Praise for *I'm Not a Numbers Person*

Data can be intimidating for many people. Fisk's book provides a valuable lifeline to anyone who aspires to start using data on a more regular basis but doesn't know where to begin or how to get started. She lays out the key data concepts and skills you'll need to initiate your journey into the numbers with confidence.
Brent Dykes, Chief Data Storyteller, Analytics Hero, LLC

Thanks to technology, love it or not, data is everywhere. This book serves as an essential guide that helps all develop comfort and confidence in not just understanding and navigating data better, but in embracing and leveraging it in ways that help us improve the way we live and work. A must-read!
Jake Sapirstein, Founder and Head of Strategy, LiftCentro

In this book Selena shows you exactly how to integrate data and storytelling in a succinct, easy-to-understand and practical way. I cannot recommend this book enough – it is a must-read for all leaders in all areas of business.
Winitha Bonney OAM, Diversity and Inclusion Expert

I'm Not a Numbers Person is the book you want every person in your company to read to have better conversations about the business. Whether you lead a team, need to find more customers, or want more confidence in your decisions, this book is your go-to resource. CEOs and HR leaders – you need to get *I'm Not a Numbers Person* for every employee!
Geraldine Ree, Experienced SVP, author and speaker

'Emotional' and 'engaging' are not words commonly associated with analytical books, but Selena's storytelling method breathes life into the numbers. *I'm Not a Numbers Person* is written in a way that encourages you to think and reflect on your own circumstances, then gives you the tools to develop your own abilities.
Ian Wiltshire, Chief Information Officer

Selena's work engages, inspires and challenges people in an authentic manner. Personnel in our organisation are richer for the opportunity to have experienced Selena's passionate message that is so relevant to contemporary business. We all now see our data stories, and those of our clients, as integral to business improvement and maximising impact.
Catherine Jackson, Director, Leopard Tree Consulting

Selena shares practical, thought-provoking insights in her book that challenge individuals and teams to engage with data to inform decisions and to tell the story of the business: past, present and future. I highly recommend this book to both aspiring and experienced leaders who want to accelerate their leadership and management capacity.
Liam Kelly, CEO, Southern Cross Motel Group

I'm not a numbers person

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How to make good decisions in a data-rich world

Dr Selena Fisk

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Introduction

'In today's business environment, organizations accumulate massive amounts of data, and their ability to make informed decisions and drive business performance depends in a part on their acumen and competency in analyzing these data and converting them into actionable insights.'

(Daradkeh, 2021)

My friend Michael runs two photography companies and has done so for the last 10 years. He is a self-professed nerd and loves everything tech related. I was recently talking to him about his business – about the progress he was making, and how he makes financial decisions. It surprised me when this spreadsheet loving, numbers-mad person told me that, even though he tracks every dollar earned and spent to the cent, he is not sure what to do with all the other data he has access to. He regularly uses Google Analytics to look at how his website is performing, where his customers come from and how long they spend looking at different pages; but he admitted he doesn't actually know what he should be paying attention to, or what to do about it. He says it is 'interesting' information, but he doesn't do anything with it.

At the opposite end of the spectrum, there are organisations that pride themselves on being data-driven. One example is Expedia, a company that has access to, and uses, extensive amounts of data (Melendez, 2015). The 2015 merger of Expedia and Orbitz led to the development of a huge travel organisation that holds and collects millions of complex data points – meaning that, as of 2017, Expedia needed approximately 150 data scientists on staff to cater for, and harness, the huge amounts of information (Reuters Events, 2017). This data is used to do things like predict user behaviour, provide recommended hotel offerings and organise options based on ratings, cost or duration. Over the last two years, individual staff, and Expedia as a whole, have promoted and shared their data-driven culture with others (Sharma, 2021) as they feel it has given them a competitive edge – that it sets them apart in understanding consumer behaviour.

