Chapter 6

Narrative

The Structure of Your Data Story

A lost coin is found by means of a candle; the deepest truth is found by means of a simple story.

—Anthony De Mello, author

Emily, a rising star at a large technology company, was tasked with piloting a promising initiative for a new product. One of her first tasks as the product manager was to gather feedback from existing customers on the new technology's potential. While her intuition told her the new product would be well received by customers, she wanted to gather evidence to confirm her theory. After surveying more than 100 of her company's top customers and receiving highly positive feedback, she was confident the new technology would fill a critical gap in his company's product portfolio. After working with a small team of developers to build a working prototype, Emily shared the concept with various internal product teams to gauge

their interest and support. Similar to the external feedback she gathered, the internal response to the idea was equally positive.

Armed with impressive survey findings, powerful customer quotes, internal support, and a working demo, Emily crafted a compelling data presentation that featured several insightful data visualizations. Over the years, she had also established great rapport with many of the decision makers who would be approving her project, including a few key female executives whom she viewed as career mentors. When it came time to present the slides to the product leadership team, Emily felt as though securing funding for the project would just be a formality. However, despite the overwhelming evidence in support of the new product, it wasn't selected as one of five initiatives to receive funding that year. Emily's project team was subsequently disbanded, and she was assigned to focus on other product needs.

Puzzled and frustrated by what happened, Emily endeavored to determine what went wrong with her team's pitch. After some probing, she found she had made two critical mistakes. First, she thought she provided all the information the audience would use to evaluate and prioritize her project. However, Emily discovered too late that there was actually some hidden resistance to her project. While the other product teams openly showed support for her team's idea, it turned out another team coveted the new technology and thought they should be the ones to introduce it. Unbeknownst to Emily, a false rumor was circulated that its M&A team was close to acquiring another firm with similar technology, which unexpectedly dropped her project off the executives' priority list. Emily's promising project became the victim of office politics as she allowed another team to shape the narrative.

The second mistake Emily made was being seduced by her own data. She was so confident in the strength of her insights and visuals that she didn't accompany them with an airtight narrative. If Emily had known she was up against some resistance, a stronger narrative could have allayed her audience's concerns, corrected any misinformation, and driven home the importance of moving forward with the new solution. Years later, Emily still shakes her head at what could have been. Her company didn't end up buying or building

the technology, and it still represents a clear gap in the company's product strategy. As this example shows, even with a great data foundation and supporting visuals, your insights still need a well-formed narrative to drive action and change.

Defining a Narrative Model for Data Stories

> Storytelling is ultimately a creative act of pattern recognition. Through characters, plot and setting, a writer creates places where previously invisible truths become visible. Or the storyteller posits a series of dots that the reader can connect.
>
> —Douglas Coupland, novelist

After you've conducted an analysis and found a valuable insight, the next challenge is to determine how you're going to present your findings in a meaningful way to your intended audience. Using a narrative structure to organize your information not only makes it easier for an audience to consume your content, but it also helps you prioritize what is essential to your message—and sometimes, more importantly, *what isn't*. While piecing together a series of facts into a meaningful story may not be the same as crafting a fictional story, the time-tested dramatic structure can be adapted and applied to data storytelling. In the journey to find a narrative approach for data storytelling, I encountered three common narrative models:

1. **Aristotle's Tragedy Structure.** The Greek philosopher Aristotle was one of the first to examine the basic structure and rules of drama in his book *Poetics*. For Aristotle, the plot—the organization of a sequence of incidents or events—was the "soul" of a story. He saw it as the most essential aspect of a Greek tragedy, ahead of characters or any other narrative elements. Aristotle implied stories have a simple structure—*a beginning, middle, and end*—that are connected through a series of cause-and-effect events (see Figure 6.1). Many people have interpreted his structure to represent three acts—a setup, an obstacle/confrontation, and a resolution. However, he actually only identified two key parts in a traditional

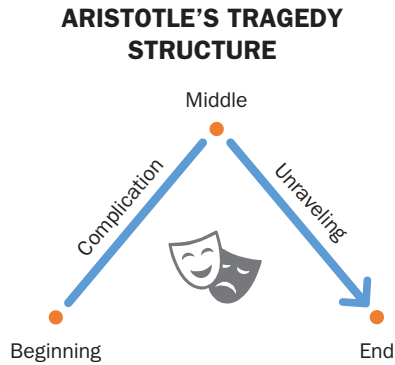

Figure 6.1 Aristotle's model is fairly straightforward, but it has had a significant influence on how people view narrative structure.

Greek tragedy—a complication and unraveling—that represent the plot turns being like a knot that is tied and then untied. Even though his views were expressed more than two millennia ago, Aristotle's simple narrative model continues to have a significant influence on how stories are crafted today.

2. **Freytag's Pyramid.** The German playwright and novelist Gustav Freytag (1816–1895) studied Greek and Shakespearian drama to understand how they were structured. Building on Aristotle's simple model, Freytag developed a more robust narrative framework to better understand the arc or progression of a story (see Figure 6.2). In his book, *Technique of the Drama* (1895), he lays out a "pyramid-based" dramatic structure with five key stages:
   a. *Exposition (introduction):* The beginning of the story when the setting is established and main characters are introduced. It provides the audience with ample background information to understand what's going to happen.
   b. *Rising action:* The series of events that build up to the climax of the story.
   c. *Climax:* The most intense or important point within the story. It is often an event in which the fortune of the protagonist turns for the better or worse in the story.
   d. *Falling action:* The rest of the events that unravel after the main conflict has occurred, but before the final outcome is decided.
   e. *Dénouement (conclusion):* The conclusion of the story where all of the conflicts are resolved and outstanding details are explained. *Dénouer* is actually the French verb for "to undo or untie" (a knot).

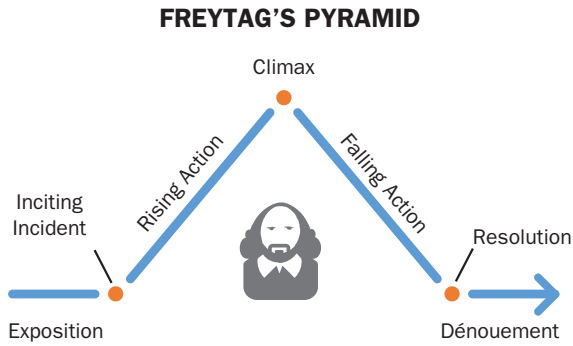

Figure 6.2 Freytag's model builds on Aristotle's model, adding more elements that provide more guidance around the narrative structure.

Similar to Aristotle's model, Freytag's model has been adapted and modified since it was first introduced. One key addition is the *inciting incident,* which is a major point in the plot where it transitions from the introduction to the beginning of the action or conflict. Today, Freytag's five-stage model is used to analyze all kinds of stories found in books, plays, and films. Researchers have even used it to analyze TV advertisements. They found 30-second Super Bowl ads that closely matched Freytag's dramatic structure were rated significantly higher than other ads that didn't (Rosen 2014).

Harry Potter and Freytag's Pyramid

If you are familiar with J.K. Rowlings' first book, *Harry Potter and the Sorcerer's Stone* (1997), Freytag's Pyramid can be used to illuminate its narrative structure. Starting with the *exposition*, you meet a mistreated 11-year-old orphan, Harry Potter, who lives in a cupboard under the stairs in the house of his uncaring aunt and uncle. The *inciting incident* occurs when Harry unexpectedly uses magic to free and communicate with a snake at a local zoo. The *rising action* ensues when Harry is brought to the Hogwarts School of Witchcraft and Wizardry and fears someone is plotting to kill him. Eventually, in the *climax*, Harry confronts the villain Voldemort, who murdered his parents. In the *falling* action, Harry learns Headmaster Dumbledore was able to foil Voldemort's plans

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to steal the Sorcerer's Stone. In the *dénouement*, Harry's Gryffindor house is awarded the Hogwarts House Cup. Triumphantly, Harry and his new friends leave the school to enjoy their summer break. You will find Freytag's Pyramid can be applied to most popular films and books.

