narrative
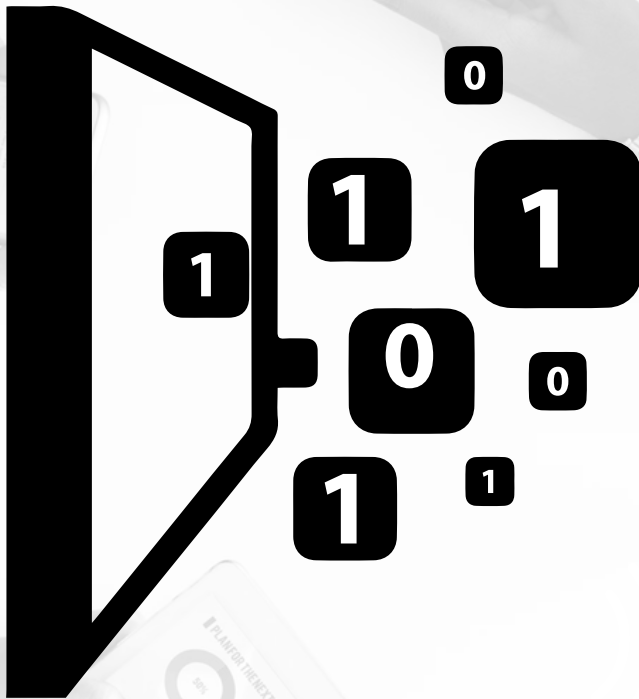## the business of stories

"Numbers have an important story to tell. They rely on you to give them a clear and convincing voice."

Stephen Few
Data Visualisation Expert, Perceptual Edge

Narrative
Data Storytelling

GO MAKE THE CHANGE HAPPEN WITH STORIES

_____ 's Learning experience
(Please write your name here)

OUR OFFERINGS

Storytelling Trainings, Workshops and Coaching which include:

- Storytelling for Presentations
- Sales Storytelling
- Data Storytelling
- Narrative Medicine
- Strategic Storytelling
- Storytelling Coaching

Storytelling Consulting

- Storytelling for Change Management
- Video Storytelling
- Get your own Storytelling Program

Storytelling Speaks

- For speaking engagements in conferences
  and company events

YOU CAN CONTACT US AT

m: +65 9181 6692
t: +65 6311 5098
e: anjali.sharma@narrative.com.sg
w: www.narrative.com.sg

16 Raffles Quay #33-3
Hong Leong Building
Singapore 048581

Written by Anjali Sharma
Printed and bound in Singapore
Company Registration Number: 201405507H
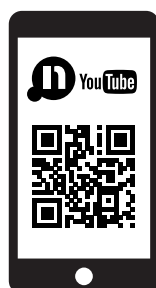
Hello!

It was a many years ago when I stumbled upon a story whilst causally surfing the internet and after reading the story my first reaction was, "No way, stories have no role to play in business." Little did I know that I would become passionate about the discipline and become a story practitioner.. So, to start things off it's best I share that story with you and who knows, may be there is a Storytelling practitioner within you who will be inspired. This story was shared by an employee of NeXT when he was working under Steve Job's leadership.

"I worked at NeXT the summer of 94. I was in the break room with two colleagues when Jobs walked in and started making a bagel. We were sitting at a table eating ours when he out of the blue asked us "Who is the most powerful person in the world?" I said Mandela since I had just been there as an international observer for the elections. In his confident fashion he stated "NO!...you are all wrong...the most powerful person in the world is the storyteller." At this point I was thinking to myself "Steve, I love you but there is a fine line between genius and loco..and I think I am witnessing this right now". Steve continued, "The storyteller sets the vision, values and agenda of an entire genera-tion that is to come and Disney has a monopoly on the storyteller business. You know what? I am tired of that bullshit, I am going to be the next storyteller" and he walked out with his bagel."

This story inspired me to learn and practice the discipline of Storytelling. Although I had been unknowingly Storytelling for over a decade in my various corporate roles in India, Australia and Singapore, in 2013 I founded Narrative with the belief that:

> "
> ## Rarely can a response make something better, what makes something better is a connection.
> "
>
> - Dr. Brené Brown

My background in corporate roles constantly informs my storyworks, so that it is not just theoretical, but based on extensive experience, knowledge and understanding of strategic issues facing companies and of the issues facing employees in delivering their best for their companies.

I have been working with brands like Cisco, Micron, Shell, Microsoft, Danone, TEDx and have delivered globally. Each delivery helps sharpen my content.

Some of the recent developments in our workshops have been the Post Mobile Learning Triggers in which each week, for 12 weeks you receive an under 60 Secs video that reinforces what you have learnt in the workshop and also triggers your desire to practice what you have learnt.

Our learning experience is designed on Scenario-based learning (SBL) and uses interactive scenarios to support active learning strategies such as problem-based or case-based learning.

It normally involves participants working their way through a storyline, usually based around an ill-structured or complex problem, which they are required to solve. In the process participants must apply their story knowledge.

Finally, this workshop is our attempt to make you a professional whose messages stick.
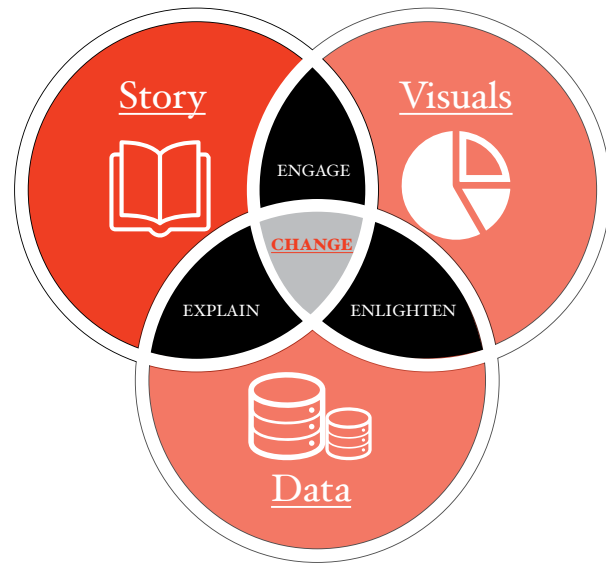
Why is Data Storytelling hard?

