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# Modeling interaction traces of an online panel: From raw interaction traces to actionable indicators: lessons learned

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# Modeling interaction traces of an online panel

**From raw interaction traces to actionable indicators: lessons learned**

8th European Survey Research Association conference July 2019, Zagreb

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## **— ELIPSS : Longitudinal Study by Internet for the Social Sciences**

- Probability-based online panel
- Monthly questionnaires designed by researchers
- Device and internet access provided to panel member
- Around 2400 panel members in June 2019

## **Panel ELIPSS, bonjour**

- Methodological corpus to standardize processes
- Different layers of processes over the years
- Recording of every interactions and/or actions
- Incident ticket tracking and follow up calls

# Panel management system

- In-house tool
- ELIPSS identification
- Contact information
- Password modification

ELODIE PETORIN\_STAFF2 • 9999216

[MATÉRIEL](#) [ÉDITER](#) [DÉSACTIVER](#) [CHANGER MDP](#)

**Données générales**

Date naiss. 19 octobre 1983 - 35 ans

Sexe Femme

Address Chemin des Hirondelles  
17000, LA ROCHELLE

**Coordonnées**

Tél. fixe 01 45 49 59 59

Mobile 07 62 01 68 85

Tél. pro N.D.

Courriel elodie.petorin@sciencespo.fr

Groupes	invi-enquête
Tx rép	1/32 (3%)
Dern enq	14 déc. 2017
Coord	Oui
Tickets	0 / 3
Relance	R0 ▶
IMEI	354438070050137
Identifiant Xenmobile	s0007
Dernière authentification	27 septembre 2018 18:17
Tél. tablette	0762016885
Jours d'absences	0
Femto	Non

Charlotte Montcharmont 02 Nov 2017  
! Relance Phone Ticket : MR :

Élodie Pétorin 30 Oct 2017  
Tablette : Bonjour Mme Maho, Nous sommes conscients de certains signes de fatigue de notre matériel et nous excusons pour le désagrément. Nous pouvons bien sur vous changer le matériel contre une tablette neuve. Pouvez-vous nous confirmer que votre adresse postale est bien 82d, rue General de Gaulle 56 100 LORIENT ? Bien à vous. Elodie pour l'équipe ELIPSS

ROSINE MOUGUE NGADEU 29 Oct 2017  
Tablette : Cette tablette est très désagréable dans son fonctionnement..elle est très lente

Kevin Boudelle 23 Nov 2016  
! Phone call in : elle appelle pour dire que l'enveloppe est ouverte mais que la tablette est bien dans le carton. Je lui dit d'accepter le colis

Geneviève MICHAUD 09 Nov 2016  
! Lettre 3 Id lot 1 : Envois du courrier Lettre 3 Id lot 1

→ Which panel manager

→ The date

→ What kind of interaction

→ The call outcome

→ Which panel manager

( 74 ) TICKETS OUVERTS À APPELER ( 0 ) TICKETS OUVERTS APPELÉS

1455 - [REDACTED] Suspension **Charlotte Montcharmont**

1486 - [REDACTED] Connectivité **Elodie Petorin**

Mobile: [REDACTED]  
Fixe: [REDACTED]  
Liens Profil Tickets ( 1 / 4 ) Connectivité

Issue de l'appel:  
Contact téléphonique

Commentaire :  
Contact téléphonique : |

**ENREGISTRER**

HISTORIQUE DES RELANCES

Date	Type	Issue	Commentaire	Appelant
2019-06-11 12:08:15	TICKET	--	Pas d'appel :	elodie.petorin
2019-06-18 14:32:32	TICKET	--	Pas d'appel : attente retour BT	elodie.petorin
2019-06-25 14:55:35	TICKET	--	Pas d'appel :	elodie.petorin
2019-07-02 11:31:30	TICKET	--	Pas d'appel :	elodie.petorin

The date

9999216 - PETORIN\_STAFF2 ELODIE

09 Jul 2019 → 09 Jul 2019 (6)

Tablette cassée (Cassé)



Label

Cassé

Statut du ticket

En cours

VALIDER

élodie.pétorin  
return package number : 8R41605666734

09 Jul 2019

Cassé X

élodie.pétorin  
Phone call : I explain to the panelist the broken tablet procedure

09 Jul 2019

Cassé X

élodie.pétorin  
Received by email : My tablet was on the table and my cat pushed it, it fell o the ground. I'm sorry but the screen is broken now. How do we proceed ?

