

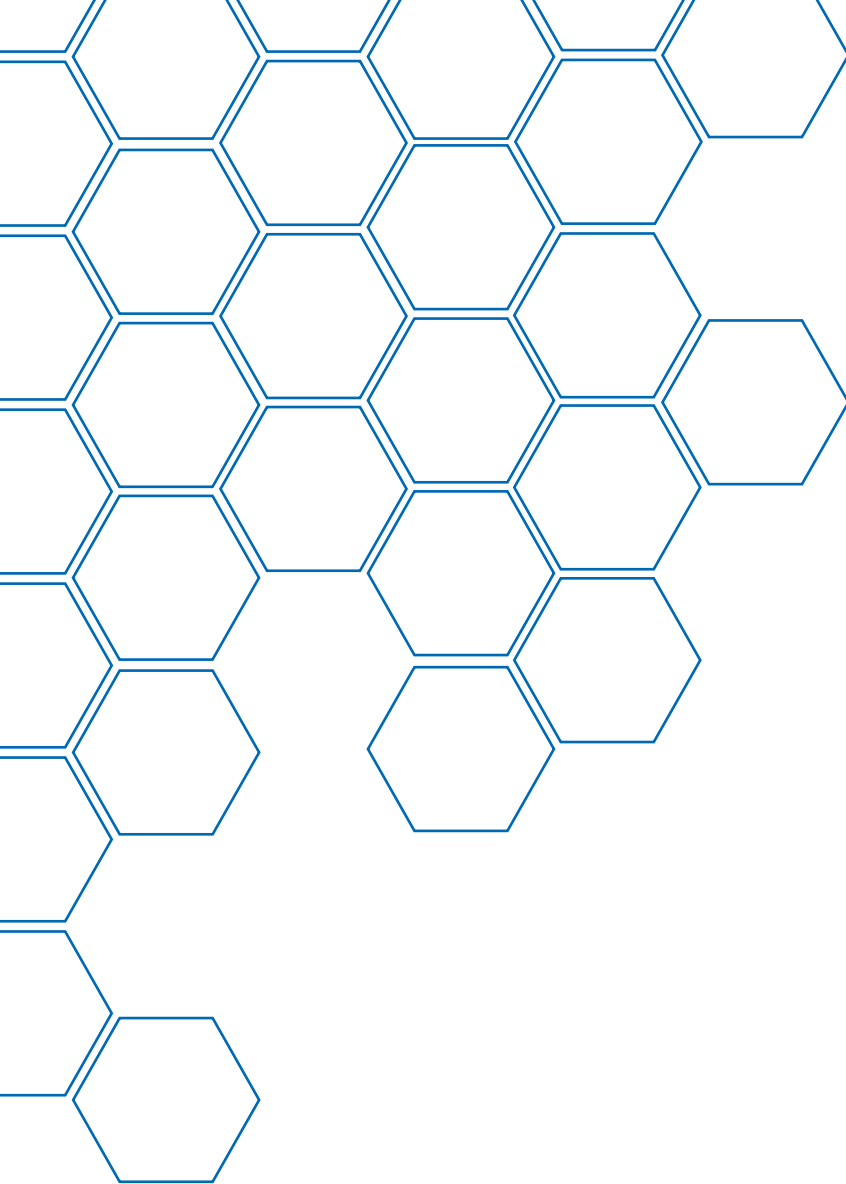


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**GOR**

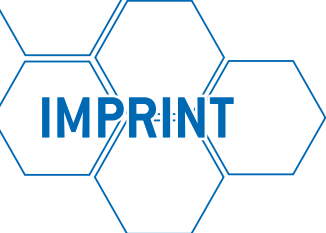
19<sup>TH</sup> GENERAL ONLINE RESEARCH CONFERENCE  
15 – 17 MARCH 2017 IN BERLIN



Cathleen M. Stützer, Otto Hellwig, Oliver Tabino, Meinald Thielsch, Alexandra Wachenfeld-Schell (Eds.)

## **19<sup>th</sup> GENERAL ONLINE RESEARCH CONFERENCE**

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Cathleen M. Stützer, Otto Hellwig, Oliver Tabino, Meinald Thielsch, Alexandra Wachenfeld-Schell  
(Eds.)

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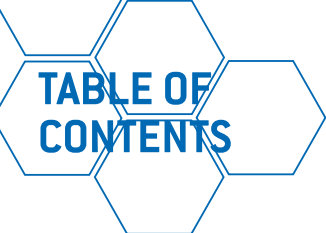
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CAMPUS TRESKOWALLEE  
TRESKOWALLEE 8, 10318 BERLIN



# DEAR GUESTS OF THE GOR 2017!

It is a great pleasure for us to welcome you all to the 19th General Online Research conference.

We're proud to welcome our guests for the first time in Berlin. We are convinced that Berlin as a venue of the GOR 17 is a good decision for three reasons: we are celebrating 20 years of GOR (the first GOR conference took place in 1997) and what place could be more suitable to celebrate online research than Berlin, which is the centre of one of the largest and most diverse scientific regions in Europe and at the same time the unofficial capital of the German digital scene. Secondly, one of the main topics of this year's conference is electoral research, because it's an important election year in which the 19th Bundestag, based in Berlin, is elected. Thirdly, Berlin is simply a wonderful city full of history and stories. For these reasons, we are very happy to host this year's GOR in cooperation with Berlin's largest university of applied science HTW in the German capital.

We again have a great conference programme lined up for you which includes keynotes, presentations, posters and awards. You can choose from four different conference tracks: Track A covers Internet Surveys, Mobile Web and Online Research Methodology. Track B covers Big Data and Data Science. Track C features Electoral Research and Political Communication and Track D gives insights in advances in applied online research and is jointly organized with marktforschung.de. In addition, we have three award competitions: i) the GOR Best Practice Award 2017 for the best practice study from applied online research, ii) the GOR Thesis Award 2017 for the best thesis (bachelor, master and PhD) in online research and iii) the GOR Poster Award 2017 for the best poster at the conference.

We are very much looking forward to this year's keynotes: On Thursday, 16 March 2017, Patrick Sturgis (Professor of Research Methodology in the Department of Social Statistics at the University of Southampton and Director of the ESRC National Centre for Research Methods (NCRM)) will share his insights from chairing the British Polling Council's and the Market Research Society's joint inquiry into the 2015 British general election opinion polls in his keynote "The Failure of the Polls: Lessons Learned from the 2015 UK Polling Disaster". On Friday, 17 March 2017, Prof. Dr. Bernad Batinic (head of the Department of Work, Organizational and Media Psychology (AOM) at the

University of Linz, Austria, and one of the founders of DGOF as well as the GOR conference series) will give us an overview of these past 20 years of online research as well as an outlook on what is still to come in his keynote titled "Celebrating 20 years of GOR: The Past, Present and Future of Online Research".

This year's panel discussion hosted by Prof. Horst Müller-Peters will focus on the methodological challenges political opinion polling is currently facing. Experts from academia as well as polling companies will discuss this topic. Moreover, they will hopefully outline options as to how valuable research can further be done in this area.

On the pre-conference day, Wednesday, 15 March 2017, it's workshops. This year four workshops cover various topics relevant to online researchers ranging from data science to data protection.

Wednesday night's get-together is this year taking place in collaboration with The Research Club and Thursday night is party-time. The former will take place on Wednesday evening after the DGOF members meeting at the Riva Bar and the GOR Party 2017 opens its gates on Thursday from 8 pm at the Kosmetiksalon Babette.

We are particularly grateful for the enthusiastic support and collaboration of long-standing DGOF member and GOR participant Prof. Dr. Holger Lütters and his team. We would also like to thank our programme partner marktforschung.de and everyone else who helped us putting the GOR conference programme together as well as our sponsors and media partners. And, of course, a big THANKS to you, the conference participants, presenters and speakers at this event!

Have a great time at the General Online Research conference 2017!

Dr. Otto Hellwig  
Chair DGOF Board and  
Conference Chair

Dr. Cathleen M. Stützer  
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THE DGOF BOARD CONSISTS OF FIVE MEMBERS ELECTED BY THE MEMBERSHIP FOR A TERM OF TWO YEARS

# ABOUT DGOF – DEUTSCHE GESELLSCHAFT FÜR ONLINE-FORSCHUNG E. V.

### Who we are:

The German Society for Online Research (Deutsche Gesellschaft für Online-Forschung e.V./DGOF) is an association specializing in online research. Online research is an extremely innovative research area comprising not only the classical fields of online research methods but also mobile and social media research.

We represent our members' interests by further developing guidelines in order to secure the quality of such research.

We share information on new methods and ideas in online research and give access to innovations in this field.

We connect people interested in online research and offer platforms where interdisciplinary dialogue and discussion on this topic can take place.

We bring forward online research and online researchers through financial support and competitions and awards.

The DGOF board consists of five members and is elected for a term of two years: Dr. Otto Hellwig (respondi AG), chairman of the board; Dr. Cathleen Stützer (Johannes Gutenberg University Mainz), deputy chairwoman; Oliver Tabino (Q | Agentur für Forschung GmbH), deputy chairman; PD Dr. Meinald Thielsch (University of Münster), deputy chairman; and Alexandra Wachenfeld-Schell (forsa), deputy chairwoman.

### What we do:

- Current developments in online and mobile research are discussed at our General Online Research conference and at our local events called Research plus.
- We give online researchers a chance to present their work and ideas to other researchers at our events and through our publications (DGOF book series and DGOF White Papers).
- We support best practice studies and research projects financially and through competitions and awards.
- We facilitate contact between academic online-researchers and those working in applied market research, so they can develop

projects together. By doing this we also foster a critical dialogue between academic and applied research.

- We support young online researchers by organizing PhD-workshops and financial support for dissertations and facilitate contact between potential employers and employees.
- We develop and publish guidelines and standards for quality assurance in online research. We do this in cooperation with the other market research associations.
- We support the public awareness campaign of the Initiative für Markt- und Sozialforschung (IMSF) in its quest to inform citizens about good practices in market and social research. We are one of the founding members of the initiative.

### Who are our members?

Our members work either in market research or at scientific institutions – or they might just be interested in online research without working in this field.



DGOF

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[www.gor.de](http://www.gor.de)

[www.researchplus.de](http://www.researchplus.de)



## ALEXANDRA WACHENFELD-SCHELL

Alexandra Wachenfeld-Schell is managing director of forsa.main, a full-service institute specialized in market, media, social, and online research, election and political surveys. She has broad experience in the field of quantitative market and social research questions. She started as a project manager at LINK Institut 18 years ago. In her role as research director she was responsible for the development of strategy, marketing and business development in terms of online research and the methodical monitoring of the completely active recruited (by representative telephone interviews) LINK online panel over the past 10 years.

Her research focuses on online and methodological research, which she presents as a welcome guest speaker at online research events like M-Motion-day, GOR and Research & Results. She is member of the DGOF board since March 2013.



## DR. OTTO HELLWIG

Dr. Otto Hellwig has been the CEO of respondi AG since the company's foundation in 2005. He has been working in the field of market and social research since the early 90s. Dr. Hellwig has a degree in Social Science, Psychology and Media Studies. He worked as a researcher for a number of years at the Institute for Applied Social Research at the University of Cologne and gained his doctorate in 2000. Since March 2013, Otto Hellwig is Chairman of the DGOF Board.



## PD DR. MEINALD THIELSCH

PD Dr. Meinald Thielsch is a Postdoc („Akademischer Rat“) at the Westfälische Wilhelms-University Münster, Department of Psychology, Germany. He accomplished his Ph.D. and his habilitation in psychology in Münster. His main working and research interest are in the areas of human-computer interaction and user experience as well as applied research, science-practice-transfer and online research. Meinald Thielsch is member of the DGOF board since 2014. Further information can be found at [www.meinald.de](http://www.meinald.de).



## OLIVER TABINO

Oliver Tabino is CEO of Q | Agentur für Forschung GmbH, Mannheim and Paris based market research and social media research specialists. He is lecturer for Social Media Research at the AACSB accredited Pforzheim University and published several articles about market research and social media. He is Co-Founder of the „mafolution“, an independent grassroots platform for market and social researchers and initiator of the „I love Mafo“-Blog. Since March 2013, Oliver is member of the DGOF board.



## CATHLEEN M. STUETZER

Dr. Cathleen M. Stützer is a Postdoc at the Institute for Sociology at Johannes Gutenberg University Mainz, Germany. She earned her doctoral degree in educational sciences in the field of academic analytics and graduated in the field of industrial management and communication sciences. Her working interests are the establishment and enhancements of computational social science in academia. Her current research is related to the implementation of analytical methods for data extraction in (large scale) online networks and the construction of identities on the web. Since 2015, she is member of the DGOF board and the programme chair of the annual GOR conference.





# WELCOME TO BERLIN, WELCOME TO HTW BERLIN!

Dear online researchers,

Welcome to Berlin, Welcome to HTW Berlin!

We are the proud host of this annual meeting of the German Society for Online Research. For the 19th General Online Research (GOR) conference we are hosting more than 300 researchers from more than 30 countries. It took the online research community 20 years to finally come to Berlin. Your choice of HTW Berlin is a choice for the biggest university of applied sciences in eastern Germany. With almost 14.000 students coming from all across the world we offer a broad variety of study programmes at bachelor and master level.

May HTW Berlin become the perfect place for a meeting of academic and professional researchers during the 3 days of your meeting in our premises. The spirit of modern research is one of HTW Berlin's missions. It shall inspire you and the whole GOR community to keep us in mind and return to HTW Berlin one day.



**PROF. DR. KLAUS SEMLINGER**  
President of HTW Berlin University of Applied  
Sciences

Prof. Dr. Klaus Semlinger |  
President of HTW Berlin University of Applied Sciences

**htw**

Hochschule für Technik  
und Wirtschaft Berlin

University of Applied Sciences





# WELCOME AND ENJOY GOR 17 @ HTW BERLIN

I personally attended my first GOR in 2001 as a PhD student. At that time the name was still German Online Research and it was a meeting of people from different academic backgrounds, who were looking for research partners in very new fields of the online research landscape. Very impressed by that rather unconventional form of exchange, I became a member of DGORF (German Society for Online Research). Since then GOR has always been a highlight in my personal academic year. After two decades of organized online research GOR is still the place that academics and professional researchers frequent to share knowledge independently from their background. You will have the chance to meet academic or professional online researchers. They all join the conference with a dedicated willingness to share their learnings in a permanently developing field of research. Hoping that GOR 17 will keep and grow the spirit of all previous General Online Research conferences here at HTW Berlin.

Welcome and enjoy GOR 17 @ HTW Berlin

Holger Lütters |  
Professor of International Marketing,  
HTW Berlin University of Applied Sciences



**PROF. DR. HOLGER LÜTTERS**  
Professor of International Marketing,  
HTW Berlin University of Applied Sciences

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# PROGRAMME OVERVIEW



## WEDNESDAY, 15/03/2017

12:00	<b>BEGIN CHECK-IN</b>
14:00 – 17:00	<p><b>WS 1: Online customer journey analysis: a data science toolbox</b> Denis Bonnay   respondi SAS, France</p> <p><b>WS 2: Kognitives Pretesting</b> Cornelia Neuert   GESIS, Germany</p> <p><b>WS 3: Surveys vs. Web Monitoring: Web crawled Data: Opportunities for getting Market Information and User Behaviour. A replacement for classical market research methods or an addition?</b> Herbert Schuster   Innoplexia GmbH, Germany</p> <p><b>WS 4: Grundzüge des Datenschutzrechts und aktuelle Datenschutzprobleme in der Markt- und Sozialforschung</b> Andrea Schweizer   Kanzlei Prof. Schweizer Rechtsanwaltsgesellschaft mbH, Germany</p>
17:15 – 19:30	<p><b>DGOF members meeting</b> Chair: Otto Hellwig   respondi AG / DGOF, Germany</p>
18:30 – 23:00	<p><b>The Research Club: GOR Pre-Conference Networking Reception</b> Location: Riva Bar, Dircksenstr. 142, 10178 Berlin Registration: <a href="http://theresearchclub.com">http://theresearchclub.com</a></p>

## THURSDAY, 16/03/2017

8:00	<b>BEGIN CHECK-IN</b>
9:00 – 10:15	<p><b>Opening &amp; Keynote 1: The Failure of the Polls: Lessons Learned from the 2015 UK Polling Disaster</b> Keynote Speaker: Patrick Sturgis   University of Southampton &amp; ESRC National Centre for Research Methods (NCRM), United Kingdom</p>
10:15 – 10:45	<b>BREAK</b>
10:45 – 11:45	<p><b>A2: Adapting Online Surveys for Mobile Devices</b></p> <p><b>B2: Tracking and Data Collection</b></p> <p><b>C2: Dynamics of Public Opinion</b></p> <p><b>D2: GOR Best Practice Award 2017 Competition I</b></p>
11:45 – 12:00	<b>BREAK</b>
12:00 – 13:00	<p><b>A3: Representativeness of Online Panels</b></p> <p><b>B3: Monitoring, Ethics and Privacy</b></p> <p><b>C3: Political Participation</b></p> <p><b>D3: GOR Best Practice Award 2017 Competition II</b></p>
13:00 – 14:00	<b>LUNCH BREAK</b>
14:00 – 15:30	<p><b>Panel Discussion: What's the matter with political polling?</b></p> <p><b>Poster Session</b></p>
15:30 – 15:45	<b>BREAK</b>
15:45 – 16:45	<p><b>A5: Measurement in Mobile Web Surveys</b></p> <p><b>B5: GOR Thesis Award 2017 Competition: Dissertation</b></p> <p><b>C5: Campaign Strategies</b></p> <p><b>D5: AI, Virtual Reality &amp; Big Data Analytics – Research Innovation in Belgium</b></p>
16:45 – 17:00	<b>BREAK</b>
17:00 – 18:20	<p><b>A6: Satisficing in Web Surveys</b></p> <p><b>B6: GOR Thesis Award 2017 Competition: Bachelor/Master (ends 18:00)</b></p> <p><b>C6: Mobile Web Surveys: Device Effects</b></p> <p><b>D6: Bitte anschnallen! Agiles Projektmanagement beschleunigt die Marktforschung (endet 18:00)</b></p>
20:00	<p><b>GOR - Party</b> Location: Kosmetiksalon Babette, Karl-Marx-Allee 36, 10178 Berlin The GOR Best Practice Award 2017 will be awarded at the Party! Drinks and fingerfood included in the ticket price. You need a valid ticket for the party. Your party ticket is included if you have a conference ticket for all days or a day ticket for Thursday! No tickets at the door.</p>

## TRACK TOPICS

- A: Internet Surveys, Mobile Web and Online Research Methodology**  
sponsored by Bright Answer
- B: Big Data and Data Science**  
sponsored by respondi
- C: Electoral Research and Political Communication**
- D: Applied Online Research (Angewandte Online-Forschung)**  
in cooperation with marktforschung.de



## FRIDAY, 17/03/2017

8:30	<b>BEGIN CHECK-IN</b>
9:00 – 10:00	<b>A7: Measurement in Web Surveys</b> <b>B7: Consumer Perception Analysis</b> <b>C7: Predicting Electoral Behaviour and Electoral Outcomes</b> <b>D7: Von Big Data bis zur e-Partizipation: Innovative Online-Methoden in der Stadt- und Verkehrsforschung</b>
10:00 – 10:15	<b>BREAK</b>
10:15 – 11:00	<b>Keynote 2: Celebrating 20 years of GOR: The Past, Present and Future of Online Research</b> Keynote Speaker: Bernad Batinic   Johannes Kepler University of Linz, Austria
11:00 – 11:30	<b>Award Ceremonies</b>
11:30 – 11:40	<b>BREAK</b>
11:40 – 13:00	<b>A9: Interactive Features and Innovations in Web Surveys</b> <b>B9: Online Indicators of Real-World Behaviour</b> <b>C9: Political Online Communication</b> (ends 12:40) <b>D9: Miteinander oder nur nebeneinander?</b> <b>Das Verhältnis von akademischer zu angewandter Markt- und Sozialforschung</b> (endet 12:40)
13:00 – 14:00	<b>LUNCH BREAK</b>
14:00 – 15:00	<b>A10: Smartphone Trends</b> <b>B10: Innovations in Market Research</b> <b>C10: Televised Debates</b> <b>D10: Mobile Research im Kontext der digitalen Transformation</b>
15:00 – 15:15	<b>BREAK</b>
15:15 – 16:15	<b>A11: Increasing Response in Web Surveys</b> <b>B11: Data Science in Online Marketing</b> <b>C11: Respondent Motivation</b> <b>D11: Predicting Psychological Traits through Digital Footprints</b>

## TRACK TOPICS

- A: Internet Surveys, Mobile Web and Online Research Methodology**  
sponsored by Bright Answer
- B: Big Data and Data Science**  
sponsored by respondi
- C: Electoral Research and Political Communication**
- D: Applied Online Research (Angewandte Online-Forschung)**  
in cooperation with marktforschung.de

# Wer groß werden will

muss klein  
anfangen.



Als wir und die Onlineforschung noch in den Kinderschuhen steckten. Und vielleicht nicht jeder daran geglaubt hat, wuchs die Überzeugung in uns, dass dieser Forschungsbereich ein ganz großer werden wird. Heute, 20 engagierte Jahre später sind wir beide erwachsen. Fest etabliert und reichlich erfahren. Geblieben aber ist unsere kindliche Neugierde und der Antrieb Marktforschung und ihre Methoden kritisch zu hinterfragen, um sie und uns noch besser zu machen. Denn wir alle wachsen mit unseren Erkenntnissen.





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# WORKSHOPS



# WORKSHOP 1

## ONLINE CUSTOMER JOURNEY ANALYSIS: A DATA SCIENCE TOOLBOX

**Time:** Wednesday, 15/Mar/2017: 14.00 – 17.00

**Instructor:** Denis Bonnay (respondi SAS, France)

**Workshop language:** English

Passive metering provides a direct access to consumers' online behavior. This wealth of unfiltered data is rife with opportunities but it also challenges traditional data analysis, because it is novel in kind and big in volume. In this workshop, I will focus on the analysis of a specific sort of such data, namely online customer journeys. What do customers do [online] before they buy [online]? What are the typical paths which lead to the online purchase of a given category of products? Can these paths be made sense of purely on the basis of online behavior? This is not completely new: weblogs of commercial websites, online touchpoints and referral data have been used to provide valuable insights into purchase paths. But access to the entirety of navigation data offers new perspectives and new challenges, because the nature of events is open-ended – all urls might be on the way, all paths are open. My aim will be to present and discuss the various strategies that are available to tackle this wilderness, both in terms of which data is used and which analyzing techniques are appealed to. Regarding data, salient issues concern the definition of the journey (eg: how far back before the purchase?) and the amount of pre-treatment (website categorization). Regarding analysis, the main options

concern the reckoning of time (flat analysis versus sequences or timed series) and navigation (history dependent or history free paths), and model free or model based analysis (eg in terms of how influence, information and action get combined). We will consider in particular the application of traditional clustering techniques, sequence based clustering and process mining.

### About the instructor

Denis Bonnay is in charge of data science at respondi, where he is dedicated to developing research methodologies for the new kind of data market researchers have access to, in particular behavioral data. He is also a lecturer in Philosophy at Université Paris Ouest Nanterre, doing research on logic, philosophy of science and philosophy of statistics. He was also a founder and director of data science at House of Common Knowledge. A former student at Ecole Normale Supérieure (Paris), he has a MSc in Logic & Foundations of Computer Science (Université Paris VII) and a PhD in Philosophy of Science (University Paris I).

# WORKSHOP 2

## KOGNITIVES PRETESTING

**Time:** Wednesday, 15/Mar/2017: 14.00 – 17.00

**Instructor:** Dr. Cornelia Neuert (GESIS, Germany)

**Workshop language:** German

Der Workshop vermittelt die grundsätzliche Bedeutung und Relevanz von Fragebogenpretests im Rahmen von Umfrageprojekten und gibt einen Überblick über traditionelle Pretestverfahren (Expert Review, Kognitives Interview) und ihre Weiterentwicklungen (Web-Probing, Eyetracking). Herausgearbeitet und diskutiert werden vor allem die Vor- und Nachteile der einzelnen Methoden, ihre spezifischen Anwendungsfelder sowie ihre Kombinationsmöglichkeiten.

### About the instructors

Cornelia Neuert ist Senior Researcher im Bereich Fragebogen-Pretesting bei GESIS. Ihre Schwerpunkte liegen in der Beratung und Durchführung kognitiver Pretests (u.a. für ISSP, SHARE, PIAAC-L) und in der Bewertung und Weiterentwicklung kognitiver Pretestverfahren, insbesondere der Einsatz von Eyetracking zur Evaluation von Fragen.





## WORKSHOP 3

### SURVEYS VS. WEB MONITORING: WEB CRAWLED DATA: OPPORTUNITIES FOR GETTING MARKET INFORMATION AND USER BEHAVIOUR. A REPLACEMENT FOR CLASSICAL MARKET RESEARCH METHODS OR AN ADDITION?

**Time:** Wednesday, 15/Mar/2017: 14.00 – 17.00

**Instructor:** Prof. Dr. Herbert Schuster (innoplexia GmbH, Germany)

**Workshop language:** English or German

There will be given an introduction to methods for webcrawling with examples for web sources and for variables. Some examples of concrete problems of companies (Marketing, Sales) will be shown. We will work on the following questions with concrete examples of real data:

- What information can be extracted out of the data out of several sources?
- What concrete value can companies generate out of this data?
- How can this information be combined with data from classical market research methods?

#### About the instructor

Prof. Dr. Herbert Schuster, CEO studied Mathematics and Geography at the University of Heidelberg before starting his career at SAP AG. Together with 300 employees he built the international subsidiary eSAP and established this company in the market. After 8 years SAP Herbert Schuster shifted to Seeburger AG and became manager for the German international operative business including the sales and marketing department. Subsequently Herbert Schuster was called to the private SRH University as a professor in Business Informatics where he acted as a dean of the faculty and implemented new courses of studies academically as well as operationally (i. a. SAP Master and Game Development).

In 2010 Herbert Schuster founded the company Innoplexia together with Christian Schneider and Walery Strauch. He has been leading the successful start-up as a CEO together with Ralph Kirchhoff – supported by the best team in the world.

## WORKSHOP 4

### GRUNDZÜGE DES DATENSCHUTZRECHTS UND AKTUELLE DATENSCHUTZPROBLEME IN DER MARKT- UND SOZIALFORSCHUNG

**Time:** Wednesday, 15/Mar/2017: 14.00 – 17.00

**Instructor:** Andrea Schweizer (Kanzlei Prof. Schweizer Rechtsanwaltsgesellschaft mbH, Germany)

**Workshop language:** German

Der Workshop behandelt die Grundzüge des Datenschutzrechts nach dem Bundesdatenschutzgesetz (u.a. Datenschutzbeauftragte, Einwilligung, Auftragsdatenverarbeitung, Datenaustausch mit Auslandsbezug) und gibt einen Ausblick auf die EU-Datenschutz-Grundverordnung.

#### About the instructor

Frau Andrea Schweizer ist Rechtsanwältin und geschäftsführende

Gesellschafterin der Kanzlei Prof. Schweizer Rechtsanwaltsgesellschaft mbH in München. Sie hat an der LMU, München, und am University College, London, Jura studiert. Frau Schweizer ist zertifizierte Datenschutzbeauftragte (DSB-TÜV) und zertifizierte Datenschutzauditorin (DSA-TÜV). Sie ist insbesondere auf den folgenden Gebieten tätig: Datenschutzrecht, Vertragsrecht, Recht der Markt- und Sozialforschung sowie der Markt- und Sozialforschung für das Recht, Europarecht, Verbraucherrecht, Arbeits- und Sozialrecht sowie Presse- und Medienrecht.

# WHAT'S THE MATTER WITH POLITICAL POLLING?

**Time: Thursday, 16/Mar/2017: 14:00 - 15:30**

For many years election polls were extraordinarily accurate. They may still have value, but appear no longer able to reliably predict which candidate or party will get the most votes on election day as was seen, for instance, in the UK general election of 2015 and now in the US presidential election of 2016. It is important to understand why this has changed, bearing in mind that this is a global phenomenon. Moreover, it is crucial to find either a new methodology for polling to conduct accurate survey research in the future or effective ways to improve existing methods to do so.

## Panellists:

- Prof. Dr. Annelies Blom (Principal Investigator of the German Internet Panel, University of Mannheim, Germany)
- Richard Hilmer (Co-Founder and CEO, policy matters, Germany)
- Dr. Peter Matuschek (Head of Social, Political, Media and Opinion Research, forsa, Germany)
- Jon Puleston (Vice President Innovation, Lightspeed, United Kingdom)
- Prof. Dr. Patrick Sturgis (Professor of Research Methodology, University of Southampton & Director of the ESRC National Centre for Research Methods, United Kingdom)
- Joe Twyman (Head of Political and Social Research, YouGov, United Kingdom)

## Discussion host:

- Prof. Horst Müller-Peters (marktforschung.de)



**PROF. DR. ANNELIES BLOM**  
Principal Investigator of the  
German Internet Panel, University  
of Mannheim, Germany



**RICHARD HILMER**  
Co-Founder and CEO,  
policy matters, Germany



**DR. PETER MATUSCHEK**  
Head of Social, Political, Media and  
Opinion Research, forsa, Germany



**JON PULESTON**  
Vice President Innovation,  
Lightspeed, United Kingdom



**PROF. DR. PATRICK STURGIS**  
Professor of Research Methodo-  
logy, University of Southampton  
& Director of the ESRC National  
Centre for Research Methods,  
United Kingdom



**JOE TWYMAN**  
Head of Political and Social Re-  
search, YouGov, United Kingdom



**PROF. HORST MUELLER-PETERS**  
marktforschung.de, Germany

## KEYNOTES

PATRICK STURGIS & BERNARD BATINIC

# PATRICK STURGIS

PROFESSOR OF RESEARCH METHODOLOGY IN THE DEPARTMENT OF SOCIAL STATISTICS AT THE UNIVERSITY OF SOUTHAMPTON AND DIRECTOR OF THE ESRC NATIONAL CENTRE FOR RESEARCH METHODS (NCRM), UNITED KINGDOM

## THE FAILURE OF THE POLLS: LESSONS LEARNED FROM THE 2015 UK POLLING DISASTER

**Time: Thursday, 16/Mar/2017: 09:00 - 10:15**

The result of the 2015 UK General Election came as a shock to most observers. During the months and weeks leading up to the 7th May, the opinion polls had consistently indicated that the outcome was too close to call and the prospect of a hung parliament appeared almost inevitable. Although there was some variation across pollsters in their estimates of the party vote shares during the short campaign, estimates of the difference between the Conservative and Labour Parties exceeded two percentage points in only 19 out of 91 polls, with zero as the modal estimate of the Conservative lead.

A feature of the 2015 election was the very high volume of polls undertaken; between 1945 and 2010 there were a total of approximately 3,000 election polls in Britain, compared to 1,942 between 2010 and 2015. This rapid expansion is almost entirely due to the emergence of opt-in internet surveys, which have massively reduced the unit cost of an interview.

In this presentation, I shall draw on the findings of the Inquiry into the British General Election opinion polls, as well as analysis of the EU referendum polls to consider what can be learned for opinion polling and survey methodology more broadly.



PROF. DR. PATRICK STURGIS

is Professor of Research Methodology in the Department of Social Statistics at the University of Southampton and Director of the ESRC National Centre for Research Methods (NCRM). He is past-President of the European Survey Research Association (2011-2015), chaired the Methodological Advisory Committee of the UK Household Longitudinal Survey (2011-2016), and is vice-Chair of the Methodological Advisory Committee of the ESS. He led the recent Inquiry into the failure of the 2015 election polls and has published widely in the areas of survey and statistical methods, public opinion and political behaviour, social cohesion and trust, social mobility, and attitudes to science and technology.

# BERNARD BATINIC

HEAD OF THE DEPARTMENT OF WORK, ORGANIZATIONAL AND MEDIA PSYCHOLOGY AND  
HEAD OF THE INSTITUTE OF EDUCATION AND PSYCHOLOGY AT THE JOHANNES KEPLER  
UNIVERSITY LINZ, AUSTRIA

**Time: Friday, 17/Mar/2017: 10:15 - 11:00**

As one of the organizers and participants of the first GOR conference in 1997, and one of those who have stayed in this field of research, I was kindly invited to deliver a keynote address - twenty years later - at the GOR conference, in March, 2017. This milestone event gives us the opportunity to look back on the success of the past, as well as an outlook on challenges in the near future.



**PROF. DR. BERNARD BATINIC**

Bernad Batinic is head of the Department of Work, Organizational and Media Psychology (AOM), founded in 2005, which is a subdivision of the Institute of Education and Psychology. Since 2007, Prof. Batinic is also head of the Institute of Education and Psychology.

Prof. Batinic studied psychology in Gießen (1995), and obtained his doctoral degree (2001) and habilitation (2006) at the University of Erlangen-Nuremberg. In 2003, he held a deputy/visiting professorship at the University of Marburg for a year, with responsibility for the Department of Work and Organizational Psychology. Since 2004, he has worked as a university professor at the Johannes Kepler University Linz. Bernad Batinic was the spokesman of the Curia of Professors of the Social and Economic Sciences and is currently a member of various commissions and committees of the University of Linz (e.g., Head of Department, member of the Studies Commission for Web Sciences, substitutionary member of the Senate).

After attaining his psychology degree, Prof. Batinic began his work on online research. He was particularly interested in the possibilities offered by the Internet as a method of data collection. As early as 1994, he conducted an online survey via Usenet, and in 1995 he published the first manual on how to use the Internet to conduct online surveys. He was a founding member of the German Society for Online Research. Bernad Batinic was probably the first researcher in the German-speaking world who implemented a survey using the World Wide Web. In addition to numerous publications, conference contributions, workshops and externally funded projects, Prof. Batinic's work has also resulted in several commercial companies, which he co-founded and helped develop through his role as supervisor, advisor or consultant. Bernad Batinic was one of the three founders of the Global Park AG (since 2012 Questback), tivian GmbH and respondi AG.

In the field of work and organizational psychology Bernad Batinic and his team focus on aspects of employment and well-being. One of their research foundations is a large, ongoing five-wave longitudinal study whose findings have been published in a number of international journals. Prof. Batinic and his team repeatedly demonstrated the mediating role of Marie Jahoda's latent benefits of work in the relationship between job characteristics and well-being.



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# GOR BEST PRACTICE AWARD 2017

Nominees for the GOR Best Practice Award 2017 come from LINK Institut (Switzerland) and APG|SGA, Allgemeine Plakatgesellschaft AG (Switzerland), InSites Consulting (Belgium) and IESEG School of Management (France), eye square GmbH (Germany) and Aktion Mensch e.V. (Germany), GapFish (Germany), pangea labs (Germany) and Mediengruppe RTL (Germany), Porsche AG (Germany), FactWorks GmbH (Germany) and Facebook Inc. (USA).

The “best practice in commercial online market research” competition was introduced at the GOR conference in 2008 and has since become an important tradition at the General Online Research Conference. The prize is awarded annually.

The winners of the award will be selected by the jury and by the audience via a survey conducted by SurveyMonkey. The award will be presented to the winners at the GOR Party on Thursday evening and the laudatory speech will be held at the GOR award ceremony on Friday.

Members of the jury are Thomas Perry (Q | Agentur für Forschung), Sabine Menzel (L'Oréal), Anke Müller-Peters (marktforschung.de) and Alan O' Malley (SurveyMonkey).

