

# Unifying the Behavioral Sciences in Practice

How Behavior Centered Design was used for formative research, program design, and evaluation for a sanitation behavior change program in Lusaka Zambia

Ben Tidwell

PhD Candidate

London School of Hygiene and Tropical Medicine

17 April 2018

LONDON  
SCHOOL of  
HYGIENE  
& TROPICAL  
MEDICINE



# Problem: Designing Behavior Change Programs

- Programs from around the globe producing new results every day
- Many different theories and approaches to choose from
- New disciplines making contributions

# Problem: Poor Peri-Urban Sanitation

- About 900 million people live in peri-urban areas, increasing to 2 billion by 2030
- Health outcomes worse than urban or rural areas
- Shared sanitation increasing in Sub-Saharan Africa
  - 204 million (40%) in 1990 to 465 million (47%) in 2015
- Motivating behavior change more difficult in landlord-tenant context

# ABCDE Design Process

A

B

C

D

E

Assess

Build

Create

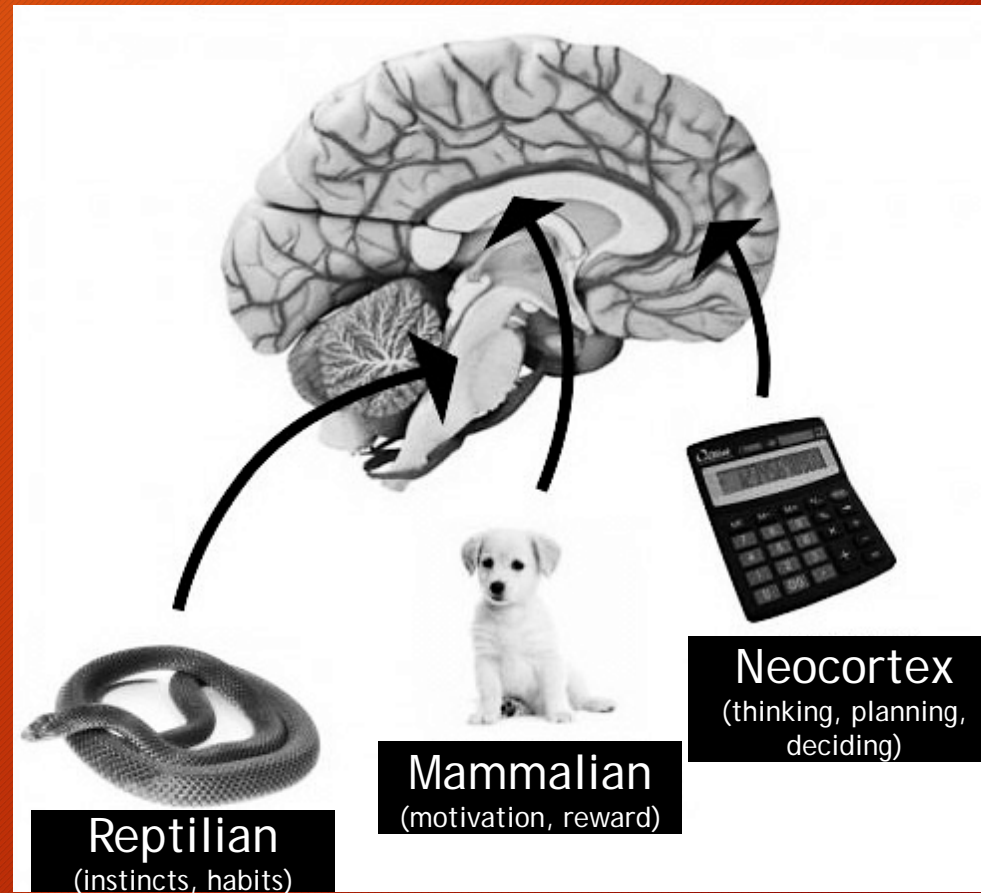
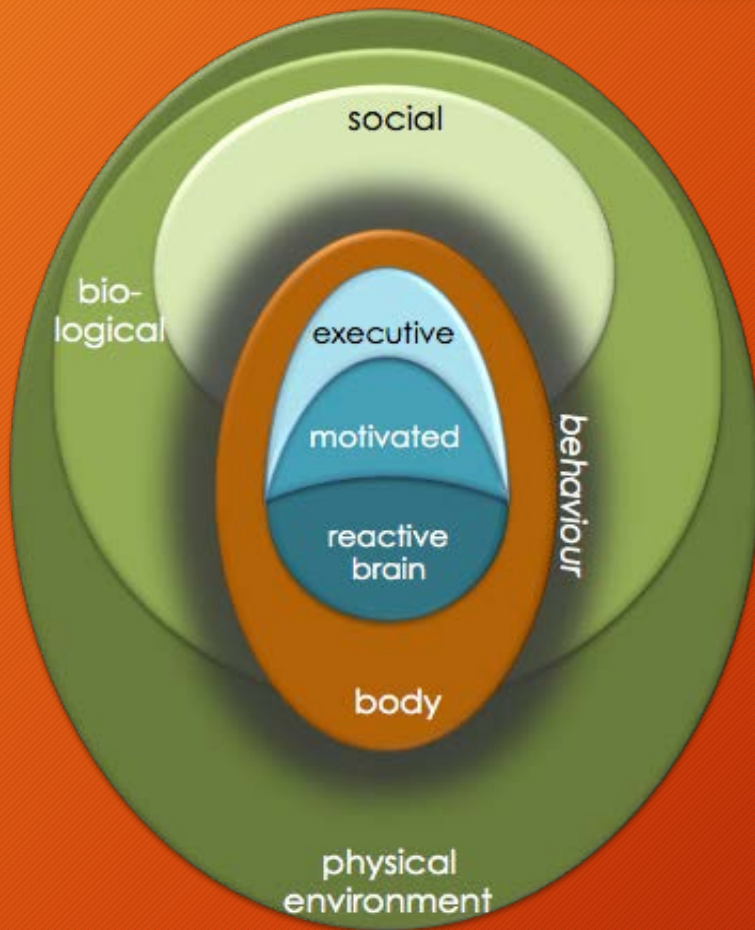
Deliver