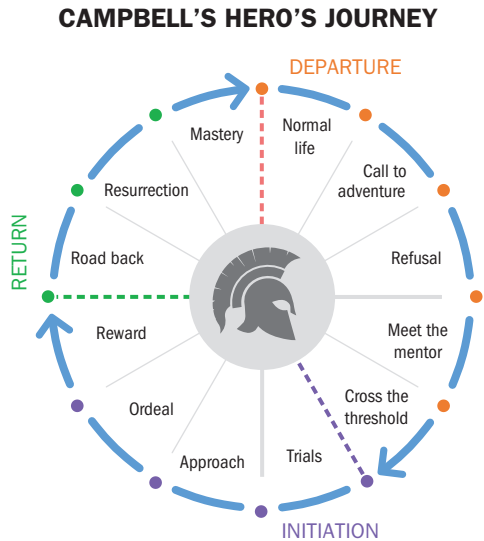

Figure 6.3 Campbell's model is more complex with multiple stages and has a cyclical pattern rather than a triangle or pyramid format.

3. **Campbell's Hero's Journey.** The last model was popularized by American mythologist Joseph Campbell in 1949. After studying various myths and fables from different cultures and genres, Campbell found they followed a universal narrative archetype that he called the *Hero's Journey* or *monomyth* ("one story"). The structure centers around a hero being called on an adventure, overcoming challenges, and then returning as a champion. Campbell divided his archetype into 17 different stages that can be grouped into three main sections: departure, initiation, and return (see Figure 6.3). Subsequent authors have simplified Campbell's 17 stages down to 8–12 stages. Compared with the previous two models, Campbell placed more emphasis on the central character

of the story. His model is also represented as a cyclical pattern rather than a triangle or pyramid. When George Lucas was finalizing his script for *Star Wars: A New Hope*, he leaned heavily on Campbell's writings (Seastrom 2015). If you examine the *Star Wars* plot, you can see how the protagonist Luke Skywalker passes through each stage in Campbell's hero journey.

As I evaluated each of the narrative models in terms of data storytelling, I felt like Goldilocks in the fairy tale *Goldilocks and the Three Bears*. I found Aristotle's beginning-middle-end structure to be too simple, as it didn't provide enough direction on how to construct a story. Without more definition around the narrative structure, you could say multiple things—a report or a textbook—have a beginning, middle, and end, but that clearly doesn't make them stories. At the other end of the spectrum, I found Campbell's Hero's Journey with its multiple stages to be too complicated for assembling data stories. While it might be helpful for screenwriters and novelists, it's too complex to be useful for data storytellers. Like Goldilocks, I found the middle option—Freytag's Pyramid—to be "just right" in terms of detail and ease of use.

Using Freytag's Pyramid as a foundation, I developed a four-stage narrative structure called the Data Storytelling Arc (see Figure 6.4).

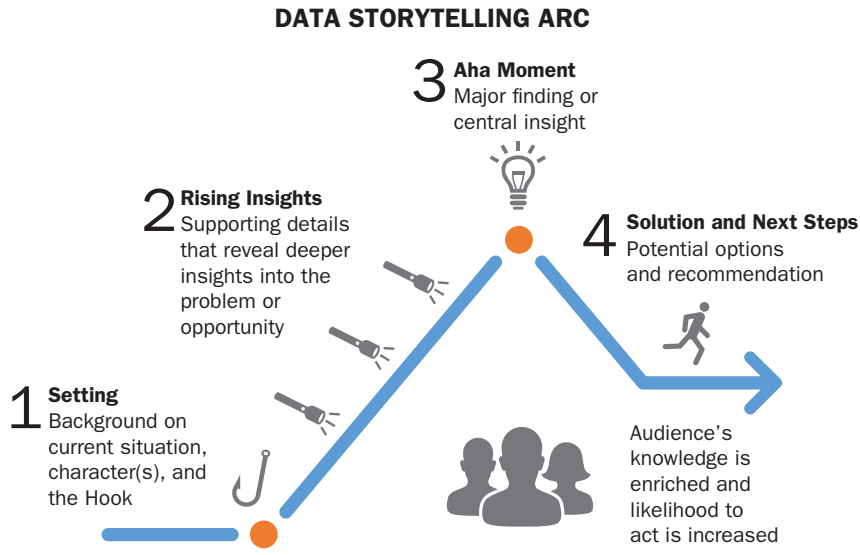

Figure 6.4 The Data Storytelling Arc uses Freytag's Pyramid as a foundation for how to tell stories with data in four steps.

In a traditional literary story, the exposition would introduce the setting details (location, timeframe, situation) and main characters (appearance, personality, background). At the beginning of a data story, it's important to establish key details such as the area of focus and time period. While you may not have actual characters in your data story, you may have a segment of people such as customers, employees, investors, and so on that you will focus on. The *Setting* of your data story should provide the audience with "just enough" background information so they can easily grasp the data you share with them. Many analysts make the mistake of beginning their data story with an in-depth summary of their entire analysis process. While this approach provides a significant amount of context, the extra detail can easily overwhelm your audience and should be relegated to an appendix. Most audiences will not care about the steps or process you used to find your insights—they're more curious about what you discovered.

A key part of the Setting phase is the *Hook*, which is a data story's equivalent of the inciting incident. While the rest of the information in the Setting provides crucial background information, the Hook is a notable observation that acts as a turning point in the story and begins to reveal a problem or opportunity (sort of a "hmm moment"). The combination of the contextual information and the Hook creates a powerful juxtaposition. Your audience should understand what's normal or expected so they can appreciate something that's extraordinary. For example, a significant spike or dip in the daily results for a key metric can serve as the opening teaser of your data story.

After the Hook has introduced something notable or unusual to the audience, the next stage is the *Rising Insights* phase, in which the subject of your analysis is explored at a deeper level. Rather than offering up a loose collection of random facts, the goal is to peel back the layers of the problem or opportunity in a directed, focused manner. You want to include only the information that is necessary to advance the desired narrative because less relevant or tangential findings will weaken your data story.

Eventually, you will reach a climax, or the *Aha Moment,* of your data story—this is when you share the main finding or central insight. It provides a clear insight, not just an interesting observation as the Hook does. How much time you spend in the Rising Insights stage

will depend on your Aha Moment and how much build-up it requires. Some central insights may be fairly straightforward to explain, but others may need multiple supporting details for the audience to fully understand or accept.

But just because you've shared your Aha Moment with your audience, that doesn't mean your data story is complete. Just like a literary story doesn't end directly after its climax, your data story must continue forward and share how the audience should leverage the new insight. In order to drive action and change, the last *Solution and Next Steps* stage is essential to effective data storytelling. If you don't guide your audience through the different options they have, they may not know what to do after being enlightened by your findings. If you're not proactive with suggesting a potential solution or discussing next steps, the opportunity to drive change may be lost.

To demonstrate how analysis results can be assembled into a data story with this narrative model, let's turn to a simple ecommerce example. Rather than using real charts, I'll use pseudo charts to not get caught up in the visualization details (see Figure 6.5). In the Setting stage, you can see how the total online sales follow a cyclical pattern each quarter. This year's sales (blue) have been trending above the previous year's results in every period until recently. For some reason, the current quarter's results took an unexpected downward turn. This anomaly is the Hook for this particular data story.

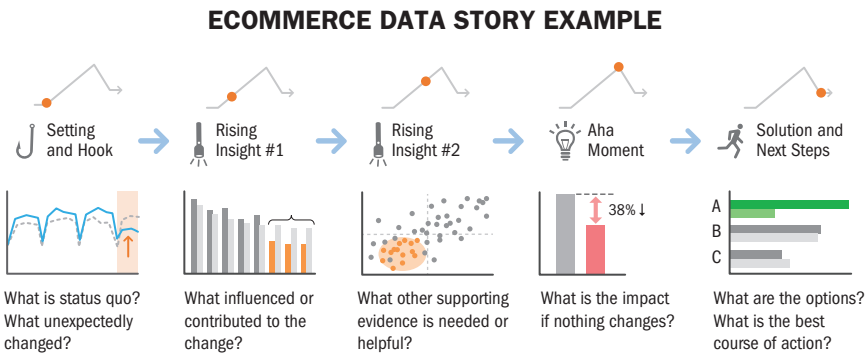

Figure 6.5 The ecommerce data story shows how insights in each of the four stages combine to form a meaningful data story. Depending on the length or complexity of your story, you may have several rising insights or none at all.