Former laureates come from Danone, InSites Consulting, Barnes & Noble, Deutsche Telekom, Facit Digital, FactWorks, GIM, MAM Baby-artikel, SKOPUS, Telekom Innovation Laboratories and Yahoo! Deutschland.

Award Sponsor:



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**THOMAS PERRY**  
Q | Agentur für Forschung,  
Jury Chair



**SABINE MENZEL**  
L'Oréal



**ANKE MÜLLER-PETERS**  
marktforschung.de



**ALAN O'MALLEY**  
SurveyMonkey

## D2 GOR BEST PRACTICE AWARD 2017 COMPETITION I

### MINORITY REPORT IN RESEARCH COMMUNITIES: THE 'PARTICIPANT' FUTURE CAN BE SEEN

**Author:** Debaere, Steven [1,2]; De Ruycck, Tom [1]; Van Neck, Sophie [1]; Coussement, Kristof [2]

**Organisation:** 1: InSites Consulting, Belgium; 2: IESEG School of Management, France

**Relevance & Research Question:** As firms recognize a Market Research Online Community (MROC) or Consumer Consulting Board (CCB) as a valuable resource for integrating external consumer knowledge into research processes, they increasingly ignore temporal interaction borders and aim for long-term collaborations. However, in the pursuit of a structural, ongoing MROC, moderators face enormous challenges for consumer insight generation, especially due to members' unconstructive behavior. Member disengagement, whether in the form of passive interaction and/or low-quality contributions, produces a shallow community with minimal activity and rotten community with inferior content, respectively. Yet MROCs tend to be characterized by an abundance (volume) of quickly expanding (velocity) multimedia (variety) member-generated data, suggesting huge opportunities to leverage this big data environment to battle member disengagement effectively and establish healthy MROCs.

**Methods & Data:** By introducing predictive analytics to MROCs, this study proposes a novel approach to predict and prevent member disengagement. Predictive analytics uses statistical/machine learning techniques and historical data to predict future events according to prediction models. We explore behavioral (RFM) & linguistic (positivity, swearing & anger) data of 150,000 posts in 10 ongoing MROCs and analyze about 7 million data points to create reliable prediction models. Moreover, we test the effectiveness of proactive actions in 4 MROCs to prevent member's unconstructive behavior from negatively impacting the community.

**Results:** First, our prediction model performance proves that moderators can predict member disengagement effectively, which enables them to proactively manage the community. Second, predicting two disengagement types separately allows community managers to take appropriate actions accordingly. Third, insights into the drivers reveal that community managers must run the community by targeting members who interacted less recently, less frequently and with shorter posts. Additionally, they must aim for the community to not become too big and maintain a positive atmosphere, by tolerating a degree of swearing or bad language, but being vigilant over anger, and not allowing members to rant.

**Added Value:** This study offers a practical approach on how moderators can benefit for MROC management from state-of-the-art big data approaches and machine learning techniques.

### INNOVATIVE OUT OF HOME ADVERTISING RESEARCH USING BEACONS

**Author:** Fischer, Beat [1]; Hotz, Christof [2]  
**Organisation:** 1: LINK Institut, Switzerland; 2: APG|SGA, Allgemeine Plakatgesellschaft AG, Switzerland

**Relevance & Research Question:** Nowadays market research faces the challenge of using the various opportunities which digitalisation provides. Several approaches to measure behavioural data in the virtual world like cookie tracking or passive metering of internet usage have been developed and brought new insights i.e. on the effectiveness of online advertising. Beacon Technology allows us to measure location-dependent behavioural data. So far it is not widely used for research purposes, but it promises i.e. deeper understanding of out of home advertising.

LINK Institute and APG SGA, Switzerland's leading out of home advertising company, tested a new and innovative research concept using beacons to measure contacts with out of home advertising. With this project we wanted to evaluate if this innovative method is suitable to measure the effectiveness of out of home advertising campaigns. The concept was judged according to technical aspects and contentual results.

**Methods & Data:** The study was set up around the area of Berne, Thun and Biel in Switzerland, where all posters and digital screens of four chosen campaigns were equipped with beacons. 545 participants living in this area were recruited to install the app LINK Move on their smartphone. The app receives the beacon signal and registers the contacts with the beacons and the campaigns, respectively. At the end of each campaign all participants were invited to short questionnaires about brand and campaign KPIs. Approximately 400 interviews for each campaign were realised. The behavioural and the survey data were merged for the analysis of the advertising impact.

**Results:** The innovative approach worked exceedingly well both on a technological level and content wise. Measured reach and contact frequencies with the tested campaigns are plausible. In addition, the study provides evidence of campaign impact on important KPIs such as awareness, image, consideration and purchase.

**Added Value:** Using beacons for out of home advertising research is a new approach to measure the reach and to better understand the impact of campaigns. The approach fits perfectly into a holistic advertising research.

## A WINDOW INTO THE DIGITAL ECONOMY - THE FUTURE OF BUSINESS SURVEY

**Author:** Degen, Martin [1]; Bichler, Axel [1]; Böhme, Nadja [1]; Jackman, Molly [2]  
**Organisation:** 1: FactWorks GmbH, Germany;  
 2: Facebook Inc., United States of America

**Relevance & Research Question:** Policymakers, researchers and businesses share a common interest in the environment in which small and medium-sized businesses (SMEs) operate, not least because SMEs are often an important source of employment growth and an indicator for economic well-being. In an attempt to fill data gaps across the world and to better understand business sentiment and trends among SMEs, Facebook, OECD and The World Bank have initiated the Future of Business Survey. The project aims to improve our understanding of SMEs with the overarching goal of helping businesses grow in the emerging mobilized economy.

**Methods & Data:** The target population includes all SMEs with a Facebook business page. A random sample of newer and long-standing businesses in each country is invited to respond to the online survey. The questionnaire consists of only 15 questions and is flexible enough to allow adaption in the future to respond to new emerging issues. Questions focus on perceptions of current and future economic activity, challenges and business characteristics. A newly developed indicator measures the overall SME sentiment: The "Business Confidence Indicator" (BCI). Data from the ongoing monthly survey is publicly accessible in an interactive online dashboard.

**Results:** A key attribute of the survey is its simplicity, ensuring a low response burden. More than 110,000 SMEs have participated so far, with the number of countries expanding from originally 17 to 33 by December 2016. Results of the survey provide insights for many stakeholders: Facebook captures the sentiment of its business page owners, policy makers and the general public gain information on longitudinal economic trends, and market researchers receive valuable data, e.g., for conducting cultural bias analyses.

**Added Value:** The survey is a unique public-private partnership providing insights on the well-being and outlook of SMEs who are digitally present. It represents a novelty in bringing together SMEs from a vast number of countries and demonstrates the potential of using digital platforms to collect timely and cost-effective information. Along the value chain, resulting data can be used by a wide range of stakeholders to inform several areas of interest.

## D3 GOR BEST PRACTICE AWARD 2017 COMPETITION II

### REAL-TIME-BEHAVIORAL IN SAMPLING FIELD WORK: EMOTIONAL STATE OF THE RESPONDENT

**Author:** Friedrich-Freksa, Malte [1]; Lütters, Holger [2]; Vitt, Sandra [3]  
**Organisation:** 1: GapFish, Germany; 2: pangea labs, Germany;  
 3: Mediengruppe RTL, Germany

The standard process of recruiting online survey respondents is email- or ad hoc survey invitation. With the growing amount of emails and decreasing participation rates this research invitation channels become more and more challenging. This study implemented a new way of recruiting allowing a real-time-behavioral sampling-approach and is far beyond ad hoc website recruiting procedures as it is not only limited to one website and the administrative rights to that website, but is open to any potential web activity that can be tracked. Panelists who installed passive meter software measuring continuously their comprehensive online and mobile internet behavior were recruited via push-notification to participate in an online-survey regarding their in the moment emotional status.

The recruiting process itself happens after a defined event: Therefore a set of 19 websites from 9 different categories (e.g. news, social media, search, media center) were determined: when the panelist reached one of these predefined websites during his natural internet usage the push-notification onto his computer popped up automatically and invited him to the online-survey. The questionnaire contained amongst other scales regarding the emotional status and impulsive shopping behavior.

Results indicate the important role of emotions during the internet usage for both reported and observed data. Three different emotional categories were extracted from the questionnaire data: the disgruntled, the optimists and the burnt-outs. As expected results showed differences in their emotional status regarding various websites. First analysis of the behavioral data showed participants media in the course of the day: therefore each website was categorized by a semi-automatically machine learning method. Afterwards it was possible to represent for each participant its individual digital customer journey for different space of time reducing complexity culminating in nine different content categories.

To sum up: the present studies combined for the first time observed and reported data in a natural real-time-sampling approach. First promising analyses indicate the power of combining both data sources in one research frame.



## MOBILITY BEHAVIOUR AND SMARTPHONE USAGE OF MILLENNIALS - CAPTURING THE MOMENT-OF-TRUTH

**Author:** Sauermann, Julia Anna; Einhorn, Martin; Löffler, Michael  
**Organisation:** Porsche AG, Germany

**Relevance & Research Question:** While the smartphone is highly important to Millennials, many studies suggest that car ownership and usage is declining among the young. In the age of digitalization and new mobility concepts it is crucial for Porsche AG to gain in-depth understanding of the relationship of cars and smart devices among Millennials. Porsche conducted a mobile research project to study the mobility mix of young people, their emotional experience of transportation usage and their smartphone usage while being on the move.

**Methods & Data:** Porsche AG developed an app to survey mobility behavior and smartphone usage in the moment-of-truth. With the app participants documented their mobility behavior by "checking in and out" each time they started or ended a trip. With every check-in and check-out they received a brief questionnaire on i.e. why they chose the transportation means, the purpose of the trip, their overall evaluation and emotional experience of the trip and their smartphone usage during the trip. The study was conducted with 6 universities in Germany and Switzerland.

**Results:** Even though the majority of Millennials did not own a car, cars have a high emotional appeal to them. Trips made by car as well as trips by bike are among the best rated ones. In the mobility mix cars and bikes have a unique positioning: while both have in common to provide flexibility, the car is mainly chosen for comfort reasons whereas the bike is chosen for fun. Both are thus perfectly fitting Millennials' needs for freedom, fun and convenience. The study also revealed that when being on the move Millennials mostly use their smartphone to communicate with their peers. In this context the car provides a private space like no other means of transportation.

**Added Value:** Our research design allows to capture mobility behavior and smartphone usage and the related emotional experience in the moment-of truth. This led to deep and comprehensive insights even though only brief questionnaires were applied. The study strongly helped in understanding smartphone usage by means of transportation which is crucial for the development of connectivity services in the automotive context.

## USING IN-CONTEXT-TESTING TO DRIVE SUCCESS OF ONLINE DISPLAY MARKETING

**Author:** Schoenherr, Stefan [1]; Lochstet, Martyna [1]; Glenz, Sebastian [2]; Sommer, Jan [1]  
**Organisation:** 1: eye square GmbH, Germany;  
2: Aktion Mensch e.V., Germany

**Relevance & Research Question:** Media budgets for online ads are rising year-by-year. Advertisers need to understand how their various banner campaigns perform in terms of both creative guidelines (create compelling creative executions) and media planning (which ads and formats should be used). In 2016, Aktion Mensch conducted an ad effectiveness study on their online display campaigns. By simulating a realistic media contact we investigated the question how the different ads do perform in terms of awareness, image, and buying intention. Which ad can hold the users' attention the longest? Are there differences between formats? Which ad execution attracts consumers in the most successful way?

**Methods & Data:** We tested 10 different creatives with 1000 participants in an online study in six fielding days. The In-Context-testing-method employs a hidden design in order to produce realistic results: The original ads are inserted into a live website and the respondents' task is browsing this website for some minutes, during which attention is captured using their webcam. Afterwards users are invited to answer ad effectiveness questions. Additionally, a reaction time based tool was deployed to assess effects on the implicit brand image.

**Results:** The results demonstrate a clear effect of the different creatives. Attention on the ads varies from 400 ms to over 1,5 sec. Some ads were looked at only by 17% while others could attract the attention of half of the users. The effects were stronger for different creatives than for different formats. The different motives showed unique ad effectiveness patterns and general guidelines for the production of display ads were derived.

**Added Value:** In our presentation we will show how state of the art online attention research tools are combined to a comprehensive test suite and easily applied to consumer understanding in digital marketing. Copy testing for digital communication leads to deep insights about how digital marketing communication is perceived, what is internalized by the users and how a successful creative execution should look like. It will underline how important it is for an advertiser to drive success of his online marketing campaigns with the help of consumer-centric, data-driven optimizations.

# GOR POSTER AWARD 2017

Posters offer the opportunity to present late breaking research, short research findings or discuss work in progress at the GOR conference. The presented works will be evaluated by a jury. The GOR Poster Award 2017 comes with a prize money of € 500.

Posters are presented in a plenary session on Thursday, 16 March 2017, 14.00 – 15.30. Access to the poster presentations will be possible during the whole conference. A poster may cover any topic of online research. All submissions in this category are considered for the GOR Poster Award 2017. The poster award ceremony will take place on Friday, 17 March 2017 at 11.00.

## GOR Poster Award 2017 jury:



**PROF. DR. FLORIAN KEUSCH**  
University of Mannheim,  
Jury Chair



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## Past winners of the GOR Poster Award are:

- GOR Poster Award 2016: Jan-Mathis Schnurr, Christina Bülow and Sebastian Behrendt (Universität der Bundeswehr München) for their poster "Mixed-Method Approaches in Enterprise Social Software Evaluation" (1st place). Peter Hellmund and Lutz Hagen (TU Dresden) for their poster "Pegidas Echo Chamber – And other Uses of Facebook to Dresdens Notorious Political Movement" (2nd place). Stephan Schlosser and Jan Karem Höhne (University Göttingen) for their poster "The Adequacy of Outlier Definitions based on Response Time Distributions in Web Surveys: A Paradata Usability Study" (3rd place).
- GOR Poster Award 2015: Jana Sommer, Birk Diedenhofen and Jochen Musch (all University Düsseldorf) for their poster "Not to Be Considered Harmful: Mobile Users Do Not Spoil Data Quality in Web Surveys" (1st place); Steffen Lemke, Athanasios Mazarakis and Isabella Peters (University Kiel, ZBW – German National Library for Economics) for their poster "Understanding Scientific Conference tweets" (2nd place) and Jean Philippe Décieux, Philipp Sischka (both University Luxemburg), Alexandra Mergener (BIBB) and Kristina Neufang (University Trier) for their poster "Higher response rates at the expense of validity? Consequences of the implementation of the 'forced response' option within online surveys" (2nd place).
- GOR Poster Award 2014: Maria Douneva (University of Muenster), Rafael Jaron (NORDLIGHT research) and Meinold Thielsch (University of Muenster) for their poster "Effects of website design on first impressions, aesthetic judgments, and memory performance" and Ines Schaurer, Bella Struminskaya and Lars Kaczmirek (all GESIS) for their poster "Incentives on demand in a probability-based online panel: redemption and the choice between pay-out options".

# GOR THESIS AWARD 2017

**Time: Thursday, 16/Mar/2017: 15:45 – 16:45 and 17:00 – 18:00**

The GOR Thesis Award Competition is an integral part of the GOR conference series and takes place annually. It comes with a prize money of 500 € for each of the two competition parts.

All submissions relevant to online research are welcome. Presentations in the past years covered a broad range of topics, be it online surveys or research on the Internet or social aspects of the Web. This year we have had a high number of 18 submissions for the contest. Theses must have been submitted in 2015 or 2016. The thesis language can be either English or German. The programme committee assigned three members of the thesis jury to review each submission. The review process was completely anonymised and reviews were randomly distributed in a way that conflicts of interests were avoided.

Three Bachelor/Master and three doctoral theses are nominated for the GOR Thesis Award. The selected authors will present their findings at the GOR conference and the best presentations will be awarded.

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## Nominated for the GOR Thesis Award 2017 are:

### Dissertations:

- "Alignment and Spoken Dialogue Systems – Influences on Trustworthiness and User Satisfaction" by Gesa Alena Linnemann (University of Muenster, Germany)
- "Searching for Equivalence: An Exploration of the Potential of Online Probing with Examples from National Identity" by Katharina Meitinger (GESIS; University of Mannheim, Germany)
- "Monitoring and Expressing Opinions on Social Networking Sites – Empirical Investigations based on the Spiral of Silence Theory" by German Neubaum (University of Duisburg-Essen, Germany)

### Bachelor/Master:

- "Determinants of Item Nonresponse in the German Internet Panel" by Katharina Burgdorf (University of Mannheim, Germany)
- "Browsing vs. Searching – Exploring the influence of consumers' goal directedness on website evaluation" by Hannah Dames (University of Muenster, Germany)
- "Attention Dynamics of Scientists on the Web" by Tatiana Sennikova (GESIS; University of Koblenz-Landau, Germany)

## GOR Thesis Award 2017 jury:



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**DR. FREDERIK FUNKE**  
forsa and datenmethoden.de



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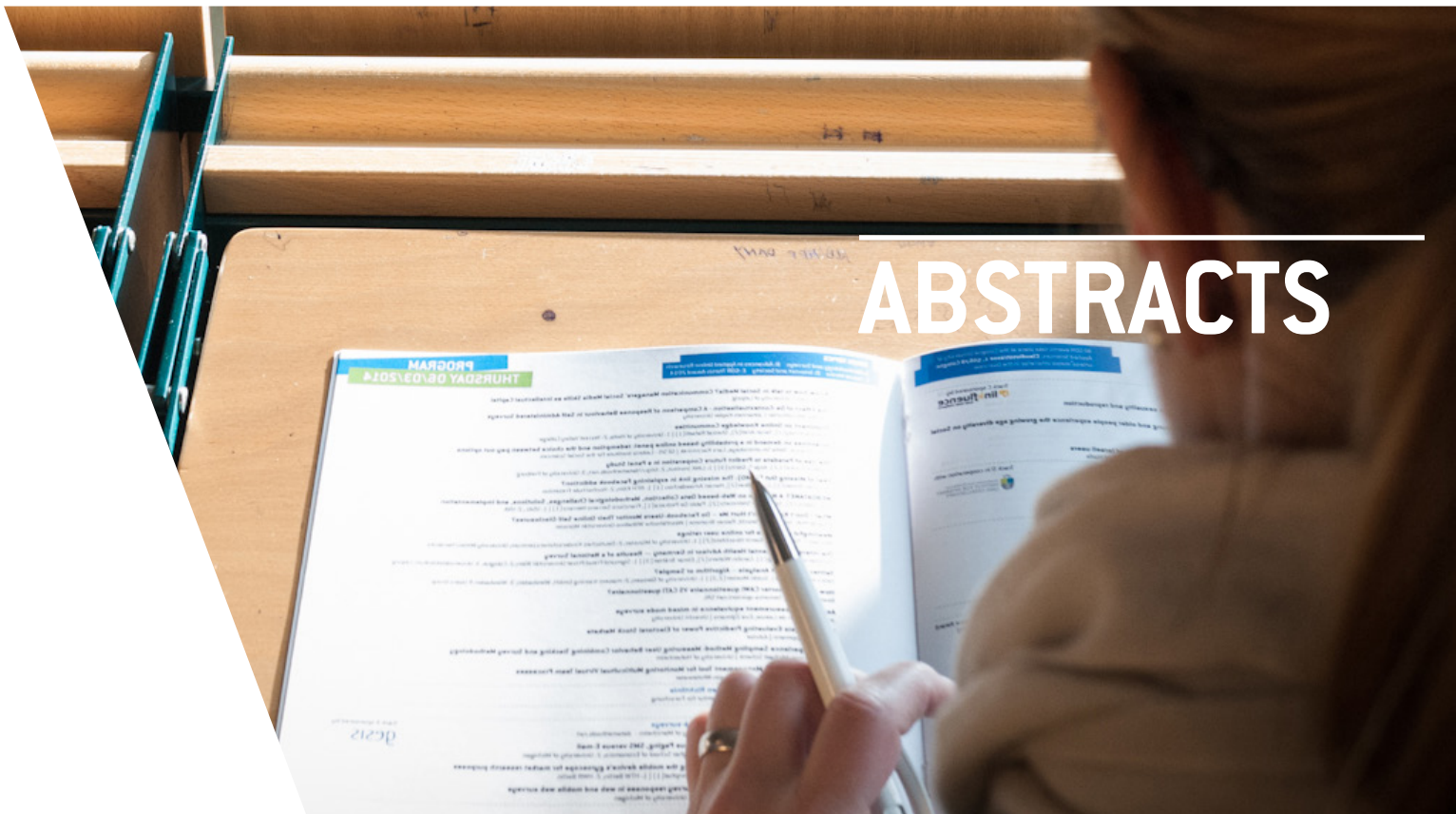
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# ABSTRACTS



## A2: DAPTING ONLINE SURVEYS FOR MOBILE DEVICES

### DATA CHUNKING FOR MOBILE WEB: EFFECTS ON DATA QUALITY

**Author:** Lugtig, Peter; Toepoel, Vera  
**Organisation:** Utrecht University, The Netherlands

**Relevance & Research Question:** Mobile phones are replacing the PC as key devices in social science data collection. In daily life, mobile phones are used for short interactions. Successful data collection strategies over mobile phones should therefore also be brief for respondents. Questionnaires for attitude research are often very long. We argue that there is a trade-off to be made. Should questionnaires on mobile devices remain long, risking dropout, or should such questionnaires be split up [from here on called chunks] to optimize data quality?

**Methods & Data:** We report on an experiment conducted in the probability-based LISS panel in the Netherlands, carried out in December 2015. We used a 'within' design of data chunking. Panelists who owned a mobile phone with Internet connection were randomly assigned to either:

- a) The normal survey (about 20 min)
- b) The same survey cut into three chunks, with each chunk offered after a week
- c) The same survey cut into ten chunks, with each chunk offered every other day.

**Results:** First, we investigated the number of complete and incomplete responses and looked at indicators for data quality (straightlining, primacy effects, survey length). We find that more respondents are completing the questionnaire when it is offered in chunks (condition b, and especially c), but also that chunking results in more item missings. We find little evidence for effects on data quality.

Finally, we report on the differences we find in the factor structure when the questionnaire was split into chunks, or was completed in one go.

**Added Value:** The idea of data chunking is not new. 'Planned-missingness' designs have been implemented in web surveys successfully in the past. This study is however the first to study data chunking in the setting of mobile phone surveys. We believe that more and more data will be collected using mobile phones (already 5-25% of all web surveys are taken on mobile phones), and that understanding how to design questionnaires for mobile phones is of vital importance to both survey researchers, market researchers, and anyone using such data for substantive reasons in the future.

### THE EFFECT OF HORIZONTAL AND VERTICAL SCALES ON THE RESPONSE BEHAVIOR WHEN SWITCHING TO A MOBILE FIRST DESIGN

**Author:** Bruch, Christian; Blom, Annelies; Burgdorf, Katharina; John, Melvin; Keusch, Florian  
**Organisation:** University of Mannheim, Germany

**Relevance & Research Question:** The aim of this paper is to analyze the effects of horizontal and vertical scales on response behavior for smartphone versus tablet/desktop participants in the German Internet Panel (GIP). Changes in the way people use technology, in particular smartphones, affect the measurement quality of online surveys, which increasingly become mixed-device surveys. On smartphone screens, for example, it is difficult to display horizontal scales, forcing survey designers to rethink the way answer options are displayed. Moving from traditional horizontal scales to smartphone-compatible vertical scales may, however, impact on time-series of established measures, if respondents on desktops and/or smartphones answer differently on a horizontal than on a vertical scale.

Research questions of interest are for example: Does the scale alignment have an effect on response behavior? In particular, do we find differential distribution effects across different alignments? And to what extent does the scale alignment affect item nonresponse and response times? Most importantly, are these effects different on desktops/tablets and smartphones?

**Data:** 59 experiments across six waves of the Germany Internet Panel, almost 3198 respondents per wave.

**Methods:** ANOVAs, (multilevel) (logistic) regressions.

**Results:** First analyses show no effect of scale alignment on variable distributions and response times for smartphone and desktop/tablet participants indicating an unproblematic switch from horizontal to vertical scales. However, analyses into distribution effects delivered significant results choosing extreme points when presented with a vertical scale as opposed to a horizontal scale.

**Added Value:** The participation in online surveys via smartphones is increasing but horizontal scales are still a common practice when designing questionnaires. Thus, it is of great importance to identify the effects of scale alignment on response behavior. Our experiments ensure a comprehensive investigation of the effect of scale alignment in 59 experiments implemented across six waves of the GIP and almost 3198 respondents per wave.

### PREDICTORS OF NONRESPONSE AT DIFFERENT PHASES IN A SMARTPHONE-ONLY TIME USE SURVEY

**Author:** Elevelt, Anne; Lugtig, Peter; Toepoel, Vera  
**Organisation:** Utrecht University, The Netherlands

**Relevance & Research Question:** Smartphones are becoming increasingly important and widely-used for survey completion. Smartphones offer many new possibilities for survey research: We can, for example, send pop-up questions in real-time, for instance to measure participants' feelings, and record sensor data. However, as nice as these new opportunities are, the questions we ask can get increasingly intrusive, and we risk over-asking participants, who may choose to drop-out in response. Nonresponse and nonresponse bias may be different in different phases (f.e. survey, pop-up questions, consent to record sensor data) of the research, because of the different intrusiveness of every phase. Fundamental, methodological knowledge about nonresponse in smartphone-only studies is lacking, but very important to understand selection bias. Therefore, our main research question is: How can we predict nonresponse at different phases in a smartphone-only survey?

**Methods & Data:** We studied an innovative smartphone-only Time Use Survey. The Dutch Institute for Social Research conducted their Time Use Survey in 2013 through an app on a smartphone at two randomly chosen days of the week.

The study consisted of four phases, specifically:

1. Invitation to participate in the study (n = 2154)
2. Participation in the Time Use Survey (n = 1610)
3. Answer pop-up questions (n = 1407)
4. Give permission to record sensor data (f.e. GPS locations and call data) (n = 1004)

**Results:** We documented the nonresponse and estimated non-response bias for each of the four phases. Because the data were collected in a panel, we can use predictors from earlier waves. Therefore, we do not only have the typical (age, sex, income) information, but also more interesting variables (personality, participation history, smartphone usage, survey attitude), which we can use as covariates and predictors of nonresponse.

**Added Value:** This study provides us with knowledge about bias in smartphone-only studies, a field which remains relatively unexplored. We used participants from the LISS-panel, which aims to be representative of the Dutch population. Therefore, this knowledge about who does and who doesn't participate, and how smartphone studies may be biased, can be very valuable for all online researchers who consider such a study.

### B2: TRACKING AND DATA COLLECTION

#### DEEP LEARNING - MANAGE ONLINE COMMUNICATION IN THE AGE OF TROLLS

**Author:** Flutto, Hervé; Gonzenbach, Maurice; de Buren, Pascal  
**Organisation:** 100 Celsius, Switzerland

**Relevance & Research Question:** „Something has changed – as globalization has marched on, [political] debate is taking place in a completely new media environment. Opinions aren't formed the way they were 25 years ago" as Angela Merkel stated in her speech to Parliament on November 23rd 2016.[1]

We are in a world where social media and peer-to-peer communication is taking the lead over curated contents. The exponential growth of trolls, fake news and chat bots raises the question how state-of-art Natural Language Processing powered by deep learning algorithms can be applied to curating online contents.

**Methods & Data:** We build on a wide array of self-developed as well as open source software, originating from research performed at ETH, Zurich.[2] Thereby we make use of state of the art machine learning technologies such as word embedding, convolutional or recurrent neural networks, but also more traditional, heuristic approaches.

We pre-train our model using publicly available German text data and fine tune it with a dataset obtained from a major Swiss-German online-newspaper.

**Results:** We have been able to establish leading sentiment analysis models on challenging data inputs such as Tweets, winning the 2016 Semeval competition (task 4a). [3] Building on those proven methods, we have since tackled the problem of detecting unwanted user comments in German language online newspapers. In particular, our system aims at detecting "trolls" who try to capture online discussions and manipulate the public opinion.

**Added Value:** This approach can be used to manage online communication through cost-effective and repeatable tools to complement human judgment on the quality and validity of online data. It can further be used to monitor and act upon customer satisfaction and sentiment at company or product level.

[1] [http://www.usnews.com/news/features/news-video?ndn.trackingGroup=90080&ndn.siteSection=ndn1\\_usnews&ndn.videoid=31671176](http://www.usnews.com/news/features/news-video?ndn.trackingGroup=90080&ndn.siteSection=ndn1_usnews&ndn.videoid=31671176)

[2] <http://e-collecHon.ethbib.ethz.ch/show?type=dipl&nr=968>

[3] <https://www.inf.ethz.ch/news-and-events/spotlights/semeval2016.html>

### MAPPING THE FIELD OF AUTOMATED DATA COLLECTION IN THE WEB. DATA TYPES, COLLECTION APPROACHES AND THEIR RESEARCH LOGIC

**Author:** Jünger, Jakob  
**Organisation:** University of Greifswald, Germany

**Relevance & Research Question:** Online communication makes the interaction of individuals, organizations and companies visible – because this interaction leaves data trails, or even consists of data itself. It is no surprise, therefore, that social scientists also work intensively on collecting online data. How the techniques used can be methodologically and epistemologically localized, however, is still unclear. This uncertainty is also reflected in the variety of terminology proposals. Concepts such as Computational Social Science [Lazer et al., 2009], Web Mining [Thelwall, 2009], or Digital Methods [Rogers, 2010] come into play. Furthermore, data collection methodology forms a diverse landscape regarding different types of data, collection methods and data providers [Keyling/Jünger 2016]. The paper asks which methodological challenges as well as opportunities result from different types of data and collection methods.

**Methods & Data:** Based on experience when collecting online data in the field of political communication research three different approaches for automated data collection are discussed and backed up with examples: raw data, application programming interfaces and user interfaces. Each of these approaches is analyzed in terms of seven methodological dimensions: research object, analysis perspective, data level, abstraction, reactivity, structuring and availability.

**Results:** The analysis results in a classification scheme which helps with identifying specific methodological opportunities and challenges. Comparing different approaches makes clear that the data never speak for themselves. However, there seems to be a lack of standards with regard to, e.g. reliability and validity of the database or the description of the procedure, which sometimes seems to be ignored with references to numerically large datasets. In contrast dealing with smaller datasets may be more valuable under certain conditions.

**Added Value:** The paper adds value to the ongoing discussion by systematically mapping the landscape of automated data collection methods in the web. It brings to mind the necessity of dealing with quality criteria in Computational Social Science.

### WEARABLE RESEARCH TECHNOLOGY: TRACKING TOOLS FOR ALL OCCASIONS?

**Author:** Gattringer, Fabiola; Schmid, Manuela; Stiglbauer, Barbara; Batinic, Bernad  
**Organisation:** Johannes Kepler University Linz, Austria

**Relevance & Research Question:** Wearables and tracking tools are on the rise on the market, and prominent manufacturers introduce an improved device at least each year. Devices come in manifold forms, colors, and with different functionalities for virtually every occasion: from smart clothing over fashionable accessories to data glasses, with the capability to measure all kinds of scientifically interesting data. What possibilities offer these wearables and self-tracking technologies for scientific research, especially in the field of psychology and social sciences? More specifically, what added value has the collection of such objective biometric data in connection with subjective self-reported data via online surveys?

#### **Methods & Data:**

We used a mixed methods approach:

- 1) An extensive literature research on studies with and about wearables and tools to measure physical and biometric data was conducted to provide a base for our literature review on possibilities for future scientific research.
- 2) A quantitative survey study (n = 98) was conducted to yield a first insight in the usability and acceptance of wearables in everyday life, especially working life.

**Results:** There are manifold devices on the market, and some have already been successfully used for research purposes in various scientific fields. In our review, we evaluate the pros and cons of these tools for scientific research in social sciences, and highlight promising research trends, as well as provide guidelines for how to avoid obstacles and achieve valid study results.

**Added Value:** This is, to our knowledge, the first attempt to provide an overview over the vast possibilities of wearable and self-tracking technology for scientific research purposes in social sciences, with a specific focus on previously conducted studies with such devices and an outlook on the usability for future, especially psychological, research. The review outlines possibilities and obstacles according to previously conducted research and additionally offers guidelines and recommendations for conducting future research endeavors.



## C2: DYNAMICS OF PUBLIC OPINION

### #BREXIT. ANALYZING TWEETS, SURVEYING TWEETERS TO UNDERSTAND PUBLIC OPINION DYNAMICS DURING THE EU REFERENDUM CAMPAIGN

**Author:** Brandenburg, Heinz [1]; Van Egmond, Marcel [2]; Johns, Robert [3]  
**Organisation:** 1: Strathclyde University Glasgow, United Kingdom;  
2: University of Amsterdam, The Netherlands;  
3: University of Essex, United Kingdom

**Relevance & Research Question:** While there is a major trend towards using big data from social media platforms, in particular Twitter data, to measure public opinion or even predict election/referendum outcomes, major questions remain about the representativeness and validity of such aggregate measures. How demographically and politically different are Twitter publics from the general public? How accurately can sentiment analysis capture actual opinions of individual Twitter users, and how can such opinions be meaningfully aggregated, given the asymmetry of participation on Twitter? We are using the UK Referendum on EU membership as a case study to trial an innovative approach towards validation and calibration of Twitter data.

**Method & Data:** After collecting 25.9 million of Referendum-related Tweets from a four month period prior to 23 June 2016, we fielded an online survey among Twitter users whose Tweets we have captured during this period. The 1,552 surveyed Twitter users and their 70,000 Tweets about half of which we expert-coded, provide us with a training data set. Finally, taking into account the variation in user activity on Twitter, we model our Twitter-derived proxy for public opinion as an aggregation of Tweets which are nested within individual users.

**Results:** Survey responses on EU attitude measures which correlate at over 0.8 with expert coding, serve both as a basis for supervised machine learning for sentiment analysis and for out-of-sample validation of sentiment scores. This provides us with a robust method of sentiment analysis to then apply to the full population of 25.9 million tweets.

**Added Value:** This method allows us not only to compare the socio-demographic and political composition of the Twitter public with the general UK public, but also to match a respondent's Twitter output with their answers to our survey question. We can thus validate opinion measures from sentiment analysis by estimating how well these measures predict respondents' attitudes towards EU membership derived from traditional survey questions. The survey then also allows for calibration, as we can compare sentiment distribution against the surveyed sample, as well as demographic distributions in the Twitter survey against known population distributions, to apply weights.

### UNDERSTANDING RIGHT-WING POPULIST VOTERS – A QUALITATIVE ONLINE EXPLORATION

**Author:** Wakenhut, Ruth Anna [1]; Faus, Jana [2]  
**Organisation:** 1: Kernwert GmbH, Germany;  
2: pollytix strategic research gmbh, Germany

**Relevance & Research Question:** The rise of right-wing populist movements has been met with a great deal of concern in Western societies over the past few years, even reinforced by the surprise election of Donald Trump. Whilst not as big as in the US, the right wing movement in Germany has been examined by (mainly) quantitative studies, which described populist voters as 'left behind', 'worried about today's uncertainties' or 'authoritarian'. Our exploratory research study aims to shed light on voters who are prone to right wing populist voting using online qualitative methodologies by examining their life circumstances, issues and attitudes towards politics. Ultimately, there will be hints for decision makers on how to reach these voters and how to win them back.

**Methods & Data:** The study will be conducted in 2 phases: An ethnographic mobile diary and an online community with individual and interactive elements. 30 Participants will be recruited using a screener that includes demographics, voting behavior and attitudes known to be connected to populist voting (e.g. attitudes to EU, outlook on Germany and the economy). In a first phase we explore peoples' lives: the participants keep an ethnographic mobile diary, sharing pictures of their homes and daily habits. A particular emphasis is placed on media usage and communication channels. In the community phase we combine creative, nonverbal tasks with accompanied discussions to elaborate their views on the current state of Germany and the Germany they'd ideally prefer to live in. Finally, we are getting participants to formulate expectations towards political decision makers with regards to political culture, leadership and policies.