We teach two main subjects in school, language and maths. With language, we learn to tell stories. With maths, we learn to use numbers.

But we don't ever learn how to tell a story with numbers. That is the reason why data storytelling can be difficult for many of us.

What sort of things do you find hard about presenting Data?

Foundation

A lot of my work involves Data Storytelling, and naturally, I look for all articles, books and papers to continuously grow my knowledge in that field. A couple of weeks ago, I stumbled upon an article that curated the best blogs about Data Storytelling written in 2016.

Excited, I started reading each one of them carefully, but to my disappointment, the majority of the articles were about data visualisation. Most people confuse data storytelling with data visualisation. I found myself lost in shapes, lines, graphs and charts, etc, to use.

The easiest way to understand the difference between data visualisation and data storytelling is this...

Imagine that you are about to make a presentation (non-data related) and you have prepared the best slides possible. You take your position on the stage or wherever you are presenting from, the slides come on the screen and then you keep mum. Does that sound like an effective presentation?

Absolutely not. That's equivalent to having a great data visualisation with no data storytelling.

By focusing only on data visualisation, you have failed to inspire the audience to take the action that you intended them to take. Because an emotion, which is in the story, leads to action, and emotion will not be there in the graphs and pie charts.

Now, ask yourself, "Why are you communicating if you cannot get the action you desire?"

Why do Stories Matter in Data Presentation?

For some people, crafting a story around the data may seem like an unnecessary, time-consuming effort. They may feel that the insights or facts should be sufficient to stand on their own, as long as they're reported in a clear manner. They may believe that the revealed insights alone should influence the right decisions and drive their audience to act. Unfortunately, this point of view is based on the flawed assumption that business decisions are based solely on logic and reason.

In fact, neuroscientists have confirmed that decisions are often based on emotion, not logic. USC professor, Antonio Damasio, found that patients who had brain damage in an area that helped to process emotions (prefrontal cortex), struggled to make basic decisions when choosing between alternatives.

Deciding on where to eat or when to schedule an appointment turned into lengthy cost-benefit debates for these individuals. Interestingly, these patients' decision-making skills were significantly impaired by the lack of emotional judgment. Emotion actually plays an essential role in helping our brains to navigate the alternatives and arrive at a timely decision.

When you package your insights as a data story, you build a bridge from your data to the influential, emotional side of the brain. When neuroscientists observed the effects that detailed information had on an audience, brain scans revealed that it only activated two areas of the brain associated with language processing: Broca's area and Wernicke's area. However, when someone is absorbed in a story, they discovered that it stimulated more areas of the brain. People hear statistics, but they feel stories. This subtle but important difference pays dividends for data storytellers in a few key ways:

Memorability: A study by Stanford professor, Chip Heath, author of Made to Stick, found 63% could remember stories, but only 5% could remember a single statistic. While 2.5 statistics were used on average in the exercise and only 10% of the participants incorporated a story, the stories are what caught people's attention.

Persuasiveness: In another study, researchers tested two variations of a brochure for the Save the Children charity organisation. The story-based version outperformed the infographic version by $2.38 to $1.14 in terms of per participant donations. Various statistics on the plight of African children were far less persuasive than the story of Rokia, a seven-year-old from Mali, Africa.
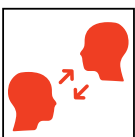
Engagement: Researchers also discovered that people enter into a trance-like state, where they drop their intellectual guard and are less critical and skeptical. Rather than nitpicking over the details, the audience wants to see where the story leads them. As mathematician, John Allen Paulos, observed, "In listening to stories, we tend to suspend disbelief in order to be entertained, whereas in evaluating statistics we generally have an opposite inclination to suspend belief in order not to be beguiled."

5 Lessons on Data Storytelling
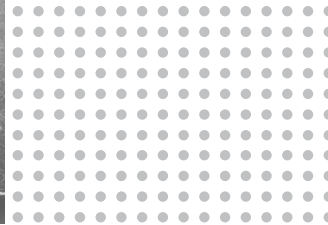
Lesson 1: What is the point you are trying to make?

Irrespective of whether you are presenting or emailing a data finding, the point you are trying to make should always come first.

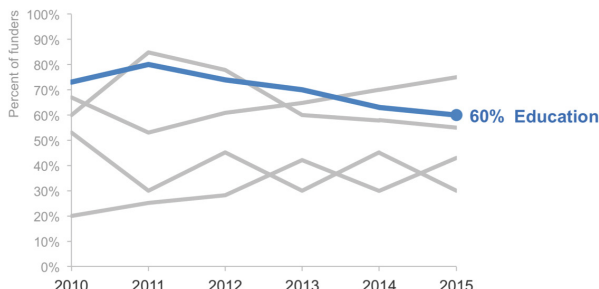**Let's take a look at this graph as an example:**

Support for education non-profits has decreased markedly over the past 5 years.

Types of non-profits supported by area funders

60% **Education**

Source : The graph is from Storytelling with Data by Cole Nassbaumer Knaflic

The header of this graph - **Support for education non–profits has decreased markedly over the past 5 years** - instantly conveys the point we are trying to make via this data.

The header should always convey the point you are trying to make. The rule I apply here is, if I was not presenting this graph, would the reader be able to look at it and know straightaway the point I am trying to make? If the answer is yes, I am on the right track.

