

Lorrie Cranor

Chief Technologist, Federal Trade Commission

Edith Ramirez

Chairwoman, Federal Trade Commission

Michael S. Wogalter

Professor Emeritus of Psychology
North Carolina State University

A COGNITIVE FRAMEWORK FOR DISCLOSURE EFFECTIVENESS: COMMUNICATION-HUMAN INFORMATION PROCESSING (C-HIP) MODEL

Michael S. Wogalter, Ph.D.

Human Factors Consultant – Fort Lauderdale, FL
Professor Emeritus of Psychology (retired)
North Carolina State University

FTC Workshop

Putting Disclosures to the Test

September 15, 2016

Background

- Area: Human Factors, Cognitive Ergonomics
 - Discipline that is concerned with the design of things (products, equipment, tasks, and built environments) based on people's abilities and limitations with an aim at increasing productivity, comfort/satisfaction and safety
 - Person–Thing Interface (& Interactions)

Background

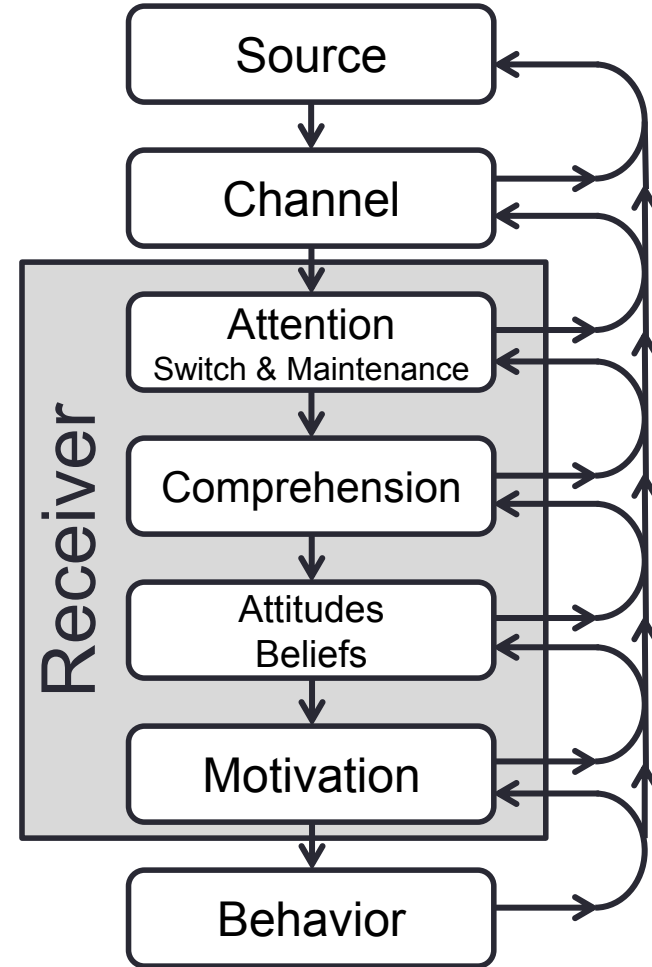
- Broad research on warnings: Communications to prevent injury or loss in a very general sense
 - Risk/hazard/safety information
 - Disclosures (informed consent forms, credit card terms, online acceptance of terms)
- Telling the negatives, not just the positives, and doing it effectively
- Factors that influence effectiveness, both negative and positive

Background

- Warning research:
 - Consumer product warnings including labels, accompanying inserts/sheets, tags, product manuals
 - Posted signs for environmental hazards, directions, & information
 - DTC advertising of prescription drugs, OTC labels
 - Symbols/icons/pictograms/pictorials
 - Visual and auditory presentation, and other modalities
 - Print, video, internet

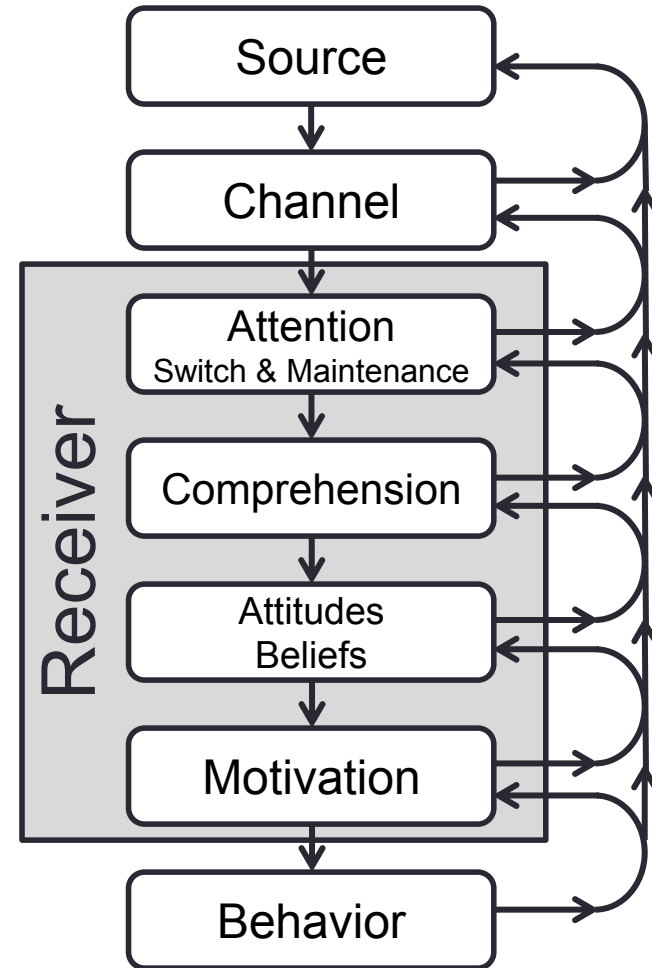
Coverage

- Communication-Human Information Processing (**C-HIP**) Model
 - General cognitive processing framework
- Combines basic communication theory and human information processing stage theory
- Utility: Organizes a lot of seemingly haphazard constructs & research



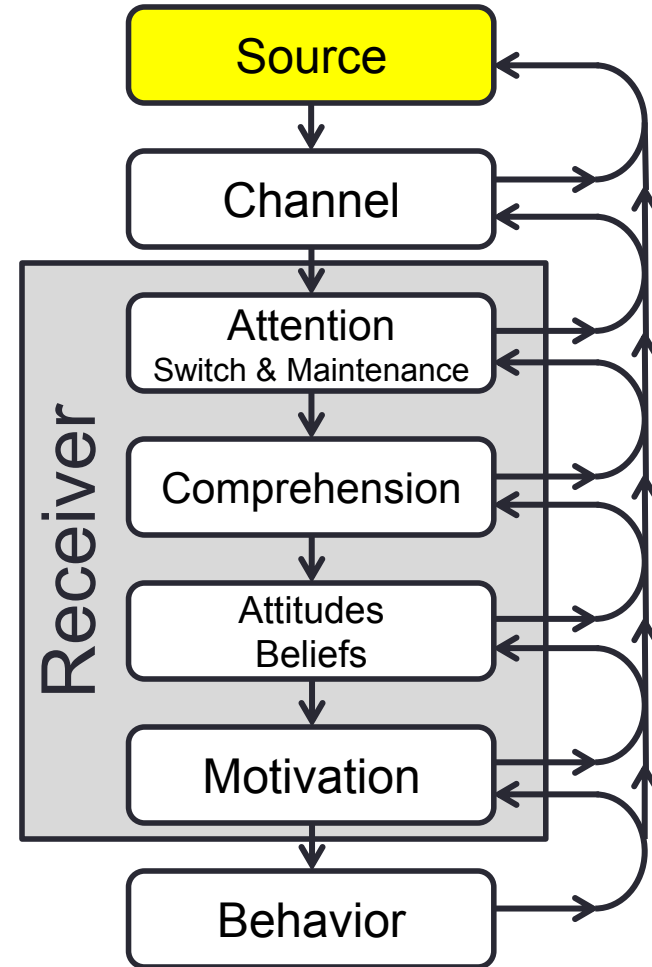
C-HIP Model

- Breaks it up into stages
- Linear process - “Bottlenecks” that could disrupt
- Sequential, but there are feedback loops
- Describes what is needed for a warning or disclosure to work
- Helpful in investigating why a warning or disclosure is not working & suggests ways to improve it
- Will start from top and work down



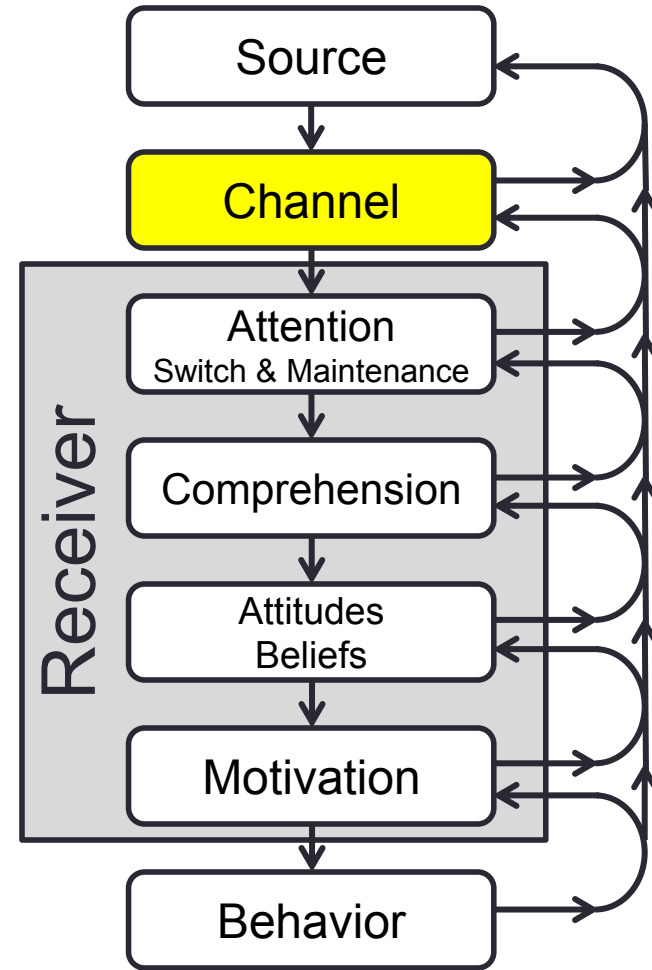
C-HIP Model: Source

- Entity that transmits disclosure/warning
 - Determines its necessity (by law, by standards, by hazard/risk analysis, etc.)
- Some research on source effects (Beliefs)
 - Surgeon General & government added to warning - greater credibility
- Social persuasion literature
 - Characteristics of source
 - Expert
 - Trustworthy
 - Likeable
 - Similarity



