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Behavioral Economics and Life Insurance Application Innovation Workshop

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Introduction to Behavioral Science

Behavioral Science

DEFINITION

Strives to explain how our decision-making can be affected by psychological, cognitive, emotional, cultural, and societal factors. Combines insights from economics, psychology, and other fields.

APPLICATIONS

Can be applied at all stages of the insurance journey to improve experiences, increase disclosure, and smooth the process for everyone involved.

PRINCIPLES



Application to Underwriting Forms



Underwriter

Whose
perspective do
we have in mind
when designing
the form?



Applicant

- Needs specific information to properly assess application
- Likes information organised by ease of retrieval
- Often dictates design of application

- Has limited cognitive capacity, memory, time, willpower
- Wants to be honest, but needs help from an easy application process
- Often confused and frustrated by design of application

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Behavioral Science Research Study

Introduction

The Idea:

- Test the impact of behaviorally-redesigned UW questions on disclosures.

The Experiment:

- Present participants with either a traditional or a behaviorally-redesigned insurance application form. Measure and compare their disclosure rates.

The Big Question:

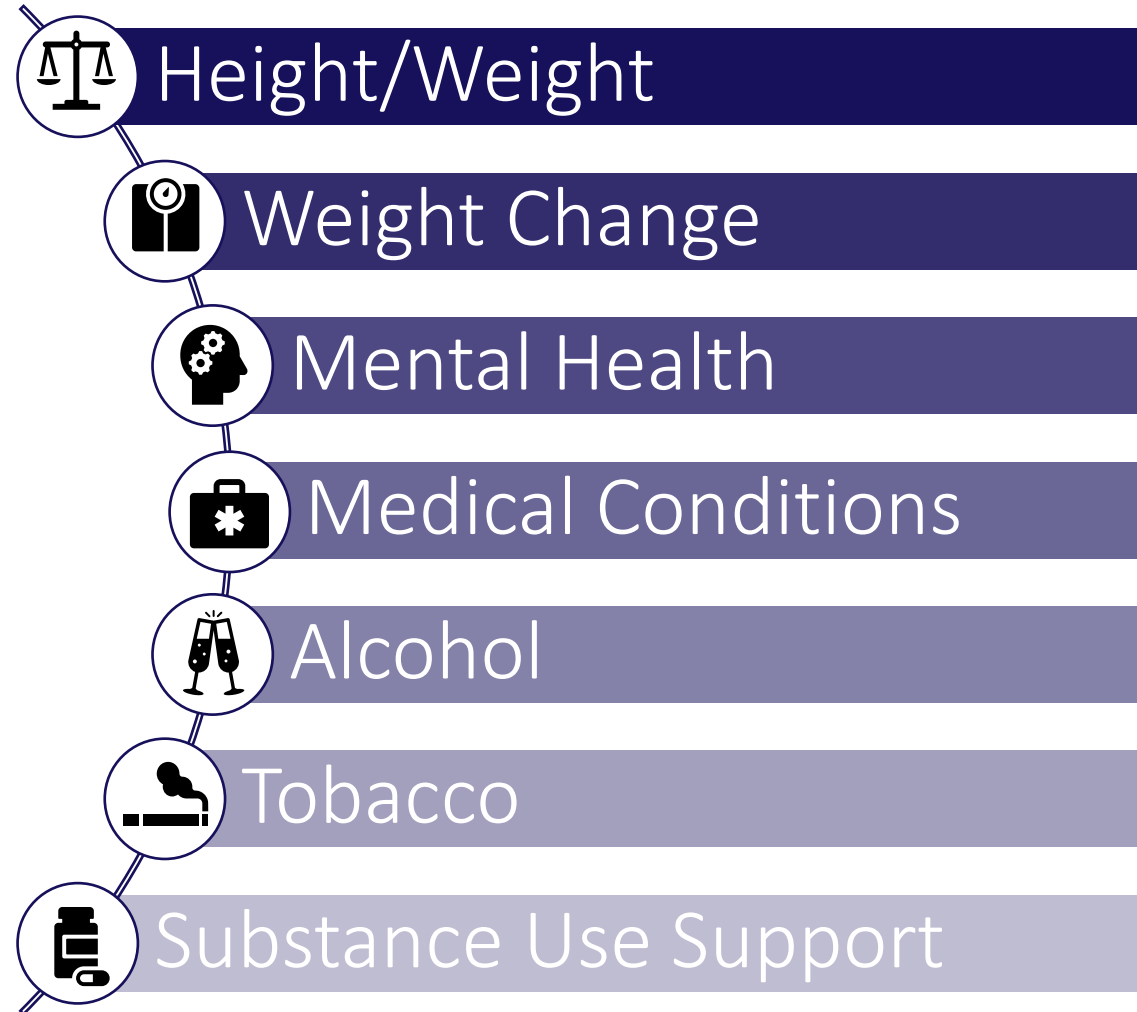
- Will behaviorally-redesigned UW questions increase disclosures?

