PEOPLE ANALYTICS

How Social Sensing Technology Will Transform Business and What It Tells Us about the New World of Work

BEN WABER

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"*People Analytics* is a watershed book in advancing the understanding of human dynamics. No longer must we rely solely on intuition when it comes to behavior; we now have hard measures for soft skills. These advances bring what used to be nuance to the forefront in driving performance."

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—**Sherry Turkle**, Professor, MIT; author, most recently of *Alone Together: Why We Expect More of Technology and Less from Each Other*

People Analytics

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People Analytics

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Ben Waber

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To Becca and Josh

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Acknowledgments

A major point in this book is that we need others to succeed, and in that sense I have been luckier than most. Nearly all of the work in this book was done in close collaboration with a number of people who have inspired me and profoundly shaped my thinking.

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It was also in Sandy's group where I was paired up with Taemie Kim and Daniel Olguin. Together with Sandy, we collaborated on most of the experiments I discuss in this book. It was through our collaboration and friendship that we were able to push the boundaries of science and sensing during our time at MIT and beyond.

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About the Author

Ben Waber is President and CEO of Sociometric Solutions, a management services firm that uses social sensing technology. He is also a visiting scientist at the MIT Media Lab, where he received his Ph.D. He was previously Senior Researcher at Harvard Business School.

Waber's work has been featured in *Wired*, the *New York Times*, on NPR, and he has given invited talks at Google, EMC, and Samsung. His research was selected for the *Harvard Business Review*'s List of Breakthrough Ideas and the *Technology Review*'s Top 10 Emerging Technologies.

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Preface

People analytics is simultaneously an extremely old and new phenomenon. When we use data to uncover the workplace behaviors that make people effective, happy, creative, experts, leaders, followers, connectors, early adopters, and so on, we are using people analytics. Thousands of years ago, this data came from humans' observations of the world. By watching their collaborators interact with other people and react to changing conditions, people were able to make educated guesses about what makes them effective and happy. Later, we augmented our senses using surveys and interviews. These methods allowed us to obtain responses from thousands of people, establishing new metrics that were a bit more quantitative, but this did not herald any radical change in the way people run companies.

Today, people analytics is poised for a revolution, and the catalyst is the explosion of hard data about our behavior at work. This data comes from a wide variety of sources. Digital traces of activity from e-mail records, web browsing behavior, instant messaging, and all the other IT systems we use give us incredibly detailed data on how people work. Who communicates with whom? How is IT tool usage related to productivity? Are there work styles that aren't well-supported by current technology? Although this data can provide amazing insights, it's only the digital part of the story.

Data on the physical world is also expanding at a breakneck pace thanks to the rapid development of wearable sensing technology. These sensors, from company ID badges to cell phones to environmental sensors, provide reams of fine-grained data on interaction patterns, speaking patterns, motion, and location, among other things. Because most communication and collaboration happens face to face, this data is critical for people analytics to take that next leap forward and become a transformative organizational tool. By combining precise data from both real and virtual worlds, we can now understand behavior at a previously unimaginable scale.

In this book, I use this data in a series of case studies to illuminate a new kind of people analytics. In particular, we'll see how slight changes in behavior, from changing when you take breaks to what

lunch tables you sit at, can make you happier, healthier, and more productive. This book shows how people analytics transforms our understanding of socialization in the workplace, the impact of office layout, and even concepts as "soft" as creativity.

Coupled with this new sensing and data mining technology, the findings in this book can help us imagine what organizations could be. I'll take a quick tour through history to help you understand all the different ways people have organized themselves since humans first formed tribes millennia ago. Looking to the future, we can use this knowledge to create fundamentally new ways of organizing people that will radically improve the way we work. Office layouts that respond to social context and real-time feedback on communication patterns and interaction styles are new levers enabled by people analytics that no one could have imagined.

This book is by no means the final say on the topic of people analytics—rather, it is a beginning. The years ahead will offer many new opportunities for people analytics that cannot possibly be anticipated. The following pages explore some of those limitless possibilities, their foundations in history, and some paths to the future.

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In an increasingly competitive world, it is quality of thinking that gives an edge—an idea that opens new doors, a technique that solves a problem, or an insight that simply helps make sense of it all.

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