Irrespective of where you sit on the spectrum of data and evidence use – from not knowing what to use or how to use it, through to capitalising on data – and regardless of whether you are a solopreneur, a small business owner, an emerging leader or in an executive leadership role, life in the 21st century dictates that you need to know your numbers and use them to enhance your impact. Increasingly, executives and board members around the world are held personally responsible for knowing the data – meaning that this understanding helps minimise and mitigate risk not only for businesses but for individuals. Whether you're organising your home budget and feeding your kids, or running a multinational, multi-million-dollar organisation, it is no longer sufficient to say 'but I'm not a numbers person' and believe that it is someone else's job to keep track of the numbers. We all need to be data literate and able to ask the right questions at the right time.

Data is all around us, and the quantities of data that we have access to are increasing at an extraordinary rate. Masses of data have been growing exponentially for the last few decades; however, finding

a consensus on just how much data is out there is quite difficult. In a publication by the World Economic Forum, Jeff Desjardins (founder and editor at Visual Capitalist) estimated that by 2020, there would be '40 times more bytes [of data] than there are stars in the observable universe.' That amount of data is incomprehensible (and, to be honest, I don't even really understand how or where all that information is stored)! But what we do know is this increased volume of data needs increased storage space. The largest data centre in the world is currently being built in the Nevada desert. While the average data centre occupies approximately 100,000 square feet, the new centre – Switch's Citadel Campus – will contain 7.3 million square feet of data storage (Zhang, 2020). The data-verse in which we find ourselves is continuing to expand exponentially.

Whether you realise it or not, you are generating and being exposed to more data than ever before. While this might sound daunting, it means you have more evidence than ever before to inform your decisions. If you weren't great at maths at school, or you feel that you need to get better with numbers (either for your current role or to move up to the next level), this is the book for you.

No longer is it enough to settle for numbers not being your strength, or hope someone else will analyse and act on the data for you. We desperately need more humans on this planet who fundamentally understand and respond to the evidence they have, as well as significant numbers of people who can critically engage in conversations about data and numbers and use them in a way that informs what they do.

How do you use data?

Like the development of any skill, everyone fits somewhere into a continuum of data use – from no understanding and use through to

highly effective and reflective practice. Along this continuum, people fit into one of six different levels of skill and understanding in using evidence, and the further they move up the levels, the greater impact they can have as a result of using and responding to the data. As shown in figure 0.1, as you progress along the continuum of the amount of data that you use, you can have an increasing impact within your sphere of influence. These categories apply regardless of your home and work life situation, as they do to the teams you work in and lead, and the organisation you work for. The six levels are: unconscious, conscious, casual, aware, active and reflective. Like any new skill, with time and effort, we all have the potential to move up through the levels.
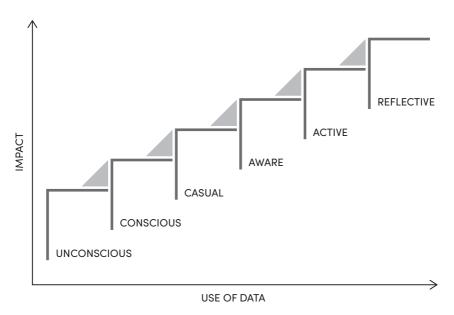
Figure 0.1: Levels of data use versus impact

As you read through the explanations of each level on the following pages, think about which of these categories you fit into. Which description resonates with you the most? What about your colleagues

and members of your team – where would you position them? Ultimately, the position that you are currently in doesn't really matter – what is important is to reflect on your current use of evidence and the impact this has, and remember that you can and will progress up the levels if you wish to.

Unconscious

Unconscious data and evidence users are genuinely oblivious to the data in the world around them. Not too many of these people exist in our world now; but if you know someone who still withdraws money from the bank with their chequebook, doesn't own a smartphone or isn't connected to the internet, they are probably an unconscious user. They are blissfully unaware of the data collected on citizens, data analysts' roles in organisations, and the existence of data science degrees.

If you have picked up this book, chances are you are not in this category. The unconscious user doesn't know what they don't know, therefore they have little interest in learning about numbers in this way. They are unaware that there's a whole other world out there where numbers rule.

Conscious

Conscious data users have a limited understanding of the numbers and what they mean. Unlike *unconscious* users, they are at least cognisant of the fact that data exists.

Conscious users might call Mark Zuckerberg's social networking behemoth 'The Facebook', or worry about people stealing all their money if they get a bank card. They know there is something else out there, they just don't know much about it.