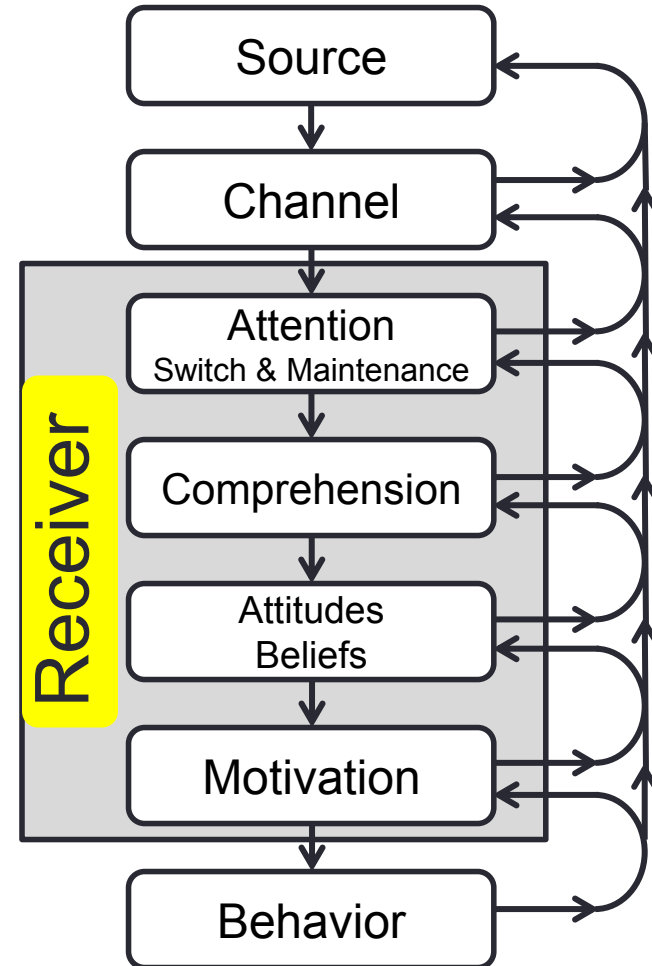
C-HIP Model: Channel

- via Modalities
 - Visual
 - Auditory
- via Media
 - Print & video (TV, radio, Internet), labels, signs, posters/placards, tags, brochures, manuals, inserts, billboards, voice warnings, etc.
- Different characteristics
- Generally, redundancy (more than one method) is better



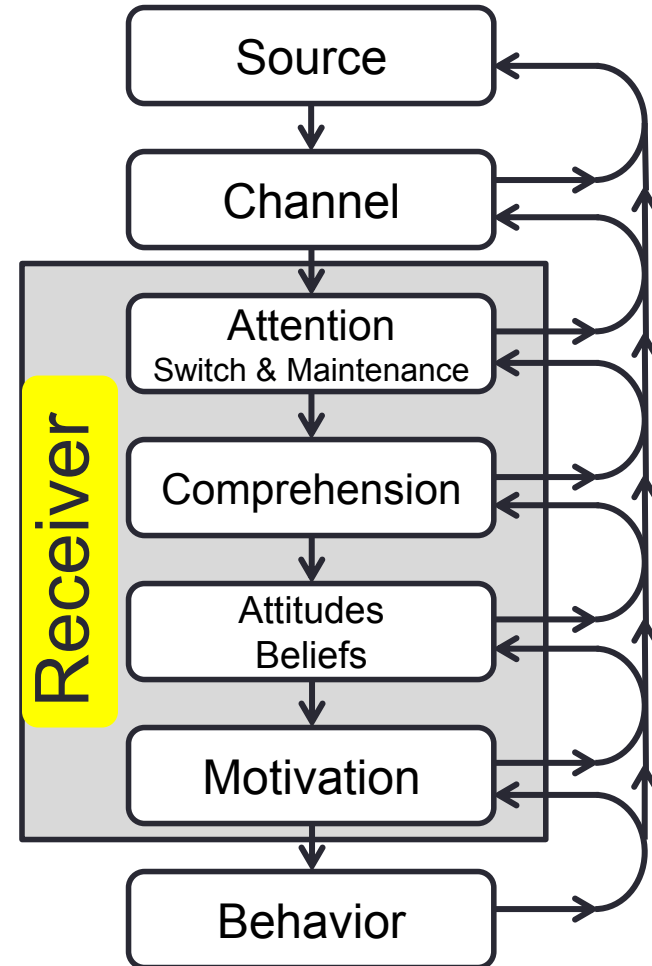
C-HIP Model: Receiver

- Third stage of communications theory part, most complicated
- “Recipient” member of target audience
- Demographic, person variables
- Different message for general public vs. sophisticated (trained, expert) group
- Future: tailor disclosures to individuals



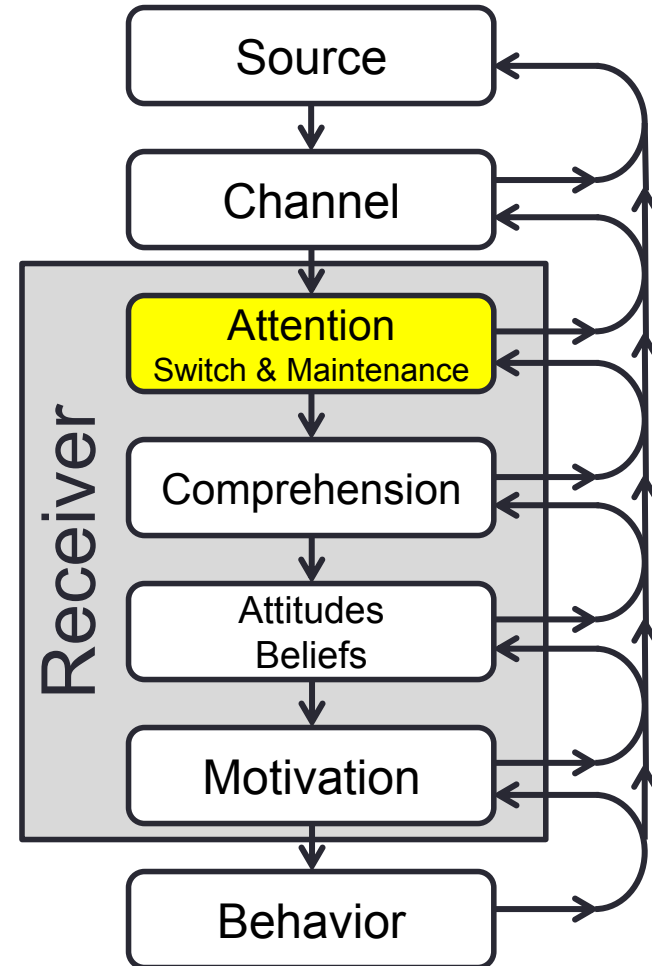
C-HIP Model: Receiver

- Delivery – Did the disclosure actually get to the “receiver”?
 - Different methods reach different groups/percentages of persons
 - Assessment method: Check whether sample received it



C-HIP Model: Attention Switch

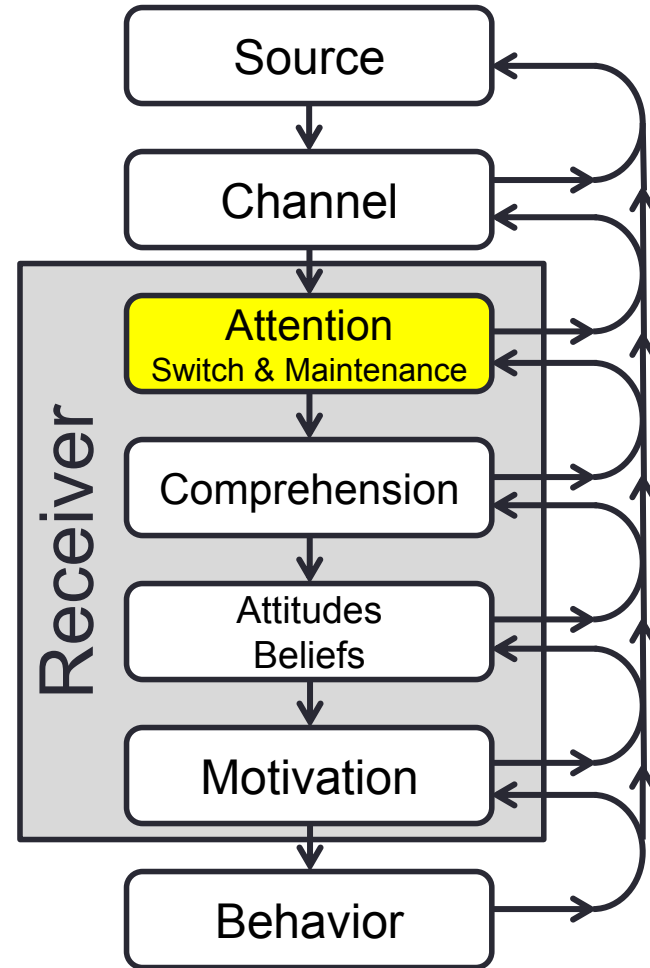
- Noticing (catching attention) in a cluttered (noisy) context
 - Salient, conspicuous, prominent
- Assessment methods:
 - Looking behavior, eye movement (saccades), response time (faster), post-exposure (if remember it, must have seen it), subjective evaluation
- Features that benefit
 - Large, high contrast, color
 - Location, placed in visual field, reduction of competing stimuli
 - Symbols



C-HIP Model: Attention Maintenance

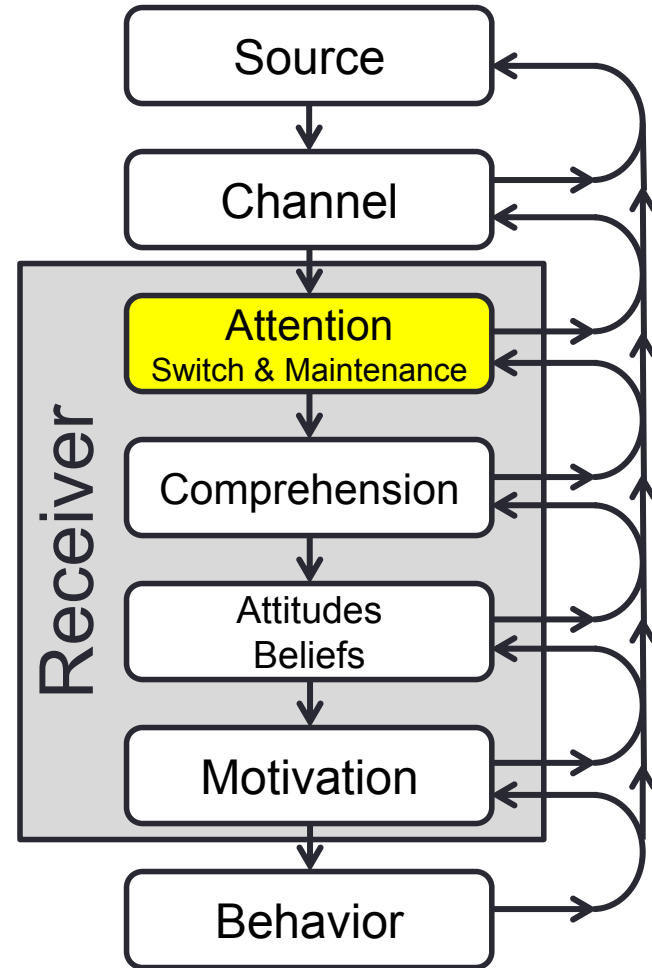
Attention Holding to Read or Examine

- Adequate time given to acquire info
- Features that benefit:
 - Legible (distinguish attributes of print)
 - Large
 - High contrast (print to background brightness difference)
 - Brief, low density
 - Structured format
 - Most relevant, priority information first



