



Optimizing Conjoint for Mobile

Mixed Profile Swiping

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Current situation



> 20% of research is on mobile phones

Conjoint usually does not fit on a mobile screen

Problem: difficult to reach the right target audience:
respondents and / or skewed sample

For MaxDiff SKIM has developed the Swipe MaxDiff,
for conjoint there was no good solution yet



We have solved your problem!



Introducing a better way of doing conjoint on mobile phones:

- The complete conjoint exercise fitting on one screen
 - A more intuitive and engaging exercise

> Conjoint is ready for mobile sampling



| Agenda



1.

**Sawtooth
conjoint
solutions in
mobile research**



2.

**SKIM's
swiping
concept**



3.

**Theory:
3 concepts
conjoint vs. 2
concepts conjoint
vs. partial conjoint**



4.

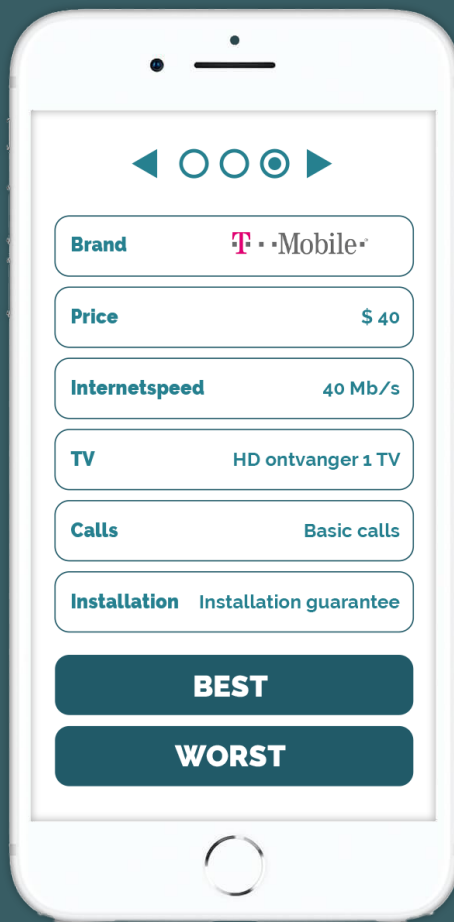
**Test on real
respondents**



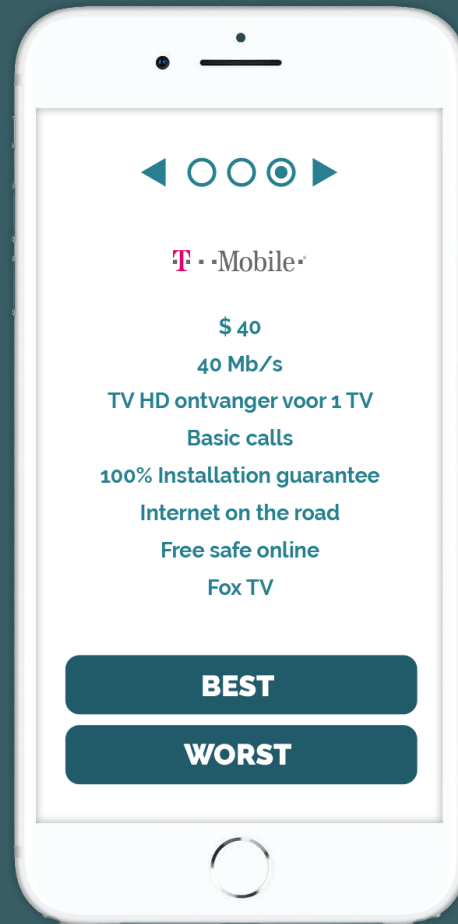
5.

