates explains how he has been able to look as far down into details as restaurant bills, and how he and his managers are able to dazzle middle managers by knowing their key figures into detail. This is quite impressive to hear from an organization as big as Microsoft.

Bill Gates states the example that middle management needs as much information as senior management, but much too often has less (Gates, 2000:p21). This also ties into the information system platform, because the number of middle managers is typically higher than that of the senior management. In order to overcome this task, the information systems platform should not only give the middle management access to data, it should also allow the middle management to slice through the data so it applies to their particular area of responsibility, such technology can be found using the so called OLAP (On-Line Analytical Processing) tools, and for even more insightful depth in the so called data, mining techniques can be used (Gates, 2000:p232).

Electronic Workflow management

The idea is that information should be "touched" as few times as possible in order to create the highest efficiency. Bill Gates explains how the basic information from the pension plan in Microsoft is used in multiple issues during the enrollment of an employee, thus reducing the time spent filling out forms significantly and increasing the quality of data as less manual input is needed.

Additionally, he gives an example of how workflow management can be used to improve quality of data and reduce costs in the area of healthcare. Bill Gates tells a sad story of the mother of an employee that is bounced back and forth in the health case system and mistreated. The fact of the matter is that the different instances of medical care she received were in fact OK, but it was the failure of the system collaborating and reusing information that makes Bill Gates raise the flag for enhancements (Gates, 2000:p333). In conjunction with generating enormous amounts of paperwork, the system loses the perspective of both the patients and doctors. A proposed "treatment" in this case is electronic files and integration of

systems in the health care system. Showing Microsoft's participation, Bill Gates refers to the MS-HUG which is short for Microsoft Healthcare User Group, to demonstrate the company's participation in a project which seeks to overcome this problem.

Knowledge management

Raising the corporate IQ can be done using information technology, essentially the technology will allow experts to collaborate more frequently, since email and internet access will reduce time cycles and geographical obstacles. Bill Gates exemplifies how this has been done in Boeing; in this case he also stresses the point that a company shall never lose the ability to be visionary. He uses the example of how Boeing leapfrogged McDonnell Douglas by prioritizing the jetliner without even having one order. As another example of collaboration that would not have been as efficient -or even possible- without the internet, Bill Gates gives the example of how the human genome was mapped.

Other than collaboration, Bill Gates addresses the issue of information flowing through the organization. Usually there is a tendency with hierarchical systems that bad news arrives late on the desk of the senior manager. By using a digital nervous system it will arrive faster, thus helping the senior management react faster before the bad news grows into a large problem. Bill Gates as a manager gives the example of the internet reprioritizing an example where he used the fact that bad news traveled fast to Microsoft's advantage (Gates, 2000:p161). Using this example, Bill Gates gives us the insight that his management style is to seek the bad news rather than the good.

E-mail

A remarkable note is that Bill Gates stresses the e-mail as one of the core components of sharing information throughout organizations. In other words, the basic tool for stepping into the information age is at the tip of the fingers for practically any organization in the western world today! When asked by customers what they can do to get more value out of their information systems and foster collaboration, he answers "E-mail" (Gates, 2000:p177).

Bill Gates believes that e-mailing is a tool to flatten the organization and shorten the cycle time from occurrence to action, but another interesting observation is that e-mailing turns middle managers from information filters into "doers" (Gates, 2000:p176).

Predicting in hindsight?

Having reviewed the book from an objective standpoint, one could now take a critical approach to the information brought forth.⁶

In the information technology industry, Microsoft has been criticized for not foreseeing the internet spreading, thus not making it a priority. Bill Gates can't help mentioning that they might not have been a forerunner, but that they did not ignore the internet as much as it might have seemed from the public. At the end of the millennium, Microsoft and Bill Gates have, by both action and this book, certainly changed their priorities.

In the book Bill Gates recalls that the priority above all was to finalize the release of Windows 95; the internet was a second priority. Looking back in hindsight the priority was not that bad from a Microsoft perspective; the release of Windows 95 and the follow-up with the updated Windows NT 4.0, that had the same user interface as Windows 95, effectively killed the idea that IBM's operation systems OS/2 would ever rebound. In conjunction with this move, Microsoft succeeded in gathering the internal knowledge already residing internally and launching it as the Internet Explorer web browser, again with significant short-term agony to the competition.