C-HIP Model: Attention Maintenance

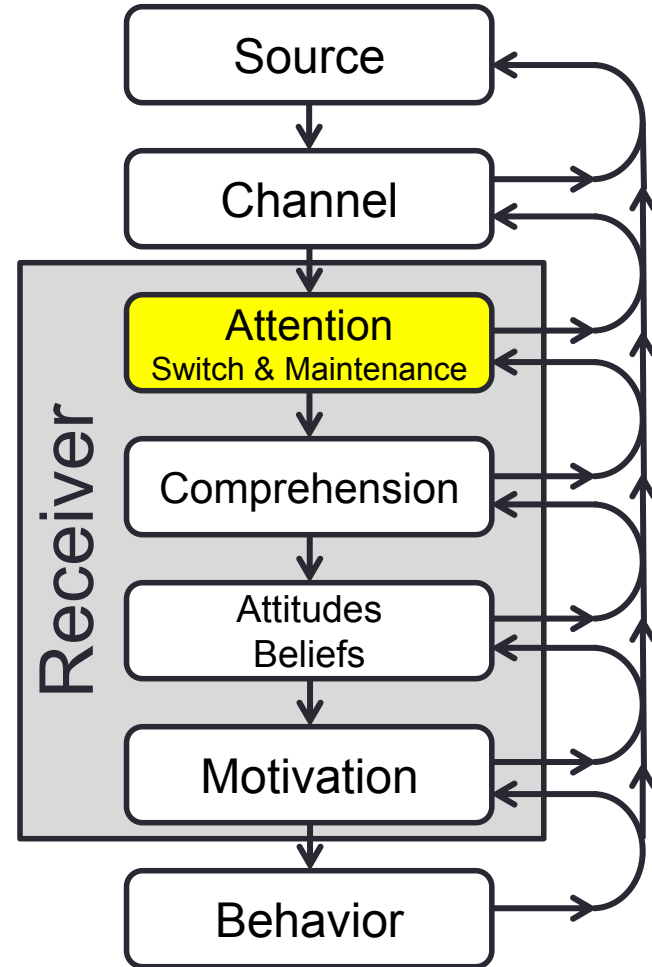
- Assessment methods:
 - Dwell time, eye fixations
 - Legibility:
distance/obscuration
techniques
 - Participant evaluation
 - Prioritization evaluation



C-HIP Model: Attention

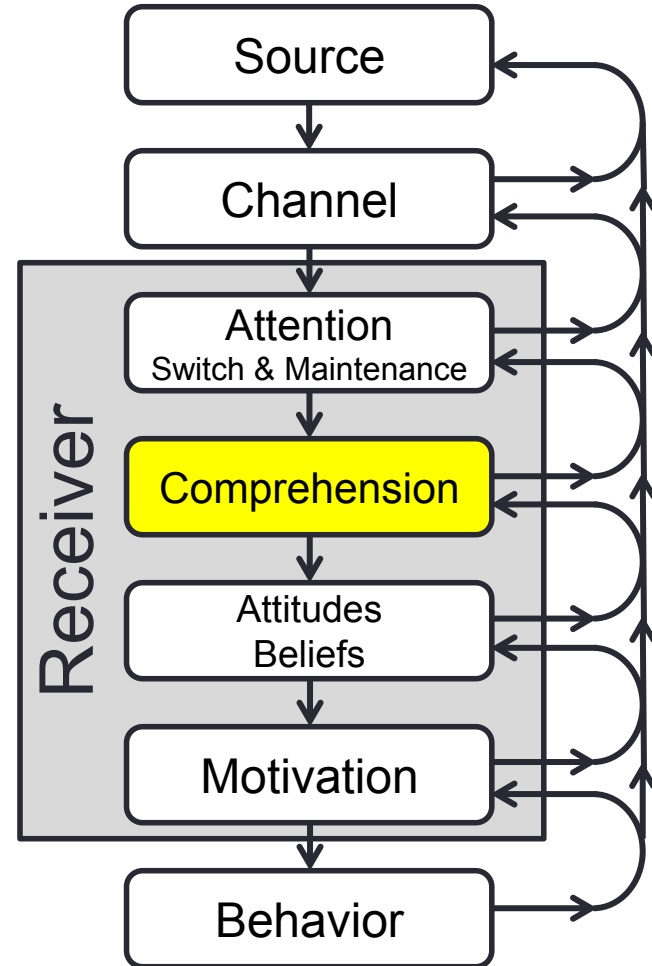
Issue: Habituation

- Seeing same or similar thing over & over
 - Novel visual things are more salient
 - Problem with standardization
 - Material all looks alike—not a good thing for Attention stage
 - Need some change



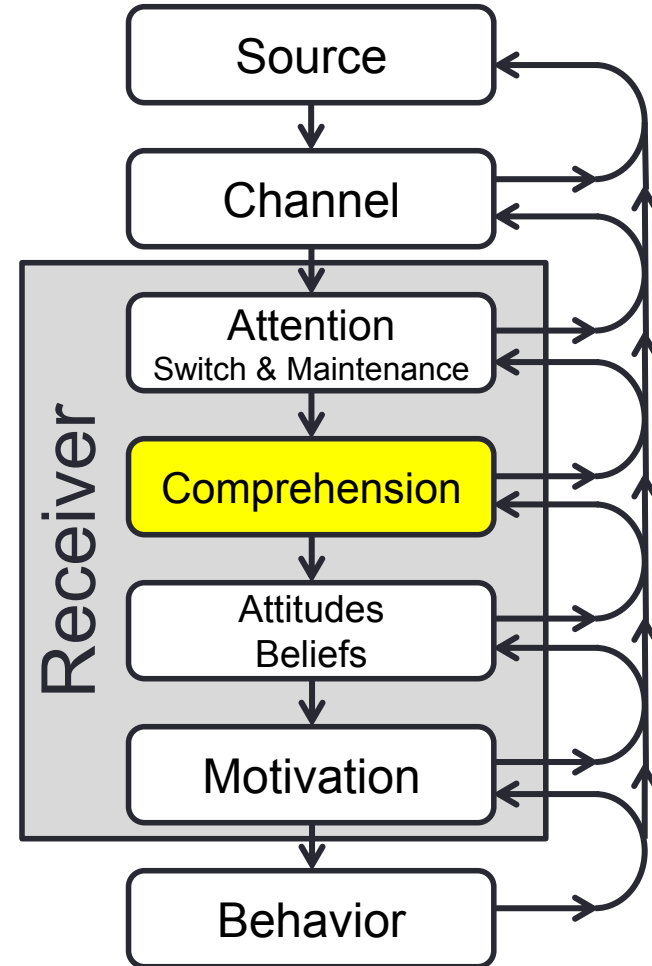
C-HIP Model: Comprehension

- Purpose is to give appreciation/**understanding** of risk & enable informed judgment
- Assessment methods:
 - Convenience: readability formulae
 - Better: Show participants material & then test
 - Open-ended questions & cognitive interview



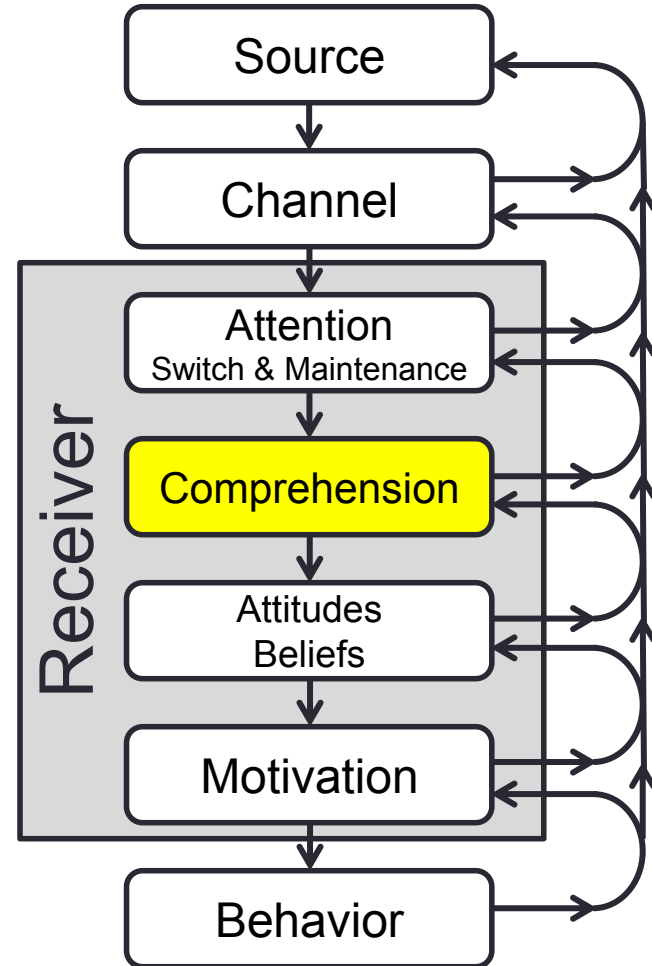
C-HIP Model: Comprehension

- Features that benefit
 - Simpler terms, high freq in language
 - Has content reflecting intended concepts
 - Message components:
 - (1) Nature of Risk/Hazard
 - (2) Instructions
 - (3) Consequences
 - Direct, active, organized/structured
 - Sufficiently explicit/specific
 - Avoid ambiguity & misinterpretation



