

Jonathan B. Spira

Foreword by Esther Dyson

OVERLOAD!

HOW TOO MUCH
INFORMATION
IS HAZARDOUS
TO YOUR
ORGANIZATION



OVERLOAD!

**HOW TOO MUCH
INFORMATION
IS HAZARDOUS
TO YOUR
ORGANIZATION**



John Wiley & Sons, Inc.

The characters and incidents on pages 4-6 and in the epilogue are drawn from the author's imagination and are not to be construed as real. Any resemblance to actual events or persons, living or dead, is entirely coincidental.

Copyright © 2011 by Jonathan B. Spira. All rights reserved.

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600, or on the Web at www.copyright.com. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008, or online at www.wiley.com/go/permissions.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

For general information on our other products and services or for technical support, please contact our Customer Care Department within the United States at (800) 762-2974, outside the United States at (317) 572-3993 or fax (317) 572-4002.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books. For more information about Wiley products, visit our web site at www.wiley.com.

Library of Congress Cataloging-in-Publication Data:

Spira, Jonathan B.

Overload!: How Too Much Information is Hazardous to your Organization / Jonathan B. Spira.

p. cm

Includes index.

ISBN 978-0-470-87960-3 (cloth); ISBN 978-1-118-06415-3 (ebk);

ISBN 978-1-118-06416-0 (ebk); ISBN 978-1-118-06417-7 (ebk)

1. Knowledge management. 2. Information resources management.

3. Information technology—Management. 4. Business communication—Management. I. Title.

HD30.2.S686 2011

658.4'038—dc22

2010053512

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

FOREWORD

FIGHTING THE GOOD FIGHT AGAINST INFORMATION BLOAT

In this book, Jonathan Spira addresses the problem of Information Overload and our own responsibilities for it. But this isn't just a question of "don't spam." People usually create content with some purpose in mind. Sometimes it's just self-aggrandizement, in which case this book is not for you.

But if you're sending messages without getting a response, maybe you aren't thinking enough about the recipient. If you do so, you'll get more done with less effort and more control . . . because thinking about the recipients helps you determine what actually gets into their heads.

Take how I came to write this foreword. Jonathan had sent me an e-mail politely asking me to write a few notes for his book. In reply, he got this plaintive away message from me: "staving off e-mail bankruptcy: I am traveling and my deferred message liability is around 4000. I'm hoping to work my way through this, but please don't expect a reply until December 31 or worst case December 32!"

He then wrote again – and didn't get a reply. I was too busy dealing with the very problem he is describing in this book.

We then chatted in Facebook instant messaging, but I responded with little enthusiasm.

What *should* people do to cut through the clutter and elicit a response? In the case of Jonathan's first e-mail, he should have given me much more complete directions. In other cases let's say

if an individual had wanted me to recommend him for a job, he should write the forwarding letter for me – which I could edit if I wanted. Otherwise, all I would have to do is add the recipient to the cc line and hit reply.

In the case of someone who wanted help getting an in with a certain company, he could do the research himself – i.e. list the top management and the board of directors – and ask me if I knew anyone there.

If someone has to write to me a second time – I’m looking through my backlog of unanswered e-mails here! – he should not say: “Did you get my last e-mail?” Instead, he should make it easy for me by resending the whole thing – which should not have been that long anyway! I would say that my response rate goes down by 60 percent if there’s a file attached.

And so on! Thinking about the person you are engaging with will not just clear up information overload; it’s also likely to get you the response you want. This is one of the key points addressed in *Overload!*

(How did Jonathan actually get me to write this? By calling me! Sometimes realtime voice communication beats all this fancy electronic stuff!)

ESTHER DYSON

PREFACE

Why are you so passionate about the problem of Information Overload?" is perhaps the question I have heard most in the past decade.

The answer is rather simple: Information Overload is killing us. It is death by a thousand paper cuts in the form of e-mail messages, documents, and interruptions.