One could argue that Microsoft was not the forerunner in terms of externally promoting the idea of the internet and the interconnected future back in 1995; however the rapid reaction and the fierce blow into the market in two segments within one year, also account for the reason to tell the story in this book. The historically flat organization of Microsoft is probably what led to the need for a digital nervous system internally. The lessons learned and the success of Microsoft in the scenario of 1995 could arguably be sufficient reason for Bill Gates to writing the entire book, regardless Bill Gates was not the first to advocate internet and emails to the mass-market.

⁶ It is good practice not to begin criticism until the outline and interpretation is completed. (Adler & Van Doren, 1972: p163)

A personal touch

Having read about Bill Gates, I feel that I should share one of my personal experiences. In the summer of 2002, we had just completed half a year of hard work to enter Microsoft's Data Warehouse Alliance; this is an alliance where software companies comply with a certain number of standards that means that the software will work optimally combined with Microsoft's database software.

During this process we received significant help from Microsoft, and I decided to write an email to Bill Gates. It was also part of an experiment, as I wanted to see just how interconnected Microsoft was.

I sent the following mail to Bill Gates:

-----Original Message-----

From: Morten Middelfart [<mailto:morton@targit.dk>]
Sent: Friday, June 16, 2000 6:29 AM
To: Bill Gates
Subject: Nobody sued NASA when they were the only ones sending people to the moon....

Dear Bill Gates,

I represent the R&D of a Danish company, which has recently been accepted into the Microsoft Data Warehousing Alliance. During the period of qualifying for the DWA, we have had an opportunity to feel the Microsoft Corporation as a very helpful, competent and professional partner; but most of all a driver to help our company become even more innovative. In addition to providing a platform, Microsoft has spent resources to stimulate our development process towards entering the DWA.

I would like to thank You for the enthusiastic and competent guidance we have received from Microsoft Denmark, and from Allan Folting in particular. Microsoft's commitment and encouragement has helped us to "move mountains" in our R&D; quite frankly I don't see any of the anti-Microsoft companies do the same at all.... To me, the Microsoft achievement so far, and its positive impact on innovation in the IT development community, is equivalent to reaching the moon; however nobody sued NASA. Microsoft has played a significant part in allowing everyone to connect with each other in a global scale; I feel that punishing the prime movers of progress would be a very wrong signal to the global community.

I am sure that you receive a lot of similar mails, I hope You will add this mail to the pile of feedback from people who believe, not only in Microsoft as a company, but in the idea that innovation is best stimulated if there is a framework where everyone can participate with their core competence.

Sincerely Yours, and best of luck in the time to come.
Morten Middelfart, Senior Vice President, R&D, TARGIT A/S

Within two days, Allan Folting asked me if I had sent an email to Bill Gates. My reply was simple "Yes, why do you ask?" Allan told me that in the mail that had been

forwarded from Bill Gates to the Danish Microsoft office, it had been circulated to the employees and Allan had received an acknowledgement for his work.

I believe that this example shows just how fast an organization like Microsoft responds using its own digital nervous system. Additionally, I think it tells something about the Microsoft management style, action is swiftly taken and there is not a long virtual distance from the top executive to the engineer in the field. Although this is just a single incident, it tells me that Bill Gates is certainly taking "his own medicine". –and I can't help thinking that according to Bill Gates, bad news would have traveled even faster!

Being global but still acting only locally?

A minor criticism of the book would be that it tells little about the global impact of the knowledge age. Information technology will change the environment in which the companies themselves will be doing business, in addition to the change in the companies themselves.⁷

In his book "Which World? Scenarios for the 21st Century: Global Destinies, Regional Choices", Dr. Allen Hammond describes three scenarios that the world could evolve into. One is his free market scenario in which the world evolves with the market economy as the growth vehicle, the global interconnectedness plays a major part in this. In this scenario he states that: "the development of the free market is the vehicle for global prosperity." (Hammond, 2000:p26) In other words, as information technology is a major facilitator in the internationalization of financial transactions, and therefore the backbone of the market economy, information technology is the engine for bridging the global prosperity gaps over time.

Bill Gates does address this slightly in the knowledge economy in an example of the implementation of information technology to "Lift the skills of all citizens" (Gates, 2000:p393). Although Bill Gates states that "Schools need to level the playing field with access to the internet to help close the gap between the *haves* and *have-nots*" (Gates, 2000:p403); his examples, outside the economy of the United States and Europe, are limited to briefly mentioning India and Latin America.

Failing to seriously deal with the developing countries could lead to a "fortress world," as described in another scenario by Allen Hammond, in which only a third of the world gains prosperity based on the market economy. This causes the rich countries to guard the borders in order to cling on to their way of life (Hammond, 2000:p37).

