Sawtooth Software

The survey software of choice

An Introduction to Conjoint Analysis

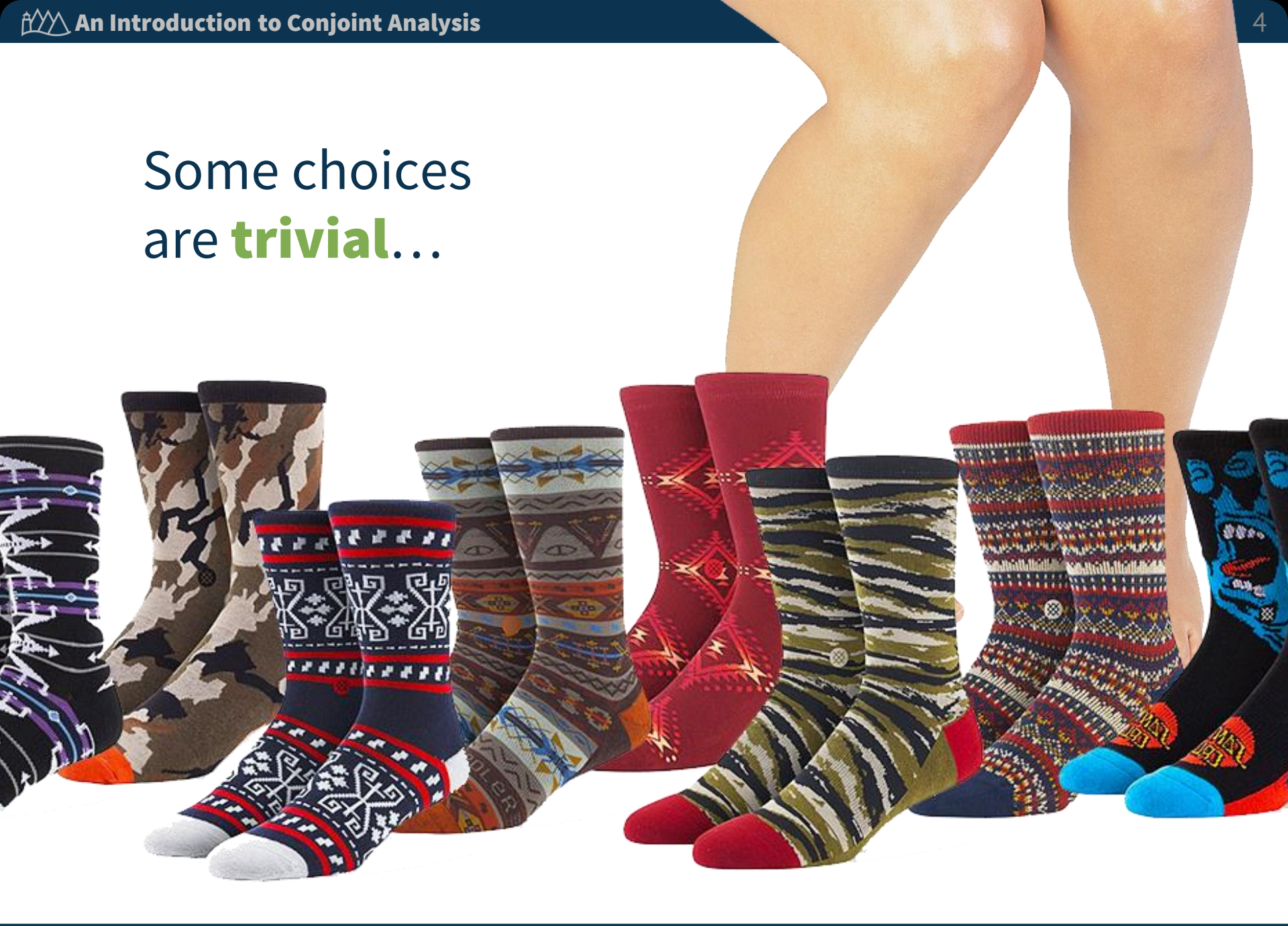
Presentation 1

SECTION 1

How Do You Make Choices?

How many **choices** do you make during a typical day?

Some choices are **trivial**…



Some choices are **trivial**…

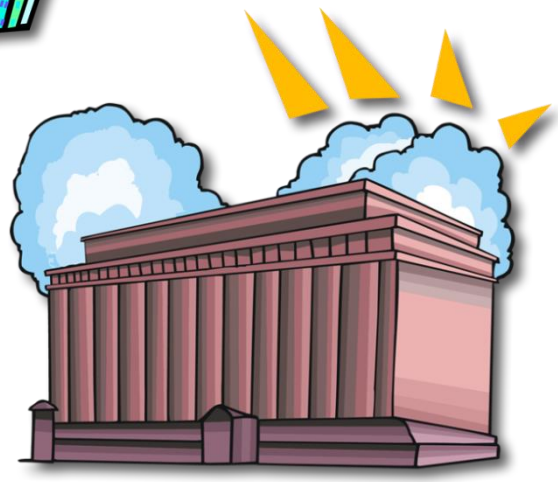
Wansink, B., & Sobal, J. (2007). Mindless Eating: The 200 Daily Food Decisions We Overlook. *Environment and Behavior, 39*(1), 106-123.

