FINDING AND COMMUNICATING THE STORY IN THE DATA

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INTRODUCTION

There is widespread agreement that storytelling is a key element in ensuring that the insight uncovered by research is communicated in ways that result in impact (Heeg, 2015). Over the last few years there has been an ever-expanding range of resources to help people understand what storytelling is, how it works, and how to become better at it, for example Chip and Dan Heath's *Made to Stick* and *Talk Like TED* by Carmine Gallo. However, one important ingredient in the process has been given much less attention, namely how to find and craft the story in the data. This paper is designed to address that shortfall.

WHY ARE WE INTERESTED IN STORY TELLING?

Stories are the way humans have communicated since before the beginning of history. Indeed, the Latin term *historia* is an umbrella word that encompasses not just a record of the past but also narrative and story. When I run workshops on the topic of finding and communicating the story in the data I usually start by asking people why we are so interested in storytelling. Common, and perfectly correct, responses include:

- Attention grabbing
- Makes the message memorable
- Makes the message easier to understand
- Makes the message coherent
- Ensures that we understand the message and its relevance to the audience

In terms of finding and crafting an effective story, the point about ensuring that we understand the message is particularly relevant to the story finding and communicating process. It is very hard to craft a compelling story without understanding both the audience and the message.

The key point underlining all the reasons why we are interested in storytelling is that storytelling works. We don't use storytelling because it is aesthetically pleasing, or because it is more enjoyable than simply regurgitating facts; we use it because it helps transfer a picture in our mind, into the mind of the audience, and from the audience's mind into action.

THE DATA DOESN'T SPEAK FOR ITSELF

When I joined the research industry in the 1970s it was not uncommon, in quantitative circles, to hear the advice '*Let the data speak for itself*.' The thinking behind this advice was that the data represented an objective reality and the analyst would dilute this objectivity if they added their interpretation. In those days, it was felt that if somebody needed to make the jump from the objective 'facts' to subjective business decisions it should be the client; the person who had commissioned the project and was in possession of the wider facts. As a consequence it was not unusual for a quantitative researcher to work on a vast range of projects. In the 1970s I might work on auto on Monday, finance on Tuesday, cosmetics on Wednesday, carbonated beverages on Thursday, and banking on Friday. The skill the researcher was bringing to the process was methodology; the 'insight' role belonged with the user of the information.

We now recognise that it was never true that market research data reflected objective reality. The selection of what questions to ask, who to ask them to, how to ask them, and how to process them, were always subjective. The answers that research participants provided were always impacted by the issues we now confront through behavioural economics and our inability to access our own motivations. However, the world has changed in more ways than just recognising these historical methodological weaknesses. Market researchers are now expected to provide insight and advice, not just a careful re-ordering of the data collected.

The role of the researcher today is to design the research, analyse the findings, find the key message in the data, and communicate that message in a way that causes actions to follow. It is not enough to convey data, indeed it is not always even necessary, what is necessary is to convey the message, and storytelling is in many cases the most powerful method of doing that.

NARRATIVE THEME

In terms of insight and market research the key element of storytelling is a narrative theme. In novels and films it can make for an interesting experience to provide ambiguity (for example, at the end of Kafka's *The Trial* Josef is executed, but we still don't know why) or to play around with the timeline (as in the film Pulp Fiction), but in market research the story should be predictable and flow from a beginning, to a middle, through to an end, taking the audience with it, and often disclosing the ending at the outset.

If we are telling somebody about our day, or if we are trying to remember a specific detail, we typically describe our day chronologically. For example, wake, breakfast, travel, work, lunch, work, travel, family and finally sleep. We could recite them in a random order, but we would probably forget some elements. If we have lost our wallet we will typically think back to some point in the day when we know we had our wallet and then walk through our day chronologically until we identify the last time that we definitely had the wallet. In many cultures, when we eat a meal it flows from drink, to starter, to main course, to dessert, to coffee. Presenting the food out of sequence, or even all at once, breaks the harmony of the meal.