09 Jul 2019

Cassé X

élodie.pétorin  
imei : 354438070050137

09 Jul 2019

Cassé X

- Incident reason
- Resolution Step
- Contact type
- Interaction abstract





Vacances  
Du 14 juin 2019 au 07 juillet  
2019 (3 semaines, 2 jours)  
Accepté(e) le 13 mai 2019 17:23 par  
charlotte.montcharmont

Jours d'absences	23
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JUNE 2019 today

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

- Absence period
- Acceptance date
- Unavailability reason
- How many days in the panel lifetime

## **Some indicators**

as of March 2019

- 76 surveys
- 3 556 panelists (2400 still active)
- 25 000 phone calls
- 510 000 messages (sms, in app, push)
- 5 800 tickets
- 4 500 follow up letters
- 6 million survey paradata records

# — Panel management: what impact on response behaviour

**Our intuition:** resources allocated for panel management have a large impact on response rate and panel attrition.

## **Stakes:**

- Review the practices + tools developed for each need
- Cleanse our large / old database tables
- Publish an exploitable dataset
- Eventually learn from our design choices

## Interaction traces as a dataset

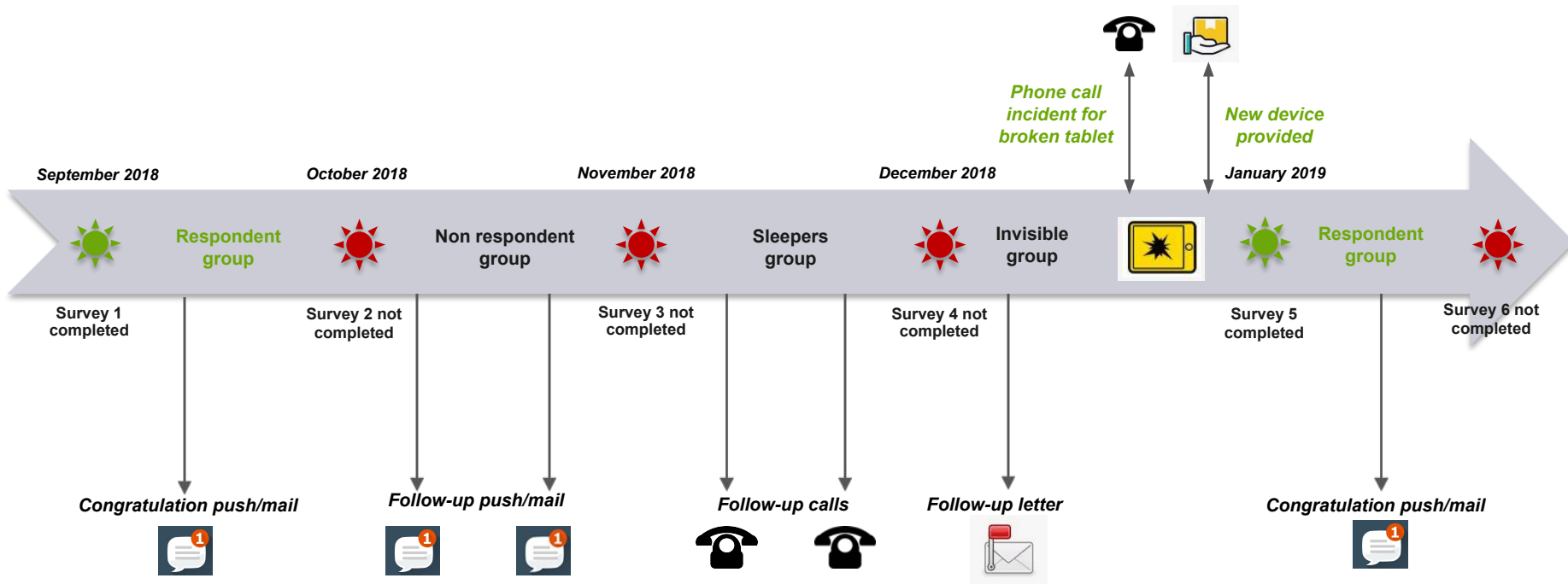
**Our choice:** produce two distinct atomic timelines:

- The set of events between a panelist and the panel management system
- The set of events between a panelist and the surveys

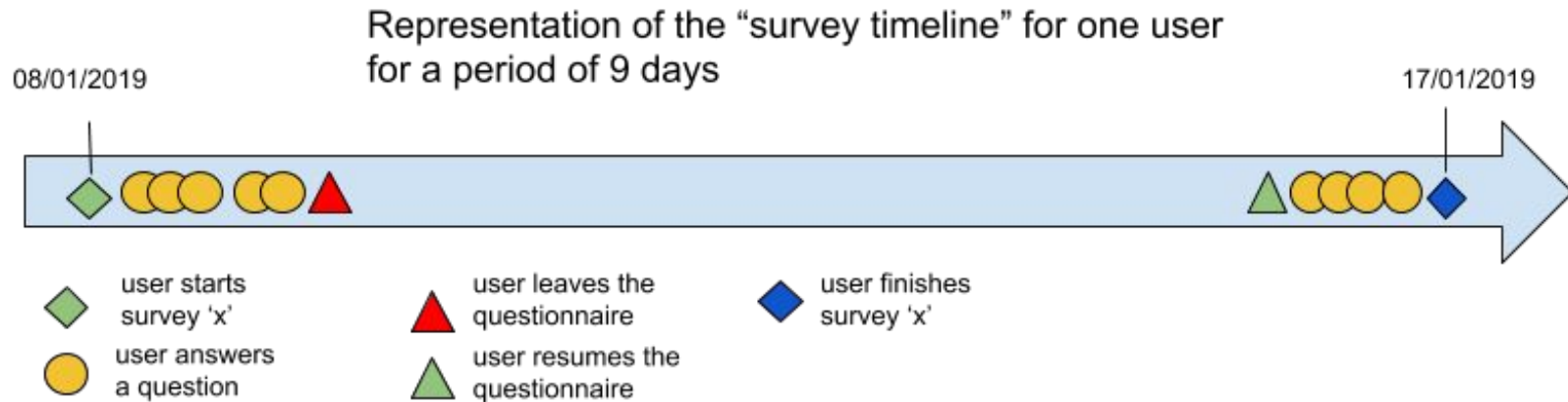
### Event types

- 'Easy' to build: follow-ups, incidents, phone call motive, survey interactions...
- Hard to build: messages → laborious parsing

