

Noldus

The What, When, Why, and How of Unobtrusive Observation



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Overview

- » Introduction
 - *Goals of the webinar*
 - *Ethnography: from anthropology to market research*
 - *How to find the “more” to the story*
 - *Noldus’ Unobtrusive Observations*
- » Observing people
 - *In the home*
 - *In the field*
- » How to make meaning from data
 - *Coding: different meanings*
 - *Analysis: merging qual and quant*
- » Conclusions



Introduction

Goals of this webinar

The goal of this webinar is to build upon traditional ethnographies by adding another layer to the understanding of consumer behavior, focusing on:

- *An overview of observational research in consumer behavior*
- *Research logistics: cameras, coding, and consequences*
- *Examples and stories from past research*

Quantity AND quality of data!

Introduction

Ethnography

- » From anthropology to market research
- » Ethnographic market research aims to understand the consumer in his/her natural environment.
- » Typical ethnographic research requires a skilled interviewer to conduct the research onsite or in the respondent's home.
- » Advantages: small numbers, rich insights
- » Disadvantages: how well do people really know themselves?

Introduction

What if there's more to the story?

» Surveys – Focus groups – Interviews: what is missed?

Pros

- Gather a lot of data
- Reach many respondents
- Can be inexpensive

- Excellent for getting at broad issues
- Allows for elaboration
- Consumers can play off of one another
- Target a very specific demographic

- Very in-depth
- Personal interest stories

Cons

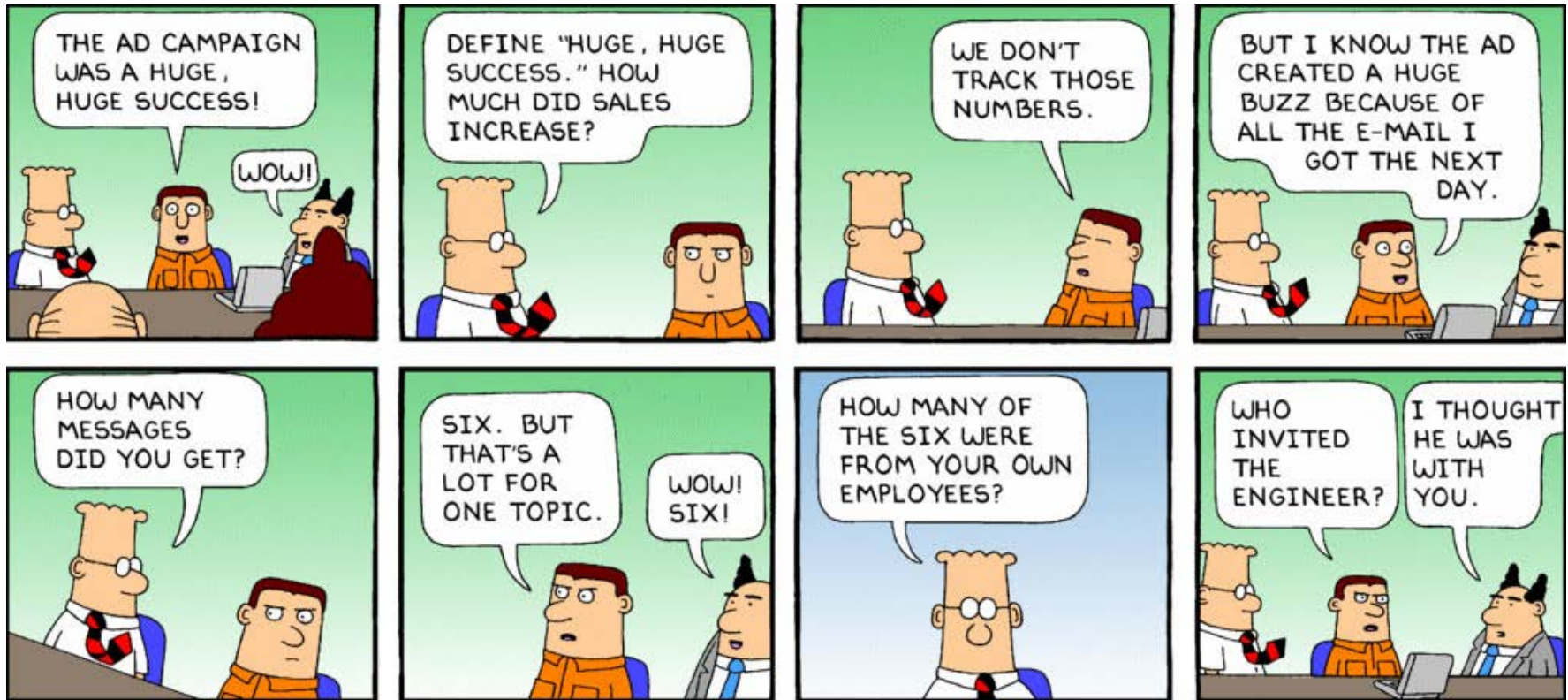
- What do you do with the data?
- Need a lot of respondents
- Low response rates
- Very susceptible to bias

