



# MOVING FORWARD: NEW METHODS FOR CUSTOMER ENGAGEMENT

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Opinion **Dynamics**

# Why Look Further?

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- We require more of end users as energy and climate goals increase
- The energy landscape is changing dramatically
- To rise to these challenges, we need more sophisticated research techniques
- Increasingly, we need to move to a more one-to-one understanding of end-users
- Learnings from other fields can help get us there

# New Approaches for New Insight

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- Consumer Product Marketing: Latent Class Discrete Choice Analysis (LCDC)
- Political Science: Micro-Targeting
- Human Development: Latent Growth Curve Analysis

# Consumer Product Marketing: LCDC

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# Consumer Product Marketing: LCDC

- Latent Class Discrete Choice Modeling generates customer *segments* by identifying product attribute *preferences* through *trade-off analysis*




# Consumer Product Marketing: LCDC

**1** Online lighting-only store  
Familiar brand

**CFL Spiral** **40** Watt Equivalent

**LASTS 8 YEARS** **Save \$40 over 10 years on your energy bills**

**Cool White**




Light output: **450 lumens**  
energy used: **8 watts**  
bulb life: **11,680 hours**  
beam angle: **180 degrees**

ENERGY STAR

**lighting facts**<sup>SM</sup>  
of Home Depot

Light Output (Lumens)	450
Watts	8
Lumens Per Watt (Efficacy)	60
Color Accuracy Color Rendering Index (CRI)	87
Light Color Correlated Color Temperature (CCT)	4100K (Cool White)



Warm White | Bright White | Daylight

**\$30**


**2** Online retail store  
Unfamiliar brand

**Halogen A-Lamp** **100** Watt Equivalent

**Dimmable**

**LASTS 30 YEARS** **Save \$27 over 10 years on your energy bills**

**Cool White**




Light output: **1600 lumens**  
energy used: **94 watts**  
bulb life: **43,800 hours**  
beam angle: **270 degrees**

ENERGY STAR

**lighting facts**<sup>SM</sup>  
of Home Depot

Light Output (Lumens)	1600
Watts	94
Lumens Per Watt (Efficacy)	17
Color Accuracy Color Rendering Index (CRI)	87
Light Color Correlated Color Temperature (CCT)	4100K (Cool White)



Warm White | Bright White | Daylight

**\$75**


**3** Lighting store  
Familiar brand

**Halogen A-Lamp** **60** Watt Equivalent

**Dimmable**

**LASTS 30 YEARS** **Save \$16 over 10 years on your energy bills**

**Cool White**




Light output: **800 lumens**  
energy used: **47 watts**  
bulb life: **43,800 hours**  
beam angle: **180 degrees**

ENERGY STAR

**lighting facts**<sup>SM</sup>  
of Home Depot

Light Output (Lumens)	800
Watts	47
Lumens Per Watt (Efficacy)	17
Color Accuracy Color Rendering Index (CRI)	87
Light Color Correlated Color Temperature (CCT)	4100K (Cool White)



Warm White | Bright White | Daylight

**\$15**


**4** Online lighting-only store  
Unfamiliar brand

**LED A-Lamp** **75** Watt Equivalent

**Dimmable**

**LASTS 2 YEARS** **Save \$77 over 10 years on your energy bills**

**Cool White**




Light output: **1100 lumens**  
energy used: **18 watts**  
bulb life: **2,920 hours**  
beam angle: **180 degrees**

