

— METHODOLOGY PAPER

DATA QUALITY · STRAIGHT-LINING

Straight-*Lining*

A Methodology for Detecting Pattern Answering – and Designing It Out

A respondent who answers every row of a grid the same way may be bored, rushing, or genuinely consistent — and a detector that cannot tell the difference either keeps careless data or deletes real opinion. This is a vendor-neutral guide to reading straight-lining as a pattern against the sample, knowing where it does the most damage, and designing the grids that invite it out of the instrument.

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“A flat line down a grid is not always carelessness — and not always an opinion. The work is telling the two apart before either is treated as data.”

PHOTO: KC SHIM / UNSPLASH

ABSTRACT

Straight-lining is the practice of answering every row of a grid or matrix the same way — a flat line down a single column of a rating scale. It is one of the most visible response-pattern signals of **satisficing**: settling for an answer that is good enough rather than reading and rating each item. But uniform answers are not always careless. A respondent who genuinely rates every attribute of a familiar product highly produces the same flat line as one who never read a word — and a detector that cannot separate the two either passes inattentive data or deletes legitimate opinion.

This paper treats straight-lining as a **pattern read against the sample**, not a verdict read off one respondent. It defines what straight-lining **is and is not**; explains why **grids invite it**; sets out how **variance and pattern analysis** detect it; names **where it does the most damage** — attribute-rating, importance and driver work, segmentation, and tracking; and shows how the grids that cause it can be **designed out**. It closes by redrawing one fatigue-inducing grid. It is the response-pattern companion to the timing study of No. 143 and one of the five integrity questions of No. 142.

CONTENTS

01	What straight-lining is — and isn't	Careless line vs. genuine pattern
02	Why grids invite it	Fatigue built into the matrix
03	Reading the pattern	Variance against the sample
04	Where it does the most damage	Ratings, drivers, segments, trackers
05	Designing it out	Prevention in the questionnaire
06	The grid, redrawn	One matrix, before and after

WHO THIS IS FOR

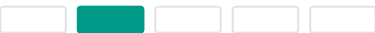
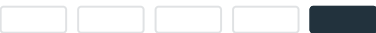
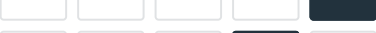
Research buyers and insights leads who see "straight-liners removed" on a QC report and want to know how the call was made; **agency and brand researchers** writing grid-heavy attribute, satisfaction, and tracking studies; and **data-quality teams** calibrating non-differentiation rules. No technical background is assumed; practitioners can skip to detection in Section 03.

01 THE PREMISE

The same flat line can be carelessness — or a real opinion.

Straight-lining is non-differentiation: selecting the same scale point for every item in a battery that shares one response scale. As a behaviour it is a classic marker of satisficing — answering well enough to finish rather than reading each row.² As a pattern, though, it is ambiguous: an identical column of high ratings is exactly what a delighted, attentive customer produces and exactly what an inattentive one produces. The detector's whole job is to separate the two.

Three respondents, one grid

REMOVE CANDIDATE Careless flat-line	HEALTHY Genuine variation	PLAUSIBLE — PROTECT Genuine consistency
		
		
		
		
		

Identical midpoint on every row, including a reverse-worded item — zero variance, the signature of not reading.

The scale is used across its range — the respondent discriminated between items, as the question intends.

Uniformly high but not flat — small, consistent movement that reads as a held opinion, not non-reading.

COLUMNS = A SHARED 5-POINT RATING SCALE • ROWS = ATTRIBUTES IN ONE BATTERY

THE REFRAMING

The question is never "did they straight-line?" A flat answer is a flag, not a finding. It is "is this uniformity the absence of reading, or the presence of a real, consistent view?" — and what else in the data agrees.

02 THE MECHANISM

Straight-lining is mostly a property of the grid, not the person.

Non-differentiation rises where the instrument makes reading every row feel pointless. The matrix question — many items, one repeated scale, presented as a single dense wall — is the format that most reliably produces it. Before treating a flat line as a respondent's failing, it is worth seeing how much of it the questionnaire manufactured.

What pushes a respondent into the flat line

LENGTH & REPETITION

Long batteries, repeated scales

A grid with many rows on the same scale invites a rhythm: pick a column, repeat down the page. Fatigue accumulates within the grid and across a long instrument.

LAYOUT

Dense matrix on a small screen

A wide matrix squeezed onto a phone is hard to read row by row, so respondents anchor on one answer and carry it down — straight-lining as a layout artefact.

COGNITIVE LOAD

Items that blur together

Near-synonymous or abstract attributes are hard to tell apart, so a tired respondent stops trying to differentiate and flattens the scale.