- Represent a small sample size
- Worry over what others in the group may think
- Need to remain aloof from discussion

- Can be costly
- Inherent bias from researcher

Introduction

Quant vs Qual in one Dilbert comic



Introduction

Noldus' Unobtrusive Observation methods

- » How do we measure consumer **behavior**?
 - Collect data in the consumer's home/natural environment
 - Record for longer periods (days, weeks, etc)
 - Code data based on *a priori* predictions
 - Analyze using Noldus' advanced analysis toolkit
- » Reduce subjectivity and make research more objective

The Observer® XT

Measuring behavior: *Direct observation*

Pros

- Very in-depth
- Note exactly what the consumer does
- Note many activities
- Little bias by researcher
- Easily analyze large data sets

Cons

- Can be costly
- Requires time
- A lot of data is gathered
- Requires *a priori* knowledge of anticipated outcomes

Observing respondents

In-home recordings

- » Privacy
- » Length of observations
- » Audio/video concerns

Naturalistic Behavior



A respondent's awareness affects behavior and distorts research results. Our technique allows respondents to act naturally, such as in the home or in an office, in order to gain insights in very real contexts.

Observing respondents

In-home recordings: Issues of privacy

- » Capturing your respondent(s) and no one else
- » Recording in sensitive areas
- » Respondent confidentiality



Observing respondents

In-home recordings: Length matters

- » “Acclimation” to recording
- » Weekdays vs weekends
- » Days, weeks, months?

August 2016						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Observing respondents

In-home recordings: Audio-video

» Video

- *Types (pros/cons)*
- *Control over video*
- *Synchronization*



» Audio



In-home Study: Example

- » Observe refrigerator usage **in the home**, over a 2 week period
 - Option 1: Survey
 - Option 2: Observe actual behavior

Who is in contact with refrigerator (father/mother/child)

What compartment (freezer/refrigerator)

What part (door/shelf 1/drawer...)

What is the **posture** of the person (squat/deep bend)

Type of interaction (open/close/load products/clean...)