The first Rising Insight highlights how the dark gray product categories are outperforming the results of the previous year. However, the three orange product categories are underperforming last year's results. In the second Rising Insight, the different individual products or SKUs in these three product categories are plotted out, and the lower, undesirable quadrant (low product views and orders) contains a cluster of products from the same brand. Whatever change that occurred impacted a specific brand of goods that is being sold on the ecommerce site.

Unless the brand issue can be resolved, the ecommerce team will miss its quarterly sales target by 38% (Aha Moment). Because the team's bonuses are tied to reaching the sales target, you suddenly have everyone's interest and attention. Your audience is ready for the final stage (Solution and Next Steps), when you explain three different options for solving the identified brand problem. By highlighting the merits of the first option, which offers the most brand-related revenue for the least amount of cost, you show how the organization can address the issue and move forward. Through this simplified example, you've seen how all of the stages of the narrative model work together to form a compelling data story.

How Does the Data Storytelling Arc Compare with Other Communication Models?

While I've primarily focused on fiction-based models for narrative structure, you may have come across other communication models for structuring business information. When I was preparing a data storytelling workshop for a business client, the employees were already accustomed to forming their business presentations in a manner that conformed to one of these models. After some research and comparison, I found that the *Data Storytelling Arc* is compatible with a variety of business communication models. Each of the models I found had three stages, similar to Aristotle's model. As shown in Figure 6.6, you can tailor your data story to work within these structures if needed.

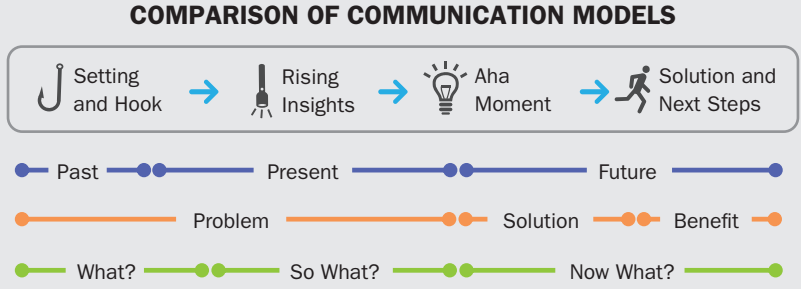

Figure 6.6 Many business communication models can be aligned with the Data Storytelling Arc.

Fleshing Out Your Narrative with Story Points

> Plot is what happens in your story. Every story needs structure, just as everybody needs a skeleton. It is how you "flesh out and clothe" your structure that makes each story unique.
>
> —Caroline Lawrence, author

Now that we have a basic narrative structure to follow, we can begin assembling the data points to fill out your data story. In literature and film, writers string together various plot points to advance their stories. These plot points are the twists, turns, and other developments in a story that move the characters through the narrative arc. For example, a plot point might be a memorable scene in which the hero is first trained by a mentor, meets a love interest, or witnesses a villain defeating an ally.

Similarly, your data story will be crafted from a series of key data points, which I will refer to as *story points*. From your Hook to the Aha Moment to your recommendations, the story points will shape and inform the various scenes of your data story. How many story points you have will depend on the depth or breadth of your data story. Generally, only a small portion of data points from your analysis will become actual story points. Most of your story points will come from the key findings or insights that caught your attention during the exploratory analysis phase. Other story points may simply provide context or supporting details to help form a coherent narrative, especially as Rising Insights.

In 2015, former Tableau evangelist Ben Jones identified seven different data story types; I found these useful in defining the various types of story points (Jones 2015). Modifying and expanding on Jones's seven variants, I settled on nine common types of story points (see Figure 6.7).

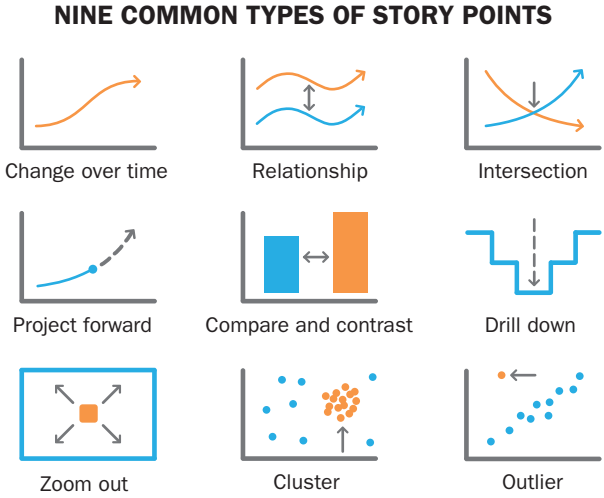

Figure 6.7 Your key insights will most likely align with one of these nine common types of story points.

While there may be other types of story points, this initial set should cover the most common forms:

1. **Change over time** focuses on how a metric shifts over time. For example, you might highlight how there's a downward or upward trend in a key metric (gradual or sharp). Even no change in a trended line may be a story point when something was expected to happen. For example, your company's investment in safety training doesn't reduce the workplace injury rate.
2. **Relationship** highlights how two things are related to each other in some way. You may show how there is a positive or negative correlation between two metrics that may or may not imply causation. For example, you could show how higher customer satisfaction scores may be contributing to a higher customer renewal rate.
3. **Intersection** reveals the moment when one metric surpasses or falls below another metric (or the same thing happens between

two plotted values). When one metric crosses or intersects with another, it could be a positive or negative sign depending on the situation. For example, you may be highlighting when your start-up's revenues surpassed costs (finally profitable), or when revenues fell below costs, indicating you still have operational issues to address.

4. **Project forward** shows what is predicted to occur in the future. Whereas the rest of the story points are primarily focused on what happened, this story point forecasts what may occur at some point. For example, you could highlight the forecasted growth of a city's population over the next five years.
5. **Compare and contrast** exposes the similarities or differences between two or more items. For example, you may contrast the overall equipment effectiveness rates of two factories—one that has been recently updated and the other that needs upgrading. This story point is probably the most popular type and is frequently featured in most data stories. Facilitating simple comparisons will be a key focus of the next chapter.
6. **Drill down** moves from a higher-level or aggregated view of a metric to a more detailed view. Essentially, you break down an overall number by different dimensions of varying levels of granularity. For example, you may start with sales results at a national level and then drill into the regional or individual store-level results.
7. **Zoom out** moves in the opposite direction of the *drill down* story point, expanding from a more granular view to a more aggregated view. For example, you may start with an individual store's sales results and then position its results alongside cohorts in the same region or in terms of national store averages.
8. **Cluster** reveals a concentrated grouping or distribution of results within a dataset. A large concentration in one area may indicate an opportunity or problem. For example, you may show how your hospital's costliest segment of patients is comprised of smokers.
9. **Outlier** uncovers an anomaly that differs dramatically from other data points. An aberration or deviation from the norm can highlight an opportunity or problem, depending on the context. For example, you may display how, in terms of repeat purchases, a specific product significantly outperforms all others in a product line.

As you evaluate your own story points, you'll find the story point types can overlap, but in most cases, a dominant type will emerge. One thing to keep in mind is you might have one or more story points in a single data visualization—there doesn't need to be a one-to-one relationship between story points and visualizations. That's why some data visualizations are capable of telling a more robust story than others—because they contain more than one story point such as Minard's Napoleon map in Chapter 4.

As you look to craft your data story, you need to be mindful of your narrative's flow and whether your story points form a cohesive story. Being familiar with the various types of story points can give you another perspective on how your data story should be formed. For example, if you were to examine the story point types used in the ecommerce data story above, you'll see how different types of story points are utilized to form the data story (see Figure 6.8).

Figure 6.8 The ecommerce data story used various types of story points to convey its message. While you may use only a few of the types on a regular basis, it is helpful to know the full breadth of options you have.

Now that you better understand the concepts of a narrative structure and story points, you're ready to learn how storyboarding can help organize your story points into an effective storyline.

