

Incompetents, Accomplices or Criminals? Panel Fraud in Health Surveys.

Ben White
Ludwig von Butler
Natalia Bogado

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Ben White
Founder & Director of
Technology



Ludwig von Butler
Co-Founder & Director of
Research



Natalia Bogado
Head of Production

Today's Speakers

We operate independently and do not represent any panel.

Not all panels are fraudulent as described.

Sensitive Data has been altered to show indicative results only.

The Fraud Landscape I

– a naïve view

The Incompetents

The Accomplices

The Criminals

The Fraud Landscape II

– a better view

Prevention & Detection

A New Method

Takeaways

Toolkits

6'6"

6'0"

5'6"

5'0"

4'6"

4'0"

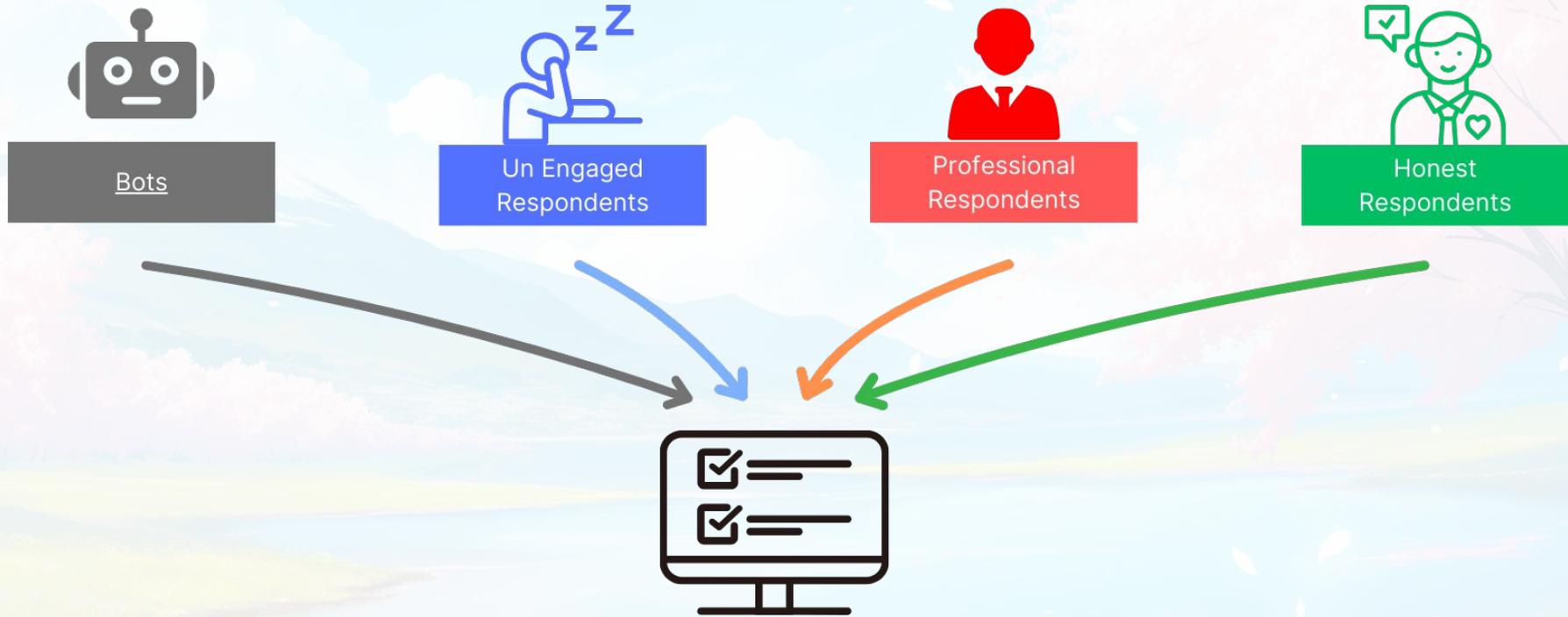
3'6"

3'0"



Introduction

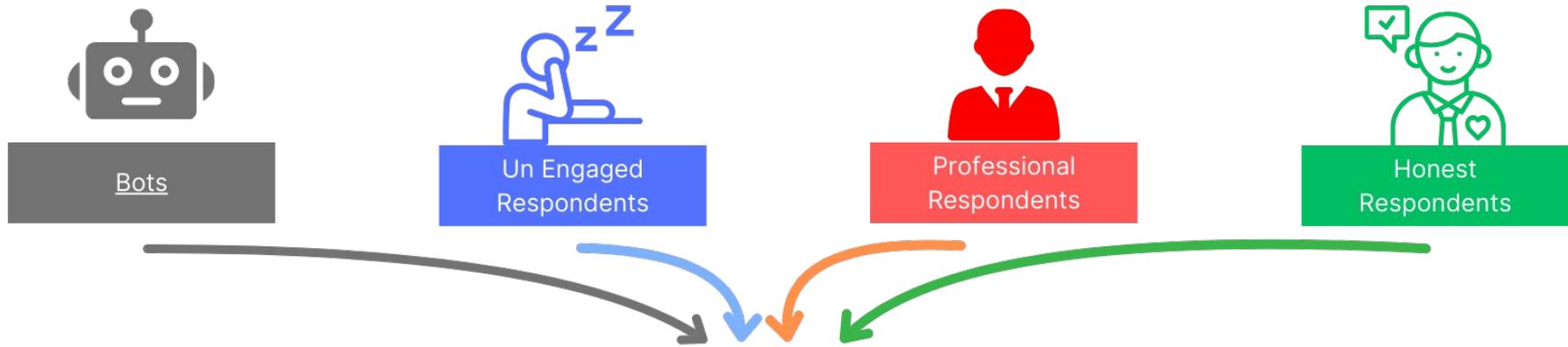




A Naïve Landscape



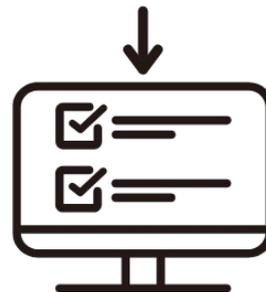
Respondents



Panels



Survey



Panels are Intermediates



Big Claims – on feasibility.