**Results:** None yet – study to be conducted in January-February 2017.

**Added Value:** Whilst online qualitative methodologies have been widely adopted in commercial research, this has yet rarely been the case in political research. This study aims to show that qualitative online research can be a valuable addition to traditional methodologies when it comes to understanding how peoples' lifestyles and attitudes influence their political behavior including voting intention.

### WHERE THEY COME FROM – AND WHERE THEY ARE GOING. AN IN-DEPTH ANALYSIS OF VOTERS OF THE AfD USING A CONNECTED DATA APPROACH.

**Author:** Schmid, Frieder Christian; Mannott, Peter  
**Organisation:** YouGov Deutschland GmbH, Germany

**Relevance & Research Question:** Since its foundation in 2013, the Alternative für Deutschland (AfD) has risen increasing interest in public and in the electorate. Since then, the AfD won seats in several elections of federal states' parliaments and has proven to be a persistent political party. Researchers and public have posed hypotheses on the motivation of voters of the AfD. While there has been research on voters of the AfD based on traditional survey methods, we will provide an in-depth analysis of voters using a connected data approach based on the YouGov Cube.

**Methods & Data:** Social research still relies largely on (i) cross-sectional approaches that measure a predefined and definite set of variables at a single point in time or (ii) longitudinal approaches that measure variables across time in a definite sample of individuals. We will show an integrated approach that connects data from numerous surveys for each individual in the sample. While traditional approaches face typical constraints (e.g., restrictions regarding survey length, statistical mortality), connecting data allows to integrate all data gathered from an individual regardless the data source or point in time. The connected data approach uses an extensive set of variables gathered on an individual level and across time and enables researchers to dynamically apply cross-sectional and longitudinal methods for analyzing voters' behavior, attitudes, and preferences.

**Results:** Our research will show basic demographics, attitudes, and opinions of voters of the AfD, as well as crucial variables predicting the voting decision for the AfD. By conducting such analyses, our research will provide a deeper understanding of voters of the AfD as well as explore persuasive triggers for political communication.

**Added Value:** Connecting data is an approach to gather rich data effectively without facing the constraints of traditional survey methods. It provides data from numerous surveys at numerous points in time and allows researchers to address research questions from multiple perspectives.

### A3: REPRESENTATIVENESS OF ONLINE PANELS

#### ASSESSING THE EFFICACY OF USING ESTABLISHED SURVEYS TO RECRUIT ONLINE PANEL RESPONDENTS

**Author:** Villar, Ana [1]; Sommer, Elena [1]; Finnøy, Didrik [2]; Johannesen, Bjørn-Ole [2]; Ainsaar, Mare [3]; Humphrey, Alun [4]; Kurdija, Slavko [5]; Soidla, Indrek [3]; Vovk, Tina [5]  
**Organisation:** 1: City University London, United Kingdom;  
 2: Norwegian Centre for Research Data, Norway;  
 3: University of Tartu, Finland;  
 4: NatCen Social Research, United Kingdom;  
 5: University of Ljubljana, Slovenia

**Relevance & Research Question:** Online survey panels enable cost-effective and timely data collection. However, obtaining a representative sample can be challenging and expensive: sample frames for probability sampling of the general population usually do not include online contact information, and recruitment thus relies on offline contacts that either suffer from low recruitment rates (telephone and mail) or involve large costs (face-to-face). Random selection of individual respondents within households also poses challenges. Carrying out panel recruitment as part of an existing face-to-face data collection effort could serve as a cost-effective way to obtain high quality data from a probability sample. However, this idea has been met in the past with concerns about potential drawbacks related to additional burden for respondent and interviewer.

**Methods & Data:** A pilot study was set up to test this "piggy-backing" approach using the European Social Survey data collection efforts. Participants of the CROss-National Online Survey (CRONOS) panel were recruited at the end of the 2016 ESS interviews in UK, Slovenia and Estonia. Participation involved completing six 20-minute online surveys over one year. Respondents were offered gift cards for £5/€5 with every new survey invitation. Those without internet access for private purposes were offered an internet-enabled tablet, training on how to use it, and telephone support.

**Results:** This paper evaluates the efficiency of this approach by examining recruitment rates across countries and across different subpopulations. We will analyse representativeness of the recruited sample, comparing those who participated and those who did not in a selection of important variables obtained from the ESS interview. As of November 2016, the initial recruitment rate varies by country—between 51% in Estonia and 61% in the UK; by age—between 80% for respondents younger than 30 and 46% among those older than 60; by gender—54% for women vs 60% for men; and by internet access—50% for those without internet access for personal use compared to 78%.

**Added Value:** This research provides insights on advantages and challenges of recruiting an online panel on the back of existing face-to-face surveys, set in a unique multilingual, cross-national context.

### PREDICTING NONRESPONSE AND ATTRITION IN A PROBABILITY-BASED ONLINE PANEL

**Author:** De Leeuw, Edith Desiree; Hox, Joop; Rosche, Benjamin  
**Organisation:** Utrecht University, The Netherlands

**Relevance & Research Question:** Probability-based online panels are state of the art data collection tools in Europe and the USA (e.g., LISS in Holland, GIP and GESIS panel in Germany, ELIPSS in France, and GfK-Knowledge Networks in the USA). However probability-based panels are also vulnerable to nonresponse and especially attrition is a constant worry of panel managers. Several theories on nonresponse have been developed over the years and attitudes towards surveys are key concepts in these theories. R.Q: Do survey attitudes predict wave nonresponse and attrition better than standard indicators of nonresponse, such as, age, education, income, and urbanization?

**Methods & Data:** Data comes from the Dutch LISS-panel. A 9-item Survey Attitude Scale was part of the annually measured core-questionnaire from 2008 - 2011. Furthermore, the number of completed questionnaires and number of invitations was available for each panel member over the years. Also available were 34 demographic and psychographic variables. Drawing on expert opinions from 31 survey methodologists, the most important correlates of nonresponse are added as control variables to our model. To predict the number of completed interviews and determine the explanatory power of the survey attitude scale, longitudinal negative binomial regression is employed.

**Results:** The Survey Attitude Scale consists of 3 sub-constructs: enjoyment, value, and burden. Respondents perceiving a survey across waves on average one unit more enjoyable (on a scale from 1 to 7) are estimated to complete roughly 1.22 times as many or 22% more interviews per year. The same attitude change with respect to the perceived survey value corresponds to merely 8% more interviews. Finally, a one-unit increase in the perceived survey burden reduces the number of completed interviews by 12%. This holds even when control variables are added to the model. The regression coefficients of the survey attitudes hardly change although most controls are significant.

**Added Value:** Hence, survey attitude is a strong predictor of non-response over and above a person's psycho-demographic profile. This makes it possible to identify potential nonrespondents in a panel early on and use tailored designs. Moreover, emphasizing survey enjoyment instead of value and decreasing burden seems promising.

### THE REPRESENTATIVENESS OF ONLINE PANELS: COVERAGE, SAMPLING, AND WEIGHTING

**Author:** Blom, Annelies G.; Ackermann-Piek, Daniela; Helmschrott, Susanne C.; Cornesse, Carina; Sakshaug, Joseph W.  
**Organisation:** University of Mannheim, Germany

**Relevance & Research Question:** The polling industry has come under considerable strain after the latest erroneous predictions of the US-American presidential election and the Brexit referendum. Election polls need to be implemented within a short framework of typically

just a few days, and thus quick and lean survey modes such as online access panels are often preferred. However, these panels generally use non-probability based techniques to recruit panelists and to select survey participants. Some comparative studies show that the samples of such nonprobability online panels lack representativeness of the general population and lead to less accurate data than traditional probability-based offline surveys. In this paper, we assess the representativeness of probability and nonprobability, as well as online and offline surveys in Germany.

**Data & Methods:** We compare data from one probability-based online panel split into two samples – one with and one without the offline population –, eight commercial nonprobability online surveys, and two probability-based face-to-face surveys. As a metric of representativeness, we use the average absolute relative bias (AARB). It measures the average of the absolute relative biases between the survey and the benchmark data, computed over the ordinal or nominal categories of the data. As benchmarks, the German Mikrozensus as well as other official data sources are used.

**Results:** Our results indicate that online panel data based on a probability sample is more representative of the target population than data from non-probability online panels. The quotas drawn and weights provided by the nonprobability panels were insufficient to provide representative samples, while our calibration weighting improved representativeness. Across survey modes, offline probability surveys showed the highest representativeness.

**Added Value:** In the light of the recent discussion, this paper is an important contribution to an urgently needed investigation of online panel data quality. Moreover, this is the first study that assesses data representativeness across different survey modes and sampling techniques in Germany.

## B3: MONITORING, ETHICS AND PRIVACY

### ANALYSIS OF THE AD-TECH INDUSTRY USING INTERNET BROWSING DATA

**Author:** Simbeck, Katharina; Malzahn, Birte; Herm, Steffen  
**Organisation:** HTW Berlin, Germany

**Relevance & Research Question:** Numerous ad-tech companies track and analyze the online behavior of internet users with the objective of placing targeted and/or personalized advertising. In order to prospect users with specific interests or to retarget users from prior website visits, ad-tech agencies rely on tracking technology, mainly cookies. While users browse the internet, an invisible network of third-party servers is called to deliver advertising based on waste amounts of data. In this research, we uncover this invisible network of tracking

servers in order to gain an understanding of the state of the ad-tech industry.

**Methods & Data:** This study uses an innovative approach to research a B2B market: We have collected more than 100.000 lines of server calls in 80 browsing sessions of students of a German university. The data is collected using the Lightbeam Firefox Plugin. The calls of third party servers were classified as asset servers, analytics servers, advertising servers and widgets using Python scripts on an SQL database.

**Results:** Not surprisingly, we find that Google's and Facebook's third party servers are called by 78%/34% of sites per user. Consequently Google and Facebook are in an excellent position to track online user behavior and offer targeted, personalized advertising. On the other hand, most of the other 1.000+ tracking servers (some belonging to one company) are called by so few internet sites, that personalized advertising is technically impossible. As our study underlines the strong dependence of advertisers on Google and Facebook we argue, that those companies will continue to absorb strong shares in the advertising market. On the other hand we predict a consolidation of the "long-tail" of ad-tech companies that are too small to be present

**Added Value:** This paper describes the tracking methodologies used to enable targeted and personalized advertising. This paper also provides the reader with a description of an alternative data collection methodology which can be used for researching consumer behavior or company strategies.

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## THE ROLE OF PRIVACY CONCERNS AND COMPUTER SELF-EFFICACY IN ONLINE JOB APPLICATIONS

**Author:** Ulfert, Anna-Sophie; Ott, Michael; Bachmann, Robin  
**Organisation:** Justus-Liebig-Universität Gießen, Germany

**Relevance & Research Question:** Over the past years there has been a strong increase in the use of online application systems in personnel selection. Considering appearance and functions, two major types of features can be distinguished: online forms and online testing. Online forms usually enable candidates to upload files or to enter personal information. Online tests are for instance used to examine an applicant's skills, personality, or interests. Research shows that the perceived attractiveness and acceptance of online application systems have a substantial influence on the rating of such tools as well as the perceived image of the company using them. These perceptions and ratings have in turn a great impact on an applicant's decision making. We assume, that these ratings are not solely dependent on the attractiveness of an application system but rather on individual differences. Particularly, an individual's privacy concerns may have an impact on how positively such an online application system is perceived. Furthermore, we assume that individuals high in computer self-efficacy, rate online applications more positively.

**Method & Data:** In our study N = 452 university students completed an online questionnaire. Participants were asked about previous experience with online application systems as well as about their rating of different features of these systems (e.g. uploading a CV, working on a personality test). Additionally, privacy concerns were assessed as

well as computer self-efficacy and personality.

**Expected Results:** We expect that individuals high in privacy concerns generally give poorer ratings of online application procedures. Furthermore, it is assumed that higher computer self-efficacy leads to better ratings of online application systems.

**Added Value:** In order to improve online application procedures it is important to assess individual perspectives on the different elements of the application process. Individual differences may play a crucial role when it comes to the rating of these systems. In furtherance of the constant improvement of application procedures, the study of individual differences may help to gain insights into applicants' preferences allowing for the construction of more individualized measures.

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## AN ETHICAL COMPASS REGARDING PRIVACY WITHIN A DIGITAL SOCIETY

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Big Data promises social benefits and new value-added chains, can improve health care and prevent crime. Big Data also describes invasive techniques that interfere with privacy. Related questions about ethical responsibility are not systematically practised, the desideratum of the systematic technology assessment is the starting point of this proposal for a conference contribution to Track B.

The current discourse ranges from the proposal to conceive privacy in the digital society as inalienable human rights (Baumann 2015) to demands for a ethical competence including a privacy competence (Grimm / Krah 2015) and up to a so-called post-privacy perspective. Seen from this perspective, privacy and privacy more and more become unrealistic and outdated (Heller 2013) in a networked world; the protection of personal data is regarded as ultimately impossible because even if one determines the criteria under which they are discounted, it is not possible to guarantee what could happen later (Seemann 2010).

The way the discourse is conducted suggests that the complexity of privacy intrusive infrastructures is widely underestimated. The ethically oriented reflection and thus the awareness of the value of privacy are overdue. This proposal is based on normative, ethical justifications of the right to privacy (dignity, autonomy, moral equality) and on social-ethical principles (solidarity, subsidiarity), as well as on questions of digital identity, freedom, tolerance and justice within the cyberworld (see Capurro et al. 2012). From this central ethical concepts for the protection of privacy can be derived: the paradigms of individual control (including informational self-determination), of responsible data processing and of solidarity.

**Research questions:** Which positions are represented? How are they justified? Who is being addressed? Who is responsible?



**Method:** Document-/platform-analysis. Sample: Research platforms, non-profit-oriented institutes, networks, associations, non-governmental organizations, activist groups [Internet Governance forums, Acatech, DIVSI, Forum Privatheit, Digital Society of Switzerland, Canvas, Privacy International].

**Results:** Process catalogue with ethical-based discussion topics, recommendations for codification, strategy; Key concepts: ethical compass, digital competence; watchdog, media discourse, mediation forums.

**Added Value:** Transfer to other facets of innovation development and self-determination within the digital society.

## C3: POLITICAL PARTICIPATION

### CONTRADICTIONARY EFFECTS OF RESOURCES ON POLITICAL PARTICIPATION OF SOCIAL MEDIA USERS IN POLAND

**Author:** Filipiek, Kamil  
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**Relevance & Research Question:** Although, political participation of social media users appears to be popular theme among researchers, there is no consensus on how to: a) conceptualize political participatory activities, b) what methods and measures apply, c) how to interpret results obtained using a variety of methodological approaches.

The main goal of this research is to find out whether and how resources embedded in personal networks (family, friends, acquaintances) influence political participation of social media users in Poland.

**Methods & Data:** In order to examine the relationship between social resources and political participation of social media users, the theory of social resources (Lin, 2001) was applied as relatively consistent and proven theoretical approach. Consequently, the core of the measuring tool was based on the Resource Generator (RG) (Van Der Gaag and Snijders, 2005). Items included in RG are the major independent variables. The RG items refer to the four types of resources (i.e. support, knowledge, recommendation, and material resources) embedded and/or mobilized through personal networks, that may have impact on political participation of social media users. Complementary, the Mokken scaling (non-parametric) method was used to investigate a latent traits with set of dichotomous items included in RG. The dependent variable (political activity) is represented by five items measured on the 5-point Likert scales. The relationship between resources and political participation has been tested with nested OLS regression models.

Data has been collected through the online questionnaire. The research has been conducted in December 2015 among 700 users of social media users in Poland.

#### **Results:**

- In general, social media users with better access to resources (embedded and mobilizable) are more engaged in political participatory activities (M1 OLS)
- At the same time, resources embedded in personal networks have positive, while resources that could be mobilize have negative effect on political participation. (M1)
- Finally, resources mobilizable through acquaintances ties have positive while resources that could be only accessed have negative impact on dependent variable. (M2)

**Added Value:** Findings prove that the Resource Generator is underestimated tool among online researchers. RG provides reliable results and could be successfully applied in online questionnaires.

### IT IS NOT WHO YOU ARE OR WHAT YOU KNOW: IT IS WHO YOU KNOW AND WHAT YOU TALK ABOUT. THE EFFECT OF POLITICAL DISCUSSION NETWORKS ON POLITICAL PARTICIPATION IN BELGIUM.

**Author:** Paulis, Emilien  
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**Relevance & Research Question:** Political participation is a central and flourishing field of research in political science. Many models using mainly micro and macro-level explanatory factors have greatly contributed to our knowledge of who gets involved, why, and under which context. Yet, we don't know much about the process of engagement, i.e. the triggers of participation or the factors that turn potential participants into politically active citizens. Investigating these dimensions calls for an analysis of the role of intermediate explanatory factors, and especially the role of mobilization by social groups or agencies.

The mobilizing effects of interpersonal communication networks have attracted a growing attention. However, these researches are limited to electoral participation and how political discussion among peers might influence the decision to vote. Few researchers have extended this framework to other forms of political participation. This paper intends to fill this little gap by looking at the mobilizing effect of interpersonal political communication networks (measured as political discussion networks) on the individual decision to participate politically. The goal is to emphasize that individuals do not act in isolation. They are influenced by the people with whom they discuss.

**Data & Methods:** This study uses social network analysis as main theoretical and methodological tool. We use data collected via an online survey among a sample quota of Belgian citizens (N=2,800). We combine traditional micro-level factors (resources and attitudes) and network characteristics (size, density, homogeneity, strength and type of social ties) to explain variation in participation levels among citizens.

**Results:** The analysis is still on going. The final results should be available around January 2017.

**Added Value:** On the one hand, the use of Social Network Analysis contributes to a methodological innovation: collecting relational data pertaining to discussion networks. This suggests the implementation of "name-generating" procedures in traditional survey questionnaire pertaining to political participation. On the other hand, this type of data allows to go beyond common socio-demographic and attitudinal explanations of political participation, exploring the relational dimension of social capital and the effect that discussion with other people may imply in terms of political involvement.

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### AMBIVALENCE, ANXIETY AND THE SEARCH FOR INFORMATION: A STUDY BASED ON A DYNAMIC INFORMATION BOARD IN THE RUN-UP TO A GERMAN STATE ELECTION

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The question how people make up their mind in an election campaign is still of great interest. Theories suggest that anxious or ambivalent voters might engage in a more thorough search for information in campaigns and finally make up their minds relying more strongly on current information rather than long-standing stable predispositions. However, we still know rather little whether this is true empirically. To test these propositions we have run an internet-based dynamic information board in the run-up to a German state election in March 2016. The study is based on an experimental design: Prior to exposing respondents to a simulated campaign, they were either exposed a (fake) newspaper article designed to induce either anxiety or enthusiasm or were made either more or less ambivalent by asking them to state negative (or positive) things about the candidate that they prefer. We will present results showing to what extent the information search as well as the decision-making differed between the different experimental groups.

## POSTER SESSION

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### COMPARING CROSS-CULTURAL COGNITIVE INTERVIEWS AND ONLINE PROBING FOR THE ASSESSMENT OF CROSS-CULTURAL MEASUREMENT EQUIVALENCE

**Author:** Adriaans, Jule; Weinhardt, Michael  
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**Relevance & Research Question:** When measuring concepts cross-culturally, measurement equivalence is essential in yielding meaningful results. As part of the questionnaire design processes, cross-cultural cognitive interviewing (CCCI) is commonly used to identify possible threats to measurement equivalence. CCCI is a version of standard cognitive interviewing used for assessing the cognitive processes behind the response process in personal interviews. For pragmatic reasons, CCCI is usually carried out with small sample sizes and involves the use of different probing techniques. The relatively new tool of online probing (OP) combines features of CCCI with the advantages of an online survey, achieving a greater sample size and broader coverage of concepts. This study investigates whether OP can be an efficient alternative to CCCI in developing cross-cultural questionnaires by comparing response quality and substantial results.

**Methods & Data:** In this study both CCCI and OP are applied in the questionnaire design process of developing a cross-cultural questionnaire on justice attitudes. Existing items that measure justice attitudes will be presented to respondents in CCCI and OP followed by comprehension and category-selection probes. A convenience sample of university students and employees with an international background will be recruited focusing on the languages German, English and Russian. The response quality of both methods will be evaluated by comparing nonresponse as well as response length. In a second step we will analyze whether both methods identify similar threats to measurement equivalence.

**Results:** The study is work in progress; preliminary results will be available for the conference.

**Added Value:** While CCCI as a method yields a higher level of interactivity and is assumed to produce higher quality data, OP can be implemented in web surveys which allow for larger sample sizes in the evaluation of threats to cross-cultural equivalence. In comparing results of both methods we study the relative benefits of both methods for the assessment of cross-cultural equivalence. We expect to find OP as a useful additional technique in the development of questionnaires, especially in cross-cultural settings.

### WHERE THE LINE BLURS BETWEEN ONLINE ADVERTISING AND EDITORIAL CONTENT: CREDIBILITY OF SPONSORED CONTENT

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Sponsored content, or native advertising in a broader term, has been given a huge potential for online advertising. As integrating the commercial message into editorial content in the most “native” way, sponsored content can be regarded as the best way to defeat ad-avoidance behaviour of internet users and, also considered the least annoying and disruptive advertising type in online ecosystem. However, sponsored content blurs the relationship between advertising and editorial content. As a result, the attitudes of internet users toward sponsored content can vary and this fact also can be influenced by their ability to notice sponsored content. The current study mainly aims to compare perceived credibility of editorial content and sponsored content. In order to make this comparison, a between-subjects design experiment was conducted. Edited version of an original sponsored content of one of the well-known and global technology companies was shown to participants of both control (N=53) and experiment (N=148) groups. The only difference between these groups was the “sponsored” information provided for the participants of the experiment group. Later, they were asked to read the content and rate the credibility of the content based on several adjectives of a 7-point Likert scale. Independent sample t-test was run to compare the responses. Results reveal that internet users found sponsored content as credible as editorial content. While examining perceived credibility difference(s) of editorial and sponsored content, the ability to recognize sponsored content was investigated among participants of the experiment group as well. According to this investigation, majority of the participants in the experiment group were able to notice what they read is sponsored content. These findings were discussed based on previous studies on sponsored content while considering the fact that the current study was the first attempt to examine attitudes toward sponsored content in Turkey.

### EFFECTS OF ADDITIONAL REMINDERS ON SURVEY PARTICIPATION AND PANEL UNSUBSCRIPTION

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**Organisation:** University of Gothenburg, Sweden

**Relevance & Research Question:** Many surveys today are challenged by falling response rates or by the difficulty to recruit panel members. It is often tempting for survey practitioners to send additional reminders in order to achieve higher response rates. It is widespread agreement that several reminders and follow-up contacts do yield higher response rates. However, it is sometimes uncertain when the reminder effects are saturated and adding more reminders will no longer increase response rates, or maybe even result in negative effects by an increase in unsubscription rates from panels as a result.

**Methods & Data:** With an experimental set-up, using members of the Citizen Panel, a non-commercial web panel run by the Laboratory of Opinion Research at the University of Gothenburg, this study examines the impact of adding several reminders to a web survey on survey participation rates, completion rates and panel unsubscription rates. 10,000 invited respondents were randomized into four groups and assigned to receive a maximum of no reminder, one reminder, two reminders or three reminders during a three week period. Reminders were only sent to those who had not answered the survey before a certain date.

**Results:** The results show that going from zero to one reminder increases the participation rate by eleven percentage points, from one to two by four percentage points, and from two to three by two and half percentage points. As the number of reminders increase, the share of people who complete the entire survey after starting it also increases, as do the share of the invited sample who instead unsubscribes permanently from the panel, albeit this negative consequence becomes more pronounced only by the third reminder.

**Added Value:** As expected, adding more reminders increases survey participation rates. Another positive effect of adding more reminders found in this study is that they also increase completion rates, thus yielding more complete data and fewer survey breakoffs. Although adding several reminders increases participation rates and completion rates, it unfortunately also seems that it makes more people leave the panel.

### THE ROLE OF CONSPIRACY BELIEFS AND PRIVACY CONCERNS IN ONLINE BANKING AND SHOPPING

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**Organisation:** Justus-Liebig-Universität Gießen, Germany

**Relevance & Research Question:** Today, more than 27 million Germans use online banking. Online shopping is even more common: more than 98 % of German internet users indicated that they bought at least one product online 2015.

It has been shown, that belief in conspiracy theories leads to lower levels of trust. Furthermore, research shows that trust plays an important role in predicting the commitment to online banking and the willingness to purchase items online. The variables which determine the frequency of usage of online-services like banking and shopping as well as the choice of devices used (e.g. smartphone, tablet, etc.) are largely unknown.

Our research question is, whether conspiracy beliefs, online privacy concerns, and broad personality traits have an impact on the frequency of usage and the choice of devices used.

**Methods & Data:** In our study N = 452 university students completed an online questionnaire. Participants were asked to answer questions about their online behavior in general as well as specific questions concerning their usage of online banking and shopping. Afterwards, they filled out an online privacy concerns scale and the generic conspiracy beliefs scale.

**Results:** Privacy concerns and conspiracy beliefs have no influence on the frequency of usage of online banking and shopping.

But Privacy concerns are able to predict, whether a person uses online banking and shopping or not.

People with high levels of privacy concerns and conspiracy beliefs tend to use less devices for online banking and shopping in general. Also, they use more safe devices like desktop pc's and less unsafe devices like laptops, smartphones or wearables.

**Added Value:** When it comes to online shopping and banking, trust is an important issue. In order to increase the number of customers as well as the frequency of usage, individual differences have to be taken into consideration. In particular, privacy concerns as well as conspiracy beliefs may offer insights into ways to further improve online banking and shopping that increase feelings of trust. For vendors, it is also possible to screen the personality of their customers and adjust the level of details of the website individually.

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## BALANCING TWITTER DATA WITH SURVEY INFORMATION TO PREDICT ELECTORAL OUTCOMES

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**Relevance & Research Question:** In recent years social networks have increasingly been used to study political opinion formation, monitor electoral campaigns and predict electoral outcomes. Still, the main problem of these studies is that data from social networks are usually not a representative sample of the whole population as, for example, people using social media are generally young. In this paper we contribute to overcome sample biases by balancing Twitter data with information from a traditional surveys with the aim of nowcasting and predicting the outcome of a constitutional referendum that recently took place in Italy.

**Methods & Data:** Data used in this research are collected from two different sources. First, using the Twitter API we collect tweets expressing voting intentions during the four weeks before the elections obtaining approximately one million tweets. Second, we use data from a traditional survey containing people's voting intentions and demographic information such as gender and year of birth. On the first set of data we perform a sentiment analysis as proposed by Hopkins and King (2010) to study voting intentions of Twitter users. Then, to improve the social media forecast, we derive an appropriate set of weights based on the survey's information providing an efficient approach to balance the sample's characteristics and adjust the forecast.

Moreover we perform a topic modelling analysis using a Latent Dirichlet Allocation model (LDA) to extract frequent topics and keywords from the Twitter data.

**Results:** Results show that we are correctly able to predict the outcome of the referendum, also in comparison with predictions achieved by using data from social media and traditional surveys separately.

Moreover we find that connected to voting "yes" at referendum there are positive words such as future and change while connected to voting "no" there are words such as fear and risk.

**Added Value:** The comparative advantage of our study is that combining data from social media with traditional survey data allows to net out most of the problems related to sample selection bias commonly present when analysing only on-line sources.

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## ASKING FOR CONSENT TO THE COLLECTION OF GEOGRAPHICAL INFORMATION

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In online surveys lots of paradata can be captured as a byproduct of data collection, for example information about devices and IP addresses. Even though much of this information is automatically sent by the browser, its storage and use by researchers is not always compatible with data protection guidelines and informed consent by respondents is required.

We study consent to the request to automatically collect geographical information in a large German online panel. Respondents of wave 4 of the German Internet Panel were asked for consent to automatically track their location using JavaScript. If consent was provided, the IP-address was stored and longitudes and latitudes were derived from it. In addition, the same respondents were asked to report their location (city name and postal code).

Geographical information on the location where the respondents fill in the survey is valuable for both substantial and methodological research. Spatial identifiers can be used to link outside information to the survey to enrich the data set with additional explanatory variables, for example weather or climate data or distances to public place like supermarkets, green spaces, or schools.

Automatically collected geographical information can be assumed to be of higher quality than reported locations, especially for respondents who fill in the survey in unfamiliar places or on the road. While response burden is lower for the automated collection, tracking of IP-addresses can also be perceived as intrusive and raise data protection concerns with respondents.

We address the following research questions:

1. What is the acceptance among the general population in Germany towards digitally collecting information on their geographical location?
2. Are there differences between people who consent to the digital collection of their geographical location and people who fill in information about their location manually in terms of socio-demographic and personality characteristics?

While about 95 % of the respondents report a city name or postal code only about 60 % consent to the digital collection. Both reporting a location and consent to digital collection are influenced by personal characteristics and different characteristics determine the willingness to provide the two types of information.

### DIGITALIZATION OF HEALTH: EXAMINING THE BUSINESS POTENTIAL OF A MEDICAL SELF-DIAGNOSIS APP USING AN EXPERIMENTAL ONLINE RESEARCH APPROACH

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**Relevance & Research Question:** Digital Health describes a multitude of electronic and internet-based trends and developments in the healthcare sector, having a disruptive impact on all stakeholders: consumers/patients, healthcare professionals and pharmaceutical companies. The promise of new prospects for value creation goes along with the menace of a future decline of traditional business models in the pharmaceutical industry. Medical apps for self-diagnosis empower patients and consumers, but challenge the traditional routes of diagnosis and medical consultancy provided by professionals. Medical apps provide digital touchpoints and the decision about their use is made autonomously by consumers. Forced-exposure studies can therefore not predict the probability that a health app is used, nor how likely it is that consumers follow a solution proposed by the app (e.g. buying a proposed self-medication product).

**Methods & Data:** The study implements a quantitative approach to check usage probability of a health app in a given indication and to derive an early forecast of the future business potential for a pharmaceutical product recommended by the app. Respondents were invited to a "health-related study", survey flow simulated all steps of the self-diagnosis process including critical drop-out points to measure probabilities for each phase realistically.

**Results:** The research design provides data for every single step of the customer journey: interest in the health indication, probability to install the app, probability to provide data needed for diagnosis and probability to purchase recommended product - helping companies to assess the impact of health apps for promoting and successfully launching new products or services.

**Added Value:** Classical concept tests force respondents to evaluate a given stimulus (e.g. a medical app) which almost certainly leads to an overestimation of future usage in the target group. The alternative observational-experimental design used in our study provides more valid input for business planning as all process steps (and potential barriers) are simulated in a realistic manner.

### COORDINATION OF GENDER EQUALITY POLICY RESOURCES ON TWITTER - A SPECIFIC CASE FOR POLITICAL COMMUNICATION

**Author:** Getz, Laura; Lipinsky, Anke  
**Organisation:** GESIS, Germany

**Relevance & Research Question:** The FP7-funded project GenPORT has initiated a user-generated online repository for resources on gender

and science along with a networking space for gender equality stakeholders. The platform is amplified by the Twitter account @genderportal. The proposed presentation discusses @genderportal as a tool for the coordination of gender equality policies in science. It displays the main thematic areas that policy stakeholders are engaged with on Twitter by means of qualitative content analysis. Thereby it contributes to the transdisciplinary and constantly developing body of work on Twitter research from a qualitative perspective (Hunsinger 2005; Weller & Kinder-Kurlanda 2016; Zimmer & Proferes 2014).

**Methods & Data:** Data from @genderportal were gathered with a Twitter analytics tool for four months in 2016. Subsequently, 350 tweets out of 2.509 to date, which make up 13.96% of all tweets on @genderportal, were analyzed using qualitative content analysis (Kuckartz 2012; Mayring 2007; Schreier 2012). Tweets were clustered into categories on the basis of multiple assignments. Data on languages used, countries of audience, and the average scope of followers were gathered, thereby giving insights into user demographics of up to 596 followers at the end of the data collection process (to date @genderportal has 907 followers).

**Results:** Results of the analysis display, that @genderportal followers use Twitter mainly to coordinate policy resources and exchange information about events. 159 of 320 tweets were assigned to the category "Policy". Our findings indicate that @genderportal mainly serves to distribute current and time-sensitive information relevant to policy-makers and researchers of the gender and science community, followed by information about developments in research and policy-making.

**Added Value:** The research conducted explores user patterns of policy stakeholders and researchers from the field of gender and science specifically. It shows that Twitter holds the potential to initiate policy learning for an international community of experts.

### READ IT FROM MY FINGERTIPS – CAN TYPING BEHAVIOUR HELP US TO PREDICT MOTIVATION AND ANSWER QUALITY IN ONLINE SURVEYS?

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**Organisation:** TU Munich, Germany

**Relevance & Research Question:** Previous research found that the current motivational state of subjects represents an important predictor for the quality of online surveys (e.g. Harper, Raban, Rafaeli & Konstan, 2008). Thus, measuring the motivation in real-time while subjects work on a survey could enable us to provide adaptive motivational cues and improve answer quality. Moreover, automated labelling of answers with motivation measures could help analysing data quality. However, previous methods of measuring current motivation are limited to self-reports or indirect measures like cognitive association tasks (see Touré-Tillery & Fishbach, 2014 for a review) – those methods tend to be biased and time-consuming. As surveys often contain open text answers, we propose to use indices of typing behaviour (e.g. speed, pauses, corrections) as a source of information about current motivation. This study investigates whether analysing the typing behaviour in surveys can help to explain variance of the motivational state and the quality of open text answers.



**Methods & Data:** Data acquisition is still in progress. 50 subjects will take part in a correlation study. As a cover story, subjects are asked to evaluate an online learning environment about website programming for about one hour. This includes four open answer tasks (e.g. "How would you change the page design?") at different time intervals. Before each task, the depending variable current motivation is assessed with 5 items (e.g. "I think, this task is fun"). The answer quality is rated manually including length, content variance and number of propositions. Typing behaviour is recorded by a JavaScript framework. Multiple regression models are used to check for relations between typing indices and motivational states.

**Results:** As data acquisition is still in progress, results are not yet available. However, an explorative pre-study revealed medium correlations between typing speed and answer quality ( $r = -.369$ ,  $p < .01$ ) as well as between the number of corrections and motivational state ( $r = .540$ ,  $p < .01$ ).

**Added Value:** Analysing typing behaviour is an unobtrusive, non-reactive, low-cost and objective method that could help predicting motivation and labelling answers in online surveys. This study investigates the practical applicability and theoretical validity of this idea.

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## HOW DOES TWITTER CONNECT POLITICIANS WITH EACH OTHER? A SOCIAL NETWORK ANALYSIS OF THE FINNISH PARLIAMENT MEMBERS

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**Organisation:** University of Turku, Finland

**Relevance & Research Question:** The social media has become an essential part of the daily politics across Europe. In Finland, for example, about 80 percent of the parliament members (MPs) utilize Twitter for networking purposes and also for spreading their political opinions. However, little research has focused on the social circles manifested in politicians' social media networks. Previous research on the politicians' use of social media has focused merely on the nature of political communication. This paper examines what kind of the social media networks are constituted by the Finnish MPs' mutual following. We also analyzed what kind of party cleavages can be detected when examining MPs' shared followees.