ENERGY STAR

**lighting facts**<sup>SM</sup>  
of Home Depot

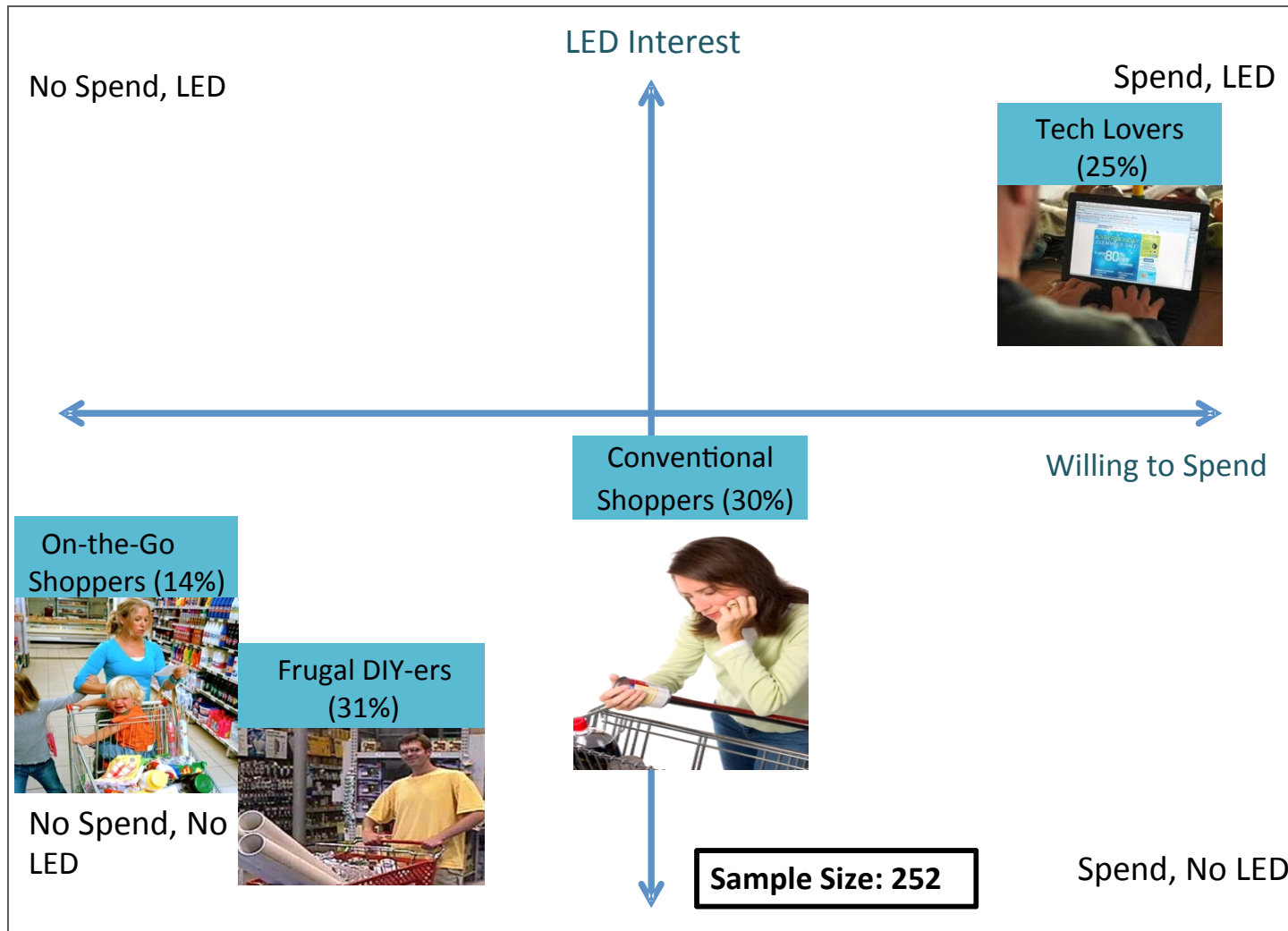
Light Output (Lumens)	1100
Watts	18
Lumens Per Watt (Efficacy)	60
Color Accuracy Color Rendering Index (CRI)	87
Light Color Correlated Color Temperature (CCT)	4100K (Cool White)