Storyboarding Your Data Story

> The storyboard's primary value is that it forces you to have a reason for, and a consistent approach to, everything you do.
>
> —David Becker, eLearning consultant

In the early 1930s, the Walt Disney Studio introduced the use of storyboards to plan the sequence of scenes for its animated films. Today, the technique has been adopted for other situations—such as live-action films, presentations, training courses, and so on. When you're planning the structure of your data story, storyboarding can help you organize the flow of your story points and determine what is essential to your data story. Whether you use sticky notes, a notepad, or a whiteboard, storyboarding helps you to determine which findings need to be a part of your story and how best to sequence them. It also helps you identify potential gaps where you may need to gather more supporting data. In a team scenario, where multiple individuals might be providing different story points, the storyboard provides a unifying vision to tie together all of the contributions into a cohesive data story.

Too often, the tendency is for people to dive in and "just start creating." When you jump into visualizing your data story too quickly without storyboarding, you pass up an essential opportunity to step back and consider what the overall narrative structure should look like. The process of storyboarding helps you craft a tighter, more impactful narrative, but it can also be a big time-saver. Instead of wasting an inordinate amount of time generating content that may or may not be included in your data story, you can pinpoint beforehand what exactly is needed. While simpler data stories may not require much storyboarding, you can't afford to skip this important method of pre-visualizing your narrative when it is complex with multiple story points.

Before getting into the four-step process for storyboarding, I want to emphasize its primary purpose is to *build a story*—not to determine which data visualizations you're going to create. Until you've established the flow of your data story, focusing on the data visualizations will only be a distraction. While you may have some rough ideas about how you'll visualize your information, it's better to suspend any in-depth visualization work until you have your narrative structure in place. Depending on how your story points come together, you may find an interesting data chart from your exploratory analysis is no longer essential to your story. With this perspective in mind, let's begin with the first step in the storyboarding process.

Step 1: Identify Your Aha Moment

The first step is to identify the main insight or takeaway of your analysis (see Figure 6.9). It will become the climax and focal point of your data story—the Aha Moment. Before you settle on a particular insight, you want to perform the "so what?" test that was covered in the previous chapter. Why should your audience care about this insight? What's significant about it? What are its implications? An Aha Moment isn't just an interesting data point. It would be incomplete without an explanation of what the numbers mean for your audience. For example, you may have found 45% of your company's construction projects are currently delayed by 60–90 days. As relevant and interesting as this data point may be to your internal stakeholders, unless you can confidently answer the "so what" question, it's deficient. When you explain this level of delay will incur an extra $5 million in idle labor and equipment costs that weren't budgeted for—now you have an Aha Moment.

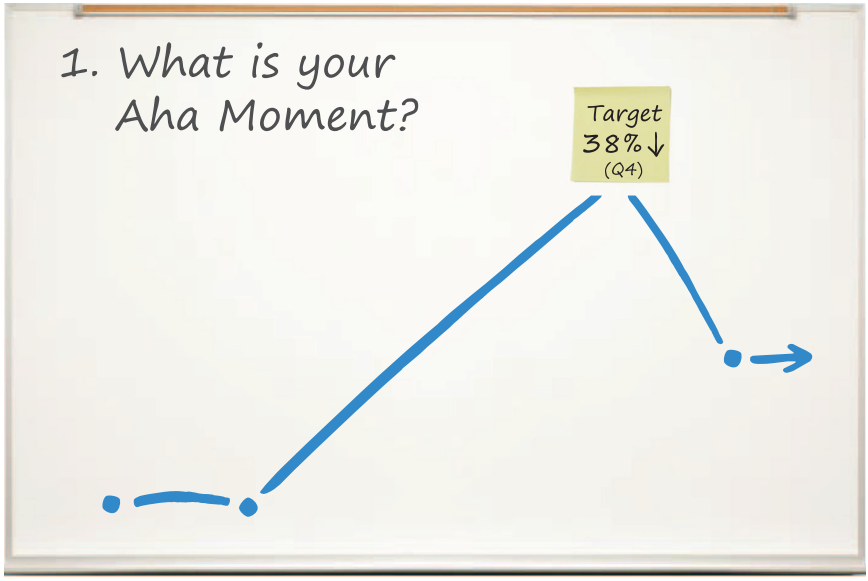

Figure 6.9 The first step in storyboarding your data story is to identify your Aha Moment.

Whenever you can attach a monetary value to your major finding, you make it significantly more concrete for your audience. Most decision makers think in terms of money—revenues, profits, costs, investments, and so on. Therefore, you want to quantify what the insight will mean to their profit and loss (P&L) statement, equity, budget, or bank account. In addition, it might be advantageous to turn a monthly figure into an annual figure to emphasize its potential value. For example, an incremental revenue source of $100,000 per month might garner more attention if it were positioned as an additional $1.2 million in *annual* revenues. You want to be careful you don't sell your insight short by inadvertently reducing its perceived value. On the other hand, you also don't want to artificially inflate its value by choosing an arbitrary or unrealistic timeframe.

Lastly, to ensure your Aha Moment is memorable, you want to articulate it as succinctly as possible—preferably in a single sentence. The sentence will be a combination of what the insight is and its meaning or impact. For the ecommerce data story I shared in the previous section, the Aha Moment could be conveyed as follows:

> *Due to poor sales of Brand X, we're going to miss our quarterly sales target by 38%, which puts our entire team's performance bonuses in jeopardy.*

If you're unable to explain your Aha Moment in a single sentence or two, you may not have found your central insight yet, or you haven't fully determined why your audience should care about it. When you can distill down your insight to a concise statement that is clear and persuasive, you're better positioned to see your data story succeed.

The reason you start with the Aha Moment is to verify you have something that even merits a data story. In addition, when you start with the end in mind, you know where you need to take your audience. Ultimately, you want your audience to draw the same conclusions from your analysis as you did, and having a clear destination will help you to design the right path. Every proceeding story point can be weighed and measured in its ability to advance the story toward the climax or Aha Moment.

Step 2: Find Your Beginning (the Hook and Setting)

After you've determined where you need to take your audience, you must then determine where your data story begins (see Figure 6.10) and establish the Hook (first) and Setting (second). Until you identify your Hook, you won't know what you need to cover in your Setting to properly frame it. In attempting to tell their data story, many analysts mistakenly retrace the steps of their analysis efforts. In painstaking detail, they explain everything they looked at before they eventually found something noteworthy. This approach, which I call the *Analysis Journey*, may stem from an unconscious desire to establish the accuracy of the data or to show how clever or thorough they were in their analysis. However, it doesn't resonate with most audiences who just want to "eat the cake"—not hear about its ingredients or the recipe steps. They want insights—not an overview of the analysis process.

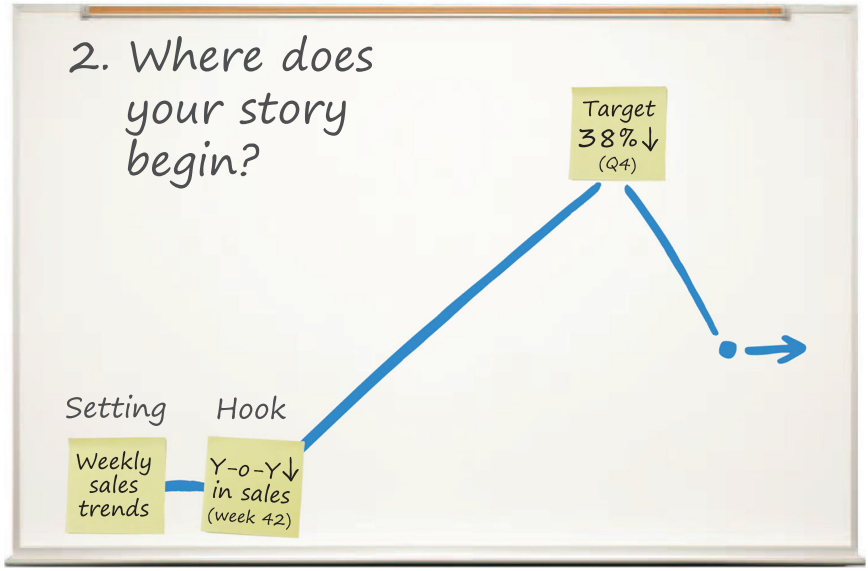

Figure 6.10 The next step is to identify your Hook and the Setting that is needed.