**Methods & Data:** For the empirical analysis, we first extracted the network connections from the MPs' Twitter accounts using NodeXL software. Second, we combined data from national voting advice application, which include information regarding MPs' general values and opinions regarding social political and economic issues. Our unique data with a total 161 observations from all Finnish MPs, including a comprehensive set of background variables give us an extensive look at the MPs' social media networks. We examined politicians' internal networks by analyzing their reciprocal following on Twitter and external networks were analyzed by MPs' shared followees on the Twitter.

**Results:** According to the explanatory analysis, a majority of MPs' interconnections were explained by party affiliation. In addition to this, however, we also found that some clusters are clearly based on matching values, rather than party affiliations. When comparing different parties, our results suggest that the members of the Green and

the National Coalition (right-wing) are highly interconnected with each other, as well as the Green and The Left. At the same time, the members of the centre-right parties seem to be withdrawn from the members of the other parties.

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## HOW MUCH DOES THE MODE OF RESPONSE MATTER? A COMPARISON OF WEB-BASED AND MAIL-BASED RESPONSE WHEN EXAMINING SENSITIVE ISSUES IN SOCIAL SURVEYS

**Author:** Koivula, Aki; Räsänen, Pekka; Sarpila, Outi  
**Organisation:** University of Turku, Finland

**Relevance & Research Question:** It is argued that traditional ways of collecting social surveys are threatened by the rising data-collection costs and the declining response rates. In an attempt to solve this problem, researchers have started to utilize cheaper and easier data collection methods, especially those focusing on various types of online data. Current research on survey methodology has criticized sample-to-population representativeness of many online surveys. At the same time, however, research on how the mode of data collection affects to responses is almost completely lacking. This paper examines whether the survey responses using Web-questionnaire are different from the mail-questionnaire responses when examining respondents' attitudes towards sensitive issues such as immigrants.

**Methods & Data:** Our data are derived from the International Social Survey Program (ISSP) 2013. We selected two countries for the analysis, Finland ( $n=1,243$ ) and Norway ( $n=1,585$ ), both of which applied similar methods of data collection technique (self-conducted mail survey and web survey).

**Results:** We found that respondents' tend to answer more negatively towards immigration via mail-questionnaire than Web-questionnaire. The results indicate also that although the popularity of the Web-surveys has increased during recent years, the mode of response is still associated with socio-demographic background, and therefore, the response mode has impact on responses.

**Added Value:** We suggest that the mixed-mode survey is a reliable method of data collection especially after controlling for background variables and their interactions with the response mode.

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## DIGITAL LOCATION MARKETING IN STATIONARY TRADE. INQUIRY OF RETAILERS IN THE DIGITAL DISTRICT OF COLOGNE SÜLZ/KLETTENBERG

**Author:** Kolb, Moritz Alexander  
**Organisation:** Cologne University of Applied Sciences, Germany

Stationary businesses, notably small ones, have been facing thriving competition by online trading for years. The use of new digital facilities holds new opportunities for the retail sector in this respect. One approach is the distribution of location-based marketing contents

to smartphone users. The broad-scale pilot project Digitales Viertel (digital district) in Cologne (district Sülz/Klettenberg) is aiming at re-surrecting customers' interest for local businesses by means of mobile marketing. The present paper, titled Digital location marketing in stationary trade. Inquiry of retailers in the digital district of Cologne Sülz/Klettenberg, is a qualitative substudy of the project adopting the retailers' perspective. The central question is: (How) can the retail sector benefit from digitalizing the district and (how) can the district benefit from digitalizing trade? Answers are developed by discussion of existing theory on digital developments combined with analysis of empirical guided interviews with experienced retailers, who were recruited via the local retailers association. Therefore a semi-structured questionnaire was developed and used for nine Face-to-Face interviews in August/September 2016. The analysis of the data is mostly based on methodology provided by Lamnek.

Traders' fundamental opinions and challenges as well as their attitude towards the digital evolution and the particular project are being evaluated. On the one hand, findings support further online inquiries for the project, on the other hand, they were used to develop recommendations for action. Results of the analysis show that retailers find themselves in a conflict between the digital and the real world. In spite of openness and curiosity, there are also great doubts concerning the Cologne-based experiment. Meanwhile, retailers describe a quite similar prospect when asked for their future vision. However, they could also name limitations that they are (already) aware of.

### ONLINE FRAGMENTED INTERRUPTIONS AND ONLINE CONTINUOUS INTERRUPTIONS

**Author:** Levy, Eilat Chen [1]; Rafaei, Sheizaf [1]; Ariel, Yaron [2]

**Organisation:** 1: The University of Haifa, Israel; 2: Yezreel Valley College, Israel

**Relevance & Research Question:** This paper examines the effects of fragmented and continuous online interruptions on the quality of cognitive performance as well as the existence of an interaction between the interruption and the richness of information. Two hypotheses were raised. H1: There is a difference between the means of the quality of cognitive performance between interruptions' pace. H2: There is a difference in the mean quality of cognitive performance for different combinations of the richness of interruption and interruptions' pace.

**Methods & Data:** 240 participants took part in an experiment based on an online business game, which stimulates a decision-making process. Additional programs were added to function as external interruptions. Two subsequent studies conducted. The first tested the influence of online interruptions' pace on the quality of cognitive performance. The second study relied on the theoretical basis of Media Richness Theory and compared the „poor“ text-only interruptions (slow and rapid) with rich interruption (combination of text and image).

**Results:** Our findings suggest that participants interrupted by continuous online interruptions performed similarly to participants that did not interrupt. Moreover, participants who experienced fast text interruption performed the best cognitive performance. The poor cognitive performance discovered at the group interrupted with slow text.

The analysis of H1 showed that the effect of the interruption's pace on cognitive performance was statistically significant ( $F(3,157)=2.683$ ,  $p<.05$ ). The rapid-fragmented interruption achieved the highest values following the non-interruption that achieved high values and then the continuous interruption and last the slow-fragmented interruption. The analysis of H2 revealed that neither interruption richness ( $F(1,156)=1.76$ ,  $p>.05$ ) nor interruption pace, ( $F(3,156)=.95$ ,  $p>.05$ ) had an impact on the quality of cognitive performance. However, the interaction effect was statistically significant [ $F(3, 156)= 5.216$ ,  $p<.05$ ].

**Added Value:** Our findings contradict one of the principal assumptions of Media Richness Theory, namely that concordance must exist between the medium and the richness of the message. As was suggested by critics of Media Richness Theory, we found that the level of richness is not dictated by the properties of the medium. One might suggest that richness is instead a matter of subjective interpretation.

### MEDIATIZED IDEOLOGIES: RELEVANCE, CREDIBILITY AND IDEOLOGY OF THE SPANISH MEDIA.

**Author:** Pavia, Jose M. [1,2]; Rubio, Alfredo [1,2]; López-García, Guillermo [1,3]; Palau, Dolores [1,3]

**Organisation:** 1: Universitat de Valencia, Spain; 2: GIPEyOP, Spain; 3: Mediaflows, Spain

**Relevance & Research Question:** The media are at the center of the political decision-making process carried out by citizens. The media concentrate information on the topics and leaders of their choice, strongly conditioning public's perception. In southern European countries, this is combined with a news scenario in which a majority of media outlets and the major factions of political power have adopted what Hallin and Mancini (2004) call a "model of polarized pluralism". The political and electoral decision-making processes carried out by citizens can only be understood identifying the ideological leanings of the media through which they perceive the events which comprise the public agenda.

This paper studies how the electorate perceives the major media outlets in terms of credibility and ideology. We seek to answer, among others, the following questions: which media are considered the most influential in public opinion formation in Spain; what ideological position Spaniards assign to the major media outlets and the most important journalists and public figures; what links can be established between Spaniards' media consumption habits and their perception of politics in terms of ideology, influence and credibility.

**Methods & Data:** An online poll of 2,500 electors, to be performed in November-December 2016, will gather information on the 25 most important national media outlets, as well as the characteristics of the poll respondents. We will use statistical techniques, including logit models and correspondence analysis, to find the most appropriate answers to the questions posed.

**Results:** The results obtained will offer a broad overview of the Spanish

communications panorama in terms of its ideological distribution. They will shed light on the public's perception of the ideological positions of the major Spanish media outlets, as well as the public's consumption criteria, in the context of the polarization that Spanish politics has been undergoing over the last few years.

**Added-Value:** This is the first study carried out in Spain on the electorate's perception—politically speaking—of the relevance, credibility and ideology of the media. This will allow us to position media and voters and to determine different subsets of voters' levels of exposure to different political messages.

### HOW ONLINE GAMING AFFECTS SOCIAL CAPITAL AND SOCIAL SUPPORT: A SURVEY STUDY ON WORLD OF WARCRAFT

**Author:** Reer, Felix  
**Organisation:** University of Muenster, Germany

**Relevance & Research Question:** The increasing popularity of online games has raised questions about the social consequences of excessive play. While some scholars found evidence that playing may lead to isolation, others argued that online gaming offers great opportunities to build up new friendships and thus to increase players' social capital. The current study takes both possibilities into consideration. Based on a sample of 409 players of the popular role-playing game World of Warcraft (WoW), possible positive as well as possible negative social effects of playing are investigated. To find out more precisely under which circumstances online gaming has positive or negative social consequences, not only playing time, but also specific game-related behaviors of the players and their playing motivations are considered as predictors of social outcomes of playing.

**Methods & Data:** Regression analysis was used to investigate how playing time, game-related behaviors (membership in a clan, preference for team play) and motivations (socializing, escapism, and achievement) are connected with different types of social outcomes (bridging and bonding social capital received from playing; overall social support). Further, moderation analysis was performed to investigate whether players' motivations moderated the connection between time spent playing and social outcomes of playing.

**Results:** Playing WoW for social motivations and preferring team play over solo play was connected with increases in the acquisition of social capital as well as with increases in social support in general. Excessive play showed negative connections with the overall social embeddedness of the players. However, moderation analysis revealed that social motivations seem to buffer some of the negative social consequences of excessive play, while playing for escapism seems to act as an amplifier.

**Added Value:** The results show that the social outcomes players

receive from WoW are not the same for all players, but depend on their motivations and their game-related behaviors. In this, the study underlines the importance of considering additional underlying factors when investigating social consequences of playing online games. Online gaming is not a one-dimensional activity and thus solely looking at connections between time spent playing and social outcomes of playing is not sufficient.

### IMPACT OF USING PROFILING OR PASSIVE DATA TO SELECT THE SAMPLE OF WEB SURVEYS

**Author:** Revilla, Melanie [1]; Ochoa, Carlos [2]  
**Organisation:** 1: RECSM-Universitat Pompeu Fabra, Spain;  
2: Netquest, Spain

**Relevance & Research Question:** Probability-based sampling is the gold standard for surveys of the general population. However, when interested in more specific populations, for instance the consumers of a particular brand, a lot of research uses data from opt-in online panels.

This paper investigates, in the frame of non-probability based online panels, different ways to select a sample of consumers: without previous information, using profiling information, or using passive data from a tracker installed on the devices of the panelists. In addition, it investigates the effect of sending the survey closer to the moment-of-truth, which is expected to reduce memory limitations in recall questions.

**Methods & Data:** The data was collected in Spain in 2016 by the Netquest online fieldwork company. The samples for administrating a web survey about the experience with the visit of the website of different airline companies were selected in four different ways (without previous information, using profiling information, using passive data in the next 48 hours after the visit or later) and compared on different aspects: participation, efficiency, data quality and accuracy, survey evaluation, etc.

**Results:** The main results were the following:

- Using additional information (profiling or passive) to select the sample leads to clear improvements in terms of levels of participation and fieldwork efficiency, but not in terms of data quality or accuracy.
- Doing the survey closer to the „moment-of-truth“ further improves the fieldwork efficiency, but not the other aspects.
- We also observed differences across the different samples in respondents' socio-demographic characteristics and in the survey evaluation. This suggests that depending on the sample selection methods, we might end up with different profiles of respondents.

**Added Value:** This is the first study to our knowledge to study the possibility of using passive data from a tracker to select the sample for a web survey and for doing in-the-moment research in the frame of an online panel. Overall, it suggests that using additional information from profiling or passive data seems recommendable, whereas contacting the panelists in the next 48 hours after the event of interest does not improve further.

### WHAT IS GOING ON IN SCIENCE? - REDUCING THE SCIENTIST-PRACTITIONER GAP WITH MORE EFFICIENT ONLINE LEARNING

**Author:** Roeseler, Stefan; Thielsch, Meinald T.  
**Organisation:** University of Muenster, Germany

**Relevance & Research Question:** Close networking of economy and science has turned out to be a key driver for innovation. However, in some fields there are gaps between researchers and practitioners, leading to an insufficient knowledge transfer. An example is the field of personnel selection. As online media are preferably used by practitioners for further education, applied sciences could focus on online learning for improving knowledge transfer [Kanning & Thielsch, 2015]. This research examines if learning from computer-based short information texts is effective among practitioners. Furthermore, the effect of two different text designs is investigated. We used the topic of the validity of different personnel selection procedures.

**Methods & Data:** The study was conducted as an online investigation of 20 min with a sample of HR-practitioners ( $N=105$ ). It was structured as follows: [1] The strength of misconceptions concerning personnel selection procedures was measured. Two measures were used: assumed predictive validities and the results of a misconception questionnaire indicating deviations from the scientific position. [2] The participants read information texts (100-150 words) including current, relevant psychological findings. These texts either presented only the correct information (expository design) or referred to misconceptions directly (refutation design). [3] Finally, the strength of misconceptions was measured again.

**Results:** A pre/post comparison revealed that misconceptions were significantly reduced. The misconception questionnaire showed smaller deviations from the scientific position ( $\eta^2 = .22$ ). Assumed predictive validity changed according to the information texts, which indicates inferential learning ( $\eta^2 = .05 - .20$ ). Refutation design was partly more efficient than expository design ( $\eta^2 = .02 - .03$ ).

**Added Value:** The results show that it is at least in short term possible, that practitioners modify long-established knowledge structures by reading short information texts online. The texts are comparably easy to create and quick to read. Regarding communication of research findings this makes it interesting for both practitioners and researchers. Moreover, different effects of text designs open up further vistas in the creation of online learning activities.

### BAYESIAN COMBINING OF WEB SURVEY DATA FROM PROBABILITY- AND NON-PROBABILITY SAMPLES FOR SURVEY ESTIMATION

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2: University of Mannheim, Germany

Sample surveys are frequently used in the social sciences to measure and describe large populations. While probability-based sample surveys are considered the standard by which valid population-based inferences can be made, there has been increased interest in the use of non-probability samples to study public opinion and human behavior, particularly through web surveys. This increased interest is driven by multiple factors such as costs which can be significant when recruiting a probability-based sample. A second factor is the popularity of the web as a survey platform which has led to increased adoption of online access panels that can deliver cheaper and timelier survey results compared to traditional probability-based surveys. However, online access panels are heavily criticized because they do not employ probability sampling methods to recruit panel members, and therefore the mathematical probability theories that underlie valid statistical inference cannot be applied. While non-probability-based surveys are not ideal for making population-based inferences, their attractive cost properties make them potentially useful as a supplement to traditional probability-based data collection. In this paper, we examine this notion by combining probability and non-probability Web survey samples under a Bayesian framework. The Bayesian paradigm is well-suited for this situation as it permits the integration of multiple data sources, and a potential for increased precision in estimation. On the other hand, combining probability samples with non-probability samples that could be biased may offset gains in efficiency. Thus, there is likely to be a bias-precision tradeoff when combining probability- and non-probability samples. We examine this tradeoff using the German Internet Panel (GIP), a nationally-representative, probability-based web survey in combination with a set of non-probability-based web surveys that fielded a subset of the GIP questionnaire during the same time period. We apply the Bayesian combining framework to produce estimates of survey items and compare them to the probability-based estimates alone. We examine the accuracy and precision of the resulting survey estimates to determine whether combining the probability and non-probability samples yields valid inferences (and a likely cost savings) relative to the probability survey alone.

### PICTURES IN ONLINE SURVEYS: TO GREET OR AVOID?

**Author:** Schmid, Manuela; Batinic, Bernad  
**Organisation:** Johannes Kepler University Linz, Austria

**Relevance & Research Question:** The visual design of online surveys is a decisive factor as it contributes to the motivation of the participants to complete the survey. Pictures often fulfill the function of encouraging people, but it remains the question if they distort self-evaluations of participants in online surveys. The aim of this study was to test whether pictures, presented at the beginning of the survey, lead to an increase or decrease – depending on the type of the picture – of the participants' self-reported evaluations of work-life fusion and well-being.

**Methods & Data:** On the basis of an experimental design, 321 participants provided information on their well-being, work-life fusion, work-life conflict and burnout in an online survey. At the beginning of the survey, the participants of the experimental group were shown a picture. Participants were randomly assigned into three groups: Group 1: picture with a person at work, seeming relaxed and sitting on the beach; group 2: picture with a person in the office, seeming stressed and screaming; group 3: no picture. Univariate and multivariate ANOVAs were conducted.

**Results:** The pictures did not significantly distort participants' self-evaluations. All three experimental groups showed similar self-reports of well-being, work-life fusion, work-life conflict, and burnout. In addition, a shorter time lag between showing the pictures and participants' self-reports did not differ significantly from a longer time lag.

**Added Value:** At the present, studies on the effects of pictures in online surveys are rather sparse. Our study contributes to the current state of research on the question if pictures can be used in online surveys without distorting participants' self-evaluations.

### THE INFLUENCE OF FORCED ANSWERING ON RESPONSE BEHAVIOR IN ONLINE SURVEYS: A REACTANCE EFFECT?

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2: Federal Institute for Vocational Education and Training (BIBB), Germany;  
3: University of Trier, Germany

Recent studies have shown that the use of the forced answering (FA) option in online surveys results in reduced data. They especially examined that forcing respondents to answer questions in order to proceed through the questionnaire leads to higher dropout rates and lower answer quality. However, no study researched the psychological mechanism behind the correlation of FA on dropout and data quality before. This response behavior has often been interpreted as psychological reactance reaction. So, the Psychological Reactance Theory (PRT) predicts that reactance appears when an individuals' freedom is threatened and cannot be directly restored. Reactance describes the motivation to restore this loss of freedom. Respondents could experience FA as a loss of freedom, as (s)he is denied the choice to leave a question unanswered. According to PRT, possible reactions in this situation might be to quit survey participation, to fake answers or to show satisficing tendencies.

This study explores the psychological mechanism that effects response behavior in FA condition (compared to non-FA- condition). Our major hypothesis is that forcing respondents to answer will cause reactance, which turns into increasing dropout rates, decreasing answer quality and a satisficing behavior.

We used an online survey-experiment (n = 914) with two conditions (forced and non-forced answering instructions). Throughout the whole questionnaire, a dropout button was implemented on each page. In both conditions, this button led to the same page that fully compliant participants reached at the end of the questionnaire. Reactance was

measured with a self-constructed reactance scale. To determine answer quality, we used self-report for faking as well as the analysis of answers to open ended questions.

Zero-order effects showed that FA increased state reactance and questionnaire dropout as well as it reduced answer length in open-ended questions. Mediation analysis (Condition -> state reactance -> dropout/answer quality) supported the hypothesis of reactance as an underlying psychological mechanism behind negative FA effects on data quality.

This is the first study which offers statistical evidence for the often proposed reactance effect influencing response behavior. This offers a base for a deeper psychological reflection of the use of the FA-option.

### RACISM AND SEXISM APPROACHED WITH „PURPOSE“: SERIOUS GAMES AS A LOW-THRESHOLD WAY TO INCREASE AWARENESS

**Author:** Stetina, Birgit Ursula [1]; Rodax, Natalie [1]; Klaps, Armin [1]; Kovacovsky, Zuzana [1]; Sertkan, Serkan [2]; Hlavacs, Helmut [2]  
**Organisation:** 1: Sigmund Freud University Vienna, Austria;  
2: University of Vienna, Austria

**Relevance & Research Question:** Racism and sexism are amongst the currently most relevant problems in our society. News present on a daily basis the cruel results of power ideas, "us-vs-them concepts", together with intense emotions, taboo, distancing and avoidance behavior (eg Diller, 2011). Defensive behaviors can easily be observed in daily life, the underlying racism and/or sexism might be unconscious.

"Purpose", a browser game, is based on currently famous survival gaming genre with the background story of a zombie apocalypse. Players have to build their virtual group of non-infected humans to reach a save place, which is indicated on a map. All survivors of the zombie apocalypse are presented with their skills and a picture. How is the decision making process regarding the group structure biased by stereotypical racist and sexist aspects?

**Methods & Data:** In a mixed method design data of 10 participants were collected from a laboratory experiment with video analysis in combination with post-hoc semi-structured interviews for individual positioning. Analysis included content analysis and statistical procedures (eg cluster analysis).

**Results:** In the presented exploratory study racist and sexist behaviors, cognitions and emotions could be triggered during the game in experienced and unexperienced gamers. A guided reflection process raised the problem awareness of underlying racist and sexist patterns in the gamers.

**Added Value:** Gamification to tackle this serious problem might be a low-threshold way to increase awareness.



### USING SMARTPHONE SENSORS FOR DATA COLLECTION: TOWARDS A RESEARCH SYNTHESIS

**Author:** Struminskaya, Bella; Lugtig, Peter  
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**Relevance & Research Question:** Given the rapid proliferation of smartphones, the potential offered by smartphone measurement for social and market research is substantial. However, there are several challenges of smartphone sensor data collection regarding willingness to allow such measurement, sample selection, and data quality. In the recent years, the number of studies have emerged that use smartphone sensor measurement. The aim of this presentation is to systematize available findings to answer the following research questions: 1) What are the rates and determinants of willingness to participate in studies involving smartphone sensor measurement? 2) How do participants differ from nonparticipants? 3) Does the use of smartphone sensors improve data accuracy?

**Methods & Data:** The research synthesis is based on the literature identified in online journal databases, conference presentations and working papers where smartphones (owned by participants or provided) are used for passive data collection using built-in sensors or apps. Qualitative review will provide an overview of domains in which sensor measurement is used and whether it leads to more accuracy and less respondent burden. Quantitative review aims to estimate nonwillingness and nonparticipation effect sizes and the role of sensor types (e.g., GPS, QR-code scanner, camera), study characteristics, and respondent characteristics.

**Results:** This is a study in progress, therefore the results are still preliminary. The body of available literature consists of three groups of studies from various domains. The first group are (small-scale) studies of volunteers that focus on the implementing smartphone measurement and practical issues. The second group are studies that focus on hypothetical willingness to participate, while the third group are relatively rare implementations of sensor measurements in (large-scale) population studies. The rates of willingness and participation vary considerably between the studies. There are some indications that smartphone sensor data collection can improve accuracy and reduce respondent burden.

**Added Value:** Using smartphone sensors for data collection can reduce self-report errors and respondent burden if certain questions are substituted by such passive measurement. Systematizing available empirical evidence and identifying research gaps will help researchers target their resources towards studies that will allow more efficient use of this data collection method.

### BIG DATA ANALYTICS: OBSTACLES AND OPPORTUNITIES IN COMPUTATIONAL SOCIAL SCIENCE

**Author:** Stützer, Cathleen M.  
**Organisation:** Johannes Gutenberg University Mainz, Germany

With the emergence of the social (mobile) web we are using digital technologies for (social) interaction each day. We communicate in cross-media channels (e.g. mobile phones, internet), we interact in social media platforms (e.g. Facebook, LinkedIn), we search information in search engines (e.g. Google), we share ideas and knowledge (e.g. learning networks, Wikipedia, Twitter, etc.), we transfer money for purchases (e.g. online banking account, Amazon, Ebay), and e.g. we wear portable devices (e.g. health assurance).

That brings us to the fact that people leave many digital traces behind. In the last 15 years we observe a new phase of data revolution (Lazer et al. 2009; Alvarez 2016). With the massive increase in data production »big data« is discussed as socio-technological phenomenon. By automated data collection with computational techniques data seems often easy to obtain and cheap (King 2016). In social science we notice a computational turn in research and that is mostly tied with high expectations on scholars (boyd & Crawford 2012). But how we can profit from the (potential) benefits of analyzing big (social) data? Which data we have? Which analytical approaches, techniques, and instruments are actually discussed? Which skills are needed in that upcoming field? And what should we know about ethical and privacy issues?

With the poster presentation we want to start a critical discussion by focusing on obstacles and opportunities of analyzing big data in social science. We will visualize the state of the art in that field (e.g. (social) data collection, analytical and methodological innovations, theoretical approaches, limitations and restrictions, as well as the usage and applications of big data analytics in academia and business).

The poster presents an overview about the upcoming research field called computational social science. It will be shown implications for both social scientists as well as data science experts in the field of computational social science and put researchers in the position to transfer new (relational) approaches in the context of social science.

### THE KEY FACTORS OF SUCCESS OF CORPORATE COMMUNICATIONS ON FACEBOOK: RESULTS OF A QUANTITATIVE CONTENT ANALYSIS

**Author:** Wattenberg, Malte; Brandt-Pook, Hans  
**Organisation:** Bielefeld University of Applied Sciences, Germany

**Relevance & Research Question:** With 1.8 billion monthly active users Facebook shows great potential for corporate communications. Especially small and medium-sized enterprises (SMEs) are challenged by the high intensity and dynamics of communication processes. However, what does the average profile of SMEs on Facebook look like? Which factors lead to successful corporate-communications and thus to high interaction rates?

**Methods & Data:** For this purpose, we developed an application that connects to the Facebook Graph API and stores returning JSON-data of requested nodes in easy accessible CSV files with separated attributes of objects. Afterwards the data of 750 Facebook web addresses of active SMEs in DACH countries was collected and analysed.

**Results:** The initial results can be divided into structural and content-related usage of Facebook.

92% of SMEs use a short description of their company, followed by their business address and a link to their corporate website (90.6% each). A corporate email-address was found in 73% and a long description of the company in 61.6%. 50.9% of SMEs state their opening hours, but only 18.3% give a description of their products, 9.6% general information and 9.3% the mission of the company. Surprisingly low, only 10.2% of SMEs have their account verified by Facebook; however, 73.4% use a vanity-URL. Concerning the number of likes, accumulated 50% of SMEs count up to 356 fans, 90% up to 644.

Analysed posts [ $n=300.000$ ] consist of 51.4% photos, 34% links, 7.3% status updates and 4.5% videos. The average word count is 25.4. Future results will cover more content-related usage (e.g. comments) and the identification of possible success factors for communication.

**Added Value:** The preliminary results of the analysis highly contribute to the general understanding of the usage of Facebook by SMEs and identifies unused structural potentials. Additionally, the collected URLs of SMEs can be considered a valid sample for future research and comparisons with large-scale enterprises, (non-governmental) organisations, certain industries, etc. Finally, the already assembled dataset resulting from SMEs allows researchers to analyse more variables and formulate hypotheses with regard to interaction rates in upcoming studies, part of which will be presented.

## AUTOMATED MECHANISMS TO DISCOVER AND INTEGRATE DATA FROM WEB-BASED TABULAR COLLECTIONS

**Author:** Yaqub, Edwin [1]; Arnu, David [1]; Klinkenberg, Ralf [1]; Gentile, Annalisa [2]; Bizer, Chris [2]; Paulheim, Heiko [2]

**Organisation:** 1: RapidMiner, Germany; 2: University of Mannheim, Germany

**Relevance & Research Question:** Growth in data has been phenomenal in recent years. Data exists on public sources such as the web or on corporate intranet sources. The information contained in this data can be utilized for many purposes including but not limited to marketing, research, manufacturing, fact checking. Currently, there is a lack of supporting tools to discover and integrate relevant new data to existing datasets. To address this inadequacy, several research questions need to be addressed:

- How to access heterogeneous data that resides on the web
- How to discover data that strongly matches an entity-query (comprising of an existing table and attributes to be extended)
- How to incorporate integration and fusion algorithms to manage the discovered data (tabular collections) within data mining processes

**Methods & Data:** In the ongoing project DS4DM (<http://ds4dm.de>), we developed the Data Search extension for RapidMiner (an open source and free data mining tool). The extension provides Search-Join [1] as an automated process to discover and integrate tabular data.

As data source, half a million Wikipedia data tables are extracted and indexed in Lucene search engine for efficient retrieval. On this, the discovery algorithms compute schema and instance level matches for the given query. The result set is a space of candidate tables. The extension empowers the data analyst to:

- Translate and fuse new data to existing tables using the provided algorithms, or
- Perform manual refinements through i) exploratory visualizations that expose (dis)similarity patterns among the vast corpus of tabular collections and ii) graphical controls to manipulate intermediate outcomes of Search-Join process in real time (e.g. remove noisy table) but prevent loss of valuable information

**Results:**

- A domain-independent data enrichment solution to harness web tables
- The quality of search results is evaluated on the basis of various statistical metrics such as coverage, trust, ratio, empty values, table score

**Added Value:**

- The RapidMiner platform has been extended to incorporate data discovery and integration methods into data mining processes [1] Extending RapidMiner with data search and integration capabilities. Gentile, Anna Lisa, et al., International Semantic Web Conference, 2016

## INTERNET OF THINGS – CORPORATE REQUIREMENTS AND FRAMEWORK OF COMPETENCIES

**Author:** Franken, Swetlana; Mauritz, Nina; Prädikow, Lotte; Wattenberg, Malte; Zurmühlen, Miriam

**Organisation:** Bielefeld University of Applied Sciences, Germany

**Relevance & Research Question:** The Internet of Things (IoT), Cyber Physical Systems, and digitalisation are considered the most important challenges companies have to face in the upcoming future. Besides new technological approaches, the IoT implies a major change in labour conditions, labour organization, operational tasks, and requirements of the employees' qualifications. Furthermore, employees will not only control operations along the value-added-chain, but also work on innovations and digital business models, thus creating new value for the customer. However, what exactly are the new conditions, operational tasks, and the future requirements of qualification? Are there any differences in various occupation groups? What does this mean for the practical implication? This and other research issues will be explored in the research purpose.

**Methods & Data:** Based on this intention, a meta-study on existing research in the field of IoT was conducted in order to find similarities between studies and to identify the research gap. In addition, a developed framework for semi-structured qualitative interviews [ $n=6$ ] with specialists builds the basis for following quantitative studies [ $n=100$ ].

**Results:** Analysed studies show that all digitising companies face the urgent need to develop their employee's competencies. Moreover, studies show substantial conformity concerning relevant competencies, which include IT and process expertise, dealing with data, interdisciplinary thinking, and lifelong learning. Yet it remains mostly unclear which specific competencies will be most important and to what extent. For this purpose, the supposed framework consists of two interconnected levels: [1] Requirements of internal (e.g. cross-linking of processes) and external digitalisation (e.g. new business models, supply chain, and customer relationship management). [2a] Qualification and competencies dealing with general labour requirements and [2b] specific tasks of different occupation groups, divided into skilled and unskilled workers, academics and executives.

**Added Value:** The results show that existing studies are consistent regarding competencies and have broad practical implications for companies, however detail is lacking. The developed framework enables researchers in upcoming studies that address more specific research questions as we do in our interviews, whose results will be presented.

## A5: MEASUREMENT IN MOBILE WEB SURVEYS

### MOBILE-FRIENDLY GRID QUESTIONS: THE ACCORDION GRID AS AN ALTERNATIVE TO THE TRADITIONAL GRID

**Author:** Barlas, Frances M.; Thomas, Randall K.; Buttermore, Nicole  
**Organisation:** GfK Custom Research, United States of America

**Relevance & Research Question:** Grid questions are used routinely in online surveys when researchers want to assess multiple items using the same response format. Grids typically present elements to be evaluated in rows with responses arrayed in the columns. Grids can be problematic with smaller screen sizes such as those of smartphones. Horizontal (left-right) scrolling is often required to view all response options, making it impossible to view both the item text and all response options at the same time and raising the possibility that respondents will be less likely to select response options not visible on the screen. In the accordion grid format, respondents see the item text listed vertically, then can click on each item to reveal the response scale in a standard single response format. Using this approach, respondents can see the entire response scale for each item, along with the response items on a single screen. However, vertical response presentation has been associated with an increased likelihood of response order effects. Is the accordion grid an effective alternative to the traditional grid format?

**Methods & Data:** We conducted two experiments each using over 1,000 cases from KnowledgePanel®, GfK's U.S. probability-based online panel. With each study, respondents were randomly assigned to complete either an accordion or traditional grid.

**Results:** The time it took for respondents to complete each grid type was comparable, and we found few differences in results across the two types of grids for both dichotomous grids and unipolar scales with three or more response options. We found similar concurrent validity for both grid types when correlating the results with behavioral data and little evidence of response order effects. Respondents provided similar ratings of the ease and accuracy with which they could respond to the traditional and accordion grid scales.

**Added Value:** Taken together, the results suggest that the accordion grid is a promising alternative to the traditional grid design, especially given the increase in the proportion of online survey respondents who complete surveys using smartphones and other mobile devices.

### ADAPTING QUESTIONNAIRES FOR SMARTPHONES: AN EXPERIMENT ON GRID FORMAT QUESTIONS

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**Relevance & Research Question:** As ownership and use of smartphones grows, we need to adapt survey design to enable people to complete questionnaires on their chosen device, without impacting negatively on respondent experience or data quality.

Previous research highlights issues with grid questions on smartphones (e.g. McClain & Crawford, 2013). The 'traditional' grid format can appear cluttered on a smartphone screen, and this in turn can cause respondent burden and risks miscoding responses and higher drop out rates.

In this paper we consider alternatives to traditional grid formats and present experimental data to show the relationship between grid format and data quality.

**Methods & Data:** We present the results of an experiment comparing traditional grids with three alternatives: item by item scrolling, item by item paging and dynamic grids.

The experiment was run on the Kantar TNS online omnibus. The achieved sample size for each format was c. 1,200, including c. 250 respondents completing on a smartphone in each cell.

Alongside this experiment we have conducted usability testing with respondents to provide qualitative feedback on ease of use and perceptions of different grid formats.

**Results:** We compared results from the formats over a number of analysis dimensions, including substantive responses, missing response levels, 'Don't know' rates, question timings, flatlining, and respondent assessments. Results are also compared across device types and screen dimensions.

The results were broadly similar over the four formats, suggesting that for this sample/questionnaire the format did not substantially affect responses. However, there were differences in relation to question timings and missing response levels, with dynamic grids performing positively.

In the usability testing respondents found the dynamic grids to be engaging and intuitive, with many expressing a preference for this format.

**Added Value:** As social studies increasingly move online we need to ensure that questionnaires are optimised for mobile devices. This paper adds important evidence to one of the challenges associated with this shift: how to deal with grids. Through our experiment and usability testing we assess the pros and cons of alternative formats, including an interactive dynamic grids approach, and consider implications for adapting existing surveys.

### THE EFFECTS ON DATA QUALITY OF HORIZONTAL AND VERTICAL QUESTION ORIENTATION AND SCALES OF DIFFERENT LENGTH FOR RESPONDENTS USING SMARTPHONES, TABLETS AND PCS

**Author:** Martinsson, Johan [1]; Dumitrescu, Delia [2]; Markstedt, Elias [1]

**Organisation:** 1: University of Gothenburg, Sweden;  
2: University of East Anglia, United Kingdom

**Relevance & Research Question:** The increasingly mixed technical devices respondents use to answer online surveys cause concern among survey researchers. Despite efforts to adjust online surveys to smartphones knowledge is still limited concerning how different response scales work on different devices. The main concern is that respondents who use a smartphone might treat response scales different than PC or laptop users. This paper analyzes response order effects (e.g. primacy effects) and uses large sample sizes that enable us to analyze whether these effects are conditional on scale length, question orientation (horizontal vs vertical) and the type of response device participants are using.

