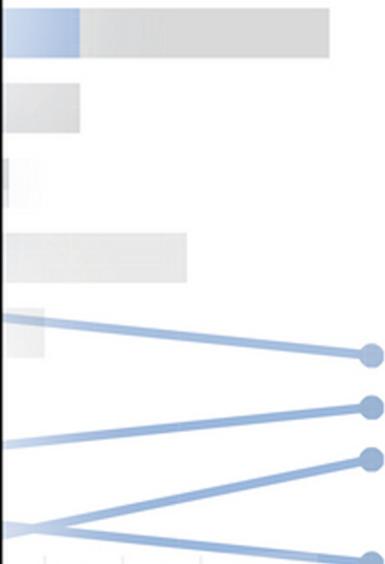




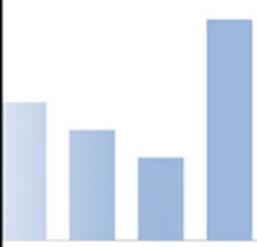
cole nussbaumer knaflic



storytelling with data

a data
visualization
guide for
business
professionals

WILEY



	A	B	C
1	15%	22%	42%
2	40%	36%	20%
3	35%	17%	34%
4	30%	29%	26%
5	55%	30%	58%
6	11%	25%	49%

	A	B	C
Category 1	15%	22%	42%
Category 2	40%	36%	20%
Category 3	35%	17%	34%
Category 4	30%	29%	26%
Category 5	55%	30%	58%
Category 6	11%	25%	49%



storytelling with data

storytelling with data

a data visualization guide
for business professionals

cole nussbaumer knaflic

WILEY

Cover image: Cole Nussbaumer Knaflic
Cover design: Wiley

Copyright © 2015 by Cole Nussbaumer Knaflic. 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 publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Library of Congress Cataloging-in-Publication Data:

ISBN 9781119002253 (Paperback)

ISBN 9781119002260 (ePDF)

ISBN 9781119002062 (ePub)

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

To Randolph

contents

	foreword	ix
	acknowledgments	xi
	about the author	xiii
	introduction	1
chapter 1	the importance of context	19
chapter 2	choosing an effective visual	35
chapter 3	clutter is your enemy!	71
chapter 4	focus your audience's attention	99
chapter 5	think like a designer	127
chapter 6	dissecting model visuals	151
chapter 7	lessons in storytelling	165
chapter 8	pulling it all together	187
chapter 9	case studies	207
chapter 10	final thoughts	241
	bibliography	257
	index	261

foreword

“Power Corrupts. PowerPoint Corrupts Absolutely.”

—Edward Tufte, Yale Professor Emeritus¹

We’ve all been victims of bad slideware. Hit-and-run presentations that leave us staggering from a maelstrom of fonts, colors, bullets, and highlights. Infographics that fail to be informative and are only graphic in the same sense that violence can be graphic. Charts and tables in the press that mislead and confuse.

It’s too easy today to generate tables, charts, graphs. I can imagine some old-timer (maybe it’s me?) harrumphing over my shoulder that in *his* day they’d do illustrations by hand, which meant you had to *think* before committing pen to paper.

Having all the information in the world at our fingertips doesn’t make it easier to communicate: it makes it harder. The more information you’re dealing with, the more difficult it is to filter down to the most important bits.

Enter Cole Nussbaumer Knaflic.

I met Cole in late 2007. I’d been recruited by Google the year before to create the “People Operations” team, responsible for finding, keeping, and delighting the folks at Google. Shortly after joining I decided

¹ Tufte, Edward R. ‘PowerPoint Is Evil.’ Wired Magazine, www.wired.com/wired/archive/11.09/ppt2.html, September 2003.

we needed a People Analytics team, with a mandate to make sure we innovated as much on the people side as we did on the product side. Cole became an early and critical member of that team, acting as a conduit between the Analytics team and other parts of Google.

Cole always had a knack for clarity.

She was given some of our messiest messages—such as what exactly makes one manager great and another crummy—and distilled them into crisp, pleasing imagery that told an irrefutable story. Her messages of “don’t be a data fashion victim” (i.e., lose the fancy clipart, graphics and fonts—focus on the message) and “simple beats sexy” (i.e., the point is to clearly tell a story, not to make a pretty chart) were powerful guides.