CONDITIONING

Practised panel behaviour

Straight-lining tends to **increase** with a respondent's panel experience — a learned shortcut for getting through familiar grids efficiently.²

WHY THIS MATTERS FOR DETECTION

If the grid manufactures the behaviour, the fix is partly the grid — a point Section 05 builds on. It also means a fair detector reads straight-lining **against the same instrument's own sample**: the question is whether this respondent flattened a grid that most others differentiated, not whether they matched an absolute rule carried over from another study.¹

03 DETECTION

Measure how little a respondent's answers vary — five ways.

Detection turns "looks flat" into something measurable: the variance and pattern of a respondent's answers within a battery, judged against how the rest of the sample answered the same grid. The methodology literature offers several established, complementary measures of non-differentiation — no single one is definitive, so strong practice reads more than one together.¹

01 Simple non-differentiation How many adjacent items received the identical answer — the most direct count of "same again."	02 Root of pairs The average difference across every pair of items — small values mean the answers barely move apart.	03 Maximum identical run The longest unbroken streak of one value — a long run is the literal straight line down the grid.	04 Battery standard deviation The spread of one respondent's answers across the grid — near-zero spread flags a flat response.	05 Scale-point variation How many distinct points on the scale were used at all — using one or two of five is a warning.
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FIVE NON-DIFFERENTIATION MEASURES • READ TOGETHER, AGAINST THE SAMPLE — NOT AS A SINGLE CUTOFF

Read against the sample, not an absolute

Because some grids are genuinely uniform for everyone, a low-variance answer is only suspicious relative to **how others answered the same battery**. A respondent who flat-lined a grid the rest of the sample clearly differentiated is a far stronger candidate than one whose uniformity the whole sample shares.

One flat grid isn't proof

As with timing, a single straight-lined grid raises scrutiny rather than triggering deletion. The case strengthens when the pattern **recurs** across several grids, and when it **coincides with other signals** — most tellingly speed: a respondent racing a grid is more likely to flat-line it, so the two together corroborate.¹

BUYER'S QUESTION

Ask: "Is a straight-liner removed on one grid, or on a recurring pattern that other signals confirm?" The second is the defensible rule.

04 IMPACT

Straight-lining hurts most exactly where grids carry the finding.

Straight-lining is not uniformly harmful — its damage depends on what the grid is measuring. The studies most exposed are the ones that depend on respondents differentiating between items: when everyone is artificially flat, the very signal the analysis needs is erased. The grid questions that invite straight-lining are often the ones carrying the most important metrics.

MOST EXPOSED**Attribute & image ratings**

Brand-attribute and satisfaction batteries depend entirely on the gaps **between** attributes. Flat answering flattens those gaps, pulling every attribute toward the same mean.

MOST EXPOSED**Importance & driver analysis**

Derived-importance and key-driver models read the **variance** in ratings to find what matters. Non-differentiation starves them of variance and destabilises which drivers surface.

EXPOSED**Segmentation**

Segments are built from **differences** in response profiles. Straight-liners cluster into artefactual "all-the-same" groups that do not describe real people.

EXPOSED**Tracking**

If the share of straight-liners drifts wave to wave, a tracker can show **movement that is a data-quality shift**, not a real change in the market.

THE DIRECTIONAL POINT

Like undetected fraud, straight-lining is not random noise that averages out — it is a **systematic pull toward the middle and toward sameness**. Left in, it does not just add error; it quietly biases means, compresses differences, and weakens exactly the comparisons a grid study exists to make.

05 PREVENTION

The cheapest straight-liner to remove is the one the design prevents.

Detection cleans up after the fact; design stops the behaviour before it starts. Because so much straight-lining is manufactured by the grid, the highest-leverage work happens in the questionnaire — long before any QC rule runs. Prevention does not replace detection, but it shrinks the problem detection has to solve and spares the genuine respondent the fatigue that produces false flags.

Design moves that lower the risk

- ◆ **Shorten and split** long batteries into themed blocks so the rhythm of repetition never sets in.
- ◆ **Randomise item order** so any straight-line cuts across unrelated attributes, making it both rarer and easier to spot.
- ◆ **Include a reverse-worded item** so a true flat-liner contradicts themselves — a built-in tell.
- ◆ **Design for mobile** with card or accordion layouts instead of a wide matrix crammed onto a phone.
- ◆ **Cut redundant scales** and near-duplicate attributes that give respondents nothing new to differentiate.

Why design beats deletion

Every straight-liner prevented is a respondent who stayed engaged and gave usable data — not one removed and replaced. Good grid design also protects the **genuinely consistent** respondent of Section 01: when the instrument makes differentiation easy, a remaining flat line is far more likely to be real, so detection can act with more confidence and less collateral removal.

THE BALANCE TO HOLD

Prevent what design can prevent; detect what remains against the sample; and corroborate before removing — so a held opinion is never mistaken for a missing one.

06 BEFORE & AFTER

One grid, redrawn to resist the flat line.