**Methods & Data:** This paper reports four experiments where response option order, scale visual orientation (horizontal or vertical) also scale length are varied randomly. These experiments examine effects for dichotomous scales, 3-point scales, 5-point scales, 7-point scales and 11-point scales for political attitude questions. The data was collected by the Laboratory of Opinion Research (LORE) at the University of Gothenburg, Sweden, from their online panel (The Swedish Citizen Panel) between May 2014 and June 2015.

**Results:** Results indicate that vertical response scales suffer more from primacy effects than horizontal response scales, and that this is even more so for smartphone users. Moreover, we find an effect of scale orientation in itself apart from response order effects: vertically oriented scales produce more responses in the beginning of the scale (topmost) than horizontally oriented scales do (leftmost). This means that comparability between smartphone and PC data is threatened when questions are not shown in the same way to respondents on different devices. However, scale length clearly matters in that these effects are substantially larger when scales are 5 points or longer.

**Added Value:** This paper demonstrates the importance of question orientation (horizontal vs vertical) and that these should be identical

on smartphones and PCs to ensure comparability. Since each of the four experiments contain at least 10,000 participants and the share of smartphone users is substantial (between 20 and 30 percent) these can be analyzed with sufficient statistical power.

### B5: GOR THESIS AWARD 2017 COMPETITION: DISSERTATION

### ALIGNMENT AND SPOKEN DIALOGUE SYSTEMS – INFLUENCES ON TRUSTWORTHINESS AND USER SATISFACTION

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With the increasing dissemination of spoken dialogue systems (SDS) spoken human–computer interaction gains importance in everyday life. Currently, SDS are — to varying degrees — able to recognize, possess, and generate human-like, natural speech. They are employed in different contexts, for example as personal assistants in smartphones (like Siri® from Apple) or special devices (like Echo® from Amazon), as in-car applications or for purposes of persons with special needs. For the communication with SDS to be successful, alignment plays a central role. Alignment describes the tendency to adapt linguistic characteristics of an interlocutor. Lexical alignment, for instance, comprises the adaptation of word choices. Besides its contribution to communicative success, alignment can reflect the interlocutors' relationship. Like other computer systems or computational agents, SDS can be perceived as social agents. Therefore, the communication between users and SDS depends, inter alia, on whether an SDS is perceived as trustworthy.

This dissertation project explores the role of alignment for spoken dialogue systems and how that affects SDS' trustworthiness and user satisfaction with the interaction. For this purpose, the dissertation focuses on lexical alignment shown by users toward an SDS (Study 1) as well as on lexical alignment shown by an SDS toward users (Study 2). Furthermore, the dissertation includes politeness behavior as a form of pragmatic alignment shown by an SDS (Study 3).

Study 1 focused on how characteristics of the conversational partner influence the amount of lexical alignment shown by the interlocutor. Especially, the present experiment involved a human versus a computer partner, namely an SDS. Furthermore, we varied the elaborateness of the employed language style. When studying lexical alignment, previous research has often only examined the phenomenon in simple reference–tasks. This study aimed at the creation of a more natural conversational situation, to allow participants for the usage of their own words. We used a Wizard-of-Oz scenario to simulate the respec-

tive conversational partner that was employed in telephone interviews regarding satisfaction with students' life. 132 students took part in the experiment. It revealed that persons lexically aligned more to an interlocutor employing a restricted, robot-like language style, irrespective of whether persons perceived talking to a human or SDS. However, they were more satisfied with the conversation when talking to a human partner and an elaborated language style.

Study 2 included two experiments that were conducted to investigate the influence of lexical alignment on trustworthiness and satisfaction with the conversation. In the first experiment, we examined how users experience lexical alignment shown by an SDS when they talked to it themselves. 130 students were asked to talk to an SDS, allegedly for the SDS's improvement. Participants read out a set of ten questions and statements related to university life to a pretended SDS via telephone. In the second experiment, we focused on the perceived trustworthiness of the same SDS from the point of view of observers. 135 student participants listened to the conversation between a student and a spoken dialogue system. The SDS either showed lexical alignment to the student or not. The system's and the student's utterances were the same as in experiment 1. However, this experiment was conducted as an online experiment. In sum, analyses showed that when SDS lexically align to users, this decreases the perceived cognitive demand. Participants that merely listened to a conversation between an SDS and a peer ascribed more integrity and likeability to an aligning SDS.

With increasing capabilities of SDS, their perceptions as social agents has an impact on further aspects of their design. Not only lexical alignment is important but also other facets of alignment that reflect pragmatics. A relevant case of pragmatic alignment is politeness. Following politeness theory (Brown & Levinson, 1987), politeness can be conveyed by respecting the interlocutor's positive or negative face. Persons do not only show polite behavior toward humans but also toward SDS. In study 3, we examined the assessment of an SDS either displaying politeness or rudeness. Polite communicative behavior toward computers includes the avoidance of face threats. 58 high school students participated and were asked to assess an SDS. The study revealed that when SDS employ polite behavior instead of being rude, this leads to positive perceptions by users, including trustworthiness in form of a higher assessment of goodwill and integrity.

In sum, this dissertation shed light on how alignment can influence important aspects of communicative success and can inform designing principles for SDS. If the SDS requires precise input on the word level, it can be recommended to employ a restricted language style for the SDS in order to elicit lexical alignment. Furthermore, the choice of language style can also be exploited in human-human communication. In interview situations, which aim at a particular topic, it might be useful to choose a restricted language style. On the other hand, an elaborated language style should be considered if conversational partners are supposed to use their own words and not to stick on given specifications. In addition, the first study revealed that an elaborated language style enhances the likeability of the conversational partner, which holds true for both the SDS and the assumed human partner. Thus, the ideal recommendation regarding language style depends on the purpose of the conversation. Moreover, the role of alignment implemented in SDS' linguistic behavior should be discussed. The results of the third study imply that the consideration of politeness enhances the perception of the SDS regarding pleasantness, appropriateness on the one hand and trustworthiness on the other hand. These results are

in accord with findings in human-human interaction. Future research should include current SDS and further alignment levels.

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## SEARCHING FOR EQUIVALENCE: AN EXPLORATION OF THE POTENTIAL OF ONLINE PROBING WITH EXAMPLES FROM NATIONAL IDENTITY

**Author:** Meitinger, Katharina

**Organisation:** GESIS; University of Mannheim, Germany

Over the last decades, a tremendous increase has occurred in cross-national data production in social science research (Harkness 2008). The large-scale provision and the wide-spread use of cross-national data sets constitute a huge opportunity for the research community but also pose the challenge to develop cross-national comparable survey items (Lynn, Japec, and Lyberg 2006). At the same time, substantive researchers are increasingly aware of the necessity to understand respondents' cognitive processes when answering a survey question (Smith et al. 2011). Recently, the method of online probing has been developed that implements probing techniques from cognitive interviewing in web surveys. In the traditional probing approach, interviewers obtain additional information by asking follow-up questions called probes (Beatty and Willis 2007). In contrast, online probing transfers probing questions as open-ended questions in the web context. It can reveal the cognitive processes of web survey participants and it helps to assess whether respondents' interpretations of an item differ across countries (Braun et al. 2015).

The implementation of probes within web surveys offers respondents a higher level of anonymity of their answers in comparison to the laboratory situation during cognitive interviewing (Behr and Braun 2015), which potentially reduces social desirability effects in the response process (Bethlehem and Biffignandi 2012). Online probing can easily realize large samples sizes, which increases the generalizability of the results, enables an evaluation of the prevalence of problems or themes, and can explain the response patterns of specific subpopulations (Braun et al. 2015). Since all probes have to be programmed in advance, all respondents receive the same probe, and the procedure is highly standardized (Braun et al. 2015). When applied to cross-national data, online probing is a powerful tool to assess the comparability of questions. In contrast to traditional quantitative approaches to assess the equivalence of items (e.g., measurement invariance tests), online probing can explain why respondents in certain countries might misunderstand a specific item or why they adopt different perspectives when providing a response (Behr et al. 2014a).

The overarching goal of this dissertation project is to explore the potential of the method of online probing vis-à-vis other relevant methods that share similar goals (cognitive interviewing and measurement invariance tests) and as an assessment tool for single-item indicators in cross-national surveys. In particular, the dissertation addressed the following research questions: 1) Does online probing arrive at similar results than other methods? 2) Which are the strengths and weaknesses of online probing in comparison to other methods? 3) How can online probing be combined with other methods in a mixed-methods approach? 3) How useful is online probing to assess the cross-national



comparability of single-item indicators? Since the dissertation's goal is to compare the methods of online probing, cognitive interviewing, and measurement invariance tests in regard to their potential to detect problematic issues at the item level, the field of national identity has been chosen as a substantive application for the method comparisons due to the existence of potentially problematic measures in a cross-national context. This dissertation focused on items from the 2013 International Social Survey Programme module on National Identity.

The first article of this dissertation ("Comparing Cognitive Interviewing and Online Probing: Do They Find Similar Results?"; published in *Field Methods*) analyzed whether online probing and cognitive interviewing arrive at similar conclusion with regard to error detection and themes that are mentioned by respondents when applied to the same set of items (ISSP item battery on specific national pride). The study compares data from cognitive interviews conducted with 20 German respondents in April 2013 with a web survey conducted with 532 German respondents in September 2013. The article revealed that both methods share complementary strength and weaknesses. While probing answers in cognitive interviewing show indications for a higher response quality, online probing can compensate through a larger sample size. The article also provides the researcher with guidance which method is preferable in a given research situation and advocates the combination of both methods in a mixed-methods approach.

The second article of this dissertation ("Necessary but Insufficient: Why Measurement Invariance Tests Need Online Probing as a Complementary Tool"; forthcoming in *Public Opinion Quarterly*, "2016 AAPOR/WAPOR Janet A. Harkness Award" and "2016 QDET2 Monroe Sirken Innovative Paper Award for Young Scholars of Question Evaluation") provides an example for a mixed-method approach that combines online probing with quantitative measurement invariance tests. With the examples of the concepts of constructive patriotism and nationalisms, this study explains how the combination of both methods can reveal incomparable items and countries but also explain issues related to cross-national comparability. By analyzing data from the 2013 ISSP and a web survey with 2,685 respondents from five countries, online probing discovered the reasons for missing comparability (varying lexical scope and silent misunderstanding of a key term) that was also detected during the measurement invariance tests.

Finally, the third article showed the potential of online probing for the assessment of the cross-national comparability of single-item indicators with the example of the general national pride item. Online probing provides a unique solution for the decision whether single-item indicators are equivalent because the traditional approach of measurement invariance tests presupposes multiple-indicator measures and is, therefore, inapplicable for single-item indicators. This study analyzed 2,685 probe responses from a web survey that was conducted in five countries. Online probing uncovered several potentially problematic issues and the fact that respondents in all countries associate various concepts with the general national pride item.

Therefore, the contribution of this dissertation is:

1. The insight that online probing arrives at similar results than cognitive interviewing and measurement invariance tests.
2. A clear understanding of the method's strength and weaknesses vis-à-vis cognitive interviewing and measurement invariance tests.

3. An explanation of optimal implementations of online probing in a mixed-methods approach.
4. A demonstration of the usefulness of online probing to assess the cross-national comparability of single-item indicators.
5. But also, an assessment of the cross-national comparability of measures of national identity for substantive researchers.

## MONITORING AND EXPRESSING OPINIONS ON SOCIAL NETWORKING SITES – EMPIRICAL INVESTIGATIONS BASED ON THE SPIRAL OF SILENCE THEORY

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Social networking technologies such as Facebook are increasingly used for the exchange of information and opinions on politically and civically relevant issues. This development, on the one hand, may foster public deliberation and political learning as every user has the same chances to publicly voice their opinion on social issues and learn how other people argue about and judge a subject. On the other hand, there is a risk that (non-representative) opinion expressions in large-scale online discussions convey distorted pictures of public opinion to users who might adapt their attitudes and behaviors to this alleged opinion climate. Given these opportunities and risks, it seems plausible to ask how long-standing theoretical propositions focusing on the dynamics of public opinion do justice to these new ways of gauging and expressing opinions in mass-interpersonal contexts as provided by social media.

The spiral of silence theory (Noelle-Neumann, 1993) proposes that human beings continuously monitor their social environment to assess prevailing opinion trends. The silence hypothesis states that people are reluctant to publicly voice their viewpoint on a controversial topic when they encounter an opinion climate that opposes their personal opinion. People remain silent because of their fear of being isolated and experiencing sanctions from their environment for being deviant. Although there are initial studies on the validity of these theoretical tenets in online communication, limited empirical support has been found for the hypotheses of spiral of silence theory in online realms. The inconclusive state of knowledge prompts one to analyze the particular circumstances under which people may (or not) be sensitive to the opinion climate when expressing their opinion through social media. Given that online networking platforms function as social spheres with an unprecedented quality, for instance, in terms of the size or the composition of the audience (including close friends, acquaintances, co-workers but also strangers at the same time), it seems conceivable that these environmental factors intervene in the silencing process, requiring new explanations for people's communication behavior. Following this line, it seems a pressing need for research to not only assess the validity but also theorize potential boundaries of the spiral of silence theory in these new communication channels. For this purpose, this dissertation is intended to investigate (a) whether and how users monitor other people's opinions through social networking technologies and (b) under which circumstances they are willing to contribute to these opinion climates by expressing their personal viewpoint on these platforms.

These two processes were addressed empirically by a multi-methodological approach consisting of five studies. Study 1 examined the effects of different opinion cues (available on Facebook) on people's inferences about public opinion. Results of a two-session online experiment ( $N = 657$ ) showed that individuals' fear of isolation sharpened their attention toward user-generated comments, which, in turn, affected recipients' public opinion perceptions in the direction advocated in the comments. The latter influenced subjects' opinions and their willingness to participate in social media discussions. Study 2 explored the situational manifestations of people's fear of isolation and environmental variables as influence factors of people's outspokenness. Results from qualitative in-depth interviews ( $N = 12$ ) revealed a variety of sanctions people expect from others when voicing a minority opinion and a series of factors such as the size or the relationship to the audience which could exert an impact on one's willingness to express their opinion in online realms. Study 3 further investigated the expectations of sanctions and their explanatory value regarding people's communication behavior in different situations. Findings from an online experiment ( $N = 365$ ) demonstrated that the expectation of being personally attacked can explain why people are more inclined to express a minority opinion in offline rather than in online communication settings. Drawing on results from the previous studies of this dissertation, Study 4 tested whether the publicness of social networking platforms in terms of the size and relational diversity of the audience affect people's outspokenness. Results from a cross-cultural experiment ( $N = 312$ ) showed that in Germany, a higher level of publicness of a controversial discussion on Facebook reduced people's likelihood to express their viewpoint, attenuating the influence of the opinion climate. This pattern, however, was not found in Singapore. Study 5 zoomed in on the role of the online audience and analyzed whether the relationship to the audience determines people's likelihood to express their opinion on Facebook. Findings from a laboratory experiment ( $N = 119$ ) showed that the relational closeness to the envisioned audience on Facebook does not directly affect people's likelihood to express their opinion on a controversial topic. However, findings revealed that users' certainty about the prevailing opinion distribution among the particular audience is a crucial predictor of people's outspokenness.

This collection of studies extends previous research by testing the validity of the spiral of silence theory but also pointing to potential boundaries thereof in the context of increasingly popular communication environments: While people were found to infer overarching opinion climates from opinion cues in the form of user-generated comments on the social networking platform Facebook, their likelihood of opinion expression was largely not contingent on whether they found the opinion climate in agreement with their personal viewpoint or not. Results instead showed that (at least in a Western culture) environmental factors pertaining to the platform such as a greater publicness in terms of a large and relationally diverse audience attenuates the influence of the opinion climate on people's outspokenness. From a practical point of view, results indicate a rather low general willingness of people to publicly voice their personal opinion on social networking platforms, also showing that predominantly voices of the "hard core" (i.e., those with a higher attitude certainty and topical involvement) are resembled in online opinion climates. Based on this, it seems desirable to reflect upon how technologies or educators can increase the ideological representativeness and the rationality of online discourses. When it comes to increase users' motivation to participate in discourses on social networking services, making audiences better visible to users or rewarding users who corroborate their online opinion expressions

with valid arguments appear promising practical approaches in face of this dissertation's findings.

## C5: CAMPAIGN STRATEGIES

### PSEUDO-DISCURSIVE, MOBILIZING, EMOTIONAL, AND ENTERTAINING: IDENTIFYING FOUR SUCCESSFUL COMMUNICATION STYLES OF POLITICAL ACTORS ON SOCIAL MEDIA DURING THE SWISS NATIONAL ELECTIONS 2015

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**Relevance & Research Question:** Political actors are adapting their communication styles to the particularities of social media platforms with varying communicative success. This study investigates four communication styles – the pseudo-discursive, mobilizing, emotional, and entertaining style – used during the Swiss national election 2015 and their success in generating digital interactions (likes, comments, and shares on Facebook and retweets and favorites on Twitter).

**Methods & Data:** We conducted a quantitative content analysis of the "top 20" most interacted with messages during the election phase (from April 1st to October 28th 2015; election: 18 October) on Facebook ( $n = 2170$ ) and Twitter ( $N = 1796$ ) of 246 Swiss parliamentarians and 11 parties. The reliability test based on a coding of 10% of the sample by three student coders showed satisfactory results: The variables for the pseudo-discursive style reached a Krippendorff's Alpha of .71, for the mobilizing of .9, for the emotional of .89, and for the entertaining of .78.

**Results:** Whereas the pseudo-discursive style is the most common on both platforms (occurs in 75% of all successful messages; 70% of Facebook posts and 79% of Tweets), it leads on Facebook to fewer interactions (regression analysis:  $\beta = -.043$ ,  $p = .019$ ). Whereas on Facebook the entertaining style supports ( $\beta = .034$ ,  $p = .062$ ), on Twitter entertainment diminishes the amount of interactions ( $\beta = -.098$ ,  $p = .000$ ). Furthermore, the entertaining style occurs significantly more often on Facebook (70%) than on Twitter (47%). The mobilizing style is found in almost half of all most successful Facebook posts (48%) and in every third tweet (34%). Mobilization leads only on Facebook to more reactions ( $\beta = .53$ ,  $p = .002$ ). Although the emotional style is used the least often (31% on Facebook and 20% on Twitter), it is the only style that fosters digital interactions on both platforms ( $\beta = .052$ ,  $p = .003$  for Facebook and  $\beta = .062$ ,  $p = .001$  for Twitter).

**Added Value:** On the one hand, our empirical insights allow us to better evaluate the current changes in political communication between political actors and citizens via social media. On the other

hand, it provides orientation for political actors aiming to achieve as many digital interactions on social media platforms as possible.

### POLITICAL ADVERTISING ON THE WIKIPEDIA MARKETPLACE OF INFORMATION

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**Organisation:** 1: University of Konstanz, Germany;  
2: University of Mannheim, Germany

**Relevance & Research Question:** We ask how politicians use the Wikipedia platform as a tool for hidden campaigning and political advertising. We argue that Wikipedia is an attractive platform for political candidates to advertise themselves to their constituencies, as it is a widely used source of political information and, perhaps as important, one that is often deemed neutral.

**Methods & Data:** The data we use to analyze edit practices on German Members of Parliament's (MP) Wikipedia pages pertain to all 1,100 members in the three preceding terms. It captures different dimensions and sources of edits, page metrics and political as well as sociodemographic MP characteristics. To infer on MP behavior, we consider only those edits featuring an IP address that is linked to the Bundestag IT network. We first investigate if and how edit histories are linked to offline political events, such as election campaigns. Furthermore, using zero-inflated negative binomial models, we test whether strategic incentives rooted in the electoral system as well as sociodemographic characteristics affect editing behavior.

**Results:** With more than half of the studied MPs found to edit their own entry, German MPs seem to have realized the value of the platform, although the overall number of MP-induced edits seems rather low. Whether and to what extent MPs exploit Wikipedia seems to depend on requirements to cultivate a personal vote, resource constraints, expected benefits, reputation costs, and the breadth of the targeted electorate. The ways in which MPs edit their biography are manifold and as creative as it can get, including the strategic placement, modeling, removal, highlighting or reframing of information.

**Added Value:** Our results speak to the domains of political professionalization and the general measurement of communicative patterns. Our research advances the menu of public opinion shaping by providing evidence for politicians not shying away from using hidden, indirect ways to achieve their goals. Furthermore, the research holds implications for the general study of elite behavior, as edits pose a behavioral measure that is not prone to various forms of bias associated with, e.g., reports in candidate surveys.

### "LIKE OF THE SAME": FACEBOOK LIKE-NETWORK OF THE 2016 HONG KONG LEGISLATIVE COUNCIL ELECTION

**Author:** Ho, Justin Chun-ting  
**Organisation:** University of Edinburgh, United Kingdom

**Relevance & Research Question:** Social media, particularly Facebook, has been central to political communication in Hong Kong while its mobilising potential was demonstrated in multiple studies. Social media has long been celebrated for its potential to foster democratic deliberation. Many scholars often assume that deliberation takes place when communication platforms exist. While there is little doubt that social media fosters communication, whether it promotes cross-ideological deliberation, a key aspect of deliberative democracy, remains largely unexamined. To fill the gap in literature, this paper investigates the online interactions between different political factions during the 2016 Hong Kong Legislative Council Election and addresses the research question: does the social media network of election candidates reflect the political faction in reality?

**Methods & Data:** With the help of data crawling techniques, this paper extracts the like-network among the Facebook pages of the candidates of the 2016 Hong Kong Legislative Council Election. Facebook is selected as the social media platform to be studied because of its high penetration rate and importance in information flow in Hong Kong. Social Network Analysis is employed to examine the relationship between page-like and political affiliation.

**Results:** At first glance, the like-network among the candidates exhibits no pattern of homophily. This paper then expands the network to include all the pages liked by the candidate's pages, the "intermediate pages". After a two-mode to one-mode transformation, a co-like network is generated, in which an edge between two candidate pages represents that they liked the same "intermediate page". Quadratic Assignment Procedure test shows that there is significant correlation between political faction and concurrent like. In other words, there is no tendency for the candidate pages of the same political faction to like each other, but they share similar preference in liking other pages.

**Added Value:** First, this paper shall inform electoral research from a social media angle. Second, provided social media is one of the major platform for political communication, this paper could shed light on the structure of online political deliberation while the difference in page-like preference might inform the opinion polarisation on current affairs in Hong Kong.

## D5: AI, VIRTUAL REALITY & BIG DATA ANALYTICS – RESEARCH INNOVATION IN BELGIUM

### ARTIFICIAL INTELLIGENCE IN MARKET RESEARCH: HYPE OR TOMORROW'S BUSINESS- AS-USUAL?

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Amazon, Facebook and Apple already know it: Artificial Intelligence (AI) is here to stay and it will have a huge impact on our lives. Will it also impact the market research industry? Of course! And instead of fearing the inevitable, we had better talk about all the opportunities. We already see examples popping up where AI machines help with research tasks like survey design, qualitative moderation and data analysis. It will help us save time, which will allow us to focus on those parts of our jobs that are really of added value: understanding the business issues, crafting powerful consumer insights and bringing those to life in front of managers.

But can AI do even more for us? Can it become a manager's next best friend in day-to-day decision making?

What if every employee within an organization could chat with a bot, a personal assistant who has answers to all their 'consumer questions'? Through the AI-driven chatbot, employees could have direct access to all consumer research ever done. It would give them the right 'answer' anywhere, anytime and inspire them with new insights which it believes one might need during the day. And last but not least, it could also impersonate the consumer, giving an employee the chance to have a simulated 'chat' with their target consumer.

Starting from this dream, we created our AI-driven Insight Activation Chatbot: Galvin!

### VIRTUAL REALITY MEETS SENSORY RESEARCH

**Author:** Depoortere, Ludovic  
**Organisation:** Haystack International, Belgium

Virtual reality is considered to have begun in the 1950's but early elements of it can be traced back to the 1860's and long before the development of digital technology. VR goggles first cropped up in the world of gaming, but are now quickly finding their way into other industries

like market and consumer research. Whilst context and situation have always been important factors in sensory experiences and product testing, it is in that field that Ludovic Depoortere, founder of Haystack, is keen to demonstrate and tell you more about the usage of VR for smell and taste tests. Discover how virtual reality technology enables marketers to study consumers' experience of products in real life, or close to real life situations and whether they could provide new insights as compared to more traditional approaches.

### BIG INSIGHTS THROUGH BIG DATA ANALYTICS

**Author:** Huyghe, Nicole  
**Organisation:** boobook, Belgium

Big data, a large daunting monster or an opportunity not to be missed? Much has been said and written about big data in the past 2 years. We all talk about it, but are hesitant to embrace it. Why? Are we or our clients not ready for it or are we afraid that it might replace market research? We are an MR analytics expert company and have been breathing data for 15 years. Whether data is small, big, simple or complex, there are no mysteries for us. A big part of our current job is demystifying big data and explaining the impact it can have on MR and its clients. And most importantly, how and where do you start with it. We will take you through this journey as well as show the power of big and small data through some telling case studies.

## A6: SATISFICING IN WEB SURVEYS

### THE GOOD, THE BAD AND THE UGLY DATA: USING INDICATORS TO GET HIGH QUALITY SURVEY RESPONDENTS FROM ONLINE ACCESS PANELS

**Author:** Althaus, Daniel  
**Organisation:** Splendid Research, Germany

**Relevance & Research Question:** One of the main issues of using online access panel members for surveys is the avoidance of invalid responses. In order to establish quality and to increase trust, indicators for the survey answering behavior called satisficing have been suggested. These include completing surveys in very short amounts of time, answering in patterns and providing inconsistent answers. A lot of research so far has focused on assessing the validity of these indicators. But how do the indicators covariate? And how can surveys be engineered to minimize invalid responses?

**Methods & Data:** Post-hoc statistical analysis was performed on 20.000 online interviews generated by online surveys on celebrities for the Human Brand Index project, all of them performed in the proprietary MOBRIG Online Access Panel. All surveys had the same basic structure, containing five grid questions of different length and a switch in scale direction in the fifth grid. They also provided the possibility for respondents to enter invalid data on their age and the size of their household. Overall interview time was measured.

**Results:** About 50% of respondents do not score on any indicator of bad data quality. Another 25% exhibit only one sign of invalid answers, often due to inconsistencies caused by the switch of scale direction in the fifth grid. There is a subpopulation of about 10% of online access panel members who will score simultaneously on almost all indicators. 80% of them manage to successfully adapt to the switch in scale direction while speeding and straight lining. Available time is a factor: Answer quality is highest among high school- and college students, pensioners and unemployed people. It is lowest among 30 to 40 year olds with full time employment. Involvement also helps: die-hard fans and haters of celebrities have higher percentages of high quality data.

**Added Value:** Using several indicators to screen out respondents whose answers are invalid is a more precise and fair way to ensure data quality than using just one. Loaded questions are avoided by most professional survey takers and confuse respondents whose answers exhibit no signs of satisficing otherwise.

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## IS CLEAN DATA GOOD DATA?: DATA CLEANING AND BIAS REDUCTION

**Author:** Thomas, Randall K.; Barlas, France M.; Buttermore, Nicole R.  
**Organisation:** GfK Custom Research, United States of America

**Relevance & Research Question:** Many researchers have argued that, in order to improve accuracy, we should clean our data by excluding participants who exhibit sub-optimal behaviors, such as speeding or non-differentiation. Some researchers have gone so far as incorporating 'trap' questions in their surveys to catch such participants. Increasingly, researchers are suggesting more extensive cleaning criteria to identify larger portions of respondents for removal and replacement. This not only raises questions about the validity of the survey results, but also has cost implications as replacement sample is often required. Our research question focused on the effects of the extent of data cleaning on data quality.

**Methods & Data:** We used data from three surveys that contained items which allowed us to estimate bias, including items for which external benchmarks existed from reputable sample surveys along with actual election outcomes. Survey 1 had 1,847 participants from GfK's U.S. probability-based KnowledgePanel® and 3,342 participants from non-probability online samples (NPS) in a study of the 2016 Florida presidential primary. Survey 2, had over 1,671 participants from KnowledgePanel and 3,311 from non-probability online samples fielded for the general elections in 2014 in Georgia and Illinois. Survey 3 was a 2016 national election study with over 2,367 respondents from the KnowledgePanel. Each study had questions that paralleled benchmarks established with high quality federal data.

**Results:** We examined how varying the proportion of respondents removed based on increasingly aggressive data cleaning criteria (e.g., speeding) affected bias and external validity of survey estimates. We compared using all cases versus cleaning out from 2.5% up to 50% of the sample cases based on speed of completion.

As found in our initial investigation of other studies, while we found NPS had higher bias than the probability-based KnowledgePanel sample, we found that more rigorous case deletion generally did not reduce bias for either sample source, and in some cases higher levels of cleaning increased bias slightly.

**Added Value:** Some cleaning might not affect data estimates and correlational measures, however, excessive cleaning may increase bias, achieving the opposite of the intended effect while increasing the survey costs at the same time.

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## HOW STABLE IS SATISFICING IN ONLINE PANEL SURVEYS?

**Author:** Roßmann, Joss  
**Organisation:** GESIS, Germany

**Relevance & Research Question:** Satisficing response behavior is a severe threat to data quality of web-based surveys. Yet, to date no study has systematically explored the stability of satisficing in repeated interviews of the same respondents over time. Gaining novel insights into this issue is particularly important for survey methodologists and practitioners in the field of online panel research because the effectiveness of approaches to cope with satisficing depends among others on the stability of the response behavior over time.

**Methods & Data:** The present study used data of three waves of an online panel survey on politics and elections in Germany to analyze the respondents' response behavior over time. For each wave of the panel respondents were classified as either optimizers or satisficers using latent class analysis with five common indicators of satisficing response behavior (i.e., speeding, straightlining, don't know answers, mid-point responses, and nonsubstantive answers to an open-ended question).

**Results:** The results of our study showed that between 10.2% and 10.9% of the respondents have used satisficing across the waves of the panel survey. Furthermore, we observed certain stability in optimizing and satisficing over time. Nevertheless, the response behavior of the participants was all but completely stable across the panel waves. This finding indicates that time-varying characteristics of the respondents and the context of a survey are important explanatory factors.

**Added Value:** Our study provides evidence that satisficing is not a completely stable and trait-like characteristic of respondents. Rather satisficing should be perceived as a response strategy, which is affected by both time-stable as well as time-varying characteristics of respondents and the context of a survey. Thus, we conclude that approaches to cope with this response behavior should focus on motivating rather than removing satisficing respondents from online panels.



### DOES THE EXPOSURE TO AN INSTRUCTED RESPONSE ITEM ATTENTION CHECK AFFECT RESPONSE BEHAVIOR?

**Author:** Gummer, Tobias; Roßmann, Joss; Silber, Henning  
**Organisation:** GESIS, Germany

**Relevance & Research Question:** Providing high-quality answers requires respondents to thoroughly process survey questions. Accordingly, identifying inattentive respondents is a challenge to web survey methodologists. Instructed response items (IRI) are one tool to detect inattentive respondents. IRIs are included as one item in a grid and instruct the respondents to mark a specific response category (e.g., “click strongly agree”). By now it has not been established whether it has positive or negative spill-over effects on response behavior if respondents are made aware that they are being controlled. Consequently, we investigated how the exposure to an IRI attention check affects response behaviors and, thus, answer quality.

**Methods & Data:** We rely on data from a web-based survey that was fielded in January 2013 in Germany (participation rate=25.3%, N=1,034). The sample was drawn from an offline-recruited access panel. We randomly split the sample into three groups: Two treatment and one control group. Both treatment groups received an IRI in a grid with 7 items (at the beginning vs. the end of the questionnaire). The control group received the same grid but without the IRI. To assess the effect of being exposed to an IRI on data quality, we compared the following 8 indicators of questionable response behavior between the three experimental groups: straightlining, speeding, choosing “don’t know”, item nonresponse, inconsistent answers, implausible answers, respondent’s self-reported motivation and effort.

**Results:** Overall, our study did not provide evidence that the exposure to an IRI affected the response behavior. The only notable exception was straightlining for which we found respondents who received an attention check at the beginning of the questionnaire to less frequently straightline in grid questions compared to respondents who were not made aware that they were being controlled.

**Added Value:** Our experimental study provides insights into the implications of using attention checks in surveys – a topic for which research is surprisingly sparse. While our study is encouraging in terms of negative backlashes by using IRIs in a survey, it also means that we did not find IRIs to raise the respondents’ awareness and, thus, enhance the overall data quality.

### B6: GOR THESIS AWARD 2017 COMPETITION: BACHELOR/MASTER

#### DETERMINANTS OF ITEM NONRESPONSE IN THE GERMAN INTERNET PANEL

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**Relevance & Research Question:** Accurate collection and processing of survey data plays an important role in today’s data-driven society. The prevention and treatment of measurement error that may occur during these processes have so far been in the focus of several survey methodologists. Item nonresponse (INR) as one source of nonobservation error occurs if participants of a survey leave selected questions unanswered and should not be neglected as it might reduce overall data quality. In my bachelor thesis, I investigated the impact of respondent characteristics and question types - complex, sensitive and neutral ones - on the occurrence of INR using data of the German Internet Panel. Furthermore, applying a multi-level logistic regression, I examined potential interaction effects between both, sociodemographic characteristics and question types. As in online surveys respondents do not face any presence of an interviewer, their overall response behavior might somehow deviate compared to rather traditional sorts of interviews (e.g. CATI, CAPI or PAPI). In particular, older participants might be less familiar with the internet which may be reflected in the answers they provide. The profound analysis of nonsubstantive responses patterns may contribute to a better understanding of its underlying mechanisms and thus help preventing future INR in online surveys.

**Methods & Data:** In order to investigate the impact of question types, all questions of the questionnaire were evaluated with regard to potential complexity or sensitivity. Therefore, a coding scheme was created, examining each single question of the questionnaire. To detect correlates of INR, two multivariate regression models were developed. The first one included the isolated impact of sociodemographic characteristics and question types on INR, whereas in the second model potential interaction effects were taken into account. Due to the nested data structure, where responses are nested within respondents, a multi-level analysis was applied. As the outcome variable of interest was considered dichotomous, logistic regression was used.

The data were taken from wave 16 of the German Internet Panel. In general, the survey contains questions concerning economic and political attitudes and is obtained via online, self-administered questionnaires.

**Results:** The findings provide some interesting insights into the patterns of nonsubstantive response behavior. Most independent variables showed to have a significant effect, with complex questions having the highest chance to produce INR. In terms of interaction effects, it could be found that people of lower cognitive abilities happen to

struggle more with complex questions than people of higher abilities. In this context, also a gender gap could be proven. With regard to sensitive questions, there exists a weak but still significant connection to rising age.

**Conclusion & Added Value:** The findings suggest, that on the one hand, item nonresponse is mainly a function of specific respondent characteristics such as cognitive abilities and gender, respectively question characteristics. On the other hand, cross-level interactions between both, respondent and question characteristics, seem to play a crucial role. These results have important implications in terms of the overall questionnaire design, especially order and content of questions. As the application of any subsequent processing is still costly and time-consuming, potential error sources should always be prevented in advance. With my research on item nonresponse, I seek to contribute to the sustainable improvement of data collection through surveys and thus to enable a solid base for further empirical social research.