Because they don't have a deep understanding of it, people in this stage are often quite fearful of data. They might have heard

something negative, or latched onto a particular risk about a data breach – and because they don't understand data risk, they treat the story like universal truth. These people are sometimes swayed by fear-based marketing (Hastings et al., 2004); because they don't have a full understanding of the numbers, they don't think critically about the information they receive and they latch on to the fear.

Casual

Casual data users understand a few key bits of data, but not many. They may understand that data is important but not necessarily have skills to use it, or not see the value in data but know they need to start learning.

Your upline who shows a graph in a meeting and fumbles their way through talking about it – confusing themselves in the process because they don't have a deep understanding of what the graph means and are thrown by questions on elements they don't understand – is probably a casual user. This person might have a good handle on their own finances, but don't really do much more with numbers outside this.

People at this level often have many misconceptions about data – from picking up inaccuracies along the way, or because they don't have much formal or structured training. They might occasionally get things wrong or have some fundamental flaws in their understanding. Often people in this group are attempting to learn and build their understanding, so they can move up the ladder of proficiency.

Aware

An *aware* data and evidence user is developing their understanding of what the numbers tell them, and may be trying to integrate this information in their life or work. People in this stage understand why data is important and why they should invest time and effort

in upskilling, and they are generally doing so, or attempting to. They might be testing out new ideas and working with data in slightly different ways to how they have before. They might be starting to think about the things that work and are most useful for them. They may prioritise (or try to prioritise) learning in the data sphere, but are acutely aware of the time it takes and the effort required to get them to where they want to be.

Active

When someone is an *active* data user, they are thinking about how the numbers and insights gleaned from the data inform their life or work. People who take action because of a shift in the housing market, or change the exposure of items in a store based on best sellers, are not just having a 'good idea' – they are engaging in evidence-informed decision-making. Not only are people at this level able to read, interpret and understand the numbers, they are able to see how the evidence connects with real people, real contexts and their life. They explore the ways that they might use this information to make things better. People in this category will not always get it right – after all, life is never just as easy as a straight cause-and-effect or input-versus-outputs scenario – but they are giving it a good go.

Reflective

Moving beyond action takes a person to the point of being a *reflective* user. They use data and evidence to inform action, reflect on the impact the action has had, then continue to refine and adjust as they go.

People in this stage realise that there is no 'magic bullet' or perfect solution; but a cycle of ongoing data collection, analysis, action and reflection helps them refine what they do. They might adjust share purchases based on the market, regularly refine organisational goals

and actions, or use social media analytics to shape, inform and refine their marketing strategy over time. The reflection stage is innovation, action and research at work. As Simon Sinek said in his book *The Infinite Game* (2019), there is no finish line – reflective data users are infinitely learning, evolving and adjusting.

Moving up the data-use levels

Regardless of where you are on the data-use continuum, you can and will improve your skill and understanding if you try. This book provides you with the tools and knowledge to become more effective in using data to inform your decision-making. As your skill improves, you will move up the levels until you are adept at using data to inform action, and reflect and refine as you go.

While moving up the levels is the goal for anyone who wants to have more impact, it is important to recognise that this growth takes time and effort. Moving from one level to the next requires time, exposure and practice, and requires you to shed some of the preconceived ideas that you have around data and evidence-informed decision-making. However, the greater your use of evidence in your decision-making, the more likely it is that your actions will have a positive impact and you can lead shifts in your own life, with your family and within your organisation.

My passage through the levels occurred while I was working as a secondary school teacher. At the start of my career, I was completely unaware of the impact of data in the classroom and school – I was focused on how I did my job, how I taught the curriculum and how I built relationships with the kids. The idea of data was completely foreign to me, other than marking assignments or exams and giving a letter grade, or a percentage-correct score. I moved up to the level of *conscious* data use when I moved to the United Kingdom, where

I heard regular conversations about data but didn't really understand what it was all about. (I was, to be honest, more concerned with when it was going to stop raining!) I moved up to become a *casual* user as I began to understand some of the key indicators that were tracked and used in schools (such as the percentage of students who passed particular subjects).