Others are far more **complex** …

Others are far more **complex** …

And some choices are laden with **emotion**.

We need to understand **how** people make choices so we can create **better alternatives** and try to **predict** their choices



Many choices are composed of **multiple attributes** or features

Cancer treatment:

- ✓ Likelihood of success
- ✓ Risks
- ✓ Pain factors
- ✓ Side effects
- ✓ Life disruption

Learning how people **value the components** of an alternative helps us design more desirable offerings

We also prefer high-likelihood alternatives that are **inexpensive**

Conjoint Analysis

Did You KNOW ?

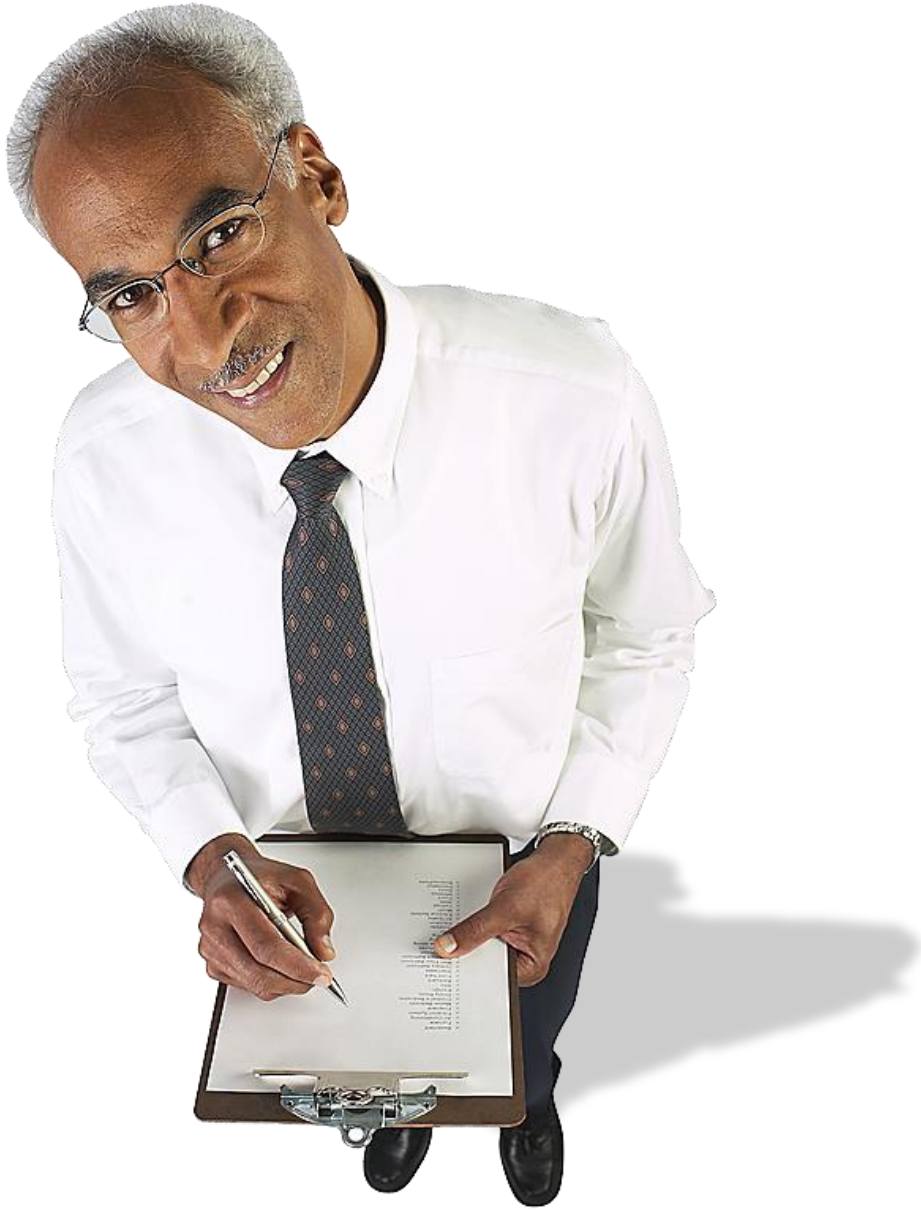
SECTION 2

What Is Conjoint Analysis?

What Can Conjoint Analysis Do for You?