### BROWSING VS. SEARCHING – EXPLORING THE INFLUENCE OF CONSUMERS' GOAL DIRECTEDNESS ON WEBSITE EVALUATION

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**Relevance & Research Questions:** The increased flexibility users experience through different devices and mobile Internet is changing the way they consume content from the Internet. In 2015, a representative study of the German population found that users do not only go online to fulfill specific goals such as finding a piece of information (76 % of the participants), but they also browse the Internet for recreational purposes such as for reading articles (59%) or watching videos (53%) [ARD/ZDF-Onlinestudie, 2015]. While searching for information can be seen as a goal-directed task, Internet visits for the purpose of recreation do not require the user to undertake specific tasks. For instance, when killing time users may visit the Internet with no specific goal in mind. They explore and browse. In research this differentiation between goal-directed and exploratory online behavior has been widely recognized [e.g. Hoffmann & Novak, 1996; Hassenzahl, 2005; Wang, Wang, & Farn, 2007]. Although it is often assumed that during website interaction the type of task may change users' perception [e.g. Van Schaik & Ling, 2009], very few studies experimentally manipulate the given tasks to assess possible interactional effects. This thesis aimed to fill this gap by investigating how goal-directed [searching] or exploratory [browsing] interactions performed on a website moderate the impact of key website attributes on users' judgements. Such key elements, namely content, perceived usability, and aesthetics have already been identified by various researchers [e.g. Thielsch, Blotenberg, & Jaron, 2014]. Furthermore, the current study distinguished between three post-use judgements. Besides the overall impression of a website, the intention to revisit or recommend a website was assessed. Based on psychological models following moderating effects were expected. The influences of content and usability perception were assumed to increase in searching tasks, while aesthetics was hypothesized to be of greater importance when browsing.

**Methods & data:** The survey was conducted online in English and German. In total, 481 participants (21.8 % female) took part, of whom

319 were German and 163 were English speaking. Ages ranged from 14 to 69 years with a mean age of 34.84 [SD = 10.68]. Two different websites of competing brands in the premium and luxury fashion segment were used as stimuli. Therefore, familiarity to the online shopping context was given. Participants were randomly assigned to one of the two conditions: free exploration [browsing] or fulfillment of specific tasks [searching]. In the searching condition participants were instructed to compare prices of two products and to answer questions about product materials. Both tasks were followed by items measuring the predictor variables: Perceived website usability was measured using the English questionnaire PWU [Perceived Website Usability; Flavián et al., 2006] and its German version WWU [Moshagen, Musch, & Göritz, 2009; Thielsch, 2008]. For measurement of aesthetics the VisAWI [Visual Aesthetics of Websites Inventory; Moshagen & Thielsch, 2010], was employed. The Web-CLIC served to measure the subjective perception of content facets [Thielsch & Hirschfeld, under review]. Finally, participants rated their intention to revisit or recommend the website and provided their overall impression.

**Results:** To assess the predictive strength of content, perceived usability, and aesthetics, hierarchical and stepwise multiple linear regressions were conducted using overall impression, recommendation, and revisit intention as outcome variables. Overall, content and aesthetics contributed significantly to revisit and recommendation intention as well as overall impression. Content had the greatest impact on revisit and recommendation intention, whereas aesthetics was the most influential for overall impression. Perceived usability only contributed to overall impression. Moderation analyses further analyzed the strength of those relationships for searching and browsing tasks. Interestingly, perceived usability was not influenced by the type of task in any of the calculated models. However, contrary to the hypotheses the predictive strength of aesthetics was stronger when searching. Yet, this change did not show significance in the moderation analysis. Only the influence of content was, in some models, significantly stronger when browsing. Taken all together, browsing or searching did not consistently change the way users were influenced by content, aesthetics or usability.

In additional analyses, differences in main effects were found for English and German participants, and for a company's registered and non-registered customers.

**Added Value:** Three main conclusions for researchers and professionals can be drawn from this study. First, the proposed assumptions regarding the influence of browsing and searching tasks cannot be supported: The perception of neither usability nor content showed stronger influences on users' judgements in searching tasks. Aesthetics was not of greater importance when browsing. In fact, to some degree, opposite effects were found. For professionals, this may lead to important conclusions that contrast intuition. For instance, when dealing with highly goal-directed users [e.g. searching for information, comparing different products] perception of usability does not become overly important. Contrary it might be as important to aim for high aesthetical appeal as communicating product information. In sum, results imply that the importance of each construct may not strongly depend on the type of task, but rather differs for spontaneous and more complex evaluations. Content seems to be the strongest driver for building more complex decisions such as revisit or recommendation intention whereas aesthetics is highly influential for spontaneous and overall evaluations of a website. This results in a second implication. Being valued for its simplicity a great number of

companies use a measurement of customer satisfaction called the Net Promotor Score (NPS), which consists of one question asking for users' intention to recommend a website [e.g. Reichheld, 2003]. However, the current survey suggests that the intention to recommend is highly influenced by content, but not as much by website facets like usability and aesthetics. The two latter constructs seem to be important rather for building an overall impression. Thus, professionals should not only focus on intention to recommend a website but also consider overall impression evaluations such as giving the website a specific grade when measuring success of websites. Third and last, the reported individual differences require further investigations. Website designers should consider adapting their content or aesthetics levels in order to enhance user experience within different cultural backgrounds or for loyal customers.

## ATTENTION DYNAMICS OF SCIENTISTS ON THE WEB

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2: University of Koblenz-Landau, Germany

**Relevance & Research Question:** Over the last years, the estimation of the scientific contribution of scholars got a lot of attention from the academic community. Prize awarding committees and a variety of non-scientific organizations use information about the academic impact to finance the most promising researches, to honor a scientist with a prize, or to hire the best experts in a field. For many years, the citation index has been used as an instrument to estimate the academic contribution of a scientist. Recently, many new methodologies such as Social Science Citation Index and Google Citation Index were developed. Nevertheless, the question of which tool provides the most complete set of citing literature often depend on the subject and publication year of a given article. Therefore, alternative indicators to measure scientific success were introduced. These new measures are often based on online social media. In the meantime, it is not clear how social media react to external shocks such as highly-publicized discoveries and big scientific awards. This research studies collective attention dynamics towards scientists who have and have not been awarded with an important scientific prize. We also examine how online public interest to scientific topics changes as researchers are awarded with some of the most prestigious prizes in their fields. For this, the following questions are considered:

1. Is the success of a scientist determined by the field he or she is working in or is the popularity of the field influenced by the scientist?
2. How does the public react to the success of a scientist?
3. Can we predict the future success of a scientist based on the dynamics of the public attention towards him/her?

**Methods & Data:** We use Wikipedia page views as a proxy for measuring online attention to scientists. We select a multidisciplinary group of scientists who received the most prestigious awards in their fields and compare it to a group of influential scientists from the same disciplines who did not receive an award. We construct lists of topics associated with the work of each scientist. Then we analyze time lags between creation of Wikipedia articles on these topics and the scientists for both

groups. We also analyze whether the trends of online public attention to these topics differ between groups. We perform time series clustering analysis over the group of awarded scientists to understand how the attention dynamics vary between scientists from the different disciplines and prizes. Finally, we perform time series clustering analysis over the dataset of Nobel Prize winners and candidates (represented by Thomson Reuters Citation Laureates) to explore if we can predict Nobel Prize winners based on online attention dynamics.

Both awarded and non-awarded scientists datasets contain the same number of academics from different fields. All together, there are 262 unique researchers in each dataset.

The dataset of awarded scientists focuses on scientists whose work was acknowledged through some of the most prestigious academic prizes. We consider the awards between 2008 and 2015. We have combined a list of winners of the following prizes and awards: Nobel Prize, Abel Prize, Fields Medal, Turing Award, IEEE Medal of Honor, International Prize for Biology, Thomson Reuters Citation Laureates. We manually mapped these winners to the corresponding Wikipedia articles in the English edition.

For a fair comparison with the Awarded Scientists dataset, we combine a dataset of highly cited scientists who worked at the same time and in the same scientific fields as the winners, but who received no prestigious awards. To select these researchers, we turn to Thomson Reuters database on Highly Cited Scientists which provides yearly accounts on the most influential academics in a variety of fields.

For every selected researcher we analyze his or her Wikipedia article to construct a list of scientific topics related to the scientist. For that, we extract all in- and out-links for the articles about scientists in the English Wikipedia. Then, we go through its in- and out-linked articles, collected their category lists, and filter them using a self-created set of stop words. This way, we eliminate links that do not refer to scientific topics. We retrieved a total of 1,911 topics related to the scientists from the Awarded dataset, and 1,070 topics from the Non-Awarded dataset.

### Results:

1. Is the success of a scientist determined by the field?  
We discovered that articles about research topics were created closer to the articles of prize winners than to scientists who did not receive a prize. One explanation could be that the research topics are more closely related to the scientist who got an award. This supports that scientists who received the prize have introduced the topics to the public. It was observed that after a page about a scientist was created, research topics of prize winners received more attention than the topics of scientists who did not receive a prize. Therefore, one can conclude that the popularity of the topics is affected by the popularity of the scientists.
2. How does the public react to the success of a scientist?  
The clustering algorithm grouped Nobel Prize, Abel Prize, and Fields Medal winners into a separate cluster based on the attention dynamics. The following trend analysis of the attention dynamics towards the Nobel Prize winners and Nobel Prize candidates showed that the candidates more often demonstrate an increasing trend in attention before the prize was awarded in comparison to the winners. Moreover, Nobel candidates more often show increasing attention dynamics after the award announcement, whereas Nobel Prize winners demon-

strate a decreasing trend. The results suggest that the decision of the Nobel committee does not necessarily reflect the current attention towards the scientist. One can say that Nobel Prize winners were not expected by the public and lose their popularity after receiving the award.

3. Can we predict the future success? The time series clustering analysis of the Wikipedia page views of the articles about Nobel Prize winners and candidates showed that it is difficult to predict the Nobel Prize winners based on the attention dynamics reflected by the Wikipedia page views of the articles about the scientists.

**Added Value:** The contribution of the research is twofold. First, the research revealed the interrelation between the success of a scientist and success of the field he is working in. The presented methods can be generalized to investigate how an information network reacts on an event and how the attention spreads from the original subject to the related topics.

Second, our work is relevant for the Altmetrics community, and more generally, contributes to the studies of collective attention and information consumption on the Web.

## C6: MOBILE WEB SURVEYS: DEVICE EFFECTS

### SMARTPHONES AS DIGITAL COMPANIONS

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**Relevance & Research Question:** Our online study addressed the personal importance of smartphones for their users. Our assumption is that smartphones are omnipresent companions in everyday life and have by far transcended their objective status as technology. Users, as a result, have developed a rather emotional relationship, e.g. feelings of closeness, with their phones. Thus, we investigated the „emotional relevance“ of participants' phones in comparison to other electronic devices and to human beings.

**Methods & Data:** We developed an online instrument based on techniques from systemic psychotherapy. The original technique involves the positioning of pieces representing family members on a chessboard to visualize relational structures within a family (Gehring & Arnone-Reitzle, 1998). We replaced family members with [1] categories of people and [2] media devices, both pretested to be relevant. Consequently, our tool visualizes the relative importance of both humans and technology via the distances to the piece representing oneself. In addition, self-report scales measured the emotional relationship to the smartphone, levels of smartphone usage, phone-related trust, phone-related stress and stress relief (e.g. Aron, Aron & Smollan, 1996; Rempel, Holmes & Zanna, 1985; Satow, 2012).

The full survey, including tool and scales, was conducted online in Germany and the UK (total n = 1168).

**Results:** Due to space restrictions only core results showing smartphones to be psychologically important beyond their mere technical functionalities can be summarised here. First, the smartphone was the fifth nearest piece on the board, thus revealing it to be [1] the most important technological device and even [2] more important than some categories of relevant persons (e.g. roommate, classmate). Second, survey measures revealed a range of significant predictors for psychological aspects of phone usage, in particular usage intensity (light, medium, heavy), operating system (iOs vs. Android) and closeness to phone as indicated by the position on the chess board.

**Added Value:** We take our findings as first evidence for our core assumption: smartphone users have on average established significant emotional relationships with their devices. The idea of smartphones as “digital companions” rather than mere digital devices is discussed against (media)psychological and evolutionary explanations.

### DEVICE EFFECTS ON BEHAVIOUR AND PARTICIPATION IN MOBILE-OPTIMISED ONLINE DIARIES

**Author:** Heeck, Annika; Holdt, Christian

**Organisation:** Schmiedl Marktforschung GmbH, Germany

**Relevance & Research Question:** What demographic and behavioural factors differentiate users of smartphones, tablets and desktops, and what are their effects on diary participation?

**Methods & Data:** 800 active pool members in 6 countries each (Australia, France, Germany, Mexico, Spain, UK) - recruited via a 15-minute online screening questionnaire - were asked to fill out at least 3 diaries per week over 25-35 weeks between November 2014 and December 2015 on a fully mobile-optimised link.

There was an option for respondents to indicate that they had nothing new to report on, which was counted as unqualified diaries. Over the course of the study, 477.330 qualified diaries were collected. One qualified diary took 3-5 minutes.

#### Results:

- Smartphone users are somewhat more likely to report qualified diaries than desktop users.
- Smartphone users reported more qualified diaries in a shorter tenure in the study than desktop users. However participants show a high variance in their individual reporting behaviour.
- Device usage is differentiated by demographic factors (age, gender, country, income), but these did little to explain activity and tenure in the survey.
- Activity in social networks was only marginally relevant in explaining activity and tenure.
- Respondents who used a mix of devices to participate in the diaries stayed active longer and delivered significantly more qualified diaries than single device participants.
- There is an important device effect on the content participants reported on. Some content is more likely to be reported on a smartphone, while other content is more likely to be reported on a tablet or desktop.

**Added Value:** The technical setup that allows completion on every device is a much more decisive factor in ensuring high activity and long tenure than respondent selection based on social demographics. Nevertheless, no single device user can be considered more valuable in terms of activity or tenure in online diary studies.

Different target groups use different devices, therefore it is necessary to offer online surveys fully optimized for smartphones, tablet and desktops alike. Also, different content is reported on each device, and therefore limitations not to provide a fully mobile-optimised diary will have effects on the results.

### THE ROLE PLAYED BY THE DEVICE SCREEN SIZE AND BY THE QUESTIONNAIRE OPTIMIZATION WITHIN THE MOBILE SURVEY PARTICIPATION

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**Organisation:** 1: University of Bergamo, Italy;  
2: RECSM – Universitat Pompeu Fabra, Spain

**Relevance & Research Question:** The mobile survey participation is currently a relevant phenomenon, worldwide. Mobile devices have different characteristics in comparison to traditional fixed-PCs or laptops. A key difference is the reduced size of the devices and of their screens. The enhanced portability is counterbalanced by some potential risks. Can the screen size affect the quality and the comparability of collected data? And which is the role that the questionnaire optimization can play?

**Methods & Data:** Data were collected in 2015, using the Netquest opt-in online panel for Spain, through a two-wave survey proposing twice the same questionnaire to the same respondents (1,608 panelist). Each panelist was randomly assigned, within a specific wave, to a survey condition (i.e. the device used and the questionnaire optimization, for participants using a mobile device). This research focuses only on mobile device respondents. In order to test our hypotheses, we computed a series of indicators -some based on paradata- related to both the participation process (e.g. the completion time, the answer consistency between waves, etc.) and the survey experience evaluation (perceived difficulty, appreciation, etc.).

**Results:** The device screen size usually does not significantly affect some indicators linked to the data quality/comparability, but can significantly affect variables (such as the survey length or the evaluation of the survey experience) that can determine the respondents' burden and their willingness in participating again in surveys. However, most of the potential issues linked to the use of small sized devices can be attenuated proposing a questionnaire optimized for the mobile participation. The paper also investigates the interaction between these two variables and the consequences of re-proposing the same survey.

**Added Value:** Despite the widely acknowledged importance of the screen size, only few studies directly analyzed this key variable. Most of them just considered broader and nonhomogeneous categories of devices (i.e. smartphones and tablets) or used a limited set of indicators (mostly completion time). This work aims at using a wider

range of indicators and at providing an updated and more precise view, taking into account the exact screen size (in inches) and its interaction with the optimization.

### FOCUS ON MOBILE SURVEYS: DO THE NUMBER OF SCALE POINTS AND SCALE ORDER AFFECT RATING SCALE RESULTS?

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**Organisation:** BiTS (Business and Information Technology School) / exeo Strategic Consulting, Germany

**Relevance & Research Question:** Scale types (straight or odd scale points) and scale order (i.e. the order in which response options of a rating scale are presented) were frequently investigated in the past, since the question arose whether the results of surveys are influenced by the nature and application of a scale. However, experimental studies have not yielded clear and robust, but rather contradictory and unambiguous results. Considering a strong trend towards online surveys in general and mobile research in particular, this question appears in a new light (reduced interview time and visibility).

**Methods & Data:** In order to analyze the influence on rating scales both mentioned factors, scale type as well as scale order an experimental online survey design was created (n=600, Germany, 16+ years), covering a 5 point vs. 6 point satisfaction scale, each with two different orders (positive-negative vs. negative-positive scale; 2\*2 design). Subjects were asked to evaluate 5 facets of the interview (topic of the interview etc.). Four test groups were randomly generated, each receiving one specific scale form.

**Results:** Based on the experimental setup, no significant differences between a 6-point and a 5-point scale can be identified as long as the scale direction is positive to negative, i.e. the best rating („very satisfied“) is shown left next to the statement/item. Particularly strong influences on the results are apparent when using a in the 6-point scale and changing the scale direction to a negative to positive order. In this case the evaluation of the interview is significantly worse than in test groups with a positive-negative ordered scale. Furthermore, this effect is particularly strong in a subgroup of respondents, which used a smartphone to participate in the web survey.

**Added Value:** Firstly, it is irritating that the mean values on a 6-scale scale differ by more than 0.5 points depending on scale order. Secondly, it is disturbing that the effects increase when respondent used a smartphone. Thirdly, this has strong implications for developing a suitable questionnaire design for online / mobile studies.



## D6: BITTE ANSCHNALLEN! AGILES PROJEKTMANAGEMENT BESCHLEUNIGT DIE MARKTFORSCHUNG

### BITTE ANSCHNALLEN! AGILES PROJEKT- MANAGEMENT BESCHLEUNIGT DIE MARKTFORSCHUNG

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Digitalisierung führt zu einer stetig zunehmenden Geschwindigkeit, die auch an der Marktforschungsbranche nicht spurlos vorbeigeht. Denn im Zeitalter von Dashboards kann kaum noch jemand vier Wochen auf Berichtsbände warten. Player aus der Branche und ein IT-Experte zeigen auf, inwiefern agiles Projektmanagement zur nötigen Geschwindigkeit und Flexibilität beitragen kann.

### AGILE FIRST?!? – EIN KURZER IMPULS ZU AGILEN METHODEN IM PROJEKTMANAGEMENT

**Author:** Toschläger, Markus  
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Agilität – was ist das überhaupt und wie ändern sich meine Projekte, wenn ich agile Methoden einsetze? Ich begleite seit einigen Jahren Organisationen bei agil durchgeführten Projekten und bei der Einführung agiler Projektmanagement-Methoden. Welche Hoffnungen auf höhere Geschwindigkeit und Flexibilität sind gerechtfertigt und wo liegen Grenzen agiler Konzepte? Der Vortrag gibt eine kurze Einführung in die agilen Prinzipien und wird dabei die vorgenannten Fragen beleuchten.

### AGILE INNOVATION - IM SPANNUNGSFELD ZWISCHEN AGILEM DESIGN THINKING UND DEM QUALITÄTSANSPRUCH DER MARKTFORSCHUNG

**Author:** Engelhardt, Steffen  
**Organisation:** Blauw Research GmbH, Germany

In agil arbeitenden Innovationsteams gehört das unmittelbare Verständnis des Kunden zum Kern des Design-Thinking-Ansatzes. In der Zusammenarbeit mit der ING-DiBa haben wir uns auf die Suche nach geeigneten Wegen gemacht. Von den anfänglichen Herausforderungen, den Lösungen und den Erfahrungen der Marktforschungs- und Innovationsteams möchten wir in diesem Vortrag berichten.

### UX RESEARCH IM AGILEN ARBEITSUMFELD - UNSERE ERFAHRUNGEN, UNSERE EMPFEHLUNGEN

**Author:** Winkler, Till; Schmidt, Sebastian  
**Organisation:** SKOPOS GmbH & Co. KG, Germany

Im vergangenen Jahr hat SKOPOS u.a. mit dem Online-Preisvergleichsportale Idealo zusammengearbeitet, um die Usability und User Experience der eigenen Website zu überarbeiten. Auch mit anderen Unternehmen, der Süddeutschen Zeitung oder mit BSH, sind wir diese Aufgaben angegangen. Dabei stellten wir immer wieder fest, dass Forschung in Zeiten des Agilitäts-Anspruches ein gewisses Umdenken erfordert und eine andere Arbeitsweise an den Tag gelegt werden muss. Anhand verschiedener Use Cases aus der Praxis berichten wir über unsere Erfahrungen.

## A7: MEASUREMENT IN WEB SURVEYS

### CLARIFICATION FEATURES IN CLOSE ENDED QUESTIONS AND THEIR IMPACT ON SCALE EFFECTS

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**Organisation:** TU Darmstadt, Germany

**Relevance & Research Question:** Previous research on clarification features in Web surveys has shown that they are an effective means of improving response quality in open-ended questions. However, little is known about their influence on response quality in closed-ended questions. Results from the literature indicate that respondents use the range and content of response categories as relevant information when generating an answer [scale effects]. Given the findings concerning clarification features in open-ended questions we assume (1) that they are similarly effective in closed ended-questions and (2) that they may have a stronger effect on the response process than the range of the response categories potentially reducing scale effects.

**Methods & Data:** Experiment 1 and 2 were conducted in two randomized field experimental Web surveys (n=4,620; n=944). Using a between-subjects design we assessed the effectiveness of clarification features in closed-ended frequency questions. Two types of clarification features were tested that aim at either clarifying the question meaning [definitions] or motivating respondents to search their memories for relevant information [motivating statements]. Questions and clarification features were designed in a way that respondents in the experimental groups with the clarifications features were expected to provide either higher or lower frequencies than respondents in the control groups with no clarification features.

Experiment 3 was conducted in a randomized field experimental Web survey ( $n=944$ ). A between-subjects design was implemented in closed-ended questions to test low and high frequency scales without clarification features, with definitions and motivating statements (2 x 3 factorial design). We assessed the magnitude of scale effects as a dependent variable.

**Results:** Overall clarification features are effective in influencing responses provided. Results indicate that definitions yield stronger effects than motivating statements. Furthermore, scale effects are lower for respondents receiving clarification features than for respondents of the control group. Again, definitions are more effective in reducing the scale effect than motivating statements.

**Added Value:** The use of definitions in closed-ended questions has a positive effect on survey responses and helps improve data quality. Definitions seem to have the potential to counteract scale effects, whereas motivating statements do not show any effect.

### IS HIGHER ENDORSEMENT IN YES-NO GRIDS DUE TO ACQUIESCENCE BIAS VS. SALIENCE IN RESPONSE?

**Author:** Thomas, Randall K. [1]; Barlas, Frances M. [1]; Buttermore, Nicole R. [1]; Smyth, Jolene D. [2]  
**Organisation:** 1: GfK Custom Research, United States of America;  
 2: University of Nebraska at Lincoln, United States of America

**Relevance & Research Question:** A common method used to efficiently obtain data in online studies is the Yes-No Grid. Elements in Yes-No Grids are endorsed at higher rates than when they occur in a Multiple Response Format (i.e., select all). Prior research (Smyth et al. 2005; Thomas & Klein, 2005) suggested that this may be due to increased consideration of each element. Asking for a response for each element to be considered will increase the access of less proximal memories (the salience hypothesis). Alternatively, Callegaro et al. (2015) proposed that acquiescence bias most likely explained heightened endorsement. Acquiescence bias results from socialization that encourages people to be agreeable leading to a greater tendency to endorse 'agree' with an agree-disagree response format or select 'yes' in a yes-no choice format. Our research question was a test of the viability of the alternative explanations.

**Methods & Data:** We present two studies, with 1,127 and 1,449 respondents respectively, testing the divergent predictions of the salience and acquiescence bias hypotheses. Each study had a 2 X 5 factorial design. The difference between the studies was in the brands used for evaluation. Respondents were randomly assigned to a rating dimension (either descriptive or agreement) and to one of five response formats. Each participant rated four brands with which they had some familiarity along six different attributes (e.g., 'Is distinctive', 'Is expensive', etc.). Those assigned the descriptive dimension were asked if the attributes described each brand, with response formats being either a multiple response format, dichotomous format ('Describes, Does not describe' or 'Yes-No'), or trichotomous format. The agreement dimension had comparable response formats (e.g., 'Agree, Do not agree'; 'Yes-No', etc.).

**Results:** We found that trichotomous formats had the highest endorsements while the multiple response formats had the lowest endorsements regardless of responses used, supporting the increased consideration-salience hypothesis. In addition, the selection of 'Describes' or 'Yes' or 'Agree' were not significantly different, for either the dichotomous or trichotomous formats, disconfirming the acquiescence bias explanation.

**Added Value:** Contrary to recommendations by Krosnick & Presser (2010) both yes-no and agree-disagree are efficient and valid response formats.

### EVALUATION OF AGREE-DISAGREE VERSUS CONSTRUCT-SPECIFIC SCALES IN A MULTI-DEVICE WEB SURVEY

**Author:** Kunz, Tanja  
**Organisation:** TU Darmstadt, Germany

**Relevance & Research Question:** Rating scales with agree-disagree response options are among the most widely used question formats to ask for attitudes, opinions, or behaviors in Web surveys, especially because several items can be combined in a grid irrespective of whether the items measure the same or different constructs. Nevertheless, there is an ongoing debate on whether construct-specific (CS) scales are to be preferred to agree-disagree (AD) scales with regard to data quality and cognitive burden. Furthermore, due to respondents increasingly arriving at Web surveys via mobile devices, conventional grids are frequently being replaced by standalone (or item-by-item) question formats at least for mobile respondents. Thus, the question may arise why not make use of construct-specific scales, since standalone question formats are already on the rise in multi-device Web surveys.

**Methods & Data:** The present experiment was designed to gain a better understanding of how data quality and cognitive burden are affected by different kinds of scale formats. In a Web survey conducted among university applicants ( $n=4,477$ ), a between-subjects design was implemented to examine three different scale formats in terms of an AD-grid, AD-standalone, and CS-standalone format. Moreover, scale direction was varied with response options being presented either in a positive-to-negative or reverse ordering. Several indicators of data quality and cognitive burden have been distinguished (e.g., response times, primacy effects, straightlining, and central tendency).

**Results:** Findings suggested that construct-specific scales prevent respondents from rushing through a series of items, thus encouraging a more thoughtful processing of the scale content without unnecessarily burdening the respondents. Moreover, construct-specific scales are less susceptible to variations in scale direction compared to agree-disagree scales. On the downside, respondents are more inclined to choose the middle category in construct-specific scales than in agree-disagree scales.

**Added Value:** The findings provide a better understanding of differences in the respondents' processing of construct-specific scales compared to agree-disagree scales. Moreover, there is convincing evidence that construct-specific scales are a proper alternative to agree-disagree scales for both mobile and desktop respondents in multi-device Web surveys.

## B7: CONSUMER PERCEPTION ANALYSIS

### MAPPING CONSUMER PERCEPTION NETWORKS FROM USER-GENERATED CONTENT USING TEXT MINING

**Author:** Egger, Marc; Lang, André  
**Organisation:** Insius, Germany

**Relevance & Research Question:** A vast number of consumers share their thoughts, opinions and feelings regarding products and brands online while creating text-based user-generated content (UGC) on the web [Gensler et al. 2015]. As UGC is also found by consumers during search- and opinion forming processes (e.g. when preparing consumption decisions) it can be considered being highly relevant in the corporate context. Thus UGC offers a new data source to get an understanding of consumers' perceptions regarding brands as well as important aspects of a brands' environment. Traditional qualitative methodologies such as content analysis to extract consumer perceptions will presumably offer deep insights, but considering the dynamics of UGC creation, lead to enormous efforts. The volume and velocity of UGC creation thus requires the introduction of automation. However, this opens up the question of which insights and managerial implications can be concluded from automatically extracting consumer perceptions from UGC.

**Methods & Data:** Using the Human-Associative Memory Model [Anderson & Bower 1980] as theoretical foundation, the authors describe an automated approach using Text Mining and Network Analysis to derive networks of words and phrases representing consumer perceptions from text-based UGC.

As an illustrating study, 44,507 German language blog and forum postings [covering 2007 to 2016] for the brand "Thermomix" were collected. The authors describe elicited consumer perceptions in the brands' environment and discuss possible insights, managerial implications and limitations.

**Results:** The perception network for "Thermomix" shows direct associations and emotions (e.g. love, practical), product-related attributes (e.g. price, size), non-product related attributes (e.g. help) and benefits (e.g. good idea, delicious food) as well as attributes from the brand environment such as usage scenarios (e.g. different ingredients). Segmenting the data by time uncovers perceptions mentioning external events (e.g. Aldi introducing a Thermomix competitor). Limitations exist, as automated approaches depth of insights is lower than traditional research methods and complexity of human language leads to errors (e.g. sarcasm, wrong sentiment)

**Added Value:** Automatically deriving consumer perception networks from UGC offers rapid insights, is non-reactive, reliable, can be applied ex-post and introduces a new and relevant information source into the method mix of market research.

### ANALYZING THREE POPULAR EFFECTS TO INFLUENCE CONSUMERS' PRICE PERCEPTION: LEFT-DIGIT-EFFECT, SCARCITY-EFFECT AND PENNIES-A-DAY-EFFECT

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exo Strategic Consulting, Germany

**Relevance & Research Question:** Due to a changing marketing environment (VUCA: volatility, uncertainty, complexity, and ambiguity framework; digitization etc.) and the lack of a consistent pricing approach (challenge to harmonize neoclassical and behavioral elements), managers are increasingly questioning established ways to determine price levels and display price structures.

**Methods & Data:** In order to analyze the influence of a modified price presentation on consumers price perception of sales offers an experimental online survey design was developed (n=600, Germany, 16+ years) and repeatedly conducted, covering different products and industries. Here, three effects often cited and related to behavioral pricing are investigated: (a) The left-digit-effect concerns a specific case of odd-ending prices, (b) the scarcity-effect describes a case when only a limited number of products is available (online shopping) or a restricted number of items can be purchased and (3) the pennies-a-day-effect is created when the total price of a product is related to different time units (for example a month instead of a year) and thereby the price offered to consumers is relatively small.

**Results:** The large number of publications related to behavioral pricing and the emphasis on the strong impact of framing and anchoring elements on price perception suggest that consumers are fundamentally strongly influenced when evaluating prices. However, results from own studies are difficult to generalize and can hardly translate into general guidelines for decision making in pricing. As the experiments illustrate the expected influences of behavioral pricing elements can partly be confirmed by our research, partly results contradict conventional wisdom. Hence, the overall results support the hypothesis that the effects of a modified presentation of sales offers are not robust across product types.

**Added Value:** Since results for the price perception seem to be product and market specific, experimental online research can provide an option to enhance the pricing tool set to improve decision making in pricing in a cost-efficient and fast way, for example to optimize the way a price is presented or to identify a revenue maximizing price level.

## MEASURING PERCEPTIONS OF WEBSITE CONTENT

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2: University of Applied Sciences Osnabrueck, Germany

**Relevance & Research Question:** Website content is the most important factor driving user's evaluations of websites. ISO 9241-151 defines content as "a set of content objects" on a web user interface, describing a content object as "interactive or non-interactive object containing information represented by text, image, video, sound or other types of media" [ISO, 2006, p. 3]. Some facets of these can be objectively measured (e.g., text patterns, word count). Other facets such as perceived clarity, credibility or likability, elude an objective assessment. Thus, reliable and valid measures of users' subjective perceptions of web content are needed. The aim of our studies is to create such an instrument.

**Method & Data:** In a series of five studies, a total of 2,732 participants (1,560 female) evaluated a sum of 57 websites from ten different content domains (such as e-commerce, information, and corporate websites), these data were used for exploratory and confirmatory factor analysis of the initial item set, reliability and validity analysis (including an experimental validation).

**Results:** A 12-item measure enclosing the four scales "clarity", "likability", "informativeness", and "credibility" was built. These scales jointly represent a general factor "subjective web content perception". We found clear evidence for very high internal consistencies, high short- to medium-term retest reliability, as well as excellent construct validity in terms of factorial, convergent, divergent, discriminative, concurrent, and experimental validity.

**Added Value:** The resulting instrument is a sound measure of perceptions of web content allowing for a precise evaluation of users' subjective content perceptions, well suited for a differentiation between websites and robust against bias effects caused by used hardware, operating system or user characteristics such as age, gender or education level. We strive for an open, unlimited publication of the instrument including aids for interpreting individual scores such as optimal cut points and benchmarks.

## C7: PREDICTING ELECTORAL BEHAVIOUR AND ELECTORAL OUTCOMES

### HOW TO PREDICT AN ELECTION.

**Author:** Wheatley, Alexander; Puleston, Jon  
**Organisation:** Lightspeed, United Kingdom

**Relevance & Research Question:** With political polling coming under such strict scrutiny in recent years with many high profile upsets is now the time to put the dark of polling in the past and ask how else can we predict the results of an election?

Utilising techniques such as: prediction protocols, projection techniques, emotional measures, implicit reactions, gameplay techniques and abstract questioning. We have embarked on an extensive and near exhaustive research program looking at the alternative methodologies we have available to us to predict the outcome of a political decision.

**Methods & Data:** Looking at case studies including the 2015 UK General Election, the UK EU Referendum and the 2016 US Presidential Election, we want to share our findings.

The culmination of more than 2 years' worth of online research in multiple markets and more than 10 research studies; we explain the alternative ways you can survey people. Circumnavigating the issues representativeness and truthfulness present in traditional political polling.

**Results:** What we have found is that if you want to accurately predict the results of a political decision you must diversify your methodologies and aggregate your findings. To use one measure, especially if this is polling data, is a sure fire way to draw false conclusions.

**Added Value:** Our methodologies & findings are already reshaping the way Kantar conducts its political research, but we have ambitions to share the message with the industry as a whole.

As an industry we must acknowledge the short falls and hazards inherent in our methodologies. This is true in all fields, but it is scarcely more vital anywhere than in the arena of political research. We must ensure that we take ownership of the conversation and present polling as what it is, one data point in a wider picture of research methodologies.

Having done this we can put the focus back to where it should be, the complete picture, and the mixed and innovative methodologies we have available for revealing this picture.

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## OVERCOMING THE HURDLE OF INDECISION, REFUSAL AND DISTORTION IN ELECTORAL ONLINE RESEARCH

**Author:** Berger, Sebastian  
**Organisation:** surveytain.me, Austria

**Relevance & Research Question:** Wrong election forecasts like the ones surrounding the UK EU membership referendum and the US presidential election last year have unveiled a serious polling crisis. While polling experts are struggling to keep up with changing demographics and technology they miss to address the problem of a growing number of undecided voters. Other main obstacles in electoral research that have not been overcome satisfactorily are the social desirability bias and the refusal of eligible voters to participate in opinion polls. Surprisingly, the advances in (implicit) consumer research have been largely ignored so far. Instead, electoral (online) research is still relying on introspection and verbal expression.

**Methods & Data:** It is nowadays commonly accepted in consumer research that human decision making is determined to a large extent by unconscious memory processes that cannot be verbalized. Therefore, implicit research techniques like mindspotting have increased in popularity because they can more reliably forecast consumer behaviour. The mindspotter uses reaction time in order to infer about the strength of neural connections in the associative network of the human mind. Participants assign as fast as possible pictorial and/or textual content on the subject matter by touch or click. Memory content linked to the study object(s) is uncovered and visualized by millisecond accurate registration and analysis of assignment speed.