C-HIP Model: Comprehension

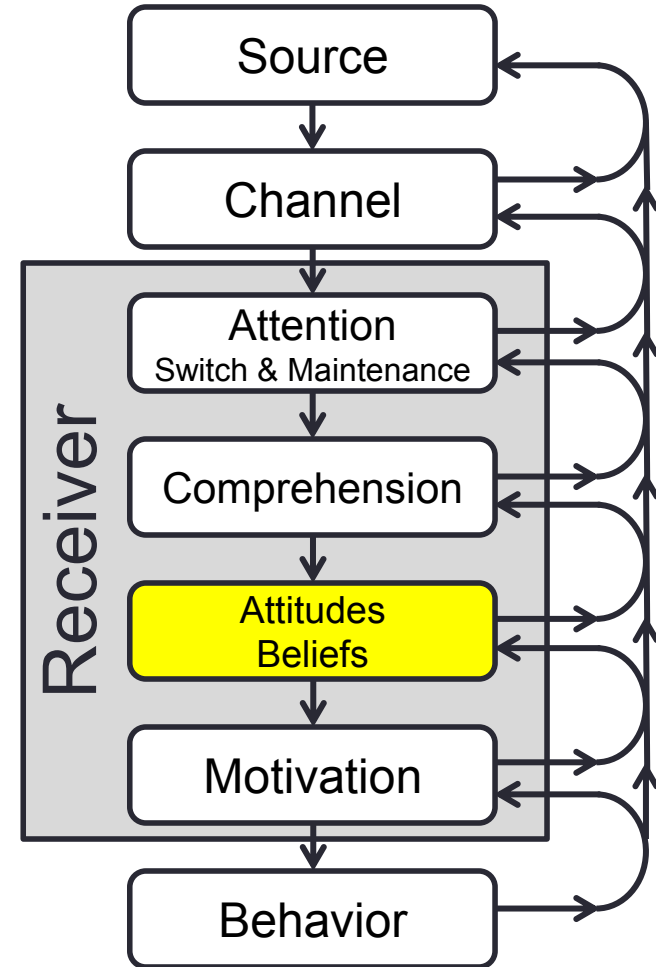
- Considerations:
 - Target audience factors
 - Skills & their levels, cognitive impairment
- Development
 - Check content for necessary content
 - Usability testing: Iterative design (changes) & test cycles
- Symbols/pictorials/pictograms
 - ANSI Z535.3 standard comprehension test
 - Acceptable to use when 85% (of sample) correctly understand what symbol means with no more than 5% critical confusions



C-HIP Model: Attitudes & Beliefs

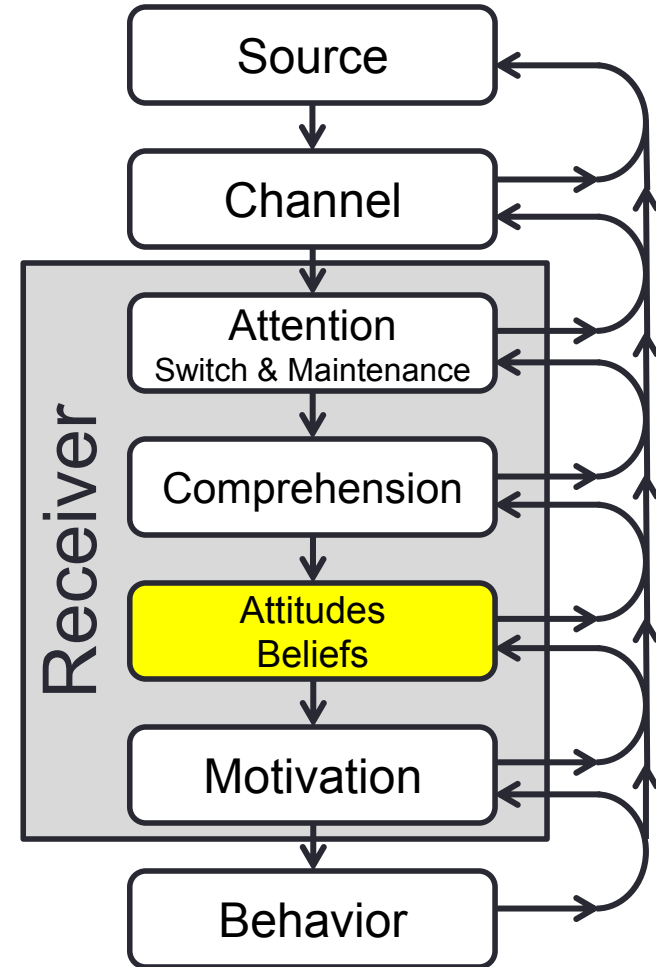
Beliefs: Knowledge structures based on experiences, accepted as true

- **Attitudes** - more emotion/affect
- Easier/quicker to process if message concurs with existing beliefs
- Problem: if beliefs are discrepant with message, e.g.,
 - Perceive lower risk than it is
 - Government would not allow substantial risk to exist
- Could lead to not looking/attending
- Need salient, persuasive message to overcome erroneous beliefs



C-HIP Model: Attitudes & Beliefs

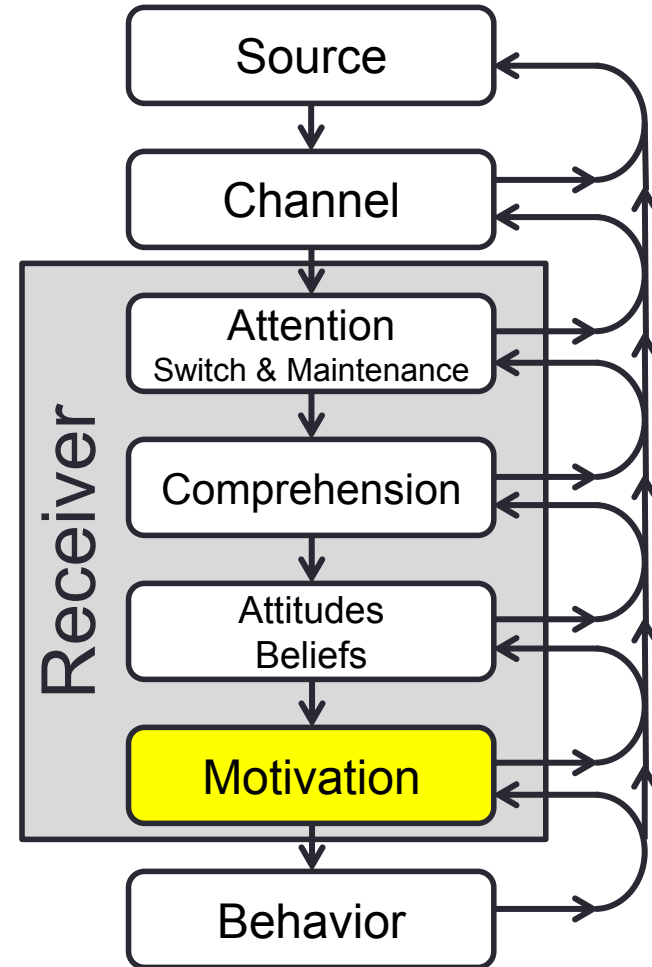
- Perceptions of hazard-risk
 - Consumers primarily consider severity and to lesser extent probability / likelihood
 - Match message characteristics to risk level
 - e.g., Use different signal words: Danger vs. Caution vs. Note
- Familiarity
 - If believe already familiar or adequately knowledgeable then less likely to read
- Perceived relevance
 - Relevant to me or is it for someone else?
- Assessment Methods: self report, participant evaluations using rating scales



C-HIP Model: Motivation

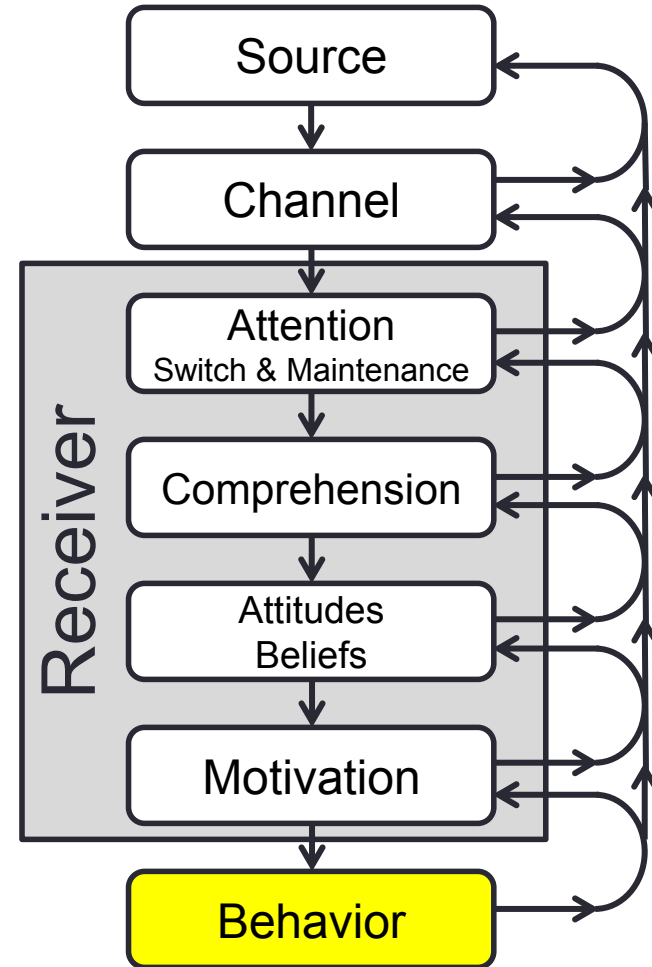
Energy/motivation to carry out task

- Cost of compliance and noncompliance
 - Effort, time, money
- Explicitness
- Severity of loss
- Other factors
 - Social influence / modeling – doing what others do
 - Time stress, mental workload, busyness
 - Interferes at all stages



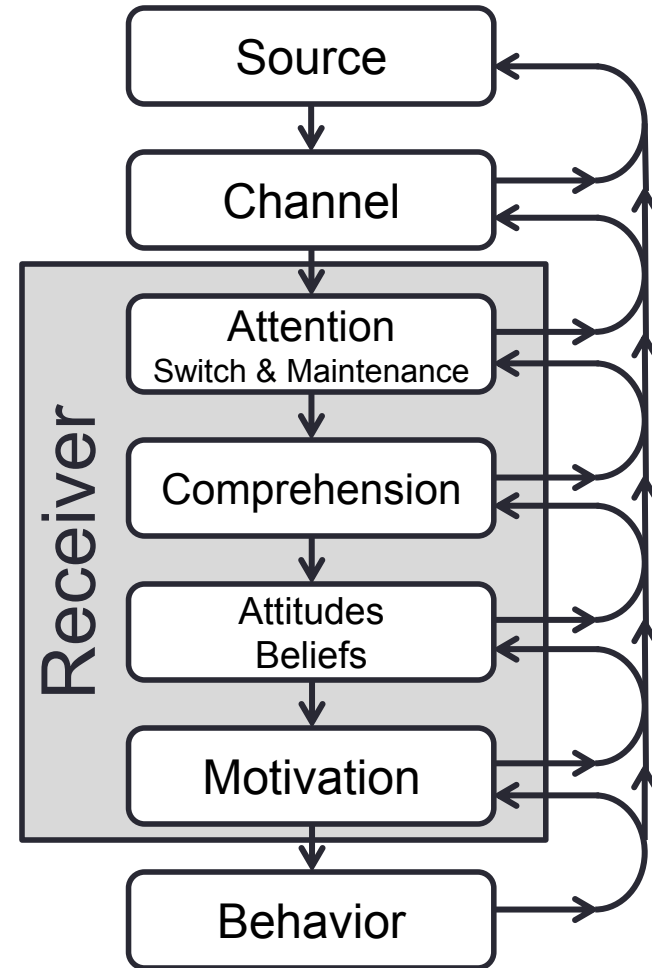
C-HIP Model: Behavior

- Complying, adhering, doing or not doing something appropriate or safe
 - Good measure of effectiveness if disclosure appropriately changed behavior
- Assessment methods:
 - Empirical behavioral compliance
 - Did they do what message directs?
 - Indirect assessment (measure related outcome)
- A lot of things have to come together to change behavior!