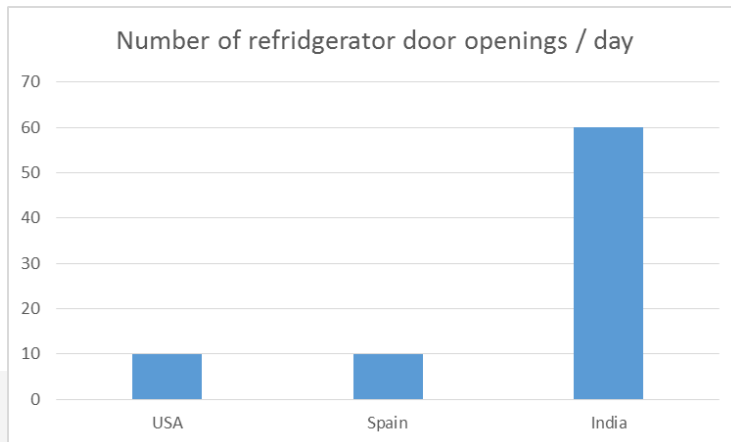
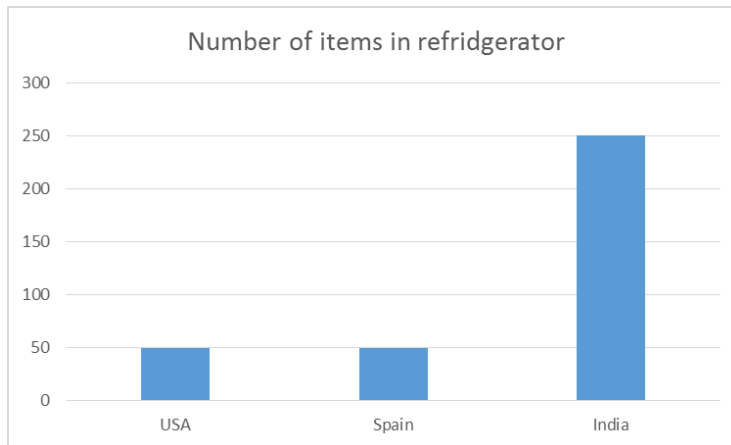
What product is loaded/taken from the refrigerator

What package is the product in (bottle/plastic box...)



Video recordings: In home study

Refrigerator Ethnography



- Dinnertime means different things to different cultures.
- Americans need space for condiments, drinks, and frozen.
- Indians need space for fresh ingredients and daily meals.
- Led to several insights into creating a fridge that fits the needs of the consumer.
- Create a product that allows for more organization on shelves and has more control of humidity

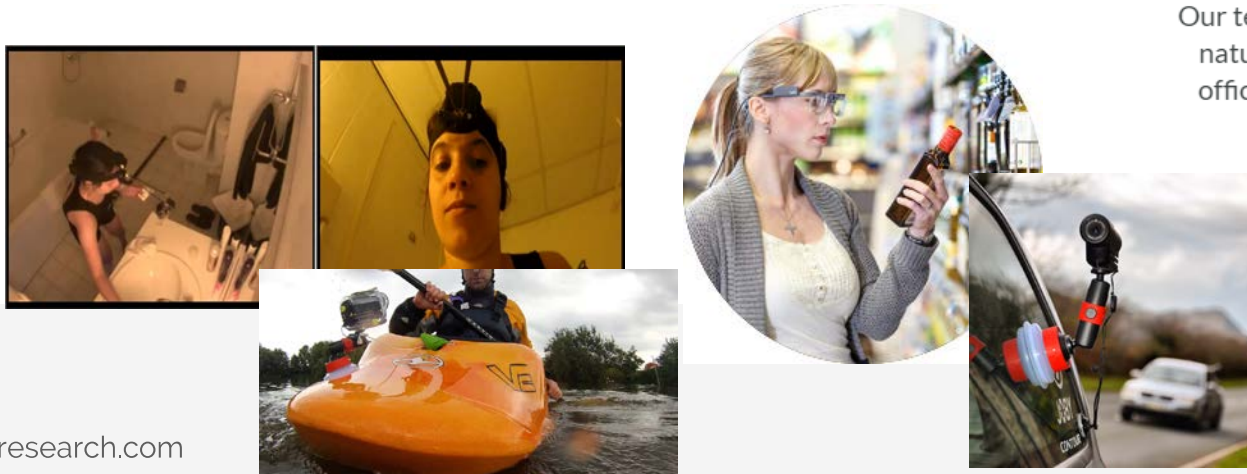
Observing respondents

Interacting with products in the field

» Recording methods



» Recording locations



Naturalistic Behavior



A respondent's awareness affects behavior and distorts research results. Our technique allows respondents to act naturally, such as in the home or in an office, in order to gain insights in very real contexts.