**Results:** The study demonstrates the effectiveness and efficiency of mindspotting on the example of the last general election in Austria. In an online survey participants had to assign pictures and collages of political parties and their top candidates to attributes that have been found to most reliably predict voting behaviour. The implicit results reflect the main outcome of the election i.e. the loss of ÖVP, SPÖ and BZÖ, the gain of the green party and the unattractiveness of a SPÖ/ÖVP coalition.

**Added Value:** Mindspotting captures unconscious, non verbalizable memory processes that determine voting behaviour. The method is hard to manipulate because too fast/slow allocations are excluded from analysis. A high surveytainment factor leads to greater willingness to participate and conscience and thus to high quality data.

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## ELECTION POLLS: EMOTIONS / INDECISION TO THE RESCUE!

**Author:** Erner, François; Bonnay, Denis; Florin, Gabrielle  
**Organisation:** respondi SAS, France

**Relevance & Research Question:** Recent events have made clear the limits of traditional polling for predicting election results. But then, what is at stake?

The method? This why we want to push forward priming as a supplement to the traditional declarative approach to political polling. But also maybe the opinion making process? In major democracies, engagement in traditional politics is getting lower and abstention rates are getting higher. This makes it all the more important to focus on the “undecided”, those who are not sure of who they are going to vote for, or who are not even sure if they are going to vote, but can still be the ones who make the election.

By renewing the method, are we able to improve our ability to predict electoral results?

**Methods & Data:** We took the opportunity of the primary election for the French right wing party “Les Républicains” to conduct this research. This is a new kind of election in France, for which traditional surveys’ weaknesses are even more obvious.

Two kinds of surveys are conducted, pre-election and post-election surveys, after each of the two rounds:

- 1) Pre-election surveys mix traditional declarative data (intention to vote, chosen candidate, confidence in the choice) and behavioral data (strength of positive/negative associations for each candidate measured via priming, as standardly used in cognitive psychology)
- 2) In post-election voting checks, participants are asked whether they voted and for whom

**Results:** As of now, the first pre-election survey has been conducted (1020 respondents). Full results will be available only after the second post-election surveys. Expected results are:

- 1) A comparison between predictions based on the traditional declarative survey data and tendencies observed in behavioral measures.
- 2) Proposals to better explain actual voting behavior by mixing declarative and behavioral data.

**Added Value:** We aim to show that behavioral approaches can be used in combination with traditional surveys to make for the blind points of declarative data.

The benefit for electoral polling would be significant: supplementing declarative data with behavioral clues would improve on ad-hoc adjustments aimed at correcting for declarative biases.



## D7: VON BIG DATA BIS ZUR E-PARTIZIPATION: INNOVATIVE ONLINE- METHODEN IN DER STADT- UND VERKEHRSFORSCHUNG

### NÄCHSTE HALTESTELLE BIG DATA: DIGITALE MESSVERFAHREN IN DER MOBILITÄTSFORSCHUNG

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Germany

In der Mobilitätsforschung waren klassische Erhebungsverfahren lange Zeit ein Standard zur Messung von Kundenverhalten. Befragungen, mit denen Bewegungsmuster und Bedürfnisse in Bezug auf Verkehrsmittel erhoben werden, sind jedoch aufwändig. Außerdem stoßen sie in einem zunehmend komplexer werdenden Umfeld multimodaler Mobilitätsmuster an die Grenzen der Genauigkeit.

Die Digitalisierung bietet im Bereich der Analyse von Mobilitätsmärkten und des Kundenverhaltens völlig neue Optionen. civity hat im Rahmen verschiedener Innovationsprojekte neue Erhebungs- und Analyseverfahren entwickelt und getestet.

In seinem Vortrag stellt Stefan Weigele von civity Management Consultants seine Erfahrungen aus diesen Pilotprojekten vor, in denen klassische Erhebungsverfahren mit digitalen Datenquellen kombiniert wurden. Er gibt einen Überblick, welche Datenquellen, die in quasi frei verfügbarer Form als „Big Data“ vorliegen, für die Mobilitätsforschung nutzbar gemacht werden können.

### AKTIVIEREN UND MODERIEREN: DIGITALE BÜRGERBETEILIGUNG IN DER PRAXIS

**Author:** Oliver Märker  
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Partizipation ist das Schlagwort des Demokratie-Updates einer digital geprägten Gesellschaft. Für viele ein Werkzeug, für andere ein Programmpunkt der Verwaltungserneuerung, für weitere ein Muss im Politikbetrieb. So leicht wir uns Beteiligung vorstellen möchten, so schwierig wird es, sie zu implementieren.

Zebralog hat sich auf die Realisierung von Bürgerbeteiligungs-Projekten spezialisiert. Ein besonderer Schwerpunkt liegt dabei in der Entwicklung von digitalen Verfahren. In dem Vortrag wird das Spektrum an Dialog- und Befragungsformen aufgezeigt, welches den interaktiven Stadtplanern zur Verfügung steht.

Zusammen mit dem Auditorium kann im Anschluss diskutiert werden, was die Online-Marktforschung von den digitalen Stadt- und Verkehrsplanern lernen kann – und umgekehrt. In der Verbindung beider Vorträge gilt es zu erörtern, wie Big Data und dialogorientierte Verfahren ideal zusammen spielen.

## A9: INTERACTIVE FEATURES AND INNOVATIONS IN WEB SURVEYS

### CONVERSATIONAL SURVEY FRONTENDS: HOW CAN CHATBOTS IMPROVE ONLINE SURVEYS?

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**Relevance & Research Question:** Even though online chats have been around for a long time, the tremendous success of WhatsApp and Facebook messenger have fundamentally changed how people interact and exchange information. With the appearance of “intelligent”, machine-learning based chatbots we assume that the areas of application will become even more versatile which leads to the question how we can utilize chatbots for market research purposes.

Chatbots consist of two components:

- (a) the frontend for the user as the point of interaction and
- (b) a backend, often based on Natural Language Processing algorithms that handles the user requests and sends appropriate responses back to the user.

Focusing on the frontend, we wondered how a chat interface impacts answer behavior. We were especially curious to understand the effect on response rates, data quality and survey fatigue by engaging in a conversational manner.

**Methods & Data:** We developed a Chatbot interface which delivers survey questions to the user. Our aim was to create a non-obstructive, responsive frontend that feels familiar to users of messenger services. A sample of 600 participants from a commercial online panel was randomly assigned to either a traditional online questionnaire or a Chatbot interface. Both questionnaires included exactly the same questions covering topics concerning media consumption and mobility, as well as questions on the perception of the questionnaire itself. Different answer types were presented to the respondent, such as open questions, Likert scales and Multiple Choice questions.

[The study was pre-registered at <http://aspredicted.org/blind.php/?x=cb5cqk>]

**Results:** Results will be available in early January 2017.

**Added Value:** Chatbots as survey frontends do not only offer a new but familiar interface for respondents. They allow the integration within different contexts using developer APIs for Facebook Messenger or other messaging services. This allows to recruit and survey participants very easily without the need to redirect them to a separate questionnaire.

Thus, it is important to evaluate benefits and potential pitfalls gained from using such frontends. Especially, when future applications of chatbots in online surveys include AI capabilities to analyze responses and adapt questions in real-time.

## WILLINGNESS OF ONLINE PANELISTS TO PERFORM ADDITIONAL TASKS

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2: University of Michigan, United States of America

**Relevance & Research Question:** People's willingness to share data with researchers is the fundamental raw material for a lot of research. So far, researchers have mainly asked respondents to share data in the form of answers to survey questions. However, there is a growing interest in using alternative sources of data. Some of these data can be used without further issues (e.g. publicly-shared social media data). For others, people's willingness to share them is a requirement. Despite the growing interest in using and combining different data sources, little is known about people's willingness to share these other kinds of data with researchers. In this study, we aim to: 1) provide information about the willingness of people to share different types of data; 2) explore the reasons of their acceptance or refusal, and 3) try to determine which variables can affect the willingness to perform these additional tasks.

**Methods & Data:** In a survey implemented in 2016 in Spain, around 1,400 panelists of the Netquest online access panel were asked about their hypothetical willingness to share different types of data: passive measurement on devices they already use; wearing special devices to

passively monitor activity; providing them with measurement devices and then having them self-report the results; the provision of physical specimens or bodily fluids (e.g. saliva); others. Open questions were used to follow up on the reasons of acceptance or refusal in the case of the use of a tracker.

**Results:** The results suggest that the acceptance level is quite low in general, but there are large differences across tasks and respondents. The main reasons justifying both acceptance and refusal are related to privacy, security and trust. Further analyses exploring the differences in levels of willingness show that we are able to identify factors that predict such willingness (attitude toward sharing, perceived benefit of research, trust in anonymity, attitude toward surveys, etc).

**Added Value:** This study provides new information about the willingness of online panelists to share data, extending prior research, which has largely focused on a single type of data and has not explored correlates of willingness.

## AUTOMATIC VERSUS MANUAL FORWARDING IN WEB SURVEYS

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2: University of Michigan, United States of America

In this paper we extend previous work on automatic forwarding (AF) versus manual forwarding (MF) to examine the effect on the cognitive response process. We expect respondent cognitive burden to increase as a combined function of low information accessibility and auto forwarding. We experimentally tested manual versus auto forwarding for varying levels information accessibility (low versus high) and need for consistency of responses (low versus high). We expect AF to perform better when information is readily accessible and the need to access previous questions (consistency) is low.

**Methods & Data:** Undergraduate students at two universities in Finland were randomly assigned to six independent web survey conditions in two experiments (n=3028 and n=5004). The experimental design was an incomplete factorial, including three independent variables: forwarding procedure, information accessibility and consistency requirement. Total response times and elapsed times on individual items from paradata were analyzed using linear regression models and multilevel models. The returns and shifts between items as well as straight-line responding and consistent responding were examined.

**Results:** Total response time was 27 seconds higher on average in the MF surveys. Less-accessible information and the consistency requirement both increased total response time (20 seconds and 14 seconds on average, respectively). All three main effects were statistically significant. Contrary to expectation, no significant interactions were found.

MF respondents were significantly more likely than AF respondents to change answers on experimentally-manipulated items. For example, 13 percent of manually forwarded group changed their responses on the question conveying less-accessible information compared with 2 - 4 % changes in the control groups. AF did not increase straight-line

responding. However, based on experiments 1 and 2 we found slight evidence that AF enhances consistent responding when the need to access previous questions is high. AF respondents of experiment 2 self-reported responding easier than MF respondents (difference 10 %).

**Added Value:** There are many proponents of auto forwarding in web surveys. This paper provides one of the few carefully-designed and theoretically-motivated studies to explore this important design choice under experimentally-varied conditions. These results will help shape practice.

### LEARNING FROM MOUSE MOVEMENTS: IMPROVING WEB QUESTIONNAIRE AND RESPONDENTS' USER EXPERIENCE THROUGH PASSIVE DATA COLLECTION

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4: U.S. Census Bureau, United States of America;  
5: Institute for Employment Research, Germany

**Relevance & Research Question:** While tracking mouse movements is common in other areas of usability testing (e.g., web design, e-learning), applying mouse movement tracking as a tool for web questionnaire testing is relatively new and has so far been mostly limited to lab studies. In the current study, we operationalize collection of specific movements on a large scale outside the lab and we experimentally vary the type of difficulty in survey questions to see if different movements are associated with different cognitive processing.

**Methods & Data:** The data for this study come from a web survey among 1,250 people who are employed, unemployed, job seekers, recipients of unemployment benefit II, and active labor market program participants. The study was conducted by the Institute for Employment Research in Nuremberg, Germany, in fall 2016. The questionnaire includes factual, opinion, and problem-solving questions with a variety of response formats, such as radio buttons and slide bars. We vary experimentally the difficulty and complexity of items between respondents to show how complexity affects behavior. We collect and log participants' mouse movements as they complete the online survey.

**Results:** We find that unsorted lists of response questions are associated with more mouse movements and more vertical regressions than sorted lists. We also find that Yes/No format results in more mouse movements and more horizontal flips than check all that apply questions. We also find specific patterns of mouse movements on sensitive questions and when difficult terms are used.

**Added Value:** By collecting and analyzing participants' mouse movement data during completion of the questionnaire, we show how complexity affects response behavior and the degree to which indicators of insecurity are related to the veracity of answers. Our results consti-

tute initial steps toward a real-time analysis of the collected paradata, and provide a building-block for adaptive questionnaires that employ online detection and resolution of respondent's difficulties, leading to more accurate survey data.

### B9: ONLINE INDICATORS OF REAL-WORLD BEHAVIOUR

#### GEOSPATIAL ANALYSIS OF SOCIAL MEDIA DATA – A BRIDGE BETWEEN TWO WORLDS

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**Organisation:** 1: Q | Agentur für Forschung GmbH, Germany;  
2: Socio-Economic Panel Study (SOEP), Germany

**Relevance & Research Question:** Social communication and interaction has been getting locally independent and increasingly global through social networks. Nonetheless, online content and communication still often relate to a local and geographical context (e.g., sights, sporting events). Moreover, regional aspects such as an areas political climate can shape tone and topics discussed in social media (e.g., elections). With this research, we seek to address the link between digital communication and geographical differences in real-world behavior and opinions. By analyzing millions of Twitter tweets along with geospatial metadata, this study contributes to a deeper understanding of the possibilities and limitations of using social media to research regional aspects.

**Methods & Data:** Data is retrieved through a direct connection to the Twitter API. The API allows collecting geospatial metadata about tweets and users such as the location where a post has been published as well as a user's residential location. Different topics and scenarios are covered in our data collection including the 2016 U.S. presidential election. Data analysis focuses on regional differences in social media communication over time. We use a text-mining approach to cluster the content according to thematically relevant keywords

**Results:** Our application scenarios allow statements about the behavior within Social Media as well as to draw conclusions about real-life events. For instance, in the context of the 2016 U.S. presidential election we compare hotspots of political agitation. By tracking specific events, we identify the origin of visitors and compare their behavior with locals. In addition, long-term observations allow us to identify real-life events that raise awareness in Social Media. By doing so, we will also point out the limitations and discuss potential sources of bias.

**Added Value:** Even though social media data has been increasingly used for research purposes, only few studies investigated the usage of geospatial metadata in social media to research human behavior, interaction and opinions. This study contributes to the state of research

by exploring and presenting applications of analyzing human behavior through social media and geospatial metadata. Future work may match social media data with other sources such as survey data in order to validate the results.

## THE IMPORTANCE OF FOREIGN LANGUAGE SKILLS IN THE LABOUR MARKETS OF CENTRAL AND EASTERN EUROPE: ASSESSMENT BASED ON DATA FROM ONLINE JOB PORTALS

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**Relevance & Research Question:** In a globalised world, where countries are firmly engaged in international trade, investment and migration, knowledge of foreign languages is an important skill. Especially in Europe, foreign language skills are considered a major asset – not only because of globalisation but also due to the continent's inherent linguistic diversity. Although the importance of foreign language skills has been widely recognised, studies on the supply and demand of these skills have only started to emerge in the last two decades. Additionally, the existing literature nearly exclusively focuses on the supply side of language skills measured through interviews and surveys, due to lack of obvious way to measure the demand. Our study explores the demand side on the basis of job vacancies obtained from the main job portals in the four analyzed countries.

**Methods & Data:** Our main data source are popular online vacancy portals in the four analysed countries. In fact, we do not analyse these vacancies as such but instead work with the meta data available on the job portals. For each of the Visegrad countries, we extracted data from a representative online job portal. By "representative" we mean that the job boards were not chosen randomly but instead selected after a careful analysis of their labour market coverage (for example, we verify whether they cover all industries, all occupations). In total, the portals contained approximately 74,000 vacancies. We use two types of meta data - the indication of language requirement (present or not present) and the occupation (which we transform into standard ISCO classification). This enables us to cross-tabulate the demand for language skill per occupation.

**Results:** The results indicate that English language knowledge is highly in demand in the region, followed by the command of German language. Nonetheless, the function of the two languages is different - while English opens the door to professional jobs, German is rather sought in occupations, which are often advertised by foreign recruiters looking to fill vacancies in the German speaking countries.

**Added Value:** One of the first studies presenting the demand for foreign languages on the labour market.

## FANTASY WORLDS LOST - COMPETITIVE GAMING ON THE RISE

**Author:** Stetina, Birgit Ursula; Klaps, Armin; Kovacovsky, Zuzana; Lehenbauer, Mario; Aden, Jan  
**Organisation:** Sigmund Freud University, Austria

**Relevance & Research Question:** Dota, a representative of the Multiplayer Online Battle Arena (MOBA) online gaming genre, is played today by an estimated number of players above 20 million, world-wide (Guo et al., 2012). Dota is featured in tournaments with wide appeal to gamers and game-watchers, such as the World Cyber Games (WCG) and the Electronic Sports World Cup (ESWC). Each of these games is played by millions of players, which are loosely grouped into large communities. In turn, most communities operate their own game servers, maintain lists of tournaments and results, and publish information such as resulting player rankings via common websites. The "phenomenon" MOBA seems to replace the trend of Massively Multiplayer Online Role Playing Games (MMORPGs). MMORPGs once labeled most "problematic" from a clinical addictive viewpoint explained using amongst other ideas the open ended gaming format now show declining numbers of players and companies who refuse to publish new member data. Are MOBAs the new "most problematic" gaming genre?

**Methods & Data:** Using a cross-sectional design with a web-based questionnaire 3898 gamers (mean age 24.24 years; 91.5% male) from German speaking areas were surveyed using several clinical scales (IGD-20, ADS, an adapted version of the "Asheron's call" questionnaire, E) were used. Participants were categorized according to their preferred game into nine genres (MMORPG, Shooter, Casual, Actions RPG, MOBA, Simulation, RTS/S, Horror & Survival and Tactical Shooter). Statistical analyses included explorative methods, ANOVAs and t-test.

**Results:** All genres differ significantly regarding the so-called Internet Gaming Disorder ( $F(8,2628)=6.226, p<.00$ ), Engagement ( $F(8,2562)=37.056, p<.001$ ), Addiction ( $F(8,2585)=6.547, p<.001$ ) and Depression ( $F(8,606.899)=4.154, p<.001$ ) with MOBAs showing the highest scores in all areas. Furthermore t-tests show significant differences between MOBAs and MMORPGs in addiction related questionnaires (IGD:  $t(991)=-2.461, p=.014$ ; Engagement:  $t(960)=3.522, p<.001$ ; Addiction:  $t(976)=-3.123, p=.002$ ).

**Added Value:** Earlier explanations of problematic gaming behavior using game elements of potentially "addictive genres", such as a never ending storyline or an open never ending fantasy world, need reconsidering. The current results cannot be explained that way. There seem to be several unexplored factors which play a relevant part in the explanation of the phenomenon, potential moderating factors that need more studies.

## SOCIAL NETWORKING SITES AS SAMPLING TOOLS – AN EXAMPLE FROM MIGRATION RESEARCH

**Author:** Pötzschke, Steffen; Braun, Michael  
**Organisation:** GESIS, Germany

**Relevance & Research Question:** The sampling of migrant populations is a highly complicated issue and one of the most pressing methodological challenges in migration research. Especially in cross-national studies this problem is intensified by the need of comparable sampling frames in different countries. Name-based telephone (i.e., onomastic) sampling is a well-established procedure in such settings. However, due to the declining use of landline connections and missing entries in telephone books the need to amend this technique by other approaches becomes increasingly visible. We therefore investigate whether and how a social networking site can be used to sample a migrant population in a cross-national setting. More specifically we ask whether the advertisement functionality of Facebook can be used for this purpose.

**Methods & Data:** We build on results of an online survey amongst Polish migrants in four different countries (Austria, Ireland, Switzerland, and the United Kingdom) conducted in late 2015. Respondents for this study were sampled through Facebook advertisements. Since we want to assess the effectiveness of our approach, our data consists of the statistical information regarding our advertisement campaign provided by Facebook and of the data collected through our survey.

**Results:** Using a total advertisement budget of €500 we succeeded in recruiting more than 1,000 respondents who completed our survey within a four weeks field period. These results are also remarkable as we used a relatively comprehensive questionnaire (median completion time 11.2 minutes). Our analysis shows that the approach is not only efficient but also accurate as nearly all of the respondents (96%) belong to the target population.

**Added Value:** The study shows how Facebook advertisements can be used to sample migrants and hence counteract some of the most pressing problems of more established methods. Hence, we judge it to be a very valuable addition, yet in most scenarios not a replacement, of the latter.

## C9: POLITICAL ONLINE COMMUNICATION

### JOURNALISTS AND POLITICIANS RELATIONSHIPS IN THE TWITTER ENVIRONMENT: A NEW GAME CHANGER?

**Author:** Elishar-Malka, Vered; Ariel, Yaron  
**Organisation:** Yezreel Valley College, Israel

**Relevance & Research Question:** Twitter has become a central work-tool for journalists as well as for politicians and elections candidates. This phenomenon is extremely noticeable in Israel, where regular citizens refrain from using Twitter, while journalists and public figures utilize it extensively. Journalism and political communication studies have thought us that changes in the nature of work tools, particularly ICT, leads to variations in work patterns and journalists-politicians relationships (e.g. Davis, 1999; Garrison 1995, 2005; Parmelee, 2014). In light of Twitter's unique features, our research questions inspect the possible professional implications of utilizing this online social network as a work-tool among senior political correspondents.

**Methods & Data:** Comparison of two data sets were utilized. First, senior political correspondents were directly contacted and asked to answer an overt questionnaire. Second, after receiving their consent, the Twitter accounts of all respondents in the first Phase were monitored on a daily basis for three months before their participation in this study. The final data compared the Twitter assessment of 57 senior political correspondents with their actual Twitter's activities. A total of 19,025 Twitter activities were analyzed.

**Results:** We conducted a separate analysis for each database and then analyzed the matching pairs. Key findings indicate that the range of correspondents' sources became wider, due to using Twitter as a work tool. Twitter enables professional brainstorming among colleagues. Thus 66% of their Twitter activities are interactive in nature. Twitter audience engagement for each post (up to 1500 unique interactors) implies that correspondents receive immediate feedback for their value of Twitter. Political correspondents report they become better informed and confident, therefore, become stronger when standing in front of politicians. Nonetheless, political correspondents perceived their level of Twitter activities as higher than their real performance.

**Added Value:** As the complex relationships between politicians and political correspondents are profoundly influenced by each player's professional status, becoming more dominant in this shared arena might mean getting a better position in this power-based relationships. The present study wishes to add another break to the wall of the growing research body that examines Twitter in political and in journalistic contexts.



### EQUALIZATION VERSUS NORMALIZATION ON SOCIAL MEDIA: CITIZENS' CONVERSATIONS ON FACEBOOK PAGES DURING THE 2015 ISRAELI ELECTIONS

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Most studies of social media's ability to create equal access to the public during elections by challengers and incumbents have adopted a top-down approach and analyzed politicians' success in engaging citizens during election campaigns. This study, however, adds a bottom-up analysis of citizens' conversations on Facebook about challengers versus incumbents during the 2015 Israeli elections (Messages posted between January 30, 2015 (a day after the candidates' lists were posted) and March 17, 2015 – election day were analyzed). The study examines Israeli citizens' conversations about the leading 12 political candidates (N = 133,828 discussions), to better understand whether social media levels the political playing field by allowing challengers to gain equal attention and engagement as incumbent PM Netanyahu. All measures in the bottom-up analysis indicate that citizens' conversations on Facebook exhibit a strong trend of equalization – As PM Netanyahu did not attract more attention than other candidates in terms of number of participants in discussions, number of conversations, number of Likes and Shares while examining citizens' conversations. A top-down analysis of Facebook members' engagement with politicians' post, an approach typically used in previous studies, was used for comparative purposes ((N=1633 politicians' posts). Similar to previous studies using the top down approach (Lev-On and Haleva-Amir's, 2016; Klingler, 2013; Strandberg, 2013; Vergeer & Hermans, 2013) the findings of the top-down analysis indicated normalization: Incumbent PM Netanyahu attracted a significantly greater number of Likes and Shares than any other candidate. Taken together, the findings bear optimism for media and democracy studies, as they show that in the same elections, although a top-down approach revealed normalization, a concurrent bottom-up analysis of citizens' conversations offers evidence of equalization. Thus, the study contributes to previous research by showing that the democratizing effect of Web 2.0 flourishes in the less-studied realm of citizens' conversations, where challengers attracted the same or greater extent of attention as did the incumbent. The study highlights specifically that these positive trends takes place amongst the so-called prosumers (producers/consumers) which produce independent political conversations during election campaigns.

### RESEARCHING AGENDA-SETTING ONLINE: THEORETICAL AND EMPIRICAL CHALLENGES

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 Weimann Saks, Dana; Avidar, Ruth  
**Organisation:** Yezreel Valley College, Israel

**Relevance & Research Question:** Agenda-Setting studies have been conducted for more than four decades, both in traditional and online media. Analysis of the public agendas in online media requires re-evaluation of definitions and measurement, and especially the dynamic environment of online social networks, their units of analysis and empirical tools. The present study seeks to address these challenges and propose possible solutions for a handful of them. Thus, our main research question is: What are the unique problems and dilemmas facing Agenda-Setting research in the online sphere?

**Methods & Data:** To answer this question, the authors have re-examined their research of online vs. offline public and media agenda conducted during the 2015 general elections in Israel. Data in the original study has been gathered from two sources during the six weeks prior to election time: (1) Posts from all the main online social networks in Israel which were digitally monitored according to a list of key words; and (2) all items from 132 television evening news broadcasts, which were content analyzed. At every stage, such as defining main variables, collecting data and analysis – we examined the various problems, dilemmas and measures which were directly associated with applying offline methods to the online sphere.

**Results:** Main challenges and dilemmas that were identified in this study: Defining what online public agenda is, forming a thematic hierarchy in the online public discourse, defining the measured units of time, measuring online salience of news items, putting together a sample, overcoming mutual influences between different media outlets, and handling inter-source „contamination.“ Considering all challenges and dilemmas, it is clear that to advance online Agenda-Setting research; a multi-facet process should take place. Instead of trying to apply traditional media concepts and methods to the online sphere, scholars should re-examine them in light of the media's novel characteristics.

**Added Value:** The current study suggests an innovative perspective on how to apply offline theories and research tools to the online sphere. Although most challenges described here are rather complex and may have no single solution, we suggest that no Agenda-Setting scholar should ignore them.

## D9: MITEINANDER ODER NUR NEBENEINANDER? DAS VERHÄLTNISS VON AKADEMISCHER ZU ANGEWANDTER MARKT- UND SOZIALFORSCHUNG

### MITEINANDER ODER NUR NEBENEINANDER? DAS VERHÄLTNISS VON AKADEMISCHER ZU ANGEWANDTER MARKT- UND SOZIALFORSCHUNG

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Wie gut funktioniert eigentlich der Austausch zwischen Hochschulen und Instituten? Wo entstehen die spannendsten neuen Methoden, und wer befruchtet hier wen? Ist die akademische Wissenschaft unverzichtbare Basis der angewandten Forschung, oder im Elfenbeinturm fern der realen Welt? Sind die Institute den Hochschulen methodisch voraus, oder in veralteten Denkansätzen verfangen? Und schließlich: Wie kann Zusammenarbeit idealerweise funktionieren – für bessere Wissenschaft und bessere Ergebnisse für die Praxis? Diesem Thema gehen wir in einer gemischten Runde aus Instituten und Hochschule nach – mit kurzen Eingangsstatements und anschließender gemeinsamer Diskussion.

### THEORETISCH WÜRDEN SIE ZUEINANDER PASSEN, PRAKTISCH EHER NICHT

**Author:** Bauer, Florian  
**Organisation:** Vocatus AG, Germany

Vergleicht man Themen und Ansätze des Marketings und der Marktforschung in Wissenschaft und Praxis so zeigt sich in vielerlei Hinsicht eine große Diskrepanz. Als Praktiker ist man vielleicht erstaunt über die mangelnde Praxisrelevanz und die Thementrägheit der diskutierten Fragen. Als Wissenschaftler schüttelt man mitunter den Kopf über die mangelnde Sensibilität, mit der man sich methodischen Details widmet. Dabei könnten sich beide Seiten so wunderbar ergänzen: Hat doch die eine viele Daten und Erhebungsmöglichkeiten, aber zu wenig Zeit für die theoretische Grundlagenarbeit, durch die diese Daten einen enormen Mehrwert haben könnten, während es bei der anderen Seite oft genau umgekehrt ist. Aber ein wirklicher Austausch scheitert eben oft an den „Standesdünkeln“, die eine jede Richtung mit sich bringt.

## MARKTFORSCHUNG ALS APPENDIX DER IT

**Author:** Lütters, Holger  
**Organisation:** HTW Berlin, Germany

Heribert Meffert, Spiritus Rector des Marketing in Deutschland, hat in einem Interview zu seinem 80. Geburtstag zu Protokoll gegeben, dass das Marketing nicht mehr den Führungsanspruch in Unternehmen reklamieren kann. Er geht noch weiter und sagt, dass Marketing unter Umständen als Anhängsel zur IT enden wird.

Der Marktforschung könnte es ähnlich gehen. Die enorm gestiegenen Anforderungen an IT Know-how werden dazu führen, dass sich das Anforderungsprofil an den Marktforscher weiter ändern wird. Der Marktforscher muss sich anpassen oder wird mittelfristig aus technischen Bereichen ersetzt werden. Bereits heute werden bei Umstrukturierungen Marktforschungsabteilungen der Business Intelligence Abteilung untergeordnet.

Die akademische Ausbildung berücksichtigt diesen Wandel bisher unzureichend bis gar nicht. Weder im Marketing, noch in der Markt- und Sozialforschungsausbildung sind die neuen technischen Anforderungen in den Lehrplänen unserer Ausbildungsstätten enthalten.

## A10: SMARTPHONE TRENDS

### SMARTPHONES USES TRENDS 2013-2016: A DIGITAL DIVIDE PERSPECTIVE

**Author:** Ariel, Yaron (1); Levy, Eilat Chen (2)  
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2: The University of Haifa, Israel

**Relevance & Research Question:** Online connectedness through mobile Smartphone is increasingly replacing regular internet access. Considering the rapid growth in smartphone usage, the purpose of this study is to examine the recreating and the dynamics of the 'second-level digital divide' (Hargittai, 2002) among Israeli Smartphone users. Second-level digital divide hinges to the possible usage gap of actual activities within various Smartphone applications, rather than access alone.

**Methods & Data:** This study compares data gathered from trend survey of four consecutive years (2013-2016). All surveys were based on a representative sample (n=550-567, maximum sample error 4.5%) of Israeli population aged 15 and above. Each survey included several repetitive questions regarding users' accessibility, usability, and eva-

luation of the smartphone. A usability Index was constructed, including ten items (Cronbach's Alpha >.8) that stood for various usages of Smartphone applications (e.g. Voice calls, short text messages and multimedia messages, pictures and video, social network, surfing the net).

**Results:** Our primary analysis focuses on the gap of Smartphones' usability, depending on variables such as gender, age, and education. Overall, we found a significant difference [ $F(549)=7.4$ ,  $p<.001$ ] between the Usability Index along the years (2013 to 2016); A swift increase was found mainly in Smartphone's use for web surfing (from 55% to 90%) and watching TV through Smartphone (from 18% to 42%). Whereas voice calls and sending text messages remained stable regarding use (85%-90%). We found a significant difference between men and females smartphones' usages; men average was found higher than females average usage. Also, we found a significant negative correlation between respondents' age and the Usability Index.

**Added Value:** Smartphones' settings comprise of a variety of potential activities (e.g. surfing, taking pictures, playing, texting, talking). Unlike other media, this dynamic environment results in different levels of usages depending on users' characteristics. Our findings imply that despite the apparent ubiquity of Smartphones nowadays, scholars should consider actual uses of the smartphone when examining the digital gap.

## UNDERSTANDING MOBILE RESPONDENTS AND THEIR IMPORTANCE FOR REPRESENTATIVE SAMPLES: ATTITUDES, BEHAVIOR, DEMOGRAPHICS AND SURVEY-TAKING

**Author:** Livadic, Diana; Badita, Mara  
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**Relevance & Research Question:** Consumers are increasingly accessing the internet through their mobile devices, so including mobile respondents in online surveys is more important than ever before. But a high share of surveys is still not mobile friendly which can impact the quality of the sample. Many questions regarding sampling and answer quality as well as the lack of (personal) experiences with mobile surveys, hinder researchers to optimize surveys for our mobile world. We address these questions and look into respondent profiles, answer behaviors, levels of distraction and engagement across devices. Furthermore, we will present learnings and best practices on how to design mobile friendly surveys and sampling implications.

**Methods & Data:** Within international research on research projects we conducted parallel tests with PC vs. mobile samples and analyzed potential differences between PC (computer or laptop), tablet, and smartphone respondents with regard to attitudes, demographics, and survey participation and engagement. We will present the results of different projects, all surveys include at least  $n=200$  respondents per device, total of  $n=600$  per country.

**Results:** Mobile respondents can have different profiles than PC respondents, which makes it necessary to include them in representative samples. They don't have meaningful differences in survey-ta-

king behavior and there is no impact on data when survey design is changed to be mobile friendly. Regardless of device, all respondents are distracted by their day-to-day life and mobile respondents are even less likely to be "potentially disengaged".

**Added Value:** We were able to prove that mobile friendly designed surveys increase mobile participation and valid data collection. Our research shows that including smartphone respondents in surveys leads to at least four important benefits: 1. Sample representativity and feasibility/ sustainability, ensuring that samples continue to include key population behaviors that mobile respondents disproportionately display 2. Key target accessibility (not only maintain, but improve coverage of specific targets such as younger consumers or mothers of babies) 3. Respondent engagement and good data quality due to positive survey experience of panelists 4. Cost effectiveness by using sample efficiently.

## WHAT DO WE KNOW ABOUT MIXED-DEVICE ONLINE SURVEYS AND MOBILE DEVICE USE IN THE UK?

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**Relevance & Research Question:** We live in a digital age with high level of use of technologies. Surveys have also started adopting technologies including mobile devices for data collection. There is a move towards online data collection in the UK, including the plan to collect 75% of household responses through the online mode of data collection in the UK 2021 Census. However, evidence is needed to demonstrate that the online data collection strategy will work in the UK and to understand how to make it work effectively. No research has been conducted so far in the UK to address respondent's online choice of device or behaviour in mixed-device online surveys. This project is very timely and will fill this gap in knowledge.

**Methods & Data:** This analysis uses all publically available UK social surveys which had an online component (Understanding Society Innovation Panel, Community Life Survey, European Social Survey, 1958 National Child Development Survey, Second Longitudinal Study of Young People in England). Descriptive analysis and multinomial logistic regressions (where possible) are used to study significant correlates of different device use in mixed-device online surveys.

**Results:** Distributions of different device use by demographic and socio-economic characteristics as well as significant correlates of device use will be presented. Comparisons to other countries (Netherlands, Germany, Spain and the US) will be drawn.

**Added Value:** The originality of the analysis lies in addressing the underresearched area of different device use including mobile device use in mixed-device online surveys in the UK. The findings from this analysis will be instrumental to better understanding the trends in device use and response behaviour in mixed-device online surveys in the UK more generally and, specifically, in informing best practice for the next UK Census 2021. The knowledge about characteristics of respondents who choose to use different devices in online surveys in the UK can help target certain groups more effectively. It also can

help improving the design of the surveys and response rates as well as reducing survey costs and efforts. This analysis lays foundations for future analysis of data quality issues in mixed-device online surveys in the UK.