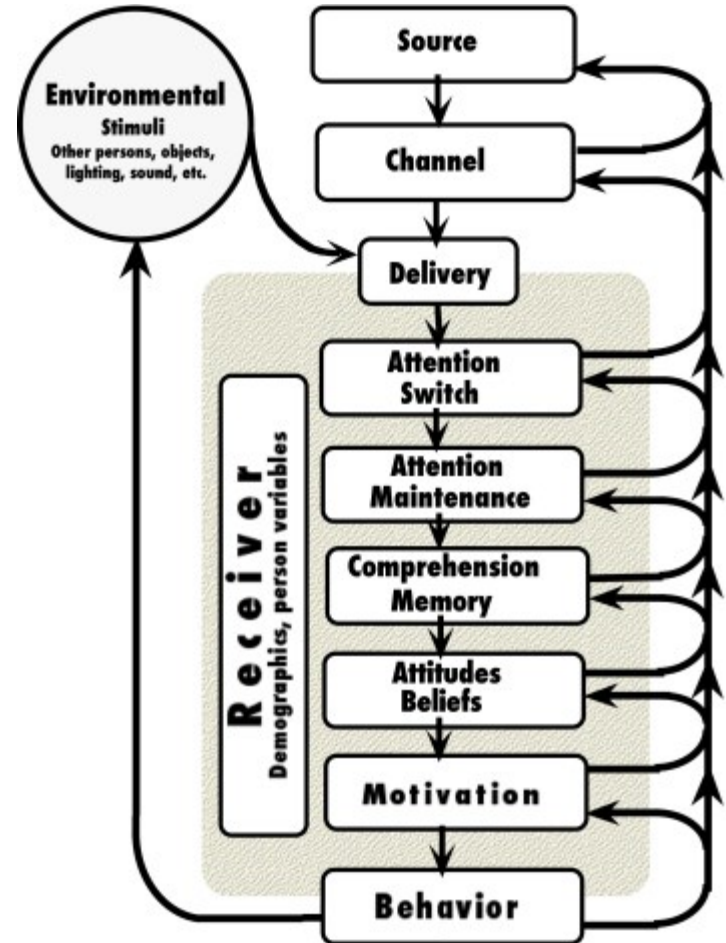
C-HIP Model - Summary

- Try to design disclosure/warning system so information passes through stages
- Described linear processing of stages but there are feedback loops: later stages can affect earlier stages
 - e.g., familiarity (Attitudes-Beliefs stage) affects earlier Attention stage
- Helps to organize diverse research
- Helps to track down reason for warning/disclosure not doing its job
 - Enables more directed/specific fixes



C-HIP Model

- Current Version 
- Separates Attention **Switch** & **Maintenance**
- Environmental stimuli (competing for attention)
- Delivery (did it actually get to receiver)
- Memory (with comprehension)



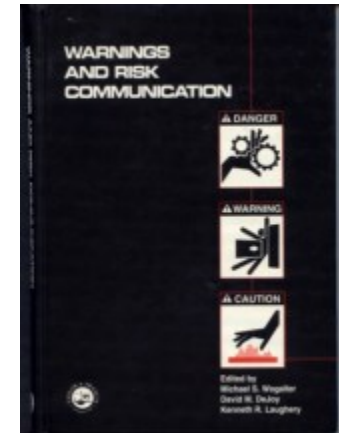
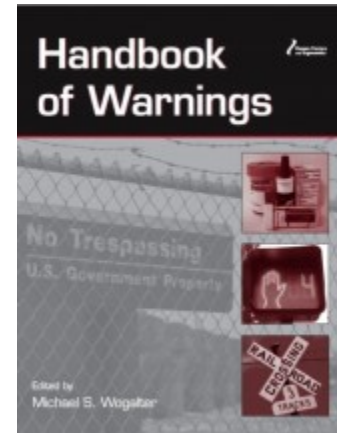
Contact Information

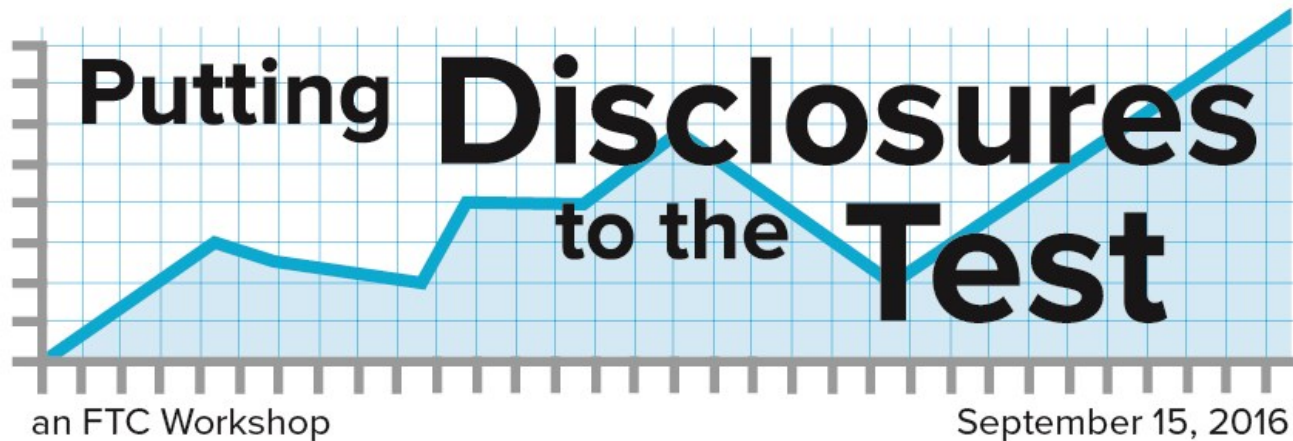
- **Michael S. Wogalter, Ph.D.**
 - **WogalterM@gmail.com**
 - **www.safetyhumanfactors.org** (pre-2013 publications)

Suggested resources:

Wogalter, M. S. (Ed.) (2006). *Handbook of Warnings*. Mahwah, NJ: LEA (Boca Raton, FL: CRC Press).

Wogalter, M. S., DeJoy, D. M., & Laughery, K. R. (Eds.) (1999). *Warnings and Risk Communication*. London: Taylor & Francis.





Evaluation procedures and methods

- Ilana Westerman

CEO and Co-founder of Create with Context, Inc.

- Craig Andrews

Department of Marketing
Marquette University

Ilana Westerman

CEO and Co-founder of Create with Context, Inc.

Evaluation Methodologies for Trusted Experiences

create  with context

Context The Goal

SCIENTISTS WANT TO

ARTISTS

UNDERSTAND

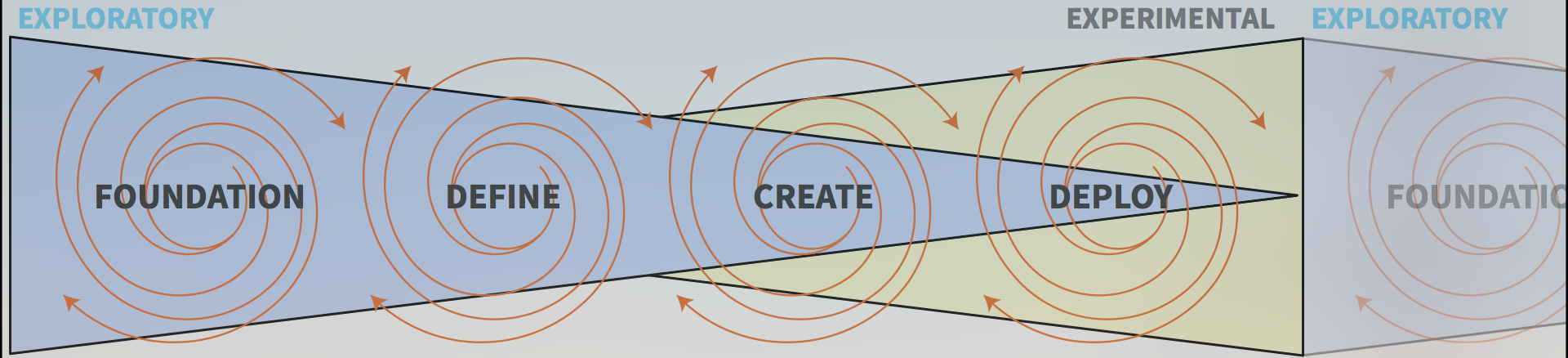
express themselves

designers

create **SOLUTIONS**

for **OTHERS**

Trust:It Data-Driven Funnel-Based Approach Driving to a Solution



Gather the context

People – Knowledge, expectations, mindset, tasks, workflows, values, beliefs, wants, needs, desires ...

Environment – Societal norms, social context, time or day, location, attention factors...