Weak Controls – over respondents.

A Vulnerable Target – for scammers.

Low motivation – to police their users.

Low Penalty – for poor data.



The Incompetent



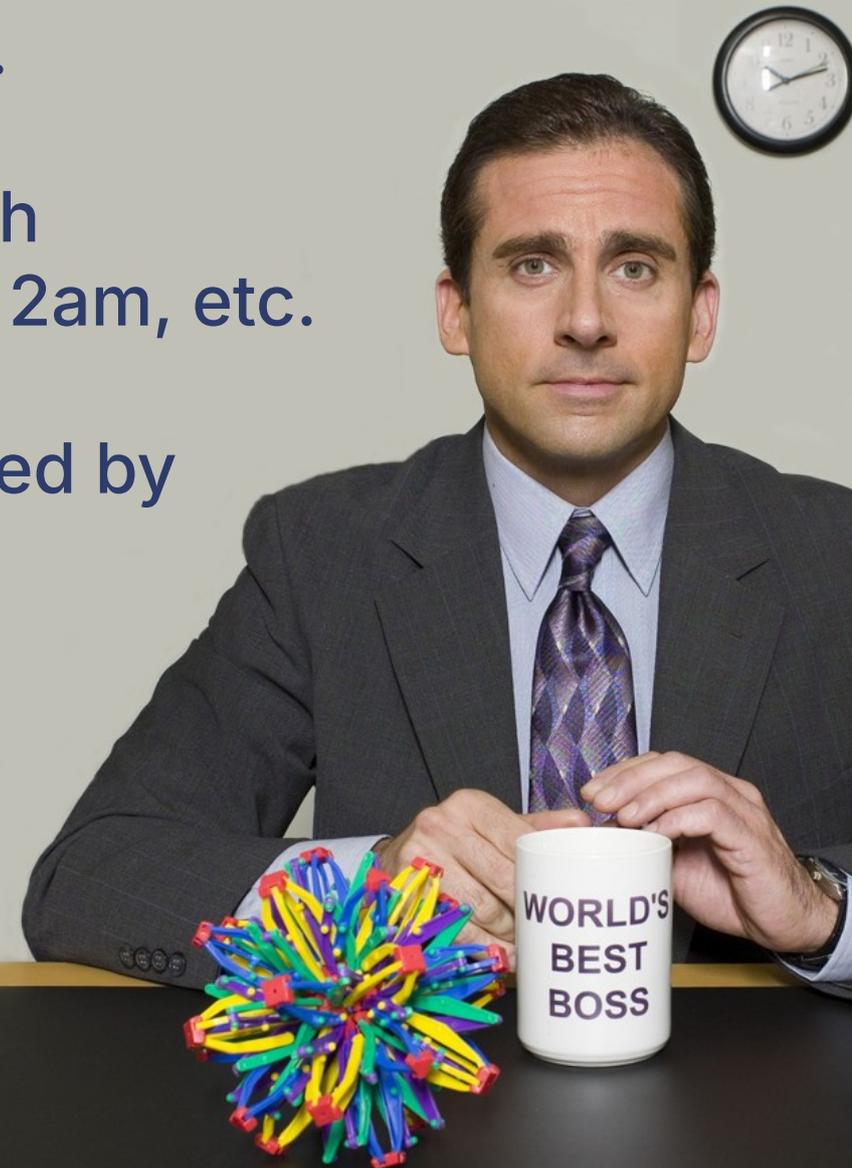
A Case Study on A Health Project in Australia

Extremely poor Behavioural model.

80% using VPNs, ages didn't match condition, typical access time was 2am, etc.

Likely the work of 2 individuals aided by lax controls.