Information Overload and related issues are now mainstream topics. The phrase itself is being co-opted for multiple purposes (many unrelated to the actual problem), and it's the topic of front-page stories in mainstream newspapers, magazines, and blogs.

No one I know is exempt from the problem as information is all around us. The issue is not only the quantity; it's also the intensity. Information is also appearing in new and unexpected ways.

Just a few days before I sat down to write this preface, the Web site WikiLeaks released 250,000 classified State Department documents including hundreds of diplomatic cables. The question of right or wrong notwithstanding, my first thought was "How will anyone be able to sort through this quantity of material and make any sense of it?"

In 1971, the *New York Times* published the *Pentagon Papers*. At the time, the approximately 7,000 pages supplied by Daniel Ellsberg probably seemed insurmountable, but the knowledge worker journalists at the *Times* managed to present the material in a comprehensible manner.

Today, anyone can go to the Web and see the actual cables released by WikiLeaks as well as tens of thousands of analyses published by various parties.

The Internet has removed the intermediaries, such as newspapers, that even a mere decade ago would have been the place to which someone such as Bradley Manning, the private in the U.S. Army who is suspected of having disseminated the classified documents, would have turned.

Manning didn't even need WikiLeaks. Anyone can publish a Web page and content today, and this, of course, is why we have more and more information coming at us from all directions.

The unfortunate reality is, there is no magic bullet for "fixing" Information Overload at this time, and it is likely that we may never fully resolve the problem. In addition, there is a huge financial cost associated with the problem – according to my research at Basex, the knowledge economy research firm where I serve as chief analyst, Information Overload cost the U.S. economy almost \$1 trillion in 2010.

While there is relatively little that we can do about Information Overload, we don't have to grin and bear it. What does help reduce Information Overload and lessen its impact is 1.) raising awareness and 2.) presenting context and history as to why the problem is occurring.

Raising awareness helps because most people are simply unaware of the root causes of Information Overload, such as poor search techniques, unnecessarily copying dozens if not hundreds of colleagues on an e-mail, or calling someone two minutes after sending an e-mail message simply to tell the sender of its presence.

Providing context and history puts things into perspective. The quantity of information has increased in lockstep with advances in technology, beginning with pen and paper and continuing into the Information Age. Not surprisingly, sixteenth-century knowledge workers complained with alacrity about such things as too many books.

In addition, we can also take preemptive steps by teaching knowledge workers more about information and information management and ensuring that they know that their actions (e.g., sending an e-mail to 300 supposedly close colleagues) have a significant impact on their colleagues' efficiency and effectiveness.

In addition, a new class of workers may be required, namely knowledge workers who are capable of efficiently sifting through the torrent of information, separating the wheat from the chaff, and presenting the important nuggets in an accessible manner. That person might be a librarian, researcher, editor, journalist – the titles are almost irrelevant but the information-swamped world will be grateful.

When I was doing a research project in grammar school, I learnt about the Library of Alexandria, built in the third century BCE. The library was charged with collecting all of the world's knowledge, the first effort of its kind, and became a home to scholars from around the world. It also had one of the most original (and possibly apocryphal) acquisition policies ever: It confiscated

every book that came across its borders (Alexandria had a man-made port and was an early international trading hub) and copied each one, usually returning the copy, not the original, to its owner.

Today, multiple parties are attempting to build a modern-day Library of Alexandria, albeit an online one. Wikipedia, since its founding in 2001, has amassed over 9.25 million articles in 250 languages that, while not books, represent a good part of the world's knowledge. In a similar vein, Google is assembling the world's known books online. An official Google blog post from August 5, 2010, stated that Google had accounted for 29,864,880 as of that date. Thus far, it has scanned approximately 10 percent of them.