Warm White | Bright White | Daylight

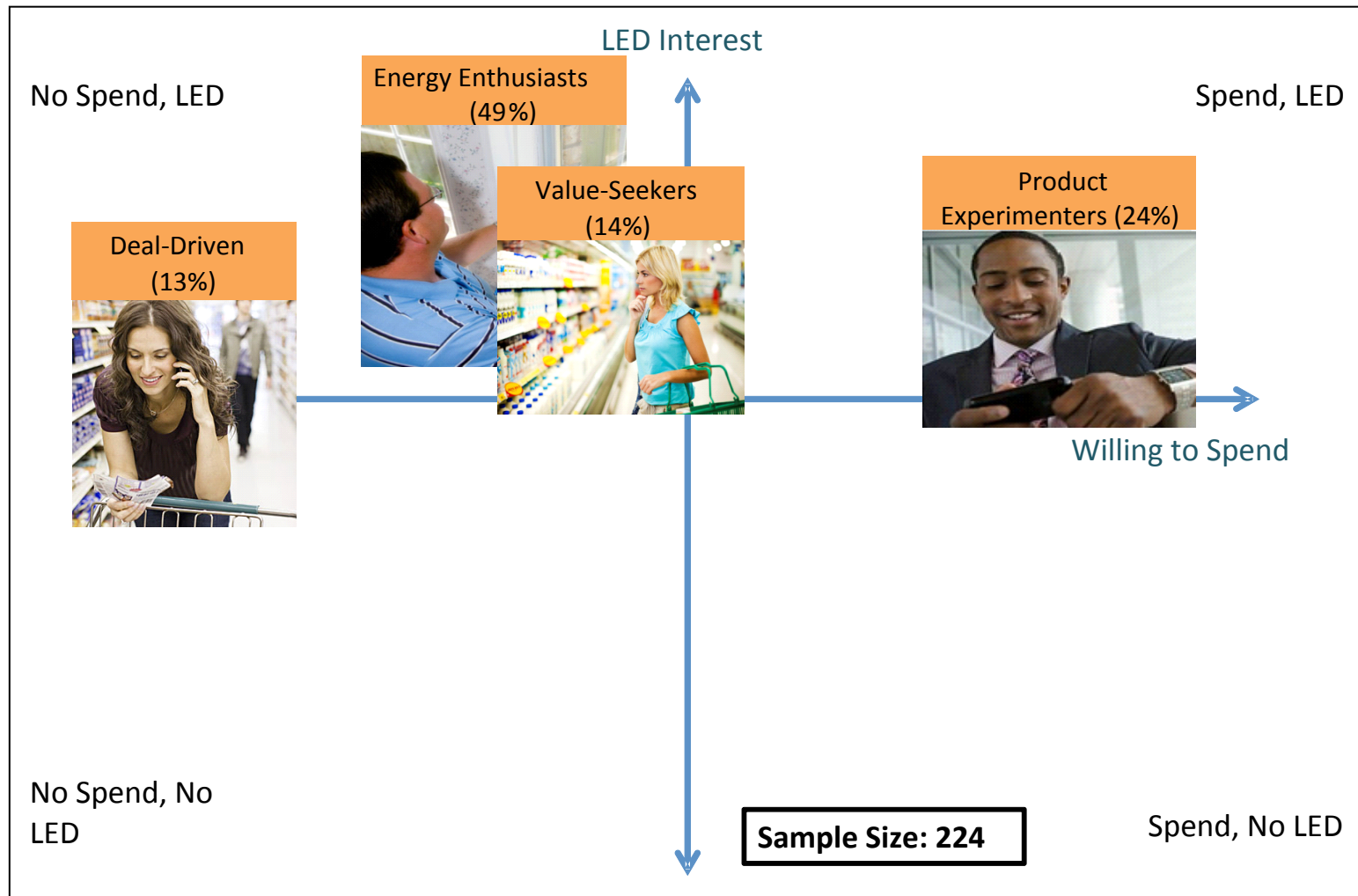
**\$5**

# LCDC: A-Line Segments



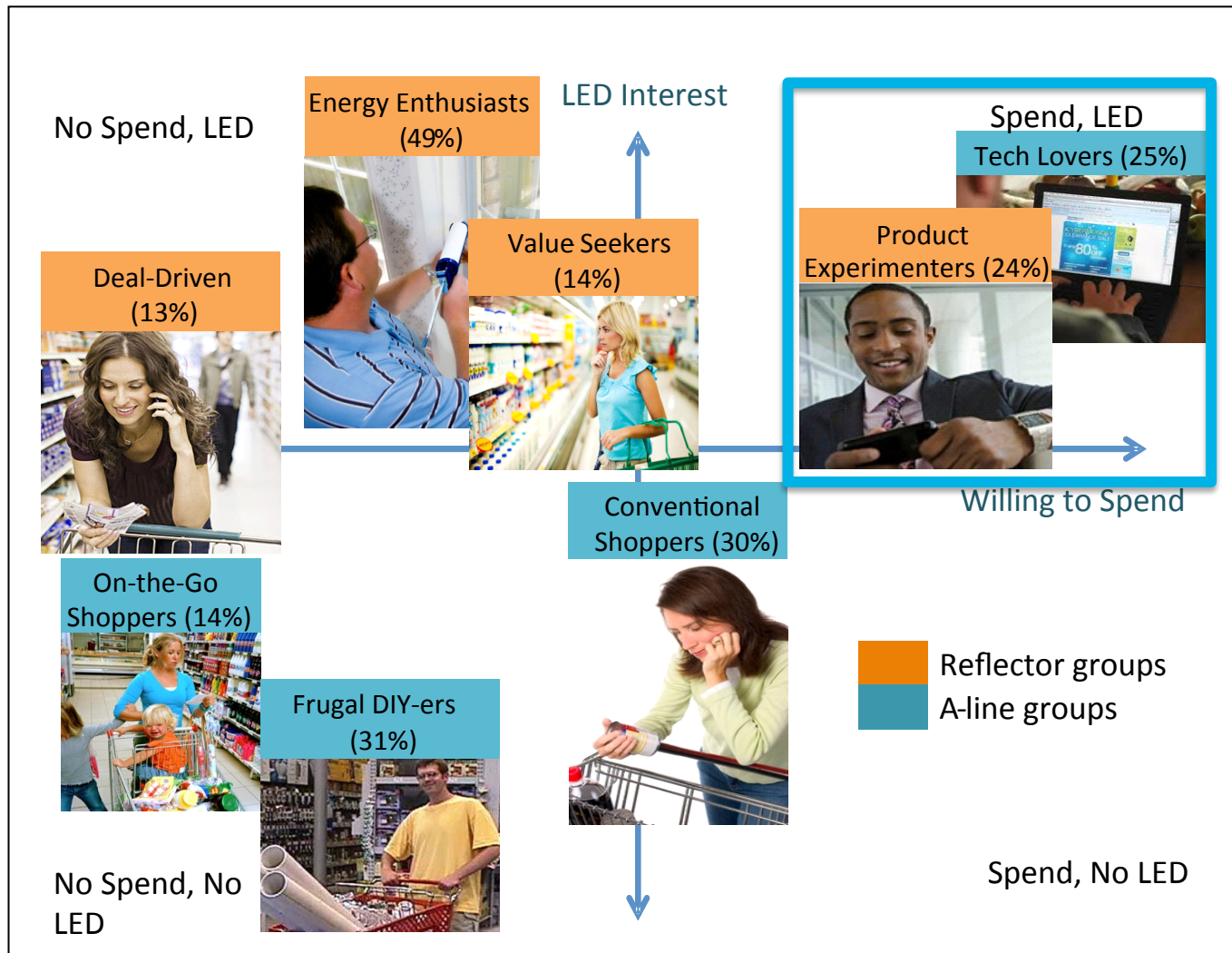


# LCDC: Reflector Segments