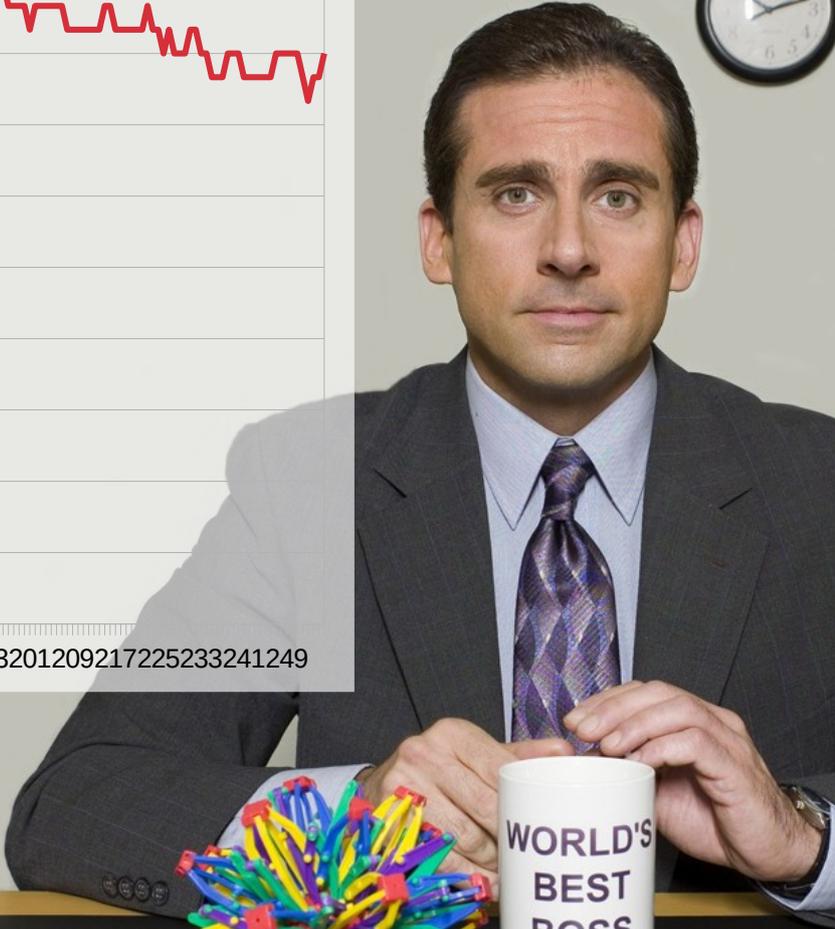
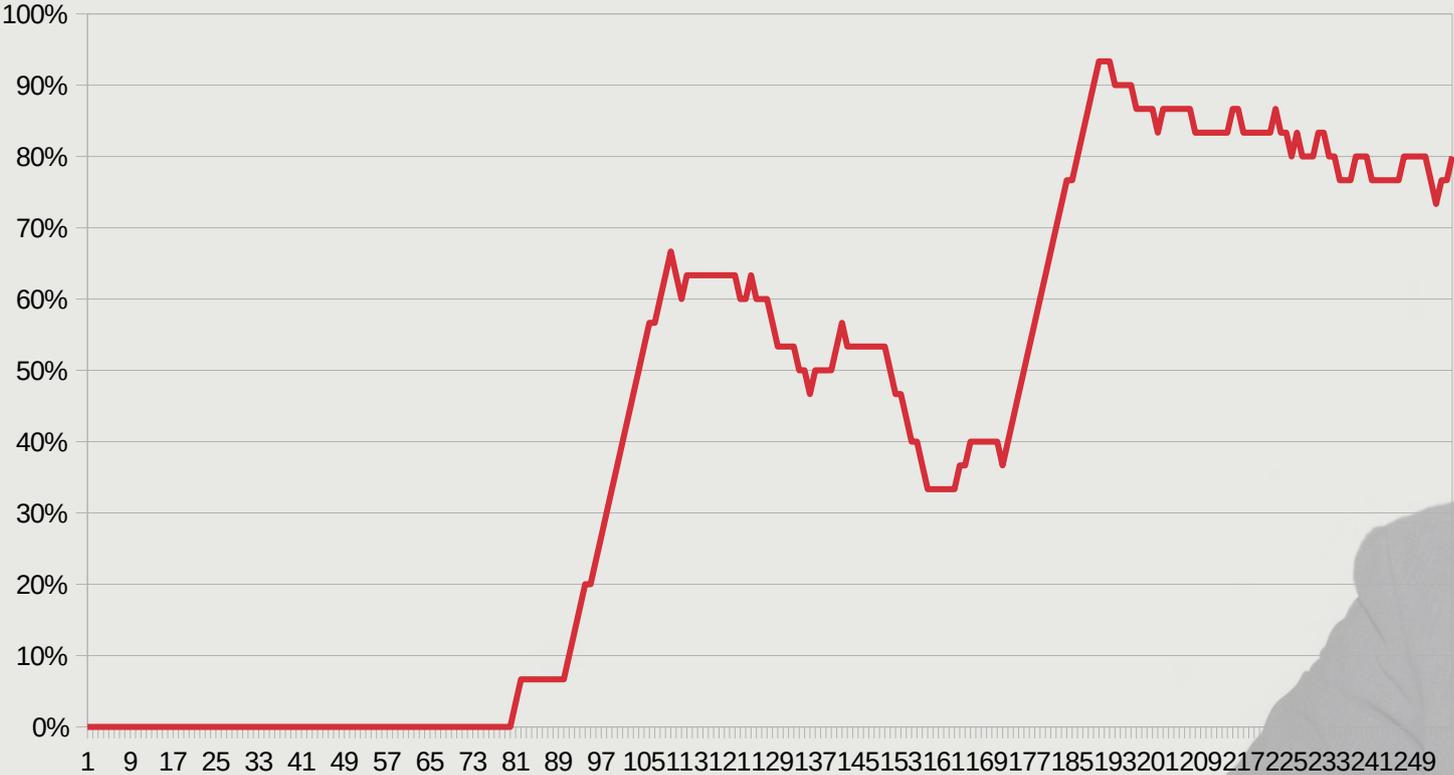
Panel's quality claims did not match reality.



The Incompetent



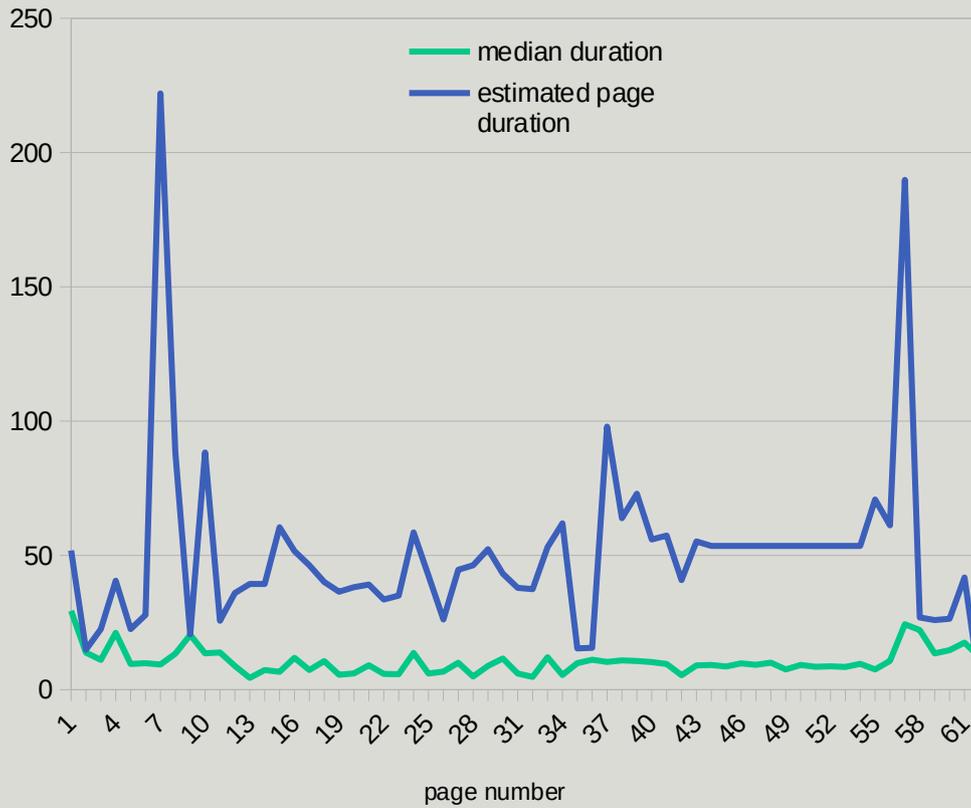
Time Dependent Completion Rates
rolling 30 respondent average