Click play button to launch a five-minute video from http://youtu.be/Su2qIrTmv1c

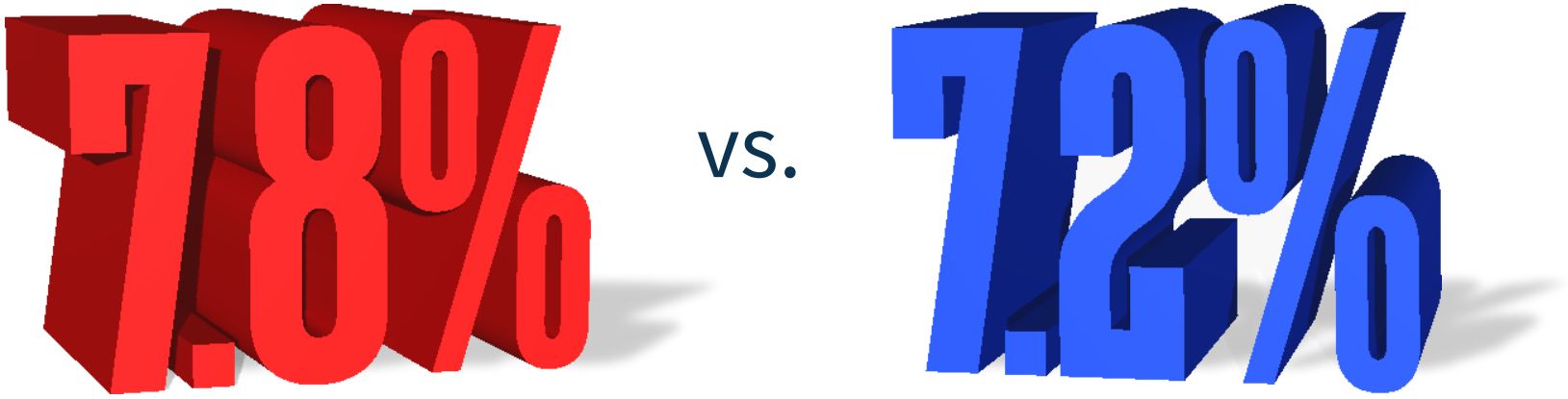
Traditionally, researchers have written surveys that ask people about their preferences



Which **brand** do you prefer?

vs.

What **interest rate** would you like?



How much **risk** are you willing to take?

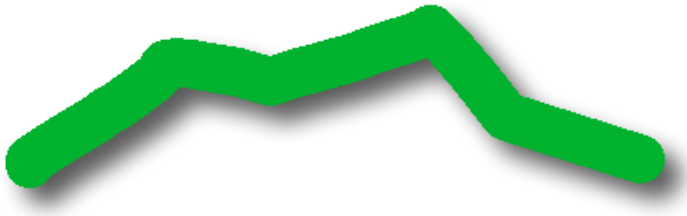
High Risk

High Potental Loss or Return

vs.

Low Risk

Low Potental Loss or Return



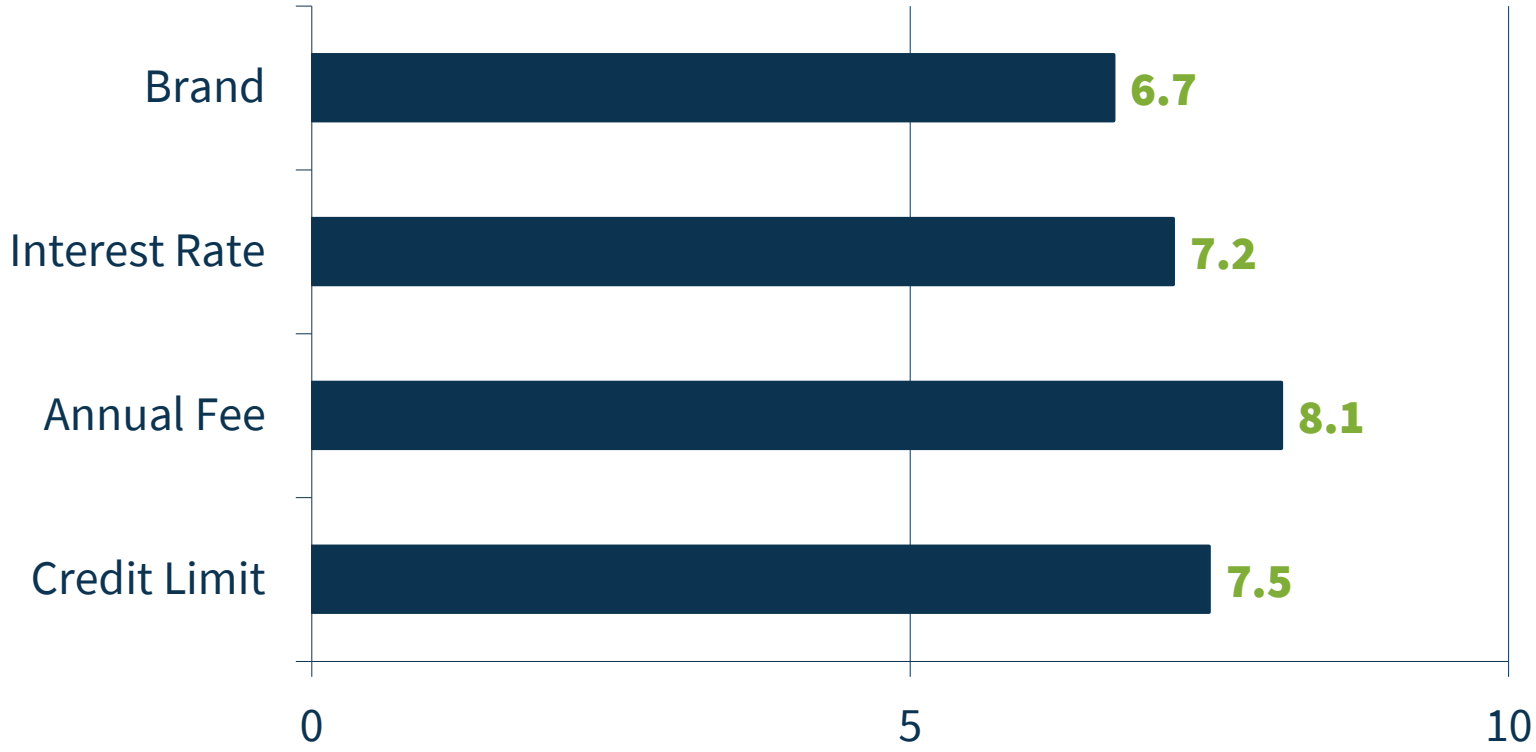
Answers are often **trivial** or **unenlightening**

