

Séissmograph 2011

Cognitive Interviewing in Market Research

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1

Introducing the Cognitive Interview

History, Context and Method of the CI

The Cognitive Interview - In Brief

- Developed by **forensic psychologists** for eye witness interrogation
- Applied in the **field of justice**, by **security services** and in **forensic investigations**



“a technique designed to improve eyewitness testimony by enhancing the recall phase” (Py et al, 1997)

- **Definition: an implicit, non-directive individual interviewing method**
- **What is special about this interviewing method?: hardly any questions are asked.** Instead, the interviewer just gives the right impulses for the respondent to report on their own.
- With 3 main advantages:
 - Improves access to memory (as proven by Tulving, 1973)
 - Minimizes biasing influences on the memory recall
 - Overcoming script confabulation

➔ therefore highly relevant for market research

History of the Cognitive Interview

- The **Cognitive Interview (CI)** was originally developed in **1984** by the researchers Edward Geiselman and colleagues in the US with the aim to **improve police witness interrogations** by **increasing the reliability and reducing the mistakes** of witness' statements by enabling a better access to memory and minimizing biases:
 - The testimonies were often **incomplete** due to **memory gaps** or even **incorrect**, when those "white spaces" were filled with **false memories** => a natural coping strategy by the brain to bridge memory gaps).
 - Closed questions asked by the police staff often **steered the respondents** in a certain, sometimes wrong, direction and the witness accounts were not truthful.
 - Other common interview biases like **selective perception, cognitive dissonance, social desirability** and **interviewer influence** impeded the interview even further.
 - The hearings were therefore often not very efficient and the witness accounts could not or only partly be used in court.
- Although these sources of errors cannot be completely eliminated through the method of the CI either, a **significant gain of correct information** could be achieved the field of criminal justice (*Kohnken et al., 1999 and Memon et al., 2011*).

Development of the C I

- The techniques of the Cognitive Interview have since been **developed further and the methodology has been researched and applied in various contexts**. Nevertheless, it is **still a young discipline** not even known for three decades yet.
- The CI is currently being **implemented as best practice in police services** across Europe and the US. In the UK it has become an obligatory part of the police officer training and France recently started training its police force in CI questioning techniques.
- **Slowly**, the CI is **moving** from its original roots in forensics, **into other fields**:
 - **Health**: e.g. *“Errors in memory for dietary intake and their reduction”* (Armstrong et. al, 2000)
 - **Social Sciences**: e.g. *“The Cognitive Interview—A Useful Tool for Social Workers?”* (Westcott, 1992)
- **However, CI has not yet been applied to Market Research.**
Séissmo is now starting to utilize the CI in market research for the first time ever. Trained by Dr. Jens Hoffman from the University of Darmstadt, Germany and Cindy Colomb, PhD at the University of Clermont-Ferrand, France, the researchers of Séissmo have **successfully applied the method of the Cognitive Interview in shopper studies** across Germany and the US and have also conducted a **Pilot Study** together with **Brandman Research Israel in 2011**, the results of which shall be revealed later in this report.

Objectives of the Cognitive Interview

- Through a non-invasive, individual and highly detailed approach, the method aims at:

- **Maximizing** the **amount of specific data** created by the interviewee himself
- **Gaining insights** into the **interviewee's own perspective** (thoughts, emotions...)
- **Understanding** the **true perceptions** (versus sensations) of the interviewee
- **Generating ideas** that are relevant to the respondent, because they are raised by him or herself spontaneously

whilst:

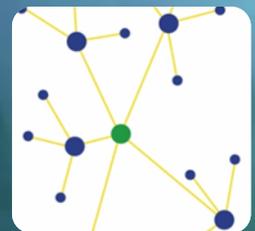
- Reducing the **social influence** from the interviewer
➔ **less interviewer-bias**
- Minimizing the **influence from previous knowledge**
➔ **less script confabulation**
- Limiting the influence of social desirability
➔ **less conformity**

How can the CI achieve this?

