Who's Cheating on Your Survey? A Detection Approach with Digital Trace Data

Simon Munzert (Hertie School)*

Sebastian Ramirez Ruiz (Hertie School)

Pablo Barberá (University of Southern California)

Andrew M. Guess (Princeton University)

JungHwan Yang (University of Illinois at Urbana-Champaign)

This draft manuscript was prepared for PolMeth Europe 2022

Abstract. In this note, we provide direct evidence of cheating in online assessments of political knowledge. We combine survey responses with web tracking data of a German and a U.S. online panel to assess whether people turn to external sources for answers. We observe item-level prevalence rates of cheating that range from 0 to 12% depending on question type and difficulty, and find that 23% of respondents engage in cheating at least once across waves. In the U.S. panel, which employed a commitment pledge, we observe cheating behavior among less than 1% of respondents. We find robust respondent- and item-level characteristics associated with cheating. However, item-level instances of cheating are rare events; as such, they are difficult to predict and correct for without tracking data. Even so, our analyses comparing naive and cheating-corrected measures of political knowledge provide evidence that cheating does not substantially distort inferences.

*Corresponding author. Address: Friedrichstrasse 180, 10117 Berlin, Germany. Email: munzert@hertie-school.org, Web: simonmunzert.github.io.

INTRODUCTION

The increasing popularity of self-administered online surveys in social science research has fueled concerns about data quality. One major consideration is that online surveys present a conducive environment for consultation of outside sources on the web. Without the constraints of a researcher-controlled environment, respondents can "google" the answers to factual knowledge questions. This potentially inflates estimates and distorts models of political knowledge.

In this note, we implement a direct yet unobtrusive approach to detect cheating behavior in the wild. By combining an online self-administered survey with passive tracking data of respondents' browsing histories, we can detect cheating with high precision at the item level. Our main goal is to assess the prevalence of cheating as precisely as possible and with high granularity, overcoming some of the limitations of previous cheating detection approaches. We then use this evidence to explore predictors as well as practical consequences of cheating.

In a quota-sampled German online panel, we find that 23% of respondents engage in cheating behavior, and we observe cheating rates ranging from 0 to 12% at the item level. Further evidence from a U.S. online panel suggests that prompts that discourage cheating can be very effective. Results from multilevel models show that while there are robust person- and item-level determinants of cheating, the act of cheating per se is difficult to predict. As a consequence, in the absence of passive tracking data it is hard to correct for cheating behavior. At the same time, we find limited evidence that cheating distorts inferences from empirical models of political knowledge.

A PASSIVE TRACKING APPROACH TO DETECT CHEATING

Previous approaches to detect cheating in online surveys have provided mainly indirect evidence (e.g., Clifford and Jerit, 2016; Gummer and Kunz, 2019; Höhne et al., 2021; Smith et al., 2020; Style and Jerit, 2021, see Online Appendix A for a detailed discussion of previous approaches and findings). We are the first to catch respondents engaging in this behavior *in flagrante*. Our approach relies on combining digital trace data and individual survey responses (Stier et al., 2022; Guess, 2021). On the one hand, we have surveys with start and end timestamps and answers to the knowledge items, in addition to a set of political and demographic covariates. On the other, we obtain respondents' web navigation data collected through passive metering.

The granularity of our data allows us to pinpoint browsing behavior during the survey-taking interval. We can detect whether, how, and on which items respondents engage with outside sources. To identify cheating, we began by flagging suspicious navigation during the survey intervals through a set of keyword queries. Subsequently, we manually validated the flagged entries. In a third step, we screened all the parallel navigation during the survey intervals to the domains resulting from the keyword-validated cheating instances (see Figure C1 in the Online Appendix).[1]

The evidence we use allows us to relax some of the assumptions that come with the use of previously employed approaches to infer cheating, such as self-reports, logs of window switching, or response times. Furthermore, the granularity of our data enables us to explore dynamics within survey sessions, such as variation between question types.

---

[1] A full list of keywords used to gather suspicious browsing, as well as tables presenting all instances of validated cheating, can be found in Online Appendix E.

DATA AND RESULTS

To identify cheating in the wild, we use data from an online panel survey recruited from the German YouGov Pulse panel. The panel enables passive metering of individuals' web usage on their registered laptop, desktop, and mobile devices. This allows us to observe every URL that respondents visited on these devices during the study period. Respondents were quota-sampled based on age, gender, and education to match target marginals of the German population that use the internet using the Best for Planning study (Best for Planning, 2017) as a benchmark. The present study was launched on July 13, 2017, and included five waves that were completed by October 4, 2017. Waves 2, 4, and 5 contained measures of political knowledge. We exclude respondent observations for which the survey-taking process does not appear in the tracking data. This reduces our sample to $n_{2,4,5} = \{545, 553, 519\}$ respondents per wave and $n_{tot} = 685$ unique respondents in total.[2] More information on the survey setup, placement of questions, recruitment of survey respondents, and deployment of the passive metering software as well as privacy and ethical considerations are reported in Online Appendix B.

Across survey waves, we asked eight different knowledge questions with a total of 68 item options (knowledge indicators). We differentiate between questions and item options because both knowledge and cheating behavior is measured at the item level. For instance, the visual elites knowledge question asks respondents to match several pictures of high-profile politicians with their party in a grid. Each politician–party pair represents one item. Section F in the Online Appendix gives an overview of the items included in each of the waves. In total, four different question

---

[2]If users who want to cheat were more likely to turn off web tracking, this would call our measurement strategy into question. While we cannot measure cheating propensity for non-tracked respondents, we model the availability of Pulse data using a set of respondent-level predictors and find no substantive differences between the subjects for whom the navigation data was available and those who are dropped (see also Figure C3 in the Online Appendix).

types were implemented varying in content, format, difficulty, and robustness against cheating. The question types are:

- Two **factual knowledge** questions on voting procedures in the German federal electoral system. The questions were asked with a closed-ended format (3 or 5 response options) and are often used in German election surveys.

- One **visual elites knowledge** question (Prior, 2014) asking respondents to match nine pictures of high-profile politicians with their party in a grid.

- One **verbal elites knowledge** question (open-ended) asking respondents to name one or several leading candidates for each of the six main parties in the 2017 election.

- Four **event knowledge** questions asking respondents to select from a list of ten events that they believe happened in the past few weeks using a multiple-choice format. The event list was designed to cover political and non-political events, with half of the events being real.

Furthermore, we also analyze data from a companion survey fielded in the United States between April 23, 2018, and February 5, 2019, to 1,494 respondents recruited from the U.S. YouGov Pulse panel. Due to differences in the passive metering software used, we observe only domain-level data and not the full URLs for many respondents, which reduces the sample to n = 409 respondents for whom cheating can be reliably detected. The panel included a total of 35 knowledge items spread across five waves. The U.S. study also differed in that it included commitment questions (Clifford and Jerit, 2016) and a self-report measure of cheating.

HOW PREVALENT IS CHEATING IN THE WILD?

Studying cheating at the respondent level, we find that 23% of participants engaged with outside sources to answer at least one of the knowledge items (see Figure 1, Panel (a)). The distribution of cheating instances is right-skewed, suggesting that serial cheaters are rare. Analyzing the tracking data beyond cheating activity, we find that 66% of respondents engaged with other websites while completing the survey in at least one of the waves. Though this suggests page switching is common while taking surveys, we could only validate 35% of the respondents that navigated in parallel to cheat. The rest of the traffic during the survey-taking interval went largely to search engines, video streaming platforms, social media, email, and online-shopping (see Figure C9 in the Online Appendix). This suggests that approaches leveraging screen-switching as a proxy measure (e.g., Gummer and Kunz, 2019; Höhne et al., 2021) may suffer from a non-negligible rate of false positives.

   Turning to the question and item levels, Panel (b) of Figure 1 shows that the prevalence of cheating instances varies considerably across question types. Information seeking from outside sources ranges from, on average, 1% in event items to 8% in open-ended elite-verbal items. The most cheated-on item asked which body of the government was tasked with electing the chancellor in Germany (factual knowledge). The heterogeneity of identified cheating at the question-type level illustrates possible limitations of relying on catch questions to explore the validity of political knowledge batteries as a unit. Further examination of the prevalence of cheating at the item level can be found in Figure C7 in the Online Appendix.

FIGURE 1: Distribution of instances of cheating at the respondent and item level.

(A) Respondent-level cheating distribution

(B) Item-level cheating distribution
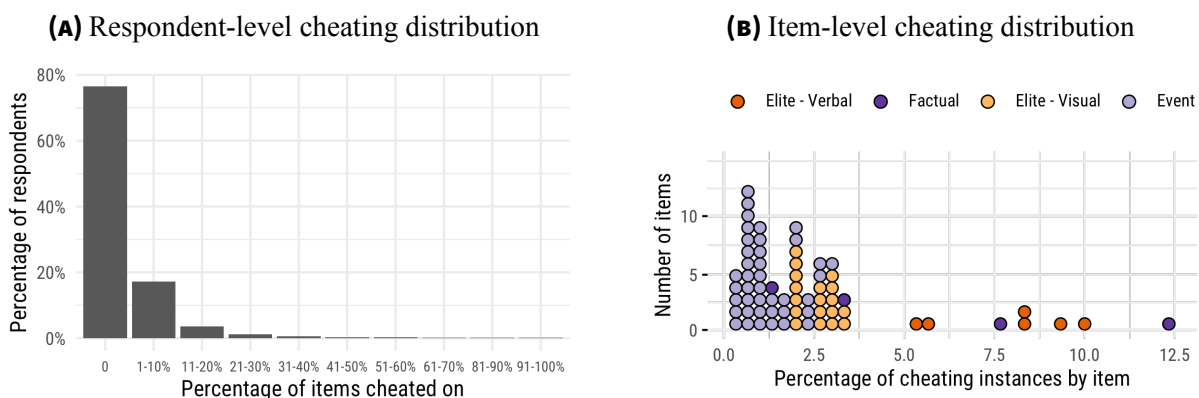
Note: Number of respondents: 666; number of items: 68. Panel (a) is based on instances of cheating identified in the tracking data at the respondent level, showing that for 77% of the respondents we find no evidence of cheating in the tracking data. Panel (b) is based on instances of cheating identified in the tracking data at the item level, showing systematic variation of propensities to cheat by item type.

DO ANTI-CHEATING COMMITMENT PLEDGES HELP?

In the U.S. survey, we presented panelists with one visual-elites knowledge, one factual knowledge, and three event knowledge questions, totaling 35 knowledge items. Additionally, this setup contained an anti-cheating commitment pledge just before the knowledge questions were asked and a lookup pledge at the end of the survey.[3]

In contrast to the previous results, U.S. tracking data suggests that the prevalence of cheating, in this setting, was minimal. A total of four respondents engaged with outside sources in six instances, all of them concerning event items. That is to say, fewer than 1% of respondents cheated and 0.01% of items were cheated on. Furthermore, the frequency of parallel navigation for this set of respondents was lower than that of the German survey, with 35% of the respondents engaging

---

[3]The wording of the pledge was as follows: "When reading these next questions, please do not consult outside sources or other people for the answers. We are interested in what you believe. If you are unsure, please just take your best guess. Will you answer the following questions without help from outside sources?" The wording of the lookup pledge was as follows: "It is essential for the validity of this study that we know whether participants looked up any information online during the study. Did you make an effort to look up information during the study? Please be honest; you will still collect incentives and you will not be penalized in any way if you did."

with other websites while completing the survey. Concerning the self-report item, none of the panelists who were caught red-handed reported having engaged with outside resources to respond to the survey. Overall, eight respondents stated having used outside information. We found through manual validation that two of them did use search engines to look up information, but these instances concerned questions outside of the knowledge battery. The remaining six did not have any suspicious activity recorded in the tracking data, though we cannot discard the possibility of cheating outside of the logged devices. Further insights can be obtained from the broader U.S. sample of n_{domain} = 963 at the domain level, which includes all respondents with domain-level or full URL data. An additional five respondents, for a total of 13 (1.4% of respondents in this sample), reported having utilized outside sources to complete the survey. Finally, parallel navigation from the broader sample was 61%.

Since the anti-cheating commitment pledge was not randomly assigned, we cannot identify its effect on cheating. Other factors that could explain the large difference in cheating prevalence between the two samples include differences in person or item characteristics that predict cheating (see next section). That being said, our evidence is consistent with existing evidence on the effect of commitment items (Clifford and Jerit, 2016; Smith et al., 2020), although the effectiveness reported in previous experimental studies was substantially lower and relied on different sample types (see Table A1 in the Online Appendix).

WHAT PREDICTS CHEATING?

Despite its limited prevalence, is cheating predictable? If respondent or item characteristics that are commonly collected in social science surveys have predictive value, they could help correct for

cheating even in the absence of tracking data. Furthermore, this evidence could be used to inform item usage and design as well as substantive models of political knowledge.

To assess the predictability of cheating, we model item-level cheating using a Bayesian logistic mixed-effects model with person- and item-level random effects and a set of person- and item-level fixed effects. At the person level, we consider gender, age, level of school education, internal efficacy, political knowledge, and survey-taking patterns as predictors. Internal efficacy is measured by conducting a principal components analysis on five (both internal and external) efficacy questions and taking the first principal component.[4] Political knowledge is measured as the fraction of knowledge items answered correctly after adjusting for cheating by coding validated instances of cheating as incorrectly answered. Further, we derive a binary measure of habitual survey-taking behavior based on the average weekly time a respondent spent on the online survey platforms that fell within the top 100 domains in our data (more than 2 hours per week).[5] At the item level, we consider item type (Gummer and Kunz, 2019) and difficulty (Motta et al., 2017; Smith et al., 2020; Style and Jerit, 2021). Difficulty is measured as the fraction of correct answers to an item after adjusting for cheating.

Figure 2 reports the results of our main model.[6] Panel (a) presents fixed effects estimates, panel (b) reports marginal effects (predicted probabilities) by predictor. In line with previous research, we find robust evidence for a positive relationship between education and cheating. Gender and age are also associated with cheating. We find an interesting difference between perceived and

---

[4]The items contributing most to the internal efficacy score are (1) "Political issues are often difficult for me to understand", (2) "I am very well versed in politics in general", and (3) "I am very well informed about current political events".

[5]This metric is based on the average time spent per week on rewards and survey-taking platforms in the top 100 domains in the tracking data. Figure C10 in the Online Appendix provides the distribution of average time spent on these platforms per week for the respondents with tracking data.

[6]We estimate the model via MCMC using the No-U-Turn-Sampler (Hoffman and Gelman, 2014), employing default priors choices as implemented in `rstanarm` (Goodrich et al., 2020).

actual competence: Cheating is more likely among those with high levels of internal efficacy, but less likely among those who actually know more about politics. We find no relationship between habitual survey-taking and cheating. At the item level, cheating is most likely to happen on the open-ended (verbal) elite questions, followed by factual (closed) questions about the political process and harder-to-cheat elite questions with visual cues. We find that the least cheating happens on event knowledge items. Item difficulty does not seem to matter.[7]

We also explored whether response times could be used as a proxy for cheating. Response times, as a frequently available alternative form of metadata (Read et al., 2021), have been used to infer cheating behavior (Clifford and Jerit, 2016; Gummer and Kunz, 2019; Marquis, 2021; Munzert and Selb, 2017), building on the assumption that respondents who look up information elsewhere should, on average, take longer to submit an answer. One limitation of this approach is that it only allows us to infer at the question, rather than the item level, because often many items are presented on one page and response times can only be measured at the page level. Nevertheless, in our data, we do find a strong and very robust relationship between log time spent on a question and whether cheating occurred, controlling for a set of commonly available respondent and question characteristics (see Figure C5 in the Online Appendix for the full model). Median response times for questions that were cheated on are over a minute longer than for honestly answered questions (see Figure C6 in the Online Appendix). However, despite these stark differences, our predictive model that combines time with respondent and question-level information has an F1 score of just 60% (precision = 60% and recall = 60%), far from giving an accurate classification of cheating

---

[7]Respondent-level models reveal very similar relationships between predictors and cheating (see Figure C4 in the Online Appendix).

FIGURE 2: Estimated effects of respondent and item characteristics on response-level cheating incidence.