Rather than spending time on nonessential information, you must quickly catch your audience's attention with a key observation that entices them to learn more. In storyboarding, the reason you start by identifying the Aha Moment and not the Hook is to ensure you have the most important part of the data story covered—the central insight. Even

with a compelling hook, your narrative can meander and lead to nowhere without a clear destination (Aha Moment). In some cases, a potential Hook for your data story may have originated from your audience. For example, a leader may have spotted an anomaly or trend in a report and questioned what it meant. A data point that piqued someone's curiosity can be used as the entry point to your data story in the following way:

> Recently, you noticed our fourth-quarter sales numbers are trending below last year's results by 28%. I'd like to show you how this trend could have a significant impact on . . .

However, in other cases, your analysis may not have been prompted by an audience member's questions about a data point. In these scenarios, you will need to comb through your findings and reflect on what initially caught your attention during the analysis phase. If your analysis were a detective case, the Hook would be the first substantial clue you uncovered. Going back to the B2C retailer example in Chapter 1, the unexpected double peak (what made the data science team go "hmm") would be a great Hook to tee up the team's international reseller discovery (Aha Moment).

In many cases, you may have observed a shift or change in a metric that indicated a potential problem or opportunity. *Resonate* author Nancy Duarte found that many successful presenters, such as Abraham Lincoln and Martin Luther King Jr., created conflict by juxtaposing "what is" with "what could be" (Duarte 2010). The comparison creates dramatic tension, which helps engage the audience in a topic. Similarly, you can draw your audience into your data story by contrasting "what is" with "what was" after a significant change occurred. For example, a company may be accustomed to retaining 85% of its customers. However, a few weeks ago, the retention rate dipped to 68% (a 20% decrease). This type of juxtaposition provides both context and the Hook. It not only establishes what the expected norm is (85%), but turns the variance (20% decrease) into a compelling mystery that can be used to grab the audience's attention.

Finally, once you have your Hook, you'll want to evaluate how much background information your audience will require to adequately comprehend and appreciate the Hook's significance—this forms your Setting. If your audience lacks sufficient context to grasp your Hook, its impact can be severely reduced or even negated. On the other hand, if you provide too much background information in your Setting, your

well-intended context can become noise. You want to select *just enough* context so they can orient themselves to the story points you're going to share. For example, in order to appreciate a recent decrease in quarterly sales, the audience will need to be familiar with quarterly sales performance over the past four-to-eight quarters. The purpose of the Setting section is to get everyone in the audience on the same page. However, if your Setting is not concise and to the point, it may cause your audience to lose interest before your Hook can even catch their attention.

Step 3: Select Your Rising Insights

Now, you're ready to build out your narrative from the Hook to the Aha Moment (see Figure 6.11). Each data story will be different, so there isn't a single pattern or a required number of story points for the Rising Insights section. Depending on the depth or breadth of the findings from your analysis, you may have multiple Rising Insights or none at all. However, while it is possible to go directly from the Hook to the Aha Moment, most data stories will require some level of supporting data or story points to ensure your audience fully grasps your main insight.

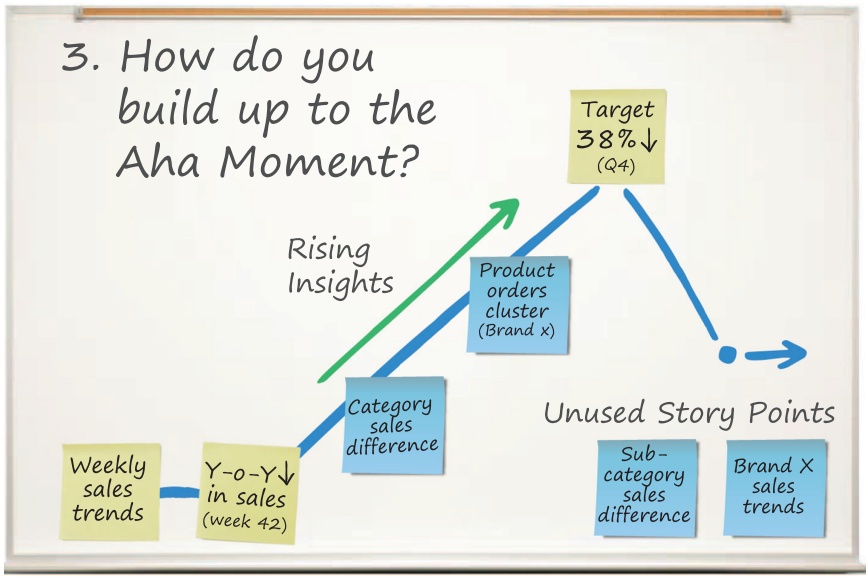

Figure 6.11 The next step is to connect your Hook to your Aha Moment with relevant story points that become the Rising Insights of your data story.

Initially, you'll want to document all of the story points from your analysis that could potentially go into your data story. Next, you'll want to be selective about which story points become Rising Insights. Anything that doesn't fit on the path between your Hook and Aha Moment may not make sense for your data story. The following questions can help you determine which story points to use as Rising Insights:

- *Which supporting data points develop the plot or provide crucial context?* Some data points will be critical to understanding the Aha Moment either because they provide deeper insights or add necessary context.
- *Can you preemptively address audience questions with your findings?* As you look to build your story, you may want to include information that addresses key questions that you anticipate your audience having. In some cases, your audience may be resistant to certain findings, and you may be able to address their concerns strategically with the right story points.
- *What findings were unexpected or surprising?* While you don't want to include irrelevant information, you'll want to highlight facts that were extraordinary or unusual that may surprise your audience and spur their interest.
- *What findings can be removed without hurting the narrative?* As a final check on what you decide to include, you'll want to confirm if any story points can be removed without impacting the story. You might find some of your findings are redundant, carry less weight, or end up being tangential to your main idea. As with most communications, less is more with data storytelling. As was highlighted at the end of the previous chapter, you may not need as many story points to convey your message as you think you do. Running your story by a colleague may help you identify information that is superfluous to your narrative.

As you storyboard your Rising Insights and sequence them in the order in which you'll share them, you want to ensure your story points form a smooth narrative flow. Sequence your points in a logical manner that mirrors the path your audience's curiosity would

naturally follow. Through the storyboarding process, you may uncover a gap or rough transition in your Rising Insights. You may need to perform more analysis to close a gap or smooth a transition in your narrative. Until you've laid out your story points in a storyboard, it may be difficult to anticipate narrative gaps or awkward transitions beforehand. However, this sort of attention to detail is the difference between just sharing your findings and crafting a data story that is both coherent and engaging.

Step 4: Empower Your Audience to Act

After you've built out your story to its climax—the Aha Moment—your story still isn't finished. If you provide the decision makers in your audience only with an insightful takeaway and nothing more, they may not know what they should do with the new information. Most decision makers will want to weigh options and then make an informed decision. However, because they may lack the necessary analytical skills, time, or resources to investigate all the potential solutions, your central insight may end up going nowhere. It's important to strike while the proverbial iron is hot (*kairos* appeal), or the initial interest generated by your Aha Moment may wane and then be pushed aside as more pressing matters grab your audience's attention.

In order to drive change and action, at this point, you need to cover the *Solution and Next Steps* (see Figure 6.12). A *complete* data story provides guidance on how your audience can move forward with your idea or insight. For example, in the ecommerce data story, a cost-benefit analysis of each alternative solution could empower the audience to consider the different options and come to a faster decision on next steps. Along with an analysis of the various alternatives, your audience may also welcome a recommendation on the best solution or path forward. If you've done a thorough job of analyzing the data and crafting a story, your audience will value your judgment. While they may not fully agree with your assessment, they will at least be interested in your perspective after you invested significant time and effort in preparing the data story.