How **important** is it that you get the …

- ✓ Brand
- ✓ Interest rate
- ✓ Annual fee
- ✓ Credit limit

…that you want?

Average Importance Ratings



"I want **ALL** the features at the **lowest** price!"

You can't have the **highest** fuel efficiency *and* the **most** performance

CITY MPG

96

Expected range for most drivers **91** to **103** MPG

Conjoint analysis mimics the real world and doesn't allow people to say **everything** is important

Trade-off: a balance achieved between two desirable but incompatible features; a compromise.

			
12%	9.5%	7.5%	11.5%
No Fee	No Fee	$75	$50
$5000 limit	$3000 limit	$9000 limit	$7500 limit

Interactive CBC Illustration

If these prices and wait times were involved, which option would you choose? (Task 1 of 9)

 Dungeness Crab Sandwich 3 people in line (approx. 3 minute wait) $6.50	 Garden Salad 5 people in line (approx. 5 minute wait) $3.50	 Garlic Fries 1 person in line (approx. 1 minute wait) $6.50	 Pizza Slice 1 person in line (approx. 1 minute wait) $3.50	 Clam Chowder 5 people in line (approx. 5 minute wait) $5.00	 Hot Dog 3 people in line (approx. 3 minute wait) $5.00	NONE: I wouldn't choose any of these.
○	○	○	○	○	○	○

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http://www.sawtoothsoftware.com/baseball

SECTION 3

What Outputs Can You Get From Conjoint?

Three conjoint analysis outputs

Utilities

Importance scores

Market simulations

Utilities (part worths)

Numeric values that reflect the desirability of different features

2.5

1.8

5.3

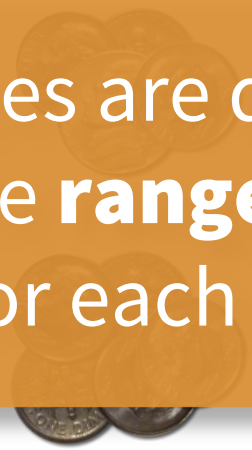
3.2

1.4

Importance scores

Measure how much influence each attribute has on someone's choice

Importances are directly affected by the **range of levels** you choose for each attribute!



