



SÉISSMO



# 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).

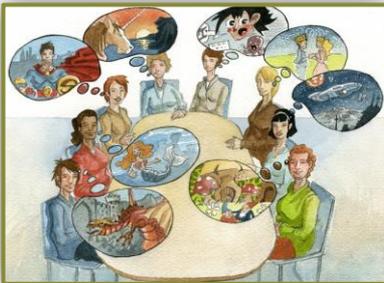
# Development of the CI

- ▶ 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

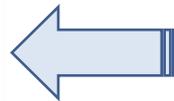
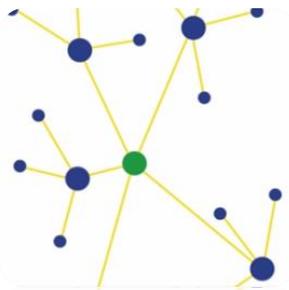
*whilst:*

- 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

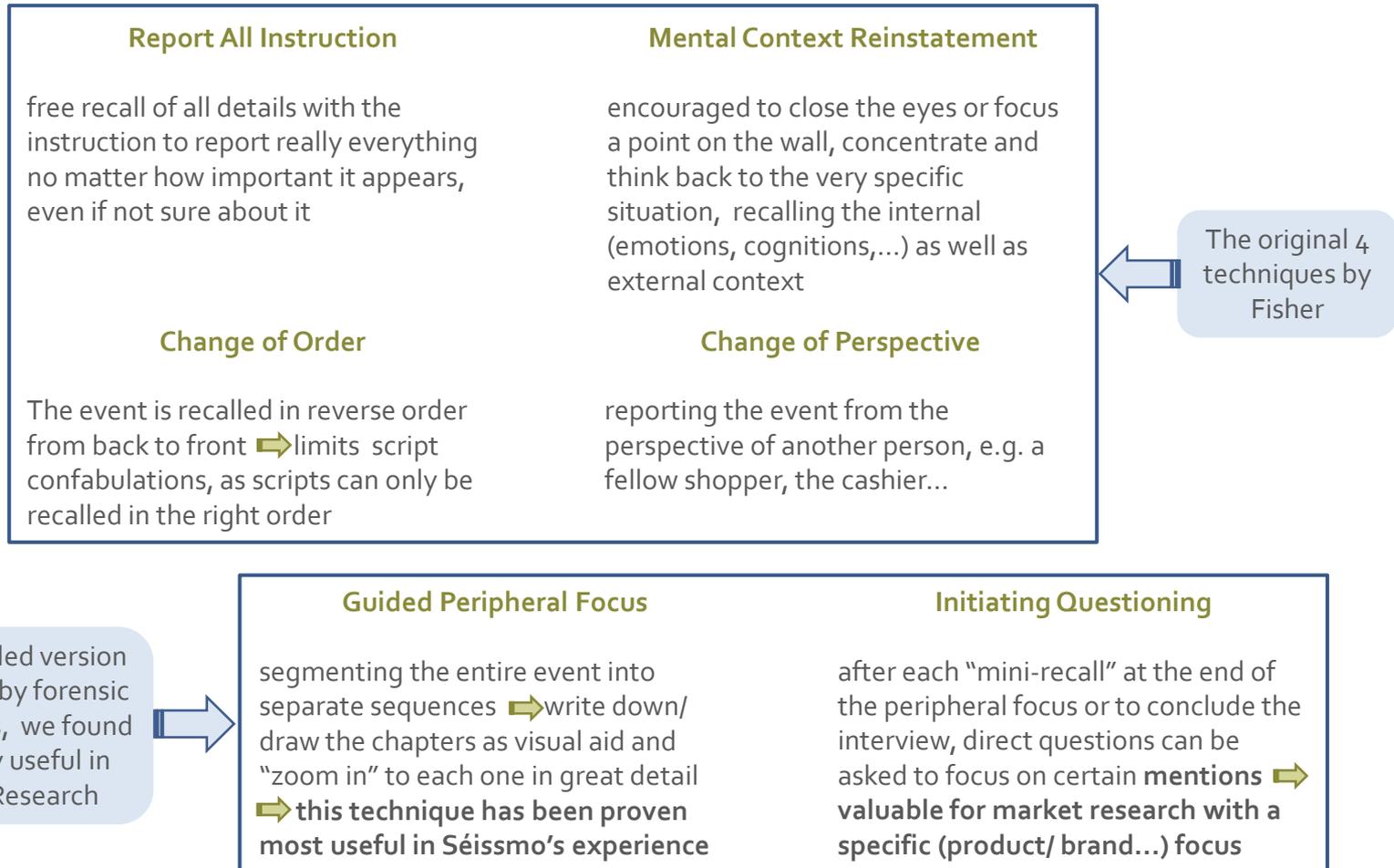
The interviewee is encouraged to **mentally return to the place and event** in question (e.g. supermarket shopping, a bus ride, taking a shower,...) and **report all details** (contextual, procedural,...) they can remember, no matter how important or not they appear to be. The event is **recalled repeatedly**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



# 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).

## Techniques of the CI in Detail (3)

- ▶ 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 standardized or half-standardized 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.

