

# Perspective on Quantitative Modelling

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# Three Changes that will affect you!

- ▶ The availability and use of big data.
- ▶ How the move to the internet for retailing, survey research and behavioral research affects the environment and expectations for quantitative research.
- ▶ People today are having information collected about their habits and behavior without their being aware of it.
  - Credit cards, smartphones (Physicalytics, Nordstrom)

# 1. The availability and use of big data

- ▶ In the past, we often knew if someone bought before, even their address. Now we know
  - What people do before they buy (pre-purchase behavior)
  - What people do after they buy (post purchase behavior)

# 1. The availability and use of big data

- ▶ This opens many opportunities
  - Probabilities of actions that lead to purchase (improve prediction)
  - Influence actions that can increase the likelihood of purchase
  - Better understanding of psychological processes that precede buying

# 1. The availability and use of big data

## ▶ Models

- Understanding of the buying process
- Understanding of how marketers can influence buying
- Understand the process: create hypothetical situations and test them
  - Counterfactuals
  - Real experiments
  - Extend studies to other spheres

# 1. The availability and use of big data

## ▶ Future behavior

- Does a purchase of X change people. How does it change them?
- Are there differences in people who are satisfied versus those who are not satisfied
- Are there markers that I can use to modify/improve my product/service

# 1. The availability and use of big data

- ▶ In the past, if person X buys life is good. If person Y does not buy, life is bad → figure out why they don't buy and fix it.
- ▶ Now, we can do much more. Why do people buy? Warning signs, anticipation and opportunity.

## 2. The move to the internet

- ▶ The quality expectations for data are much higher
  - When something is easier to get, the quality expectations are higher
  - Don't necessarily use past/published articles as the basis for what is required.
  - You need to get a measure from people that are working in the area. What are they doing.



## 2. The move to the internet

- ▶ Support for analytical work, especially assumptions must be solid.
  - If an assumption is not strongly supported by stylized facts, then you may be expected to collect data to support your assumptions.
- ▶ Comfort with tools such as Google Analytics are now quite important if you are about to embark on quantitative research.

## 2. The move to the internet

- ▶ Generalizability of theory is more important now than ever.
  - If you are working on a model of the sharing economy using data from SnapGoods
  - You should expect reviewers to ask for confirmation from AirBnb, Dog Vacay, Relay Rides, Getaround, Lyft (not Uber)

### 3. The marketer may know stuff about you that even you don't know!

- ▶ There are not right and wrong answers in this area...
- ▶ What is the cost of upsetting people compared to the benefit of using information?
  - If you buy something and the company knows your name, there is nothing under criminal law that stops the company from using it (exceptions)
    - civil law is different (slander/libel)

# 3. The marketer may know stuff about you that even you don't know!

- ▶ Is the law overly restrictive or too lax
  - Legal versus ethical
  - Quantitative researchers have an opportunity to really add some value here.
    - Objective of rule
    - How do people behave when the rule is in place?
    - Many laws have perverse effects...

### 3. The marketer may know stuff about you that even you don't know!

- ▶ In general, the marketing community (practitioners and academics) spend too much time counting our money and not enough time communicating about the positives we create.
  - Misuse of information (social media).
  - Products or services that don't live up to expectations
  - Pure and simple deception

### 3. The marketer may know stuff about you that even you don't know!



- ▶ 80 to 90% of the discussion of marketing in the public sphere is negative

### 3. The marketer may know stuff about you that even you don't know!

- ▶ Is there some way to turn the heat down by stimulating/promoting more discussion of the value that marketing creates?
- ▶ When someone who serves you has better information about you, is the outcome for you better or worse?
  - A competent physician with better information will serve you better.
  - Secret police (Stasi) with better information will serve you worse.
- ▶ Why is the public perspective invariably the latter and not the former?