The concept of the Library of Alexandria (and, subsequently, the New York Public Library, which I frequented during another research project) made quite an impression on me. But I also realized how much information was out there. When I started working at my father's company, Spiratone, during school vacations, helping select and deploy office automation systems, I began to see how information flowed throughout an organization, or sometimes how it didn't flow.

The time I spent at Spiratone created an indelible impression of how technology sometimes could work in harmony with business – and sometimes not.

It was in the early 1990s, by which time I had been at Basex for almost a decade, when I began to realize that the spread of then-new technologies within the enterprise, such as e-mail, were probably creating as many problems as they were solving. This contrasted with the prevailing view of such new technologies, which viewed them as a panacea for all the ills of the office.

CNBC interviewed me on productivity issues back in 1993. The reporter, Bob Pisante, opened the segment by saying “It's not just meetings that are taking up a ton of time, there's also a problem with mail. And in this day and age, mail means e-mail. You think you're busy? Jonathan Spira can get 150 e-mails a day.”

If only that were the case today.

A NOTE TO THE READER

At the risk of potentially overloading you with information before you even start reading, I wanted to alert you to two important issues relating to this book.

First, while this book is bound and fixed in time and space, its mission is not limited to these pages. The book's companion Web site, Overload Stories (www.OverloadStories.com), has been created in order to allow you to share your own experiences and stories about Information Overload and read what others are going through. You will also be able to review updated research and case studies and participate in a dialogue with me on these issues.

Second, I have written this book with the individual knowledge worker in mind. As a result, throughout the book, my references to the knowledge worker are in the singular tense and this requires a singular pronoun, such as he or she. (It is at this point that I am reminded of Mark Twain's excellent essay, "The Awful German Language," in which he points out that "a tree is male, its buds are female, its leaves are neuter; horses are sexless, dogs are male, cats are female.")

To avoid what would be a rather awkward repetition of "he or she" or "him or her" throughout the book and to maintain a modicum of consistency in pronoun usage, I treat the term "knowledge worker" as a masculine noun that requires a masculine pronoun (i.e., I refer to the individual knowledge worker as "he" or "him"). Of course, Information Overload impacts everyone without regard to gender; it is truly an equal opportunity problem.

ACKNOWLEDGMENTS

Despite suffering from significant overload themselves, many knowledge workers have selflessly contributed their time and thoughts to my research over the past ten years which culminated in this book. Without the thousands of knowledge workers who took my surveys, participated in interviews, attended workshops, and sent me their thoughts, I would never have been able to understand the extent to which Information Overload impacts them and at what cost this occurs.

There are a few people whom I must single out by name, due to their unique contributions.

David M. Goldes, president of Basex and a lifelong friend, who has worked alongside me for 22 years studying knowledge workers and knowledge work and kept me focused on the reason we are doing what we do.

Cody Burke, vice president and senior analyst at Basex, who has served as my partner-in-crime since I started to work on Overload! and contributed a good deal of research and thinking that was incorporated in the book.

Basilio Alferow, vice president and editorial director at Basex, who has tirelessly reviewed my writing and made sense of it, even when it made little sense to me.

Greg Andrew Spira, my brother and a veteran of multiple books himself, who was always happy to review at my text and contribute his knowledge of the book-publishing industry.

Nathan Zeldes, president of the Information Overload Research Group, who, first as Intel's Information Overload czar (a title I created to describe his role) and now from his current position, tirelessly contributed data and his experiences in confronting Information Overload.

Tim Burgard, Stacey Rivera, and Vincent Nordhaus, my editors at Wiley, who provided support, guidance, suggestions, and words of encouragement throughout the process.

Finally, I would like to thank my partner, Daniel Lafler, for his unconditional support and understanding during the preparation of this book.