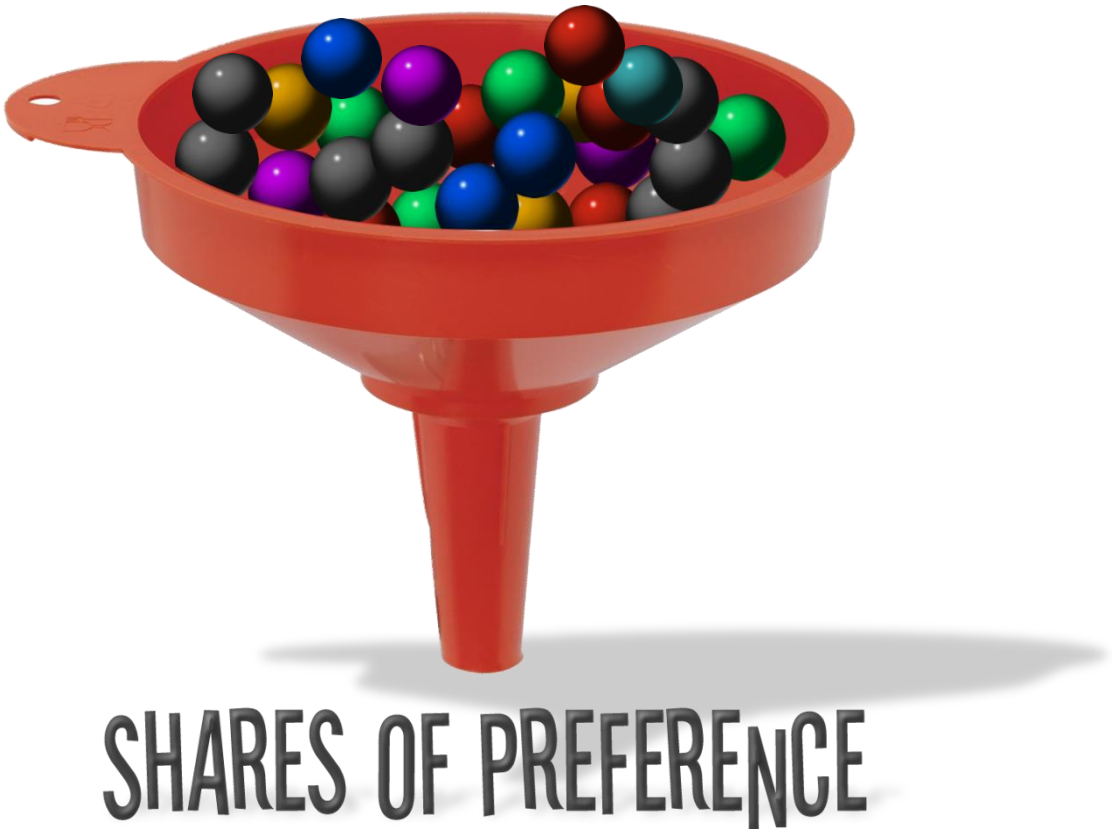
0.7 + 3.9 = 4.6

0.7 / 4.6 = 15.2%

3.9 / 4.6 = 84.8%

Market simulations

Competitive market scenarios to predict which products respondents would choose



Market simulations

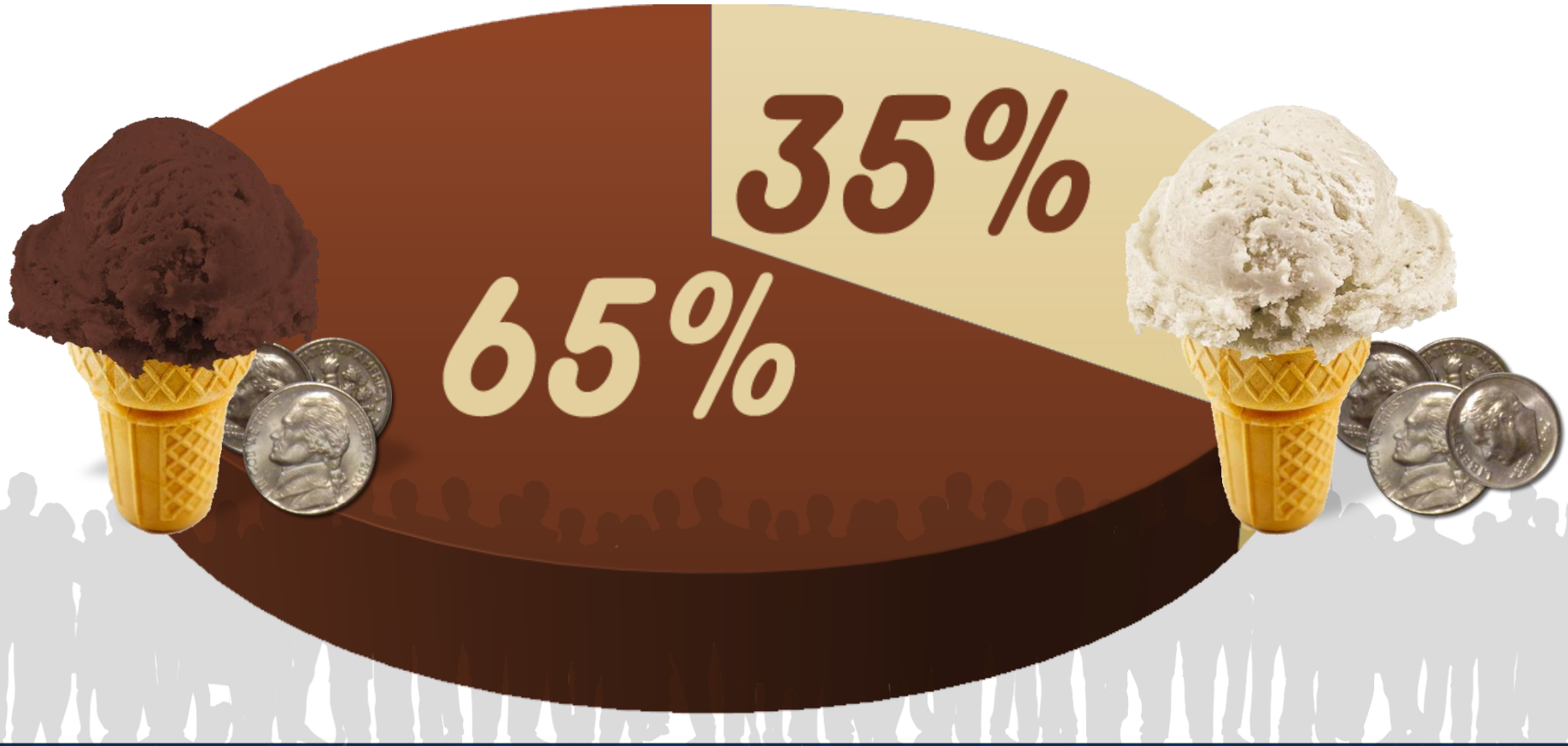
Competitive market scenarios to predict which products respondents would choose