- The basic underlying experience is, that a person will be able to recall a lot less than what is contained in the memory => **perception rate higher than recall rate**
→ The **CI increases the recall rate** by about 45% (Kohnken et al., 1999 and Memon et al., 2011)
- With its specific techniques, the CI facilitates rich and detailed recall from the **episodic memory** => the memory of autobiographical events with **places, procedure, associated emotions or thoughts**

The interviewee is encouraged to **mentally return to the place and event** in question (e.g. supermarket shopping, a bus ride, taking a shower,...) and **report all details** (contextual, procedural,...) they can remember, no matter how important or not they appear to be. The event is **recalled repeatedly** using different techniques.

- As the brain works like a **network**, **each piece of information recalled can lead to another** (sometimes “forgotten”) **memory connected to it**
→ “Unimportant” details like the weather or the hair colour of a sales assistant might lead to important statements that help identify the offender (forensics) or a certain product in the shelf (market research).
- It has been proven that with the CI, it is **not necessary to physically return to the site of the event** in order to recall this information accurately and vividly.



Techniques of the Cognitive Interview Overview

The Cognitive Interview is composed of separate modular techniques:

Report All Instruction

free recall of all details with the instruction to report really everything no matter how important it appears, even if not sure about it

Mental Context Reinstatement

encouraged to close the eyes or focus a point on the wall, concentrate and think back to the very specific situation, recalling the internal (emotions, cognitions,...) as well as external context

Change of Order

The event is recalled in reverse order from back to front => limits script confabulations, as scripts can only be recalled in the right order

Change of Perspective

reporting the event from the perspective of another person, e.g. a fellow shopper, the cashier...

Guided Peripheral Focus

segmenting the entire event into separate sequences -> write down/draw the chapters as visual aid and "zoom in" to each one in great detail
➔ **this technique has been proven most useful in Séissmo's experience**

Initiating Questioning

after each "mini-recall" at the end of the peripheral focus or to conclude the interview, direct questions can be asked to focus on certain mentions ➔ **valuable for market research with a specific (product/ brand...) focus**

The original
4 techniques
by Fisher

The extended
version
developed by
forensic
researchers,
we found to
be very useful
in Market
Research

The Interviewer Instruction is Key!

Overview

- The **Introduction and Interviewer Instruction** at the beginning of the interview is crucial to the successful outcome of the CI, more than in any other interviewer.

- The interviewer should:

- ✓ **Establish rapport and show concern**
- ✓ **Explain the purpose of the interview and expectations towards the interviewee**
- ✓ **Indicate the levels of details expected**
- ✓ **Transfer control**

- The correct instruction determines the level detail retrieved. After giving the instruction, the interviewer **hardly asks any questions, nor intervenes in the recall**, and transfers all control to the interviewee => **minimizing interviewer influence**

Techniques of the CI in Detail (1)

- At the beginning of the interview, the interviewee is encouraged to **think and feel back to the to be remembered (TBR) event**. The respondent is asked to recall the context of **this one specific situation** and report all experiences, perceptions, emotions and thoughts. The **interviewee** should not only give their account of the external environment but also their internal processes.
- The key to the CI is the introductory interviewer instruction. The interviewer should make it clear that the **respondent has the control over the process and is free to report absolutely everything**.
- It is also important to explain the **purpose and relevance of the interview** e.g. to find the offender (criminal justice) or to improve the supermarket layout according to the shoppers' needs (market research) in order to **motivate the respondent to cooperate by providing him with a personal gain** in this matter.
- Just like in any other individual interview, the atmosphere should be pleasant and the respondent should feel welcome and relaxed. However, specifically in the Cognitive Interview, a relatively **neutral, unobtrusive, quiet room** should be used to facilitate the deep concentration required for this method. A plain, white room is thought to be best, and a one-way mirror may be deterrent for the interviewee, who must be completely free and concentrated.

Techniques of the CI in Detail (2)

- The **interviewer is very much retaining themselves** and not giving any answers, only initiating impulses for the interviewee to continue with their report. They do not disturb or interrupt the interviewee in their report flow. Therefore, the respondent is not restricted by the interviewer and biasing effects are kept to a minimum.
- Repeated mentioning of the TBR event with its date, time, place etc. by the interviewer makes the recall **specific and emotionally vivid**, which aids the detailed and honest recall (e.g. of this shopping trip) beyond the semantic memory (of how shopping usually works).

