

Opt-in Online Research: What Could Possibly Go Worng?

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Fuhgedaboudit?

Let's forget for the moment that... per AAPOR...

- “The nonprobability character of volunteer online panels... violates the underlying principles of probability theory”
- “...claims of ‘representativeness’ should be avoided when using these sample sources.”
- “The reporting of a margin of sampling error associated with an opt-in or self-identified sample is misleading.”

<https://aapor.org/wp-content/uploads/2022/11/nfq048.pdf>

While we're forgetting...

Opt-in samples do not perform as well as probability-based samples in estimating population characteristics (Cornesse, et al., 2020; Dutwin & Buskirk, 2017; Lavrakas, et al., 2022; Lehdonvirta, et al., 2021; MacInnis, et al., 2018; Mercer & Lau, 2023; Pasek & Krosnick, 2010).

Opt-in samples produce less accurate estimates of political and social attitudes and behaviors than probability-based samples (Bradley, et al., 2021; Lavrakas, et al., 2022; Legleye, et al., 2018; Lehdonvirta, et al., 2021; Pennay, 2018; Sohlberg, et al., 2017; Rohr, et al., 2025; Sturgis, et al., 2018; Yeager, et al. 2011).

Associations among variables sometimes differ when estimated based on data from opt-in samples versus data from probability-based samples (Jerit & Barabas, 2023; Einarsson, et al., 2022; Pasek & Krosnick, 2010; Pekari, et al., 2022; Rohr, et al., 2025; Zack, et al., 2019).

Statistical adjustments used to remove bias in opt-in surveys do not consistently improve accuracy (Bradley, et al., 2021; Einarsson, et al., 2022; Lavrakas, et al., 2022; MacInnis, et al., 2018; Pasek, 2016; Pennay, 2018; Rohr, et al., 2025; Sturgis, et al., 2018).

Pape and Price, 2026: “We find that disengagement is far less prevalent in probability panels, and that the effects of disengagement and question wording are less pronounced than in opt-in panels...”



Instead let's wonder

- Who's opting in to take these surveys?
 - Are they... people?
 - Are they... one person?
 - Are they... who and where they claim to be?
- If so,
 - Are they... being honest?
 - Are they... paying attention?
 - Are they... being monitored effectively?



Oops



(Or, how fares Frank Hayden)

PRESS RELEASE

Eight Defendants Indicted in International Conspiracy to Bill \$10 Million for Fraudulent Market Survey Data

<https://www.justice.gov/usao-nh/pr/eight-defendants-indicted-international-conspiracy-bill-10-million-fraudulent-market>

From 2014-2024, senior leaders at Op4G (later Slice) “decided to increase company revenues by generating fabricated survey data. To execute the scheme, some of the defendants recruited ‘ants,’ who pretended to be legitimate survey takers but instead were paid a nominal fee for completing surveys that produced fraudulent market research data.”

PRESS RELEASE

Third Man Pleads Guilty for Role in \$10 Million International Fraudulent Market Survey Conspiracy

<https://www.justice.gov/usao-nh/pr/third-man-pleads-guilty-role-10-million-international-fraudulent-market-survey>

Hayden, first to plead, was to be sentenced May 12, 2026; continued to Aug. 11.
He faces up to 20 years in prison.

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Some may say it's a one-off

Industry observers are not so sure.

“...everyone in the research industry knows this is happening.”

<https://www.thevoiceofuser.com/breaking-slicemr-and-op4g-indicted-for-10-million-survey-fraud-that-shocked-absolutely-no-one/>

“...the tip of the iceberg”

https://www.linkedin.com/posts/datafairy_mrx-dataquality-activity-7318626806381584384-va7U/

“...a wake-up call”

<https://www.linkedin.com/pulse/op4g-slice-mr-fall-out-fresh-insights-friday-kelvin-claveria-jpwcc/>

But who needs ants? When you've got bots.



Westwood (2025) demonstrated how AI can be used to produce undetectable falsification – including manipulation of results – in unsupervised opt-in panels.

<https://www.pnas.org/doi/10.1073/pnas.2518075122>

Van der Stigchel, et al., (2026) extend Westwood's findings to AI falsification in behavioral experiments.

<https://www.pnas.org/doi/full/10.1073/pnas.2535585123>

Westwood & Frederick (2026) elevated their concern: “Here, we present direct evidence that AI contamination of online research panels is not ‘potential’ but a measurable present reality.”

<https://pmc.ncbi.nlm.nih.gov/articles/PMC12933150/>

Zhang, et al., (2026), assessing multiple panels, found evidence of AI bots in 6 to 19.6 percent of cases (rising to 41 percent in one); “...an urgent need for AI detection tests and consistent, systematic monitoring of data quality on online platforms...”

https://osf.io/preprints/psyarxiv/xcg26_v1

POV



Zhang, et al., indicate that they see 6% AI (in the Prolific panel) as “a low rate.”