(A) Fixed effects estimates

(B) Predicted probabilities
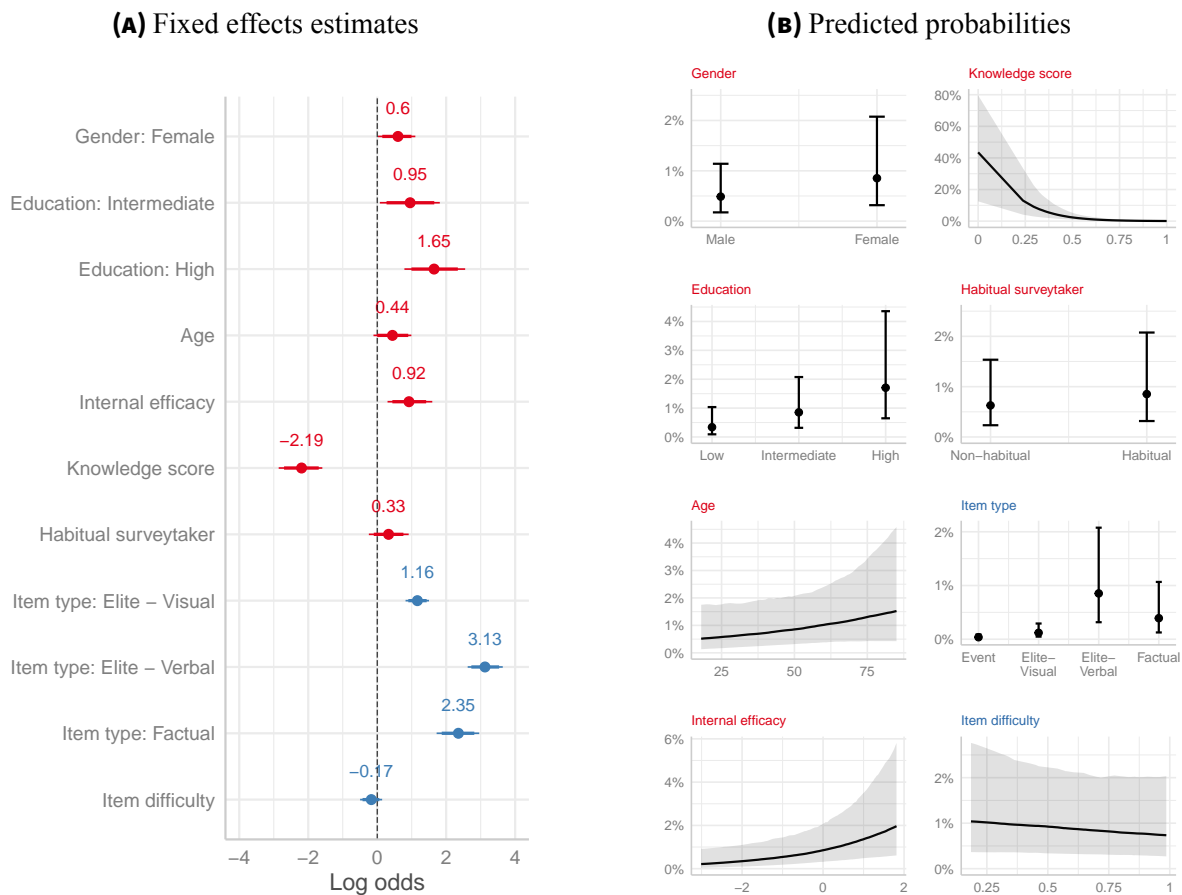
Note: Results from a Bayesian logistic mixed-effects model with person and item random effects. Posterior means along with 95% credible intervals reported. Number of observations: 35,486; number of respondents: 656; number of items: 68. To compute the predicted probabilities, numeric covariates are held at their means and the other covariates are set to: female, intermediate education, item type "Elite - Verbal", and habitual survey-taker.

instances. We conclude that relying on response times alone to approximate cheating potentially generates many false negatives and potentially even more false positives.

DOES CHEATING DISTORT MODELS OF POLITICAL KNOWLEDGE?

If cheating happens, does it matter for our understanding of political knowledge? In a further step, we explore whether cheating distorts models of political knowledge. First, we compare estimates

for predictors of political knowledge using unadjusted and cheating-adjusted measures. In line with previous research, we study gender, age, political interest, internal efficacy, and education as determinants of political knowledge (Delli Carpini and Keeter, 1996; Prior, 2014). We then run a multiverse of linear models using all possible 31 permutations of the covariates to predict question-specific as well as composite measures of political knowledge. For pairs of otherwise identically specified models that only differ in the outcome measure (naive or cheating-adjusted political knowledge), we then test for the equality of coefficients of each covariate. Figure C8 in the Online Appendix reports the distribution of Z-scores of the difference-in-coefficients tests. We do not find substantive differences in the estimates for any of the covariates in any of the models.

Next, we explore how the effect of political knowledge differs between cheaters and non-cheaters in predicting various related outcomes, including political interest, vote certainty, internal efficacy, and likelihood to vote. To that end, we regress these outcomes on our different measures of political knowledge (uncorrected for cheating) and interact the knowledge indicator with the cheating indicator. This gives us an estimate of how the estimated effect of political knowledge differs between both groups, while also adjusting for baseline differences between cheaters and non-cheaters. We also adjust for gender, education and age in these models. Tables C1 to C4 in the Online Appendix report the results. In most cases the differences are substantively minor, and there is no instance of a statistically significant difference. Both analyses suggest that the distortions in measures of political knowledge induced by cheating have no severe downstream consequences for either the estimated relationships between political knowledge and some of its key predictors or estimates of political knowledge as a predictor of related outcomes.

DISCUSSION AND CONCLUSION

In this note, we leverage a novel data collection format to explore the prevalence of cheating in online surveys of political knowledge. By inspecting the parallel web navigation of survey respondents, we uncover first-hand evidence of cheating: We find that 23% of respondents in our German survey panel engage at least once with outside sites for answers, though serial cheaters are rare. Our model of item-level cheating reveals that subjects who report being knowledgeable about politics, have higher levels of formal education, and have lower actual knowledge scores are more likely to cheat. Cheating is also particularly likely for open-ended items that ask for verbal input. Despite these patterns, due to the low base rate of verified cheating instances, it remains difficult to reliably classify.

It is important to note that though our cheating detection approach provides a precise method for retrieving first-hand evidence of cheating, it is not without limitations. First, lacking information about offline behavior and thought processes, we have to assume that our *corpus delicti* in the shape of trace data represents instances of cheating and not, e.g., of respondents checking their response after answering. Also, we cannot identify whether respondents consult devices not registered for passive metering — or even offline sources — to search for information. Additionally, not all survey-takers show up in the tracking data, so our sample is subset to respondents whose survey logs we can match. Nevertheless, we overcome some of the limitations of previous research utilizing self-reports, catch questions, and window switching logs by parsing the web navigation of survey respondents observed during the survey-taking interval.

Even though cheating occurs with some regularity in survey samples, optimism may be warranted: Our findings from the U.S. raise the possibility that commitment pledges to refrain from

looking up information (Clifford and Jerit, 2016) could potentially reduce the rates of cheating. Further, we fail to observe any significant differences in tests of coefficient correspondence on determinants of political knowledge for naive and cheating-adjusted measures.

Our data framework provides us with a rare opportunity to observe the prevalence of cheating with a high level of detail. Our empirical strategy offers an effective strategy to correct for cheating post hoc in survey samples with linked digital trace data. Nevertheless, this data collection setup is unique and not available to most researchers in the social sciences. Given these constraints, we recommend that researchers take measures against cheating before it occurs. Our findings suggest that normative commitment pledges discouraging the use of external sources and question types that are more robust to cheating, such as visual knowledge questions, are two viable options. Finally, while researchers face tradeoffs between self- and interviewer-delivered survey modes, the validity of political knowledge measures does not need to be one of them, since it can to a large extent be addressed through survey design features.

REFERENCES

Best for Planning. 2017. *Berichtsband b4p 2017*. Gesellschaft für integrierte Kommunikationsforschung.

Clifford, Scott and Jennifer Jerit. 2016. "Cheating on Political Knowledge Questions in Online Surveys: An Assessment of the Problem and Solutions." *Public Opinion Quarterly* 80(4):858–887.

Delli Carpini, Michael X. and Scott Keeter. 1996. *What Americans Know About Politics and Why it Matters*. New Haven: Yale University Press.

Goodrich, Ben, Jonah Gabry, Imad Ali and Sam Brilleman. 2020. "rstanarm: Bayesian applied regression modeling via Stan.". R package version 2.21.1.
URL: *https://mc-stan.org/rstanarm*

Guess, Andrew M. 2021. "(Almost) Everything in Moderation: New Evidence on Americans' Online Media Diets." *American Journal of Political Science* 65(4):1007–1022.

Gummer, Tobias and Tanja Kunz. 2019. "Relying on External Information Sources When Answering Knowledge Questions in Web Surveys." *Sociological Methods & Research* p. 0049124119882470.

Hoffman, Matthew D and Andrew Gelman. 2014. "The No-U-Turn sampler: adaptively setting path lengths in Hamiltonian Monte Carlo." *J. Mach. Learn. Res.* 15(1):1593–1623.

Höhne, Jan Karem, Carina Cornesse, Stephan Schlosser, Mick P Couper and Annelies G Blom. 2021. "Looking Up Answers to Political Knowledge Questions in Web Surveys." *Public Opinion Quarterly* .

Marquis, Lionel. 2021. "Using Response Times to Test the Reliability of Political Knowledge Items in the 2015 Swiss Post-Election Survey." *Survey Research Methods* 15(1):79–100.

Motta, Matthew P, Timothy H Callaghan and Brianna Smith. 2017. "Looking for answers: identifying search behavior and improving knowledge-based data quality in online surveys." *International Journal of Public Opinion Research* 29(4):575–603.

Munzert, Simon and Peter Selb. 2017. "Measuring political knowledge in web-based surveys: An experimental validation of visual versus verbal instruments." *Social Science Computer Review* 35(2):167–183.

Prior, Markus. 2014. "Visual political knowledge: A different road to competence?" *The Journal of Politics* 76(1):41–57.

Read, Blair, Lukas Wolters and Adam J. Berinsky. 2021. "Racing the Clock: Using Response Time as a Proxy for Attentiveness on Self-Administered Surveys." *Political Analysis* p. 1–20.

Smith, Brianna, Scott Clifford and Jennifer Jerit. 2020. "How Internet Search Undermines the Validity of Political Knowledge Measures." *Political Research Quarterly* 73(1):141–155.

Stier, Sebastian, Frank Mangold, Michael Scharkow and Johannes Breuer. 2022. "Post Post-Broadcast Democracy? News Exposure in the Age of Online Intermediaries." *American Political Science Review* 116(2):768–774.

Style, Hillary and Jennifer Jerit. 2021. "Does it Matter if Respondents Look up Answers to Political Knowledge Questions?" *Public Opinion Quarterly* 84(3):760–775.

Who's Cheating on Your Survey? A Detection Approach with Digital Trace Data

Online Appendix

Contents

A Previous Evidence on Cheating Online

The potential impact of cheating in self-administered surveys on the validity of the derived measures has gathered substantial attention. A stream of this research has relied on comparisons between survey modes and sample types (Ansolabehere and Schaffner, 2014; Burnett, 2016; Shulman and Boster, 2014; Strabac and Aalberg, 2011). These performance comparisons do not allow to untangle the provenance of these observed score differences, i.e. sampling error or cheating. More recently, researchers have leveraged multiple techniques to tackle questions concerning the extent and characteristics of cheating and cheaters in online surveys. Based on a student sample, randomly assigned to laboratory and online survey modes, Clifford and Jerit (2014) encountered that 10% of the subjects in the online group reported having navigated the web in parallel to completing the survey. In the Danish context, Jensen and Thomsen (2014) tackled cheating directly and encountered that 22% of the respondents reported having used the internet to answer at least one of the political knowledge questions. Also, employing self-reported behavior measures, Clifford and Jerit (2016) found substantial variation in rates of cheating ranging from 4-6% in MTurk to 19-42% in student samples with lower problematic behavior encountered in subjects presented with commitment statements.

Leveraging an alternative cheating identification measure in a series of studies, catch questions, Motta, Callaghan and Smith (2017) encountered similar rates of cheating (8% to 25%), in addition to presenting mixed results regarding the use of explicit instructions not to cheat. More recently, joining the catch question and self-report identification strategies, Smith, Clifford and Jerit (2020) randomly presented subjects in two student sample studies with messages discouraging and allowing the use of outside sources to complete a battery of political knowledge questions resulting in cheating rates around 20-22% and 69-72% for the discouraged and allowed groups respectively. In addition to the experimental studies, the researchers provide evidence from an observational set-up where 11% of respondents provided a correct answer to the catch question. Another study employing catch questions and random assignment of instructions on an American National Elections Studies (ANES) 2018 pilot study found that though cheating was prevalent on both treatment states, 15% of the respondents explicitly told not to cheat answered the catch questions correctly compared to 25% of respondents who did not receive instructions (Style and Jerit, 2021).

Further research has made use of respondents paradata to explore the rate to which respondents switched between the browser window containing the online survey and other sites (Gummer and Kunz, 2019; Höhne et al., 2021). The findings suggest that screen switching rates range from 3-30% with variation along with question format, where open-ended questions are more prone to problematic conduct compared to closed. Overall, the evidence from previous studies suggests that consultation to outside sources in online surveys is a considerable phenomenon. Still, the debate about the extent to which cheating is present in online knowledge assessments is far from settled. As Table A1 showcases, the prevalence of cheating in the literature ranges from 3% to 72% varying along with the different modes of identification, sample types, and manipulations designed to prevent it in the first place.

The assumptions embedded in cheating identification strategies used previously pose limits to these findings. A stream of the literature suggests that social desirability in the form of self-deceptive enhancement (SDE) could be partly associated with cheating (Clifford and Jerit, 2016; Shulman and Boster, 2014; Style and Jerit, 2021). Under these terms, identification through self-reporting could provide problematic measures, as cheating can be itself subject to social desirability. Catch questions are often employed to circumvent some of the issues with self-reports. However, this identification strategy does not come without downsides. The literature has employed obscure facts in open-ended format to ensure that guessing does not confound the identification of cheating. Some problems may arise with this strategy as these rare facts may not

Table A1: Prevalence of cheating in online assessments of political knowledge in selection of studies

Article	Prevalence	Detection method	Sample type	Item type	Effort
Clifford and Jerit (2016)	23%	Self-report	Student	Closed	DR
Clifford and Jerit (2016)	41%	Self-report	Student	Closed	FS+T+C
Clifford and Jerit (2016)	19-27%	Self-report	Student	Closed	C
Clifford and Jerit (2016)	14%	Self-report	Campus	Closed	C
Clifford and Jerit (2016)	13%	Self-report	Quota - Gen pop	Closed	T+C
Clifford and Jerit (2016)	14%	Self-report	Quota - Gen pop	Closed	—
Clifford and Jerit (2016)	4-7%	Self-report	MTurks	Closed	—
Clifford and Jerit (2016)	7%	Self-report	MTurks	Closed	C
Gummer and Kunz (2019)	3-6%	Window switching log	Quota - Internet	Closed	—
Gummer and Kunz (2019)	4-9%	Window switching log	Quota - Internet	Open	—
Höhne et al. (2021)	28%	Window switching log	Quota - Internet	Closed	—
Höhne et al. (2021)	36%	Window switching log	Quota - Internet	Open	—
Jensen and Thomsen (2014)	22%	Self-report	Quota - Internet	Closed	—
Motta, Callaghan and Smith (2017)	25-26%	Catch question	MTurks	Closed*	—
Motta, Callaghan and Smith (2017)	5-13%	Catch question	MTurks	Closed*	DR
Motta, Callaghan and Smith (2017)	8%	Catch question	SurveyMonkey	Closed*	—
Motta, Callaghan and Smith (2017)	11%	Catch question	SurveyMonkey	Closed*	DR
Smith, Clifford and Jerit (2020)	20-22%	Catch and self-report	Student	Closed*	C
Smith, Clifford and Jerit (2020)	69-72%	Catch and self-report	Student	Closed*	AS
Smith, Clifford and Jerit (2020)	11%	Catch question	Quota - Internet	Closed*	—
Style and Jerit (2021)	15-25%	Catch question	Quota - Gen pop	Both*	DR

Notes: *Open-ended catch questions. DR: Direct request not to seek information; C: Commitment question; T: Time limits; FS: Forgiving statement; AS: Statement allowing to seek information

measure the same latent features of political knowledge and open-ended questions have been connected with higher cheating prevalence (Gummer and Kunz, 2019; Höhne et al., 2021). The rates retrieved with catch questions may then not be illustrative of the respondents' behavior in completing the rest of the political knowledge battery. Finally, the use of paradata presupposes that deviations from a behavior established by the researchers, such as expected time per question or screen-switching, is a direct manifestation of cheating. In this note, we provide direct evidence of online survey respondents who are caught *in flagrante* consulting outside sources to complete political knowledge questions.

B Information on the Survey and Tracking Data

B.1 Sampling

The survey was administrated by YouGov. Surveys run by YouGov combine purposive sampling with a multi-stage sample-matching and weighting procedure (Rivers, 2006). First, a target population is defined, which is the German online population for the data at hand. Based on information from high-quality studies on demographic population marginals (i.e. gender, age and educational attainment), a sampling frame is defined. For the panel, data on marginals from Best for Planning (2017) were used, who conducted 30,000 face-to-face interviews to evaluate the German online population. A stratified sample is drawn from this frame and matched as closely as possible to YouGov's longstanding panel (with over a million members).

The resulting target sample constitutes a representative set of respondents in terms of traditional sampling theory. However, respondents might be hard to contact because they either have never reported their contact details or do not agree to the terms of the survey. Hence, multi-stage matching is applied, combining the representative target sample with YouGov's longstanding panel of reliable respondents. From this panel, a sample of individuals is selected that matches as closely as possible the distribution of the target sample and has opted in to provide website visit data (see below). Through this procedure, YouGov guarantees not only a minimum of 1,000 respondents in the survey, but also the inclusion of hard-to-reach population subgroups.

B.2 Survey Design and Fielding

All data was gathered by YouGov from July 1 to December 9, 2017. The panel was made up of five waves. Besides evaluating respondents' political knowledge on several dimensions, the survey covered a wide range of topics such as people's political preferences, their general attitudes towards politics, opinions on particular parties, and what people think of the election campaign (the federal elections were held on September 24, 2017).

B.3 Passive Metering Technology

Wakoopa, the tracking software used by YouGov in this study, runs in the background of panelists' devices and collects anonymized visit data. There are no technological limits to the types of websites that can be included in the data. Moreover, the software tracks web traffic (passwords and financial transactions are ignored) for all browsers installed on a user's computer. The technology does not slow the performance of users' computers and is transparent about the data that is being sent: Panelists can see a list of the last several captured URLs and can also pause tracking for 15 minutes. Of course, they can also uninstall the software at any time. YouGov encourages its panelists to install the software on as many devices as possible, including laptops, mobile phones, and tablets. The capabilities for mobile tracking are somewhat more limited for privacy reasons, but data on domain-level visits and app use are collected.