## Techniques of the CI in Detail (4)

### 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.

# Techniques of the CI in Detail (5)

## 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.

From forensics



To market research



## 2. The Cognitive Interview in Market Research

Relevance, Research Questions and Application

# 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?”

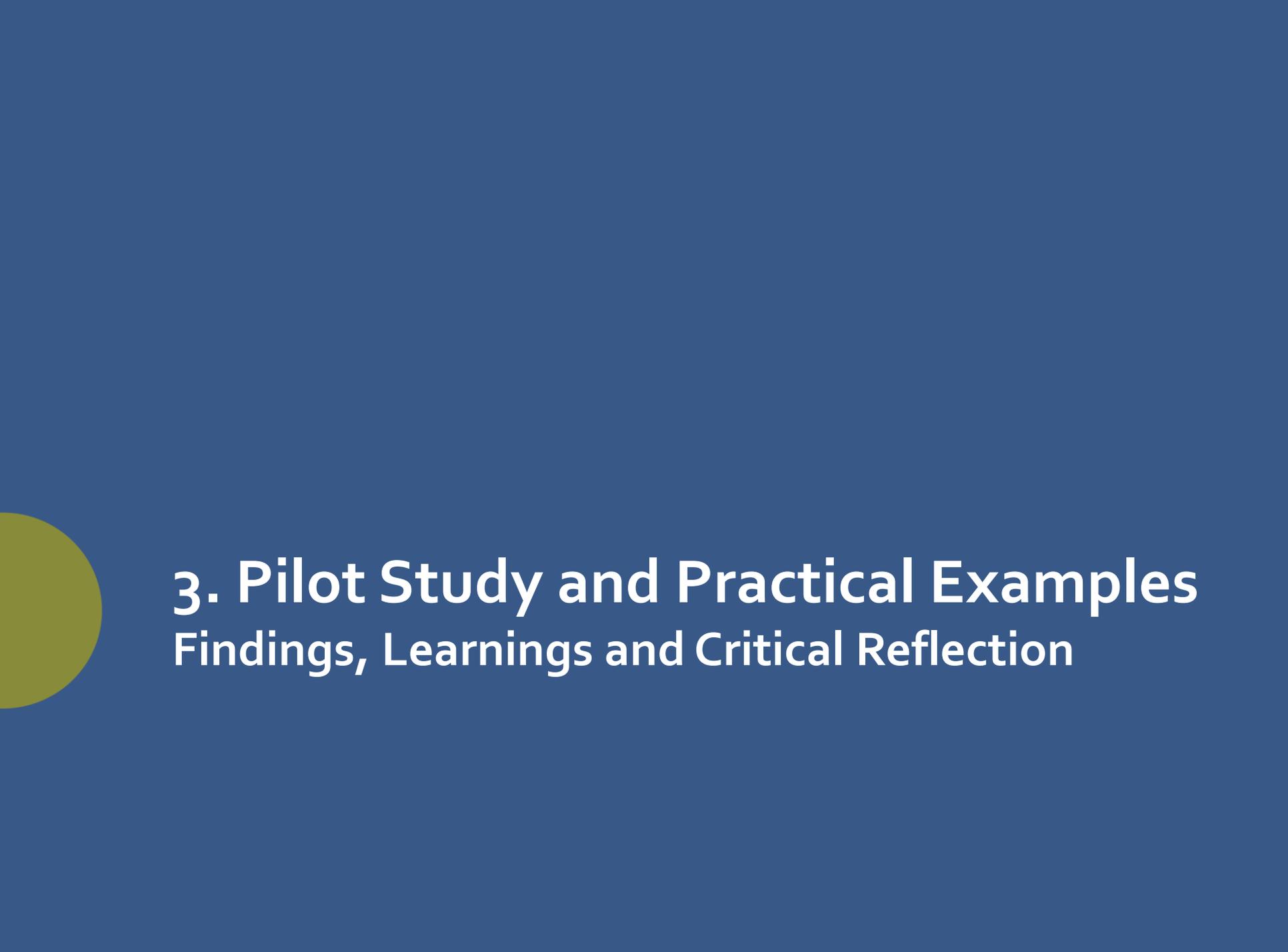
... and potentially also advertising / advertisement concept tests (to be tested)