Now, if I had to present this graph, I would start by saying something like this:

Support for education non-profits has decreased markedly over the past 5 years. Let us try and understand what data we have that supports our finding,

What are the key takeaways?

1. The point you are trying to convey via the data should be the header of your visual.

2. The point you are trying to convey via the data should be the first thing you say when you present.

Lesson 2:

Who am I speaking to and why should they listen to me?

A couple of months ago, I had the privilege of coaching a data analyst, who is Swedish but based in Singapore and works on the e-commerce strategy of a growing MNC. The desired outcome from the coaching was a 30-min data storytelling presentation for the CEO.

He shared his data findings with me and they looked pretty solid. Of course, we needed to work on his delivery, etc, but before we did that, I asked him, "How long have you been working in Singapore?" His answer was, "Less than a year." His answer led me to ask a few more questions:

> 1) Have you presented to your CEO before or will this be the first time?
>
> Sam's response: "*This will be the second time, the first time was a disaster.*"
>
> 2) Oh, why was it a disaster? What happened?
>
> Sam's response: *"He stopped me 10mins into the presentation. So, I am a bit nervous and this time, my boss recommended that I asked for your help.*"

We straightaway changed our plan for the day and started working on Building Credibility. It's vital to think about the relationship that you have with your audience and how you expect them to react to you. If they already trust you and you have worked with them in the past, it's perfectly fine to start with data storytelling. But if that is not the case,building credibility precedes everything.

Here is an example of how a great business storyteller I know, used a story to build credibility with a new client. The story is narrated exactly how the business storyteller is telling it. So, imagine him in a boardroom with 25 people.

> *"My insights for the project in conversation come from an experience that I would like to share."*
>
> *"May 15th, 2004 – It was in Johannesburg when the results of the hosting bids for 2010 FIFA World Cup were meant to be announced. South Africa lost the bid for the 2006 World Cup to Germany in a closely fought contest.*
>
> *South Africa was up against Egypt, Libya and Morocco this time around. A poor showing at the African Cup of Nations did not do any good for their chances to host the prestigious tournament. Nevertheless, the rainbow nation was quite upbeat about their chances. When the then FIFA president, Sepp Blatter, announced that South Africa would indeed be the host for 2010 WC, the nation erupts with joy.*
>
> *4 months later, I received a call from Durban City Manager – Dr Michael Sutcliffe's office asking me to come over for a meeting. I was personally involved in several projects for his office and hence, thought it was a routine call-up for a project review. When I landed at his office, there were 7 other people in that conference room and most of them were not familiar to me.*
>
> *Dr Sutcliffe walked in and announced that this was the Technology Task Force that he was assembling to get the "Project" underway. I was still puzzled as to what this so-called "Project" is. It was only after the first 15 minutes into the conversation that I realised that it was the FIFA 2010 where Durban was to host 3 group matches and 1 semifinals. The members I saw in front of me were meant to work on the entire technology strategy and roll-out leading up to the event.*
>
> *As an ardent football fan, I was excited and privileged to be there. The event was a grand success and free from any glitches. They were gracious enough to host me for the Germany Vs. Spain semifinal.*
>
> *My name is Vish and I learnt a lot during my time at the Task Force and I am here to share some of my experiences and insights."*
>
> *I had a question after listening to that story, "Do you have a doubt in your mind about Vish's credibility or were you all ears for him?"*

Understanding your Audience

Let us understand our audiences through Matt.

Who is Matt?
Matt works in a corporate organisation and is responsible for selling cloud services platforms for a technology company.
Matt has to tell a story about cloud services platforms to 3 different audiences, on three different occasions.

Occasion 1 : In a boardroom to government officials
Occasion 2 : In a roadshow to consumers
Occasion 3 : In a partners' conference to partners

Now, Matt can't possibly tell the same story on all of these 3 occasions. Things he need to be clear about are:

Matt's Audience	Matt's Purpose	What matters to audiences?	Where is Matt telling this story?
Govt Officials	Sell	Trust	Boardroom
Consumers	Generate interest	Functionality	Exhbition
Partners	Provide insights, tools and support	Success	Conference

After mapping this, say, Matt is going to craft a story for govt officials. So, what he is doing is – Boardroom Influencing via storytelling. I would suggest that Matt asks himself these questions:

Occasion 1: In a boardroom to government officials

Questions	Answers
Who are the people in the room?	Govt Officials
What are the objections from your listener?	I am not sure if I can trust what he has to say
Why am I telling a story?	Our cloud services are trustworthy
What do I want the audience to say/think after I have told the story?	I am willing to listen to this person and I think I can trust him
What is your overall purpose of this interaction?	You move forward in the sales cycle

After you have all of this, the only question you have to ask is,

Who do I know who is exactly like the person I am talking to. Meaning another govt official for a govt official. Another partner for a partner, another consumer for a consumer that I have provided our cloud services to and what happened in that case.

If you stick to the rule of, who do I know who is like this person, your emotions, your narrative and your ability to achieve the desired outcome will all fall in place.

Stories in a presentation need to be tailored to the audience and purpose of the presentation, and you can't use the same story for all presentations.

Rapport Story

Reciting a CV won't help, because your uniqueness as an individual - your very identity - doesn't lie in the roles you have filled. It resides in the one - of - a kind person that you have become as a result of the experiences. This section is about how to use stories when encountered by a new audience in a low trust world.

Stories

Who am I story

I am 46. I've been married for 22 years and we have 3 kids. And like anyone else, a lot of what I do and how I think has been shaped by my family and my overall life experiences. Many who know me say I am also defined by my curiosity and thirst for learning. I buy more books than I can finish. I sign up for more online courses than I can complete. I fundamentally believe that if you are not learning new things, you stop doing great and useful things. So family, curiosity and hunger for knowledge all define me.