The Cognitive Interview uses four techniques to scaffold memory processes and thus to obtain an account of the TBR event that is as precise as possible. The procedure is as follows:

a) Introduction

The purpose and relevance of the CI is roughly explained to the interviewee (eg. “today we are talking about your shopping experience”...), but it is avoided to present a focus or an intention to refrain the interviewee to censor themselves.

The special characteristics of the CI is explained to the interviewee. In contrast to a standardised or half-standardised interview, the Cognitive Interview is less based on a question-answer scheme; the interviewer’s task is rather to give the right impulses to make the interviewee tell their experience.

b) Free Recall

This technique focuses on the free recall of a specific situation: The interviewee is encouraged to report in as much detail as possible. There is no previous instruction concerning the importance of certain aspects. All aspects, even the smallest ones, are regarded as important as they help reducing the distortion of the report and help recalling further memories.

c) Change of the Order

One option to maximize the recall rate is to report the event in a reverse order. Further details can be gained from the different course of events because the new perspective requires a cognitive effort and forces the narrator to deviate from the script. The narrator does not tell the situation according to social expectations of the situation and thus obtains many individual, true memories which are not overshadowed with biases. This increases the probability that the interviewee recapitulates how it was and not how it should have been or how it is “usually”.

d) Change of Perspective

Another option to increase the recall rate is a “forced” change of perspective. If the interviewees tell their experience from a (fictitious) third person’s perspective, they are less prone to fall back upon the script and rather tell the facts instead.

e) Sequential Report

After giving the account in the reverse order or from a different perspective, the interviewee is asked to divide the event into appropriate sequences according to his or her intuition and to write these sequences down. The interviewee is asked to go through the phases one by one and give an exact account of each of the sequences. The process of telling the event bit by bit increases the recall rate once more.

In contrast to the conversation so far, the interviewees are encouraged to close their eyes or to focus on a point on a plain wall to increase their concentration.

f) Questions and Conclusion

The conclusion at the end of the interview is guided by the interviewer. This part is about giving the interviewees the opportunity to remember how they felt in the situation while recapitulating the event. Was it a positive or negative experience? Additionally, the interviewer may ask questions that have arisen during the interview and that have not been asked because they would have interrupted the interviewee's account.

2

The Cognitive Interview in Market Research

Relevance, Research Questions and Application

from forensics



to market research



The Cognitive Interview as an Innovation in Market Research



The CI offers tools which can help to understand an individual experienced event in great detail and undistortedly. This makes the CI especially interesting for any **procedural or experiential research topics** such as:

1) Shopper Research

answering questions like:

- “Does the product attract attention in the shelf?”
- “What does the customer perceive in store?”
- “What does the customer remember particularly well? / What is overlooked?”
- “How does the environment influence the buying habit of the customer?”

2) Usage and Attitude Studies

answering questions like:

- “How do the consumers apply their make-up and how is the handling perceived?”
- “Which emotions and thoughts do consumers have as they get into the car?”
- “Which different steps do consumers go through when they shower in the morning?”
- “How do the consumers describe their yoghurt/ chocolate/ coffee moment?”

... and potentially also advertising/ advertisement concept tests (to be tested)

Advantages of the CI in Market Research



The CI reaches deeper layers of a person's memory, perception and cognition:

The human memory consists of different layers. At the surface are certain memories which are easy to recall. Beneath this layer are memories that are less established and have to be made accessible before they can be retrieved. Further hidden details are even more difficult to retrieve.

As **consumers, we are mostly not aware of our consumer behaviour**, even if we can purportedly rationalise it afterwards. **What has driven us in the moment of the buying decision** escapes our memory and our awareness. This is particularly true with low involvement products.

Other processes like cooking, body care and hygiene or getting into the car are events with which we do not trouble our memory because they are very frequent and comparatively simple processes.

For routine processes, the **brain prefers stored patterns called scripts** over working with specific memories.

The **CI does not accept "usually"**; it accepts only specific situations that are not smoothed out by experience.

Often dissatisfaction (or a vague feeling of unease because we are not aware of the causes) is due to **details which are also the starting point for innovation.**

→ Methods that retrieve such memories and help to report them precisely are particularly interesting for market research. The CI can achieve this.