Having a narrative theme means that there is a meaningful connection between the elements of the story. The elements do not contradict each other, they come in the right order, and they build understanding and memorability. Having a narrative theme means there is a direction to the story, it does not wander through the data highlighting shiny pebbles found on the beach, it has a structure that builds and reinforces a single overall message.

The narrative flow for a particular story will depend on the message and the audience.

If the message that needs to be conveyed is good news, then the flow can often start with 'Good news', and then show why. But if the news is bad, for example you are telling the client that their preferred option is a poor choice, the flow needs to build trust and help the audience discover why they were wrong (and it still won't necessarily be easy). In most cases a good news story (and a good news presentation or report) will be much shorter than a bad news story.

Different audiences require different narrative flows, even when the story is the same. A presentation for the insight team will probably want to reassure them that the methods used were correct and they may well be interested in conclusions that were considered and rejected. A meeting with senior executives is more likely to start with the conclusion and focus on what the options for action are. Cultures can also impact the preferred flow. In many Western countries, such as the USA, it is quite a common practice to start with the conclusion and then show why that is the right conclusion and to highlight the ways the conclusion can be implemented. In other countries, for example Japan, the flow tends to start by showing what was done, then what was found, and only then suggesting what it means.

FRAMEWORKS

After working with research and insight professionals for more than thirty-five years I have noted that most of the teams that reliably produce good analysis and useful stories use frameworks. There are many individuals who seem to intuitively know how to analyse information, to seek out the key messages, and then craft a compelling story. However, these individuals often struggle to teach others how to do it their way and often struggle if they have to work in a team to produce the analysis.

There are a wide variety of frameworks in use, and teams will find it useful to evolve their own specific framework. In terms of market research and the process of finding and communicating the story in the data, the following elements are typical of most frameworks:

- How to frame the problem. For example, what problem is being solved, and what action does the client want to take once he/she has the answer?
- Linking the project to a wider context. Too often research is conducted as if the project is the only source of information, and as if its output only has one use. A framework assesses what is already known and how the new information should fit into the web of what is already known.
- A standard method of organising the data (both qualitative and quantitative).
- A systematic method of analysing the data.
- A preferred method of extracting the story and linking it to the wider context.

Framing the problem

In their book *The Art and Science of Interpreting Market Research Evidence*, Smith & Fletcher point out that "*A problem defined is a problem half-solved.*" (Smith & Fletcher, 2004) Even apparently simple problems such as "Which of these three ads should I use?" may be hiding one of the following key propositions:

1. Because I have to use one of them.
2. But if none of them are better than the old ad I will re-run the old ad.
3. If two of them are really good, I will use both of them.

Key factors that need to be assessed when framing the problem are:

- What is the background to the project? Why is it being run, and why is it being run now?
- What would success look like? (For example, one of the ads will be better than the other two and it will be good enough to use.)
- What actions should follow the research (For example, following the research we will pick an ad and run it.)
- What do people think the results are going to be? Why do they think that? What of the dominant or prevalent hypotheses?

A wide range of resources are available to help answer these questions and frame the problem. If there is an on-going relationship between the supplier and client then this will provide a wealth of insight into the background for the project. The request for a study (e.g. the brief, RFQ or RFP) should state most of the more obvious elements and should be re-reviewed before starting the main part of the analysis. The proposal should also be re-reviewed, suppliers should double-check what they said they were going to do as an early part of their analysis process.