After a few months in a middle management role I became an *aware* user, and started to think more about the data that applied to me in my role and my team. It was a steep learning curve, accelerated by the data-driven culture, the high expectations of fast learning and the senior leaders' active development of my skills in support and suggested models. As I learned more, became faster and could understand the data more quickly, I became more able to connect it to my own practice. I tried out some ways of addressing the challenges many of my students faced.

I transitioned to the *active* level when I started trying new things, testing out ideas and talking to my team members about how they were using their data. We set some goals and sought to improve the pass rates in our subjects by collecting and using data for things we could control.

I became a *reflective* user when I started learning from my mistakes, evolving and adapting what I did in my department and in my classroom, and trying to innovate in my teaching strategies and with my team. Sure, we made mistakes; but we were guided by the evidence that we had access to and collected, it informed our decision-making, and it meant that we had a considerable impact on student outcomes. We were able to double the percentage of students who passed my subject in a 12-month period, and most of that was due to the way that we collected and responded to the data. There was a similar percentage point increase in the second year I was in the role.

Although my experience with data started in schools and classrooms, the idea of using and responding to data is far bigger than

this context. While the context changes depending on the field you are in, the principles of capitalising on data remain the same – you must put people first; be solutions-oriented in your data use; and remember that when data is not acted upon, it has no impact at all.

Becoming a numbers person

In my work as a data coach and storyteller since I left the classroom, I have learned about the challenges that individuals and organisations face in using evidence to inform their decision-making. Sometimes that comes down to a lack of confidence. It's usually due to limited training or exposure to learning opportunities. Often leaders tell me that they are embarrassed to ask for additional help, as they believe they should already have the skills and understanding of how to use data in their role.

This book aims to help you (and members of your team) move up the levels of data use, so that you can engage with the evidence that you have to make better, evidence-informed decisions in your sphere of influence. That might be in your own work or your small team in your small business, or you might be an executive looking to become more fluent in the use of data.

This book is designed to be read from start to finish if you are new to data, but each of the five chapters offers standalone content that will assist in whichever element of data use you would like to dig into. Chapter 1 considers the question 'why data and why now?' and unpacks some of the ways that you should think about the data that you are given. Chapter 2 focuses on understanding the numbers, and it includes a discussion on different types of data that are available, including quantitative and qualitative data types. This chapter also explores how to decide which data is most important. Chapter 3 covers visualising data – in other words, representing data in a graphical way.

It discusses the way people read visualisations, developing your own visualisations, and knowing how to choose the best visualisation for your aims.

Chapters 4 and 5 focus on the notion of data storytelling, which is the ultimate goal of using data. Chapter 4 looks at establishing trends in data, including some of the fundamental principles you must understand when thinking about data, and possible models of analysis questions you can use in the process. There are plenty of ways that human brains want to work against us with data – including confirmation bias and loss aversion – but if you can recognise these regular patterns and trends, then you can rethink the data and the way you respond to it. Chapter 5 considers how to make decisions, talk about data and work with others to collaboratively establish actions as a result of the information you have.

Each chapter steps you through the elements of data storytelling, to progressively build your skills in the aspects needed to critically engage with the data and to tell effective data stories.

Data storytelling involves thinking about what the numbers tell you about real people and real lives, and considering what your actions should be as a result of knowing that information. You won't effectively engage with and use data unless you get to this point. In saying that, your data literacy and visualisation skills are not fixed, or something that you can tick a box and move on from if you feel you have it handled. In new roles, as time progresses, and as new data sets are introduced, you'll need to go back and learn about the context of the new metrics (or measures) and different types of visualisations, so that you can return to a place of data storytelling with the new information you have. In other words, being an effective data storyteller involves continual engagement and curiosity. Unfortunately, research suggests that only one in 10 organisations engages with data storytelling on a regular basis (Tischler et al., 2017), and that organisations are

not investing enough in building employees' data storytelling skills (Amini et al., 2018).

I hope that you find this book engaging, useful and more interesting than the maths textbooks that you used to hate when you were in school. Numbers can be fun – I promise. They can teach you a lot, and they can help you make good decisions. But to use data in this way, you need to replace your fear of numbers with curiosity. You need to know how to read the data and use it effectively. Once you do this, you, too, can become a numbers person.