# 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**.

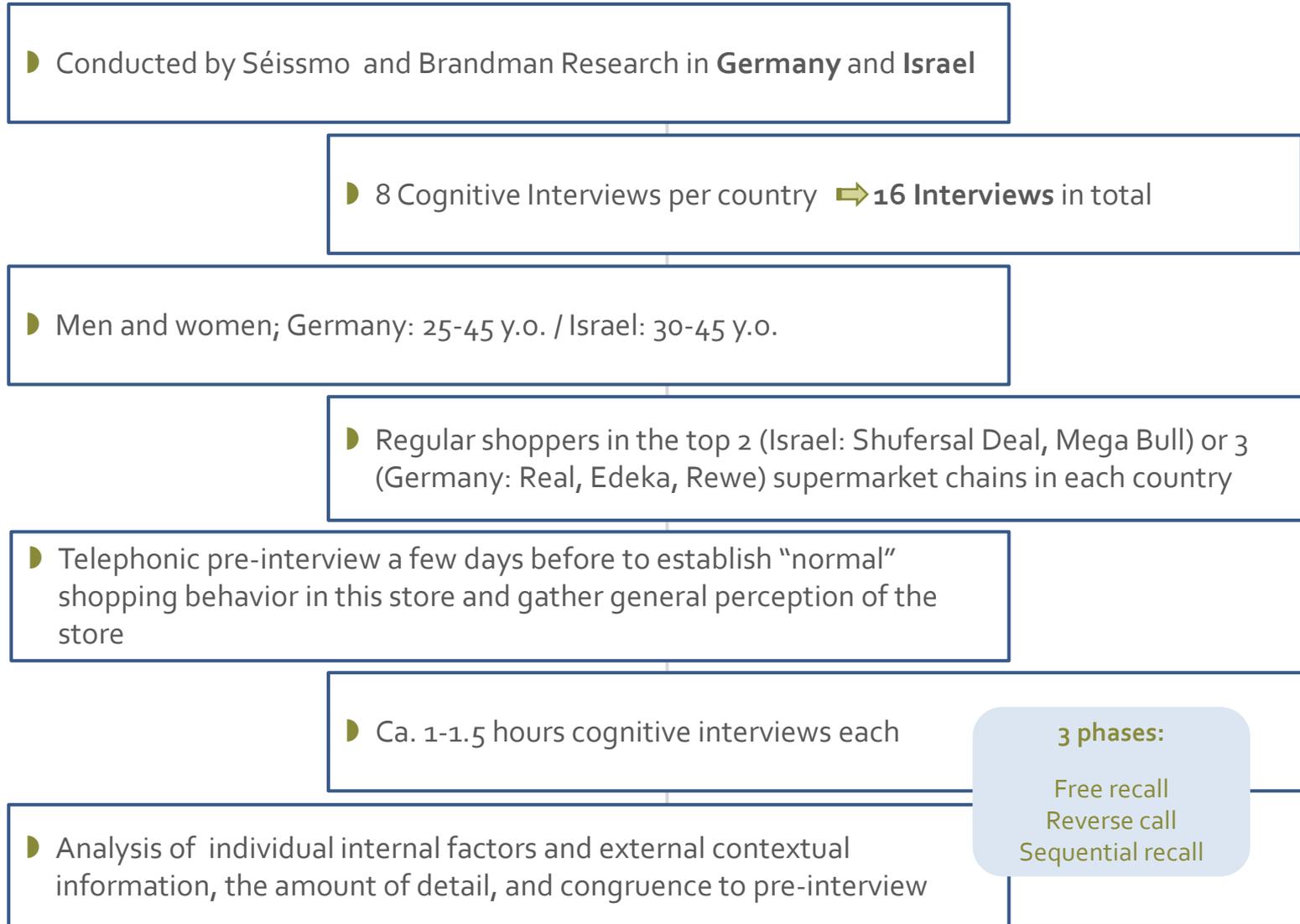
⇒ Methods that retrieve such memories and help to report them precisely are particularly interesting for market research. The CI can achieve this.



# **3. Pilot Study and Practical Examples**

## **Findings, Learnings and Critical Reflection**

# Pilot Study – Shopping Experience in a Grocery Store



# 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**:

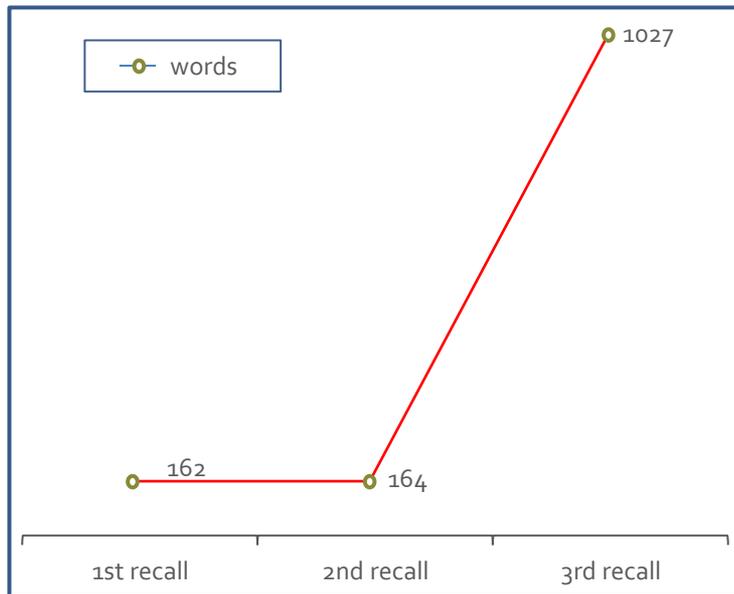
- beginning: the shopper’s state of mind
- action: following the shopper through to making 1st purchase
- interaction: between the store and the shopper
- ending: happy/unhappy shopping experience