Video recordings: In home study

Shaving Razor ethnography

Investigate functional and emotional journey during razor usage in men and women

Noldus installed cameras to measure male and female respondents' reaction to all dimensions of shaving experience

Data lead to key insights into experience of shaving, and how that maps onto functional use of the razor



Video recordings: In home study

Hand washing ethnography



Learn about hand-washing behavior and liquid soap usage in India.

Noldus installed cameras inside men's WCs for one week to measure WC usage, the hand-washing procedure, and liquid soap usage.

Data lead to several key insights into washroom hand-washing behavior that informed product design and target messaging.

washing hands	(Mutually exclusive, Exhaustive)
	Not washing
	Make hands wet
	Put soap on hands
	Wash hands dry
	Wash hands wet
	Wash soap away
	Dry hands
	Other behavior
	Smell or extensively rub hands
	Leave without washing hands

Restaurant of the Future

Interacting with products in a store



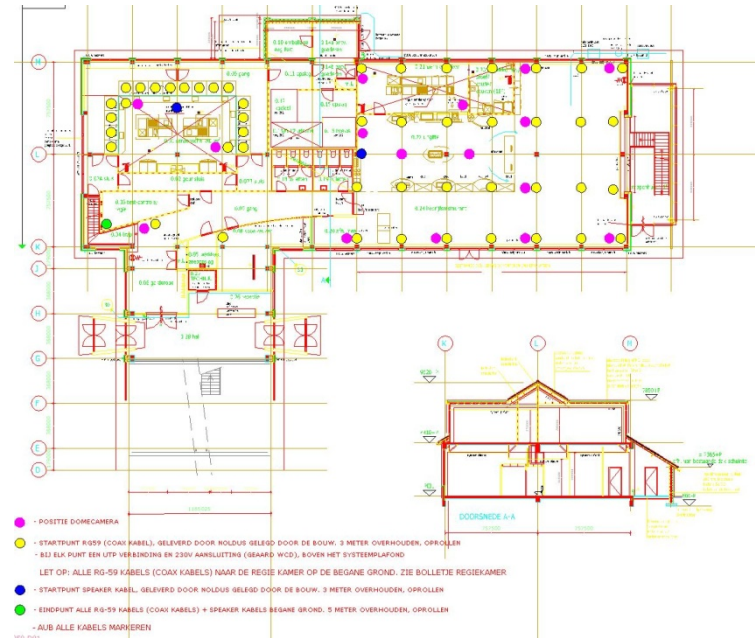
“Living laboratory” for the study of food choice and consumer experience (Wageningen, The Netherlands)

Restaurant of the Future

A multifunctional research facility



- Restaurant for 200 persons
- Grand café
- Research kitchen
- Sensory laboratory
- Mood rooms
- Mind lab
- Body lab



- 45 video cameras
- 2 control rooms
- 7 video analysis workstations
- 3 km of cabling

Restaurant of the Future

Unobtrusive observations in the field



- Observe food selection and consumption
- Study effects of environmental and social variables



Restaurant of the Future

Unobtrusive observations in the field

- » Observe consumers in a naturalistic restaurant; experiment with **food presentation** and how it impacts food **choice**

- *Option 1: Survey*
- *Option 2: Observe actual behaviors*

- » **Question:**

- Does presentation at the salad bar affect selection and buying behavior?

- » **Method:**

- Present buffet with different chicken sandwiches labeled:

NEW

Lower Price

Healthy

- » **Results:**

- Men preferred those labeled “New”
- Women preferred those labeled “Healthy”