3

Pilot Study and Practical Examples

Findings, Learnings and Critical Reflection

3

Pilot Study

Shopping Experience in a Grocery Store

- Conducted by Séissmo and Brandman Research in **Germany** and **Israel**
- 8 Cognitive Interviews per country => **16 Interviews** in total
- Men and women; Germany: 25-45 y.o. / Israel: 30-45 y.o.
- Regular shoppers in the top 2 (Israel: Shufersal Deal, Mega Bull) or 3 (Germany: Real, Edeka, Rewe) supermarket chains in each country
- Telephonic pre-interview a few days before to establish “normal” shopping behavior in this store and gather general perception of the store
- Ca. 1-1.5 hours cognitive interviews each

3 phases:

- 1) free recall
- 2) reverse recall
- 3) sequential recall

- Analysis of individual internal factors and external contextual information, the amount of detail, and congruence to pre-interview

3

The Principle of Slicing

➤ Focus on a **short slice of time** in order to allow step by step detailed reconstruction

➤ We chose the **first 1-3 minutes** in the store:
“From the beginning of the shopping trip to the first item you picked”

➤ It held a **rich and compelling story**:

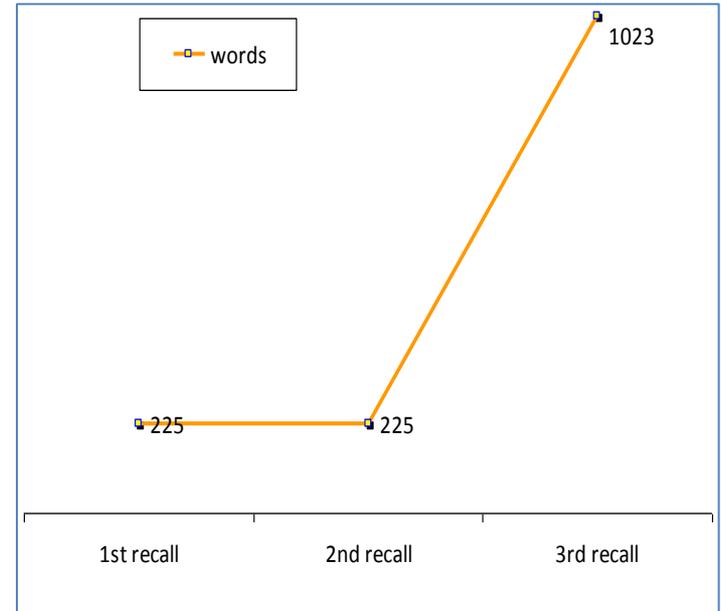
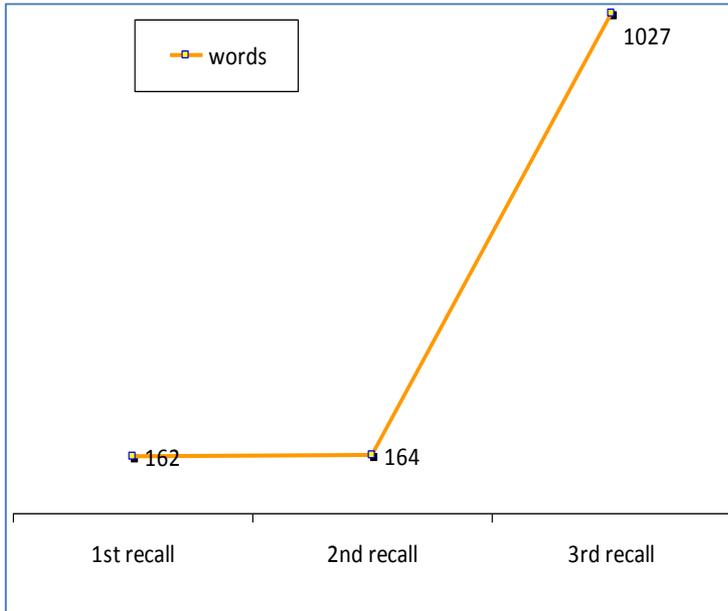
- beginning: the shopper’s state of mind
- action: following the shopper through to making 1st purchase
- interaction: between the store and the shopper
- ending: happy/unhappy shopping experience

➤ As researchers we were impressed by the **amount of detail and vividness** of the interviews achieved through the CI. The interviewees themselves were surprised at how much detail they were able to remember, **increasing their memory with each of the 3 recall phases**.