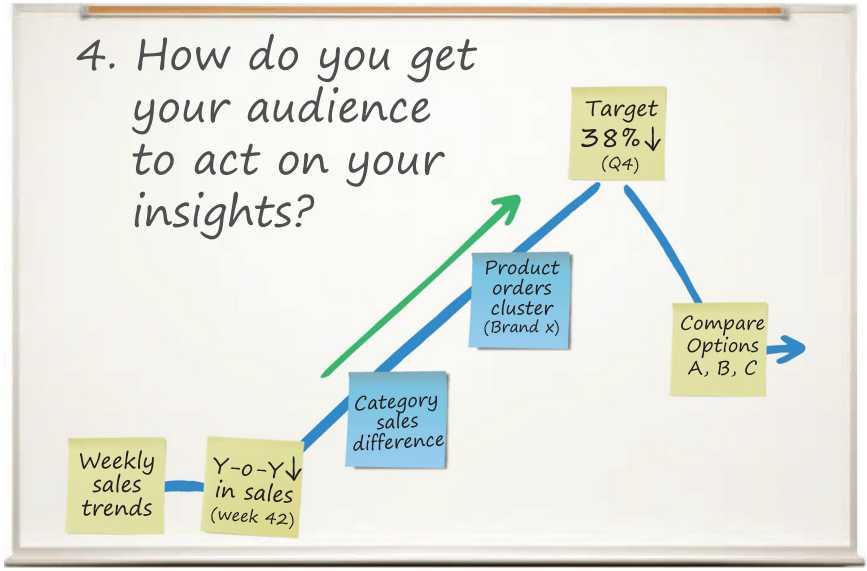

Figure 6.12 If you're looking to drive action and change, you need to help the audience understand what it can do with your insights by helping them identify a Solution and Next Steps.

Even when you've examined various options and provided a strong recommendation, your audience may still delay making a decision. In these situations, the perceived cost of *not making a decision* is viewed as being lower than that of *making an immediate decision*. Another critical piece of your data story may be to create a sense of urgency around solving the problem you've identified or seizing the opportunity before a window closes. Frequently, if you can quantify the cost of *not making a decision* from a daily or weekly perspective, it can help motivate your audience to act on the insights you've shared with them. For example, after sharing a recommendation on how the ecommerce team could improve product sales, you could emphasize how delaying the proposed changes costs the company $2 million each week in lost potential revenue. Once you attach monetary figures to the cost of delaying a decision, your audience will better appreciate why a decision must be made in a timely fashion. Ultimately, the better you understand your audience, the more you'll be able to tailor the Solution and Next Steps section to your audience's decision-making style and preferences.

Finally, if you are presenting your data story directly to your audience, you need to leave sufficient time for questions and discussion. It can be a critical step in gaining buy-in and alignment from a group of stakeholders with diverse opinions. At one presentation I attended, a manager laid out an impressive data story to a group of executives. Just as he was finishing his presentation, I noticed the executives had already started closing their laptops to head to their next meeting. A wave of panic swept over the manager's face as he realized he hadn't given his audience an opportunity to discuss the insights and agree on a course of action. A few weeks later, he was able to reschedule another meeting so they could discuss and decide on next steps, but he lost some momentum in the process. If you've crafted a compelling data story, anticipate that it will generate a healthy amount of questions and discussion. Ensure you leave adequate time at the end of your data story (or during) for two-way communication to occur—it may end up being essential to persuading your audience to act on your insights.

What If You Don't Have All the Answers?

In some situations, you may have discovered a great Aha Moment, but you may find yourself struggling to develop meaningful recommendations. This can be due to not having the required authority, expertise, or domain knowledge to propose legitimate solutions. You definitely don't want to undermine your credibility by suggesting impractical or untenable options just so your narrative conforms with the Data Storytelling Arc. In some scenarios, it may be more expedient to share the story up to the Aha Moment and then leverage the collective know-how and resources of the audience to determine the best course of action. The narrative structure can set the stage for collaborative problem solving and ensure the group clearly understands the nature of the situation, its level of urgency, and desired outcomes. While you may not always have all of the answers at your disposal, you can still spearhead the search for solutions and enlist the help of a capable, invested audience.

When They Want Just the Facts

I was a kind of hyper-intense person in my twenties and very impatient.
—Bill Gates, Microsoft founder and philanthropist

When I've shared the Data Storytelling Arc at presentations and workshops, I'm often asked how data storytellers should handle impatient executives who "just want the facts." These time-challenged individuals are unlikely to wait patiently for you to build up to your Aha Moment. You may have no more than 10–15 minutes (sometimes less) to get your main point across before they lose interest and shift their attention to another pressing topic. In these situations, the generally accepted practice is to provide an executive summary in which you review the most important information at the outset. However, as I noted in Chapter 4, this approach negates many of the benefits you would gain from having a narrative structure. Just imagine creating an executive summary for the popular Star Wars movie *The Empire Strikes Back*. Hearing "Darth Vader is Luke Skywalker's father" at the outset would surely ruin the cinematic experience for most people. The same effect can occur when you give an audience "the facts" up front without a story.

With this type of audience, you can't just launch into your data story. Even when you know they'll care about your findings, they're not conditioned to receive information in a story format. To accommodate an impatient executive, you'll need to create a *data trailer* for your data story (see Figure 6.13). Similar to movie trailers that are designed to promote a film and draw in an audience, your data trailer is designed to *pique the interest* of your audience and *gain their permission* to tell the entire story. While a movie trailer tries not to ruin the story by giving away any spoilers, the data trailer includes a brief Setting and Hook with a major spoiler—the Aha Moment. In situations where an impatient boss or executive must be convinced of the payoff for listening to a data story, you reveal why your insight is worth 20 minutes of attention. After hearing the data trailer, the executive has the option to say "tell me more" or indicate they're not interested in learning more. A data trailer isn't an alternative to having a complete data story—it's simply a tool for gaining an executive's buy-in and inviting them to explore the rest of your data story.

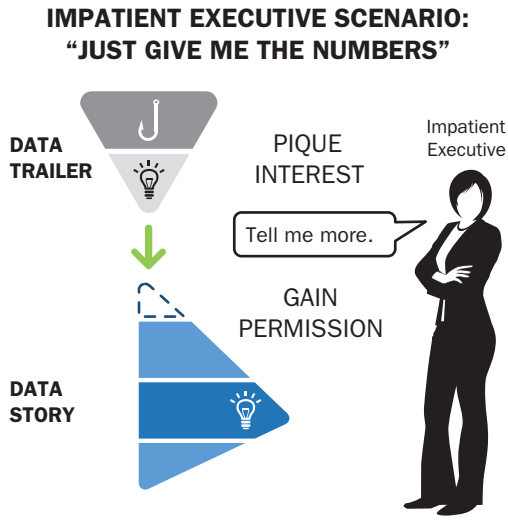

Figure 6.13 The Data Trailer is designed to pique interest from the impatient executive and gain her permission to tell your data story. If you gain permission, you've already set up your data story, so you can dive immediately into the Rising Insights.

Data storytelling is still a relatively new approach for data communication. Up until now, most executives have been exposed to mind-numbing data dumps on a repeated basis over the years. Their insistence for "just the facts" may just be a coping mechanism to avoid being overloaded and inundated with too much noise. If you see a potential opening, I'd encourage you to test a simple data story on this type of executive—even if it means starting with the modified data trailer approach. Despite their hardened exterior, everyone loves a good story—it's in their DNA. Once they've experienced what effective data communication feels like, don't be surprised when they advocate for data stories to be shared throughout your organization.

Uncovering the Heroes in Your Data Story

> I think the best stories always end up being about the people rather than the event, which is to say character-driven.
>
> —Stephen King, author

Characters are an essential element of stories. What would *Pride and Prejudice* be like without Elizabeth Bennet, or the *Harry Potter* series without Lord Voldemort? While the plot of the story is important, it's the characters—the protagonist and antagonist—who breathe life into the tale and make it truly interesting. As we turn to our raw data, it can seem cold, distant, and impersonal. Some analytical individuals may prefer to keep the data somewhat detached and neutral. However, in order to make your insights more engaging and relatable, you should consider *humanizing* the data for your audience by revealing the faces behind the numbers. While you may be enamored with a particular insight you've discovered, your audience will relate better to people than to an abstract data point. In Chapter 2, we saw how the story of the seven-year-old Malian girl, Rokia, was much more compelling than an assortment of statistics on the suffering of children across Africa. The more you can bring out the characters or heroes hidden within your data, the more your story will resonate with your audience.