# LCDC: Short-term Targets



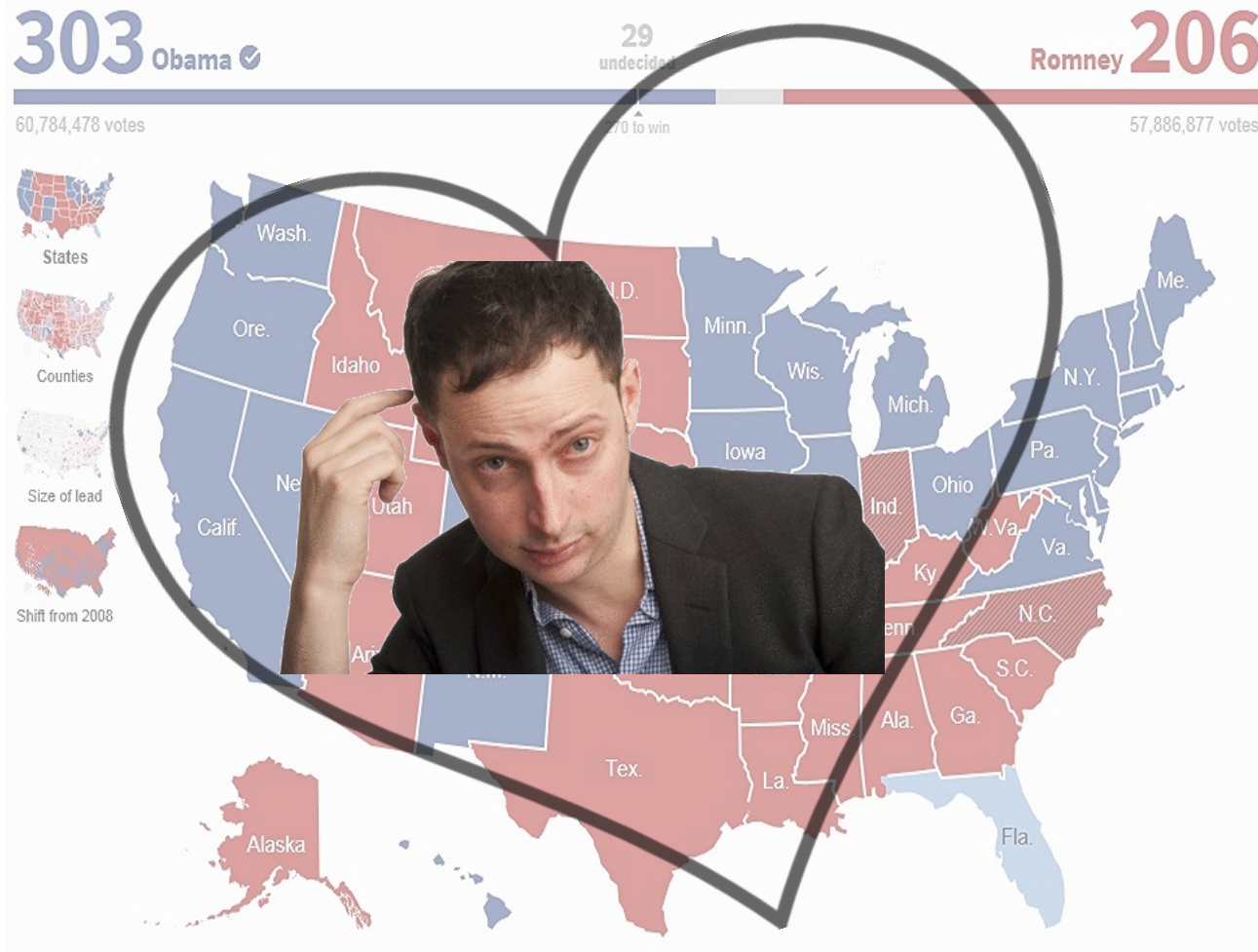
# Latent Class Discrete Choice Modeling

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## It's Best to Use it When:

- You have a new product or offering to take to market
- You need clear direction for design and merchandising
- You need to prioritize marketing efforts in competitive channels to target customers

# Political Science: Micro-Targeting

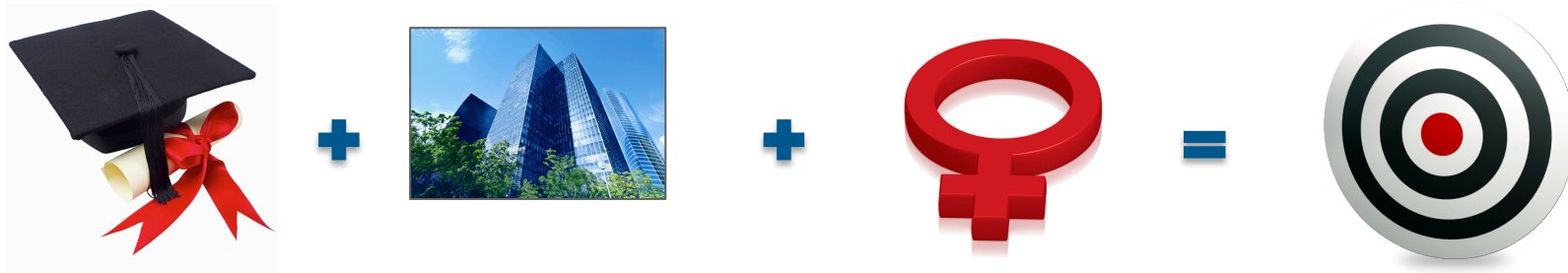


# Political Science: Micro-Targeting



# Political Science: Micro-Targeting

- Traditional segmentation defines and divide a large homogenous population into *identifiable groups* based on *similar characteristics*
- Micro-targeting identifies *individual* household *propensities to act*





# Political Science: Micro-Targeting

The Obama 2012 campaign was the first in history to successfully leverage Facebook as a tool for mobilizing voter turnout on a mass scale



# Applying Micro-Targeting to Program Offers

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1. Develop Core Database

2. Surveys to Obtain APS-specific Behavioral & Psychographic Data

3. Intermediate Segment Variables

4. Populate Customer Database with New Variables

5. Develop Program-specific Propensity Models



# Applying Micro-Targeting to Program Offers

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1%

4%

5.7%



# Micro-targeting

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## It's Best to Use it When:

- You have access to multiple data sources
- Transactional or behavioral data is available
- You have teams willing and able to collaborate and to share knowledge

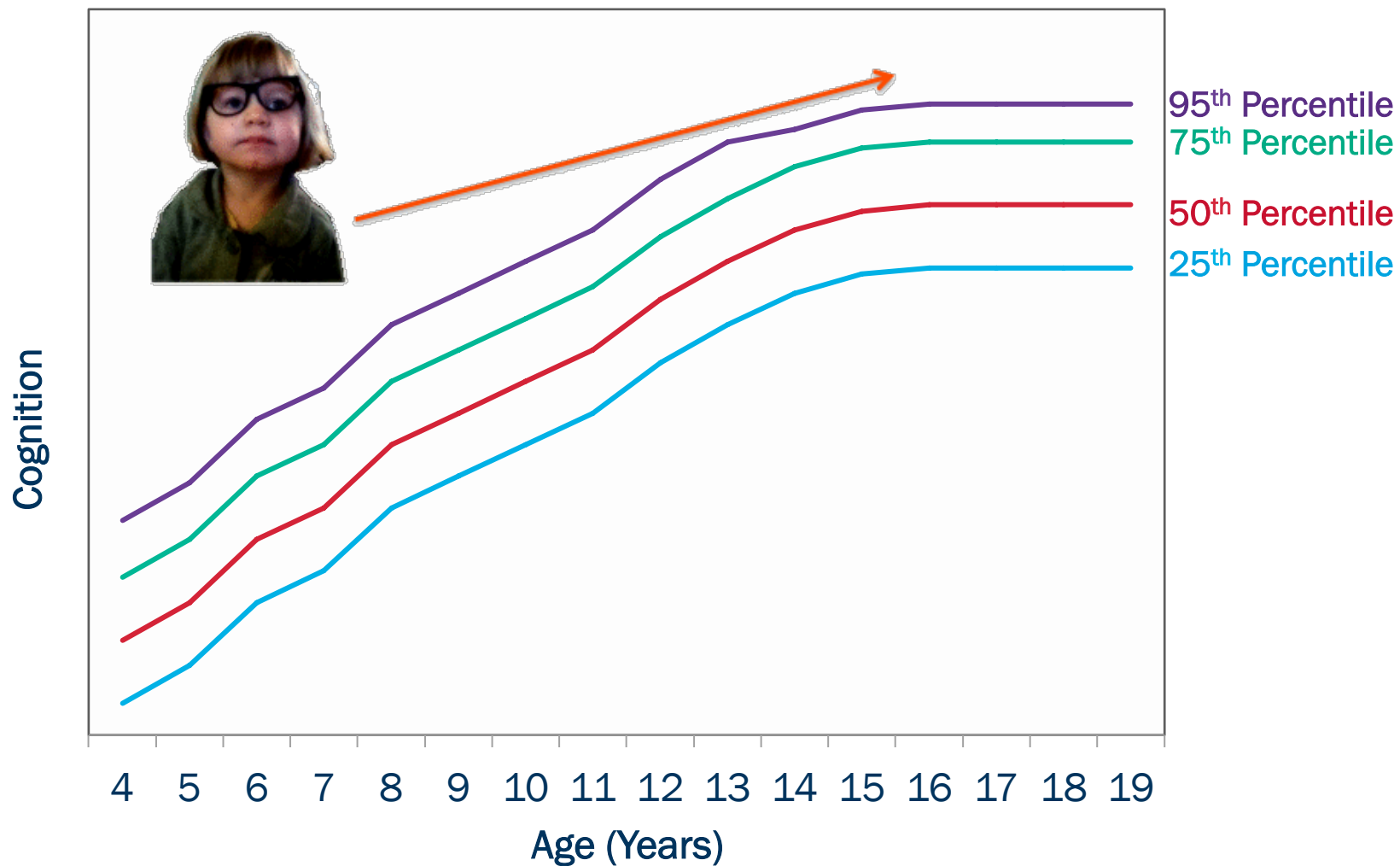
# Human Development: Latent Growth Curve Analysis