Create concepts

Form hypothesis
Iterative test & design
(qualitative)

Define and validate solutions

Iterative test & design
(quantitative)
Validation test

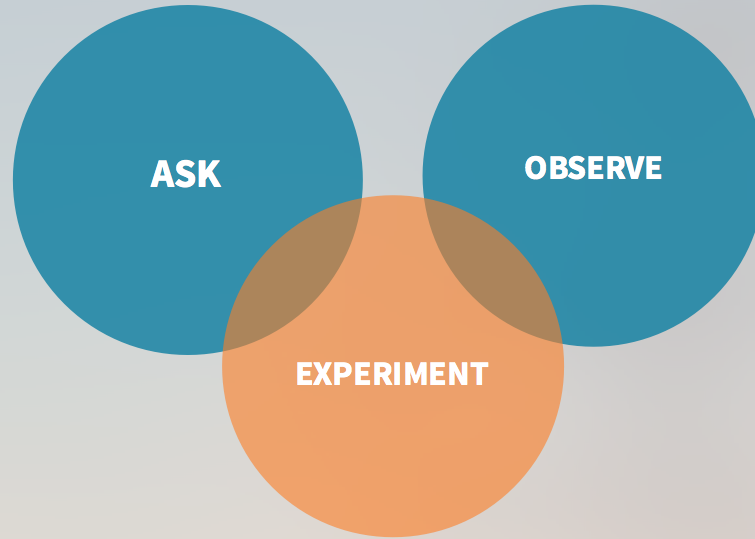
Implement solutions

Measure outcomes
Define guidelines
Develop design patterns

Explore enhancements

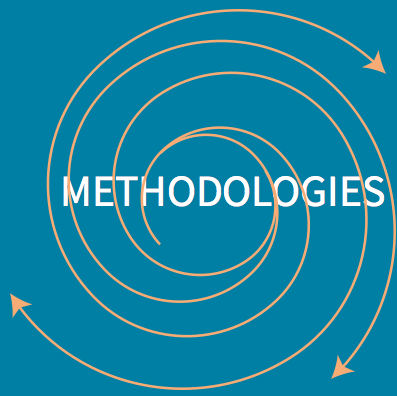
Trust:It

Ask questions or gather reactions for topics that people can reliably respond to



Observe behaviors & environmental factors; gather artifacts; model underlying motivations, predict future behaviors

Systematically gather data across individuals utilizing ask & observe methodologies



Trust:It Research Methodologies

MULTI-DISCIPLINARY

Anthropology • Cognitive Psychology • Data Science
 Economics • Ergonomics & Human Factors • Market Research
 Medical Sciences • Statistics • UX Research

...

DATA COLLECTION

In-Context vs. In-Lab

In-Person vs. Remote

Qual. vs. Quant.

Recall vs. Reaction

Target vs. Actual

...

A/B Testing

Benchmark
Evaluation

Biometrics

Card Sorting

Clickstream Analysis

Concept Testing

Data Mining

Desirability Study

EKG & EEG

...

Ethnography

Eye Tracking

Facial Coding

In-Depth Interviews

Iterative Test & Design

Journey Mapping

Longitudinal Studies

Mind Mapping

Navigation Tree Test

Online Intercepts

...

Personas

Recall & Recognize

Secret Shopper

Spark Analysis

Surveys

Talk-Aloud Protocol

Task Flow Analysis

Usability Study

User Diaries

Validation Testing

...

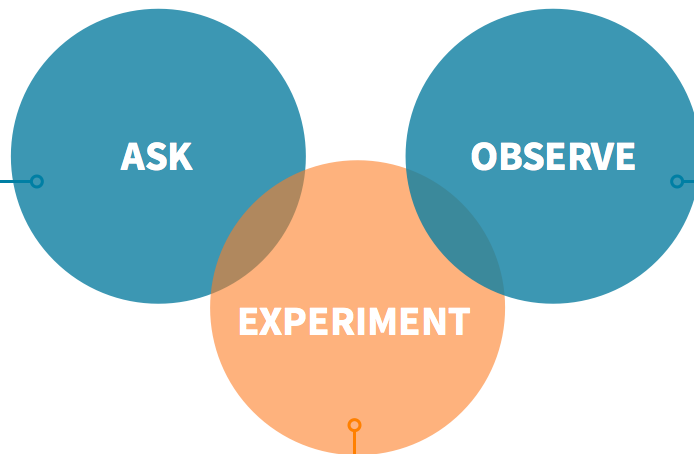
There Is No Perfect Method Each Has Strengths and Limitations
The Best Approach Isn't One Methodology, but a Combination

Case Study: Inform Shoppers of In-Store Data Collection Practices

Gather Context

People: What should be communicated?

Environment: How should it be communicated?



In-Depth Interviews

Research Question: What do people know? What do they expect? What do they understand?

In-Context Observation

Research Question: Can we notify people on their mobile devices? Do environmental factors impact people's ability to receive notices on their mobile devices? What is the best context and factors for messaging?

Recall & Recognize Test

Research Question: Can we notify people using in-store signage? What in-store messaging gets the most attention? What are their attributes? Generate hypothesis as to why.

What Do People Know, What Do They Expect?

IN-DEPTH INTERVIEWS (2013-2015 US GEN.POP)

1:1 lab-based sessions

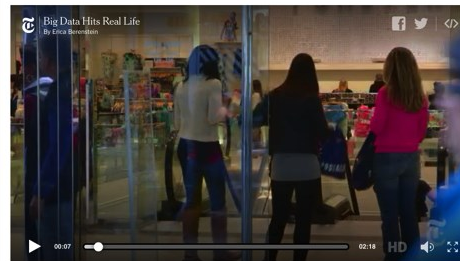
Blind research goal with
funnel-based methodology

Talk aloud protocol to gather
expectations and reactions

Do:It recruiting methodology

Attention, Shoppers: Store Is Tracking Your Cell

By STEPHANIE CLIFFORD and QUENTIN HARDY JULY 14, 2013



Brick-and-mortar stores are looking for a chance to catch up with their online competitors by using software that allows them to watch customers as they shop, and gather data about their behavior. By Erica Berenstein on July 14, 2013. Watch in Times Video >

Like dozens of other brick-and-mortar retailers, Nordstrom wanted to learn more about its customers — how many came through the doors, how many were repeat visitors — the kind of information that e-commerce sites like Amazon have in spades. So last fall the company started testing new technology that allowed it to track customers' movements by following the Wi-Fi signals from their smartphones.

*http://www.nytimes.com/2013/07/15/business/attention-shopper-stores-are-tracking-your-cell.html?_r=0

“Do you think that retail stores such as Target, Walmart, Macy’s, Best Buy, Home Depot, etc. are able to track your cellphone while in the store?”

“Read the article, tell me your thoughts. Is it something you were aware of prior to reading the article?”

Amber didn't expect that stores are collecting data from her phone.

When prompted to discuss her thoughts, she doesn't understand **what** would be collected, **how** and **why**.

Alicia was asked to read the article "Attention Shoppers: Store is Tracking your Cell"

In-Store Mobile Usage

IN CONTEXT OBSERVATION (US 2013)

Observe when and where mobile phones are used in stores

Assess the ability to hold a mobile phone while shopping

4624 shoppers; AM & PM, weekday/
weekend, in-mall, big box, urban,
suburban, rural



Bloomingdale's, Costco, Hollister, Walmart,
Neiman Marcus, Pottery Barn, Macy's, Target, TJ Maxx, Walgreens



11% of people had phones visible at a given time

HANDS AVAILABLE

37%



No ability

20%

33%



Limited ability

53%

30%



Full ability

27%



30% of people had phones visible at a given time

What Are the 'Best Signs'? What Is Given Attention?

RECALL & RECOGNIZE (2013 US GEN. POP)

Secret shopper study
followed by 1:1, 60 minute
lab-based test

Blind research approach

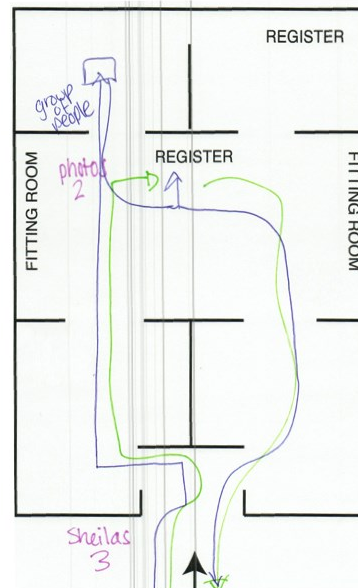
Open and prompted recall
grounded in storytelling

OPEN RECALL

Participants were given a
floor plan of each store
with key landmarks such
as registers

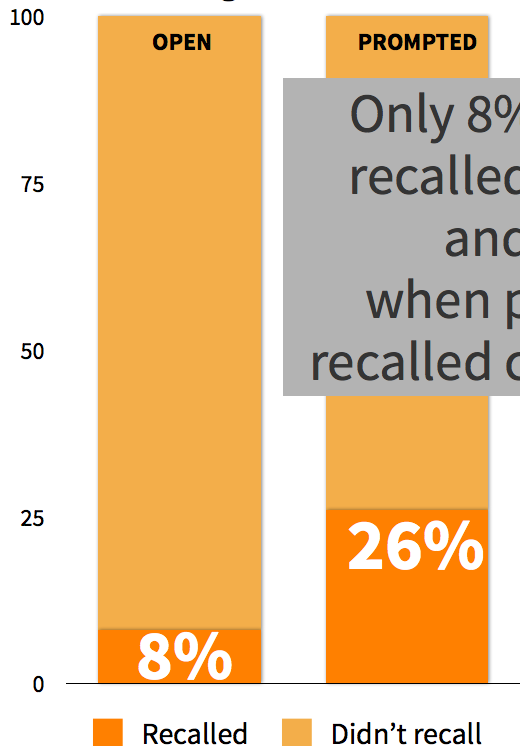
PROMPTED RECALL

Participants were given a
set of signs and asked
which ones they had seen
– 50% of signs were in the
store, 50% were not



People Were Wrong More Often than Right

Signs Recalled

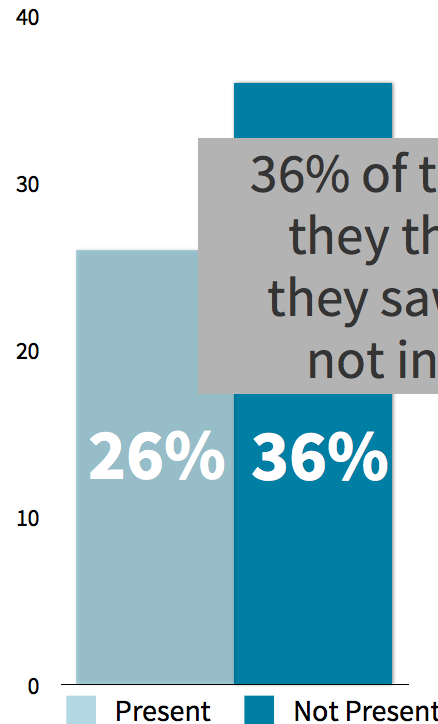


Only 8% of signs were recalled unprompted, and only 26% when prompted, 0% recalled consumer notice

0%



Signs Recalled (Prompted)



36% of the signs they thought they saw, were not in store



**DEFINE
CREATE**

Case Study: Create an Icon to Inform Mobile Users That Personal Data Is Being Collected

Create Concepts and Refine Solutions

Over 200 rounds of testing with 30 different methodologies to support concepting

Do They See It?