Westwood & Frederick call net of 4.4% AI (again in Prolific) “a contamination rate exceeding the margin of error (*sic*),” “a lower bound on true AI prevalence” and grounds for alarm.

A Prolific sales rep told us their detection identifies 100% of bots and 99% of LLMs.

Who monitors the monitors?

Some providers use only their own panels.

Others supplement their panels with other panels, not always specified.

Many panels are available via panel aggregator platforms – without providing panel-specific details.

Gordon, et al., (2026): “Human data quality varied substantially by platform type, with direct panels outperforming hybrid platforms, which outperformed marketplace platforms, across nearly all measures.”

And there’s a new industry of QC intermediaries, claiming, e.g., cross-panel checks.

Open exchange groups

Search suppliers Q

Add to group ▾

Block

▾ Default group (367)

- CRG Global, Inc. - OTC
- 37.672.133 MAURICELIO ALVES GOMES - Engage
- 7 Points Sp. Z.O.o. - Engage
- 99 Ventures - API
- 99 Ventures - API (testing)
- 99 Ventures - Link
- A One Market Research - Match
- A-K International
- Acutus AI Insights Pvt Ltd. - Feed
- Acutus AI Insights Pvt Ltd. - Match
- Adnitech LLC - Link
- AdScend New - Link
- Aeon Research - Link
- Aeonem GMBH - Match
- Afrisight - Feed
- Airtools - Match
- Almedia AG - API
- Alpha Poll-API
- Apex

Aggregator sites such as Cint and PureSpectrum list hundreds of panels – with, as far as we see no details on panel creation and management.

Cint sales rep: "Our U.S. and other global panels follow ESOMAR compliance."

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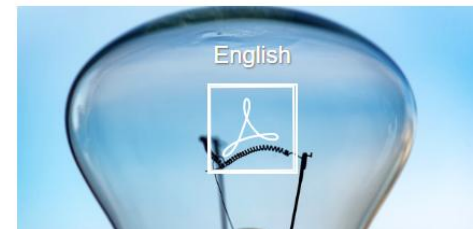
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ESOMAR/GRBN Guideline on Online Sample Quality

This ESOMAR/GRBN Guideline on Online Sample Quality will help researchers and clients understand how the changing features of online sampling, from online panels to routers to exchanges, and emerging quality assurance practice can improve data quality.

It sets out best practice in:

- Research participant validation to ensure the respondent falls within the description of the research sample.
- Survey fraud prevention to ensure the same person doesn't try to receive more incentives by completing a survey more than once.
- Survey engagement to ensure that the respondent is paying sufficient attention.



404

Page Not Found

We're sorry, but the page you're looking for doesn't exist. It may have been moved, deleted, or you entered the wrong URL.

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Recruitment and QC

One panel provider told us recruitment was “by invitation,” implying some selection process. Upon probing, we learned that a banner ad on a social media site is construed as an invitation.

Another told us recruitment was “by word of mouth.” Upon probing, we learned that social media ads and list-based campaigns are used.

Panel providers claim a range of panel recruitment and maintenance controls, e.g., VPN and TOR blocking, IP address checks, email domain checks, gov’t ID checks, double-opt-in enrollment, “bank-level” validation, digital fingerprinting, MFA, panelist quality flagging, incentive redemption controls. Intermediaries offer cross-panel duplication checks, high-volume respondent checks, “no fly lists.”

We’ve asked for and await evidence, e.g., dispositions.

Discussion with a sales rep

250K panelists; 1m on waiting list. “13% make it on.”

-What does that mean?

Payment: Recommended minimum \$8/hr.

If 5 min survey? “Pro-rated.”

-So, 67 cents.

Substantive removals in QC: Typically 3%

-Our experience elsewhere – 15% or more. So either... or...

Platform “rule book” – not the client - sets QC standards for replacement.

-Uh-oh

Routers?



1. Do you drink beer? —————> Routed to beer drinkers survey
2. Do you chew gum? —————> Routed to gum chewers survey (which includes no beer drinkers)
3. Are you registered to vote? —————> Routed to political survey (which includes neither beer drinkers nor gum chewers)

Now imagine the routed-out groups are relevant to your research question.

In short: How respondents are directed into your survey is generally unknown and unobservable.

Soooo, let's do a survey

1. Do you engage in any of the following activities on a regular basis?

- a. Tiddlywinks
- b. Skydiving
- c. Equestrian jumping
- d. Crocheting
- e. Home brewing

A: YES YES YES YES YES!

(Straightlined, to screen in for my 67 cents)

2. (ASK SKYDIVERS) What's your favorite brand of parachute? (Select one)

- a. Dewdrop
- b. Butterfly
- c. Plungemaster
- d. Hard Stop
- e. Other (write in)

A: Um, Butterfly!

(Except... it doesn't exist. Red herring.)

QC is essential – and you have to design for it.