CONTENTS

Foreword	Fighting the Good Fight against Information Bloat	xi
Preface		xiii
A Note to the Reader		xvii
Acknowledgments		xix
	Introduction	1
	The Way Work Was	2
	The Age of the Knowledge Worker	3
	Mark Rivington's Day	4
	A Global Economy	6
	Great Moments and Milestones in Information Overload History	7
Part I	How We Got Here	21
Chapter 1	Information, Please?	23
Chapter 2	History of Information	29
	The Information Revolution and the Book	31
	E-readers Rising	33
	After the Book ... Getting the Word Out	34
	The New News Cycle	40

Chapter 3	Welcome to the Information Age	43
	Is Software Holding Us Back?	45
	The Tools We Use	47
	<i>Mid-Nineteenth-Century Tools: Groundwork Is Laid</i>	48
	Twentieth-Century Tools: The Foundation for the Information Revolution	49
	Breakthroughs in Productivity	51
	Online Collaboration Makes Its Entrance	52
	Enter Charlie Chaplin	53
	Enter the Office Suite	55
	An Office for the Twenty-First Century	56
	The Problem with Documents	59
	The Collaborative Business Environment	62
Chapter 4	What Is Information?	67
	Quantifying Information	69
	Why Information Is Exploding	70
	How Information Is Going beyond Network and Storage Capabilities	70
	Structured versus Unstructured Information	71
	Data Mining to the Rescue?	72
Chapter 5	The Information Consumer	75
Chapter 6	What Is Information Overload?	81
	Meetings: Too Much of a Good Thing?	84
	How Long Has This Been Going On?	85
	More Information – Isn't that What We Wanted?	86
	Information Overload and the Tragedy of the Commons	87
	The Ephemerization of Information	89
Chapter 7	The Cost of Information Overload	93
	In Search of a Management Science	96
Chapter 8	What Hath Information Overload Wrought?	99
	Aspects of Information Overload	101
	Information Overload–Related Maladies	108
	The Compatibility Conundrum	113

Chapter 9	The Two Freds	117
	Entitlement	121
	Mad about Information	122
	Work–Life Balance	122
Chapter 10	Beep. Beep. Beep.	125
	How Much Texting Is Too Much?	126
	Sample Text Phraseology	128
	The Search for Whatever It Is We Are Looking For	130
Chapter 11	Heading for a Nervous Breakdown	131
	Thinking for a Living	132
	The Roundtable	134
	<i>How the Other Half Lives</i>	135
	The New Busy Is Heading for a Nervous Breakdown	136
Part II	Where We Are and What We Can Do	139
Chapter 12	Managing Work and Workers in the Twenty-First Century	141
Chapter 13	Components of Information Overload	147
	E-mail Overload	147
	Unnecessary Interruptions and Recovery Time	149
	Need for Instant Gratification	151
	Everything Is Urgent – and Important	152
Chapter 14	E-mail	153
	The Cost of Too Much E-mail	158
	E-mail and the Network Effect	159
	Reply to All	160
	Profanity in E-mail (Expletive Deleted)	164
	A Day Without E-mail	165
	What to Do With 2.5 Billion E-mail Messages	167
	Deleting E-mail, Deleting Knowledge	168
Chapter 15	The Googlification of Search	171
	Search and the Quest for the Perfect Dishwasher	173
	The Search Experience	175
	<i>Does the King of the Watusis Drive an Automobile?</i>	177

Chapter 16	Singletasking	181
	Attention	187
	Three Types of Attention	188
	Automaticity	190
	The Supertaskers Among Us	192
Chapter 17	Intel's War	195
	Recent Information Overload Initiatives	196
	Quiet Time: A Time for Thought and Reflection	197
	No E-mail Day	199
	E-mail Service Level Agreement	200
Chapter 18	Government Information Overload	203
	The Government's Information Problem	204
	Information Overload Turns Deadly	206
	A Culture of Secrecy	207
	The Consequences of Not Connecting the Dots	210
Chapter 19	The Financial Crisis and Information Overload	213
	No Information Overload in 1907?	215
	Information Overload in the Market	216
Chapter 20	The Tech Industry and Information Overload	219
	The Industry Comes Together?	220
	Information Overload Awareness Day	223
	What Software Companies Are Doing	225
Chapter 21	What Works Better When	229
	Social Software Tools in the Enterprise	231
	What Should I Use When?	232
	10 Tips to Help Lower Information Overload	236
Epilogue	2084: Our Future?	239
References		243
About the Author		247
Overload Stories: The Web Site		249
Index		251