Evaluate

# Assess: Improving Peri-Urban Sanitation

- A few trials have encouraged discussion or provided behavior change messages and buckets
- None have examined improving structural quality

# BCD Behavioral Determinants



# Assess: Synthesizing insights from other contexts

Determinant	Findings
Executive Brain	Health Knowledge (?)
Motivated Brain	Comfort, Status, Fear, Disgust, Affiliation
→ Reactive Brain	Cleaning habits
Body	Physical ability (access/strain)
→ Social Environment	Collective efficacy, Peer influence
Physical Environment	Security of land tenure, Access to Water
Biological Environment	Pathogens/Epidemics

# Build: Formative Research Tools



# Build: Existing Toilet Quality

10%



50%



35%



5%



# Build: Problematic Behaviors

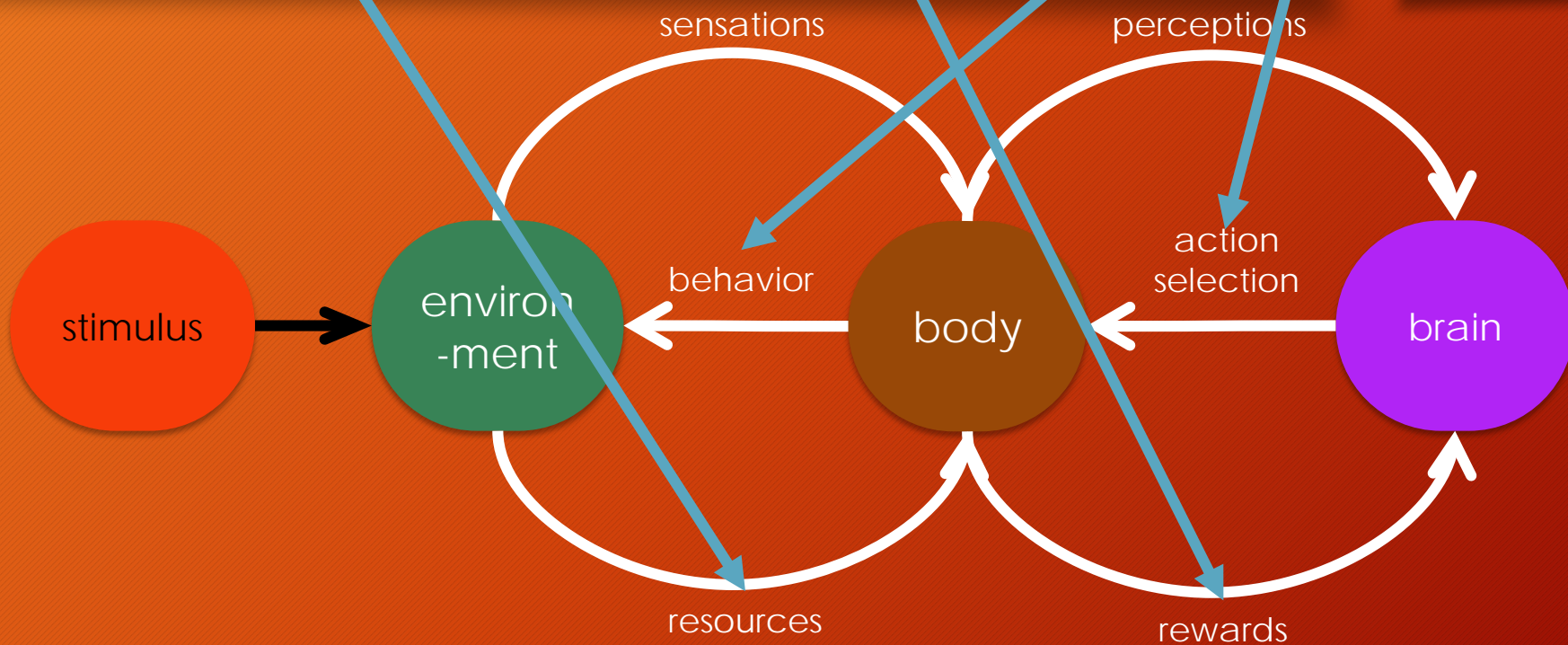
- Cleaning systems are hard to follow and challenging to enforce
- Tenants fail to express demand for better toilets to landlords
- Toilets are built or repaired only when existing ones are damaged
- Mechanisms for plot improvement funding are not used for toilets (not an “investment”)