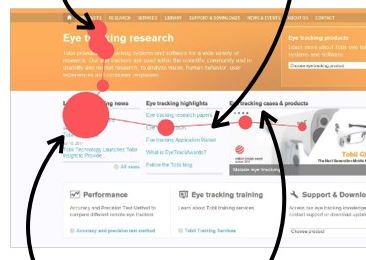
EYE TRACKING

determines if the eyes have 'focused' on measuring where and for how long an item is viewed



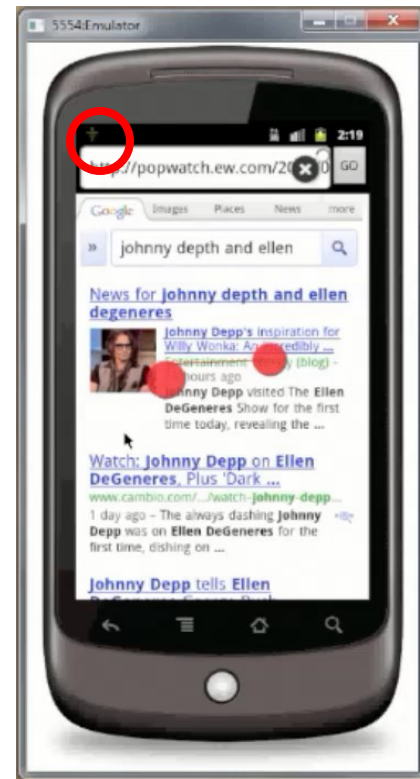
Eye tracker

Focus (fixation) Pathway between fixations (saccade)



Longer duration Shorter duration

Participants don't see fixation visualizations on the screen




Do People Understand the Meaning of the Icon? Is It Desirable?

VALIDATION TESTING (2013 US GEN.POP)

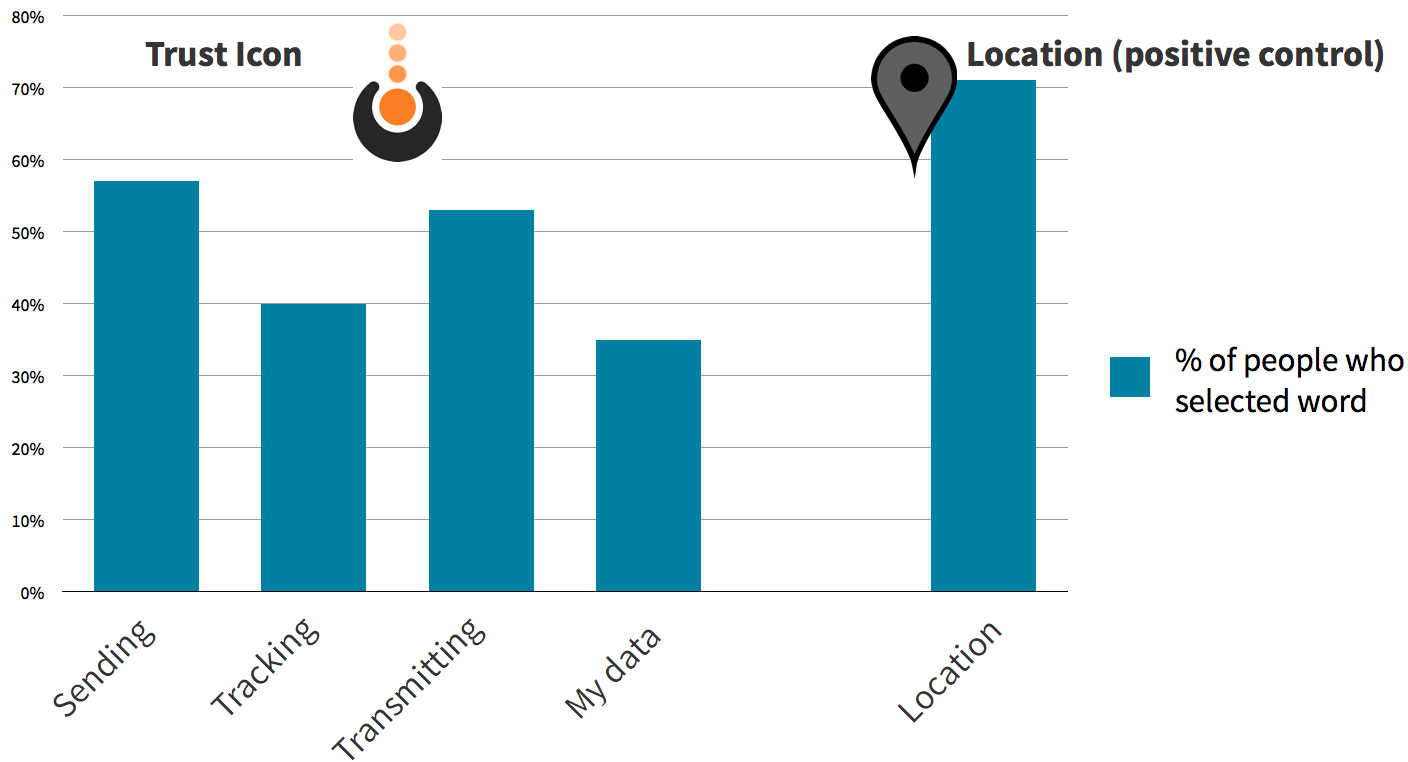
Quantitative

Unmoderated word
association exercise

Positive and negative
controls included

*“Imagine you saw this
symbol  on the status
bar of your phone while you
were browsing the web.
Which words would
DESCRIBE the symbol?
Select all that apply.”*

Access	Easy	My data
Alive	Empowering	Not Valuable
Appealing	Encouraging	Overwhelming
Approachable	Energetic	Personal
Attractive	Engaging	Positive
Authentic	Entertaining	Receiving
Beneficial	Exciting	Reliable
Busy	Friendly	Reputable
Choice	Frustrating	Rigid
Collecting	Giving	Safe
Community	Harmful	Sending
Compelling	Helpful	Signal
Complex	Honest	Sharing
Confidential	Human	Taking
Confusing	Impersonal	Tracking
Connected	Ineffective	Transmitting
Convincing	Informative	Trustworthy
Coverage	Innovative	Unattractive
Credible	Inspiring	Understandable
Cutting edge	Interesting	Undesirable
Disconnected	Intimidating	Unique
Disruptive	Inviting	Useful
Distracting	Irrelevant	
Dynamic	Location	



However data-driven design processes only work if the research is executed properly

Incorrect or unreliable research findings can be more damaging than not conducting research; people are less likely to doubt a ‘fact’ than their assumptions

The Order and Content of Survey Questions Can Bias Responses

Spring Tracking Survey 2012

Final Topline

04/10/2012

Data for March 15–April 3, 2012

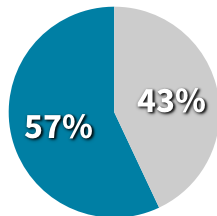
Princeton Survey Research Associates International for
the Pew Research Center's Internet & American Life ProjectSample: n=2,254 national adults, age 18 and older, including 903 cell phone interviews
Interviewing dates: 03.15.2012 – 04.03.2012

Margin of error is plus or minus 2 percentage points for results based on Total [n=2,254]

Margin of error is plus or minus 3 percentage points for results based on cell phone owners [n=1,954]

Margin of error is plus or minus 4 percentage points for results based on those who download apps to their cell
phone [n=714]

Taken together, 57% of all app users have either uninstalled an app over concerns about having to share their personal information, or declined to install an app in the first place for similar reasons



SurveyQuestions_MobilePrivacy.pdf (page 1 of 2)

Survey questions

Spring Tracking Survey 2012 Final Topline 04/10/2012
Data for March 15–April 3, 2012
Princeton Survey Research Associates International for
the Pew Research Center's Internet & American Life Project

Sample: n=2,254 national adults, age 18 and older, including 903 cell phone interviews
Interviewing dates: 03.15.2012 – 04.03.2012

Margin of error is plus or minus 2 percentage points for results based on Total [n=2,254]
Margin of error is plus or minus 3 percentage points for results based on cell phone owners [n=1,954]
Margin of error is plus or minus 4 percentage points for results based on those who download apps to their cell
phone [n=714]

Q35 Has your cell phone ever been lost or stolen, or has this never happened to you?

Based on cell phone owners [N=1,954]

CURRENT		
%	31	Yes
	68	No
	*	Don't know
	*	Refused

Q36 Has another person ever accessed the contents of your phone in a way that made you feel your privacy was invaded?

Based on cell phone owners [N=1,954]

CURRENT		
%	12	Yes
	88	No
	1	Don't know
	*	Refused

Thank you!

Ilana Westerman

ilana@createwithcontext.com

General Contact

Website

createwithcontext.com

General inquiries

info@cwcmail.com

Media

media@cwcmail.com

Employment

jobs@cwcmail.com

Phone

+1 408 834-7601 main

+1 408 834-7602 fax

Silicon Valley office

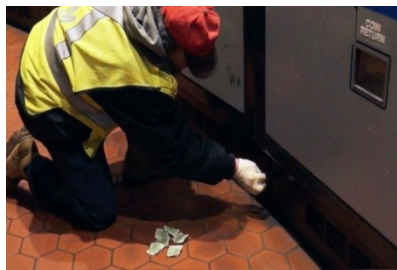
Create with Context

1490 Lincoln Street

Santa Clara, CA 95050 USA

Craig Andrews

Department of Marketing
Marquette University



Tradeoffs and Traps in Testing Disclosures

Craig Andrews
Marquette University
September 15, 2016

Privacy Disclosure Example:

Understanding and/or behavior?

Take a detailed look at how we protect your privacy.



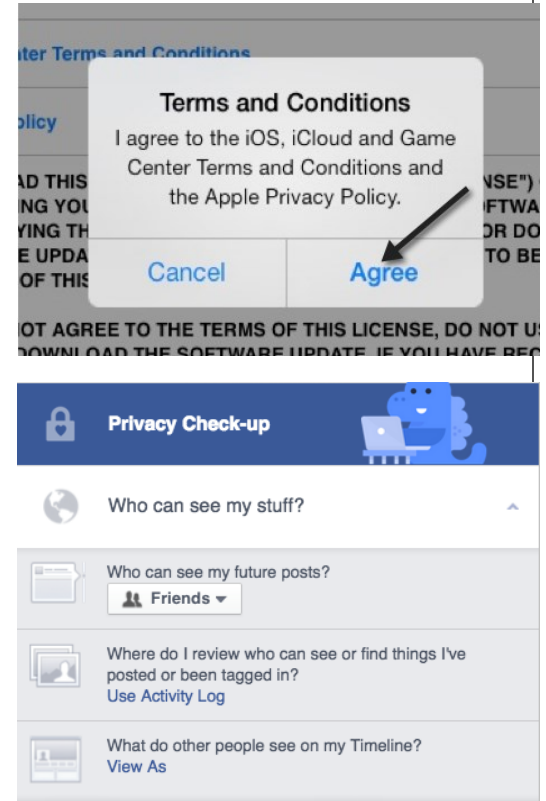
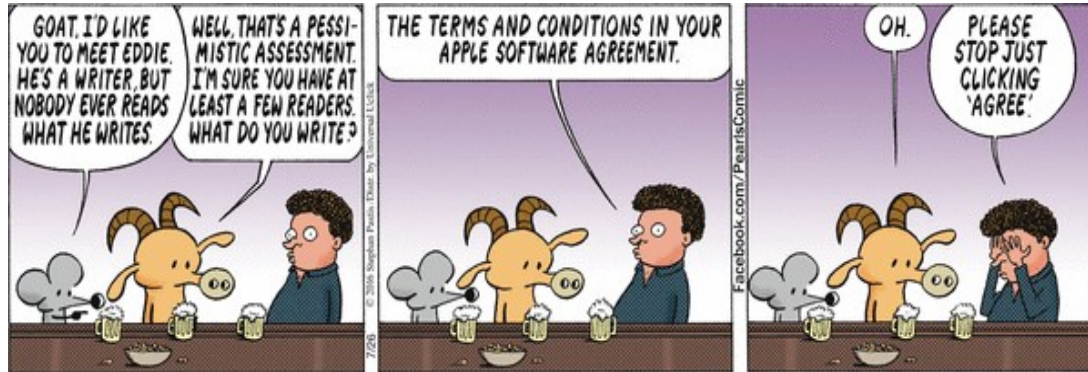
Privacy Built In
We design products with your privacy in mind from the start. [Learn more >](#)



Manage Your Privacy
We empower you to make your own choices about what you share and with whom. [Learn more >](#)



Government Information Requests
We believe you have a right to transparency. [Learn more >](#)



Before one begins testing...