Vanilla (2.5) + 35¢ (3.2) = **5.7**

Chocolate (1.8) + 25¢ (5.3) = **7.1**

Market simulations

Competitive market scenarios to predict which products respondents would choose



SECTION 4

Market Simulation Assumptions

ASSUMPTION #1

All attributes that affect buyer choices in the real world have been accounted for

ASSUMPTION #2

Each product has **equal availability** (distribution)

ASSUMPTION #3

Respondents are aware of **all products**

ASSUMPTION #4

The products reach long-range **equilibrium**

ASSUMPTION #5

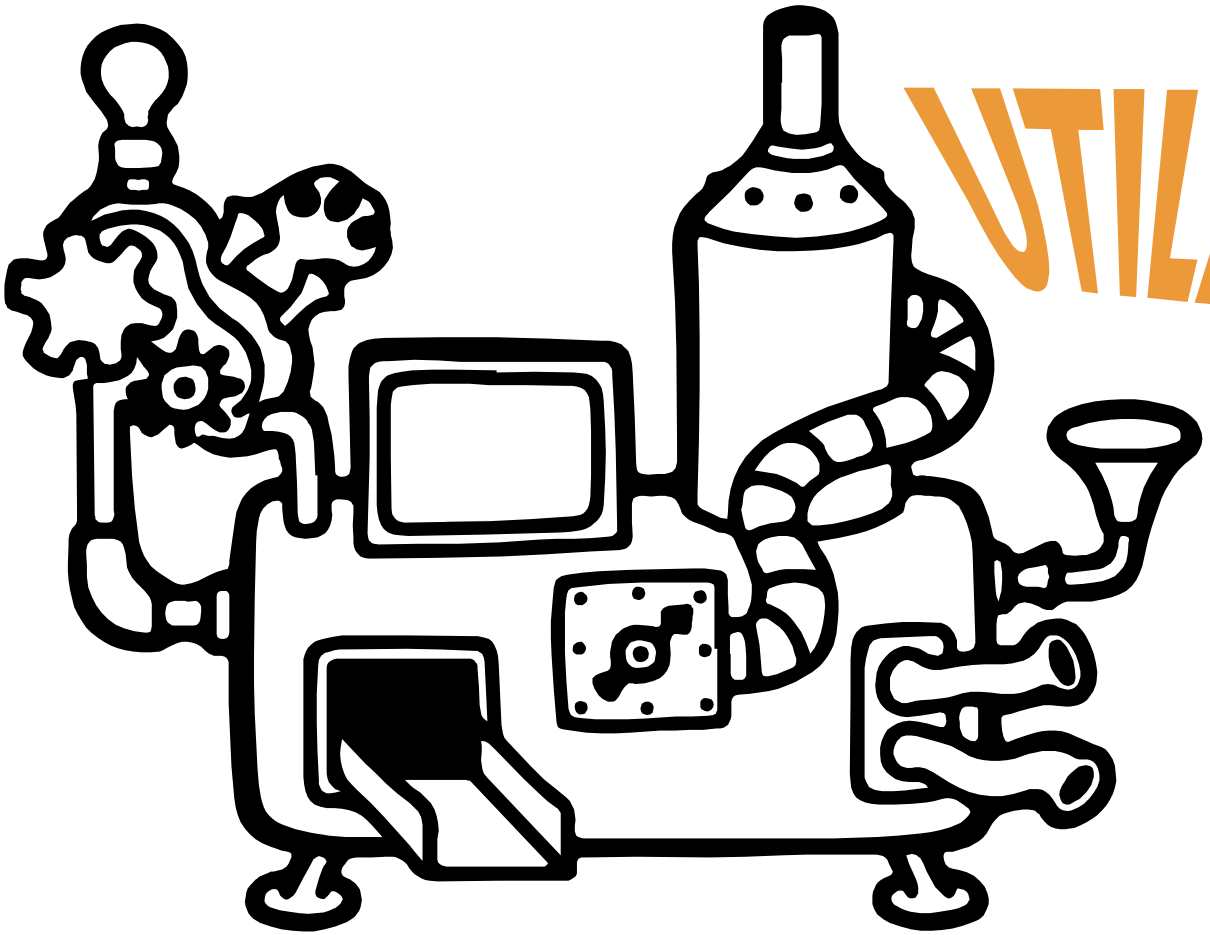
Equal effectiveness of sales force

ASSUMPTION #6

No **out-of-stock** conditions

Shares of preference don’t always match **real world** market shares