Surprise

Revaluation

Performance

How does behavior change



# How does behavior change



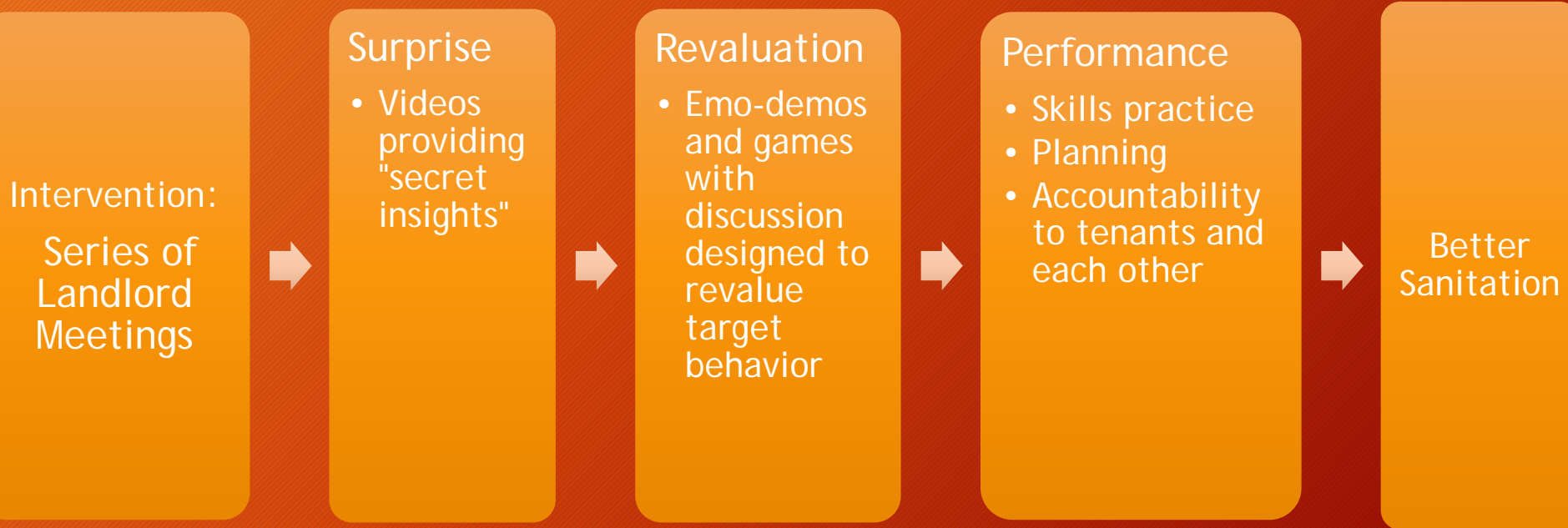
# Create: Designing a Program

- Provided brief to creative agency
- Revised and refined their ideas
- Process not deterministic, but works like our brain works



# Deliver and Evaluate

- Evaluation based directly on theories of change  
(Overall program)



# Deliver and Evaluate

- Evaluation based directly on theories of change  
(Behavior-specific)

Secret #4:  
Flushing  
Toilet

"A wise  
landlord  
invests in  
his plot's  
sanitation"



Surprise

- You are losing out on income because of your poor quality toilet



Revaluation

- Wise investor game - investing in a toilet gives more income faster than building a room



Performance

- Instructions on available toilet technology options and costs
- Facilitating behavior through formation of savings groups



State-of-  
the-world:

Higher  
quality  
toilets

# Advantages and Disadvantages of BCD

- Advantages

- Synthesizes and shows gaps in literature
- Focuses formative research
- Guides design and evaluation process

- Limitations

- Determinants aren't exhaustive descriptions and processes aren't entirely explicit

But, roots other approaches in human biology with strong theoretical links to other disciplines

# For more information

- BCD guides, papers, and resources:

<http://www.lshtm.ac.uk/bcd/>

- Sanitation Demand Intervention:

<http://bentidwell.com/sandem/>

- Email me:

[ben.tidwell@lshtm.ac.uk](mailto:ben.tidwell@lshtm.ac.uk)