Restaurant of the Future

Changing environments



- Light
- Odor
- Temperature



Restaurant of the Future

Changing environments

» Nudging

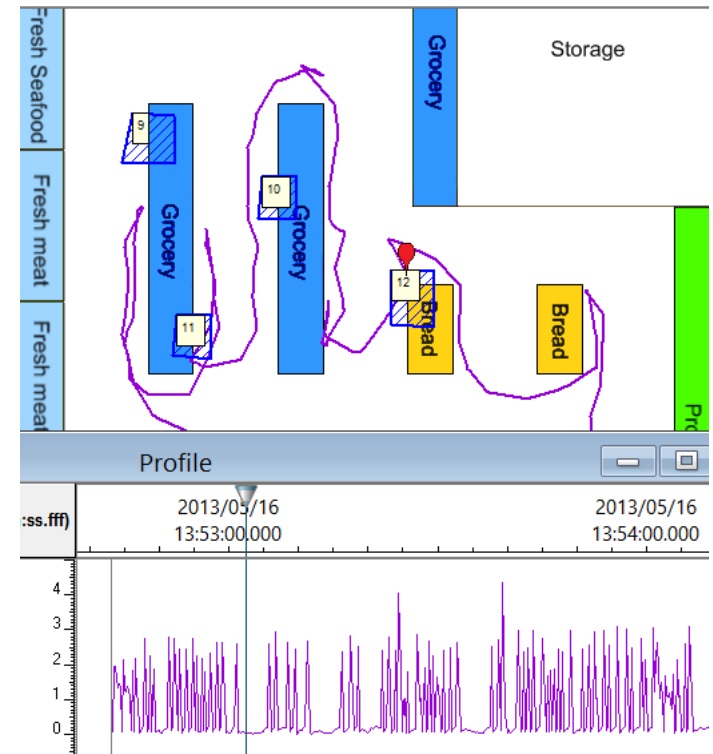
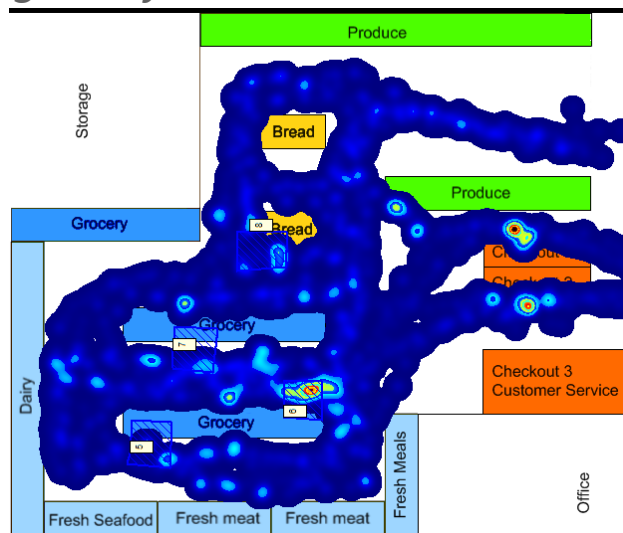


*“Another Restaurant of the Future nudging research project analyzed whether a healthier lunch choice could be stimulated by offering free samples of either a healthier fruit snack or an unhealthier fried snack beforehand. **The free snack did influence the subsequent lunch selection and led to a larger food intake but did not nudge consumers towards a healthier or less healthy choice.**” Wijk, R.A. de et. al /2012. Flavour, 1:24*

Unobtrusive observations in the field

» Shop-alongs and in-store observations

- Eye tracking
- Facial expression analysis
- Tracking analytics



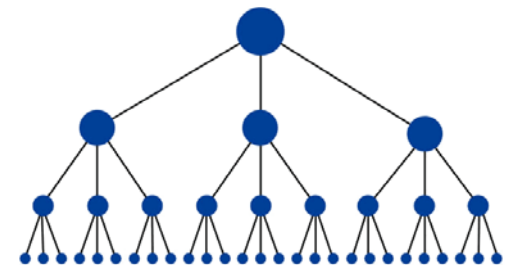
Different ways to derive meaning

Coding: what does this mean?