Design of the Groups

Five Groups – 4200 Total Participants

Control Questionnaire	Questionnaire A	Questionnaire B	Questionnaire B + Honesty Pledge at Start	Questionnaire B + Honesty Pledge at End
• 1050 participants • Traditional UW questions • No honesty pledge	• 1050 participants • Behaviorally-redesigned UW questions – Version A • No honesty pledge	• 1052 participants • Behaviorally-redesigned UW questions – Version B • No honesty pledge	• 526 participants • Behaviorally-redesigned UW questions – Version B • Behaviorally-designed honesty pledge – Beginning of application	• 525 participants • Behaviorally-redesigned UW questions – Version B • Behaviorally-designed honesty pledge – End of application

Questions Explored



Techniques Tested

Ask One Thing at a Time

Separate lists of conditions/experiences

IMPROVED DISCLOSURE ON:



Social Norms

Assume the behavior exists and use anchoring

IMPROVED DISCLOSURE ON:



Methodological Bias

Add relevant options and use reflexive questions

IMPROVED DISCLOSURE ON:



Ask Again

Re-ask about important medical conditions

IMPROVED DISCLOSURE ON:



Experiences

Ask about medical experiences

IMPROVED DISCLOSURE ON:



Framing Honesty

Include an honesty pledge at the beginning of the application

IMPROVED DISCLOSURE ON:



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Behavioral Science at Bestow

Facilitating Behavioral Economics with Technology

BESTOW

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**Make
hard
things
easier**

“

**IF YOU WANT PEOPLE TO DO
SOMETHING, MAKE IT EASY.**

— **RICHARD THALER**
American economist

”



**ECONOMIC QUOTE
OF THE DAY**

Choice architecture

Designing the different ways choices are presented

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Customize your coverage

MONTHLY COST
\$44.81
(i) Why this price?

TERM LENGTH (i)
20 years

10 15 **20** 25 30

COVERAGE AMOUNT (i)
\$750,000

\$100K \$1.5M

Confirm coverage

Add beneficiaries

Assign 100% of your benefits to one or more beneficiaries. You can change this any time after purchase.

100% Assigned

BESTOW

MEDICAL INFO 0 / 9

In the past 10 years, have you been diagnosed or treated by a medical professional for:
Select all that apply

(?) More information

☐ Blood disease or clotting disorder (excluding iron-deficiency anemia or sickle cell trait)

☐ Cancer, tumor, or other abnormal growth

☐ Cardiovascular or Vascular disorder

☐ Connective tissue or Autoimmune disorder

☐ Digestive system disorder or impairment

☐ Kidney disorder or impairment

☐ Mental health disorder

☐ Neurological disorder or impairment

☐ Pulmonary or respiratory disease or disorder

☐ Thyroid or Endocrine disorder

☐ None of the above

Have you had a biological parent die before age 60 from any of the following:
Select all that apply

☐ Heart disease

☐ Melanoma

☐ Colon cancer

☐ Ovarian or breast cancer

☐ None of the above

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Testing, testing, testing!

Theory versus practice

A/B testing in production

- by state
- by question
- by answer method (slider v self-disclosed)