Satya Nadella
CEO, Microsoft

So, in just 105 words Satya achieved a lot and how did he do that? The ease of these words is only an illusion. Satya and his team have worked very hard on crafting his who am I story. Let's decode the methodology behind this story.

I've been married for 22 years and we have 3 kids: When you meet someone for the first time building a connection is the desired outcome and that happens by a bridge of commonalities. Now, Satya's letter is read by a variety of readers (Microsoft employees and public) so how can he find a commonality with so many people? The trick here is to go with things that are common to all, like parents, friends, marriage and children which is exactly what Satya has done here. Connection Storytelling via finding something in common to all. These things are also profoundly human and naturally lead to a connection

I buy more books than I can finish. I sign up for more online courses than I can complete: In this sentence Satya is building likability and connection by being vulnerable by openly admitting that he doesn't read all the books he buys and doesn't complete all the online courses he signs up for. This sentence also reveals what Satya is passionate about which is learning. Only somebody keen to learn will buy a book and sign up for online courses.

Dr Brené Brown very rightly puts it as...Courage is to tell your story of who you are with your whole heart.

Many who know me say I am also defined by my curiosity and thirst for learning : In this sentence he clearly articulates what is it that he is passionate about but this sentence would have evaporated if it was not for – **I buy more books than I can finish. I sign up for more online courses than I can complete.** He has cleverly made his passion for learning memorable by unread book and incomplete online courses.

> "A story you tell about an apparently trivial incident <u>can expose the entire fabric of your character.</u>"
>
> - Steve Denning

I fundamentally believe that if you are not learning new things, you stop doing great and useful things: So, what does doing great things mean? This sentence is a perfect segway to what is most important to Microsoft which is Innovation.

After talking about his passion for learning he connects to what is most relevant to Microsoft which is Innovation. He has aligned his passion of learning to innovation. He makes a great connect between learning and innovation by stating without learning you cannot innovate.

Satya has stayed away from the traditional approach of reciting your CV when saying hello to your teams. He has done something remarkable.

If you are a leader you can use these techniques to build connection too. This is what I suggest you do.

I am about to say Hello

1   Make sure you tell people who you are via a story.

2   Don't think of reciting your CV.

3   Think of what is common between you and people listening to you.

4   Think of what you are passionate about that is relevant to your listener.

5   Don't boast about your achievements. You are a CEO and that is enough of an achievement.

6   What are some of the failure moments in your life that have shaped you and that will help convey what you are passionate about?

7   Can people find out what you are saying about yourself by an online search. If the answer is yes. Don't use that.

8   At the end of you telling about yourself your listeners should feel they got to know something about you that they did not know and they feel a sense of connection with you.

Your introduction aka hello is your golden opportunity to make a lasting first impression or not. If you put in thought and effort like Satya, you will be remembered.

The Story of YOU

1

The story of you is a prelude to some other communication - your main communication. Be clear on the purpose of this main communication - selling your product. Your story is just a starter not the core.

2

Review your career and select an event where you learnt a lesson that is relevant to your main communication. Please bear in mind that its important that this event is relevant and also builds your credibility.
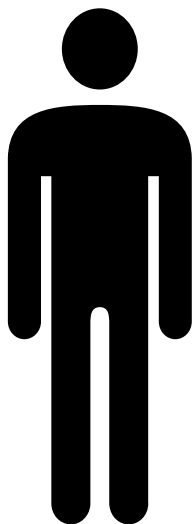
3

Jot down some details of the event - when and where it happened - e.g. July 2007 in Dubai.

4

Ask yourself if this event is interesting to the audience. If the audience run plants and oil drills why would they want hear about your experience in a restaurant? This is about keeping things common between you and your audience.

5

Make sure you have at least one word that reveals how you felt at the time the incident took place.

6

Make sure it doesn't sound like boasting.

7

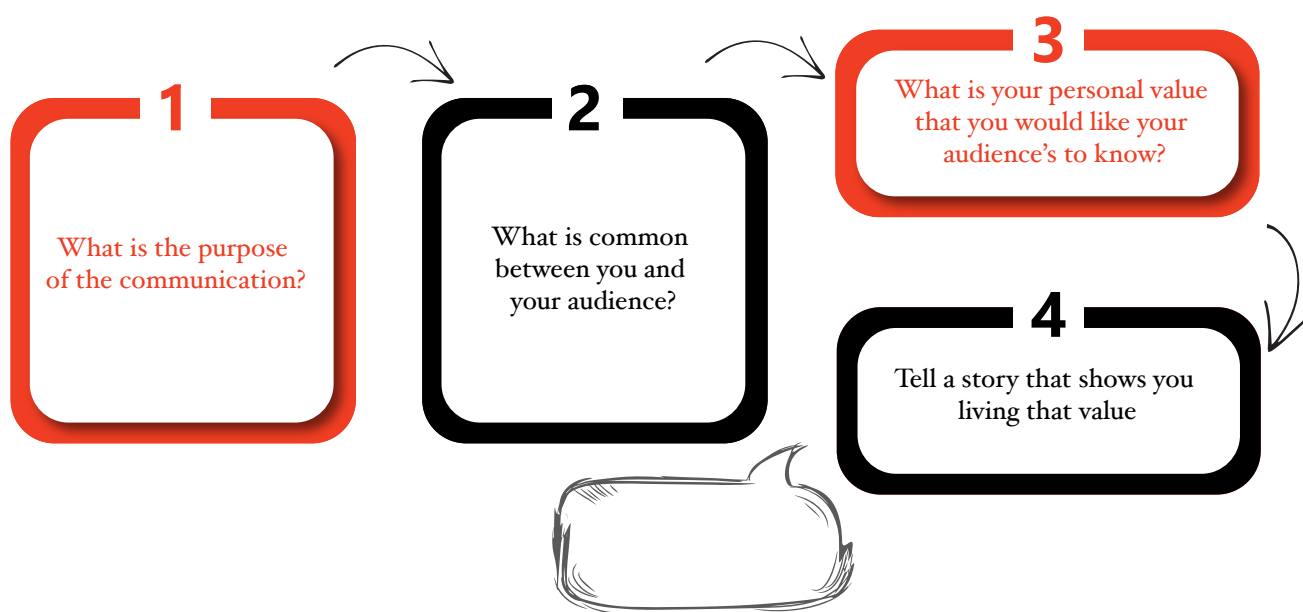**Link it to your main communication,** *"What this experience taught me was..."*

When can you tell this story?