Panelists are recruited from YouGov's traditional participant pool via incentives. The company reports fairly strong incentives: 4,000 "points" for signing up and downloading the Wakoopa software—roughly 8 times the number offered for a typical survey—and 1,000 additional points every month. Participants in online surveys can redeem these points for clothing, prepaid gift cards, and other merchandise. One consequence of this recruitment strategy is that YouGov Pulse users are a subset of the overall panel, making sampling somewhat more challenging.

B.4 Privacy and Ethical Considerations of Data

Combining survey data and digital trace data of the same respondents has substantive merits to understand the effects of online exposure on people's attitudes and behavior. However, it entails challenging tasks for protecting the privacy of the respondents and raises ethical questions, as users may not be aware of how their data are being used. Even with the consent of the participants, it still could be problematic because the account names and meta-information of their social media accounts can be identifiable and linked to their survey responses (Stier et al., 2020). Thus, it is important to communicate these concerns as clearly as possible when collecting data (Menchen-Trevino, 2013). In every step of data collection, we informed participants about the scope of data collection, data management, confidentiality, and research purpose. We have an explicit and informed consent from the people whose data are collected.

Regarding the web-tracking data, YouGov received the consent from the panel that their social media data can be linked to other survey items they have participated. They highlighted that participants have complete control over which data they share for research purposes. Participants can choose which information they want to share, pause the tracking app when they want, and withdraw their consent anytime. After data collection, YouGov removed any personally identifying information and sensitive data (e.g., financial transaction) and stripped-out geocoding information that is too specific before delivering the data to researchers. The deliverables are de-identified and anonymized and fully comply with the EU's General Data Protection Regulation (GDPR) requirements.

C Supporting Tables and Figures

Figure C1: Illustration of cheating identification
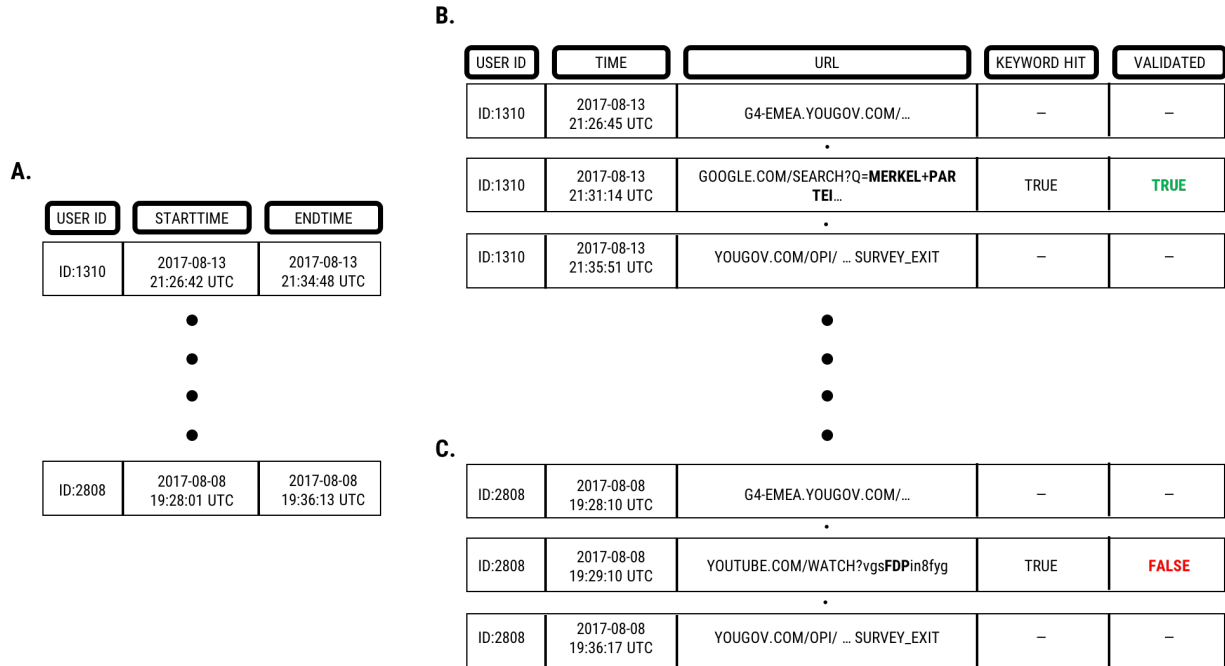
Note: Panel A displays the structure of the survey matrix containing the timestamps to subset the relevant web browsing data for each respondent. Panels B and C display examples of a validated cheating instance and a false positive derived from the keywords. In panel B, the words "Merkel" and "Partei" flag suspicious activity related to an item about Angela Merkel's party affiliation. This search log was then marked as a true positive. On the contrary, Panel C presents an example where the acronym of the Free Democratic Party (FDP) is flagged as suspicious activity, yet in manual validation it was marked as a false positive. We proceeded with a second screening in which we flag all navigation to the domains resulting from the validated keyword queries during the survey interval.

Figure C2: Distribution of items cheated on for identified cheaters

6
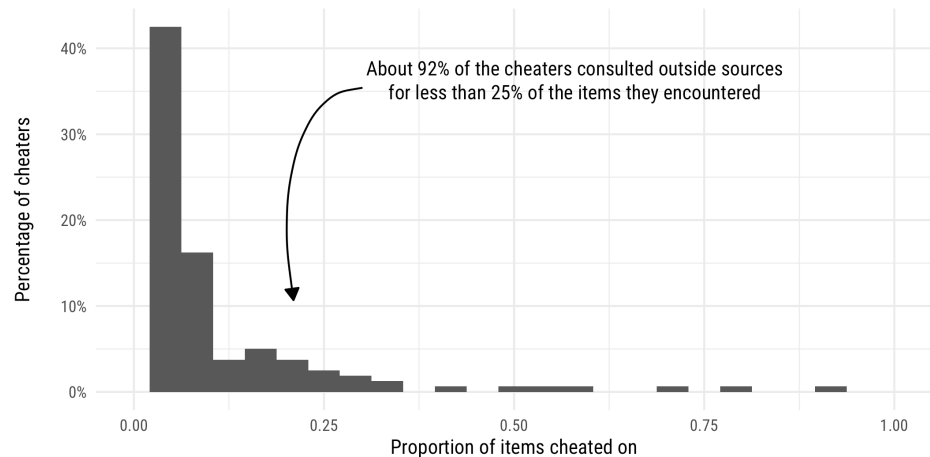
Figure C3: Estimated effects of respondent characteristics on the availability of web-tracking data
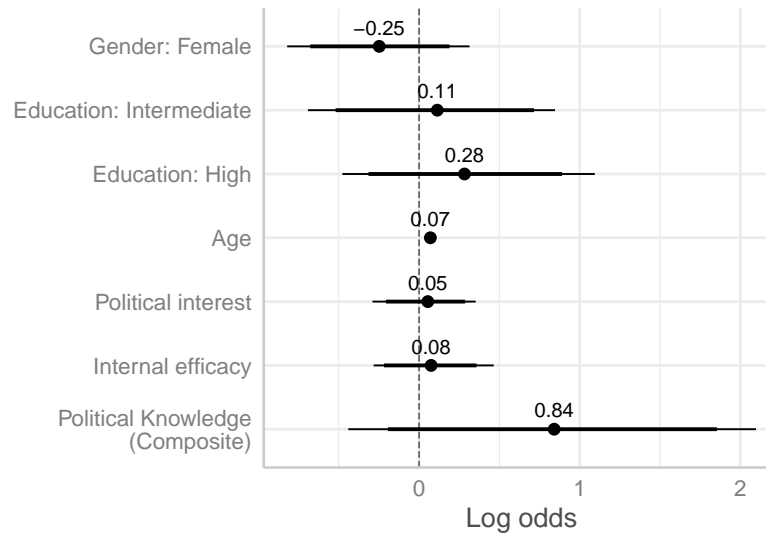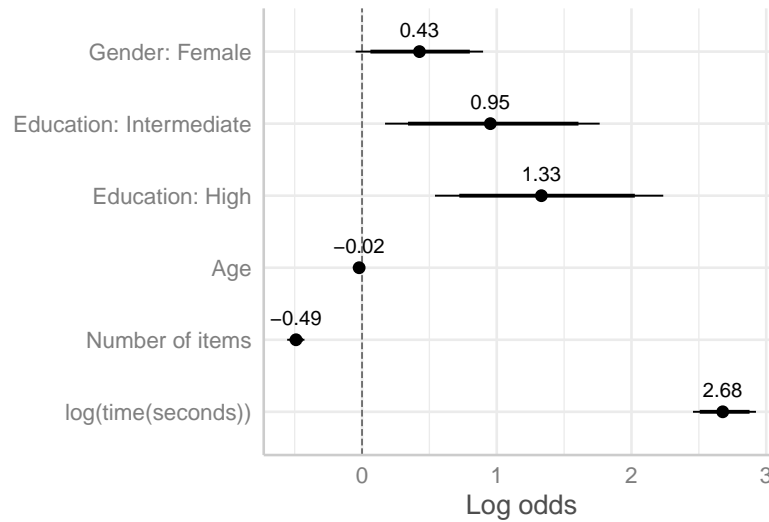

Note: Results from a Bayesian logistic mixed-effects model with person and wave random effects. Posterior means along with 95% confidence intervals reported. Number of observations: 3,350; number of respondents: 1,117; number of waves: 3.

Figure C4: Estimated effects of respondent characteristics on cheating (left: binary, right: proportion of items cheated on)
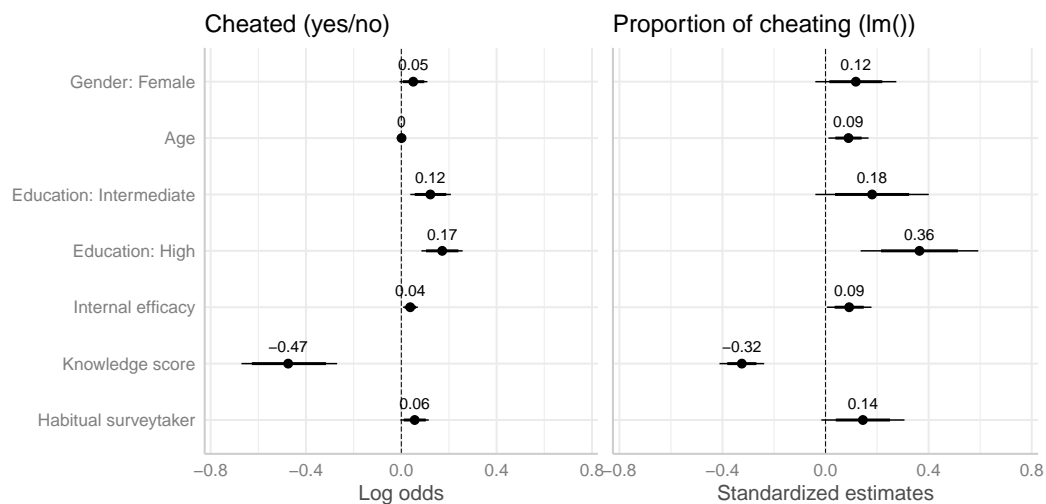

Note: Results from from a Bayesian logistic mixed-effects model with person and wave random effects and a linear model Standardized (by two standard deviations). Posterior means along with 95% confidence intervals reported. Number of observations: 656.

Figure C5: Estimated effects of respondent and question characteristics as well as response time on question-level cheating

Note: Results from a Bayesian logistic mixed-effects model with person and question random effects. Posterior means along with 95% confidence intervals reported. Number of observations: 5,860, number of respondents: 679, number of questions: 11.

Figure C6: Density plots of question response times by cheating status
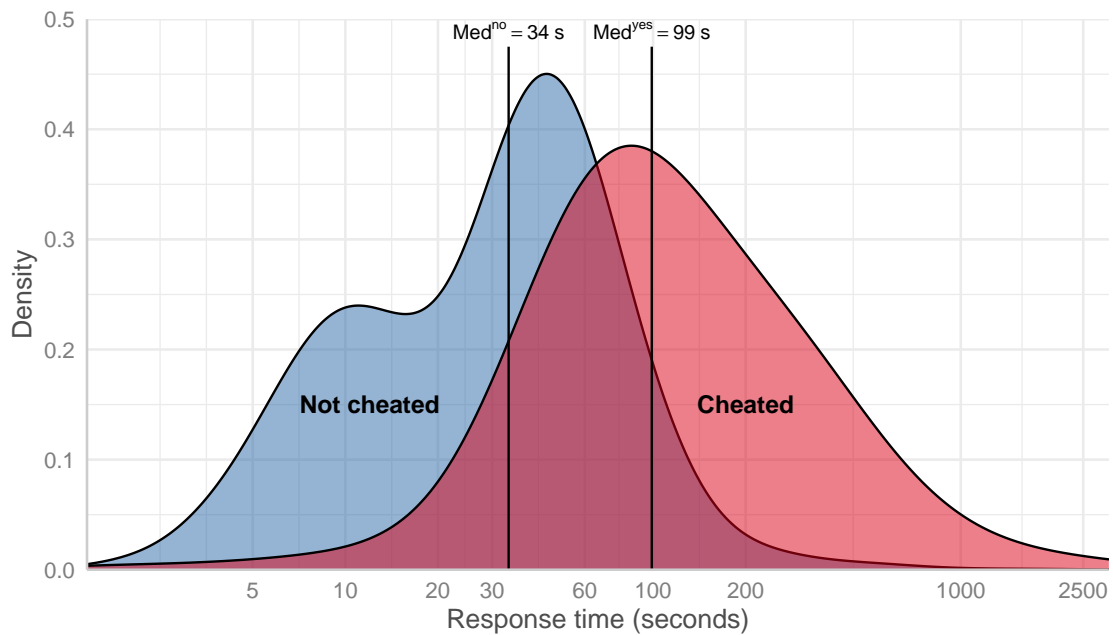
Note: 5,574 question responses involving no cheating compared to 345 question responses involving cheating. Median difference is 99s (under cheating) - 34s (under no cheating) = 65s.

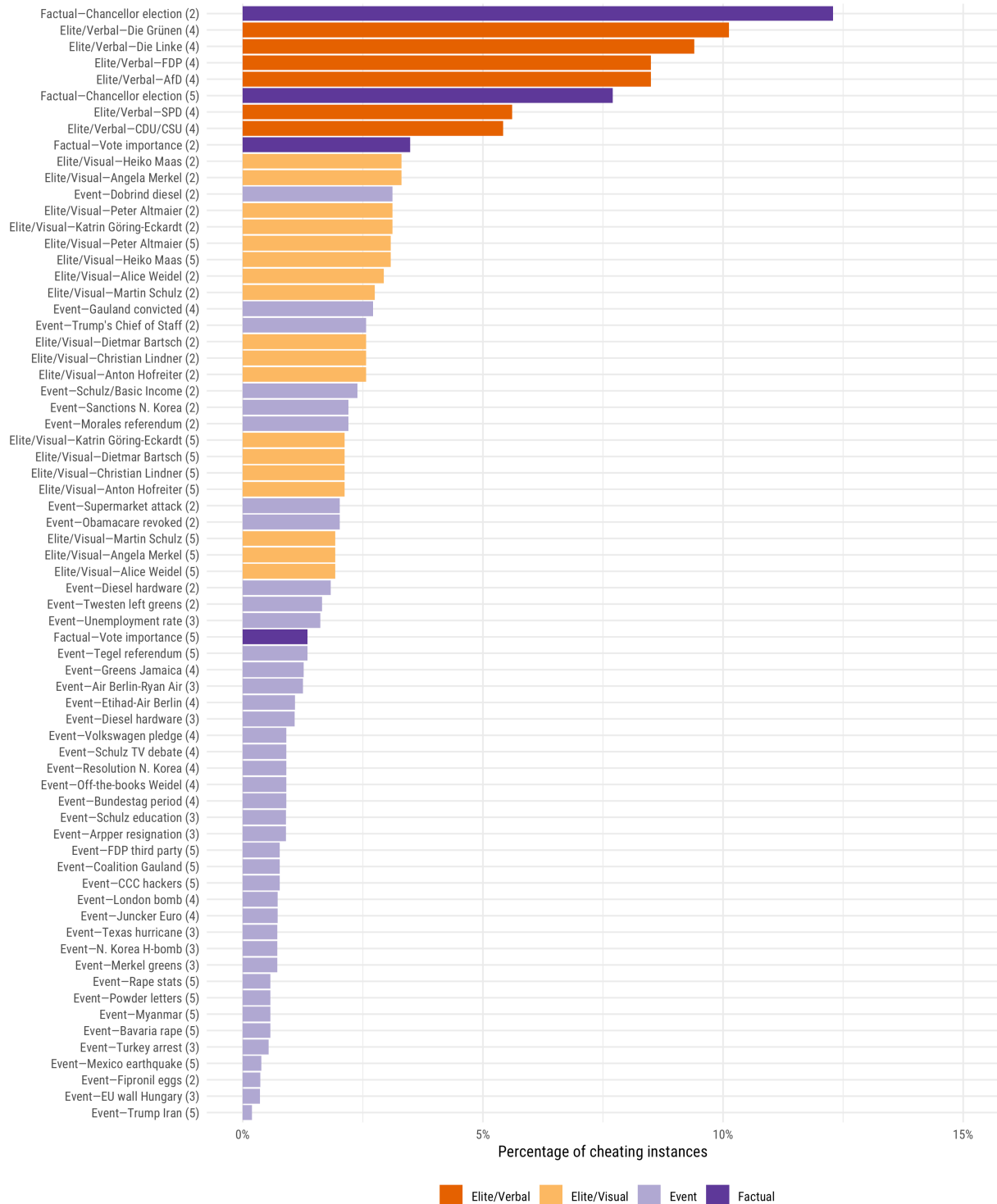Figure C7: Percentage of instances of cheating by item