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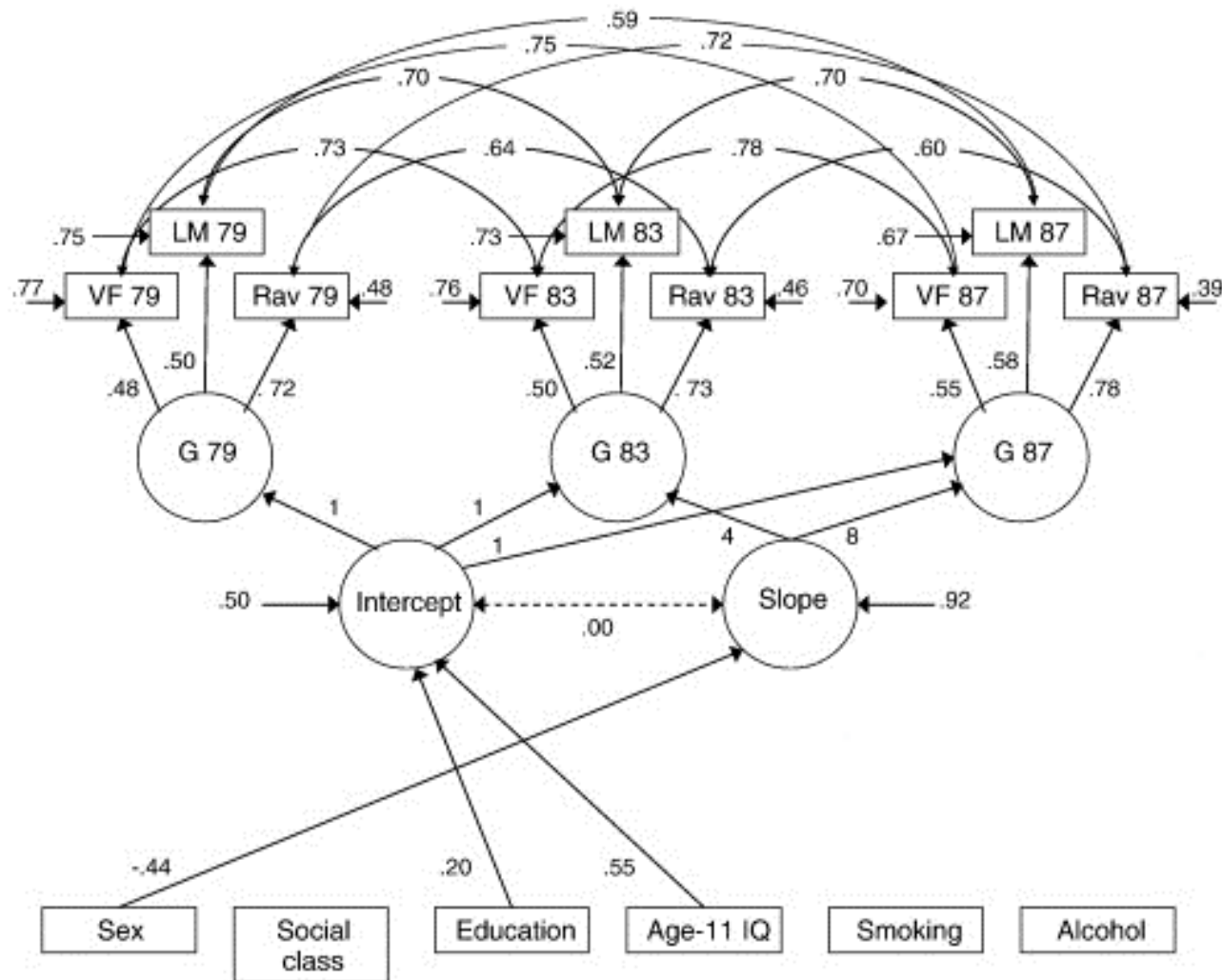
- LGCA uses cross-sectional, time-series analysis
- Identifies consumption curves and how they differ
- *Predicts* and describes the shape of *consumption curves*
- Identifies which *factors mediate consumption* growth (or decay)