3

Results – Word Count

The number of words increased dramatically with every recall phase => the reports became **more and more detailed**



Israel

Germany



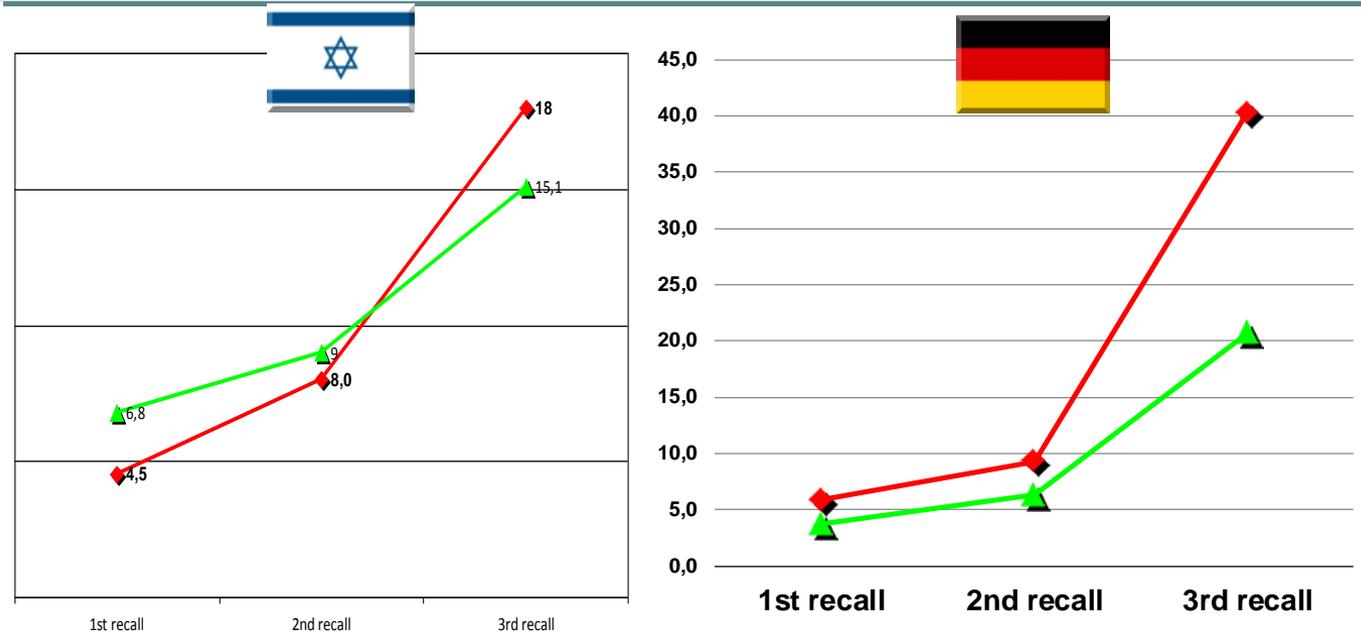
Results – Semantic Units

3

In both countries: counting the semantic units we found a dramatic increase in the environmental scope and the shoppers' internal experience

External context
 elements relating to the shopping environment increased by 4 folds (Israel) and even 7 folds (Germany) number of details relating to the shopping environment (store, staff, other shoppers, goods...)

Internal context
 elements relating to the shopper's experience more than doubled (Israel) or even quadrupled (Germany) number of details relating to the shopper actions, feelings and thoughts



Interesting Cultural Observation: In Germany, the amount of internal information (moods, emotions, thoughts) always remained smaller than the amount of external observations, whereas in Israel internal context “overtook” external accounts.

➔ German shoppers were less ready to express what was going on inside of them, but paid great attention to all the details around them -> a cultural phenomenon?



3

First Recall Remained Superficial

The depth of insights developed gradually. On the first recall very few hints about the shoppers' state of mind were given

1st and 2nd recall – focus on actions and factual description of event



“selected a good enough trolley; my child went ahead with trolley and I went to return empty bottles...went to toiletries and passing travelling bags remembered to pick up a make-up bag for travel, after checking its price.”



“I’m going to the shop and I search for the things I have written down (shopping list). In general it’s the fruits and vegetables, it’s always what comes first. I take quite simply the things I want ... I have first taken the bananas because it’s very important for me to eat a banana everyday.”