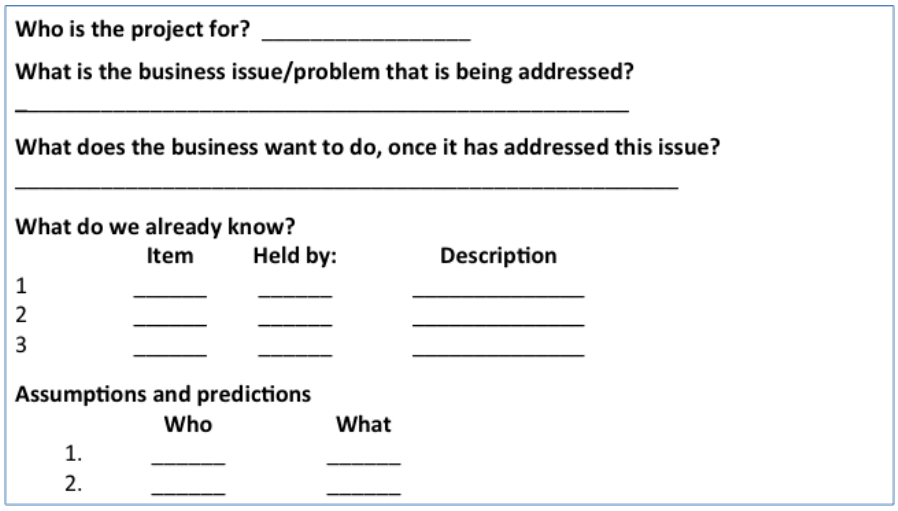
Perhaps the most important element in framing the problem is to have discussions with the person commissioning the research and ideally the people who are going to use the results. This is where the questions can be asked and probed about what success looks like, and what the prevalent hypotheses are.

Linking the project to the wider context

All research projects should fit within a wider context. Other research has been undertaken before it, further research will be taken after it, and the client will have an extensive network of knowledge, some of which will be relevant to this project. There will also be relevant knowledge and information within the supplier organisation and in the public domain.

Too many research projects are handled as if they are a world unto themselves. The analysis and presentation often draws solely upon the research. It is much better to assess what is already known, and what is already believed, and to take that into account when conducting the analysis and crafting the story.

FIGURE 1.



A section of a simplified framework example is shown in figure 1. Team members should use a form like this to ensure they collect the relevant information and address the key framing issues. As the framework approach becomes embedded the task becomes less onerous because more and more of the existing knowledge is documented.

ASSEMBLING THE EVIDENCE

When using a framework approach to finding and communicating the story in the data the researcher normally needs to combine different strands and forms of information. This process typically requires the information to be assessed and in many cases converted into an accessible form.

In terms of quantitative data, typical processes include: standardizing the data, accounting for missing data, creating indices and cross-tabulating by relevant variables.

With qualitative information, typical framework processes include ensuring translations are available, accessing transcripts, determining whether memos and notes should be created as part of the analysis, and guidance on practices such as tagging and metacoding. Some organisations specify that the data should be brought together in a specific platform, such as NVivo.

Where there are multiple sources of information there are a variety of steps that are necessary such as:

- Assessing the credibility/reliability of each source.
- Checking the granularity of the information, for example individuals or totals and timing issues such as monthly or daily data.
- Determining the best way to combine the information. This might be as extensive as creating an integrated data set, or it might be as loose as assessing the conclusions and main messages from each source.
- Evaluating whether the data sources are overlapping or complementary.

SEPRATING THE SIGNAL FROM THE NOISE

As the quantity of information rises, the ratio of signal to noise tends to get worse, i.e. the noise grows faster than the signal. In modern research projects the amount of data, especially from sources such as passive tracking, transactional data, and background information, is rising exponentially. This means researchers need to establish and use a toolbox of techniques that help remove noise and identify the signal.

Examples of typical approaches to identifying the signal are:

- Normalising by 'share of'. When tracking something over time the measurements can be disturbed by seasonal changes and by underlying trends. Expressing the data as share of all mentions, for example: share of wallet (share of purchases), and share of voice (a relative measure of advertising coverage) makes it easier to compare the data.
- Normalising by coding. There are a wide variety of ways that codes and categories can be used to separate the signal from the noise. Sentiment analysis, coding text into Positive, Negative and Neutral, is one way to extract a message from open-ended data. Scoring systems can be used to evaluate and compare performance – in the way that different actions in sports like American Football and Rugby result in different points, which are summed to determine the final score and thereby the winner.
- Standardising. Standardising is a well-established method of allowing researchers to work with disparate data sets. The most traditional way of standardising data is to transform the data so that it is has a fixed mean and standard deviation. Two common options are to create a mean of zero and a standard deviation of 1, or a mean of zero and a standard deviation of 10.
- Indexing. The most common form of indexing is to pick a start date and recode the data to be some fixed value (for example 100). Over time the different variables can be contrasted to see how they move. A good example of an index is the FTSE 100 (which measures the value of the shares of the 100 companies on the London Stock Exchange with the highest market capitalisation). The value of the FTSE 100 was set at 1000 in 1984, on Feb 15, 2016 the FTSE stood at 5824, i.e. it had climbed by 482%. 1000 was picked to avoid decimal places. One basis point, for example the difference between 1000 and 1001, is one-tenth of a percentage point.
- Normalising by growth over time. Fast moving fields, like social media, are often compared by looking at growth over time. There are two main forms of this process. The first is to take a fixed period of time, for example three years, and the growth of the brands or services shown on a chart – even though they may have been launched years apart. A second variant of this chart is to show how long it took each brand or service to reach a particular fixed level, for example how long did it take to reach 400 million users.