The clearest way to end is to put the two grids side by side: the same fifteen attributes as a fatigue trap, and as an instrument built to keep respondents differentiating. Nothing about the research question changes — only the design that surrounds it, and with it the share of flat lines QC will ever have to judge.

BEFORE	The fatigue trap	AFTER	Designed to differentiate
✗	One 15-row matrix on a single screen, every row on the same 7-point scale.	◆	Three themed blocks of five , each a short battery that never builds a rhythm.
✗	Fixed item order for every respondent, so flat lines are invisible and patterns repeat.	◆	Randomised item order , so any straight-line crosses unrelated attributes and stands out.
✗	Every attribute positively worded — no internal check on a flat-liner.	◆	One reverse-worded item per block — a true flat-liner now contradicts themselves.
✗	Wide desktop matrix shrunk onto mobile, unreadable row by row.	◆	Mobile-first card layout , one attribute in clear focus at a time.
✗	Near-duplicate attributes a tired respondent cannot meaningfully separate.	◆	Redundant attributes cut , leaving items that genuinely ask to be told apart.

WHERE THIS SERIES GOES DEEPER

No. 143	Speeder detection. The timing signal straight-lining most often travels with — speed plus a flat grid corroborate each other.
No. 142	Respondent validation. Straight-lining is one of its five integrity questions; this paper is its response-pattern deep-dive.
No. 137 • 138	QC framework & fraud detection. The process and the wider signal stack non-differentiation sits inside.

▲ CONCLUSION

Read the line against the sample; design the grid that drew it.

Straight-lining is one of the most visible quality signals in grid research and one of the easiest to misread. A flat column of answers can be the absence of reading or the presence of a real, consistent opinion, and a rule that cannot tell them apart either keeps careless data or deletes legitimate views. The durable approach measures non-differentiation several ways at once, reads it against how the rest of the sample answered the same grid, treats a single flat line as a flag to corroborate rather than a verdict, and removes only on a recurring pattern other signals confirm — while doing the higher-leverage work upstream, designing the grids that manufacture the behaviour out of the instrument. Done this way, detection protects the finding from non-differentiation and from over-zealous cleaning. Recognised conduct and service-quality frameworks let buyers ask for that rigour in consistent terms.^{3,4}

§ REFERENCES

- [1] Kim, Y., Dykema, J., Stevenson, J., Black, P., & Moberg, D. P. **“Straightlining: Overview of Measurement, Comparison of Indicators, and Effects in Mail-Web Mixed-Mode Surveys.”** Social Science Computer Review 37, no. 2 (2019): 214-233. (Compares five non-differentiation measures; straightlining read against the sample.)
- [2] Schonlau, M., & Toepoel, V. **“Straightlining in Web Survey Panels Over Time.”** Survey Research Methods 9, no. 2 (2015): 125-137. (Straightlining as a satisficing indicator; its increase with panel experience.)
- [3] ICC/ESOMAR. **International Code on Market, Opinion and Social Research and Data Analytics.** ICC & ESOMAR. (Conduct and transparency in quality control.)
- [4] International Organization for Standardization. **ISO 20252:2019 — Market, opinion and social research, including insights and data analytics — Vocabulary and service requirements.** Geneva: ISO, 2019.

References are cited for the documented measurement methods for non-differentiation, the satisficing relationship and panel-conditioning effect they establish, and the conduct/quality frameworks referenced — not for any operational figure transferred to this paper. This paper publishes no straight-lining-rate, removal-rate, or threshold-value statistics; every detection threshold is study-specific and read against the sample's own distribution. “Aligned to ISO 20252” denotes conformance with the standard's framework, not third-party certification; any turnaround estimate is a modelled feasibility range, not a guarantee.

Ask us how we'd detect straight-lining against the sample — and design it out of your grids before fielding — and we'll return a modelled feasibility range, typically within 24 hours.

§ ABOUT

CatalystMR

CatalystMR is a global market-research panel and fieldwork partner specialising in **hard-to-reach B2B, healthcare, and niche audiences**. We evaluate straight-lining **against the sample and across multiple grids**, alongside timing, attention checks, duplicate detection, and open-end quality — removing flat, inattentive completes while **preserving respondents whose uniform answers read as genuine**.

Wherever possible we work upstream, **advising on grid and questionnaire design** that lowers straight-lining before fielding; borderline completes are **replaced rather than silently deleted**.

Compliance posture: our methodology is aligned to the ESOMAR Code and Guidelines and the ISO 20252 framework, and we are certified under the EU-U.S., UK, and Swiss Data Privacy Frameworks, with personal data siloed from response data.

STRAIGHT-LINING

NON-DIFFERENTIATION

GRID DESIGN

DATA QUALITY

ESOMAR CODE

ISO 20252

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