Figure C8: Distributions of Z-scores in difference-in-coefficients tests. Rows correspond to different measures of political knowledge, columns to covariates used as predictors. Results based on difference-in-coefficients tests of the corresponding covariate for 31 linear models (each run twice, once with naive and once with cheating-adjusted knowledge measure as outcome).
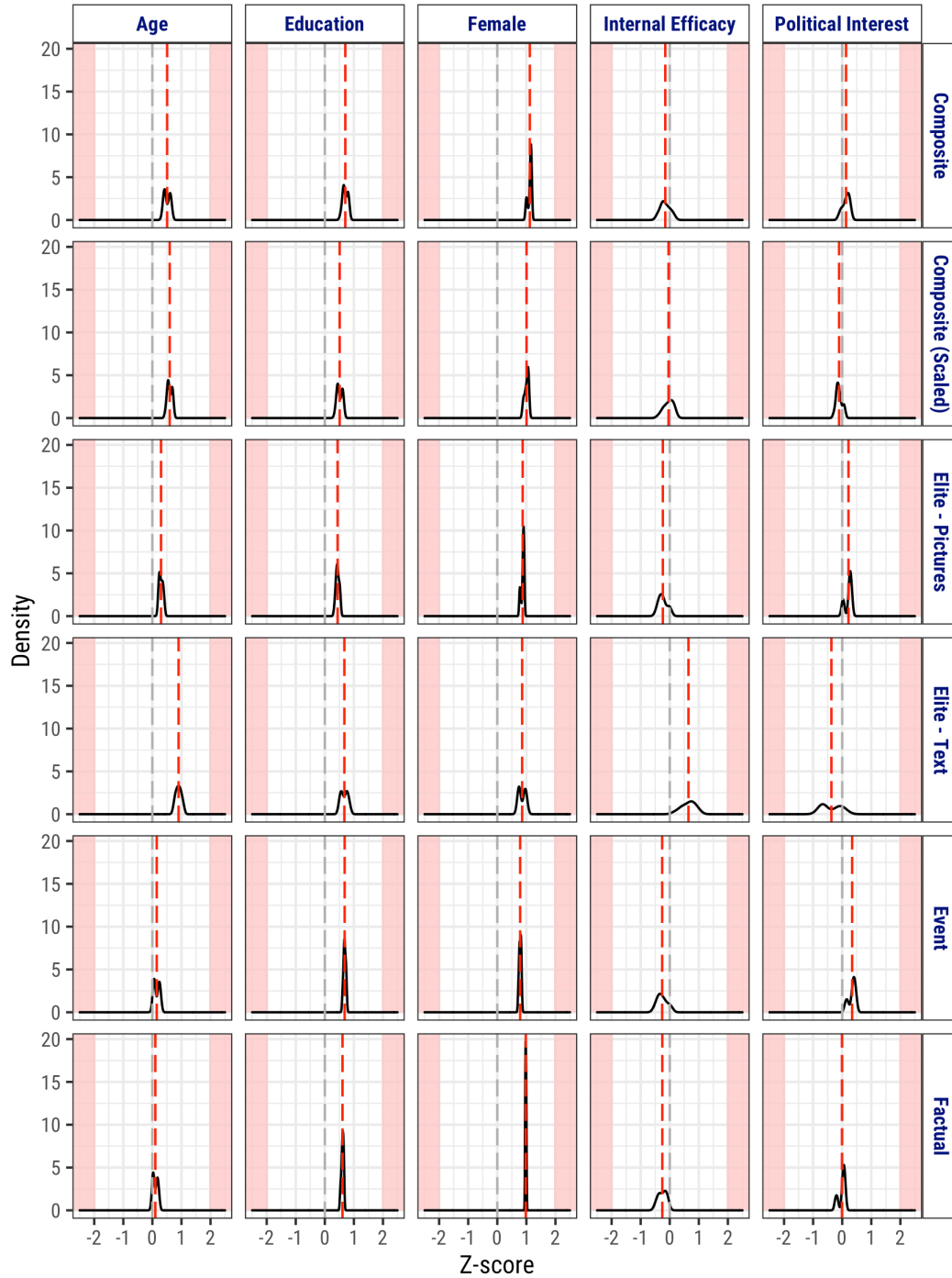
Figure C9: Parallel navigation. Top-25 domains visited during survey-taking intervals.
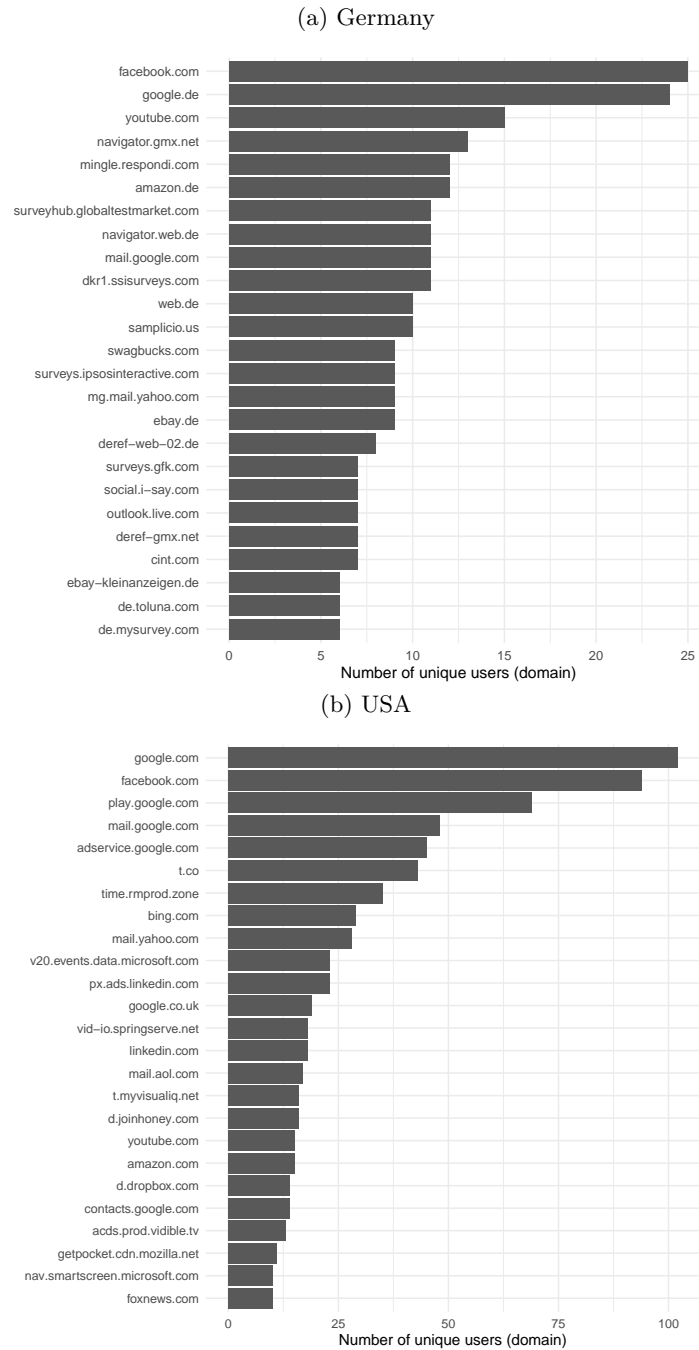
(a) Germany

(b) USA

Figure C10: Distribution of the average time spent per week on survey-taking platforms for respondents with tracking data. Survey-taking platforms considered include: swagbucks, ssisurveys, globaltestmarket, toluna, respondi, neobux, meinungsstudie, surveyrouter, samplicio, ipsosinteractive, mysurvey, researchnow, yougov, gfk, opinionbar, norstatsurveys, and greenpanthera. The vertical line at 120mins marks the coding criterion of the habitual survey-taker indicator. According to this definition, 30% of the respondents fall into that category.
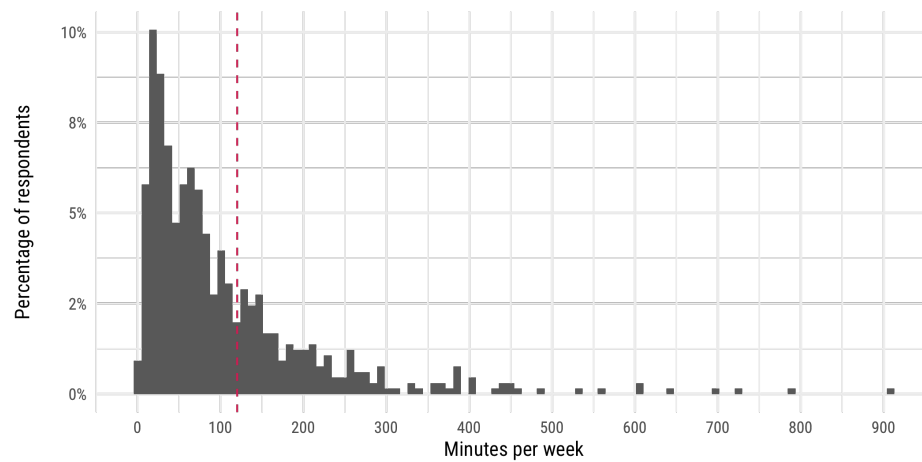
Table C1: Political interest and cheating interaction model. Rows correspond to different measures of political knowledge, columns to the outcomes predicted

	Composite	Composite (Scaled)	Elite - Pictures	Elite - Text	Event	Factual
(Intercept)	-1.873	-1.155	-1.025	-1.196	-1.672	-0.784
	(0.264)	(0.240)	(0.244)	(0.267)	(0.323)	(0.263)
Political knowledge	2.723	1.788	1.765	1.063	1.743	0.634
	(0.256)	(0.151)	(0.152)	(0.137)	(0.349)	(0.123)
Cheated	0.392	0.379	0.391	0.410	0.006	0.319
	(0.395)	(0.228)	(0.198)	(0.207)	(0.552)	(0.212)
Female	-0.281	-0.280	-0.282	-0.400	-0.399	-0.413
	(0.071)	(0.071)	(0.073)	(0.079)	(0.076)	(0.079)
Education	0.052	0.047	0.041	0.131	0.118	0.089
	(0.050)	(0.050)	(0.051)	(0.056)	(0.053)	(0.057)
Age	0.001	0.001	-0.001	0.006	0.005	0.006
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Political knowledge x Cheated	**-0.594**	**-0.633**	**-0.509**	**-0.592**	**0.075**	**-0.427**
	(0.567)	**(0.333)**	**(0.296)**	**(0.272)**	**(0.770)**	**(0.284)**
Num.Obs.	679	656	618	548	679	618
R2	0.230	0.257	0.265	0.187	0.127	0.122
R2 Adj.	0.223	0.250	0.258	0.178	0.120	0.113
F	33.487	37.450	36.791	20.773	16.348	14.127

Table C2: Vote certainty and cheating interaction model. Rows correspond to different measures of political knowledge, columns to the outcomes predicted

	Composite	Composite (Scaled)	Elite - Pictures	Elite - Text	Event	Factual
(Intercept)	-0.473	-0.212	-0.178	-0.360	-0.429	-0.147
	(0.312)	(0.280)	(0.288)	(0.300)	(0.356)	(0.284)
Political knowledge	0.592	0.408	0.365	0.403	0.334	0.136
	(0.310)	(0.185)	(0.187)	(0.157)	(0.383)	(0.138)
Cheated	-0.435	-0.230	-0.093	-0.051	-0.374	0.037
	(0.472)	(0.280)	(0.246)	(0.244)	(0.615)	(0.231)
Female	-0.175	-0.186	-0.213	-0.230	-0.199	-0.237
	(0.083)	(0.082)	(0.085)	(0.089)	(0.083)	(0.086)
Education	-0.098	-0.110	-0.099	-0.085	-0.077	-0.090
	(0.058)	(0.059)	(0.060)	(0.062)	(0.058)	(0.062)
Age	0.009	0.008	0.007	0.009	0.010	0.009
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Political knowledge x Cheated	**0.748**	**0.454**	**0.262**	**0.180**	**0.660**	**0.036**
	(0.670)	**(0.402)**	**(0.358)**	**(0.316)**	**(0.853)**	**(0.310)**
Num.Obs.	615	594	558	496	615	558
R2	0.054	0.055	0.051	0.063	0.045	0.040
R2 Adj.	0.045	0.045	0.040	0.052	0.036	0.030
F	5.776	5.691	4.909	5.505	4.782	3.856

Table C3: Internal efficacy and cheating interaction model. Rows correspond to different measures of political knowledge, columns to the outcomes predicted

	Composite	Composite (Scaled)	Elite - Pictures	Elite - Text	Event	Factual
(Intercept)	-2.523	-1.733	-1.610	-1.817	-2.407	-1.434
	(0.261)	(0.234)	(0.240)	(0.257)	(0.317)	(0.254)
Political knowledge	2.528	1.673	1.534	1.129	1.716	0.629
	(0.255)	(0.150)	(0.152)	(0.133)	(0.343)	(0.120)
Cheated	-0.085	0.003	0.022	0.131	-0.093	0.171
	(0.386)	(0.221)	(0.195)	(0.198)	(0.536)	(0.204)
Female	-0.335	-0.359	-0.380	-0.471	-0.440	-0.484
	(0.070)	(0.069)	(0.071)	(0.076)	(0.074)	(0.076)
Education	0.182	0.151	0.158	0.207	0.244	0.194
	(0.049)	(0.049)	(0.050)	(0.054)	(0.051)	(0.055)
Age	0.008	0.008	0.007	0.014	0.012	0.014
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Political knowledge x Cheated	**0.071**	**-0.093**	**0.011**	**-0.304**	**0.168**	**-0.306**
	(0.554)	**(0.322)**	**(0.290)**	**(0.260)**	**(0.748)**	**(0.273)**
Num.Obs.	666	644	606	539	666	606
R2	0.275	0.306	0.299	0.271	0.184	0.185
R2 Adj.	0.269	0.300	0.292	0.263	0.177	0.176
F	41.701	46.880	42.620	33.004	24.841	22.587

Table C4: Likelihood to vote and cheating interaction model. Rows correspond to different measures of political knowledge, columns to the outcomes predicted

	Composite	Composite (Scaled)	Elite - Pictures	Elite - Text	Event	Factual
(Intercept)	-1.642	-1.179	-1.098	-1.395	-1.639	-1.086
	(0.292)	(0.269)	(0.279)	(0.287)	(0.341)	(0.274)
Political knowledge	1.754	1.100	0.859	0.917	1.313	0.708
	(0.286)	(0.174)	(0.177)	(0.149)	(0.367)	(0.129)
Cheated	0.051	0.094	0.058	0.153	0.236	0.290
	(0.433)	(0.257)	(0.230)	(0.222)	(0.577)	(0.220)
Female	-0.016	-0.030	-0.075	-0.076	-0.077	-0.083
	(0.078)	(0.079)	(0.083)	(0.085)	(0.079)	(0.082)
Education	0.043	0.037	0.050	0.069	0.086	0.043
	(0.055)	(0.056)	(0.058)	(0.060)	(0.055)	(0.059)
Age	0.007	0.008	0.008	0.013	0.009	0.011
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Political knowledge x Cheated	**-0.051**	**-0.108**	**0.102**	**-0.284**	**-0.254**	**-0.382**
	(0.621)	**(0.373)**	**(0.341)**	**(0.292)**	**(0.805)**	**(0.296)**
Num.Obs.	665	643	606	538	665	606
R2	0.094	0.101	0.088	0.119	0.053	0.087
R2 Adj.	0.086	0.093	0.079	0.109	0.045	0.077
F	11.352	11.908	9.639	11.926	6.172	9.468