FIGURE 2.

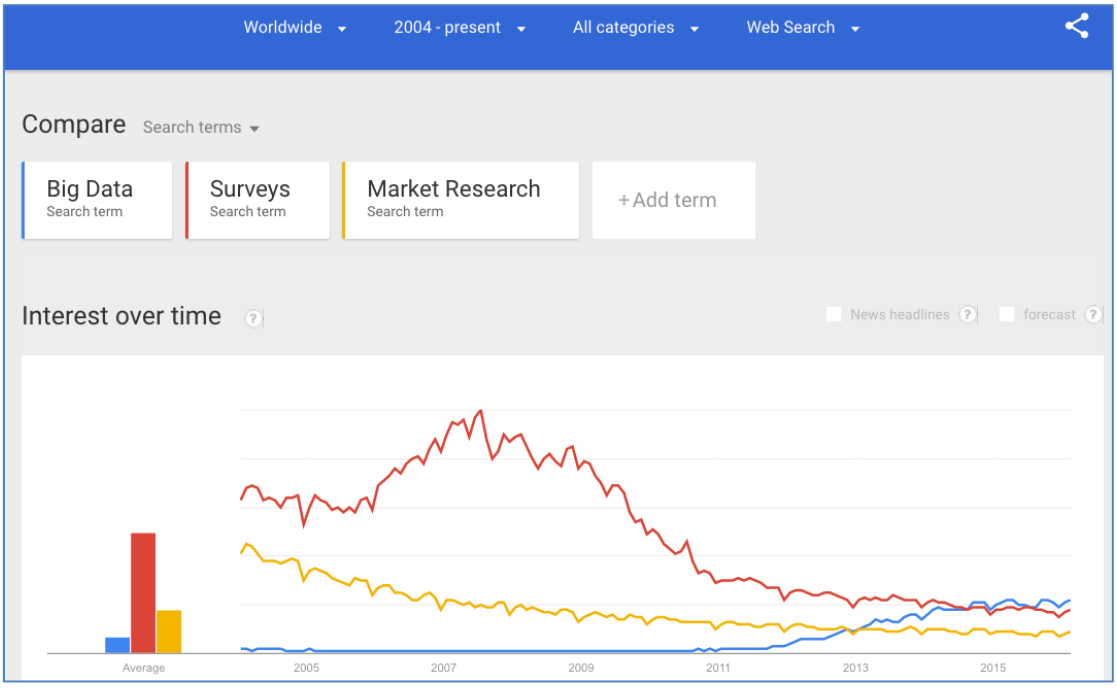


Figure 2 shows a Google Trend chart, based on Global Data, showing the relative frequency of searches for Big Data, Surveys, and Market Research. The way the data are presented takes into account the fact that during the time period shown more than one billion more people started using the internet, usage shifted markedly to mobile, and the way the internet is used has continued to evolve.

ARE THE DATA CORRECT?

Checking the data is something that should happen at every stage, partly because errors can creep in at every stage and partly because some errors are most identifiable at different stages. For example, comments in an open-ended variable saying that something is not working in an online survey are best dealt with during fieldwork. But, if during analysis it becomes apparent that one stream of data contradicts other streams, then it is either an interesting message or a sign that something might be wrong with the data.