Risks (1)

“Statistics suggesting a rise in church attendance among the Gen Z generation, coining the widely used term “the quiet revival,” have now been found to be unreliable.

“YouGov, which carried out the two surveys in 2024 after being commissioned by the Bible Society, has apologised after admitting it recently found major flaws in its data collection.

“It said that, due to human error, a range of quality control technologies were not activated. These systems are designed to filter out respondents outside the country of study, as well as those who attempt the survey multiple times or complete it too quickly or inattentively.”

<https://premierchristian.news/en/news/article/we-re-deeply-disappointed-quiet-revival-data-found-to-be-inaccurate>



YouGov: “new and additional better tools and techniques” since that study’s 2024 fieldwork found that “specific demographic groups particularly emphasised in this survey contained a number of respondents who we can now identify as fraudulent.

“This occurred at a higher rate than typical amongst other polls at the time and enough to make a few points difference to the key result. This was because some of the anti-fraud measures available in 2024 were not administered in the optimal way.”

“Online market research has come under increasing attack by fraudsters in the past several years.”

<https://yougov.com/en-gb/articles/54406-conclusions-of-investigation-into-2024-bible-society-study>

There but for the grace of God go I

Bible Society: “...as a client we weren't able to access the systems YouGov uses to detect ineligible respondents and had to rely on their assurances that these had been properly applied. This turned out not to be the case.”

<https://www.biblesociety.org.uk/quiet-revival-faqs>

Risks (2)

Responding to the Bible Society study retraction, the Orthodox Studies Institute posted in April 2026 on an opt-in online study of its own. It reported a high level of QC rejection of people who claimed to be Orthodox Christians, as well as, in the cleaned sample, “dozens and dozens of nonsensical responses.”

Among the anomalies, “bewilderingly, more than a quarter of the people who identified as Macedonian Orthodox were black or Hispanic.” Similarly, 23% of those claiming to be Armenian Orthodox also were said to be Black or Hispanic people, as were 34% of Romanian Orthodox, a “laughable” result.

In the same study, responses to open-end questions “were obviously AI-generated.”

In sum: “The results were unbelievable. As in, literally, we did not believe them.”

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Risks (3)

Posting on aapornet:

“Americans are drinking bleach – retracted

“Young adults are going to church more – retracted

“1-in-5 young adults think the Holocaust was a myth – retracted

“Americans have high levels of support for political violence – not supported.”

Re: MOE

- AAPOR Code

- “Reports of non-probability sample surveys will only provide measures of precision if they are defined and accompanied by a detailed description of how the underlying model was specified, its assumptions validated, and the measure(s) calculated.”

https://aapor.org/wp-content/uploads/2022/12/AAPOR-2020-Code_FINAL_APPROVED.pdf

- CHIP50

- “In making inferences from data, statistical significance tests and confidence intervals with nonprobability samples are technically inappropriate. Yet, CHIP50 follows the common practice in using these approaches...”

<https://www.chip50.org/survey-methodology>

- AP VoteCast

- “Although there is no statistically agreed upon approach for calculating the margin of sampling error for nonprobability samples, these margins of sampling error are estimated using a measure of uncertainty that incorporates the variability associated with the poll estimates, as well as the variability associated with the survey weights as a result of calibration. After calibration, the nonprobability sample yields approximately unbiased estimates. “

https://apnorc.org/wp-content/uploads/2025/03/Methodology_2024-FINAL.pdf

What's a researcher to do?

- Follow the literature
- Be skeptical, stay alert to unsupported claims, dog down details
- Ask for evidence of recruitment and maintenance QC outcomes
- Ask about and avoid routers
- Take over scripting and hosting
- Set logic traps, attention traps, timestamps
- Apply your own substantive QC with replacements on your terms

Trap suggestions



Jaffe, et al. (2026):

- Typing speed
- No pasting
- reCAPTCHA v3
- Device fingerprinting
- OE AI checks
- Speeding

Martherus, et al. (2025): “reverse shibboleth”

(among others)

Affonso (2026):

“Cognitive Trap Framework”

- Perception of visual patterns
- Spatiotemporal models (predicting motion)
- Spatial reasoning (constructing imaginary paths)
- Cross-modal binding (recognizing which single object possesses multiple combined features)

Are we having fun yet?

The Traps Trap

In sum we're looking at an IT security arms race, in which clever QC checks and question traps need to be constantly re-evaluated as models improve, with risk of misses, false positives – and burden to human respondents.

And yet...

...For all the heroics

Remember what we started by trying to forget.

- “The nonprobability character of volunteer online panels... violates the underlying principles of probability theory”
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<https://aapor.org/wp-content/uploads/2022/11/nfq048.pdf>



Buyer Beware

- Exercise due diligence (not easy)
- Design for and execute independent review
- Abjure unsupported claims of representativeness and a calculable margin of sampling error

Thank you

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