D   Documentation of Cheating Behavior

Table D1: Keywords utilized to flag suspicious activity per item

Item Label	Keywords
Elite/Verbal—AfD (4)	afd; alternative_f; alternative-f; alternative+f; weidel; gauland; petry
Elite/Verbal—CDU/CSU (4)	merkel; cdu; csu; christlich
Elite/Verbal—Die Grünen (4)	gruene; grüne; b'90; eckart; özdemir; oezdemir
Elite/Verbal—Die Linke (4)	linke; wagenknecht; bartsch
Elite/Verbal—FDP (4)	lindner; fdp; freie
Elite/Verbal—SPD (4)	schulz; spd; sozialdemokratische
Elite/Visual—Alice Weidel (2)	weidel; afd; politiker
Elite/Visual—Alice Weidel (5)	weidel; afd; politiker
Elite/Visual—Angela Merkel (2)	merkel; cdu; csu; politiker
Elite/Visual—Angela Merkel (5)	merkel; cdu; csu; politiker
Elite/Visual—Anton Hofreiter (2)	hofreiter; grüne; politiker
Elite/Visual—Anton Hofreiter (5)	hofreiter; grüne; politiker
Elite/Visual—Christian Lindner (2)	lindner; fdp; politiker
Elite/Visual—Christian Lindner (5)	lindner; fdp; politiker
Elite/Visual—Dietmar Bartsch (2)	bartsch; linke; politiker
Elite/Visual—Dietmar Bartsch (5)	bartsch; linke; politiker
Elite/Visual—Heiko Maas (2)	maas; spd; politiker
Elite/Visual—Heiko Maas (5)	maas; spd; politiker
Elite/Visual—Katrin Göring-Eckardt (2)	göring; grüne; politiker
Elite/Visual—Katrin Göring-Eckardt (5)	göring; grüne; politiker
Elite/Visual—Martin Schulz (2)	schulz; spd; ; politiker
Elite/Visual—Martin Schulz (5)	schulz; spd; ; politiker
Elite/Visual—Peter Altmaier (2)	altmaier; cdu; csu; politiker
Elite/Visual—Peter Altmaier (5)	altmaier; cdu; csu; politiker
Event—Air Berlin-Ryan Air (3)	ryanair; airberlin; air-berlin; air_berlin; berlin
Event—Arpper resignation (3)	holger; arppe; afd; mecklenburg
Event—Bavaria rape (5)	oberbayern; vergewaltig; afghan; flüchtling
Event—Bundestag period (4)	wahlperiode; bundestag
Event—CCC hackers (5)	hacker; wahlsoftware; ccc; chaos
Event—Coalition Gauland (5)	koalition; gauland
Event—Diesel hardware (2)	diesel; euro-5; euro-6; hardware; dieselgipfel
Event—Diesel hardware (3)	hardware; automobil; merkel
Event—Dobrind diesel (2)	diesel; dobrindt
Event—Etihad-Air Berlin (4)	etihad; airberlin; air-berlin; air_berlin
Event—EU wall Hungary (3)	ungar; grenzzaun
Event—FDP third party (5)	bundestagswahl; fpd; freie_demokratische; freie-demokratische; ergebnisse; wahlergebnis
Event—Fipronil eggs (2)	fipronil; insektizid; eier
Event—Gauland convicted (4)	gauland; verurteilt; volksverhetzung
Event—Greens Jamaica (4)	london; bomb; explosion
Event—Juncker Euro (4)	juncker; euro
Event—London bomb (4)	jamaika; koalition; grüne
Event—Merkel greens (3)	koalition; merkel; grüne
Event—Mexico earthquake (5)	erdbeben; mexiko; 200
Event—Morales referendum (2)	bolivi; morales; referendum; protest
Event—Myanmar (5)	myanmar; rohingya
Event—N. Korea H-bomb (3)	nordkorea; bombe; test
Event—Obamacare revoked (2)	obamacare; senat; usa
Event—Off-the-books Weidel (4)	alice; weidel; schweiz; syri

Event—Powder letters (5)	drohbrief; pulver; rasierklingen; politiker
Event—Rape stats (5)	herrmann; vergewaltig; bayern
Event—Resolution N. Korea (4)	veto; nordkorea; uno
Event—Sanctions N. Korea (2)	sanktion; nordkorea; uno; sicherheitsrat
Event—Schulz education (3)	bildungsreform; schulz
Event—Schulz TV debate (4)	tv-duell; tvduell; schulz
Event—Schulz/Basic Income (2)	grundeinkommen; schulz
Event—Supermarket attack (2)	palaesti; palästi; messer; hamburg; supermarkt; terror; attentat
Event—Tegel referendum (5)	tegel; volksentscheid
Event—Texas hurricane (3)	texas; hurrikan
Event—Trump Iran (5)	iran; atom; trump
Event—Trump's Chief of Staff (2)	stabschef; trump; general
Event—Turkey arrest (3)	tuerkei; türkei; festgenommen; deutsche
Event—Twesten left greens (2)	elke; twesten; niedersachsen
Event—Unemployment rate (3)	arbeitslosenquote; arbeitsmarkt; arbeitslose; august
Event—Volkswagen pledge (4)	volkswagen; 2040; vw; autos
Factual—Chancellor election (2)	bundeskanzler
Factual—Chancellor election (5)	bundeskanzler
Factual—Vote importance (2)	erststimme; stimme; bundestag; direktstimme; listenstimme
Factual—Vote importance (5)	erststimme; stimme; bundestag; direktstimme; listenstimme

Table D2: Instances of cheating for Factual items

Item	Domain	Query
Factual—Chancellor election	google.de	wer wählt kanzler
Factual—Chancellor election	google.de	bundeskanzler wer wählt
Factual—Chancellor election	bing.com	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	de.wikipedia.org	Bundeskanzler_(Deutschland)
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	bundeskanzlerin durch wen gewählt
Factual—Chancellor election	google.de	wer wählt bundeskanzler
Factual—Chancellor election	bing.com	bundeskanzler wahlen
Factual—Chancellor election	google.de	wahl bundeskanzler durch
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	welche stimme entscheidet über die Stärke der Parteien im Bundestag
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	wer wählt bundeskanzler in dtl.
Factual—Chancellor election	google.de	wer w%C3%A4hlt bundeskanzler in deutschland
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Bundeskanzler
Factual—Chancellor election	google.de	wer wählt bundeskanzler deutschland
Factual—Chancellor election	google.de	bundeskanzlerwahl 2017
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wahl bundeskanzler
Factual—Chancellor election	google.de	zweitstimme
Factual—Chancellor election	de.search.yahoo.com	Bundeskanzler
Factual—Chancellor election	google.de	wie wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	focus.de	politik/praxistipps/bundeskanzler-wer-waehlt-ihn_id_6852180
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	wahl bundeskanzler
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler der bundesrepublik deutschland gew%C3...
Factual—Chancellor election	google.de	wahl des bundeskanzlers
Factual—Chancellor election	bing.com	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler der bundesrepublik deutschland gew_hl...
Factual—Chancellor election	google.de	bundeskanzler wird gewäh_lt durch
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wahl des bundeskanzlers durch
Factual—Chancellor election	google.de	wer w%c3%a4hlt den bundeskanzler
Factual—Chancellor election	ecosia.org	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	bundeskanzler gewählt von
Factual—Chancellor election	google.de	wahl der bundeskanzlerin 2013
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler der bundesrepublik deutschland gew_hl...
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wahl des bundeskanzlers einfach erkl_rt
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wie wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	wer wählt bundeskanzler
Factual—Chancellor election	duckduckgo.com	bundeskanzlerwahl
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.com	durch wen wird der bundeskanzler gew%C3%A4hlt
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wer wählt bundeskanzler
Factual—Chancellor election	google.de	bundeskanzler wird vom bundestag gewählt
Factual—Chancellor election	google.de	bundeskanzler gewählt
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	bundeskanzler wahl
Factual—Chancellor election	bing.com	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	bundeskanzler
Factual—Chancellor election	google.de	bundeskanzlerwahl deutschland
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wer wählt bundeskanzler
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.com	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	bundeskanzlerin gewählt durch
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	durch wen wird die Bundeskanzlerin gewählt
Factual—Chancellor election	de.wikipedia.org	Bundeskanzler_(Deutschland)
Factual—Chancellor election	google.de	Bundeskanzlerin bzw. der Bundeskanzler der Bundesrepublik Deutschland ...
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wer wählt den bundeskanzler%2Fdie bundeskanzlerin
Factual—Chancellor election	de.wikipedia.org	Bundeskanzler_(Deutschland)
Factual—Chancellor election	suche.t-online.de	wer wählt den bundeskanzler%3F
Factual—Chancellor election	google.de	wer wählt bundeskanzler
Factual—Chancellor election	google.de	bundeskanzlerwahl
Factual—Chancellor election	bing.com	Wahl Bundeskanzler
Factual—Chancellor election	google.de	wer wählt kanzler
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin gewählt
Factual—Chancellor election	google.de	Bundeskanzlerwahl wer wählt
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler der bundesrepublik deutschland gew_hl...

19

Table D2: Instances of cheating for Factual items

Item	Domain	Query
Factual—Chancellor election	bing.com	durch wen wird der bundeskanzler gew%c3%a4hlt
Factual—Vote importance	bing.com	welche Stimme bei der Bundestagswahl ist wichtiger
Factual—Vote importance	google.de	Bei der Bundestagswahl haben Sie zwei Stimmen%2C die Erststimme und di...
Factual—Vote importance	google.de	welche stimme entscheidet über die Stärke der Parteien im Bundestag
Factual—Vote importance	google.de	bundestagswahl erststimme
Factual—Vote importance	google.de	bundestagswahl erststimme
Factual—Vote importance	google.de	wer wählt den bundeskanzler
Factual—Vote importance	google.de	welche stimme ist bei der bundestagswahl die wichtigste
Factual—Vote importance	google.de	welche stimme ist bei der bundestagswahl die wichtigste
Factual—Vote importance	google.de	wahl welche stimme wichtiger
Factual—Vote importance	google.de	relative st%C3%A4rke bundestag ersstimme
Factual—Vote importance	ecosia.org	zweitstimme
Factual—Vote importance	de.wikipedia.org	Politisches_System_der_Bundesrepublik_Deutschland
Factual—Vote importance	google.de	welche stimme für bundestag
Factual—Vote importance	google.de	welche stimme ist wichtiger erst oder zweitstimme
Factual—Vote importance	google.de	erst- und zweitstimme
Factual—Vote importance	google.de	erststimme zweitstimme unterschied
Factual—Vote importance	google.de	Bei der Bundestagswahl haben Sie zwei Stimmen%2C die Erststimme und di...
Factual—Vote importance	google.de	zweitstimme
Factual—Vote importance	de.search.yahoo.com	zweitstimme bundestagswahl
Factual—Vote importance	bpb.de	mediathek/599/erst-und-zweitstimme
Factual—Vote importance	bing.com	erststimme
Factual—Vote importance	google.de	zweitstimme wahl
Factual—Vote importance	google.de	ist die zweitstimme wichtiger
Factual—Vote importance	google.de	Welche der beiden ist entscheidend für die relative Stärke der Parteie...
Factual—Vote importance	google.de	erststimme bundestagswahl
Factual—Chancellor election	google.de	wer wählt bundeskanzler
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesr...
Factual—Chancellor election	google.de	wie wird der bundeskanzler in deutschland gew%C3%A4hlt
Factual—Chancellor election	nortonsafe.search.ask.com	bundeskanzler wird gewählt
Factual—Chancellor election	google.de	ewer w%C3%A4hlt den Bundeskanzler%3F
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	bundeskanzler wahl
Factual—Chancellor election	google.de	bundeskanzler
Factual—Chancellor election	google.de	bundeskanzler
Factual—Chancellor election	google.de	wer wählt die bundeskanzlerin
Factual—Chancellor election	google.de	durch wen wird der bundeskanzler gewählt
Factual—Chancellor election	google.de	bundeskanzler gewählt
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	bundeskanzlerwahl
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wer wählt bundeskanzler
Factual—Chancellor election	google.de	Wahl Bundeskanzler
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	bundeskanzler wird gewählt
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	bundeskanzlerwahl
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	Bundeskanzler der Bundesrepublik Deutschland gewählt
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	durch wen wird bundeskanzler gewählt
Factual—Chancellor election	google.de	Wer wählt den Bundeskanzler
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	durch wen der bundeskanzler gew%C3%A4hlt
Factual—Chancellor election	duckduckgo.com	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	bundeskanzlerwahl
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	kanzler wird gewählt durch
Factual—Chancellor election	google.com	Bundeskanzler
Factual—Chancellor election	ecosia.org	Bundeskanzlerin
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	bing.com	wahl des bundeskanzlers
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wie wird der bundeskanzler gewählt zusammenfassung
Factual—Chancellor election	google.de	Durch wen wird die Bundeskanzlerin bzw. der Bundeskanzler der Bundesre...
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	search.avast.com	wie wird der bundeskanzler gewählt%3F
Factual—Chancellor election	google.de	Bundeskanzler Wahl
Factual—Chancellor election	google.de	wer wählt den bundeskanzler
Factual—Chancellor election	google.com	Bundeskanzler der Bundesrepublik Deutschland gew%C3%A4hl
Factual—Chancellor election	google.de	Bundeskanzlerwahl
Factual—Vote importance	google.de	wahl sitzverteilung
Factual—Vote importance	google.de	welche stimme war die wichtigste bei Bundestagswahl%3F
Factual—Vote importance	google.de	werwählt kanzler
Factual—Vote importance	google.de	erststimme und zweitstimme
Factual—Vote importance	google.de	sitzverteilung bundestag berechnung
Factual—Vote importance	google.de	Bei der Bundestagswahl haben Sie zwei Stimmen%2C die Erststimme und di...
Factual—Vote importance	google.de	welche stimme ist aussschlaggebend für sitzverteilung bundestag
Factual—Vote importance	google.de	kanzlerwahl bundesrat
Factual—Vote importance	google.de	erststimme und zweitstimme
Factual—Vote importance	google.de	sitzverteilung bundestag
Factual—Vote importance	google.de	sitzverteilung bundestag erststimme zweitstimme

Table D3: Instances of cheating for Elite Visual items

Item	Domain	Query
Elite/Visual—Alice Weidel	google.de	weidel
Elite/Visual—Alice Weidel	bilder.bild.de	fotos-skaliert/alice-weidel-51561416-44966086/3,w=650,c=0.bild.jpg
Elite/Visual—Alice Weidel	google.de	alice weidel
Elite/Visual—Alice Weidel	ecosia.org	alice weidel
Elite/Visual—Angela Merkel	google.de	welche partei angela merkel
Elite/Visual—Angela Merkel	google.de	merkel partei
Elite/Visual—Angela Merkel	google.de	angela merkel
Elite/Visual—Angela Merkel	google.com	merkel cdu oder csu
Elite/Visual—Angela Merkel	google.de	partei von merkel
Elite/Visual—Angela Merkel	de.wikipedia.org	Angela_Merkel
Elite/Visual—Angela Merkel	google.de	Merkel%2Bpartei
Elite/Visual—Angela Merkel	google.lv	angela merkel contact
Elite/Visual—Anton Hofreiter	google.de	anton hofreiter
Elite/Visual—Broad picture search	google.de	steinmeier
Elite/Visual—Broad picture search	google.de	lammert
Elite/Visual—Broad picture search	spd-saar.de	landtagswahl/kandidaten
Elite/Visual—Broad picture search	google.de	schwesig afd
Elite/Visual—Broad picture search	google.de	minister regierung
Elite/Visual—Broad picture search	google.de	politiker
Elite/Visual—Broad picture search	ecosia.org	kanzleramtsminister
Elite/Visual—Broad picture search	google.de	bilder von politiker frauen
Elite/Visual—Broad picture search	bundestag.de	parlament/fraktionen
Elite/Visual—Broad picture search	google.de	politikerinnen
Elite/Visual—Broad picture search	google.de	spd
Elite/Visual—Broad picture search	google.de	die grünen politiker
Elite/Visual—Broad picture search	google.de	kanzleramtsminister
Elite/Visual—Broad picture search	google.de	politiker deutschland
Elite/Visual—Broad picture search	google.de	deutsche politker
Elite/Visual—Broad picture search	google.de	kanzlerkandidatin die partei
Elite/Visual—Broad picture search	google.de	die grünen
Elite/Visual—Broad picture search	google.de	von der leyen
Elite/Visual—Broad picture search	google.de	politikerin deutschland
Elite/Visual—Dietmar Bartsch	google.de	diemtmar bartsch
Elite/Visual—Dietmar Bartsch	google.de	bartsch spd
Elite/Visual—Dietmar Bartsch	google.de	dietmar bartsch
Elite/Visual—Heiko Maas	google.de	heiko maas partei
Elite/Visual—Heiko Maas	google.de	maas
Elite/Visual—Heiko Maas	google.de	heiko maas
Elite/Visual—Heiko Maas	google.de	maas partei
Elite/Visual—Heiko Maas	facebook.com	maas%20heiko
Elite/Visual—Heiko Maas	ecosia.org	heiko maas
Elite/Visual—Heiko Maas	google.de	heiko maas
Elite/Visual—Heiko Maas	google.de	Heiko Maas
Elite/Visual—Heiko Maas	google.de	maas
Elite/Visual—Heiko Maas	google.de	Heiko Maas
Elite/Visual—Heiko Maas	google.de	Heiko Maas
Elite/Visual—Heiko Maas	ecosia.org	heiko maas
Elite/Visual—Katrin Göring-Eckardt	ecosia.org	katrin güring-eckardt
Elite/Visual—Katrin Göring-Eckardt	search.avast.com	Katrin Güring Eckardt
Elite/Visual—Katrin Göring-Eckardt	google.de	Katrin Güring-Eckardt
Elite/Visual—Katrin Göring-Eckardt	google.de	güring eckardt
Elite/Visual—Katrin Göring-Eckardt	google.de	güring eckardt
Elite/Visual—Katrin Göring-Eckardt	ecosia.org	karin güring-eckardt
Elite/Visual—Martin Schulz	google.de	bundeskanzleramt schulz
Elite/Visual—Martin Schulz	de.wikipedia.org	Martin_Schulz
Elite/Visual—Martin Schulz	google.de	martin schulz partei
Elite/Visual—Peter Altmaier	google.de	peter altmayer partei
Elite/Visual—Peter Altmaier	google.de	altmeier
Elite/Visual—Peter Altmaier	google.de	minister mit hasenscharte
Elite/Visual—Peter Altmaier	google.de	peter altmaier
Elite/Visual—Peter Altmaier	ecosia.org	kanzleramtsminister altmeier
Elite/Visual—Peter Altmaier	google.de	peter altmaier
Elite/Visual—Peter Altmaier	google.de	Peter Altmaier
Elite/Visual—Peter Altmaier	ecosia.org	peter altmaier
Elite/Visual—Alice Weidel	google.de	afd politikerin weidel
Elite/Visual—Anton Hofreiter	de.wikipedia.org	Anton_Hofreiter
Elite/Visual—Broad picture search	google.de	gauland
Elite/Visual—Broad picture search	google.de	steinmeier bundeskanzler
Elite/Visual—Broad picture search	google.de	linke politiker
Elite/Visual—Broad picture search	bing.com	die f%C3%BChrenden politiker
Elite/Visual—Broad picture search	google.de	deutsche politiker
Elite/Visual—Broad picture search	google.de	fdp politiker
Elite/Visual—Broad picture search	google.de	fdp politiker
Elite/Visual—Broad picture search	google.de	grüne politiker
Elite/Visual—Broad picture search	google.de	google bildersuche rückwürts
Elite/Visual—Broad picture search	google.de	Kandidaten afd
Elite/Visual—Broad picture search	google.de	politiker 2017
Elite/Visual—Christian Lindner	google.de	christian lindner
Elite/Visual—Dietmar Bartsch	google.de	bartsch linke
Elite/Visual—Heiko Maas	google.de	welcher partei gehürt maas an
Elite/Visual—Heiko Maas	google.de	heiko maas
Elite/Visual—Heiko Maas	google.de	heino maas
Elite/Visual—Heiko Maas	google.de	Maas justizminister
Elite/Visual—Heiko Maas	google.de	heiko maas
Elite/Visual—Heiko Maas	google.de	maas
Elite/Visual—Heiko Maas	google.de	Heiko Maas