In general, I have found that most interesting findings turn out to be errors. Genuinely surprising and interesting results do happen, but errors are much more common. A good framework will include standard checks, such as looking at the open-ended comments, looking at questions not answered in a survey, and comparing the notes and memos from different focus groups. However, in addition to these standard checks, the researcher should double-check anything that looks interesting or surprising.

FINDING THE STORY

The data has been checked, the different streams have been reviewed, and the problem that needs solving has been defined; so now the process of finding the story commences. The first step is to find the main messages in the data, for example:

- What are most people doing?
- What do most people believe?
- What are the main motivations?
- Is the story basically good news or bad news?

Finding these elements requires time and it means looking at the data, for example, looking at the totals in the quantitative data and reading the transcripts or memos from qualitative research. This stage is a high-level review of the information; the researcher should not be looking at endless lists of sub-groups and variations, the key is to look for the big truths that will help create the big picture.

Homing in on the story
Armed with the clients' business problem and the big picture the pursuit of the story can start in earnest. As you pursue the story, make memo notes of everything you find of interest. Flag these items into two broad categories; things that are interesting but not relevant to this investigation, and things that you think are relevant and important. The interesting findings that are not relevant to this story should still be reported, but not as part of the story. These 'other findings' can be reported separately, possibly at a later date, or possibly as a series of useful communications between the researcher and different parts of the client organisation.

The business problem will provide some specific questions, test these. Find out if there are groups of people (or situations) where the big picture is not true. The hypotheses that you collected earlier should now be re-visited. Are they true? If they are not true, why not? Are there people or situations where the hypotheses hold or don't hold which differ from the big picture?

Once you find differences, see if you can make them bigger and therefore easier to understand and communicate. For example, if you find that men like Brand A more than women, and that Under 30s like Brand A more than Over 30s, check whether men under 30 are even more distinct in their preference for Brand A.

Don't dive into the weeds!
Perhaps the most common mistake I see today is the tendency to start the analysis process by using modern data interrogation tools to search for differences in the data, without first assessing the big picture. Knowing that there are differences is not the point; things need to be different from something, something relevant.

Find the core of the story
In most cases the story can be reduced to a one-sentence message, which can typically be supported by three themes, and each theme is ideally supported by three key points.

In many cases the key to the story is to identify if it is good news, leading to the following four common situations:

1. Good news!
2. Good news, but there are issues to address
3. Bad news, but it can be mitigated
4. Bad news!

There are situations where the story cannot be defined as either good or bad news, but they are surprisingly rare if you take into account the actions the client wants to take and the hypotheses that were elicited.

CREATING THE STORY

Once the researcher knows the message, has found the core of the story and understands how this links to the client's business needs, the next stage is to create the entire story. This is the earliest stage that something like PowerPoint or a report template should even be considered.

Storytellers not cartographers
The difference between storytellers and cartographers highlights the difference between using storytelling to answer a business problem and simply processing data. A mapmaker does not have a single use in mind; he or she produces a product that has to cater for a vast range of possible journeys, from different starting points, to different destinations, for different purposes, often via different modes. The cartographer has to produce a product that treats every square centimetre as equally important, highlighting every road, each river, and flagging buildings as diverse as post offices, churches, toilets, and shopping centres.

By contrast the storyteller has a focused mission, to convey a message in a way that impacts the trinity of levels: Think, Feel, Do. The storyteller passes on the key information, in ways that are felt to be true, and which encourage actions. Stories leave out most of the detail; they focus on the information that builds the story.

Constructing the story
The key to the story is narrative flow, a message that builds a clear picture from a start to a conclusion. The details of each story will vary, matching the questions, the message, and the audience. But, there are some core principles that remain common to most, or perhaps all cases:

- The method of finding the story has little bearing on how the story should be constructed and told. A complex media mix model might have been the essential processing that helped you find the answer – but it is rarely good story material. A vox pop video might not be a good way to find the story, but it can be a great aid in telling the story.
- The narrative flow of the story will almost never follow the flow of a discussion guide or questionnaire. Indeed a presentation that follows the survey flow is usually a poor presentation (and a clear warning to the client that little thought has been applied to the analysis).
- Editing is essential; anything that is not the story should be removed. Once the audience has grasped and accepted the message then the story should move on, to avoid labouring the point. Researchers either need to become great assassins of their own work, or more reliably enlist the support of somebody with good editing skills, including the ability to act as a devil's advocate.
- The story should focus on the 'Think, Feel, Do' approach which typically means it does not need a description of who the storyteller is or what the storyteller did. The story is about the audience and the message.
- Robust in the face of simplification. When creating the story the researcher needs to be aware that the message will be simplified as it is passed on. A message that A is slightly better than B, risks being simplified to A is better than B – which could be disastrously wrong. A message that A and B are basically equal is a more robust message.