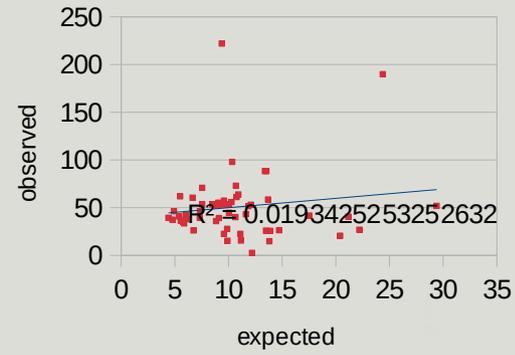
The Incompetent



Time Spent on Page
Expected vs Actual



Page Duration Correlation
Observed vs Expected



The Incompetent



Claims Feasibility – to win the business then maximises eligibility by ...

Coaching Respondents on how to bypass screeners and quality checks.

'no-fault' no-payment - if clients are unhappy with the quality of the data.

Typical return is 10K a project for low cost GenPop sample

Difficult to detect – unless ...

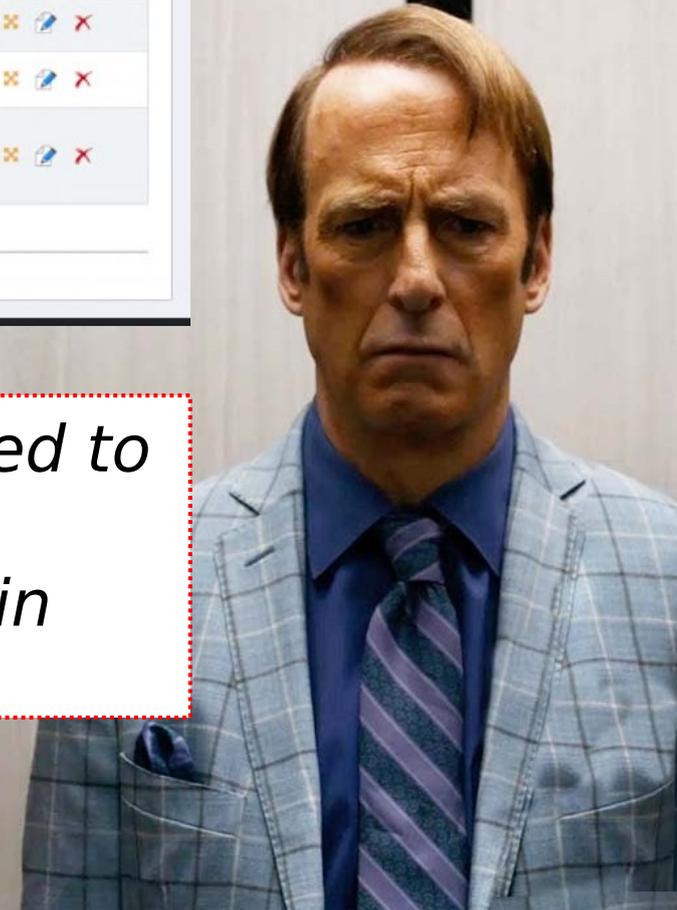


The Accomplice



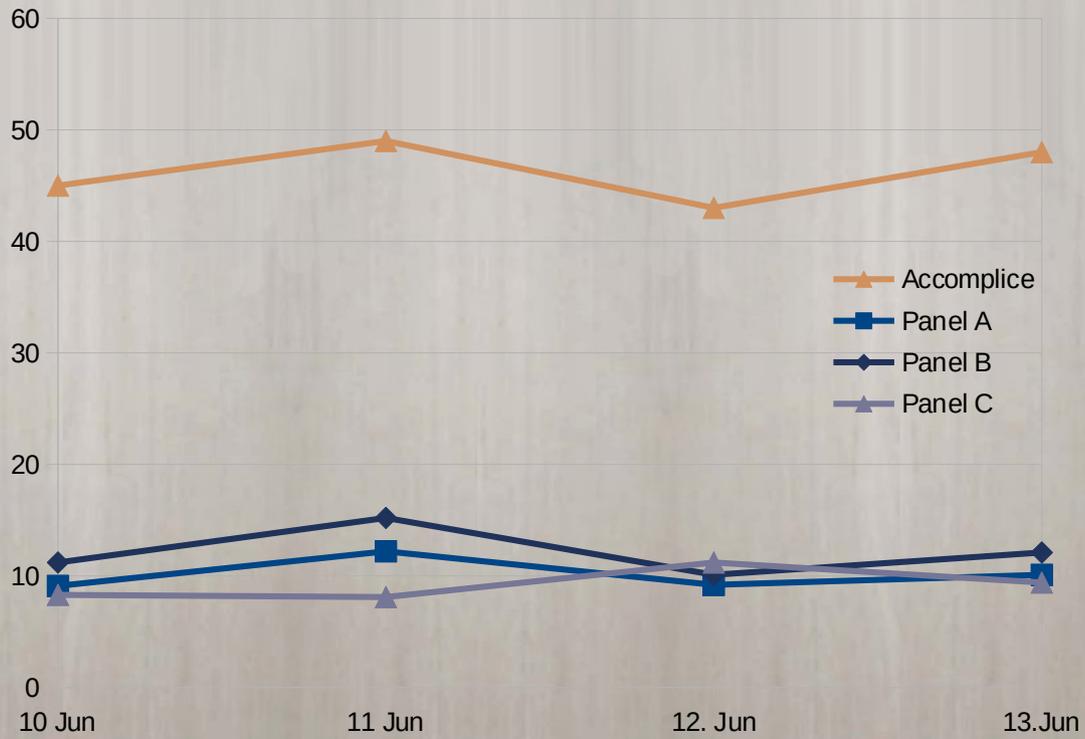
ID	Category	Sub Category	Control	Question	Action
1	WI0792_C1		Radio	With what kind of device are you filling out this survey?	
2	WI0792_C1		Radio	Do you currently own and use a SmartPhone (i.e. mobile phone with multiple applications)?	
3	WI0792_C1		Radio	Do you have any of the following health conditions?	
4	WI0792_C1		Radio	How long ago were you diagnosed with Diabetes?	
5	WI0792_C1		Radio	Have you been taking insulin prescribed by your doctor for at least 6 months?	
6	WI0792_C1		Radio	Which of the following are you currently using (as your main method) to administer insulin?	
7	WI0792_C1		Radio	Have you ever used any of the following Connection-enabled Insulin Pen Platforms? This is quality check question and you will need to select NONE OF THE ABOVE option to proceed ahead. Please do the same once you are in the main survey.	