The darker perspectives arising in this scenario, due to a high dependability on information technology, are: a high societal and organizational vulnerability, and loss of control for any single governmental regulatory body. This could lead to criminal organizations controlling governments in several developing countries, thus gaining a secure base for activities such as computer crimes.

The interconnected world will mean that governmental control will decrease since information technology interconnects the world; no single nation will be able to legislate on the huge amount of international transactions: financial, criminal, intellectual and others. This lack of governmental control effectively could leave no other option than a global market economy without any regulation, unless a regulatory body with global reach is formed. Some may argue that no regulation is

⁷ In criticizing, one should show wherein the author's analysis or account is incomplete. (Adler & Van Doren, 1972: p163)

necessary, but no-one can claim to have the full perspective of such a situation since it has never been seen...

What would happen if intellectual property rights ceased to exist –or what about no legislation and no monitoring of conglomerates conducting unfair competition in the market?

These questions are impossible to answer concretely, but sadly the world has at least experienced the feeling of international terrorism. The attacks on the United States on September 11th 2001 will live in many people's mind for many years, as a point in time when we recognized just how much damage a few madmen can do in our modern society. This could be at least one example of where we need a regulatory tool in the interconnected world of the knowledge age.

Could it be that Bill Gates only acts locally ie United States and Europe and that in his excitement, he loses the larger perspective of technology?

In this book, he seems keener on writing about doing business in the knowledge age than about reducing the gap of technology among countries. Bill Gates does not leave the developing countries out; he mentions an opportunity to leapfrog the investments in education made by most western countries by adopting new methods of learning and education. However, this opportunity for sharing information globally in order to prevent the developing countries from falling too far behind is not described in detail. As such, he does little to draw a holistic picture of the future; he appears much more focused on showing how technology will impact business life today with little emphasis on the long-term consequences.

In his role as a management guru of the knowledge age, it is obvious that Bill Gates cannot cover all aspects in one book, and regardless of this priority, he makes it clear that information technology is a powerful sword for change today and in the future to come. Additionally, many of the examples and benefits achieved by enterprises can be used as learning tools for governments and global organizations as well.

Based on his actions, Bill Gates also indicates a holistic perspective when addressing the information technology gap as critical. He donates money for PC's to poor neighborhoods as well as encouraging teachers to adopt computers into the classroom and integrate them with the learning process.

Being a visionary and a respected person, it would be interesting though, should Bill Gates decide to dedicate a book to the subject of the global perspectives of information technology in the knowledge age.

Conclusion

This book is important for two reasons: first of all since information technology will change the way organizations will work in the future, this will impact on both businesses and governments. Ignorance of the effects could be a matter of life and death, or at the minimum a matter of use or abuse of opportunity.

Secondly, the fact that a man like Bill Gates, one of the most influential people in business, takes time to tell a story is most likely reason enough in itself for many people to read it. By predicting something, that so many people will read and consider, could ultimately make this book fulfill its own prophecy.

This book or a book on the same subject is, in my opinion, a “must read” for any manager that runs an organization today. Undoubtedly information technology will change the ways we do business with the next decade to come. Reacting based on the review guidelines of this book could be the starting point for an organization in taking advantages of the potential of the future.

The book gave me a lot of insight into the “mind of Microsoft”, even though I would consider myself knowledgeable about this organization already. The positive approach to information technology and the importance of how it can and will shape the way to do business must not be ignored, in saying this I do agree with Bill Gates that the 2000s is and will be about velocity. This is based on the arguments of this book combined with my personal experience in the business intelligence field. The book appears right up this alley, and it highlights issues from the strategic level, yet gives a hands-on perspective so business managers can have the greatest benefit from it.

Having read about Bill Gates excitement for e-mail as well as having personally tried Microsoft’s efficiency by the use of e-mail, it is not hard to guess why Bill Gates put an @ in the title.

In my opinion, this book undoubtedly solved its goal of teaching managers the importance of a digital nervous system. My only concern is, that knowing about the causes that Bill Gates is involved in, along with much of the information of his biography; one can only assume that he is aware and caring for the opportunities and threats of the global digitalization, thus I would hope that he will cover this in the short future. Recognizing that this has not been the primary focus of this book, I would like to see Bill Gates or a person just as known and recognized doing so. This would both be a natural progression to this subject, a book worth reading and needing to be written...⁸

Sincerely, Morten Middelfart

⁸ It is good practice to determine which problems the author has and has not solved, and which of the latter he knew did not solve. (Adler & Van Doren, 1972: p163)

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The TARGIT E-mail Archive. www.targit.com