Fortunately, most data is either directly or indirectly related to people—your customers, prospects, employees, partners, patients, citizens, and so on. Some of your most useful and enlightening data will be based on the behaviors, attitudes, and attributes of people. Even when your data appears to be generated by processes or machines—not humans—it can usually still be tied back to humans. Rather than looking at transactional data (process-generated) as the outputs of a business system, you can envision it as the purchasing behaviors of individual consumers or organizational buyers. Rather than seeing the sensor data (machine-generated) from connected cars as vehicle information, you can view it as reflecting the usage patterns of drivers. Most likely the heroes of your data story are standing in front of you; you just need to adjust your frame of reference to see them.

Confusion about Who Is the "Hero" of a Data Story

From time to time, I've heard people say the "audience is the hero of a data story." I believe this viewpoint can lead to confusion and misdirect the focus of your data story. Its original

(continued)

(*continued*)
intent was probably to emphasize making the story as relatable as possible to the audience. I believe this objective can be achieved without necessarily casting the audience as the lead role in your data story.

To be honest, most people don't want to be the focus of attention—they don't want a light shined on their accomplishments or (especially) their failures. Imagine how uncomfortable it would be to sit through a film or play depicting your life story. Between the painful inaccuracies and equally painful truths, you'd want to flee for the exit. However, audiences do like characters to whom they can relate and care about. Salespeople care about prospects. Doctors care about patients. Hiring managers care about job candidates. You get the idea. Depending on your audience, you choose the hero who matters to them in the data.

While your audience most likely won't be the main characters in your data story, I believe they can still be heroes in a different but critical way. Ultimately, you're going to need them to act heroically in enacting your solutions and recommendations. Your data story can prepare the audience to be real heroes as they embrace and apply your insights to drive value within an organization.

In my career in marketing analytics, I found it highly effective to highlight people—not just numbers—in my data stories. I found marketing audiences enjoyed getting deeper insights into their customers and prospects, so featuring them as characters in my presentations was an effective way of gaining their interest, attention, and buy-in. The following five-step process (see Figure 6.14) reveals how you can add heroes to your next data story:

Figure 6.14 This five-step process will help you develop a hero for your data story.

1. **Determine where your insights intersect with people.** In some cases, it may be easy to identify the group of people your analysis touches. In these cases, the challenge is how broad or narrow your focus should be. For example, you could emphasize customers in general or a more targeted segment of customers that fits a certain profile (online, female, or repeat). In other cases where your data is a little more abstract, you may need to evaluate how your data relates to the people your audience cares about. Each audience is going to be interested in different key groups. If you can link your insights to people who matter to your audience, you're going to win their attention with your story.
2. **Build a data-driven persona of your hero.** In marketing and user experience design, it's common to develop personas to help the marketers and designers appreciate the goals, attributes, and behaviors of their customers or users. Each persona is typically portrayed as an individual but is representative of a particular segment of people. Synthesizing all the quantitative data you have on your intended segment, you can flesh out key traits for your hero and build a persona. Depending on what's relevant or important to your data story, you can profile different aspects—such as their gender, ethnicity, location, income level, interests, and so on. Sometimes,

you may include details that may not be essential to your story but are helpful in establishing an interesting and memorable character.

3. **Give your hero an identity.** Whether or not you're a fan of stock photography, a useful tactic in creating your hero is to show a representative picture of who they are. As human beings, we are naturally engaged by pictures of other people. Researchers at the Georgia Institute of Technology and Yahoo Labs discovered Instagram pictures with human faces were 38% more likely to generate "likes" than those without. They were also 32% more likely to be commented on (Georgia Tech 2014). In another study, researchers found including a patient's photo with imaging exam results made radiologists more empathetic and thorough in their analysis of the results. They found the radiologists were more likely to view the patients as human beings and not just as anonymous subjects (Radiological Society of North America 2008). A carefully chosen stock photo can be helpful in drawing in your audience—just like a cheesy picture can lose them. Using different images of the same model can be helpful in displaying different emotions (frustration, happiness) or situations/activities (work, recreation). Images will make your hero a visible, integral part of your data story.
4. **Give your hero a voice.** As you build your hero's persona, you should consider leaning on qualitative (non-numerical) data, not just quantitative (numerical) data. If you're able to access survey, interview, social, or product-review data, you have what you need to give your hero a voice. For example, if your analysis was about how customers were unhappy with a new policy change, one of the best ways to demonstrate their discontent would be to share feedback from actual customers. A few insightful remarks from customers may be the extra leverage you need to sell your audience on making a change.
5. **Show your hero's journey.** While your audience may be familiar with *whom* the hero represents, they may not be acquainted with that group's journey. Rather than just relying on data points to highlight the outcomes of a bad or good experience, you could show your audience what the hero actually encounters. By putting your audience in the hero's shoes, they will experience the pain or gain for themselves. For example, you may use screenshots to illustrate how an online application process is broken and confusing. You may diagram the back-and-forth nature of an inefficient process for submitting

time off. By helping the audience to experience something from a different perspective, you can open your audience's eyes to issues that wouldn't have been as apparent or urgent if they only saw the numbers and charts. In addition, you can reveal what a happy ending looks like for the hero, which is tied to your recommendations.

Inserting relatable and recognizable characters into your data story will help humanize your narrative and enable your audience to see your insights from a people-centered perspective. While it may not always be possible or easy with every dataset, any opportunity to show how your insights impact human beings should be pursued, especially when your audience cares about those individuals. By putting a human face on your numbers, you make the data much more approachable and engaging for your audience.

How Conflict Amplifies the Impact of Your Data Narrative

> Conflict is to story what sound is to music.
>
> —Robert McKee, screenwriting expert and author

In narrative, conflict is the challenge or problem the story's main characters must overcome to achieve their goal. Conflict is often viewed as an essential ingredient in forming a *compelling* story. How interesting would Oliver Twist be if he wasn't a poor, runaway orphan? In the *Lord of the Rings*, what if Frodo felt no burden or corrupting influence in his role as the Ring-bearer? Without struggles or obstacles, you are left with a boring, uninspiring tale.

Fortunately, data stories often have conflict at their core, as they are primarily centered on solving problems or seizing untapped opportunities. The source of conflict can be *internal*—your company, department, or team isn't measuring up to its past performance, expectations, or a specific goal or target. The source could be *external*—your group is underperforming when benchmarked against a peer group, a competitor, or the overall industry. Even though conflict will be an inherent part of your story, like a writer or director, you still need to decide how you're going to employ it strategically within your data narrative.

Simply having a problem or unexploited opportunity that provides conflict doesn't guarantee it will engage your audience. How you package and deliver the conflict will determine how impactful it is. Playwright William Archer once stated, "Drama is anticipation mingled with uncertainty." If conflict is used effectively in your data narrative, it can generate similar dramatic effects in your audience such as *intrigue*, *tension*, and *suspense*. For example, rather than just providing a basic summary of a problem, you could approach it from different perspectives or angles to tease out its unique features:

- How long has it been an issue?
- How frequently does it occur?
- How widespread is the problem?
- Who is impacted by the problem?
- What are its contributing factors?
- How difficult is it to address?
- What are the consequences if it isn't fixed?

With each additional revelation, the problem will gain deeper meaning and significance for your audience. While it may not be possible to explore all of the viewpoints, some specific insights may especially resonate with your audience and *intrigue* them to learn more. As your audience gains a deeper appreciation of the problem, it may feel growing *tension* as it waits to find out how the problem can be resolved. The tension evokes an emotional response in your audience members, drawing them into your narrative as their anxiety and stress levels increase. While chronic stress is harmful, small doses of acute stress can be beneficial and sharpen your audience's attention.

Conflict can generate *suspense* as the audience becomes more curious about the problem and how it will be overcome. Researchers at the Georgia Institute of Technology found that when people experience high-suspense moments, they focus less on peripheral information to focus more intently on the story (Georgia Tech 2015). In their study, they showed subjects different scenes from suspenseful movies such as *Alien* and *Misery*. As the participants watched the scenes, a flashing checkerboard pattern was shown around the edges of the screen. As the researchers monitored the participants' brain activity on MRI machines, they observed their visual focus would narrow as the suspense intensified

and broaden when the suspense faded. Essentially, we get "tunnel vision" as suspense channels our attention to the most critical visual information.