.....This is a quality check and you will need to select NONE OF THE ABOVE to proceed ahead. Please do the same once you are in the main survey.



The Accomplice





The Accomplice



Organised and Coordinated fraud on high value studies on vulnerable channels.

Could be posing as **panels** or respondents.

Either Bots, small groups or both.

Sophisticated tech – Macros, custom VPNs.

Setup lead time makes them vulnerable detection using to IR spikes and late wave access.

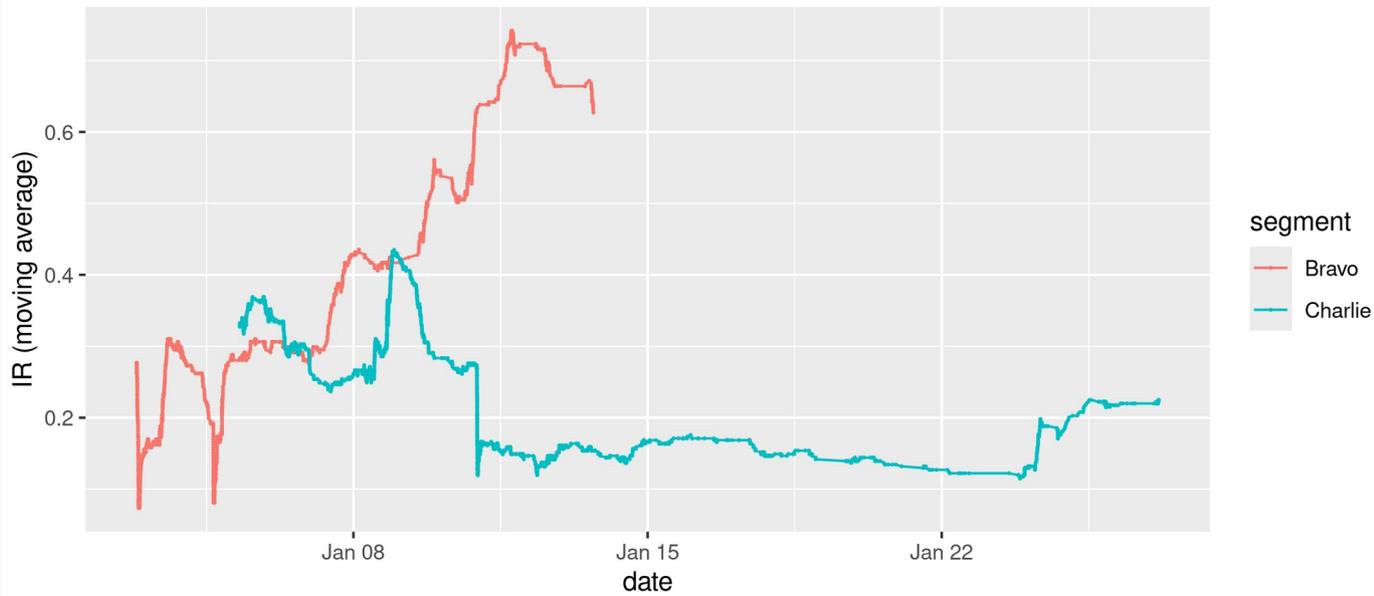
...Likely not their only scamming activity.