1st recall – free description of what took place from approaching the store to 1st item picked

3

The Third Recall Digs Deeper

Step by step the depth of the insights increased recalling more feelings and thoughts at each moment

Moving from description of action to spontaneous description of thoughts and feelings



“I was preoccupied, focused on keeping my child near to me and hoping to find a trolley that easy to handle...”

“the make up bag was not very pretty but will do, I hoped it will be convenient. I was pressured to make a quick decision this time...”



„... and I saw this miniature, discount version of „Prinzenrolle“ (Prince of Lu) and I was camping last week-end and I have bought these cookies. I love eating that but I try to buy it not that often because I devour that in a short time.”

→ Feelings of enjoyment and guilt

3rd recall – repeat recalls through detailed description of moment by moment

Seeing the environment through the shopper's eyes

3

Moment by moment we follow the environment through the respondent's eyes and at the same time hear their thoughts and feelings about it



"I searched the long line of promotion displays... took wafers from the display, the promotion was not really attractive 11 NIS instead of 10 NIS. I took one pack thinking of the children..." (F)

"As I walked in, I immediately noticed the table with the honey cakes on the promotion display; I thought it is going to be crowded because of the holidays. We were very excited about telling our news (expecting a baby) at the family table..." (M)



"I searched for a long time the bananas, because they weren't in the same place... and I have discovered the apples and I have through that I can take apples too..." (F)

"I'm tall so I can see without problem, I scan the rack and all the things over like bakery products to recognize, although it's far away. It's a relative opened architecture..." (M)

3

The Impact of the Internal State and the Environment

Better understanding of the mutual impact of the shopper state of mind and the environment

Improves our reading of the environment's meaning for the respondent



"Approaching the store I was feeling glad that I was going to fill the fridge with goodies for the children, when I'll leave for work in the afternoon..."

"on entering the store, I was guarding my wallet. I stick to my system of shopping to avoid waste..."



"I was very happy because I have already found a parking place. The weather was good and I felt the wind blowing. I hoped no storm because I would like to have a BBQ for dinner..."

"I remember that the door was very old. I know from my youth a turnstile... The trolley must apart introduce. You go through the turnstile und the trolley right of you"

3

Avoiding the script is a challenge

- Script - the existing ideas about the store and the shopping experience. It was measured prior to the cognitive interviews by telephone interviews
- The script is stored in the semantic memory
- The semantic memory is much more easily accessible than the episodic memory. This is the memory of what actually took place in the specific experience.
- Our challenge is to avoid being misguided by the script

Having recalled the specific experience frees the respondents from the script and allows them to re-evaluate their shopping experience at the store

- Precision means not to rely on the script but rather on what actually took place at the time
- We found inconsistencies between the two and often met conflicting reports:

Scripts are Erroneous

We found a staggering magnitude of errors in the script.

The “normal shopping trip” does not seem to exist: in the interviews we often heard *“normally I always take a trolley... but this time it was different/ it was different because I had seen this advertisement and went straight to the special offer/ because I needed fireworks for New Years Eve”...*

**=> Respondents justifying why this time was different to “normally”.
But when every time is different, what is the norm?**

- 43% of the script elements were detected as errors
- In many cases errors were actual contradictions
- Errors made on both internal and external contexts

The script

big, organized, clean, wide choice, quality goods, cheap, fast, polite service, convenient, easy orientation

The interview

errors:

dirty, cluttered, ignored by staff, many delays, waste of time

correct:

big, wide choice, quality goods, cheap

Insights from the CI Leading to Practical Advise

3

- Recommendations practically come directly from the shoppers' mouth (and heart) or can easily be translated from their thoughts or feelings into action plans
- Welcome the shopper:
In Israel the guard is not just a security man he is your receptionist
on entrance say hello smile and hand him a basket
offer a clean trolley with a leaflet of pomotions/news
remove obstacles and bumpers from entrance: like the turnstile or the beggar frequently mentioned in Germany
- Improve the shopper mood:
start with the car park (especially important in Germany)
select the mood concept and create it outside – light, colors, promotion displays, music, fragrance...
of course – clean, pleasant, easy, safe, better lit
- The store staff plays an important role
In Germany: the first person to greet you in store is usually the lady at the check out, and she can very much influence the perception of the shop, e.g. leave a negative imprint by wearing a nose piercing as mentioned in one interview in Germany

4

Conclusions and Prospectives

What happens next?