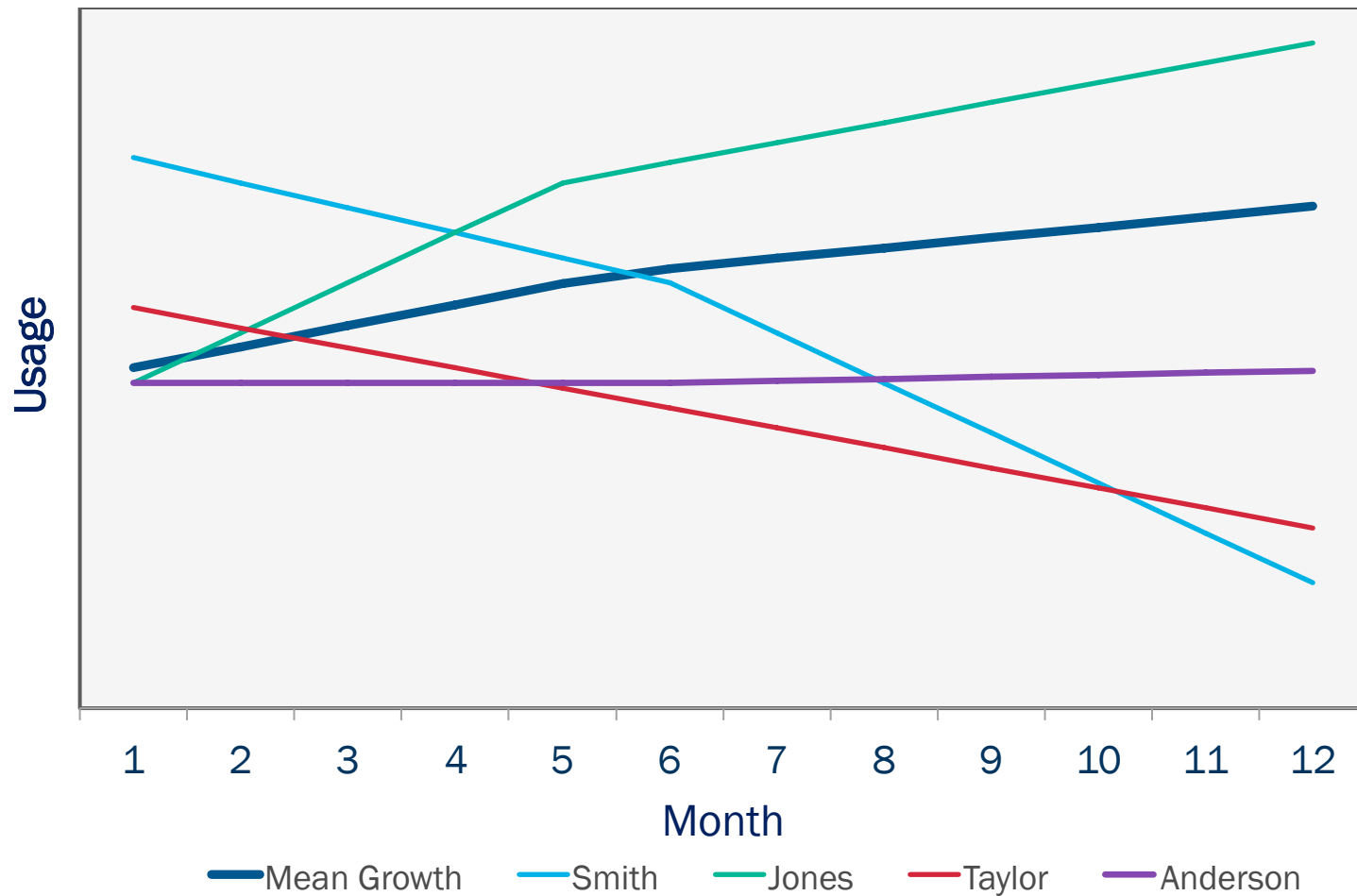
# Human Development: Latent Growth Curve Analysis