**Conclusions &
Recommendations**

Lighthouse 9.5.3: concepts besides each other



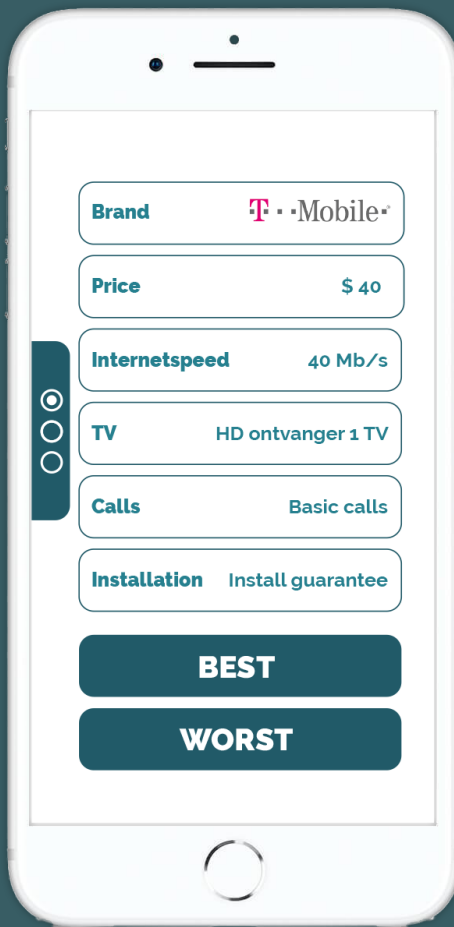
With attribute labels



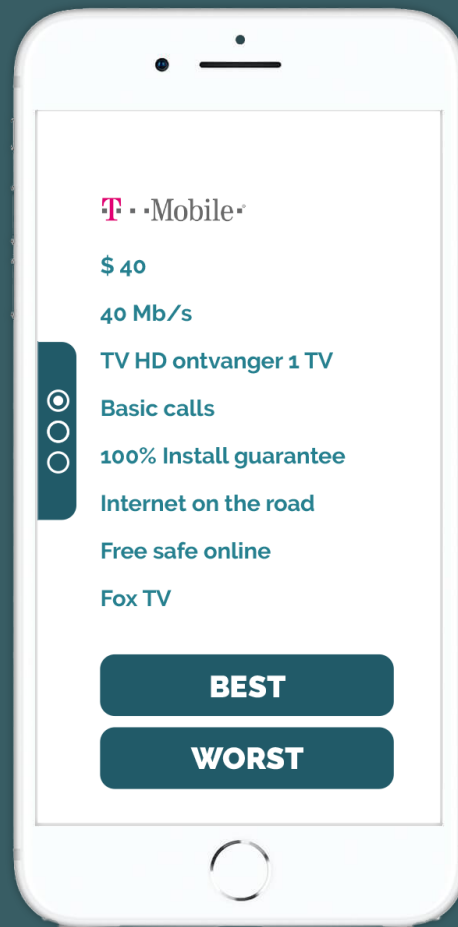
Without attribute labels



Lighthouse 9.5.3: concepts below each other



With attribute labels



Without attribute labels





SKIM Mobile Conjoint set up

| Swipe CBC – a mobile-friendly conjoint



Challenges

Solutions

Fit 3 concepts on a screen	→	Stacked, minimize wording
Make the answer intuitive	→	Swiping
Deal with >6 attributes	→	Partial Profile: hide some attributes for a concept
Retain statistical robustness	→	Include tasks with 1-2 concepts
Implicit measurements	→	Reaction time, in future eye tracking



Swipe CBC – visually



1. Partial Profile

Swipe your favorite plan tot the right and least favorite left

WORST

BEST

	500 MB Unlimited national calls Unlimited SMS Spotify	€ 30
	Unlimited GB 500 min national calls	€ 25
	1 GB Unlimited national calls Unlimited SMS Spotify	€ 25

2. Full Profile

Swipe your favorite plan to the right

BEST

	Unlimited GB 500 min calls No sms Youtube Facebook First month free 30% discount on international calls	€ 25
	1 GB Unlimited national calls Unlimited SMS Spotify Pay upfront Connect second person 10% Discount on international calls	€ 25

3. Dual response

Swipe right if you would purchase this plan and left if you worst not purchase it

DON'T BUY

BUY

	Unlimited GB 500 min national calls No sms Youtube Facebook First month free 30% discount on international calls	€ 25
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Try out the differences

tinyurl.com/mobileCBC





Theoretical differences between
2 vs. 3 concepts vs. partial profile

2. Theoretical Comparison 2 - 3 concepts



**Comprehension
fine in both
cases**



**At least double
information
with 3 concepts**

Hardly any conjoint studies with 2 concepts

2. Theoretical Comparison Full vs. Partial Concepts



Literature in general prefers a full profile study,
but there are some benefits to showing only partial profile

Full profile

- + More **realistic** descriptions
- + Greater **predictive** validity

-/- Respondents might **short cut** the compensatory choice process

Partial profile

- + **Cognitive** advantages
- + Statistical and behavioral advantages

-/- **Larger sample sizes / more tasks** required

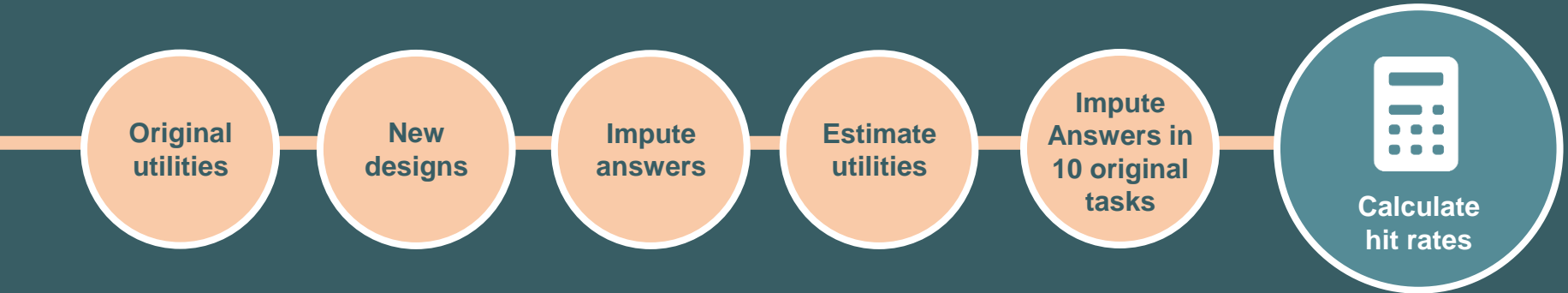
-/- Complex presentation might **bias** the final part-worth utilities