The Criminal

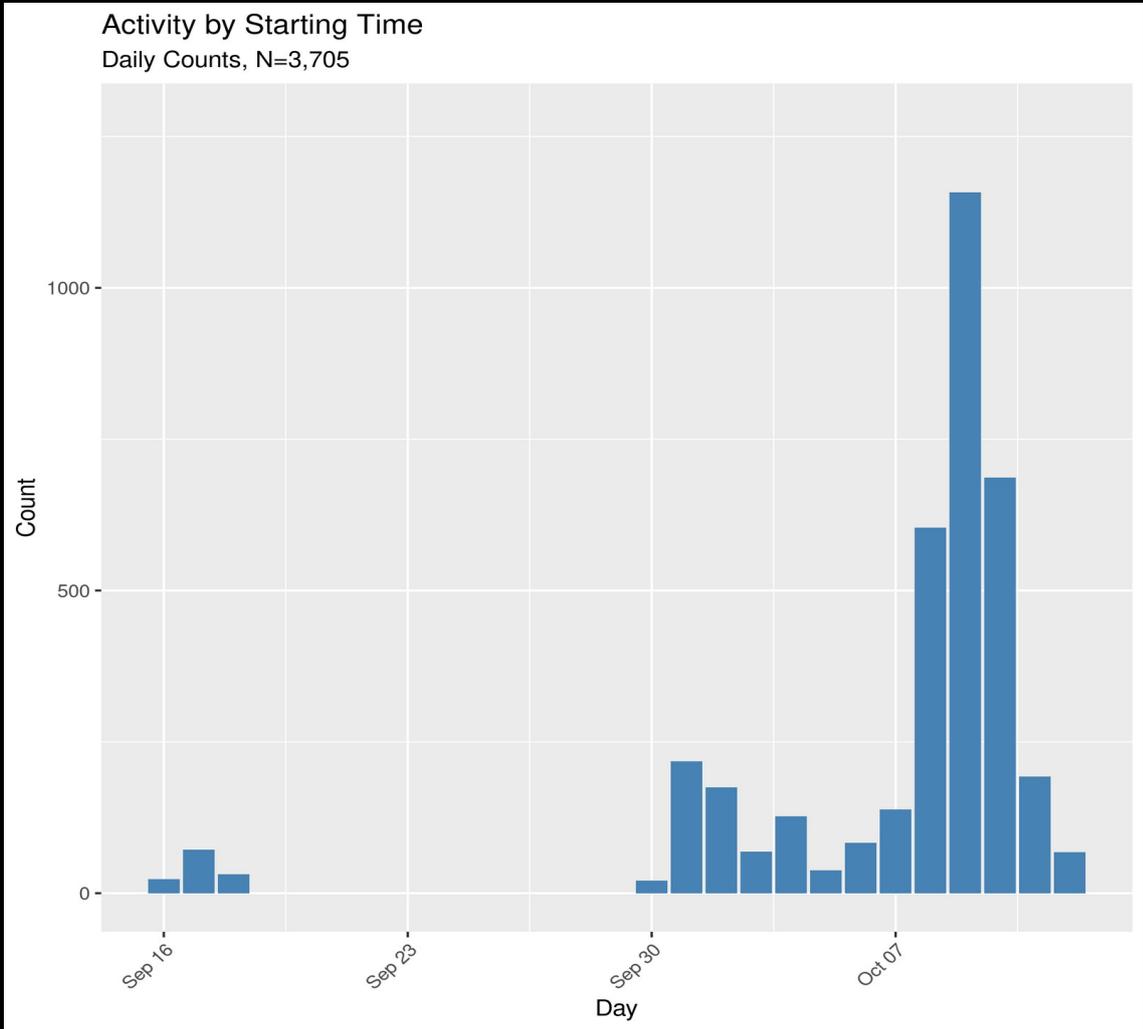


Incidence rate (IR) change by panel
prescreener, post Jan 1 2024 (N=6873)