Table D3: Instances of cheating for Elite Visual items

Item	Domain	Query
Elite/Visual—Heiko Maas	google.de	Heiko Maas
Elite/Visual—Katrin Göring-Eckardt	google.de	katrin güring-eckardt
Elite/Visual—Peter Altmaier	google.de	altmeier
Elite/Visual—Peter Altmaier	google.de	altmeier
Elite/Visual—Peter Altmaier	google.de	altmaier
Elite/Visual—Peter Altmaier	ecosia.org	altmeier
Elite/Visual—Peter Altmaier	google.de	altmaier
Elite/Visual—Peter Altmaier	google.de	Peter Altmaier
Elite/Visual—Peter Altmaier	google.de	altmaier partei
Elite/Visual—Peter Altmaier	google.com	Altmeier

Table D4: Instances of cheating for Elite Verbal items

Item	Domain	Query
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—AfD	google.de	alice afd
Elite/Verbal—AfD	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—AfD	bing.com	afd
Elite/Verbal—AfD	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—AfD	google.de	spitzenkandidat afd
Elite/Verbal—AfD	sueddeutsche.de	politik/bundestagswahl-die-spitzenkandidaten-der-parteien-1.3520071
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	google.de	afd politiker
Elite/Verbal—AfD	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—AfD	google.de	spitzenkandidat afd
Elite/Verbal—AfD	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	google.de	afd spitzenkandidat
Elite/Verbal—AfD	google.de	Alice Weidel
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	bild.de	politik/inland/bundestagswahl2017/alle-informationen-im-liveticker-532...
Elite/Verbal—AfD	google.de	afd spitzenkandidat
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	bing.com	afd
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	google.de	kandidat afd
Elite/Verbal—AfD	google.de	bundestagswahl spitzenkandidaten
Elite/Verbal—AfD	google.de	Spitzenkandidaten partei
Elite/Verbal—AfD	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—AfD	google.de	spitzenkandidaten bundestagswahl 2017
Elite/Verbal—AfD	google.de	afd politiker
Elite/Verbal—AfD	www.afd.de	
Elite/Verbal—AfD	google.de	afd
Elite/Verbal—AfD	google.de	gauland
Elite/Verbal—AfD	google.de	spitzenkandidat afd
Elite/Verbal—AfD	google.de	afd kandidaten 2017
Elite/Verbal—AfD	google.de	Spitzenkandidat AfD
Elite/Verbal—AfD	google.de	afd spitzenkandidat 2017
Elite/Verbal—AfD	google.de	gauland
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	google.de	Alice Weidel
Elite/Verbal—AfD	google.de	Afd kandidat
Elite/Verbal—AfD	afd.de	
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	google.de	spitzenkandidatenm
Elite/Verbal—AfD	google.de	afd bundestagswahl spitzenkandidat
Elite/Verbal—AfD	google.de	spitzenkandidat afd
Elite/Verbal—AfD	google.com	Alice Weidel
Elite/Verbal—AfD	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—AfD	google.de	afd spitzenkandidat
Elite/Verbal—AfD	rundschau-online.de	politik/afd-spitzenkandidat-gauland-spricht-von–entsorgung–der-integ...
Elite/Verbal—AfD	google.de	spitzenkandidaten 2017
Elite/Verbal—AfD	google.de	spitzenkandidat AfD
Elite/Verbal—AfD	google.de	afd kanzlerkandidat 2017
Elite/Verbal—AfD	google.de	Spitzenkandidaten
Elite/Verbal—CDU/CSU	google.de	spitzenkanida cdu
Elite/Verbal—CDU/CSU	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—CDU/CSU	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—CDU/CSU	google.de	cdu spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—CDU/CSU	google.de	cdu spitzenkandidat bundestagswahl
Elite/Verbal—CDU/CSU	google.de	spitzenkandidat cdu 2017
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.nl	horst seehofer
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	bild.de	politik/inland/bundestagswahl2017/alle-informationen-im-liveticker-532...
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	bing.com	csu

Table D4: Instances of cheating for Elite Verbal items

Item	Domain	Query
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.de	bundestagswahl spitzenkandidaten
Elite/Verbal—CDU/CSU	google.de	Spitzenkandidaten partei
Elite/Verbal—CDU/CSU	google.de	cdu spitzenkandidaten
Elite/Verbal—CDU/CSU	google.de	Namen von Spitzenkandidaten cdu
Elite/Verbal—CDU/CSU	google.de	cdu politiker
Elite/Verbal—CDU/CSU	google.de	cdu spitzenkandidat
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.de	cdu spitzenkandidaten bundestagswahl 2017
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.de	spitzenkandidatenm
Elite/Verbal—CDU/CSU	google.de	spitzenkandidat cdu csu
Elite/Verbal—CDU/CSU	google.com	Spitzenkandidat CDU CSU
Elite/Verbal—CDU/CSU	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.de	spitzenkandidaten 2017
Elite/Verbal—CDU/CSU	google.de	angela merkel%2Bpartei
Elite/Verbal—CDU/CSU	swagbucks.com	csu
Elite/Verbal—CDU/CSU	google.de	Spitzenkandidaten
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Grünen	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Grünen	google.de	Gr%C3%BCne
Elite/Verbal—Die Grünen	google.de	gruene
Elite/Verbal—Die Grünen	nortonsafe.search.ask.com	grünen politiker
Elite/Verbal—Die Grünen	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Grünen	google.de	spitzenkandidat die grünen
Elite/Verbal—Die Grünen	google.de	spitzenkandidat grüne
Elite/Verbal—Die Grünen	google.de	grüne spitzenkandidaten
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	google.de	spitzenkandidat der grünen
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	google.de	die grünen politiker
Elite/Verbal—Die Grünen	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Grünen	google.de	die grünen spitzenkandidat bundestagswahl 2017
Elite/Verbal—Die Grünen	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	google.de	die grünen spitzenkandidat
Elite/Verbal—Die Grünen	de.search.yahoo.com	spitzenkandidaten grüne
Elite/Verbal—Die Grünen	google.de	Katrin G_ring-Eckhardt
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	bild.de	politik/inland/bundestagswahl2017/alle-informationen-im-liveticker-532...
Elite/Verbal—Die Grünen	google.de	grüne spitzenkandidat
Elite/Verbal—Die Grünen	google.de	grüne kandidat
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	bing.com	grüne chef
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	google.de	kandidat grüne
Elite/Verbal—Die Grünen	google.de	bundestagswahl spitzenkandidaten
Elite/Verbal—Die Grünen	google.de	spitzenkandidat Grüne
Elite/Verbal—Die Grünen	google.de	Spitzenkandidaten partei
Elite/Verbal—Die Grünen	google.de	kanditat der Gr%C3%BCnen
Elite/Verbal—Die Grünen	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Grünen	google.de	Namen von Spitzenkandidaten grüne
Elite/Verbal—Die Grünen	google.de	grünen kanzlerkandidat
Elite/Verbal—Die Grünen	google.de	grüne kandidaten 2017
Elite/Verbal—Die Grünen	google.de	die grünen
Elite/Verbal—Die Grünen	google.de	grünen polkitikerin
Elite/Verbal—Die Grünen	suche.t-online.de	Spitzenkandidat Die Grünen
Elite/Verbal—Die Grünen	google.de	grüne
Elite/Verbal—Die Grünen	google.de	eckhard d_ring
Elite/Verbal—Die Grünen	google.de	spitzenkandidat grüne
Elite/Verbal—Die Grünen	google.de	Spitzenkandidat grüne
Elite/Verbal—Die Grünen	google.de	die grünen spitzenkandidat 2017
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	de.wikipedia.org	w/index.php
Elite/Verbal—Die Grünen	google.de	spitzenkandidat grüne
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	google.de	spitzenkandidatenm
Elite/Verbal—Die Grünen	google.de	spitzenkandidat grün
Elite/Verbal—Die Grünen	google.de	Katrin G_ring-Eckhardt
Elite/Verbal—Die Grünen	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Grünen	google.de	Katrin G_ring-Eckhardt
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Grünen	google.de	spitzenkandidat die grünen
Elite/Verbal—Die Grünen	google.de	b90 die grüne kanzlerkandidat 2017
Elite/Verbal—Die Grünen	suche.web.de	grüne
Elite/Verbal—Die Grünen	google.de	grüne wahlprogramm
Elite/Verbal—Die Grünen	google.de	Spitzenkandidaten
Elite/Verbal—Die Linke	google.de	spitzenkandidat der linken
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Linke	google.de	linke
Elite/Verbal—Die Linke	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Linke	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017

Table D4: Instances of cheating for Elite Verbal items

Item	Domain	Query
Elite/Verbal—Die Linke	google.de	spitzenkandidaten der linken
Elite/Verbal—Die Linke	google.de	spitzenkandidat linke
Elite/Verbal—Die Linke	google.de	linke spitzenkandidat
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Linke	google.de	die linke spitzenkandidat bundestagswahl 2017
Elite/Verbal—Die Linke	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Linke	google.de	die linke
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	google.de	die linke spitzenkandidat
Elite/Verbal—Die Linke	en.wikipedia.org	w/index.php
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	bild.de	politik/inland/bundestagswahl2017/alle-informationen-im-liveticker-532...
Elite/Verbal—Die Linke	google.de	linke spitzenkandidat
Elite/Verbal—Die Linke	google.de	linke kandidat
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	google.de	linke spitzenkandidat
Elite/Verbal—Die Linke	bing.com	linke chef
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	google.de	kandidat linke
Elite/Verbal—Die Linke	de.search.yahoo.com	linke kandidat
Elite/Verbal—Die Linke	google.de	bundestagswahl spitzenkandidaten
Elite/Verbal—Die Linke	google.de	Spitzenkandidaten partei
Elite/Verbal—Die Linke	google.de	kanditat der Linken
Elite/Verbal—Die Linke	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Linke	google.de	Namen von Spitzenkandidaten linke
Elite/Verbal—Die Linke	google.de	linke politiker wahlprogramm
Elite/Verbal—Die Linke	google.de	linke kanzlerkandidat
Elite/Verbal—Die Linke	suche.t-online.de	Spitzenkandidat Linke
Elite/Verbal—Die Linke	google.dk	linke spitzenkandidat
Elite/Verbal—Die Linke	google.de	Bartsch
Elite/Verbal—Die Linke	google.de	spitzenkandidat linke
Elite/Verbal—Die Linke	google.de	die linke spitzenkandidat 2017
Elite/Verbal—Die Linke	google.de	bundestagswahl 2017 die Linke
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	de.wikipedia.org	Sahra_Wagenknecht
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	google.de	spitzenkandidatenm
Elite/Verbal—Die Linke	google.de	spitzenkandidat linke
Elite/Verbal—Die Linke	google.de	die linke
Elite/Verbal—Die Linke	google.de	kandidaten linke
Elite/Verbal—Die Linke	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	google.de	spitzenkandidaten 2017
Elite/Verbal—Die Linke	google.de	spitzenkandidat die linke
Elite/Verbal—Die Linke	google.de	linke
Elite/Verbal—Die Linke	google.de	die linke kanzlerkandidat 2017
Elite/Verbal—Die Linke	google.de	die linke spitzenkandidat
Elite/Verbal—Die Linke	google.de	spitzenkandidatdie linke
Elite/Verbal—Die Linke	swagbucks.com	linke
Elite/Verbal—Die Linke	google.de	Spitzenkandidaten
Elite/Verbal—FDP	google.de	FDP lindner
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—FDP	google.de	spitzenkandidat fdp
Elite/Verbal—FDP	google.de	FDP
Elite/Verbal—FDP	bing.com	lindner fdp
Elite/Verbal—FDP	google.de	fdp
Elite/Verbal—FDP	google.de	spitzenkandidat fdp
Elite/Verbal—FDP	google.de	spitzenkandidat fdp
Elite/Verbal—FDP	sueddeutsche.de	politik/bundestagswahl-die-spitzenkandidaten-der-parteien-1.3520071
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—FDP	google.de	fdp spitzenkandidat bundestagswahl 2017
Elite/Verbal—FDP	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	google.nl	fpd partei
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	bild.de	politik/inland/bundestagswahl2017/alle-informationen-im-liveticker-532...
Elite/Verbal—FDP	google.de	fdp spitzenkandidat
Elite/Verbal—FDP	google.de	fdp lindner
Elite/Verbal—FDP	google.de	fdp kandidat
Elite/Verbal—FDP	google.de	christian lindner
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	bing.com	fdp chef
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	de.search.yahoo.com	fdp kandidat
Elite/Verbal—FDP	google.de	bundestagswahl spitzenkandidaten
Elite/Verbal—FDP	google.de	Spitzenkandidaten partei
Elite/Verbal—FDP	bundestagswahl-bw.de	spitzenkandidaten_btwahl2017
Elite/Verbal—FDP	google.de	Namen von Spitzenkandidaten FDP
Elite/Verbal—FDP	google.de	fdp politiker
Elite/Verbal—FDP	google.de	fdp kanzlerkandidat
Elite/Verbal—FDP	google.dk	fdp spitzenkandidat

Table D4: Instances of cheating for Elite Verbal items

Item	Domain	Query
Elite/Verbal—FDP	web.de	magazine/politik/wahlen/bundestagswahl/bundestagswahl-2017-fdp-afd-nah...
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	fdp.de	kandidat/christian-lindner
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	google.de	spitzenkandidatenm
Elite/Verbal—FDP	google.de	fdp lindner
Elite/Verbal—FDP	google.de	spitzenkandidat fdp
Elite/Verbal—FDP	google.de	fdp
Elite/Verbal—FDP	google.de	kandidaten fdp
Elite/Verbal—FDP	bing.com	spitzenkandidaten bundestagswahl 2017
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	google.de	spitzenkandidaten 2017
Elite/Verbal—FDP	google.de	spitzenkandidat fdp
Elite/Verbal—FDP	google.de	fdP
Elite/Verbal—FDP	google.de	fdp kanzlerkandidat 2017
Elite/Verbal—FDP	suche.web.de	fdp
Elite/Verbal—FDP	google.de	lindner
Elite/Verbal—FDP	fdp.de	kandidat/christian-lindner
Elite/Verbal—FDP	swagbucks.com	fdp
Elite/Verbal—FDP	google.de	Spitzenkandidaten
Elite/Verbal—SPD	facebook.com	martin%20schulz
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	bundestagswahl-bw.de	spitzenkandidaten__btwahl2017
Elite/Verbal—SPD	bundestagswahl-bw.de	spitzenkandidaten__btwahl2017
Elite/Verbal—SPD	bundestagswahl-bw.de	spitzenkandidaten__btwahl2017
Elite/Verbal—SPD	google.de	spitzenkandidat spd
Elite/Verbal—SPD	sueddeutsche.de	politik/bundestagswahl-die-spitzenkandidaten-der-parteien-1.3520071
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	bing.com	spd spitzenkandidat 2017
Elite/Verbal—SPD	google.de	spd spitzenkandidat bundestagswahl
Elite/Verbal—SPD	bundestagswahl-bw.de	spitzenkandidaten__btwahl2017
Elite/Verbal—SPD	google.de	spd
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	bild.de	politik/inland/bundestagswahl2017/alle-informationen-im-liveticker-532...
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	google.de	bundestagswahl spitzenkandidaten
Elite/Verbal—SPD	google.de	Spitzenkandidaten partei
Elite/Verbal—SPD	bundestagswahl-bw.de	spitzenkandidaten__btwahl2017
Elite/Verbal—SPD	google.de	Namen von Spitzenkandidaten spd
Elite/Verbal—SPD	google.dk	spd spitzenkandidat
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	spd.de	
Elite/Verbal—SPD	de.search.yahoo.com	spd%20schulz
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	google.de	spitzenkandidatenm
Elite/Verbal—SPD	bundestagswahl-bw.de	spitzenkandidaten__btwahl2017
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	google.de	spitzenkandidaten 2017
Elite/Verbal—SPD	suche.web.de	spd
Elite/Verbal—SPD	google.de	Spitzenkandidaten