-/- **Price** tends to carry **less weight**

2. Test with simulated data



Old study on Telecom with a full profile conjoint: 11 attributes, 10 tasks, 2057 respondents



Overview hit rate comparison



% Fit	10 tasks	15 tasks	20 tasks
3 concepts full profile - best - worst	92.0%		
3 concepts full profile - best only	88.6%		
3 concepts partial profile – best - worst	88.4%	89.8%	90.8%
3 concepts partial profile – best	86.7%	88.9%	89.7%
2 concepts full profile	83.8%	87.4%	87.5%



Test on real respondents

Study | Specifications

Topic: TV and Internet
6x 200 respondents



Attributes	Levels	Tasks
1. Provider	6	Always shown
2. Price	5	Always shown
3. Download speed	6	Always shown
4. TV	5	Hidden 50%
5. Calls	4	Hidden 50%
6. Security package	2	Hidden 50%
7. Internet on the road	5	Hidden 50%
8. Additional services	5	Hidden 50%
9. Installation	6	Hidden 50%



4. Real life test



1200 respondents, equally divided as follows:

	Profile	# concepts / screen	# screens
1. Traditional desktop	Full	3	10
2. Traditional tablet	Full	3	10
3. Traditional mobile phone	Full	3	10
4. 2. concepts swipe	Full	2	15
5. 3 concepts partial swipe	Partial	3	15
6. Mixed concepts swipe	Mixed	2 - 3	7 + 8

Each respondent additionally answered 6 dual response none tasks and two hold-out tasks

Comparison: Swiping is definitely appreciated



	Average age	Time spent on conjoint	Appreciation
1. Traditional desktop	55	4.6	7.9
2. Traditional tablets	55	5.5	7.8
3. Traditional mobile phone	40	5.9	7.5
4. Swipe with 2 concepts	40	3.3	8.1
5. 3 concepts partial swipe	40	4.7	7.8
6. Mixed concepts swipe	40	4.4	7.9

Best-Worst: 2 concept Swipe outperforms traditional solution



	Hold-out 3 concepts Best	Hold-out 2 concepts	Mean Absolute Error	Price sensitivity
1. Traditional desktop	65.6%	71.2%	8%	-1.43
2. Traditional tablet	67.5%	74.5%	6%	-1.40
3. Traditional mobile phone	53.9%	69.4%	8%	-0.84
4. 2 concepts swipe	59.4%	74.3%	4%	-0.90
5. 3 concepts partial swipe	61.4%	64.4%	9%	-0.64
6. mixed concepts swipe	58.1%	62.6%	3%	-0.80
Average	61.0%	69.4%	6%	-1.00



Conclusion & Recommendations

Conclusion: Survey Engagement



Mobile research reaches **younger** respondents: the average mobile phone user is 40 yrs old vs. 55 yrs old on desktop / tablet



Respondents' **speed and pleasure** for the mobile swiping tasks is **much better** compared to the current mobile solution and even similar to that of the desktop respondents



50% more tasks for 2 concepts or partial profile swipe can be done on the phone in the **same time frame** as desktop full profile 3 concepts



Conclusion 2: Utility structure



On paper no difference
in utility structure
between partial profile
vs. full profile and 2
concepts vs. 3
concepts



In reality, there are some differences though:

- > Importance of price lower on mobile phone
- > Partial Profile overestimates importance of 'partial' attributes
- > Price importance / sensitivity especially low for partial profile swiping
- > More tasks did not (clearly) increase price importance
- > None share lower on mobile phones, even more with partial profile

Adding worst tasks has no significant impact on utilities

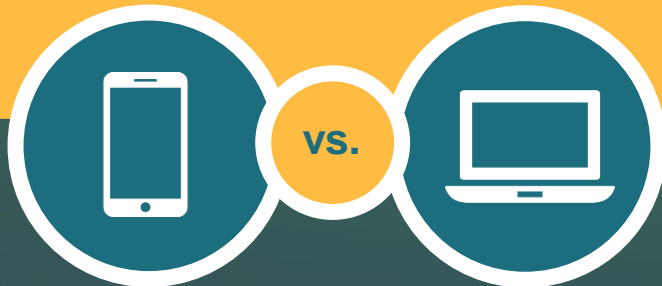
Conclusion (3): Predictive validity



It is not obvious which method works best:

Hit rate desktop better than mobile

However **MAE** better for mobile, especially with 2 concepts & mixed profile swipe



SKIM's swiping method
outperforms existing
solutions for mobile conjoint



Recommendation & Key Takeaways



**Combine your desktop
conjoint with
2 concepts mobile swipe**



- > Reach a wider target audience than computer / tablet
- > Swiping is faster and much better appreciated
- > The predictive validity is comparable to desktop / tablet
- > It outperforms the traditional mobile solution in all possible ways



| Thank you!



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