Conclusions

- This Pilot Study supported our hypothesis, that the Cognitive Interview can be a powerful tool in Market Research

The CI
enables us
to observe the environment through the shopper's mind
and break through the script errors

therefore

improves our chances to see
the forthcoming impact of changes
that are still covered by the semantic memory

Critical Reflection

Based on the Pilot Study we could confirm following advantages of the Cognitive Interview in Market Research:

- **Non-directive:** minimal bias
- **Explorative character:** discover surprises
- **Economic:** no need to go back to the location of the TBR event
 - **Learning what is perceived vs. what is seen**
- **Highly detailed and specific:** exact and accurate data
- **Flexible tool box:** compatible with other tools

→ therefore a useful tool for market research

Critical Reflection

We were also able to identify certain disadvantages and limitations of the CI in Market Research:

- **Time consuming:** ca.1hour for 5 minutes shopping
 - **A lot of “side product”:** data irrelevant to the topic
 - **Interindividual differences:** in the ability to recall
 - **Expert training required:** instruction is key
- therefore most suitable for **open, exploratory, broad research** questions which benefit from **discovering the unexpected** insights in the depth and breath of detail the CI produces
- less suitable for narrow field questions, as much of the data generated may not be needed and remains unanalyzed

Already proven useful, yet to be supported scientifically...



- To our knowledge at the point of writing there has been no scientific study that supports the reliability, validity and relevance of the CI in the field of market research.
- Therefore, a PhD project is currently being undertaken as a pioneer of research in this field by Séissmo's Research Manager Christiane Trebeljahr.
- This research project aims to investigate how the CI compares to traditional marketing research techniques and deliver suggestions on the implementation of the CI alternatively or complementary to those techniques.
- The University of Clermont-Ferrand is with Magali Ginet and Cindy Colomb one of the leading research institutions focusing on CI and innovative research to further validate and establish this methodology.
- At the point of writing this proposal, the project planned shall be the first to evaluate the usability of the CI in market research and pioneer in making CI techniques available to the marketing domain.

Methodology of the Research Project Planned (1)



The traditional qualitative methods in these fields of market research are:

- **Shopper studies => Shop alongs:** the researcher accompanies the shopper to the point of sale, observes (sometimes films) the behavior and concludes with a structured interview afterwards, for example to find out if a certain product is seen in the shelf, or how the general atmosphere of a shop could be improved
- **U&A Studies => Ethnographic Interviews:** semi-structured interviews at the home of the consumer with focus on a certain topic, e.g. their daily face care routine, and product portfolio
- **Advertising Concept Research => Focus Group Discussions:** Story Boards with drawings of scenes of an advertisement are shown to a group of people, who afterwards collectively discuss what they have remembered and how each scene could be improved or fine-tuned before filming the advertisement.

→ Hence, in this proposed project the Cognitive Interview shall be compared to these methods.

Methodology of the Research Project Planned (2)

	Cognitive Interviews in a Shopper Study “Daily Shopping” n=16	Cognitive Interviews in U&A Research “Morning Routine” n=16	Cognitive Interviews in an Advertising Concept Test n=16
Shopper: Shop Alongs with Observation n=16	Comparison		
U&A: Ethnographic Interviews n=16		Comparison	
Advertising Concept: 2 Focus Groups with n=8 / group = 16 total			Comparison
Quantitative script n= 100 (+/- 10%)	Comparison	Comparison	

n= 96 in qualitative methods (of which 48 CIs)

n= 100 in quantitative methods

**We welcome your input, questions,
feedback, thoughts and experiences,
so please get in touch if you have something
to say about the Cognitive Interview!**

Thank you for your interest in our Séissmograph!

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Thanks to all “Cognitive Interviewers” and Analysts at Séissimo and our Partners



From left to right: Jagoda Zeis, Jérémy Lowicki, Rolf Dobler, Cindy Colomb (our trainer from the University of Clermont-Ferrand), Marie Arbogast, Natacha Dagneaud, Valentine Bahri, Ruthie Brandman (MD of Brandman Research, our partner institute in Israel) and Christiane Trebeljahr