The lead

Nora Ephron, the screenwriter of *Sleepless in Seattle* and *When Harry Met Sally*, provided a great example of identifying the lead, or in market research terms the essence of the story. Before being a screenwriter, Ephron was a journalist and told an illuminating story about her first week studying journalism in Beverly Hills. She explained how the class were taught about the 5Ws – Who, What, Where, When and Why?

As the class's first week assignment the students were asked to listen to a briefing and then write the lead for an article to appear in the student newspaper. The briefing was something like:

"The entire school faculty will travel to Sacramento next Thursday for a colloquium in new teaching methods. Among the speakers will be anthropologist Margaret Mead, college president Dr. Robert Maynard Hutchins, and California Governor Edmund Brown."

The teacher reviewed the work by the students, who had mostly focused on the 5Ws, i.e. they were telling the whole story. However, the teacher then revealed that the best lead was "No school next Thursday!"

Researchers need to be aware that sometimes the story is not in the data, it can be about the consequences of the data.

Correlation, causation, and spurious correlation

One of the key threats to the storytelling researcher is being deceived by the data. As data sets become larger, the quantity of spurious correlations will increase, especially when using software to find patterns in the data. When a true correlation is found, the researcher still needs to deal with the difference between correlation and causation.

A good example of a compelling story that turned out to be wrong is the initial reaction to HRT (hormone replacement therapy). A few years ago a number of studies showed that women taking HRT were less likely to suffer from CHD (coronary heart disease). This led to some key medical experts to propose that HRT was protecting women against CHD; citing a number of plausible mechanisms. However, randomised controlled tests showed that HRT created an increased risk of CHD. The explanation of the data that emerged was that HRT was typically being prescribed to higher income, healthier groups in society, who had lower rates of CHD.

A story based on spurious correlation or one based on confusing causation and correlation can be very convincing, and a convincing but wrong story is the worst possible case. Storytelling switches power from the audience to the storyteller, so the researcher needs to exercise even more care when utilising the power of storytelling.

THINK, FEEL, DO

Researchers have three core elements to deal with when finding and communicating the story in the data:

- Think: what is it that the client should know and understand? Broadly this heading deals with 'facts', certainly with information, but also with probabilities.
- Feel: people rarely do things because they know them to be true, they do them because they feel they are right. As leading neuroscientist Antonio Damasio said "*humans are not either thinking machines or feeling machines but rather feeling machines that think.*" As storytellers, we need to determine how we want people to feel about our message and craft the story accordingly.
- Do: what is it that we want our audience to do after receiving our information and advice? The actions could be to launch a product, or to not launch a product, or unsatisfyingly the action could be to conduct further research – but there should always be a 'something' that we want the audience to do. A market research story that does not deliver the 'Do' is like a love story without love.

SEVEN STEPS TO FINDING AND COMMUNICATING THE INSIGHT IN THE DATA

In summary, here are a few steps that will help you find and communicate the story in the data:

1. Use a frameworks approach to ensure that the process is efficient, reliable, and capable of being scaled-up.
2. Embed the framework approach into your organisation and share it with your colleagues and your suppliers. Design new projects so they will fit your framework and ask suppliers to provide their materials in formats that accommodate your system.
3. Start by understanding what success looks like, i.e. what does the client need and what does the client want to do once they have the answer.
4. What is already known and how can it be utilised?
5. What are the main messages in the data?
6. What are the relevant exceptions to the main message?
7. Determine the 'Think, Feel, and Do' elements of the message and craft them into a story.

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