- » *It does NOT mean writing code, or doing any programming!*
- » *“Coding” means to segment your observation using a systematic “schema”.*
- » *Coding schemes are ways of categorizing behavior so that you can annotate what is observed.*
- » *Reliability is the measure to check consistency of coders.*

» *Two ways to do this:*

- 1. Define scheme prior to coding video*
- 2. Define scheme as/after you watch video*



Different ways to derive meaning

Coding: *a priori* coding

- » *Research questions are defined prior to coding*
- » *Requires category knowledge*
- » *Coding is done by trained observers, who are “blind” to any potential biases*
- » *Data are analyzed according to coding scheme and/or research questions*
- » *Disadvantage: turn-around time and costs*



Different ways to derive meaning

Coding: *post-hoc* coding

- » *Requires NO category knowledge*
- » *Themes are identified during research or from watching the videos*
- » *Codes are created based on emergent concepts*
- » *In many cases, codes are used to “analyze” written transcripts*
- » *Disadvantage: time and accuracy of transcription*



Different ways to derive meaning

Coding: Methods

» Observations:

- Observer XT
- Mangold
- Studio Code

» Text

- ATLAS.ti
- NVivo
- QDA Miner

The screenshot displays the Observer XT 9.0 software interface. The main window shows a video stream of a young girl in a pink shirt eating from a yellow plate. The interface includes a Project Explorer on the left, a central video player with playback controls, and a Codes panel on the right. The Codes panel is titled 'Play with food' and lists various behaviors under the category 'Hand Movement (R)'. A table at the bottom of the interface shows event logs with columns for Event Time, Behavior, and Comment.

Start	Event Time	Behavior	Comment
1	00:00:00,00	Start	
2	00:00:00,00	▶ Look at food	
3	00:00:00,00	▶ Eat	
4	00:00:00,00	▶ Play with food	
6	00:00:00,93	▶ Other	
8	00:00:03,54	▶ Inactive	
10	00:00:05,21	▶ Touch face	

Different ways to derive meaning

Analysis: Blending qual & quant

- » *Qualitative research*: exploratory technique used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights or helps to develop ideas or hypotheses for potential...



Different ways to derive meaning

Analysis: Blending qual & quant

- » *Quantitative research*: emphasizes objective measurements and the numerical analysis of data collected through polls, questionnaires, and surveys



Different ways to derive meaning

Analysis: Blending qual & quant

- » Our goal is to blend quant and qual
- » Traditional ethnography can be performed the day of camera setup
- » Comparison of the ethnography and coded observation can provide insight into awareness, gaps, and/or opportunities

Expert Analyses

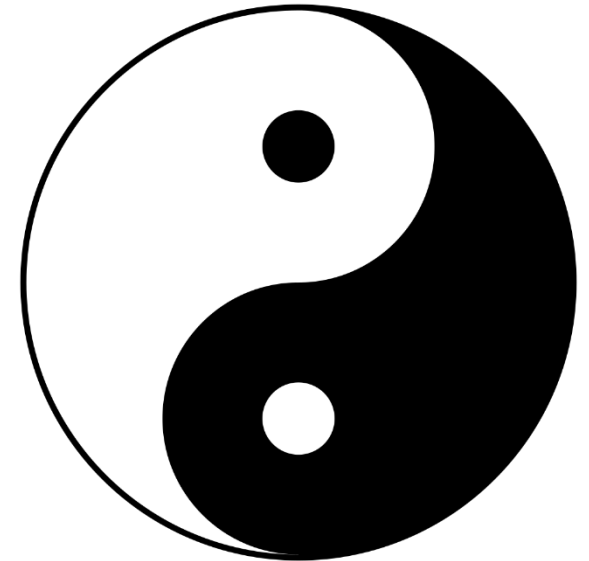


We understand how to turn data into meaning. Our consultants have advanced degrees in the behavioral sciences, which provides a unique ability to uncover behavioral patterns and turn them into actionable results.

Conclusions

Multiple methods create deeper insights

- » Quant **AND** qual, not quant **VS** qual
- » There are many options for cameras/recording
- » Can be done in-home or in the field
- » Balance act of time and resources



Noldus Information Technology:

Human Observation. Clear results.



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