1. _____

2. _____

3. _____

Think of a situation in the near future where you need to build rapport or credibility.

1

What is the purpose of the communication?

2

What is common between you and your audience?

3

What is your personal value that you would like your audience's to know?

4

Tell a story that shows you living that value

My Audience
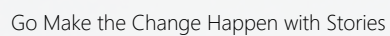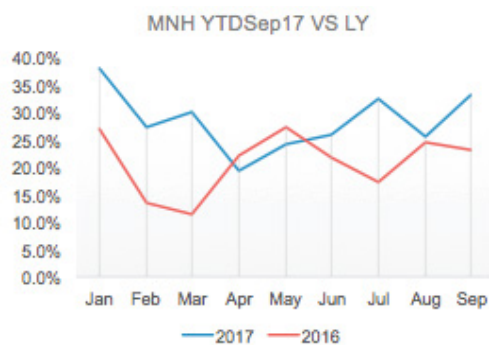
Lesson 3:

Why do we present data like a maze?

As I do more and more work on Data Storytelling, I come across examples that are demonstrative of the fact that our ability to data storytell is still at its embryonic stages. There are simple things that we agree with in theory but fail to apply.

Here are some slides I have worked with that demonstrate my point.

Now, as soon your audience look at this, the feeling they get is very close to the feeling one gets when one enters a maze without choice.

Confusion, Irritation and Frustration surfaces.

The first natural reaction of the audience is to stop listening to you because their brain starts to make meaning of what they are seeing. The problem is that these slides don't really guide you where to look, you are likely to lose interest in the presenter.

So What Should Change?

My learnings on change that we should seek to make in such an instance come from Storytelling with Data by Cole Nussbaumer Knaflic.

A better way is to draw your audience's attention to where you want them to focus. You have to highlight the important stuff but only the important stuff. Highlighting too much leads in diluting what you wanted to highlight in the first place. In Universal Principles of Design (Lidwell, Holden, and Butler,2003), it is recommended that at most, 10% of the visual design be highlighted.

Here are some of the highlighting principles:

Bold, *Italics,* and **underlining**: Use for titles, captions, labels and short word sentences to differentiate and highlight. Bolding is generally preferred over italics and underlining because it adds minimal noise to the design while clearly highlighting chosen elements. Italics also adds minimal noise, but also do not stand out as much. Underlining adds noise, so it should be used sparingly.

CASE Uppercase text in short word sequences is easily scanned, which can work well when applied to titles, labels and key words. Avoid using different fonts as a highlighting technique, as it's difficult to attain a noticeable difference without disrupting aesthetics.

Color is an effective highlighting technique when used sparingly and generally in concert with other highlighting techniques (for example bold).
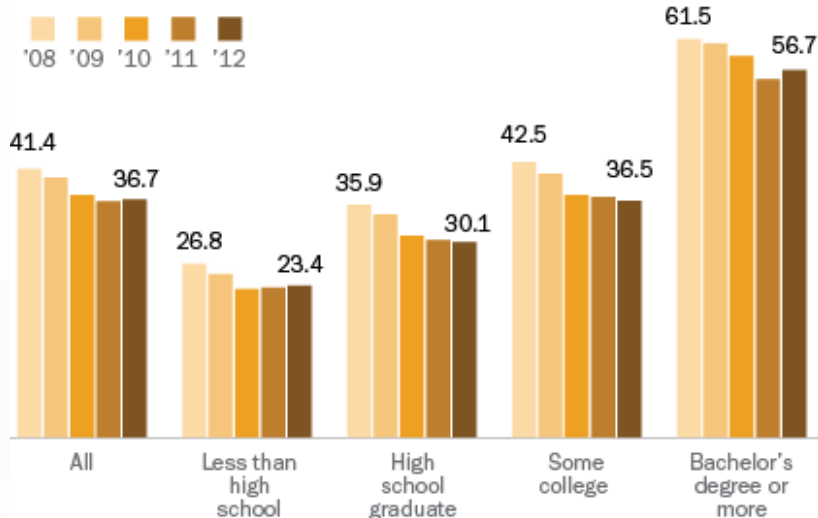
SIZE is another way to attract attention and signal importance.
As an example, look at the graph below. A graph that's similar to this was published by PEW Research Centre in an article titled, "New Census Data Show More Americans Are Tying the Knot, but Mostly it's the College Educated."