► 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.

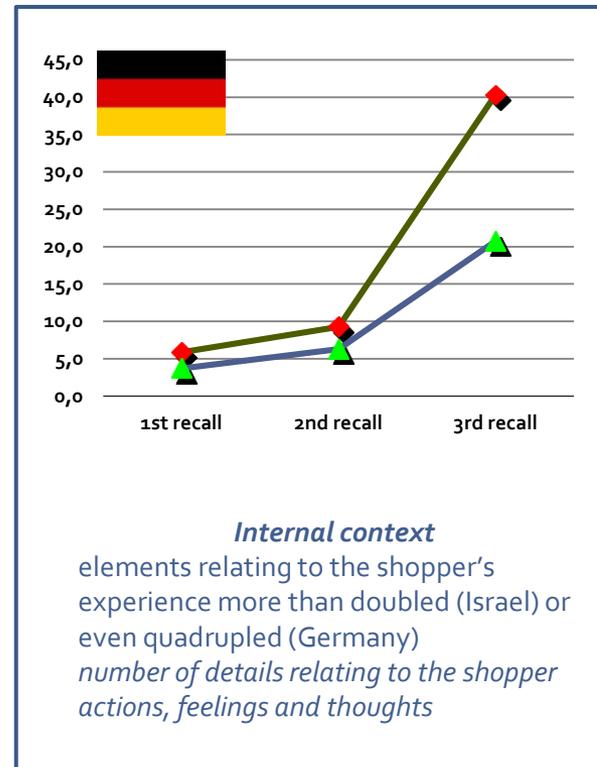
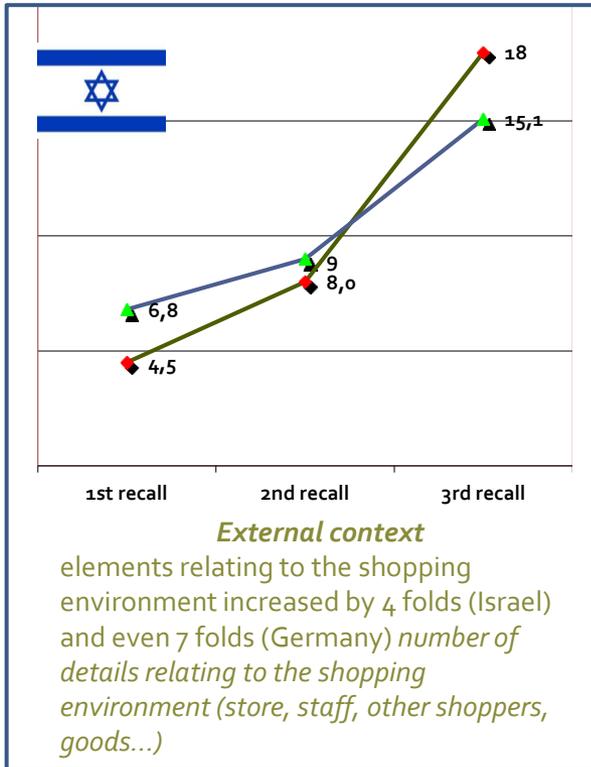
# Results – Word Count

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



# Results – Semantic Units

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



**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?

# First Recall Remained Superficial

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

1<sup>st</sup> and 2<sup>nd</sup> recall – focus on actions and factual description of event



Israel

*"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."*



Germany

*"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."*

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

# 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*



**Israel**

*"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..."*



**Germany**

*"... 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*

*3<sup>rd</sup> recall – repeat recalls through detailed description of moment by moment*

# Seeing the environment through the shopper's eyes

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



Israel

*"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)*



Germany

*"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)*

# 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



Israel

*"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..."*



Germany

*"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"*

# 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

- ▶ 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 promotions/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?

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

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

- ▶ **Time consuming:** ca. 1 hour 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

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!**

We welcome your input, questions, feedback,  
thoughts and experiences, so please get in  
touch...  
[contact@seissmo.com](mailto:contact@seissmo.com)