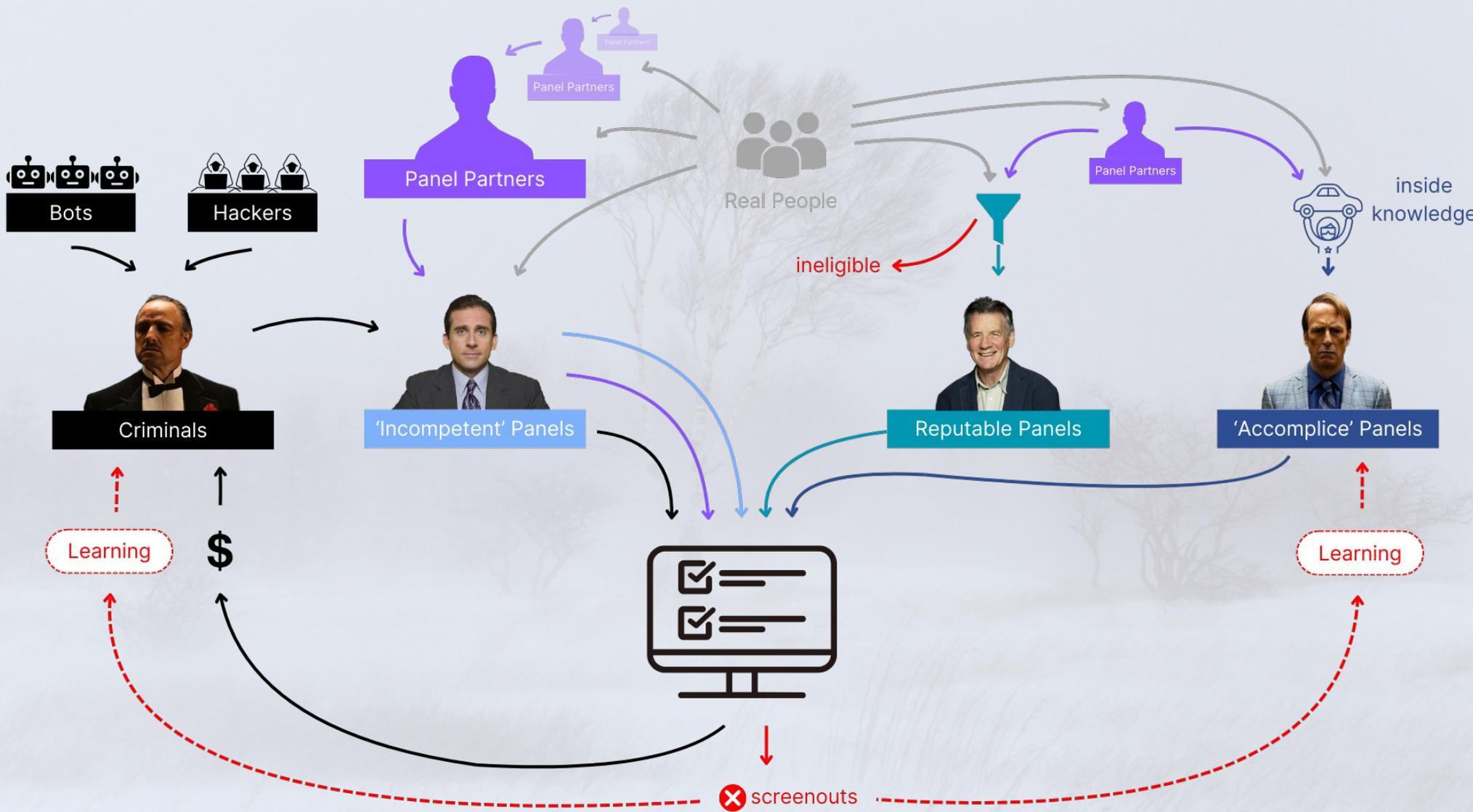
The Criminal





The Criminal





A More Likely Landscape



Screening

CAPTCHAs

only good against bots

Test questions

a team of scammers can learn

Consistency

many random answers will still pass

Cookies

useless against private mode

VPN Exclusion

cannot detect custom vpns

Contractual

Vendor Vetting

only good against bots

No Partners

may limit feasibility

Data Transparency

many panels won't agree

Proof of Diagnosis

technical & regulatory challenges

Follow up in-person

higher costs and some wont allow



Prevention



Respondent Analyses

Speeders

Patterned Responses

Nonsense Textual responses

Literacy and trap question

Comprehension tests

Consistency tests

Detection



Individual detection
suffers from too little
data

Fraud often occurs
(and can be mitigated)
at the group level



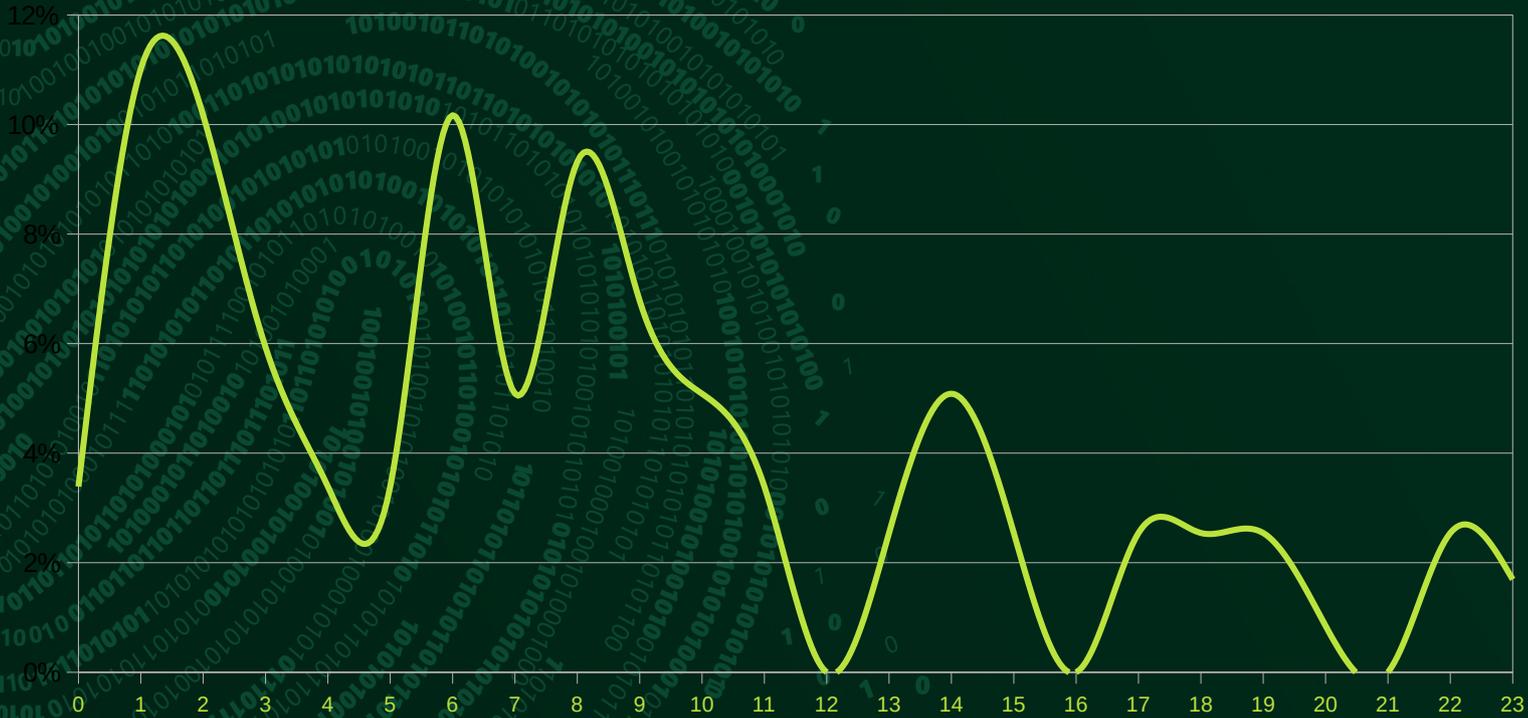
Identify groups
...rather than individuals.



Time Dependent Completion Rates
Rolling 30 respondent average

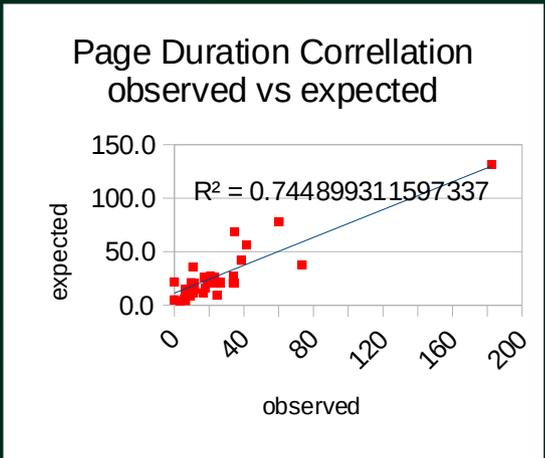
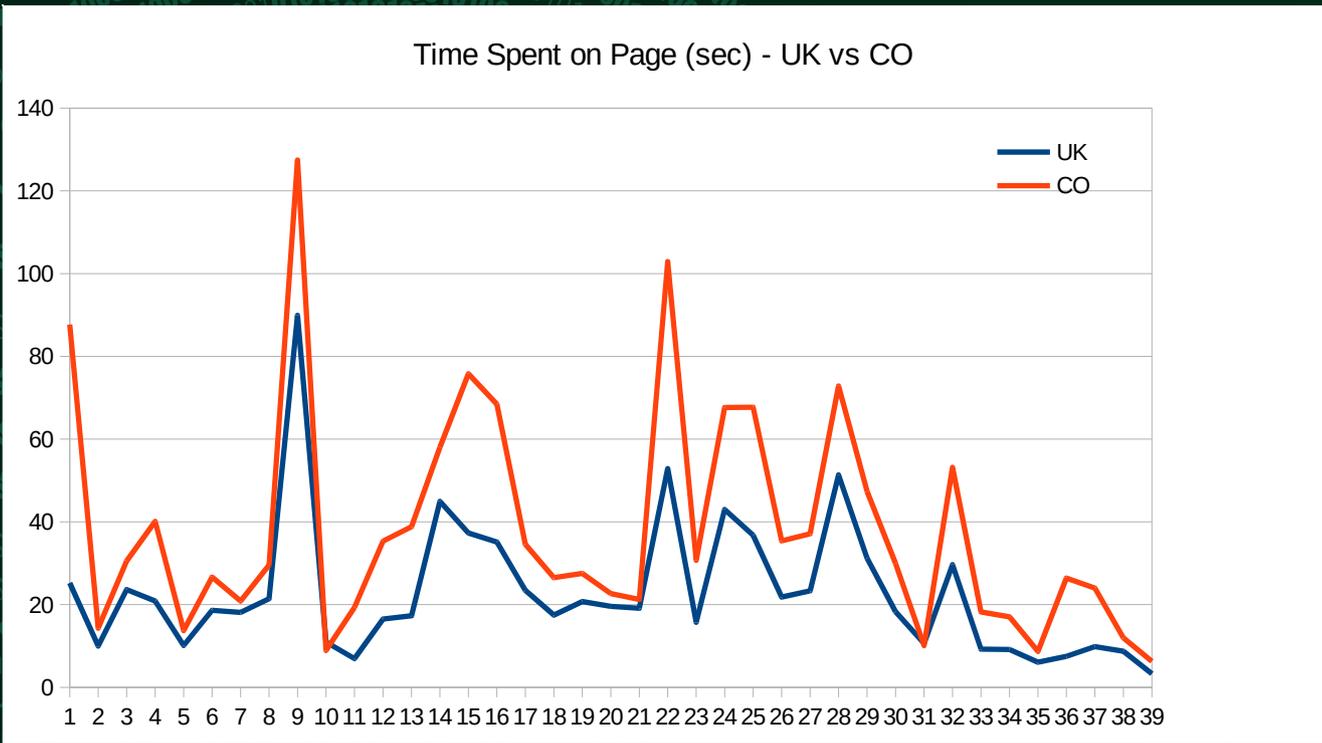