Conjoint simulator assumptions usually **don't hold true** in the real world

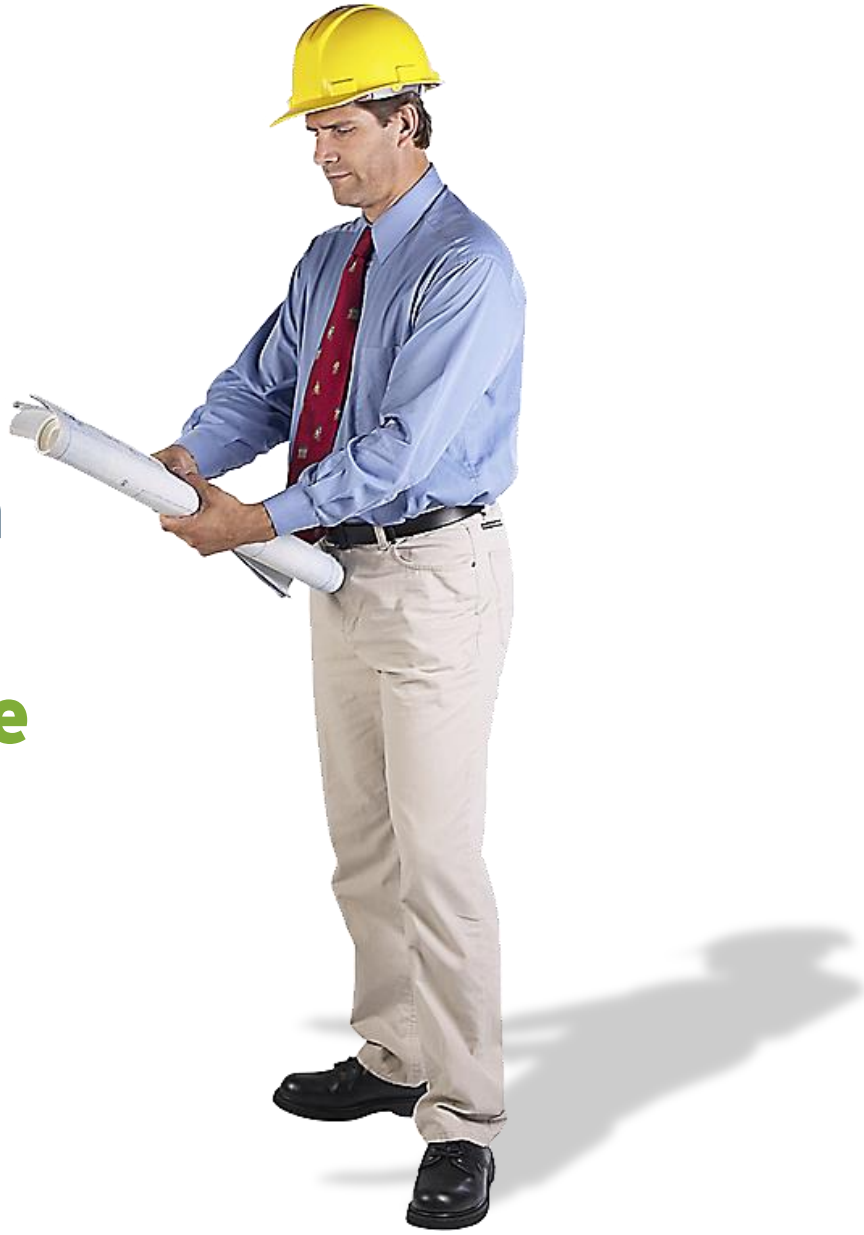


UTILITIES

SHARES

Conjoint simulators predict respondents' **interest** in products or services

Conjoint simulators help managers design alternatives that achieve **higher choice likelihood**




Did You
KNOW

SECTION 5

Conjoint Simulator Examples

Lets you play “what-if” games to investigate the **value of modifications** to an existing product or alternative

Lets you predict which healthcare **treatment options** respondents or segments of the population will choose

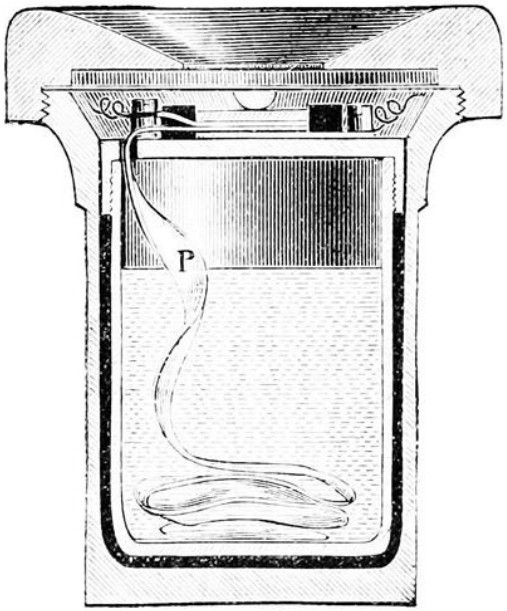


FIG. 1.

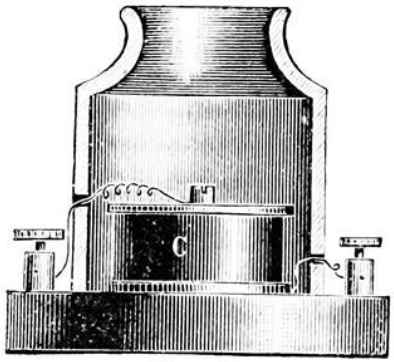


FIG. 2.