- Clearly identify purpose/objectives and expected outcomes
- Is an evaluation plan in place *before* the testing is launched? If not, don't get involved.
- With teams/panels in evaluation – watch out! KISS principle and the difference between “*interesting*” and “*important*” (e.g., do you really need 30 different treatments or 100 coding categories?)
- Are the IVs and DVs clearly named and tied to key information processing objectives?
- Target market's priors, motivation, ability (e.g., sample knowledge, literacy), opportunity to process information/disclosures?
- Try to understand objectives and focus of different disciplines



Information Processing (Outcome) Variables	Possible Testing Methods
(1) Exposure	Impressions (page views), ratings
(2) Attention	Recognition, recall, eye tracking
(3) Affect	Emotions evoked, sentiment analysis, facial/brain imaging
(4) Comprehension	Message beliefs/ knowledge and accuracy tests
(5) Yielding/Persuasion	Attitude change
(6) Decision-Making	Choice scenarios
(7) Behavior	Click through to action/choice re: privacy settings (location, public/friends, 3rd parties)
(8) Post-Behavior	Longitudinal change

*Adapted from McGuire's (1980) Communication-Persuasion Model and Wogalter's (2006) C-HIP Model. See Shimp and Andrews (2013) *Advertising, Promotion, and other aspects of Integrated Marketing Communications*, 9th ed., for ad testing methods.

Tradeoffs with testing methods

Awareness

- Recall – cognitively based; memory issues with age progression.
- Recognition – more contextual, better with emotional/affect ads (Bruzzone tests; FCB Recognition); more brand focused.
- Eye tracking – good with controversial issues/topics (warnings); doesn't assess sentiment/persuasion/cognition/understanding. Is ad received, understood? accepted?

Comprehension

- Beliefs, accuracy, knowledge tests – can assess understanding of disclosures/stimuli objectively. Open to validity issues given selection of exact beliefs/information tested.

Decision-making and behavior

- The ultimate tests, yet many things can affect behavior beyond the disclosure/stimuli tested. Field studies (package disclosures) – pricing, promotion, place, prior attitudes....
- Experiments – Behavior (learning) without understanding? null effects? – poor stimuli, exposure issues, wrong sample ... Control groups are very important to infer causality.

Type of Study Design?

- Type of data? Primary versus secondary? Experimental (randomized control; causality; does $x \rightarrow y$?); Quasi-experimental; Focus groups; Survey; Eye-Tracking; Content analyses; Meta-analyses; Reviews, ...
- Internal versus external validity (Cook and Campbell 1979)
- Cross-sectional versus longitudinal (change over time)?
- Study designs (after-only, pre-post/no control, after-only/control, pre-post/control, Solomon four-group)
- Different types of control groups (cf. Andrews and Maronick 1995 *JPPM*)

Common Designs in Testing Ads: The Importance of Control Groups

1) One-shot case study:

x O

any problems?

2) Pre-post with no control:

O₁ x O₂

any problems?

3) After-only with a control group:

EG (R): x O₁

CG (R): O₂

any problems?

4) After-only with a control group:

EG (R): O₁ x O₂

CG (R): O₃ O₄

any problems?

Key: x = ad treatment, O = observation; Burns and Bush (2010), Churchill (1979), Cook and Campbell (1979)

Sampling issues

- Consumers in your target market?
 - Knowledge/ literacy issues (e.g., average U.S. adult readability scores between 7th-9th grade; Neuhauser 2011)?
Senior citizens? English as second language?
- Collecting data online:
 - e.g., “Who are these people?” – address-based versus opt-in sampling; need for cognitive interviews; mTurk and rewards; panel data: “click-throughs” and checks; mobile device viewing
- Probability (simple random, cluster, stratified); Non-probability (convenience, quota, expert)
- Panel company “partners” and different recruitment/ incidence levels
- Weighting/propensity scores; size per cell/ power tables (Cohen 1969)



Disclosure Stimuli!

- Color? large enough? type size/contrast/other distractors?
- Same testing context as viewed normally
- FTC Clear and Conspicuous Std. (1970; 2013)
- If text – use readability indices
- Pretesting with control groups

Privacy Policy

Last Modified: March 29, 2016

Snapshot is a fast and fun way to share experiences with your friends and the world around you. You can send a photo or video Snap to friends, chronicle your day through Story, touch base using Chat, immerse yourself in global events through Live, and enjoy handcrafted stories from the world's top publishers on Discover.....

.....Of course, you'll also provide us whatever information you send through the services, such as Snaps and Chats to your friends. **Keep in mind that the users you send Snaps, Chats, and any other content to can always save that content or copy it outside the app.** So, the same common sense that applies to the Internet at large applies to Snapchat as well. Don't send messages or share content that you wouldn't want someone to save or share.

(Resch-Kincaid Grade level = 11.3 for entire policy)



WARNING:
Cigarettes are addictive

CAMEL FILTERS

20 CIGARETTES



Blue

NEW

Three Cheese Chicken
Grilled White Meat Chicken Strips in a Three Cheese Sauce with Broccoli and Red Peppers

PER 1 SERVING

278 CALORIES 14% DV	5g SAT FAT 25% DV	720mg SODIUM 30% DV	4g SUGARS 4% DV
----------------------------------	--------------------------------	----------------------------------	------------------------------

NET WT 9.5 OZ (266 G)

We packed so much

DELECTABLE CHOCOLATE TASTE INSIDE,
there was only room for

HALF THE CALORIES. SORRY, CALORIES.

No tears for the snack bar with half the calories of the leading candy bar.

KRAVE SOMETHING BETTER™



Amount Per Serving	% Daily Value*
Calories 400	20%
Total Fat 14g	28%
Saturated Fat 7g	35%
Cholesterol 10mg	2%
Sodium 210mg	42%
Potassium 100mg	20%
Total Carbohydrate 56g	28%
Dietary Fiber 4g	14%
Sugars 4g	8%
Protein 14g	28%

*Percent Daily Values are based on a diet of other people's secrets.

***Contains 400 calories per serving. An amount determined by the Food & Drug Administration to be high.**

Questions and measures

- Screeners (target market: demographics, product usage? consent; quotas)
- Specificity: TACT (target, action, context, time; Ajzen and Fishbein 1980) and product experience/ sufficient knowledge/literacy? credence claims- EOI – (e.g., prescription drugs)
- Funnel (open-ended → successively narrow/closed-ended); question order/priming?
- When/ how long to show stimuli? Prominent? Mobile access?
- Manipulation/confound checks? (Perdue & Summers 1986 *JMR*)
- Avoid negatives, biasing, hypotheticals, lack of options
- Multiple measures? hierarchy of effects? (Vakratsas and Ambler 1999 *JM*)
- Creativity (e.g., comprehension tests: if ate four servings – greater than, equal, or less than rec. daily amount? WTP, auctions, choices in mock stores)
- Behavior versus communication/comprehension (understanding)

Analysis Issues

- Match with objectives/data/measures
- Read outside of discipline (e.g., mediation)
- Comparisons with control group(s)
- Significance levels, comparison adjustments

Common Problems Experienced in the Testing Process

- Poor planning: no objectives or evaluation
- Treating exposure as awareness
- No control groups, bad stimuli, wrong sample
- “Sample of one, ” “We already know that”
- Incidence/qualification rates, panel “partners,” re-bidding
- Too many “cooks in kitchen,” 30 different test conditions, 100 coding categories,....
- Conclusion based on six decades of disclosure research: “...when accounting for audience characteristics ... and proper delivery modes ... disclosures can ... be effective communication tools and remedies for consumer and public health policy” (Andrews, 2011, *Communicating Risks & Benefits*, FDA, p. 156).



Some helpful research on testing/disclosures:

- **Study Design Issues:**

Pechmann, Cornelia and J. Craig Andrews (2010), “Methodological Issues and Challenges in Conducting Social Impact Evaluations” in *Scaling Social Impact* (Chapter 12), Paul N. Bloom and Edward Skloot, eds., New York: Palgrave Macmillan, pp. 217-234.

- **Copy Testing Issues:**

Pechmann, Cornelia and J. Craig Andrews (2011), “Copy Test Methods to Pretest Advertisements,” in *Wiley International Encyclopedia of Marketing*, Jagdish Sheth and Naresh K. Maholtra, Editors-in-Chief, v. 4 (*Advertising and Integrated Marketing Communication*), West Sussex, UK: John Wiley & Sons, Ltd., pp. 54-62.

Andrews, J. Craig and Thomas J. Maronick (1995), “Advertising Research Issues from FTC Versus Stouffer Foods Corp.,” *Journal of Public Policy & Marketing*, 14 (Fall), pp. 301-309.

- **Clear and Conspicuous Standard:**

Mariea Hoy and J. Craig Andrews (2004), “Adherence of Prime-Time Television Advertising Disclosures to the “Clear and Conspicuous Standard”: 1990 vs. 2002,” *Journal of Public Policy & Marketing*, 23 (Fall), pp. 170-182.

- **Warnings and Disclosures:**

Andrews, J. Craig (2011), “Warnings and Disclosures” (Chapter 15) in *Communicating Risk and Benefits: An Evidence-Based Users Guide*, Baruch Fischhoff, Noel T. Brewer, and Julie S. Downs, eds., Silver Spring, MD: U.S. Food & Drug Administration, pp. 149-161.

Morning break

The next session begins at 11 am