## B10: INNOVATIONS IN MARKET RESEARCH

### MAKING CONJOINT QUESTIONNAIRES MORE REALISTIC: THE EFFECT OF RANDOM NOISE AND VISUAL PRESENTATION ON DATA QUALITY AND SURVEY EVALUATION

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**Relevance & Research Question:** Conjoint is a commonly used advanced market research technique to estimate preference share for products and services with different attributes and levels. A common criticism of conjoint analysis is the repetitive nature of the questions. The main goal of this research is to study the impact on the answers and the data quality of making conjoint questions more realistic by introducing some randomised textual noise into the descriptions of the conjoint levels or by simulating the way an e-commerce website displays products.

**Methods & Data:** An experiment was implemented in Spain using 1,600 respondents from the opt-in online panel Netquest. The respondents were randomly assigned to one of the following four conditions: classic conjoint design without noise (control group), classic conjoint design with some random textual noise added to the attribute level descriptions, conjoint simulating e-commerce display of products but no noise, conjoint simulating e-commerce display and some random textual noise.

**Results:** The four groups were compared in terms of data quality and survey experience. Results show a directional (but not statistically significant) improvement of quality of estimations. In terms of survey evaluation, a Chi2 test indicates that there is a significant relationship between the experimental group and three aspects of the evaluation: finding the survey interesting (e-commerce layout without noise got the higher evaluation), liking participating in it (e-commerce layout with noise got the higher evaluation), and finding it short (e-commerce layout without noise got the higher evaluation).

**Added Value:** This study indicates that there is room for improvement in the design of Conjoint experiments. Even if the gains are not as high as expected, the costs of adding noise or presenting the conjoint more like an e-commerce website are low, so it seems recommendable to do it.

### MEASURING ATTENTION TO DIGITAL ADS: ARE NATIVE ADS A SOLUTION TO AD BLOCKING?

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2: mo'web research, Germany

**Relevance & Research Question:** Banner ad spending has increased steadily. Nevertheless, a growing number of advertisers start to question its effectiveness because of rising banner ad fatigue which manifests itself in a high popularity of ad blocking. The advertising industry presents native advertisement as a solution to this problem. Native ads feel and look like editorial platform content and as such promise to get more attention. The present study, for the first time, investigates if this claim is justified in a realistic web environment.

**Methods & Data:** Internet users were exposed to a variety of banner ads in the context of editorial websites. These banner ads were replaced in a control group with native ads of the same size which resembled the form and function of the webpage upon they appeared. Both types of ads contained the identical textual information in order to allow for comparison. While both groups were confronted with the editorial platforms their gaze pattern was recorded using spotlight-viewer technology. Visual spotlighting is an online eye-tracking method that allows tracking visual attention of a large number of Internet users.

**Results:** The study illustrates when native ads outperform banner ads and vice versa. It further discusses the implications of the results on the basis of bottom up and top down attentional processes. While banner ads can generate more attention initially due to their higher ability to break through on a webpage, native ads may generate greater total attention. The implications are that both types of advertisement carry the risk of causing frustration. In case of banner ads high saliency may distract the users following their top-down attentional goals. On the other site native ads disguise their real purpose and therefore may mislead users.

**Added Value:** Nowadays click and viewability statistics are the most popular KPI of online ads. However, click-through rates only represent the less than one percent that actually click on banners. Ad viewability simply illustrates if an ad is displayed on the user's screen. Online eye-tracking has helped to overcome this gap in advertising research because it measures what was actually seen by Internet users.

### SHOPPING MOTIVES AND CONSUMER SEGMENTS IN ONLINE-SHOPPING

**Author:** Zaharia, Silvia  
**Organisation:** Hochschule Niederrhein, Germany

**Relevance & Research Question:** Almost 73% of the German population aged 14+ buy frequently or occasionally online. During their customer journey the shoppers use different offline and online touch points and devices for information before purchase and for purchase.

This paper addresses the following research questions:

1. Can shopping motives be used in order to segment online shoppers? And if so, which segments exist?
2. How do the online consumer segments differ in terms of:
  - Shopping motives?
  - The channels they use for information before purchase and for purchase (mobile, online and offline)?
  - The product categories they purchase online?
  - The devices they use to access the Internet (smartphone, tablet, laptop, desktop PC)
  - Socio-demographic characteristics?

**Methods & Data:** This study is based on extensive qualitative (focus groups) and quantitative research. The quantitative data has been obtained from a representative sample of 1.002 German online buyers (online questionnaire & phone interviews).

Factor analysis is used to identify the relevant shopping motives. Cluster analysis and discriminant analysis are used to segment the online-shoppers into subgroups based on their shopping motives. The segments are analysed using multivariate analysis of variance (MANOVA) and descriptive statistics.

**Results:**

1. This study identifies seven shopping motives: “recreational orientation”, “convenience orientation”, “independence orientation”, “risk aversion”, “price orientation”, “variety seeking” and “shopping advice orientation”.
2. Four segments are identified in the data. We call these segments: “price-oriented heavy users”, “convenience-oriented advice-rejecters”, “risk-averse hedonists” and “critical light users”.

**Added Value:** This study is an extension of earlier studies focusing on shopping motives in a multi-channel environment. By its broad focus it helps to better understand:

- The online shopping behaviour of German consumers in terms of the channels they use for information before purchase and for purchase (mobile, online and offline);
- the product categories they purchase online;
- the devices they use to access the Internet (smartphone, tablet, laptop, desktop PC).

## C10: TELEVISED DEBATES

### REAL-TIME EVALUATION OF POLITICAL DEBATES AT HOME AND ABROAD WITH THE DEBAT-O-METER

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**Organisation:** University of Freiburg, Germany

**Relevance & Research Question:** Due to their role in election campaigns, televised debates between political candidates (“TV-Duelle”) have attracted substantial scholarly attention. A large body of work has used physical feedback devices to measure viewers’ reactions to a debate in real-time. However, this approach is limited to lab-based settings with potential negative ramifications for e.g. external validity. Therefore, a method freeing researchers from the need to use physical devices is called for.

**Methods & Data:** We present the Debat-O-Meter, a novel Internet-based application for smartphones and tablets that allows to evaluate the effects of televised political debates on large-scale audiences following the discussions in the setting of their private homes. It consists of a real-time response (RTR) measurement system and modules for instructing the audience at home and for collecting survey data. Together with a website for user registration and Internet-based interactive data analysis (under development), it allows to both realize large-scale measurement of viewer reactions for scientific research and creates a second screen situation for the audience to support educational/voting advice application-like interaction with the debate. A version independent of the local Internet infrastructure is available, too.

**Results:** We present results from three discussions covered in the context of the Baden-Württemberg election 2016, and results from both the Brexit and the third US presidential debate. Data from the latter one has been examined in a cross-cultural perspective with both German and an Internet-based US set of participants. The results so far show that the Debat-O-Meter can be applied on par with established methods based on physical measurement devices, that it can be applied fruitfully in a cross-cultural context, and that it can be used with unsupervised participants.

**Added Value:** Besides permitting cost-effective investigation of larger samples in a “natural” setting outside the lab, the Debat-O-Meter adds flexibility to RTR-based research since its virtualization allows to quickly implement user interfaces that can step beyond conventional methods by e.g. allowing for group discussions (“Elefantentrunden”) and/or alternative measurement constructs (such as e.g. emotional reactions, calls for fact checks, or statements about the candidates like disbelief, dodging or spinning).



### SECOND SCREEN EFFECTS ON CANDIDATE PERFORMANCE EVALUATIONS DURING THE 2013 TELEVIEWED GERMAN CANDIDATE DEBATE

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2: University of Frankfurt, Germany

The second screen has been a growing phenomenon in how individuals consume television in recent years. Particularly the increasing prevalence of smartphones allows viewers to join online communities and exchange views on programs. An interactive viewership experience is at times even explicitly invited by producers by specifically designing online platforms or creating dedicated social media presences to frame shows. Academic analysts have been quick to consider the ramifications of this new phenomenon for the viewer experience. While many observers have investigated the content of concurrent online discussions dedicated to particular programs, it is much more challenging to capture the effects of such accompanying viewership.

This study makes an attempt at filling some of the gaps in this research program. Specifically, we analyze data from a panel study that was collected on the occasion of the televised candidate debate that was aired as part of the 2013 German federal election campaign. The candidate debate is one of the most important events on the campaign trail and arguably has the potential to shape electoral outcomes. It is thus crucial how viewers perceive candidate performances during the debate. This contribution considers whether and how performance evaluations on the second screen – in the present case: Twitter – shape performance evaluations of viewers that are concurrent social media users. To this end, a sample of Twitter users was invited to participate in a short survey in the days before the candidate debate and re-contacted for the panel component of the survey after the debate. Additionally, participants were invited to provide the names of their Twitter accounts. This allows us to link individual performance evaluations with the content of the respondents' Twitter messages and more importantly with the candidate performance evaluations in the respondents' Twitter feeds.

### THE CONTENT OF LIVE-TWEETING DURING TWO TELEVIEWED ELECTORAL DEBATES

**Author:** Isotalus, Pekka  
**Organisation:** University of Tampere, Finland

**Relevance & Research Question:** [live-tweeting, television, debate, content, twitter] Live-tweeting during electoral debates has generated increasing interest among scholars. Although the results of earlier research vary, there are many positive results in terms of the ability of live-tweeting to activate viewers or to increase viewer engagement in politics. Many scholars have also focused on who is tweeting and the roles of the political elite and citizens in this process. Only a few studies have analysed the content of tweets. This study analyses the content of live-tweets during two televised electoral debates during the Finnish parliamentary elections in April 2015. The aims of the study are to examine the kinds of communication acts used by tweeters as well as the themes that animate live-tweeting.

**Methods & Data:** [hashtag, qualitative content analysis] More than 26,000 live-tweets during two debates with a specific hashtag were collected by NodeXL network analysis software, all of which were categorised manually and subjected to partly quantitative but mostly qualitative analysis.

**Results:** [communication act, themes, content, party leader] The results show that the majority of the tweets were opinionated and evaluative rather than neutral questions, statements or reports about the discussion. The most popular themes (49%) concerned evaluations of the overall nature of the discussion, party leaders' performance and opinions and hosts' performance. However, many tweets (37%) focused on the content of the debates. The most popular category concerned party leaders; thus, this category was analysed more carefully. This analysis showed that these tweets often (40%) focused on the content of party leaders' turns.

**Added Value:** [television, tweet, opinion, personalization] Overall, as in earlier research, the study shows that debate participants and their performance in television debates easily caught viewers' attention and that a significant proportion of live-tweets concerned the contents of the debate and party leaders' speeches. The most typical tweet of a Finnish debate viewer concerned opinions regarding party leaders' view on a subject. Therefore, political topics do not appear to assume a marginal place in live-tweeting. However, live-tweeting seems to foster the personalization of politics in this context.

## D10: MOBILE RESEARCH IM KONTEXT DER DIGITALEN TRANSFORMATION

### MOBILE RESEARCH IM KONTEXT DER DIGITALEN TRANSFORMATION

**Author:** Friedrich-Frekxa, Malte  
**Organisation:** GapFish, Germany

Die Marktforschung steht in Zeiten der Digitalisierung vor umwälzenden Herausforderungen. Es ist zu erwarten, dass der rasante und gleichzeitig tiefgreifende Wandel, hervorgerufen durch die Digitalisierung wesentlicher Wertschöpfungssteile der Marktforschung, die Branche in den kommenden Jahren radikal verändern wird. Der Siegeszug des Smartphones als dominierendes Endgerät des Konsumenten unserer Tage ermöglicht und erfordert aufgrund seiner massiven Nutzung und seiner besonderen technischen Eigenschaften neue Studiendesigns. Zusammen mit Sandra Vitt von der Mediengruppe RTL, Matthias Kampmann von Interrogare und Judith Schmelz von STURM und DRANG diskutieren wir die Rolle des Smartphones für die digitale Marktforschung, methodisch sowohl unter qualitativen als auch quantitativen Forschungsaspekten.

### NEUE MOBILE MEDIENNUTZUNG VERÄNDERT DIE MARKTFORSCHUNG

**Author:** Kampmann, Matthias  
**Organisation:** Interrogare GmbH, Germany

Die Aufmerksamkeitsspanne sinkt durch den Gebrauch mobiler Endgeräte mit kürzeren Nutzungssessions immer weiter, aber die Befragungslänge bleibt? Was Werbetreibende schon lange wissen, muss die Marktforschung erst noch lernen. Gute Ergebnisse gibt es nur mit guter Usability, klaren Formulierungen und mit integrierten, technischen Messdaten.

### DAS MEMO-PRINZIP: MOBILE ETHNOGRAFIE IM MOMENT

**Author:** Schmelz, Judith  
**Organisation:** STURM und DRANG GmbH, Germany

Wir bei STURM und DRANG beobachten, dass Menschen in der post-digitalen Netzwerkgesellschaft keine klare Trennung mehr machen zwischen Online und Offline. Diese Symbiose beeinflusst auch uns als Forscher und wie wir an Menschen herantreten. Insbesondere für die qualitative Analyse der Markenbeziehung haben wir unseren app-basierten Forschungsansatz MEMO entwickelt. Dabei stellen wir uns die Frage: Welche Facetten von Selbst-Ethnographie können wir in einer sich selbstdokumentierenden, mobil-vernetzten Gesellschaft miteinbeziehen, um konsumkulturelles Verhalten noch direkter zu verstehen? Let's discuss!

### FORSCHUNG MIT APP-SOFORT-WIRKUNG

**Author:** Vitt, Sandra  
**Organisation:** Mediengruppe RTL Deutschland GmbH, Germany

Für die Mediengruppe RTL ist mobile Marktforschung ein essentieller Bestandteil des Forschungs-Portfolios. Es ist unerlässlich, der veränderten Mediennutzung der Zuschauer und Konsumenten zu folgen und die Marktforschung darauf anzupassen. Daraus resultierend hat sich gezeigt, dass sich dank mobiler Forschung ein neues Spektrum innovativer und spannender Methoden und Studienansätze eröffnet hat.

## A11: INCREASING RESPONSE IN WEB SURVEYS

### DAY OF THE WEEK AND TIME OF THE DAY FOR SURVEY DISPATCH. TWO LARGE-SCALE RANDOMIZED EXPERIMENTS.

**Author:** Andreasson, Maria; Martinsson, Johan;  
Markstedt, Elias  
**Organisation:** University of Gothenburg, Sweden

**Relevance & Research Question:** Day of the week and time during the day for survey invitations are two of many possible factors that might affect participation rates in web surveys. Using two large scale experimental studies, we examine whether survey dispatch time is something survey practitioners need to take into consideration or not.

**Methods & Data:** In the first study, respondents were randomly assigned to one out of seven groups, one for each day of the week (n=11 200). In the second study, respondents were randomly assigned to one out of six different times of the day (n=47 279). Survey invitations were dispatched during the fall of 2014 to members of the Citizen Panel, a non-commercial web panel run by the Laboratory of Opinion Research at the University of Gothenburg.

**Results:** Findings indicate that initially Fridays and Saturdays, closely followed by Sundays, are the worst days to dispatch an online survey. On field day one, these days have significantly lower response rates than other days. However, after three to four days of data collection, the significant differences between dispatch days disappear, even without any follow-up reminder. Similarly, for the second study where time of the day is examined, results show that dispatch time only affects participation rates in the short run, within the first 24 hours. The results suggest that survey practitioners do not need to consider which day of week or what time to dispatch a survey, unless they really want quick answers and a very short period of field work.

**Added Value:** Further, and somewhat peculiar, respondents are more likely to say that they prefer to answer surveys on the day of the week when they actually received our invitation e-mail in the randomized experiment.

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## NO PAY, NO GAIN. THE RELATIONSHIP BETWEEN MONETARY AND NON-MONETARY MOTIVATION TO PARTICIPATE IN WEB SURVEYS AND DATA QUALITY IN AN INTERNATIONAL CONTEXT.

**Author:** Achimescu, Vlad [1]; Keusch, Florian [1]; Liu, Mingnan [2]  
**Organisation:** 1: University of Mannheim, Germany; 2: Facebook Inc., United States of America

**Relevance & Research Question:** Numerous studies have shown a positive association between providing incentives conditional upon survey completion, i.e., an extrinsic motivation, and survey participation. Less focus has been placed on extending the reasoning to explain variations in data quality. Satisficing theory predicts that data quality may suffer when respondent motivation is low. This paper challenges the assumption that non-monetary, intrinsic motivation is preferable to monetary, extrinsic motivation, by studying the link between motivation type and data quality in an international context. We answer two research questions in this study: “How do monetary motivated participants differ from non-monetary motivated participants?” and “What is the relationship between motivation type and data quality?”.

**Methods & Data:** The data come from a web survey conducted by SurveyMonkey among approximately 35,000 respondents from 6 countries across 5 continents in early 2016. Participants were recruited into the study from various web panels using different recruiting strategies and incentive structures. Personal and survey related characteristics that may influence the type of motivation were identified. The link between motivation and data quality, measured by four indicators as well as a composite measure, was tested using logistic regression models controlling for panel type and country. Interaction effects between motivation and other predictors and controls were explored.

**Results:** Financial motivation is stronger among younger, low-income, and mobile web respondents, with country and panel-specific differences. In turn, monetary motivation has a positive relationship with data quality. This finding is consistent across countries, panels, and devices. Respondents who are motivated mainly by the incentives rather than curiosity or positive feelings associated with expressing an opinion or taking surveys show a lower propensity to use satisficing strategies such as straightlining or speeding.

**Added Value:** This study sheds light on the relationship between self-reported respondent motivation and objective measures of data quality in web surveys. The results suggest that offering incentives that trigger respondents' extrinsic motivation can increase their levels of attention, possibly by nurturing a sense of obligation and responsibility as a compensation for their monetary gains. The cross-cultural aspect of the study provides external validity.

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## PERSONALIZED FEEDBACK IN WEB SURVEYS: DOES IT AFFECT RESPONDENT MOTIVATION AND DATA QUALITY?

**Author:** Kühne, Simon; Kroh, Martin  
**Organisation:** Socio-Economic Panel (SOEP)@ DIW Berlin, Germany

**Relevance & Research Question:** Web surveys technically allow providing personalized feedback to the respondents based on their previous responses. For instance, after collecting information about the respondent's body weight and height, the web survey system can calculate and display the respondent's body mass index. We argue that such personalized feedback may motivate respondents to respond more accurately in surveys. While past studies mainly concentrate on the effects of providing study results on future response rates, thus far survey research lacks theoretical and empirical contributions on the effects of personalized, immediate, feedback on response behavior. We seek to address this gap in the literature by investigating the potential advantages and disadvantages of providing personalized feedback within an online survey.

**Methods & Data:** We implemented a randomized trial in the context of the Berlin Aging Study II (BASE-II) in 2014, providing feedback regarding the respondents' personality tests (Big Five Personality Inventory) to a subgroup of the sample. We assess (1) whether (the advance notice of) the feedback decreases undesired response behavior, such as item nonresponse, response styles, low reliability, socially desirable responding, or corrective answers and (2) whether the feedback affects respondent satisfaction with the survey.

**Results:** We found only minor effects of the advance notification of feedback on responses to the Big Five Personality Inventory. Thus, contrary to what was expected, the results do not point to an increase in data quality through the announcement of upcoming feedback. Fortunately, we also do not find evidence for manipulations and adjustments of answers after the feedback was presented to respondents. Finally, we observe a positive effect of feedback on respondent satisfaction and enjoyment with the survey.

**Added Value:** Our study provides unique and novel insights on how personalized feedback affects response behavior and data quality within web surveys. Further research may build upon our results by incorporating feedback for different questions and topics, varying the style of the feedback, and investigate effects on future survey participation rates.

## B11: DATA SCIENCE IN ONLINE MARKETING

### THE KEY FACTORS OF SUCCESSFUL VIRAL MARKETING ON FACEBOOK FROM USERS' PERSPECTIVE

**Author:** Woytal, Laura; Wattenberg, Malte  
**Organisation:** Bielefeld University of Applied Sciences, Germany

**Relevance & Research Question:** Viral Marketing, which uses the customers' motivation to spread publishers' content to evoke an exponential distribution, is an important strategy in the field of Social Media. In combination with Facebook, which has more than one billion daily users, Viral Marketing has great potential. However, companies need to know which factors influence the spread of Viral Marketing campaigns. Based on this research question the following hypotheses were formulated:

The amount of average logins, mobile usage, Facebook friends and the users' age influence firstly the amount of followed brand pages [H1], secondly their willingness to spread content [H2] and finally the methods to spread posts (i.e. sharing content, commenting, liking, posting and linking friends) [H3].

**Methods & Data:** A quantitative online survey consisting of 22 questions was conducted among Facebook users (n=542) in May 2016. The described indicators were calculated by chi-square tests and Cramér's V.

**Results:** Users' willingness to call attention to attractive posts and their amount of followed brand pages are connected with the defined variables. With reference to the survey's results, the amount of followed brand pages [H1] depends on the average login (V=0.2554\*\*\*), followed by the mobile usage (V=0.2160\*\*\*) and the age (V=0.1627\*\*\*). All variables are moderately correlated. However, they are weaker correlated to the willingness to spread content [H2] (quantity of the average login V=0.1734\*\*\*, mobile usage V=0.1517\*\*, age V=0.1412\*). Against expectations, the amount of Facebook friends does not influence the users' interaction (willingness to spread V=0.1009, amount of followed brand pages V=0.0749).

Concerning users' preferred methods to spread posts [H3] the age influences the preference to share content (V=0.2233\*\*\*), post information (V=0.2170\*\*\*) and linking friends (V=0.1595\*\*). The amount of Facebook friends depends on sharing content (V=0.2078\*\*\*), commenting on content (V=0.1514\*\*) and posting information (V=0.1424\*). The willingness to link friends also correlates with the average login (V=0.2089\*\*\*) and usage of the mobile version (V=0.2101\*\*\*).

**Added Value:** This study contributes to the understanding of successful Viral Marketing campaigns by stressing the importance of a strategic focus towards frequent and mobile users. It indicates that the methods to spread content depend on different factors.

### EXPLAINING THE FOMO-PHENOMENON – WHAT ARE THE CORRELATES AND PREDICTORS OF THIS FEAR-OF-MISSING-OUT?

**Author:** Bosau, Christian; Bito, Nina; Götze, Yvonne  
**Organisation:** Rheinische Fachhochschule Köln, Germany

**Relevance & Research-Question:** In recent times it is discussed intensively, how extensive and to some extent uncontrolled usage of online and mobile services can be explained. The concept of Fear of Missing Out (FoMO) was introduced as a new important aspect in explaining this behaviour (JWT, 2012; Przybylski, Murayama, DeHaan & Gladwell, 2013). Several studies could already proof the clear impact of FoMO on the amount of mobile and internet usage (Bosau & Kühn, 2015; Bosau & Müller, 2015; Bosau & Ruvinsky, 2016). However, it still remains unclear, how FoMO itself can be explained and what the correlates and predictors of this fear are.

**Methods & Data:** Two online-studies analysed to what extend FoMO can be explained by other concepts. The first study (N=174) compared the influence of social curiosity (Renner, 2006), need to belong (Leary, Kelly, Cottrell & Schreindorfer, 2013) and different attachment styles (Bartholomew & Horowitz, 1991). The second study (N=94) looked at the correlates of FoMO in terms of psychological need satisfaction (Sheldon, Elliot, Kim & Kasser, 2001), life satisfaction (Przybylski et al., 2013) and general mood (Diener & Emmons, 1984).

**Results:** In correspondence with the theoretical hypotheses, all concepts were significantly correlated with FoMO. Whereas people with more satisfied psychological needs ( $r=-.47, p<.00$ ), higher life satisfaction ( $r=-.26, p<.05$ ), and more positive general mood ( $r=-.28, p<.01$ ) had lower levels of FoMO, social curiosity ( $r=.36, p<.00$ ) as well as need to belong ( $r=.69, p<.00$ ) were positive predictors of FoMO. Higher FoMO-levels could also be found especially for people with a preoccupied attachment style compared to the other 3 styles ( $F(3,170)=14.2, p<.00$ ). However, additional regression analyses showed interesting differences for men and women regarding these results. Overall, need to belong resulted to be the strongest predictor for fear of missing out. Therefore, FoMO seems to be predominantly a problem of missing out on social contact instead of missing out on information.

**Added Value:** These two studies give further insight into the nomological network of FoMO. It can be explained what important correlates and predictors of fear of missing out are and how "fomotics" (people suffering from FoMO) can be characterized.

## MEASURE THE BRAND IMPACT OF FACEBOOK VIDEO ADVERTISING

**Author:** Arkhipova, Daria  
**Organisation:** Ipsos GmbH, Germany

**Relevance & Research Question:** Facebook is not only the most important social network in many countries but also increasingly important as a touchpoint for brands to effectively reach consumers. Particularly Facebook video ads are very promising – but how to measure their effectiveness? Is measuring viewing lengths, likes and shares enough to evaluate the real brand impact?

**Methods & Data:** We conducted a number of studies to address the above question. In our approach we are using both view and brand metrics to measure brand impact related to business goals. In one of the studies we served two Facebook video ads to the consumers in their normal newsfeed as the advertiser will do. Those who saw the ad for at least 3 sec. were redirected within 24 hours to a short survey to comprise a Test Cell, N=150. We had 2 Test Cells, 1 per each ad. Those who haven't seen any of the 2 ads (N=150) also participated in the survey with the same questionnaire as for the Test Cells for the further comparison between the Test and Control groups.

**Results:** The results of the survey show that the ad which was on average viewed for a shorter time performed better for the brand (consumers who saw the ad = Test Cell feel closer to the brand than those who haven't see the ad = Control Cell) than the ad which was viewed for the longer time. Thus the results show that the viewing length of the ad doesn't guarantee the better impact on the brand.

**Added Value:** In addition to sharing with you some studies' result this session also explains how the testing of the Facebook ads can be organized to measure and improve their performance.

## C11: RESPONDENT MOTIVATION

### EXPLORING THE INFLUENCE OF RESPONDENTS' IT LITERACY ON NONRESPONSE IN AN ONLINE SURVEY

**Author:** Herzing, Jessica M. E.; Blom, Annelies G.  
**Organisation:** University of Mannheim, Germany

**Relevance & Research Question:** Researchers have expressed concern about the generalizability to the general population of estimations based on online surveys. While much of this discussion circles around the suitability of nonprobability sampling methods, the lack of coverage

of persons without computers and/or internet has also received attention. Probability-based online panels only account for this potential source of error, if they specifically cover the offline population, for example by equipping them with devices and internet connection. However, even when covered, offliners tend to be underrepresented in the final sample because of nonresponse.

Research in this area has thus far considered the underrepresentation of sample units in online surveys to be a binary phenomenon: sample units were either offline or online. In this paper, we extend this binary characteristic into the multi-dimensional characteristic of IT literacy. We use IT literacy to predict nonresponse in the German Internet Panel at the first online interview and across waves.

**Methods & Data:** For this purpose we run a Latent Class Analysis to identify different classes of IT literacy. To assess differences in response probabilities with regard to IT literacy and panel wave, we run logistic regressions.

**Results:** We find that respondents who belong to different classes of IT literacy have systematically different socio-demographic characteristics and show different voting behavior. In addition, we find that response propensities vary by classes of IT literacy, both at the first online interview and regarding retention over time.

**Added Value:** This paper is the first to consider a multi-dimensional classification of IT literacy and its value to predicting nonresponse in online surveys.

### IMPLICATIONS OF DISPOSITION CODES FOR MONITORING BREAKOFFS IN WEB SURVEYS

**Author:** Čehovin, Gregor; Vehovar, Vasja  
**Organisation:** University of Ljubljana, Slovenia

**Relevance & Research Question:** Respondents quitting surveys prematurely (breakoffs) require special attention in web surveys because they occur more often there than in interviewer-administered questionnaires. In addition, the collection of paradata in web surveys enables a more precise measurement of breakoffs. In our study, we compare: 1) introduction breakoffs (occurring at the start of a questionnaire) vs. 2) questionnaire breakoffs (occurring at some later point in the questionnaire) and define them as separate types. We provide a conceptual framework that relates both breakoff types to the AAPOR Final Disposition Codes for Internet Surveys, and propose monitoring breakoffs in web surveys in greater detail. We discuss the practical applications of this approach in a metastudy of 7,676 web surveys.

**Methods & Data:** Our sample is based on approximately 1,250,000 responses to 7,676 web surveys, which were conducted from 2009 to 2014 using the 1KA open source survey software. To analyse the impact of survey characteristics and email invitations on introduction breakoffs vs. questionnaire breakoffs (dependent variables), we used linear regression models with the number of pages and items in the questionnaire, as well as whether the survey was disseminated using the survey software's email invitation system as predictors.



**Results:** Our empirical study shows that questionnaire length only impacts questionnaire breakoffs, and that email invitations only impact introduction breakoffs. We can on average expect the questionnaire breakoff rate to increase by 0.07 of a percentage point for each additional item in the questionnaire, or by 0.17 of a percentage point for each additional page. The introduction breakoff rate is on average expected to decrease by 16.6 percentage points if the survey software's email invitations are used. The sample's mean total breakoff rate is 43%, where the introduction breakoff strongly dominates (about three-quarters of all breakoffs).

**Added Value:** Separately defining introduction vs. questionnaire breakoff allows for a more accurate analysis of related causes because fundamentally different factors contribute to each type. This holds practical importance for survey methodology, especially in terms of breakoff prevention methods and accurately reporting on various missing data and data quality aspects.

## CONTINUITY OF WEB-SURVEY COMPLETION AND RESPONSE BEHAVIOR

**Author:** Höhne, Jan Karem; Schlosser, Stephan

**Organisation:** University of Göttingen, Germany

**Relevance & Research Question:** Web surveys are increasingly used for data collection in social science research since they offer several substantial benefits: cost-effectiveness, saving time, and most importantly, they enable researchers to capture a variety of paradata (e.g., response times). Web mode, however, might also support respondent's distraction during survey completion due to „multi-tasking“ (e.g., checking incoming emails, changing to other websites, or starting programs). Until now, it lacks empirical evidence in which specific way distraction during survey participation affects the response behavior of respondents.

**Methods & Data:** In this study, we, therefore, investigate whether there are systematic differences between respondents who process the survey continuously and those do not. For this purpose, we use a new paradata tool called „SurveyFocus (SF)“ – enabling survey researchers to gather the activity of the web-survey page. This cross-sectional study (n = 1,751) is based on an onomastic sampling approach and contained single as well as grid questions.

**Results:** Our statistical analyses reveal substantial differences between continuously and discontinuously processing respondents. This implies that respondents who leave the web survey for a certain time produce significantly longer processing times (after correcting for the „time-out“). They additionally produce lower response quality in terms of item non-response and error of central tendency. Furthermore, there are considerable differences between single and grid questions.

**Added Value:** All in all, our empirical findings suggest that the continuity of web-survey processing matters. For this reason, survey researchers and practitioners should take this circumstance into consideration when analyzing and interpreting web-survey data.

## D11: PREDICTING PSYCHOLOGICAL TRAITS THROUGH DIGITAL FOOTPRINTS

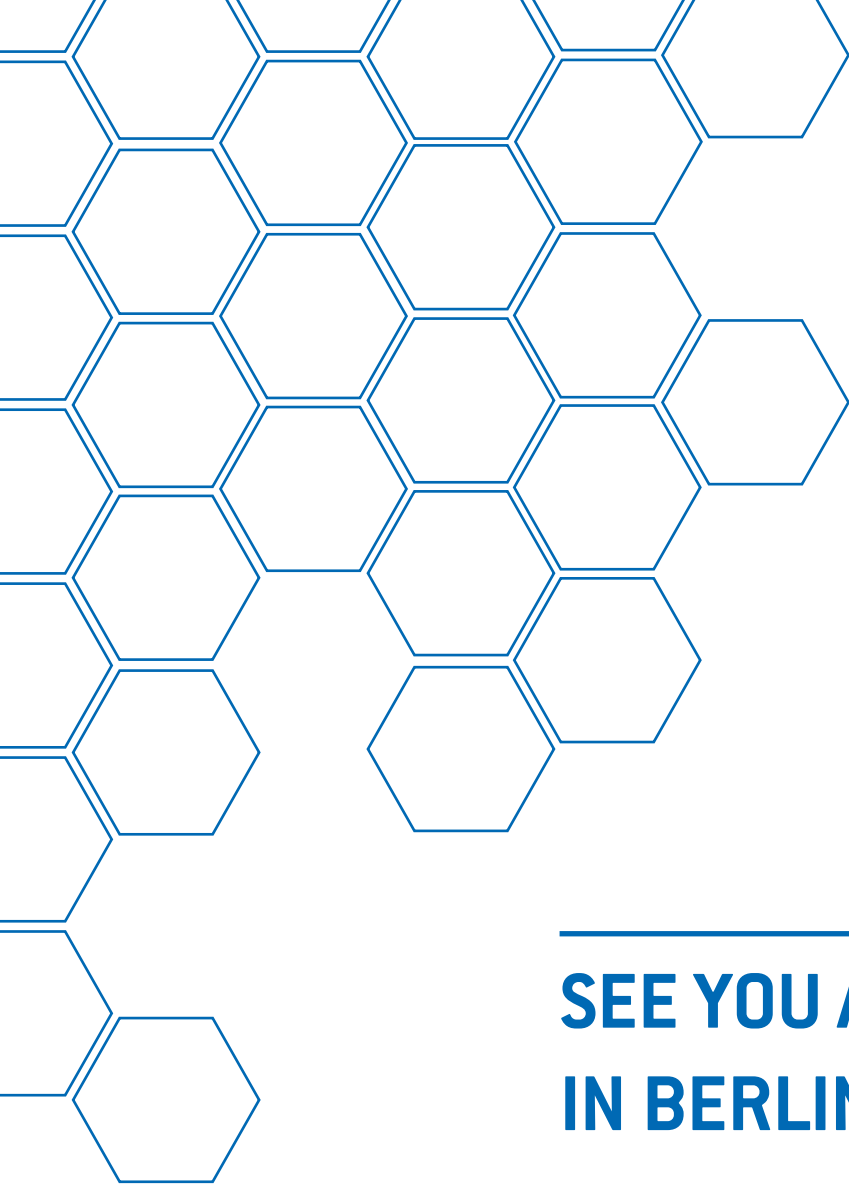
### PRACTICAL AND ETHICAL CONSIDERATIONS ON THE USE OF DIGITAL FOOTPRINT PREDICTIONS

**Author:** Popov, Vesselin

**Organisation:** University of Cambridge, United Kingdom

Our lives are online. We hurtle blindly through a web of ads and adblockers, cookies and anti-cookies, leaving a trail of millions of behavioural and psychological signals that implicitly reveal to others our innermost desires.. For the most part, these traces are harmless and are considered part of the natural debris of the internet. However, when it becomes possible to automatically process this behavioural residue and use it for profiling or targeting purposes, it becomes a different story. Our personality, intelligence, sexual preferences and political orientations become available for all to see and trade upon, even when we are not aware what we are sharing. This processing is possible now, and digital footprint prediction – in one form or another – is becoming increasingly prevalent in marketing, human resources, finance, health and beyond.

Vesselin Popov leads the Apply Magic Sauce initiative at the University of Cambridge Psychometrics Centre, which educates digital citizens on the possibilities of these prediction tools and encourages organisations to make privacy and personalisation indispensable to their business. Used by millions worldwide to see how others see them, the project has had a tremendous impact on public awareness of these issues. Regrettably, many have also been negatively impacted by the imitation of these published academic methods in political contexts. Vesselin will discuss the risks and rewards of technology that can psychometrically assess an individual in milliseconds, and put forward guidelines on how researchers can leverage these methods for social good.



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