FIG. 3.

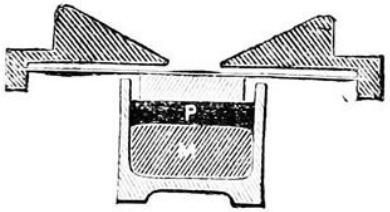


FIG. 4.

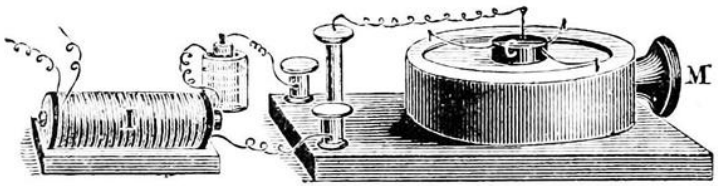
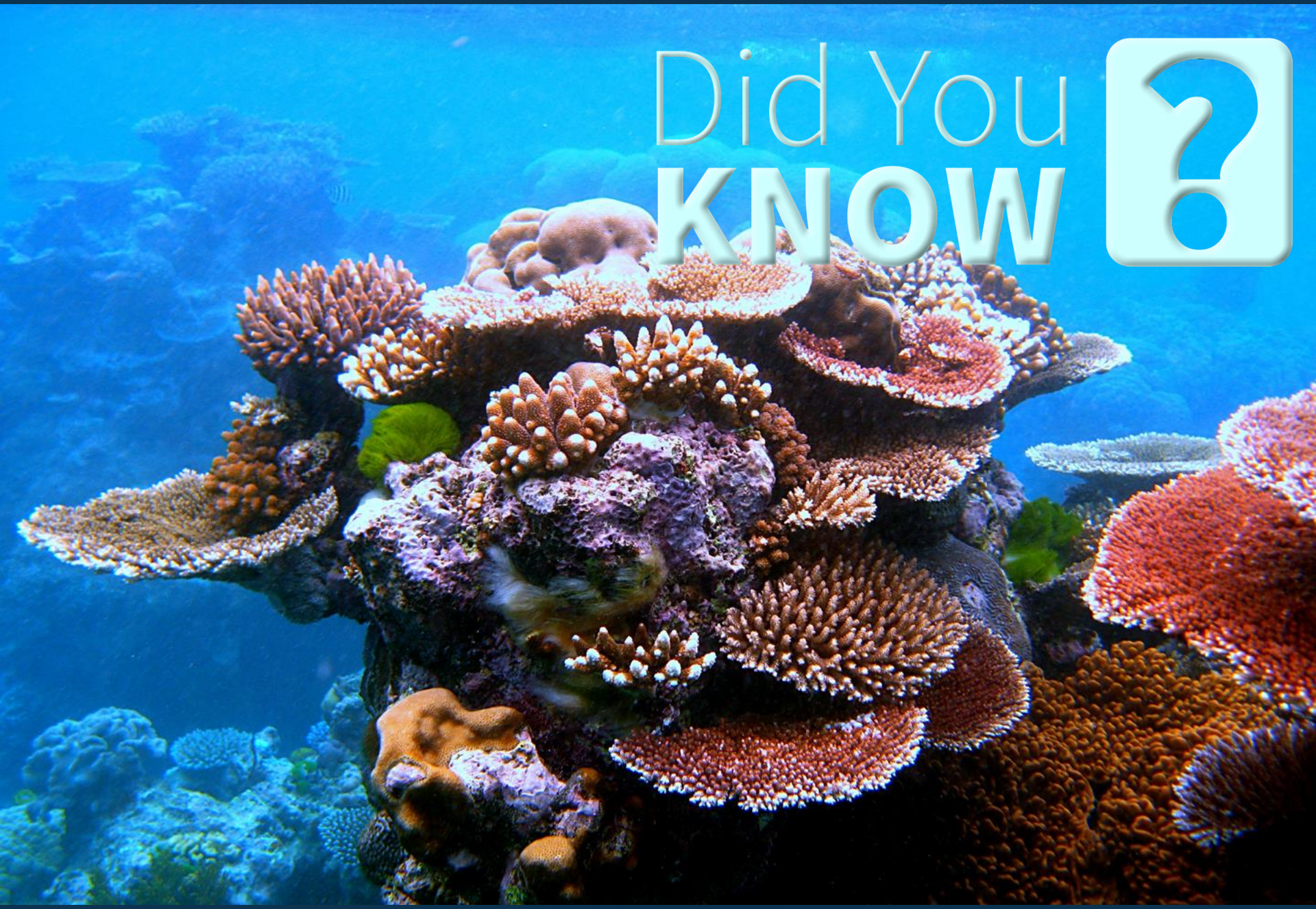


FIG. 5.

Lets you estimate how to **design new products** to maximize buyer interest at low manufacturing cost

Lets you investigate product line **extensions**

Lets you estimate
demand curves


Did You
KNOW
?

Choice-Based Conjoint

Adaptive Choice-Based Conjoint

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