



Hypotheses: Guessing the Relationships Between Variables



Hypotheses Must Contain Variables

In the prior example about revenue, variables may be:

- Number of sales staff hours worked
- Staff distraction
- Quantity of services sold
- Price of services offered and sold
- Customer staff levels
- Customer demand for our services

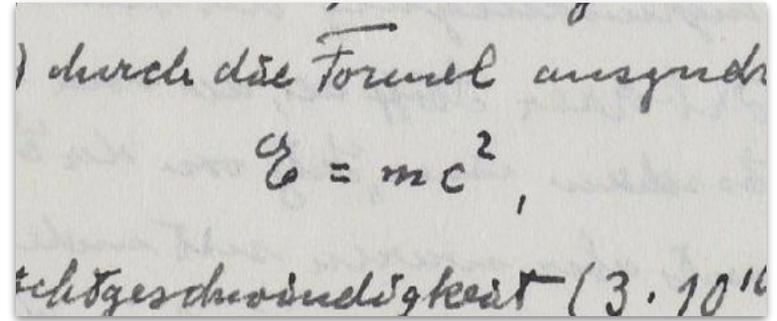
Hypotheses Guess at Relationships Between Variables

Variables can be understood by putting them into relationship with each other.

- Sales efforts, customer need, quantity ordered, price of services ordered = sales revenue

The challenge is to find the variables and their relationships.

- Data can tell you about correlations (r) and sometimes causation (r^2)
- Think about basic operations: +, -, *, /
- Or, you just identify the variables, like a functions.
P(MOCA) or [Motivation](#) (an experiment)



Einstein's famous formula

Hypotheses Contain Variables & Relationships

In the prior example about distraction, variables and relationships may be:

Variable	Possible Relationship
Capacity available	
Faith in team ability	Addition or subtraction
Travel time	Subtraction
Insecurity	Divisor?

Sample hypothesis

$$\text{Distraction} = \frac{(\text{Capacity} + \text{Faith})}{\text{Insecurity}}$$

Hypotheses: Guesses That Allow for Experiments

For leaders, the question is, which variables are controllable?

Hypothesis about what we might do to change the situation:

If I avoid making promises the team cannot easily meet, everyone's experience and ability to contribute might be transformed for the better.

Actions to take:

- Check on team capacity before going to a meeting. Pre plan what you can offer.
- Allow time to move between meetings and prepare to be present
- Only offer what you can deliver well and is on your plan, not matter how you feel

Much more on this in HL chapter 8

What is Your Hypothesis?

- What is the situation you would like to change?
- What variables are involved?
- Which variables can you control?
- Which controllable variables might produce the desired outcome with the least effort?

Controllable v. Uncontrollable Variables

Some variables are controllable and some are not.

An example of variables that affect sales results:

Controllable variables	Uncontrollable variables
<ul style="list-style-type: none">● Product quality● Price● Quality of sales efforts● Quantity of sales efforts● Promotion● Places offered● Availability	<ul style="list-style-type: none">● Competitor's product quality● Customer choices/distractions● Customer finances & optimism● Economic conditions● Weather



Grant me the serenity
To accept the things I cannot change;
Courage to change the things I can;
And wisdom to know the difference.

— Reinhold Niebuhr



Leaders *Must* Learn What's Controllable

Leaders will be out front in the team's search for truth about creating value. They:

- **Study** how they and their teams create value, all the variables and algorithms
- **Test** hypotheses about what's controllable and how variables relate with experiments
- **Build** their own self development road maps to become better scientists
- **Realize** that actions and incentives should focus on what's controllable