# Panelist timeline



# — Survey timeline

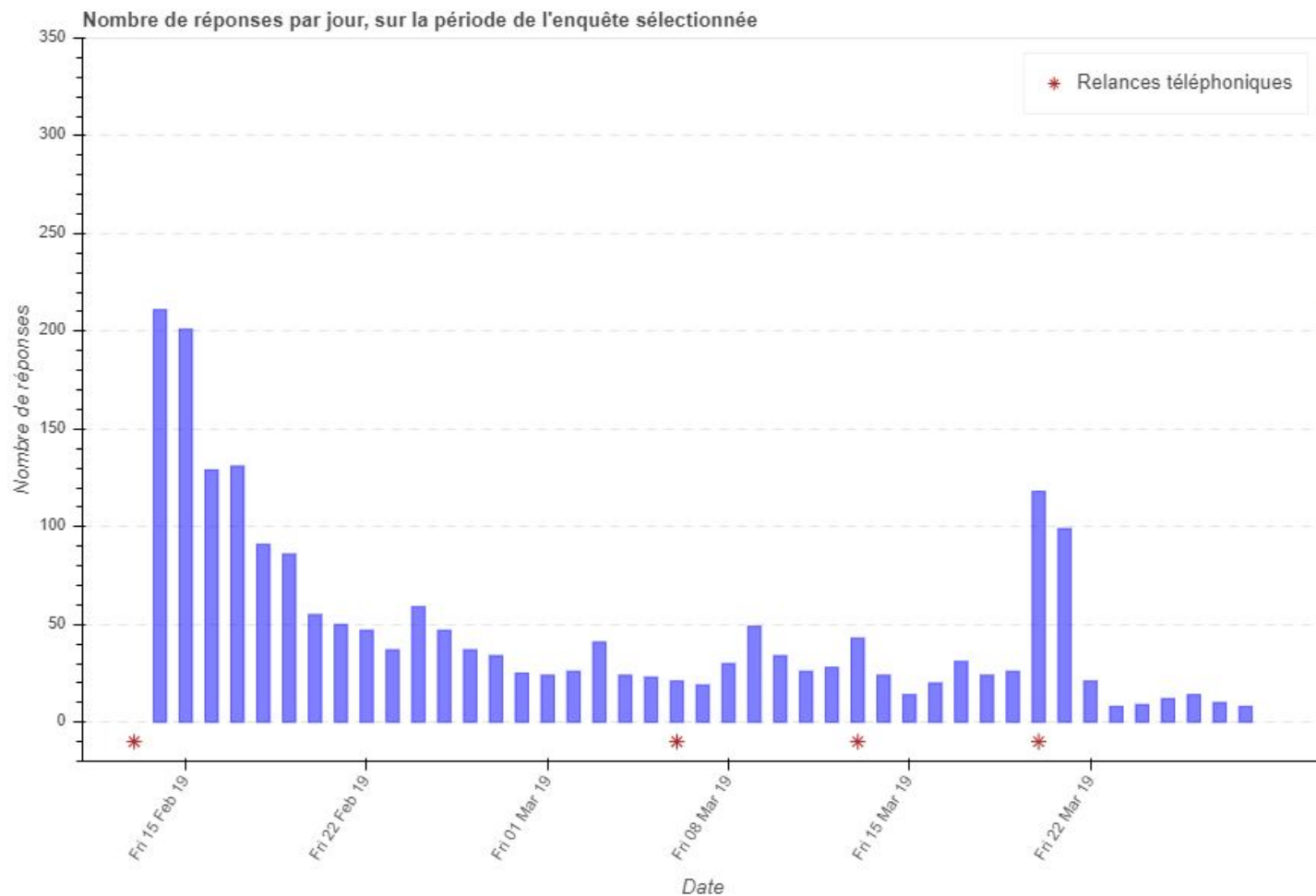


## From raw to derived traces

Combined together, enhanced with panelist demographics, raw data become meaningful

### **Questions:**

- What parameters influence response rates/behaviors and how?
- Can we identify standard profiles that inform us on response behavior?
- Do we have more leverage on certain group of people?





# — Work in progress

## Regarding the publication of the dataset:

- Establishing which interactions to keep ✓
- Building a dataset based on the interactions corpus ✓
- Documentation ✗
- Integrating panelists socio-demographic data ✗

## Lessons learned

- On general strategies
  - ◆ More A/B testing throughout the panel lifespan
- On a development/database perspective
  - ◆ change of people + change of practices → inhomogeneous data
- On in-app tools improvements
  - ◆ incident ticket tracking → missing information about the panelist contact mode

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Thank you!

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