Table D5: Instances of cheating for Event items

Item	Domain	Query
Event—Diesel hardware	google.de	dieselgopfel hardware-update
Event—Diesel hardware	google.de	diesel gipfel
Event—Diesel hardware	google.de	dieselgipfel hardware
Event—Diesel hardware	ecosia.org	eim Dieselgipfel haben sich die Autohersteller zur kostenlosen Hardwar...
Event—Diesel hardware	google.de	Beim Dieselgipfel haben sich die Autohersteller zur kostenlosen Hardwa...
Event—Diesel hardware	google.de	Beim Dieselgipfel haben sich die Autohersteller zur kostenlosen Hardwa...
Event—Diesel hardware	google.de	Beim Dieselgipfel haben sich die Autohersteller zur kostenlosen Hardwa...
Event—Diesel hardware	google.de	aus für dieselfahrzeuge bis 2030
Event—Diesel hardware	google.de	kostenlose hardware updates dieselgipfel
Event—Diesel hardware	google.de	kostenloses hardware update dieselgipfel
Event—Diesel hardware	google.de	diesel gipfel
Event—Diesel hardware	google.de	diesel gipfel
Event—Dobrind diesel	google.de	dobrint dieselfahrzeuge 2030
Event—Dobrind diesel	google.de	dobrindt
Event—Dobrind diesel	ecosia.org	undesverkehrsminister Dobrindt hat das Aus f%C3%BCr Dieselfahrzeuge bi...
Event—Dobrind diesel	google.de	Bundesverkehrsminister Dobrindt hat das Aus für Dieselfahrzeuge bis 20...
Event—Dobrind diesel	google.de	dobrindt dieselfahrzeuge
Event—Dobrind diesel	google.de	Bundesverkehrsminister Dobrindt hat das Aus für Dieselfahrzeuge bis 20...
Event—Dobrind diesel	google.de	dieselgipfel
Event—Dobrind diesel	google.de	aus für diesel
Event—Dobrind diesel	de.search.yahoo.com	dobrindt alexander
Event—Dobrind diesel	google.de	Bundesverkehrsminister Dobrindt hat das Aus für Dieselfahrzeuge bis 20...
Event—Dobrind diesel	google.de	dobrint aus für dieselfahrzeuge
Event—Dobrind diesel	google.de	dobrindt aus für diesel 2030
Event—Dobrind diesel	google.de	dieselfahrzeuge abschaffen bis 2030
Event—Dobrind diesel	google.de	dobrint%2Bdiesel

Table D5: Instances of cheating for Event items

Item	Domain	Query
Event—Dobrind diesel	google.de	dieselverbot bis 2030
Event—Dobrind diesel	google.de	Bundesverkehrsminister Dobrindt hat das Aus für Dieselfahrzeuge bis 20...
Event—Dobrind diesel	google.de	aus für dieselfahrzeuge
Event—Dobrind diesel	google.de	Dobrindt %2B Diesel
Event—Dobrind diesel	google.de	Bundesverkehrsminister Dobrindt hat das Aus für Dieselfahrzeuge bis 20...
Event—Fipronil eggs	google.de	Wegen möglicher Belastung durch das Insektizid Fipronil nehmen einige ...
Event—Fipronil eggs	google.de	Fipronil
Event—Fipronil eggs	google.de	Wegen möglicher Belastung durch das Insektizid Fipronil nehmen einige ...
Event—Morales referendum	google.de	massenproteste bolivien
Event—Morales referendum	bing.com	bolivien massenproteste%3F
Event—Morales referendum	bing.com	evo morales
Event—Morales referendum	google.de	evo morales massenproteste
Event—Morales referendum	google.de	morales verfassungsreferendum
Event—Morales referendum	ecosia.org	Ein vom bolivianischen Präsidenten Evo Morales initiiertes Verfassungs...
Event—Morales referendum	google.de	Ein vom bolivianischen Präsidenten Evo Morales initiiertes Verfassungs...
Event—Morales referendum	google.de	evo morales
Event—Morales referendum	google.de	evo morales
Event—Morales referendum	google.de	Ein vom bolivianischen Präsidenten Evo Morales initiiertes Verfassungs...
Event—Morales referendum	google.de	morales verfassungsmemorandum
Event—Morales referendum	google.de	morales verfassungsreferendum
Event—Morales referendum	google.de	evo morales bolivien
Event—Morales referendum	bing.com	morales
Event—Morales referendum	google.de	Ein vom bolivianischen Präsidenten Evo Morales initiiertes Verfassungs...
Event—Morales referendum	google.de	bolivien
Event—Morales referendum	google.de	evo morales
Event—Obamacare revoked	bing.com	abschaffung obamacare
Event—Obamacare revoked	google.de	us senat obamacare
Event—Obamacare revoked	google.de	Der US-Senat hat die Abschaffung von Obamacare beschlossen.
Event—Obamacare revoked	google.de	senat obamacare
Event—Obamacare revoked	google.de	Der US-Senat hat die Abschaffung von Obamacare beschlossen.
Event—Obamacare revoked	google.de	us senat obamacare
Event—Obamacare revoked	google.de	abschaffung obamacare
Event—Obamacare revoked	google.de	Der US-Senat hat die Abschaffung von Obamacare beschlossen.
Event—Obamacare revoked	google.de	abschaffung obamacare
Event—Obamacare revoked	google.de	obamacare
Event—Obamacare revoked	google.de	Der US-Senat hat die Abschaffung von Obamacare beschlossen.
Event—Obamacare revoked	bing.com	us senat abschaffung obamacare
Event—Obamacare revoked	google.de	Der US-Senat hat die Abschaffung von Obamacare beschlossen.
Event—Obamacare revoked	google.de	obamacare
Event—Sanctions N. Korea	google.de	un sanktionen gegen nordkorea
Event—Sanctions N. Korea	google.de	sicherheitsrat sanktinen nordjoprea
Event—Sanctions N. Korea	google.de	Der UN-Sicherheitsrat hat einstimmig härtere Sanktionen gegen Nordkore...
Event—Sanctions N. Korea	google.de	un sicherheitsrat, härtere sanktionen gegen nordkorea
Event—Sanctions N. Korea	google.de	Der UN-Sicherheitsrat hat einstimmig härtere Sanktionen gegen Nordkore...
Event—Sanctions N. Korea	google.de	un sankzionen gegne nordkorea
Event—Sanctions N. Korea	google.de	Der UN-Sicherheitsrat hat einstimmig härtere Sanktionen gegen Nordkore...
Event—Sanctions N. Korea	google.de	härtere sanktionen gegen nordkorea
Event—Sanctions N. Korea	google.de	harte sanktionen gegen nordkorea
Event—Sanctions N. Korea	google.de	un sicherheitsrat sanktionen nordkorea
Event—Sanctions N. Korea	google.de	härtere massnahmen nordkorea
Event—Sanctions N. Korea	google.de	Der UN-Sicherheitsrat hat einstimmig härtere Sanktionen gegen Nordkore...
Event—Sanctions N. Korea	google.de	un nordkorea
Event—Schulz/Basic Income	google.de	schulz grundeinkommen
Event—Schulz/Basic Income	google.de	schulz fordert bedingungsloses Grundeinkommen
Event—Schulz/Basic Income	google.de	schulz martin grundeinkommen bedingungsloses
Event—Schulz/Basic Income	google.de	schulz grundeinkommen
Event—Schulz/Basic Income	google.de	SPD-Kanzlerkandidat Schulz hat die Einführung eines bedingungslosen Gr...
Event—Schulz/Basic Income	google.de	martin schulz
Event—Schulz/Basic Income	google.de	SPD-Kanzlerkandidat Schulz hat die Einführung eines bedingungslosen Gr...
Event—Schulz/Basic Income	google.de	bedingungsloses einkommen deutschland
Event—Schulz/Basic Income	google.de	schulz fordert bedingungsloses grundeinkommen
Event—Schulz/Basic Income	google.de	schulz grundeinkommen
Event—Schulz/Basic Income	google.de	schulz einführung grundeinkommen
Event—Schulz/Basic Income	google.de	schulz grundeinkommen
Event—Schulz/Basic Income	google.de	SPD-Kanzlerkandidat Schulz hat die Einführung eines bedingungslosen Gr...
Event—Schulz/Basic Income	google.de	schulz grundeinkommen
Event—Supermarket attack	google.de	Ein Pal%C3%A4stinenser hat in einem Supermarkt in Hamburg auf Menschen...
Event—Supermarket attack	google.de	palästinenser hamburg supermarkt
Event—Supermarket attack	google.de	palästinenser supermarkt hamburg messer
Event—Supermarket attack	focus.de	suche/messerstich%20hamburg
Event—Supermarket attack	ecosia.org	Ein Palästinenser hat in einem Supermarkt in Hamburg auf Menschen eing...
Event—Supermarket attack	google.de	Ein Palästinenser hat in einem Supermarkt in Hamburg auf Menschen eing...
Event—Supermarket attack	google.de	supermarkt hamburg
Event—Supermarket attack	google.de	Ein Palästinenser hat in einem Supermarkt in Hamburg auf Menschen eing...
Event—Supermarket attack	google.de	überfall auf supermarkt in hamburg
Event—Supermarket attack	google.de	Ein Palästinenser hat in einem Supermarkt in Hamburg auf Menschen eing...
Event—Supermarket attack	google.de	palästinenser supermarkt
Event—Supermarket attack	google.de	palästinenser hamburg
Event—Supermarket attack	google.de	hamburg messerattacke
Event—Supermarket attack	google.de	supermarkt hamburg t_ter
Event—Trump's Chief of Staff	bing.com	usa neuer stabchef
Event—Trump's Chief of Staff	google.de	stabsshef trump general
Event—Trump's Chief of Staff	google.de	trump general
Event—Trump's Chief of Staff	ecosia.org	stabchef wei_es haus
Event—Trump's Chief of Staff	google.de	US-Präsident Donald Trump hat einen General zum neuen Stabschef ernann...
Event—Trump's Chief of Staff	google.de	US-Präsident Donald Trump hat einen General zum neuen Stabschef ernann...
Event—Trump's Chief of Staff	google.de	us senat stabschef
Event—Trump's Chief of Staff	google.de	general%2C neuer staabschef

Table D5: Instances of cheating for Event items

Item	Domain	Query
Event—Trump's Chief of Staff	google.de	US-Präsident Donald Trump hat einen General zum neuen Stabschef ernann...
Event—Trump's Chief of Staff	google.de	stabschef in den usa
Event—Trump's Chief of Staff	google.de	US-Präsident Donald Trump hat einen General zum neuen Stabschef ernann...
Event—Trump's Chief of Staff	google.de	trump general stabschef
Event—Trump's Chief of Staff	google.de	general stabschef usa
Event—Trump's Chief of Staff	google.de	trump neuer stabschef
Event—Trump's Chief of Staff	google.de	US-Präsident Donald Trump hat einen General zum neuen Stabschef ernann...
Event—Trump's Chief of Staff	google.de	stabschef usa
Event—Trump's Chief of Staff	google.de	US-Präsident Donald Trump hat einen General zum neuen Stabschef ernann...
Event—Twesten left greens	google.de	elke twesten
Event—Twesten left greens	ecosia.org	ie Grünen-Abgeordnete Elke Twesten hat ihre Fraktion im nieders_chsisc...
Event—Twesten left greens	google.de	Die Grünen-Abgeordnete Elke Twesten hat ihre Fraktion im nieders_chsis...
Event—Twesten left greens	google.de	elke twesten
Event—Twesten left greens	google.de	Die Grünen-Abgeordnete Elke Twesten hat ihre Fraktion im nieders_chsis...
Event—Twesten left greens	google.de	Die Grünen-Abgeordnete Elke Twesten hat ihre Fraktion im nieders_chsis...
Event—Twesten left greens	google.de	elke twesten
Event—Twesten left greens	google.de	Elke twesten
Event—Twesten left greens	google.de	Die Grünen-Abgeordnete Elke Twesten hat ihre Fraktion im nieders_chsis...
Event—Twesten left greens	google.de	elke twesten
Event—Twesten left greens	ecosia.org	elke twesten
Event—Air Berlin-Ryan Air	google.de	ryanair airberlin
Event—Air Berlin-Ryan Air	google.de	ryanair air berlin
Event—Air Berlin-Ryan Air	google.de	Die Fluggesellschaft Ryanair hat angekündigt%2C gro_e Teile der insolv...
Event—Air Berlin-Ryan Air	google.de	ryan air air berlin
Event—Air Berlin-Ryan Air	google.de	ryanair air berlin
Event—Air Berlin-Ryan Air	google.de	rayanair%2Bairberil
Event—Air Berlin-Ryan Air	google.de	air berlin %C3%BCbernahme
Event—Arpper resignation	google.de	arppe
Event—Arpper resignation	google.de	arppe
Event—Arpper resignation	google.de	Der bisherige AfD-Fraktionsvize in Mecklenburg-Vorpommern Arppe ist na...
Event—Arpper resignation	google.de	Der bisherige AfD-Fraktionsvize in Mecklenburg-Vorpommern Arppe ist na...
Event—Arpper resignation	google.de	Arppe
Event—Diesel hardware	google.de	merkel hardware automobilhersteller
Event—Diesel hardware	google.nl	merkel asked auto updates
Event—Diesel hardware	google.de	merkel hardware updates
Event—Diesel hardware	google.de	merkel automobil hardware update
Event—Diesel hardware	google.de	Angela Merkel hat die deutschen Automobilhersteller aufgefordert%2C ko...
Event—Diesel hardware	google.de	Merkel hardwareupdate
Event—Diesel hardware	google.de	Angela Merkel%2BHardware Update
Event—EU wall Hungary	google.nl	hungary fence
Event—EU wall Hungary	google.de	Die EU-Kommission hat sich bereiterkl_rt%2C sich an den Kosten für den...
Event—EU wall Hungary	google.de	Grenzzaun eu Kommission
Event—Merkel greens	google.de	merkel wunschkoalition
Event—Merkel greens	google.de	merkel wunschkoalition
Event—Merkel greens	google.de	Angela Merkel eine Koalition mit den Grünen zu Ihrer Wunschkoalition n...
Event—Merkel greens	google.de	Angela merkel grüne
Event—N. Korea H-bomb	google.de	Nordkorea hat den Test einer Wasserstoffbombe vermeldet.
Event—N. Korea H-bomb	google.de	Nordkorea hat den Test einer Wasserstoffbombe vermeldet.
Event—N. Korea H-bomb	google.de	nordkorea wasserstoffbombe
Event—N. Korea H-bomb	google.de	nordkorea wasserstoffbombentest
Event—Schulz education	google.de	schulz konzept bildungsreform
Event—Schulz education	google.com	SPD-Kanzlerkandidat Schulz hat ein Konzept f%C3%BCr eine Bildungsrefor...
Event—Schulz education	google.de	schulz bildungsreform
Event—Schulz education	google.de	schulz konzept bildungsreform
Event—Schulz education	google.de	Schulz bildungsreform
Event—Schulz education	bing.com	schulz bildungsreform
Event—Texas hurricane	google.com	Teile von S%C3%BCdtexas %C3%BCberflutet
Event—Texas hurricane	google.de	Durch einen Hurrikan sind weite Teile von Südtexas überflutet worden....
Event—Texas hurricane	google.de	hurrikan texas
Event—Texas hurricane	google.de	Durch einen Hurrikan sind weite Teile von Südtexas überflutet worden....
Event—Turkey arrest	google.de	türkei festnahme deutsche
Event—Turkey arrest	google.de	Festnahmen türkei
Event—Turkey arrest	google.de	Türkei%2Bfestnahme deutscher Staatsbürger
Event—Unemployment rate	google.de	arbeitslosenquote im august
Event—Unemployment rate	google.de	Arbeitslosenquote ist im August auf unter 4%25 gesunken.
Event—Unemployment rate	google.de	arbeitslosenquote
Event—Unemployment rate	bing.com	arbeitslosenquote august 2017
Event—Unemployment rate	google.de	arbeitslosenquote august 2017
Event—Unemployment rate	google.de	Die Arbeitslosenquote ist im August auf unter 4%25 gesunken.
Event—Unemployment rate	google.de	Arbeitslosenquote august 2017
Event—Unemployment rate	google.de	arbeitslosenquote bayern 2017
Event—Unemployment rate	google.de	arbeitslosenquote deutschland
Event—Bundestag period	google.de	bundestag wahlperiode verl_ngern
Event—Bundestag period	t-online.de	nachrichten/deutschland/bundestagswahl/id_81846732/umfrage-bundestagsw...
Event—Bundestag period	google.de	Wer will Wahlperiode von 4 auf 5 Jahre verl_ngern
Event—Bundestag period	google.de	Die Parteien im Bundestag m_chten die Wahlperiode von vier auf fünf Ja...
Event—Bundestag period	google.de	Wahlkampf 2017%2Bstreitfragen%2BInternet
Event—Etihad-Air Berlin	google.de	etihat airways gebot
Event—Etihad-Air Berlin	google.de	Die Fluggesellschaft Etihad Airways hat im Bieterwettstreit ein Angebo...
Event—Etihad-Air Berlin	google.de	bieter bei air berlin
Event—Etihad-Air Berlin	google.de	etihad airway
Event—Etihad-Air Berlin	google.de	etihad airways air berlin
Event—Etihad-Air Berlin	google.de	etihad airways buys air berlin
Event—Gauland convicted	google.de	gauland bew_hrungsstrafe
Event—Gauland convicted	google.de	AfD-Spitzenkandidat Alexander Gauland ist wegen Volksverhetzung
Event—Gauland convicted	google.de	gauland volkisverhetzung verteiltz
Event—Gauland convicted	google.de	gauland
Event—Gauland convicted	google.de	alexander gauland
Event—Gauland convicted	google.de	gauland in 1. Instanz wegen Volksverhetzung verurteilt