New Marriage Rate by Education

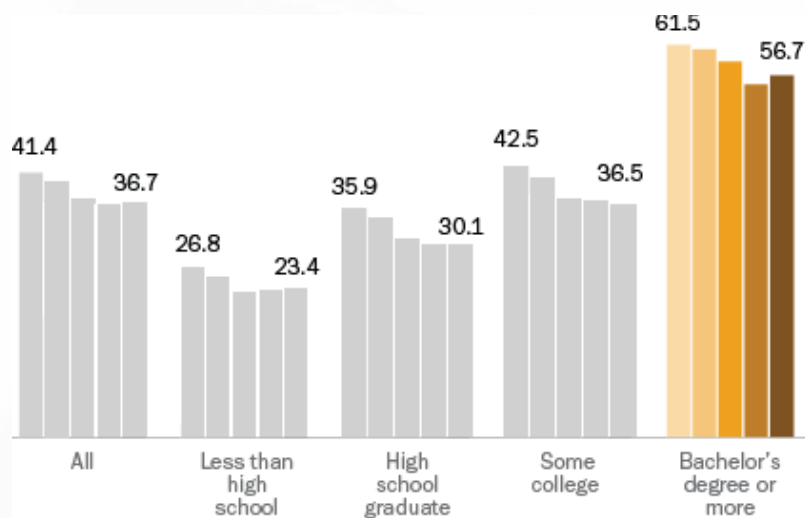*Number of newly married adults per 1,000 marriage eligible adults*

'08 '09 '10 '11 '12

41.4   36.7   26.8   23.4   35.9   30.1   42.5   36.5   61.5   56.7

All | Less than high school | High school graduate | Some college | Bachelor's degree or more

Note: Marriage eligible includes the newly married plus those widowed, divorced or never married at interview.
Source: US Census

PEW RESEARCH CENTER

If you read the article that accompanied this graph, you will see that it's meant to demonstrate that the 2011 to 2012 increase observed in total new marriages was driven primarily by an increase in those having a bachelor's degree or more. The design really doesn't draw your attention to that insight and makes you focus on the 2012 data because it is darker in colour.

If we use the colour as a strategy to draw attention, then the look of this graph could change like this:

41.4   36.7   26.8   23.4   35.9   30.1   42.5   36.5   61.5   56.7

All | Less than high school | High school graduate | Some college | Bachelor's degree or more

Note: Marriage eligible includes the newly married plus those widowed, divorced or never married at interview.
Source: US Census

Now, where do your eyes go straight away? You have focussed the audience's attention to where you really wanted it to be.

Don't make your audience process everything to figure out where they should be paying attention. Rather, direct their attention strategically to the most important part(s) of what you are showing. Create visual hierarchy by emphasising some elements and pushing others to the background.

Lesson 4:

Hey Data Analyst, Are You are a Questionologist?

Last month, I conducted 3 workshops on Data Storytelling in Singapore, China and Malaysia. During the workshops I got the Data Analysts to apply the learnings on data that they had brought from work. I noticed a pattern in their struggle.

Let us try and dig deeper into the issue using an example. Imagine you are a Data Analyst and you are presenting the data given below which shows the volume of tickets received versus volume of tickets processed.

Monthly Volume Received & Processed, as of Dec 2011

Most analysts will show this graph and say, "In the later half of the year, we processed less tickets than we received." The moment you hear something like this, as an audience, what goes through your mind is, "Well, that I can see."

So what exactly is the purpose of you standing up and speaking?

As an analyst you should always want your audience to know or do something. If you cannot articulate that, then you should revisit whether you need to communicate at all in the first place.

When I brought this up and questioned my workshop participants why are they not sharing insights and suggesting actions, the answer I got was, "The audience know better and should be able to decide on how to act".

However, what I am noticing more and more in my Data Storytelling Workshops is that Data Analysts are really far from understanding why things happen the way they do and even further away from an ability to suggest actions. Their roles are limited to being number crunchers. My experience in conducting these workshops informs that the way most organisations are currently structured, Data Analysts are not really a part of the business where they have the know-how of what business activity is happening.

So, with such a limitation, what can the Data Analysts Do?

Here is what I suggest Data Analysts do.

Ask the Questions. The New York Times published a great article, The Power of 'Why?' and 'What if '? which highlights the importance of asking questions. Feedback from senior executives reflects that they need employees and leadership to ask more questions. This is true especially when investigating facts with data.

In this specific Data Presentation, if you are not aware what caused the difference between the number of tickets received and the number of tickets processed, here are some questions you could ask:

- **Can anyone take a guess at why our volume of tickets recieved to processed changed?**
- **Were there any resignations and were we facing a manpower crunch?**
- **Was our ticketing system having any troubles that led to the slowing down of the process?**
- **Did we have a new system that the team was still learning how to use?**

It is totally fine that you do not know the answer to why things happened the way they did. If you simply said what was obvious on the slide, you are really not needed. But if you asked the questions, you can lead the group into some productive conversations which will reveal the insights that can be used to drive business outcomes. And even if you are highlighting the wrong thing, it prompts the right sort of conversation.

So in the absence of an insight, being a questionologist is a great move.

Lesson 5:

Explain the grandness or minuteness

Let's casually throw a number around, for example, "Our facility is 255,000 square feet large." This is a classic example of a number just thrown, but if you say, "Our facility is 255,000 square feet which is as big as four football fields", you have now explained the grandness of scale by contrasting it with items of familiar sizes.

I noticed that it's a particular problem when business professionals talk like this, "We have been around for 38 years, we have 36,000 employees in 26 different companies." The question that goes through my mind is, "So what?"

Compare it with something.

Numbers can be mysterious unless you compare them to numbers of similar value in a different context.

Here is a great example of Intel's CEO, Paul Otellini's 2010 CES Presentation:

"Today we have the industry's first-shipping 32-nanometer process technology. A 32-nanometer microprocessor is 5,000 times faster; its transistors are 100,000 times cheaper than the 4004 processor that we began with. With all respect to our friends in the auto industry, if their products had produced the same kind of innovation, cars today would go 470,000 miles per hour. They'd get 100,000 miles per gallon and they'd cost three cents. We believe that these advances in technology are bringing us into a new era of computing."

Telling the story of the number makes it a hero versus a zero.

Explanatory Story Pattern

The Explanatory story works by walking the audience through the data in chronological order, illustrating how you've arrived at the situation you're in now. It works well with time-series data, especially when it shows the result after some intervention.

