
The Eight Most Common Big Data Myths



By Joerg Niessing , INSEAD Affiliate Professor of Marketing, and James Walker , Partner Demand Analytics, Strategy&

The hype surrounding “Big Data” does businesses a disservice by making it all look much too easy.

Data analytics and “Big Data” promise to revolutionise marketing. Most companies are sitting on tonnes of data from various sources: financial data, mobile data, transactional data, customer research data, behavioural data, social media data, etc. The combination of new analytical techniques, amped-up computer power and instantaneous online resources has resulted in incredibly powerful tools that have changed the game forever. So powerful, in fact, that analytics can go beyond merely lending support to unlocking new opportunities and strategies, as well as opening up possibilities never before imagined.

But the ease of analysing “Big Data” also has been overstated. In reality, harnessing Big Data is still a messy and very labour-intensive business. Take it from two people who do this work for real: Some of the hype is doing us a disservice, because it creates a false expectation of how easy this is going to be.

So that we can start getting real about Big Data, it's time to put to rest these commonly heard myths.

Big Data Myth #1: It's Big

Big Data isn't "big". It is diverse. "Big" is misleading. What we're talking about is a large volume of data points, updated at high-frequency in real-time, from various sources. It's very granular. It's individual transaction data; it's a certain credit card, paying for a certain amount of gas, at a certain gas station. Big Data is actually lots and lots of very small data. It's not a landslide of data; it's a sandstorm. And sandstorms can blind and disorient you. So, to help see in the storm, what other myths do we need to debunk?

Big Data Myth #2: You need to apply it right away

Most things in life that are important and worthwhile are difficult, and the analysis of Big Data is no different. The solution is to take small steps and start with very specific objectives. Think carefully about what you want to do with the information before you start stockpiling data.

Big Data Myth #3: The more granular the data, the better

Is real-time and granular data always better? No, it's not. The first quarter of a football game doesn't predict how a whole game plays out. Real-time can be too close to the action. Sometimes, you need to pull back for the long shot to reveal what's really going on.

Big Data is encumbered by a huge amount of white noise. The noise as a proportion of the total signal increases with higher resolution, for example, data by minute rather than by week, or data at a town level rather than state. Do not confuse precision with accuracy. Big Data, in its raw disaggregate form, can be misleading. There needs to be an appropriate level of aggregation to cancel out all the white noise.

Big Data Myth #4: Big Data is good data

There is a distinction between a lot of data and a lot of good data. Poor quality data has lots of errors, lots of missing data that can be misleading. Photographs and videos can be tagged incorrectly, and is unstructured text written by teenagers reflecting a positive or negative sentiment? It takes a smart model to figure that out sometimes. To make sense of data, you need to throw some of it away. To analyse Big Data, one of the first things you have to figure out is what data to include in your analysis, and what you need to throw away.

Big Data Myth #5: Big Data means that analysts become all-important

It is often said that Big Data will see the rise of the analysts, “the new gods of the Information Age”. But the rise of the analytics team is exaggerated. The dramatic increase in data velocity means there’s no time to “brief the analytics team” now. We need fast tools that can cope with the velocity, volume and granularity of the data. Ideally, a small group of master-analysts would leverage technology to empower marketers to do more of their own analytics and scenario-modelling and decision-support. We predict the death of the Analytics Department, and the rise of self-service. The era of the pre-eminence of the Data Scientist will not last forever – there is just too much data!

Big Data Myth #6: Big Data gives you concrete answers

Ambiguity is the dominant characteristic of Big Data. Multiple sources of data (for example, transaction, customer acquisitions and media) can lead you away from what the evidence is telling you. Different data, analysed incorrectly, can yield conflicting evidence. Which data do you believe? Big Data requires human judgment to intervene and resolve seemingly conflicting evidence, and that’s where the skilled analyst comes in.

The more data you have, the more likely you are to have contradictions and ambiguities that require resolution. Big Data is not all-powerful. Quite the opposite, in fact. More data gives you more witnesses, but doesn’t get you closer to the truth until you leverage experienced human judgment to reconcile conflicting evidence. The future of analytics is all about combining, weighing and judging multiple sources of information and different analyses.

Big Data Myth #7: Big Data is a magic 8-ball

Well, yes, but you need to ask the question in exactly the right way. It’s a bit like when a genie gives you your three wishes. You have to phrase your wishes very carefully. Applying analytics with a lack of precision or detailed hypothesis creation in advance, when dealing with complex data sets such as cell phone or calling network data, can actually lead you astray and give an incorrect answer. You need to ask your questions very carefully of the “Big Data” crystal ball.

Big Data Myth #8: Big Data can create self-learning algorithms

False positives from rogue data (for example, call centre call volume prediction from direct response TV ads) indicate the limits of automated

models from a marketing perspective. Rogue data from a Super Bowl weekend could distort an auto-update algorithm.

When set up in the right way, algorithms can be very powerful, but they always require human intervention. Cell phone operators, for example, have demonstrated good use of non-marketing data for marketing. They know who your friends are, they can guess your age, they know the parts of town where you hang out, they know what websites you visit, what apps you use, and when. Insurance companies can use telemetrics for obtaining data for marketing, not just underwriting.

At bottom, debunking these myths is about discarding blind faith that the formulae for business success are set down in the data. Truth is, Big Data is a tool in itself, like a computer or smartphone - an awesome, game-changing tool, but only when wielded by people who know the right commands and coordinates.

***Joerg Niessing** is an Affiliate Professor of Marketing at INSEAD. You can follow Joerg on Twitter [@JoergNiessing](#)*

James Walker is a partner with Strategy& based in London.

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About the author(s)

Joerg Niessing is a Senior Affiliate Professor of Marketing at INSEAD. He co-directs the **Leading Digital Marketing Strategy** and **B2B Marketing Strategies** programmes at INSEAD.

James Walker James Walker is a partner with Strategy& based in London.