We put Cole on the road, teaching her own data visualization course over 50 times in the ensuing six years, before she decided to strike out on her own on a self-proclaimed mission to “rid the world of bad PowerPoint slides.” And if you think that’s not a big issue, a Google search of “powerpoint kills” returns almost half a million hits!

In *Storytelling with Data*, Cole has created an of-the-moment complement to the work of data visualization pioneers like Edward Tufte. She’s worked at and with some of the most data-driven organizations on the planet as well as some of the most mission-driven, data-free institutions. In both cases, she’s helped sharpen their messages, and their thinking.

She’s written a fun, accessible, and eminently practical guide to extracting the signal from the noise, and for making all of us better at getting our voices heard.

And that’s kind of the whole point, isn’t it?

Laszlo Bock

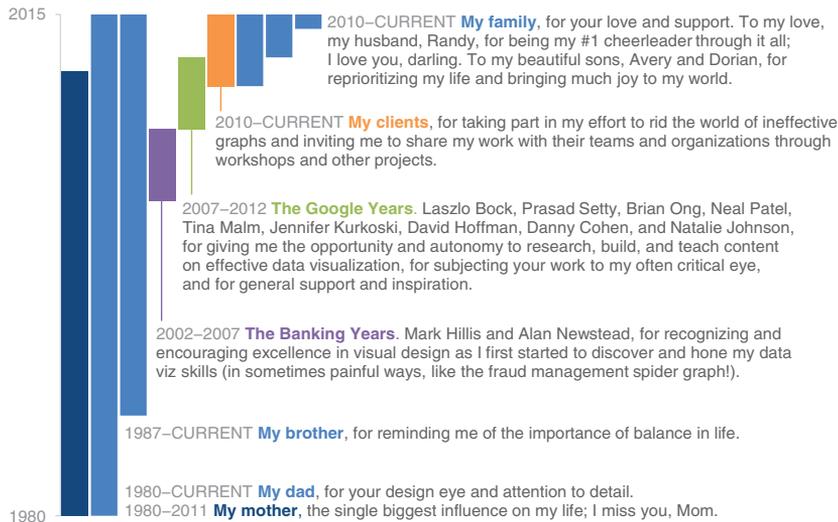
SVP of People Operations, Google, Inc.
and author of *Work Rules!*

May 2015

acknowledgments

My timeline of thanks

Thank you to...



Thank you also to everyone who helped make this book possible. I value every bit of input and help along the way. In addition to the people listed above, thanks to Bill Falloon, Meg Freeborn, Vincent Nordhaus, Robin Factor, Mark Bergeron, Mike Henton, Chris Wallace, Nick Wehrkamp, Mike Freeland, Melissa Connors, Heather Dunphy, Sharon Polese, Andrea Price, Laura Gachko, David Pugh, Marika Rohn, Robert Kosara, Andy Kriebel, John Kania, Eleanor Bell, Alberto Cairo, Nancy Duarte, Michael Eskin, Kathrin Stengel, and Zaira Basanez.

about the author

Cole Nussbaumer Knaflic tells stories with data. She specializes in the effective display of quantitative information and writes the popular blog storytellingwithdata.com. Her well-regarded workshops and presentations are highly sought after by data-minded individuals, companies, and philanthropic organizations all over the world.

Her unique talent was honed over the past decade through analytical roles in banking, private equity, and most recently as a manager on the Google People Analytics team. At Google, she used a data-driven approach to inform innovative people programs and management practices, ensuring that Google attracted, developed, and retained great talent and that the organization was best aligned to meet business needs. Cole traveled to Google offices throughout the United States and Europe to teach the course she developed on data visualization. She has also acted as an adjunct faculty member at the Maryland Institute College of Art (MICA), where she taught Introduction to Information Visualization.

Cole has a BS in Applied Math and an MBA, both from the University of Washington. When she isn't ridding the world of ineffective graphs one pie at a time, she is baking them, traveling, and embarking on adventures with her husband and two young sons in San Francisco.