Imagine a sales trend chart showing revenues in four consecutive quarters, Q1 to Q4: $30M, $30M, $26M, and $33M. You could explain this by saying, "As you can see, the intervention we put in place at the end of Q3 completely reversed the decline in sales. Let me explain what we did . . ." followed by all the details. That's fine. And that's the way most people would share the data. But it's not a story.

Instead, you could explain it in story form: context, challenge, conflict, resolution.

You'd start by explaining how quarterly sales had been steady at $30M through Q2 (that's context). And then in Q3, you had a 13 percent decline (that's the challenge). Then, you explain that you and your team developed and implemented a plan to reverse it by saying, "So, here's what we did. . ." (this is the conflict). You finish with, "And as you can see, sales are now up to record levels," which is the resolution. Now, it's a story.

Source: Paul Smith | Sell with a Story

1
For a long time it was like this

2
Then we faced some challenges

3
So we will...
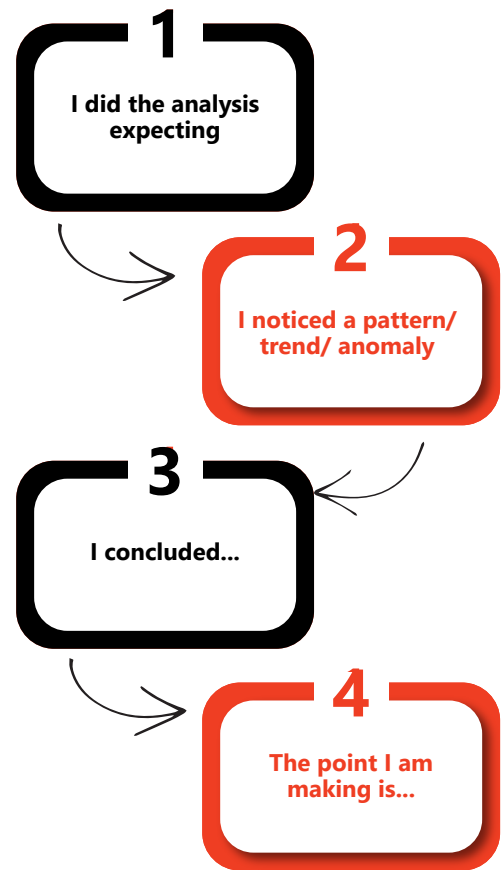
4
The benefits will be...

Exploratory Story Pattern

The "Discovery Journey" story is very different. You're not walking the audience through the data in chronological order. You're walking them through your analytical process in chronological order. In other words, the main character of this story isn't the business. It's you. Same data, different main character. In this story, you walk the audience through the work you did right up to the point that you had your aha moment. But instead of simply telling them your conclusion, you give them the opportunity to draw that conclusion themselves.

The goal here is to let your audience have that same aha moment you had when you came up with your brilliant idea by telling them your journey of discovery. People are more passionate about pursuing their ideas than they are your ideas. The Discovery Journey story turns your ideas into their ideas.

Source: Paul Smith

1
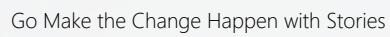**I did the analysis expecting**

2
I noticed a pattern/ trend/ anomaly

3
I concluded...

4
The point I am making is...

Data Storytelling

Important Things in Data Storytelling

What Data Points You Are Using?

Your Data Storytelling is very dependent on the Data Points you choose for the correct story to shape up.

Brian Wansink, Professor of Marketing and the Director of the Cornell Food and Brand Lab., author of Slim By Design and Mindless Eating, is famous for the popcorn study. This popcorn study is a great way to elaborate this point.

Here is what the Popcorn Study was all about.

*One Saturday in 2000, some unsuspecting moviegoers showed up at a suburban theatre in Chicago to catch a 1.05pm matinee of Mel Gibson's action flick, Payback. They were handed a soft drink and a free bucket of popcorn and were asked to stick around after the movie to answer a few questions about the concession stand. These movie fans were unwitting participants in a study of irrational eating behavior.

There was something unusual about the popcorn they received. It was wretched. In fact, it had been carefully engineered to be wretched.

Some of them got their free popcorn in a medium-size bucket, and others got a large bucket. Every person got a bucket so there'd be no need to share. The researchers responsible for the study were interested in a simple question: Would the people with bigger buckets eat more?

Both buckets were so big that none of the moviegoers could finish their individual portions. So the actual research question was a bit more specific: Would somebody with a larger inexhaustible supply of popcorn eat more than someone with a smaller inexhaustible supply?

The researchers weighed the buckets before and after the movie, so they were able to measure precisely how much popcorn each person ate. The results were stunning: People with the large buckets ate 53 percent more popcorn than people with the medium size. So, clearly People eat more when you give them a bigger container.

What interests me most about this study is not the finding but imagine that a data analyst looked at this study and put together a graph with two data points, the number of people and how much they ate, with no mention of bucket sizes. Upon looking at the data you would quickly jump to the conclusion that some people simply ate too much and you would perhaps want to think about ways to motivate people to adopt healthy eating habits.

But in fact, there is a much more simple solution available at hand, which is to reduce the bucket sizes.