Example: Height & Weight

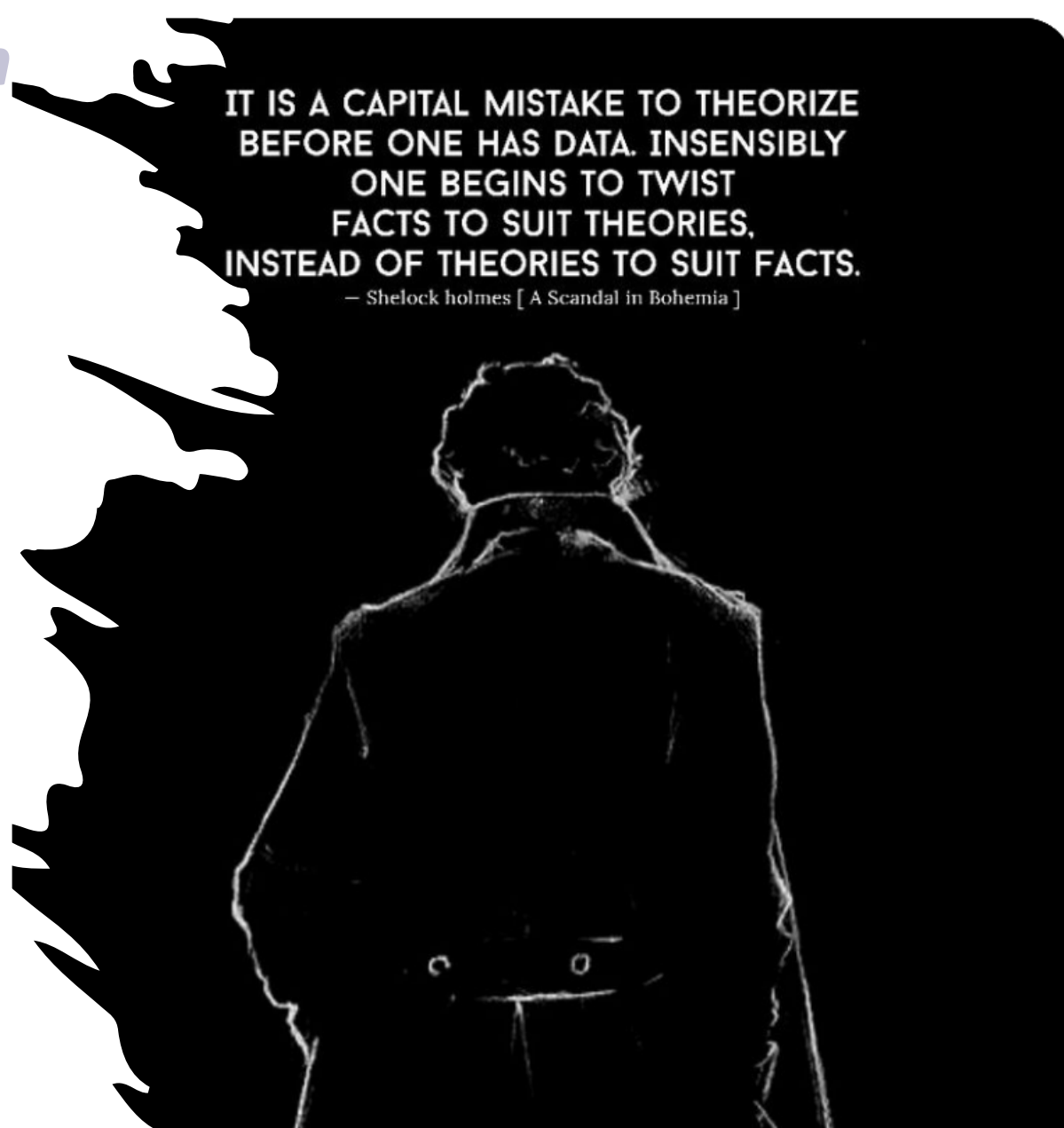
Pounds: V Pounds:

But don't only measure disclosure....

What about: application submits, close rates, lapse rates, slippage, mortality?

IT IS A CAPITAL MISTAKE TO THEORIZE
BEFORE ONE HAS DATA. INSENSIBLY
ONE BEGINS TO TWIST
FACTS TO SUIT THEORIES,
INSTEAD OF THEORIES TO SUIT FACTS.

— Sherlock holmes [A Scandal in Bohemia]



More disclosure isn't necessarily better

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- P = Profitability
- R = Revenue (from premiums of bound policies)
- C = Costs (claims paid + operational costs)
- D = Disclosure level (proportion of truthful and complete responses, $0 \leq D \leq 1$)
- A = Application submissions
- B = Bound policies (approved and issued, depends on D)
- L = Policy lapse rate
- M = Ultimate mortality rate (impacted by D)

Additional disclosure might be:

- inaccurate
- have minimal impact to mortality
- be outweighed by decreased bound applications, higher lapse rates.

Formula:

$$P = (R \times B(D) \times (1 - L(D))) - (C \times M(D))$$

Monitoring in Post Issue Audit

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BESTOW
UNDERWRITING PORTAL

ALL POLICIES UNDERWRITE AUDIT

Welcome, David! 