Survey Start Hour In local 24 hour period



Supporting Method – Diurnal Activity





Method 2 – Reading Speed Correlation



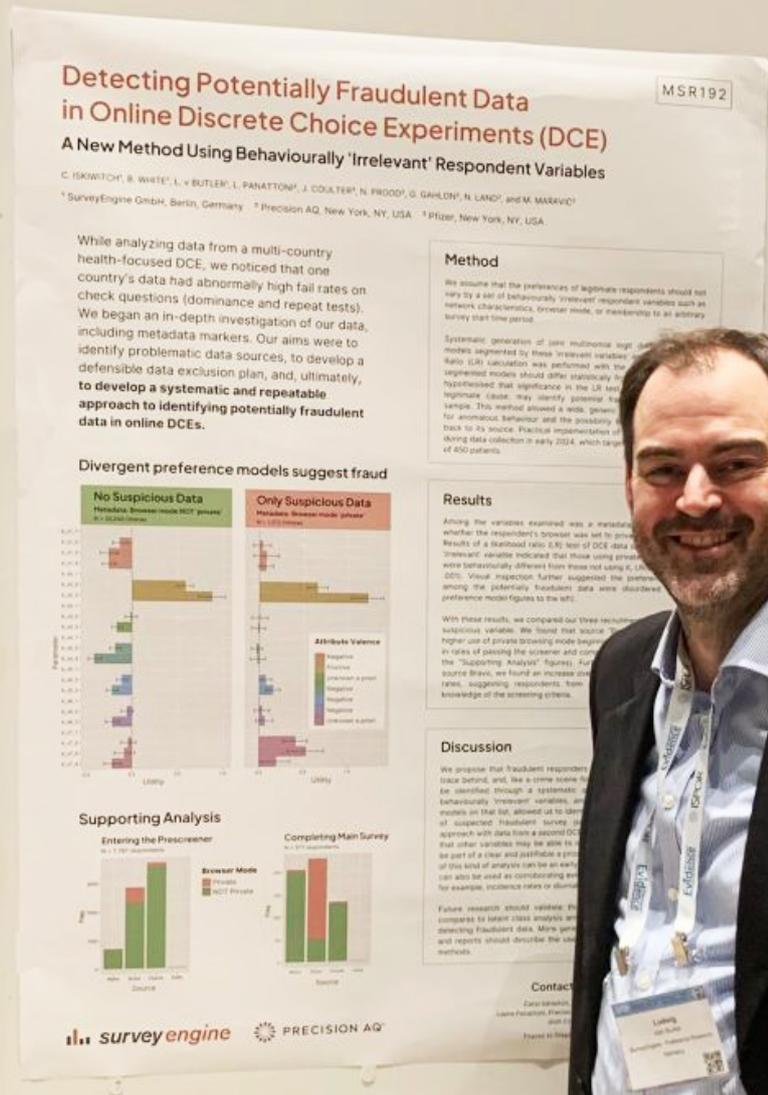
DCE's are extremely sensitive to choice behaviour.

'Irrelevant Segmentation' reveals anomalous behaviour.

Don't expect behaviour to change by browser mode, panel or survey wave.

DCE's are the most powerful method we currently have against fraud.

Irrelevant Segment Modelling



syreo
Research Institut

CREATING E
TO CAPTURE

INTRODUCTION

- A significant part of global public health
- Healthcare systems continue to face
- The current understanding of the
- Two hundred components linked to
- Systemic research on
- Corresponding author: jkiss.j

OBJECTIVES

- US Healthcare technology, National
- Bring together to the age of AI
- build a knowledge
- work across information

CONTACT

Caro Wenzel
Lead Product, Precision

PRECISION AQ

PRECISION AQ



Fraud is often concentrated by panel.

Partners increase the fraud rate.

Reputable panels at risk.

Fraud occurs late in fieldwork.

IR should not increase.

Two panel are better than one.

Prepare for real-time quality reporting.

Delay payment until data is signed off.



Takeaways



- ◆ Realtime behaviour model estimation
- ◆ IR check
- ◆ Diurnal check
- ◆ Reading speed correlation
- ◆ VPN lookup
- ◆ Browser mode check
- ◆ Fingerprinting
- ◆ Domain specific literacy questions
- ◆ Trap questions
- ◆ Captcha's



Toolkit



Q & A

Thank You

Follow SurveyEngine LinkedIn
page for our latest
developments and updates!