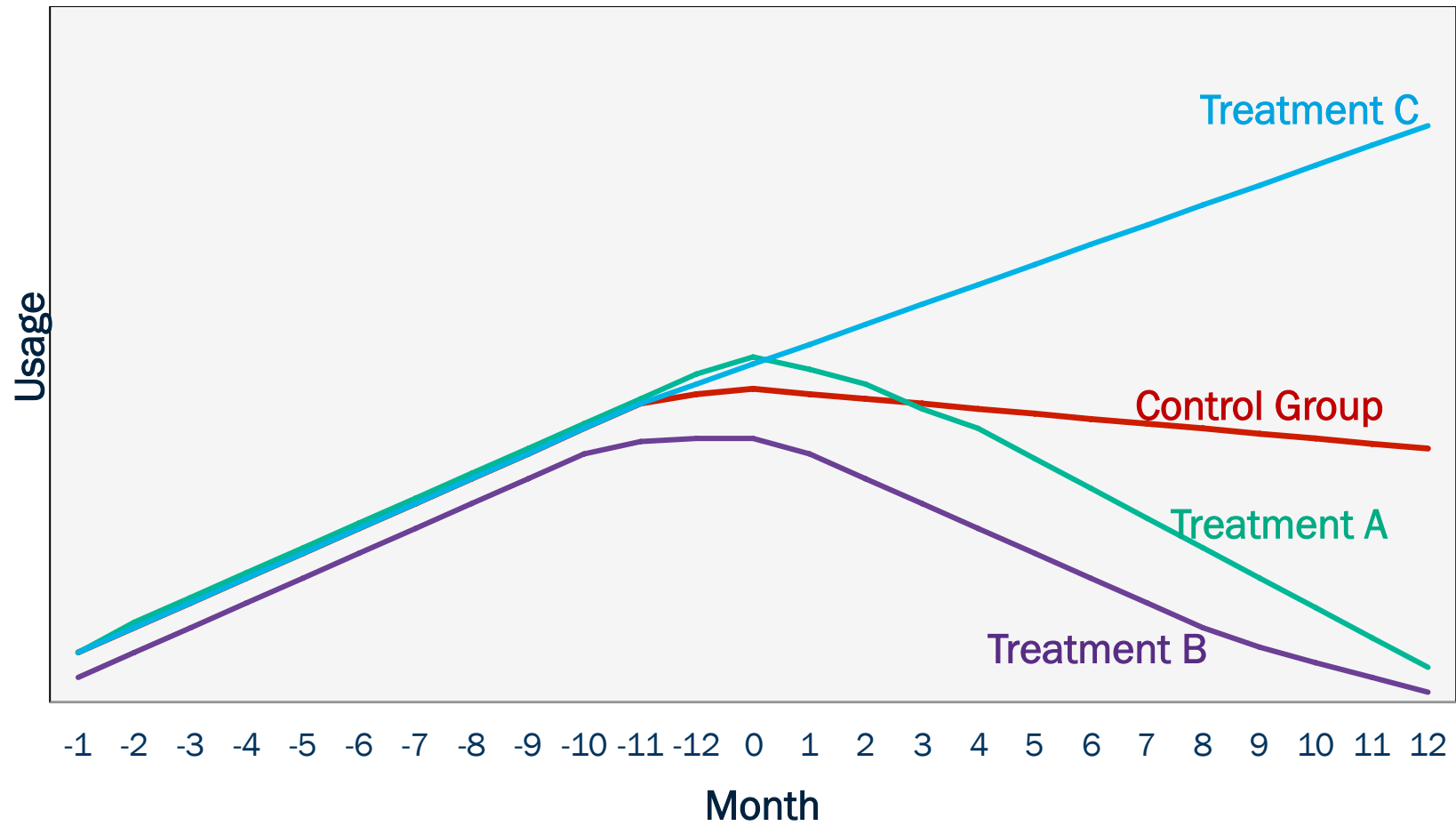
# Human Development: Latent Growth Curve Analysis



# Human Development: Latent Growth Curve Analysis



# Human Development: Latent Growth Curve Analysis





# Latent Growth Curve Analysis

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## It's Best to Use it When:

- You are working with a heterogeneous population
- You expect wide variation in response to stimulus
- You have to identify customer groups for targeting



# Closing Points

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- Other disciplines offer field-tested methods
- Greater granularity provides a finer point for targeting
- Expand programs by aligning offerings with:
  - Customer needs and wants
  - Customer-specific messaging



# QUESTIONS?

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