When you prepare to add tension and suspense to your data narrative, you can turn to the *Unifying Theory of 2+2* as a guiding principle. In a 2012 TED Talk, Pixar writer-director Andrew Stanton described this storytelling theory in the following way:

> We're born problem solvers. We're compelled to deduce and to deduct because that's what we do in real life. It's this well-organized absence of information that draws us in. . . . Make the audience put things together. Don't give them four, give them two plus two. The elements you provide and the order you place them in is crucial to whether you succeed or fail at engaging the audience. (Stanton 2012)

Rather than just simply serving up answers ("four") to a passive audience, you can activate your audience's curiosity and problem-solving skills by having them participate in a closer examination of the numbers ("What is two plus two?"). If an audience can reach the same conclusion on their own ("The sum is four"), they will be more engaged by the narrative and will experience a mild form of germane cognitive load. In the previous chapter, we learned this form of cognitive load can help your message to be more memorable—it's not a bad thing. Here are some ways in which you can strategically employ the *Unifying Theory of 2+2* in your data narrative:

1. **What happened next?** In this scenario, you show the past results to provide some background context and then ask the audience to predict what they think happened next. For example, you could show the campaign results for May and then ask them what they expect the results to be in June. This approach also provides you with deeper insights into your audience's preconceived beliefs and expectations. In addition, it introduces tension and suspense because the audience usually doesn't want to be wrong and will be anxious to learn what actually occurred.
2. **Fill in the blanks.** With this technique, you partially reveal some of the results and ask the audience to fill in some data points that are strategically hidden by you. For example, you might reveal the sales performance for three regions and ask the audience to estimate what happened in the remaining region. Alternatively, you

could reveal the great sales results for a region but withhold its poor employee satisfaction scores. While this approach relies on speculation, it does bring the audience's beliefs and assumptions into clear view for everyone involved—both you and the audience. When your audience is shocked or surprised by the actual results, their attention and interest in your narrative will deepen.

3. **Do you see what I see?** In this strategy, using a data chart that lacks any highlighting or annotations, you ask the audience to tell you what's unusual or what stands out. After you have given them some time to evaluate the chart, you switch to a different version of the data chart that highlights key insights. A number of different outcomes can occur with this method. First, the audience may pinpoint the insights you found and feel clever that they were able to make the same observations. Second, they may notice something you didn't and contribute something new to the discussion. Third, they may not find anything meaningful in the chart and then will be surprised as you connect the dots for them. The audience will feel tension about finding something in the data and suspense over learning what you discovered.

Novelist William Landay noted, "Good stories are driven by conflict, tension, and high stakes." In certain situations, and with an audience you know well, these techniques can make your data story more compelling. However, you'll want to be careful to use them tactfully and judiciously. As you invite the audience to participate in the evaluation of the data, you need to be amply prepared for unexpected feedback and sidetracking observations. In addition, the goal isn't to embarrass anyone in your audience when they guess wrong or frustrate people with a slower interactive approach when they're anxious and ready to learn more. If they are employed wisely by the data storyteller, conflict and tension can be helpful at keeping your audience engaged and focused on your message.

Make Your Ideas More Digestible with Analogies

> Analogies, it is true, decide nothing, but they can make one feel more at home.
>
> —Sigmund Freud, neurologist and founder of psychoanalysis

Whenever your data narrative deals with a new or complex subject, there's another narrative tool that can be helpful—*analogies*. An analogy is a comparison of a *complex* or *unfamiliar* subject matter to another that is *simpler* or *more familiar*. As an example, in Chapter 5, when I introduced the concept of working memory, I compared the human brain to a computer, based on its input, processing, and memory components. Because most people have a high-level understanding of how computers work, they can more easily grasp the different functions of the brain when they are compared to the components of a computer. Analogies can serve as useful shortcuts that can significantly reduce the time it takes an audience to learn new or abstract concepts. As American attorney Dudley Field Malone recognized, "One good analogy is worth three hours of discussion."

In data storytelling, analogies can also be used to communicate key concepts or insights in a manner that is easier and faster for an audience to follow and absorb. They can be used at any stage in your data story if they can help sharpen or quicken the audience's understanding of your insights. Instead of having to invest significant time explaining new information to others, you can expedite the *knowledge transfer* process by tying off key ideas with relatable analogies. For example, you could compare the current challenges in a manufacturer's supply chain to a triathlon. When a triathlete struggles at one of her transitions (T1: swim-to-bike), the problems can cascade throughout the race like they do with supply chain issues. Just like smooth, efficient transitions at each stage are important to elite triathletes, they can be equally important to a manufacturer and its supply chain.

Analogies can also be used to reinforce the central theme or message of your data narrative, making it significantly more memorable and repeatable. When you're presenting your data story, they can also create opportunities to use visual imagery and add emotional power to your narrative. Even the mental imagery of a well-chosen analogy can make your data story more potent. For example, your findings could be about a new competitor that has recently emerged in your industry and is taking away key customers. Alternatively, your insights could be about a broken internal process that is inhibiting your sales growth. Either of these examples can be positioned as a villain that must be confronted and defeated. Creating an antagonist

from your findings can be a great way of drawing attention to a new threat or problem.

Cultural anthropologist Mary Catherine Bateson said, "The human species thinks in metaphors and learns through stories." Good analogies can complement your insights by facilitating learning and injecting more narrative into your data story. However, if you're not careful, bad analogies can just as easily confuse your audience and weaken your overall story. In order to verify whether you have a solid analogy, you'll want to consider the following attributes:

1. **Is it relatable?** Depending on how well you know your audience, you should have a good sense for the relevance of your analogy. For example, if you knew a key stakeholder was a car-racing enthusiast, an analogy based on Formula 1 racing could really resonate with him, whereas it might fall flat on an audience that isn't as familiar with this type of sports event.
2. **Is it sound?** The soundness or "fit" of an analogy is based on how many parallel attributes the two subjects share. The more similarities they share, the more sound the analogy can potentially be. However, a critical mismatch or logical breakdown can weaken an otherwise sound analogy and undermine its overall usefulness.
3. **Is it clear?** If you're not careful, some analogies can end up being more complex than the abstract ideas they're designed to explain. You want a somewhat familiar analogy that is both clear and simple. If it places too much of a burden on the audience to comprehend the similarities, it will add extraneous load and potentially fail entirely.
4. **Is it concise?** The faster the analogy is to communicate, the more powerful it will be. If it takes a long time to develop and explain, the payoff may not be worth it because people may lose interest along the way.
5. **Is it interesting?** The more thought-provoking your analogy is, the more people will remember it. Dry, overused examples will be easily forgotten. However, something that is a *personal*, *topical*, or *unexpected* will make your audience more curious. For example,

if you had just had your first child, a "new parent" analogy would take on a personal tone that most audiences would find hard to ignore. On a different note, if you compared your current pricing policy to an out-of-control carnival ride, your audience will be intrigued to see how you could draw such an unusual comparison.

Analogies represent yet another powerful way of connecting with your audience through narrative and of making your ideas more engaging and approachable. An analogy can be used to clarify a minor aspect of your findings or to help underscore a major theme within your data story. Be mindful that not every subject can be easily tied to an analogy. For example, in the popular animated TV show *The Simpsons*, Homer Simpson once told his son, Bart, that women were like refrigerators: "They're about six feet tall, 300 pounds. They make ice, and . . . um . . . Oh, wait a minute. Actually, a woman is more like a beer" (O'Brien and Archer 1992). While most analogies don't fall apart this epically, each analogy will have inherent limits. How far you push a comparison can determine whether it supports your story or buckles under pressure.

As the writer and director of your own data story, you control how your insights unfold to the audience. While most people have placed a heavy emphasis on the visualization aspects of data storytelling, narrative plays an integral role in crafting effective data stories. If you wish to become a data storyteller, you must master the fundamentals of narrative and not just analysis or data visualization. How you develop the plot of your data story is equally important as which charts you choose to communicate your insights.

From this chapter, you've learned how narrative builds a sturdy structure on your data foundation, preparing the way for the visual elements to now be added. While data stories may not always embody all of the characteristics of traditional stories, the more "story-like" or "narrative-centered" they are, the more engaging and compelling they become. The next two chapters will examine the last remaining pillar of data storytelling—visuals—that brings your storyline to life.

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