Table D5: Instances of cheating for Event items

Item	Domain	Query
Event—Gauland convicted	google.de	gauland bew__hrungsstrafe
Event—Gauland convicted	google.de	gauland
Event—Gauland convicted	google.de	AfD-Spitzenkandidat Alexander Gauland ist wegen Volksverhetzung in ers...
Event—Gauland convicted	google.de	Gauland
Event—Gauland convicted	google.de	Gauland strafe
Event—Gauland convicted	google.de	Gauland volksverhetzung
Event—Gauland convicted	google.de	alexander gauland
Event—Gauland convicted	google.de	Alexander Gauland
Event—Gauland convicted	google.de	gauland
Event—Gauland convicted	google.de	urteil gegen gauland
Event—Gauland convicted	bing.com	gauland
Event—Greens Jamaica	google.de	jamaika koalition
Event—Greens Jamaica	google.de	fdp bundesparteitag jamaika
Event—Greens Jamaica	google.de	Die Grünen haben auf ihrem Bundesparteitag den Eintritt in eine Jamaik...
Event—Greens Jamaica	google.de	jamaika koalition grüne
Event—Greens Jamaica	google.de	die grünen politiker
Event—Greens Jamaica	google.de	Die grünen jamaika coalition
Event—Greens Jamaica	google.de	CDU%2FCSU SPD Grüne Linke FDP AfD wei__ nicht %2F keine Angabe Alle Bür...
Event—Juncker Euro	google.de	junker euro alle ___nder
Event—Juncker Euro	google.de	juncker euro
Event—Juncker Euro	google.de	EU-Kommissionspräsident Juncker hat sich in einer Grundsatzrede dafür ...
Event—Juncker Euro	google.de	Juncker Euro in allen l__ndern
Event—London bomb	google.de	london u bahn bombe
Event—London bomb	google.de	bombe london undergrunn
Event—London bomb	google.de	Bei der Explosion einer Bombe in der Londoner U-Bahn sind viele Mensch...
Event—London bomb	google.de	Explosion londoner u-Bahnd
Event—Off-the-books Weidel	spiegel.de	politik/deutschland/afd-alice-weidel-droht-neuer-aerger-um-die-beschae...
Event—Off-the-books Weidel	google.de	weidel schweiz syrische asylbewerberin
Event—Off-the-books Weidel	zeit.de	politik/deutschland/2017-09/alternative-fuer-deutschland-alice-weidel-...
Event—Off-the-books Weidel	google.de	Recherchen der ZEIT haben ergeben%2C dass AfD-Politikerin Alice Weidel...
Event—Off-the-books Weidel	google.de	Alice weidel%2Bschwarzarbeit
Event—Resolution N. Korea	google.de	veto russland rakentenstart nordkorea
Event—Resolution N. Korea	google.de	un sicherheitsrat resolution nordkorea
Event—Resolution N. Korea	google.de	Nach einem erneuten Raketenstart Nordkoreas konnte sich der UN-Sicherh...
Event—Resolution N. Korea	google.de	Nach einem erneuten Raketenstart Nordkoreas konnte sich der UN-Sicherh...
Event—Resolution N. Korea	google.de	nordkorea veto russland
Event—Schulz TV debate	google.de	martin schulz offener brieg duell
Event—Schulz TV debate	google.de	Martin Schulz hat Angela Merkel in einem offenen Brief zu einem erneut...
Event—Schulz TV debate	google.de	schulz neues tv duell
Event—Schulz TV debate	google.de	Martin Schulz hat Angela Merkel in einem offenen Brief zu einem erneut...
Event—Schulz TV debate	google.de	TV duell schulz offener brief
Event—Volkswagen pledge	google.de	vw 2040 keine
Event—Volkswagen pledge	google.de	Volkswagen hat angekündigt%2C ab sp__testens 2040 keine Autos mit Verbr...
Event—Volkswagen pledge	google.de	volkswagen 2040
Event—Volkswagen pledge	google.de	Volkswagen verbrennungsmotor 2040
Event—Volkswagen pledge	google.de	Volkswagen 2040
Event—Bavaria rape	google.de	afghanen oberbayern vergewaltigung
Event—Bavaria rape	google.de	m__dchen 16 afgahnen veregwatigt
Event—Bavaria rape	google.de	vergewaltigung 16j__hriger in oberbayern
Event—Bavaria rape	google.de	16 j__hrige bayern
Event—CCC hackers	google.de	chaos computer club
Event—CCC hackers	google.de	chaos computer club bundestagswahl
Event—CCC hackers	google.de	russsiche hacker chaos sofware bundestagswahl
Event—CCC hackers	google.de	chaos computer club
Event—Coalition Gauland	google.de	gauland koalition mit fdp
Event—Coalition Gauland	bing.com	alexander gauland
Event—Coalition Gauland	google.de	afd koalition
Event—Coalition Gauland	google.de	gauland
Event—Coalition Gauland	google.de	Gauland koalition
Event—FDP third party	google.de	fdp bundestagswahl
Event—FDP third party	gutefrage.net	frage/wie-schaffen-wir-es-das-die-csu-auch-in-zukunft-staerkste-partei...
Event—FDP third party	welt.de	politik/bundestagswahl/article168296921/Ergebnis-und-Wahlsieger-im-Wah...
Event—FDP third party	google.de	maas
Event—Mexico earthquake	google.de	erdbeben mexiko 2017
Event—Mexico earthquake	google.de	erdbeben mexiko 2017
Event—Myanmar	google.de	myamar flucht
Event—Myanmar	google.de	myanmar
Event—Myanmar	google.de	myanmar
Event—Myanmar	google.de	myanmar
Event—Powder letters	google.de	drohbrioefe rasierklingen spitzenpolitiker
Event—Powder letters	news.google.com	news/search/section/q/drohbriefe/drohbriefe
Event—Powder letters	google.de	drohbriefe an politiker
Event—Powder letters	google.de	brief rasierklnge
Event—Rape stats	google.de	joachim hermann vergewaltigungen
Event—Rape stats	google.de	vergewaltigungen in deutschland gesunken
Event—Rape stats	google.de	Vergewaltigungen Herrman
Event—Tegel referendum	google.de	flughafen tegel
Event—Tegel referendum	google.de	flughafen tegel
Event—Tegel referendum	google.de	Volksentscheid tegel
Event—Tegel referendum	google.de	Volksentscheid zum Flughafen Tegel in Berlin haben mehr als 60%25 der ...
Event—Tegel referendum	google.de	volksentscheid tegel
Event—Tegel referendum	google.de	Abstimmung tegel
Event—Tegel referendum	google.de	volksentscheid tegel ergebnis
Event—Trump Iran	google.de	un generalversdmmlung atomabkommen
Event—Trump Iran	google.de	trump iran

E Documentation of Survey Items

Figure E1: Factual — Vote importance; waves 2 and 5

[**Translated**] In the federal election you have two votes, the first vote and the second vote. Which of the two is decisive for the relative strength of the parties in the Bundestag?
○ The first vote
○ **The second vote [CORRECT]**
○ Both are equally important
○ Don't know

Figure E2: Factual — Chancellor election; waves 2 and 5

[**Translated**] By whom is the chancellor of the Federal Republic of Germany elected?
○ Federal Council (Bundesrat)
○ Federal Convention (Bundesversammlung)
○ **Federal Parliament (Bundestag) [CORRECT]**
○ Cabinet of Germany (Regierungskabinett)
○ The Chancellor is not elected, they are determined by the strongest party in parliament
○ Don't know

Figure E3: Elite - Visual — Politician's party affiliation; waves 2 and 5

[**Translated**] Which party do the following politicians belong to? If you are not sure, please mark it.

- Christian Lindner **(FDP)**
- Dietmar Bartsch **(Die Linke)**
- Peter Altmaier **(CDU)**
○ CDU
- ...
○ AfD
○ Don't know

Figure E4: Elite - Visual — Politician's party affiliation; waves 2 and 5

[**Translated**] Which party do the following politicians belong to? If you are not sure, please mark it.

- Alice Weidel **(AfD)**
- Heiko Maas **(SPD)**
- Anton Hofreiter **(Die Grünen)**
- ○ CDU
- ...
- ○ AfD
- ○ Don't know

Figure E5: Elite - Visual — Politician's party affiliation; waves 2 and 5

[**Translated**] Which party do the following politicians belong to? If you are not sure, please mark it.

- Angela Merkel **(CDU)**
- Katrin Göring-Eckardt **(Die Grünen)**
- Martin Schulz **(SPD)**

○ CDU

- ...

○ AfD

○ Don't know

Figure E6: Elite - Verbal — Party leaders; wave 4

Kennen Sie den Namen von einem oder vielleicht sogar mehreren der Spitzenkandidaten der folgenden Parteien? Bitte nennen Sie uns in diesem Fall den oder die Namen in den entsprechenden Feldern!

☐ CDU/CSU: [   ]

☐ SPD: [   ]

☐ FDP: [   ]

☐ Die Linke: [   ]

☐ B'90/Die Grünen: [   ]

☐ AfD: [   ]

[**Translated**] Do you know the name of one or even more of the top candidates from the following parties? In this case, please tell us the name, or names, in the corresponding fields.

○ CDU/CSU

• ...

○ AfD

Figure E7: Events; wave 2

YouGov

Im Folgenden sehen sie einige Ereignisse, die in den letzten Wochen stattgefunden haben oder nicht. Bitte wählen Sie die Ereignisse aus, von denen Sie wissen oder glauben, dass sie tatsächlich stattgefunden haben!

- ☐ Der UN-Sicherheitsrat hat einstimmig härtere Sanktionen gegen Nordkorea beschlossen.
- ☐ Wegen möglicher Belastung durch das Insektizid Fipronil nehmen einige deutsche Supermarktketten Eier aus dem Sortiment.
- ☐ US-Präsident Donald Trump hat einen General zum neuen Stabschef ernannt.
- ☐ Ein Palästinenser hat in einem Supermarkt in Hamburg auf Menschen eingestochen.
- ☐ Beim Dieselgipfel haben sich die Autohersteller zur kostenlosen Hardware-Updates von Euro-5- und Euro-6-Fahrzeugen verpflichtet.
- ☐ Bundesverkehrsminister Dobrindt hat das Aus für Dieselfahrzeuge bis 2030 gefordert.
- ☐ Der US-Senat hat die Abschaffung von Obamacare beschlossen.
- ☐ Ein vom bolivianischen Präsidenten Evo Morales initiiertes Verfassungsreferendum hat zu Massenprotesten geführt.
- ☐ SPD-Kanzlerkandidat Schulz hat die Einführung eines bedingungslosen Grundeinkommens gefordert.
- ☐ Die Grünen-Abgeordnete Elke Twesten hat ihre Fraktion im niedersächsischen Landtag verlassen.
- ☐ keines der genannten Ereignisse hat sich zugetragen

[**Translated**] Below are some events that have or have not occurred in the past few weeks. Please select the events you know or believe actually happened.

- ○ The UN Security Council has unanimously approved tougher sanctions against North Korea. [TRUE]
- ○ Some German supermarket chains are removing eggs from the range due to the potential contamination with the insecticide fipronil. [TRUE]
- ○ US President Donald Trump has appointed a general as the new chief of staff. [TRUE]
- ○ A Palestinian person stabbed people in a supermarket in Hamburg [TRUE]
- ○ At the Diesel Summit, the car manufacturers committed themselves to free hardware updates for Euro 5 and Euro 6 vehicles. [FALSE]
- ○ Federal Transport Minister Dobrindt has called for the end of diesel vehicles by 2030. [FALSE]
- ○ The US Senate has decided to abolish Obamacare. [FALSE]
- ○ A constitutional referendum initiated by Bolivian President Evo Morales has led to mass protests. [FALSE]
- ○ SPD candidate for chancellor Schulz has called for the introduction of an universal basic income. [FALSE]
- ○ The Green MP Elke Twesten has left her parliamentary group in Lower Saxony. [TRUE]
- ○ None of the events mentioned have occurred.

Figure E8: Events; wave 3

YouGov

Im Folgenden sehen sie einige Ereignisse, die in den letzten Wochen stattgefunden haben oder nicht. Bitte wählen Sie die Ereignisse aus, von denen Sie wissen oder glauben, dass sie tatsächlich stattgefunden haben!

☐ In der Türkei sind zwei deutsche Staatsbürger aufgrund politischer Vorwürfe festgenommen worden.

☐ Die Fluggesellschaft Ryanair hat angekündigt, große Teile der insolventen Fluglinie Air Berlin übernehmen zu wollen.

☐ keines der genannten

☐ Der bisherige AfD-Fraktionsvize in Mecklenburg-Vorpommern Arppe ist nach Vorwürfen zu gewaltverherrlichenden Äußerungen in Online-Chats zurückgetreten.

☐ Die EU-Kommission hat sich bereiterklärt, sich an den Kosten für den Bau eines Grenzzauns an der ungarischen Grenze zum Balkan zu beteiligen.

☐ SPD-Kanzlerkandidat Schulz hat ein Konzept für eine Bildungsreform vorgestellt.

☐ Nordkorea hat den Test einer Wasserstoffbombe vermeldet.

☐ Angela Merkel hat die deutschen Automobilhersteller aufgefordert, kostenlose Hardware-Updates zur Verfügung zu stellen.

☐ Angela Merkel eine Koalition mit den Grünen zu Ihrer Wunschkoalition nach der Wahl erklärt.

☐ Die Arbeitslosenquote ist im August auf unter 4% gesunken.

☐ Durch einen Hurrikan sind weite Teile von Südtexas überflutet worden.

[**Translated**] Below are some events that have or have not occurred in the past few weeks. Please select the events you know or believe actually happened.

○ Two German citizens have been arrested in Turkey on political charges. [TRUE]

○ The airline Ryanair has announced that it intends to take over large parts of the insolvent airline Air Berlin. [FALSE]

○ None of the events mentioned have occurred.

○ The previous AfD parliamentary deputy in Mecklenburg-Western Pomerania Arppe has resigned after allegations of expressions glorifying violence in online chats. [TRUE]

○ The EU Commission has agreed to contribute to the costs of building a border fence on the Hungarian border with the Balkans. [FALSE]

○ SPD chancellor candidate Schulz has presented a concept for an educational reform. [TRUE]

○ North Korea has announced the test of a hydrogen bomb. [TRUE]

○ Angela Merkel has asked German car manufacturers to provide free hardware updates. [FALSE]

○ Angela Merkel declared a coalition with the Greens as her desired coalition after the election. [FALSE]

○ The unemployment rate fell below 4% in August. [FALSE]

○ Large parts of southern Texas have been flooded by a hurricane. [TRUE]

Figure E9: Events; wave 4

Figure E10: Events; wave 5

References

Ansolabehere, Stephen and Brian F. Schaffner. 2014. "Does Survey Mode Still Matter? Findings from a 2010 Multi-Mode Comparison." *Political Analysis* 22(3):285–303.

Best for Planning. 2017. *Berichtsband b4p 2017*. Gesellschaft für integrierte Kommunikationsforschung.

Burnett, Craig M. 2016. "Exploring the difference in participants' factual knowledge between online and in-person survey modes." *Research & Politics* 3(2):2053168016654326.

Clifford, Scott and Jennifer Jerit. 2014. "Is there a cost to convenience? An experimental comparison of data quality in laboratory and online studies." *Journal of Experimental Political Science* 1(2):120.

Clifford, Scott and Jennifer Jerit. 2016. "Cheating on Political Knowledge Questions in Online Surveys: An Assessment of the Problem and Solutions." *Public Opinion Quarterly* 80(4):858–887.

Gummer, Tobias and Tanja Kunz. 2019. "Relying on External Information Sources When Answering Knowledge Questions in Web Surveys." *Sociological Methods & Research* p. 0049124119882470.

Höhne, Jan Karem, Carina Cornesse, Stephan Schlosser, Mick P Couper and Annelies G Blom. 2021. "Looking Up Answers to Political Knowledge Questions in Web Surveys." *Public Opinion Quarterly* .

Jensen, Carsten and Jens Peter Frølund Thomsen. 2014. "Self-reported cheating in web surveys on political knowledge." *Quality & Quantity* 48(6):3343–3354.

Menchen-Trevino, Ericka. 2013. "Collecting vertical trace data: Big possibilities and big challenges for multi-method research." *Policy & Internet* 5(3):328–339.

Motta, Matthew P, Timothy H Callaghan and Brianna Smith. 2017. "Looking for answers: identifying search behavior and improving knowledge-based data quality in online surveys." *International Journal of Public Opinion Research* 29(4):575–603.

Rivers, Douglas. 2006. "Sample matching: Representative sampling from internet panels." *Polimetrix White Paper Series* .

Shulman, Hillary C and Franklin J Boster. 2014. "Effect of test-taking venue and response format on political knowledge tests." *Communication Methods and Measures* 8(3):177–189.

Smith, Brianna, Scott Clifford and Jennifer Jerit. 2020. "How Internet Search Undermines the Validity of Political Knowledge Measures." *Political Research Quarterly* 73(1):141–155.

Stier, Sebastian, Johannes Breuer, Pascal Siegers and Kjerstin Thorson. 2020. "Integrating Survey Data and Digital Trace Data: Key Issues in Developing an Emerging Field." *Social Science Computer Review* 38(5):503–516.

Strabac, Zan and Toril Aalberg. 2011. "Measuring political knowledge in telephone and web surveys: a cross-national comparison." *Social Science Computer Review* 29(2):175–192.

Style, Hillary and Jennifer Jerit. 2021. "Does it Matter if Respondents Look up Answers to Political Knowledge Questions?" *Public Opinion Quarterly* 84(3):760–775.