towards
data science
Sharing concepts, ideas, and codes

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First-hand experience can be a double-edged sword

You've been waiting for a special occasion to take your partner to the fancy new restaurant in town. You've done your research: checked the yelp reviews, asked a few friends, even searched newspaper and magazine articles to make sure it would make for the perfect evening.

Just before you make the reservation, you tell your friend, let's call her Debbie, about your plans. "You're making a big mistake," she warns "I ate there last Friday and it was terrible. I had to wait 20 minutes even though I had a reservation, it was too loud by our table, the bread was stale, the service was slow, and my meal was overcooked."

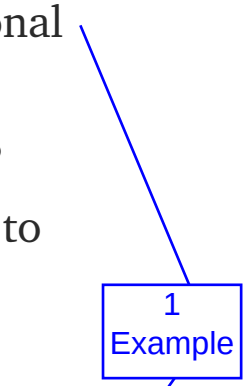
Debbie wouldn't lie to you about her experience, but your exhaustive research indicates it's a fine establishment. What do you do?!

The issue at hand is one which businesses struggle with constantly.

How anecdotes can blow up your data insights

Anecdotes resonate with us on an emotional level, which can lead to an **overemphasis on those data points**. When Debbie takes you through each step of the evening, it's almost as if you are experiencing it yourself. You imagine yourself feeling the annoyance of waiting for a table, the displeasure of tasting stale bread, the frustration of not being able to get a server's attention, and the disappointment when your long-awaited meal is sub-par.

Instead of comparing the data itself, let's compare your emotional reaction to each data point. Does the general on-line review or Debbie's description give you a greater magnitude of emotion? Clearly Debbie's! We naturally associate a greater significance to the account that elicited a stronger emotional response.



In a nutshell, when you experience a data point yourself, you will associate greater value to it than if it was simply reported to you. Because you experience more emotions from a data point, you naturally (often subconsciously) assign it more importance.

This occurs every day with customer service. The people most likely to call in will be dissatisfied customers, and you can bet they will providing descriptions at length as to how a product or service gave them a horrendous experience. If executives were to

listen to these stories and compare them to raw data that showed that their sales were getting stronger, they might be prone to making ill-advised changes because of the emotional weight attached to consumer anecdotes. This is not to say that those dissatisfied customers don't count as data points, or that there is nothing to be done to improve the product or service. It's simply stating the fact that each customer should be weighted the same, even if the dissatisfied data point is more emotionally engaging.

Emotions are useful in all areas of life, including business. They allow us to connect with our customers so we can market effectively and develop products and services that meet their needs. However, they can cloud our judgement and prevent us from staying objective when drawing conclusions from data sets.

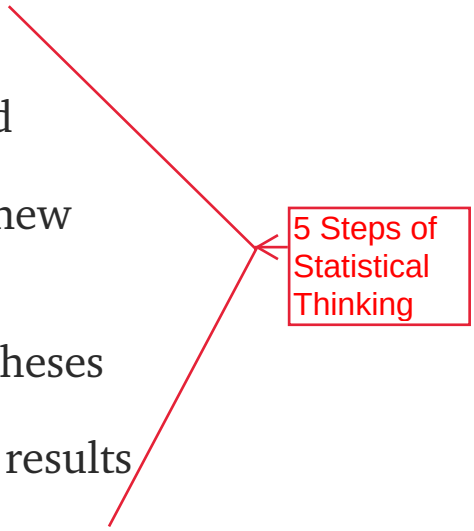
Without a data collection process set in place ahead of time, anecdotal evidence will make you susceptible to the basic human instinct to assign greater value to inputs that move you emotionally. Incorrectly weighted inputs lead to incorrect outputs. This could result in implementing the wrong strategy, costing you resources or worse, customers.

Where do we go from here?

The scientific method plays a crucial role in your data analytics process. Systematically testing your hypothesis and communicating the conclusions from the results is how data helps us make more informed strategic decisions.

Let's go back to our restaurant example. So while Debbie is complaining about her night out, remember how to approach anecdotes:

1. Keep emotions aside
2. Consider variables you have not yet considered
3. Develop novel, testable hypotheses from your new variables
4. Systematically and objectively test those hypotheses
5. Maintain or change your strategy based on the results



Now, you can feel more confident your night out will be an enjoyable one.

NOTE: This article has been heavily edited for use in PSY 210.