INTRODUCTION

Information has become the great leveler of society and business. Today, practically everyone is more informed than even the most informed person was a mere 25 years ago yet, paradoxically, knows a smaller percentage of the available knowledge. Governments, too, are far better informed about what other nations are doing (which, we hope, leads to fewer misunderstandings) as well as what the citizenry is up to. Young people in poorer nations – witness India, for example – have been able to capitalize on the flexibility of an information society to create better lives for themselves as knowledge workers, something unimaginable a mere quarter century ago.

Knowledge workers think for a living to varying extents, depending on the job and situation, but there is little time for thought and reflection in the course of a typical day. Instead, information – often in the form of e-mail messages, reports, news, Web sites, RSS feeds, blogs, wikis, instant messages, text messages, Twitter, and video conferencing walls – bombards and dulls our senses.

We try to do our work, but information gets in the way. It's not unlike the game Tetris, where the goal is to keep the blocks from piling up. You barely align one, and another is ready to take its place.

When computers first began to encroach upon our everyday lives, they were in distant, glass-walled rooms run by scientists in white coats. The closest most of us came to them were punch cards that came with utility bills. Indeed the term “Do Not Fold, Spindle, or Mutilate” became a running gag among late-night comedians (as well as the name of a movie in the 1970s about a computer dating service).

Technology was the source of conflict in earlier films as well. Films, such as *Metropolis* (1927) and *Modern Times* (1936), commented on the negative impact of automation in the workplace. *Desk Set* (1957), where Spencer Tracy and Katharine Hepburn clash over the computerization of a TV network's research department, presented an epic man versus machine struggle.

Information Overload was first mentioned in 1962 by Bertram Gross in *Operation Basic: The Retrieval of Wasted Knowledge*. It was predicted by Alvin Toffler in *Future Shock* (1970). In 1989, Richard Saul Wurman warned of it in his book *Information Anxiety*.

But Information Overload is no longer a problem of the future; it's something that we have to address and manage right now.

Indeed, the term "Information Overload" has become part of the vernacular. While spending the better part of a week at the remote Blackberry River Inn in Connecticut to focus on writing this book, I found that people I ran into had a lot to say on the topic. They also had an encyclopedic knowledge of the problems that arise from multitasking (something I cover in Chapter 16) and cited several incidents where texting resulted in train crashes and other accidents.

Two 40-ish women dining in a local restaurant and seated next to me asked me about my visit. When I mentioned the topic of the book, they both started rattling off the dangers of multitasking and the problem of finding accurate information online.

Back at the inn, the chief information officer at a large software company quizzed me endlessly on what he could do to make his workforce more efficient and effective, given the severity of the problem.

The Way Work Was

As our work environment changed and evolved, it was accompanied by a significant increase in the amount of information that was being created and that we needed to perform our jobs.

For thousands of years, work was a matter of subsistence. We worked to eat, to survive, to provide our family with food. Life was simpler then. There was a direct correlation between the success of our work and whether there was food on the table, or even if there was a table. The dawn of the Industrial Age changed all that. We went off to factories and offices as fewer and fewer of us lived off the land.

The way we look at work today is inexorably and somewhat romantically linked to 1950s situation comedies where the father, a distant figure, would leave for work in the morning in his suit and fedora, briefcase in hand, returning promptly an hour before dinner, just in time for his wife to ask "Hard day at the office, dear?" A quiet dinner hour usually followed, along with time to discuss homework with the kids and present various life lessons, all of which were to be resolved in under 30 minutes. (The actual work