In summary, you may have a way to obtain data, but knowing the correct data points to use and interpret will give you the insights you need for the best business outcomes.
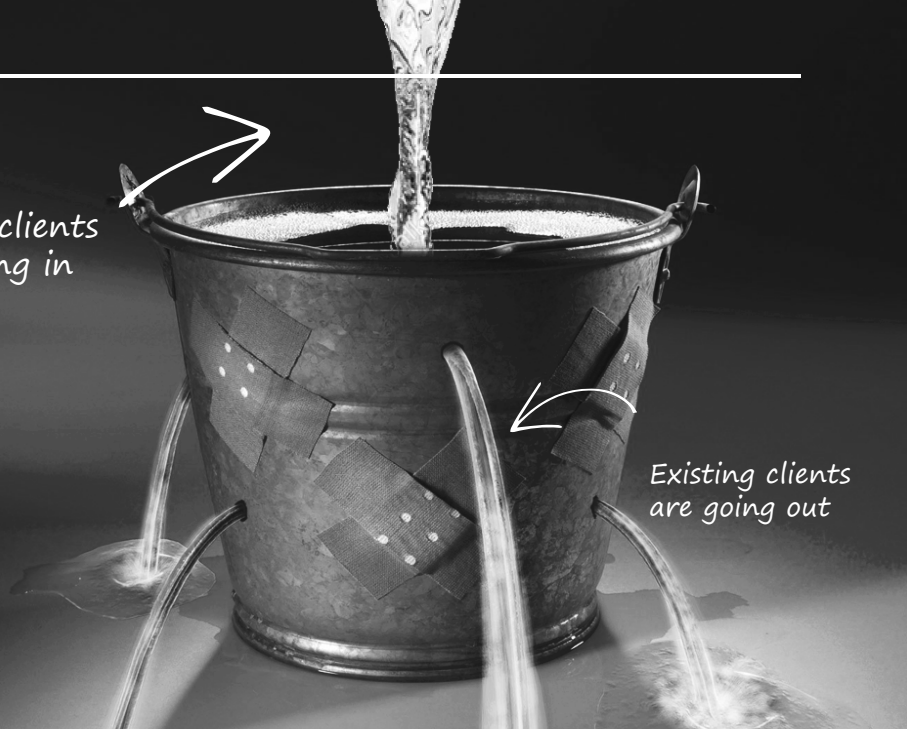
Narrative's Data Storytelling Workshop is designed to help business professionals learn how to tell a story that's hidden in Data for Better Business Outcomes.

* Source : Switch: How to Change Things When Change Is Hard by Chip Heath and Dan Heath

New clients
coming in

Your Leaky
Sales Bucket

Existing clients
are going out

Do Not Just Go from Problem to Solution

Data Storytelling and a mistake we often make

Less than 7 years ago, a Managing Director of a business retrieves data for the last 5 years' sales revenue. He calls his team and shows them that in Year 1 and Year 2 they performed exceptionally well. In Year 3, the revenue dropped a little and in Year 4 and Year 5 it dropped even more.

He tells the team that they need a "Rainmaker" in the business. Someone who can bring the revenue back to what it was in Year 1 and Year 2. Shortly after, a Rainmaker gets hired.

Sadly, 1 year later, the only change that happened was that they've had three Rainmakers come and go and the revenue continued to drop.

What is going on here?

The problem is, most people look at the data and jump in solution mode.

Data tells us that teamwork is not good. Let us resolve this by doing team building exercises.

Data tells us that we don't have enough gender diversity in our team. Let us get some women into our workforce.

In this case, data tells us that we have declining sales. Let us get a Rainmaker.

The reality is different. In Year 3, three other major global competitors had come into the market and what was required was not a Rainmaker but a strategy on retaining clients.

If the Managing Director had interrogated the Data pattern, trend or anomaly, the Story would have sounded something like this:

In Year 1 and Year 2, we had great revenues, and as you can see, in Year 3, 4 and 5, our revenues have consistently dropped. You know what happened in year 3? We had 3 other competitors enter the market who took our clients. Our market share reduced.

Interestingly, our new business generation remained the same for all 5 years, but we lost loyal retainer clients. What we need is a strategy for retainer clients, not acquisition clients. We have a leaky bucket business where we are adding sales with new clients but losing sales from existing clients.

So what can we do?

Do not jump from Problem to Solution when Data Storytelling.

Ask yourself, *"Why does the problem exist?"* And that precisely, is your insight/unexpected of the Data Story.

I am Data and I can Lie

My recent work with market research specialists and data analysts has led to a conclusion, which is, there is a particular skill that contributes to you being able to analyse data really well.

What is it?
Your ability to challenge or decode the findings.

Here is a wonderful story of what that looks like.

1n 1991, a first-year PhD student named Amy Edmondson, now Novartis Professor of Leadership & Management at Harvard Business School began visiting hospital wards, intending to show that good teamwork and good medicine went hand-in-hand.

*Amy started visiting recovery rooms, talking to nurses, and paging through error reports. She noticed a lot of reported errors and she explains that the errors were not happening because there was incompetence, but because hospitals are really complicated places and there's usually a large team involved in patient care. It's easy to make mistakes due to the complexity involved.

However, some hospitals seemed more prone to errors than others. She made an observation that one department that was chatty and informal, had pictures of their kids on the wall and the other department was sedate. The nurse managers wore business suits and kept the public area free of personal items and clutter.

Amy took this opportunity to investigate if good teamwork and good medicine go hand-in-hand.

She designed a survey with suitable questions, expecting to prove that a good team and good medicine went hand-in-hand, but the survey findings shocked her. The wards with the strongest team cohesion had far more errors. She checked the data again, it did not make any sense.

She then went back to the questions in the survey and looked at each one of them. One question in the survey was, "If you make a mistake in this unit, is it held against you?" The response to this question revealed what was going on.

It wasn't that wards with strong teams were making more mistakes. Rather, it was that nurses who belonged to strong teams felt more comfortable about reporting their mistakes. The data indicated that one particular norm, whether people were punished for missteps, influenced whether they were honest after they screwed up.

This is a wonderful example of how a data analyst should not data puke. There are 3 things that are important to tell the data story:

Why are you looking for the numbers that peak or drop?
So, what if the numbers are peaking and dropping?
If the data analysis reveals results that are against your instincts, challenge the results.

In my recent work on Data Storytelling, I have come across several situations where we have challenged the data being presented and upon investigating, found what was really going on.

Since when did data become smarter than a human?

Story Source: Smarter Faster Better by Charles Duhigg

Present your Data with Stories now

Key Reflections

My Notes

My Notes