Jane Smith
Audit / #224003510

IN REVIEW

Start Audit

Overview Application Underwriting Documents History

 **Applicant details**

APP ID
27d73702-c14a-40a3-afac-7081b88706b2

TERM LENGTH
30

APPROVED RISK CLASS
PREFERRED_PLUS_NT

DATE OF BIRTH
3/17/1988

GENDER
Female

POLICY #
224003510

FACE AMOUNT
\$750,000.00

NAME
Jane Smith

ACTUAL AGE
36

SOCIAL SECURITY NUMBER
... - 2222 

 **Risk Summary**

Examone Labpiture
PREFERRED PLUS NT

Milliman Sherlock Result
PREFERRED PLUS NT

Milliman Rx Result
PREFERRED PLUS NT

BMI
PREFERRED PLUS NT

Milliman Risk Score
PREFERRED PLUS NT

Decision Making Under Risk: Context, rank and distribution

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Decision by Sampling

- People make decisions by mentally comparing the value of an option to a sample of similar values stored in memory.
- These samples are drawn from two sources:
 1. Personal experience (e.g., past purchases or prices seen).
 2. Contextual information (e.g., options presented at the time of decision).
- The rank position of the option within this sample determines its subjective value:
 1. Higher-ranked (better) options feel like gains.
 2. Lower-ranked (worse) options feel like losses.

"Decision by Sampling" by Neil Stewart, Nick Chater, and Gordon D. A. Brown, published in Cognitive Psychology, 2006

Experiment

Does \$15 for a Gin and Tonic feel like a good deal, an expensive deal, or a fair price?

Menu 1

Range from: \$10-15

- Manhattan \$13
- Old fashioned \$10
- Negroni \$12
- Gin and tonic \$15
- Martini \$17

Menu 2

Range from \$15-25

- Manhattan \$19
- Old fashioned \$17
- Negroni \$20
- Gin and tonic \$15
- Martini \$22

Results

			Good	%				
			Bad	%				
			Fair	%				
Old fashioned	Negroni	Manhattan	Gin and tonic		Martini			
\$10	\$12	\$13	\$15		\$17			
			Gin and tonic		Old fashioned	Manhattan	Negroni	Martini
			\$15		\$17	\$19	\$20	\$22
			Good	%				
			Bad	%				
			Fair	%				

Ranked position within a sample matters more to subjective value than the absolute price

Framing Benefits and Costs

Symmetrically: Display equivalent coverage benefits for monthly premiums to prevent an overemphasis on the perceived "loss" of paying a premium.

Highlighting Gains Over Losses:

Emphasize the security and peace of mind gained from coverage rather than the cost of the premium.

Using Contextual Markers:

Include scenarios or markers that make the potential benefits of higher premiums more salient, encouraging decisions that prioritize long-term gains.

Customize your coverage

MONTHLY COST

\$23.28

TOTAL COVERAGE

\$750,000

TERM (YEARS)

10

15

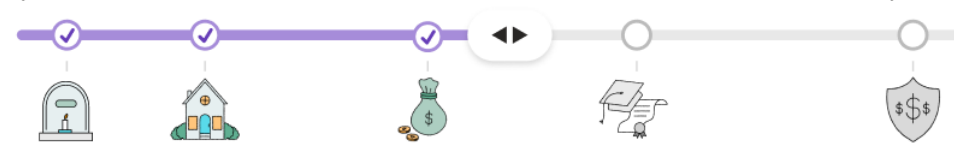
20

25

30

\$50K

\$1.5M



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YOUR ESTIMATED COVERAGE NEEDS

 Final expenses	Moderate funeral and burial	✓ = \$50,000
 Mortgage	\$200,000	✓ 20 yrs ✓ = \$200,000
 Income replacement	\$50,000	✓ 10 yrs ✓ = \$500,000
 Child education	Avg. 4-yr college	✓ 2 kids ✓ = \$150,000

Confirm coverage

Activity: Applying Behavioral Science Principles to Insurance Applications

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Now It's Your Turn!

Instructions

Your Task:

Work with your group to analyze and improve your given sample application section

Time Limit:

**10
minutes**

Questions to Consider:

- What issues are there from an applicant perspective?
 - Confusing language?
 - Social stigmas?
- Which Behavioral Science techniques could be used to improve your section?

Ask One Thing at a Time

- Separate lists of conditions/experiences

Social Norms

- Assume the behavior exists and use anchoring

Methodological Bias

- Add relevant options and use reflexive questions

Ask Again

- Re-ask about important medical conditions

Experiences

- Ask about medical experiences

Framing Honesty

- Include an honesty pledge at the beginning of the application

Report out by teams

Your Task:

Share your question and redesign with the larger group

Time Limit:

3 minutes each group

Questions to Consider:

- Which techniques did you use?
- Which Behavioral Science techniques could be used to improve your section?

Ask One Thing at a Time

- Separate lists of conditions/experiences

Social Norms

- Assume the behavior exists and use anchoring

Methodological Bias

- Add relevant options and use reflexive questions

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Questions & Wrap Up