

Same Fact, Different Reader

Reader preferences may change how evidence is rendered. They should not silently change the evidence, uncertainty or editorial frame underneath.

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Different readers can receive different representations of the same evidence without receiving different evidence.

Imagine two readers opening the same article. The newsroom has stored a reported amount of US\$1,000. For illustration, assume it has also created a Danish-krone representation using an explicitly selected exchange rate, date and rounding method. The number below is illustrative, not a current exchange-rate quote.

One sees:

US\$1,000

The other sees:

Approximately 6,300 DKK

Original amount: US\$1,000

They are not reading two different facts. They are seeing two different representations of the same underlying monetary observation.

That distinction sounds simple. It becomes important as soon as journalism starts treating facts as structured objects rather than fixed strings of text. This is not a proposal to generate a different truth for every reader. It is the opposite: the reader's settings should not change the evidence state.

That state can still change through a sourced, documented editorial update or correction. The representation can change too, but it should not quietly become a new fact.

The fact is not the format

Digital publishing often binds the fact and its presentation together.

A journalist writes:

The town is 10 kilometres away.

The published object becomes the sentence.

But the underlying measurement could just as well be represented as:

6.2 miles

for a reader who uses imperial units.

The quantity, source and observation have not changed. Only the representation has. The road has not become shorter; it has merely changed clothes.

The same is true for dates. 2026-10-04 can appear as 4 October 2026, October 4, 2026 or 4. oktober 2026.

Unicode CLDR provides locale data for rendering numbers, currencies, dates and related formats according to regional conventions. Journalism can use the same separation between stored value and reader-facing representation.

Adapt the representation, not the evidence.

Not all transformations are equal

The difficult part is deciding when a transformation stops being presentation and starts becoming editorial.

There are at least three different kinds. The first is mostly presentational. Number separators and date order can change. A structured table can be presented differently while preserving the relationships between headers and data cells for assistive technologies. The form changes while the material relationship is intended to stay stable.

The second kind is derived representation. Take 10 km and convert it to 6.2 miles. That requires a conversion rule and rounding. The number shown changes; the underlying measurement does not.

Currency is a more complicated version of the same problem. A historical amount can be shown in the original currency or converted for the reader, but the conversion introduces a rate, a date and a method. That is why the original value should remain underneath. A derived representation may change what the reader sees; it should not replace the evidence it came from.

Derived representations should remain traceable to the evidence state they came from.

The third kind is different: it changes the frame.

The same data can tell a different story

Suppose unemployment rises from 4% to 6%.

One representation says:

Unemployment rose by 2 percentage points.

Another says:

Unemployment rose by 50%.

Both statements can be mathematically correct, but they are not neutral alternatives in the same sense as kilometres and miles. They place the same observations inside different reference frames, which can change how large the movement feels.

Research on health-risk communication shows the same boundary. The same underlying risk can be presented using absolute differences, relative risk reductions, percentages or natural frequencies.

A Cochrane review of 35 studies and 83 comparisons found that natural frequencies were better understood than percentages in some diagnostic and screening contexts. It also found that relative risk reductions tended to be perceived as larger and were more persuasive than absolute risk reductions or number-needed-to-treat formats.

That does not mean one format is always manipulative. It means format can become interpretation. The moment a transformation changes baseline, denominator, comparison period or uncertainty, the newsroom is no longer merely formatting. It is making an editorial choice.

When a transformation changes the frame, it becomes editorial.

Visual representation is not neutral either

Charts make the same problem visible. A graph can preserve every underlying data point and still change how a reader perceives the relationship between them. Truncating a y-axis can make differences appear larger.

A 2021 study of bar charts found a persistent truncation effect across five studies, with 83.5% of participants showing the effect.

A 2022 randomized study of truncated line charts found a more restrained result: context affected participants' opinions, while the misleading axis and graph literacy did not have a significant effect on opinion or estimates in that experiment.

That nuance is useful. The lesson is not:

Every chart choice manipulates readers.

It is:

Visual representation can affect interpretation.

Chart scale is not the same category as changing a decimal separator. It belongs closer to editorial framing. The underlying data can stay identical while the reader's impression changes.

That boundary matters if readers are ever allowed to choose between visual forms. A chart and a table may come from the same dataset, but they do not necessarily create the same cognitive experience. Reader choice therefore needs limits.

Reader choice can select a representation

There are many useful choices a reader can make without changing the evidence.

A reader can prefer:

- metric or imperial units;
- original currency or a derived local conversion;
- local date conventions;
- compact or detailed numeric display;
- accessible text alternatives;
- original values alongside converted values.

These choices do not require profiling or a generative model. They can be deterministic: the reader chooses how the fact is rendered, while the newsroom still controls the evidence state. That boundary should be explicit.

A reader preference should not silently choose:

- a more favourable baseline;
- a different denominator;
- whether uncertainty is shown;
- which side of a disputed claim is treated as established;
- which evidence is omitted;
- a political frame.

Reader choice can select a representation. It should not select the evidence state.

That does not make the evidence state permanent. New reporting can change what is known. A correction can replace an erroneous value. A source can revise a dataset. A claim can move from open to verified, contradicted or withdrawn.

Those are editorial transitions. They should create a documented new state, not appear because one reader selected a different display preference.

The evidence state must survive underneath

This is where structured journalism becomes useful. A visible number can remain simple. Underneath it, the system can preserve:

- original observation;
- unit;
- date;
- source;
- method;
- uncertainty;

- conversion rule;
- rounding rule.

The reader may never inspect those fields. That is fine. The point is that the representation remains traceable.

A rounded value should still point back to the unrounded measurement. A converted currency amount should still point back to the original amount and conversion method. A localized date should still point back to the same underlying date or timestamp.

This is not about putting a database on the page. It is about keeping the database from disappearing when the page is rendered. The visible article can stay readable while the underlying state stays precise.

Accessibility needs the same discipline

Accessibility makes this principle especially clear. A chart may need a textual alternative. A table may need explicit header-to-cell relationships so assistive technology can preserve context even when the presentation changes. A visual cue may need to be expressed in another form.

The representation changes because the reader's access method changes, but material meaning still needs to survive.

That means preserving:

- values;
- ordering;
- material relationships;
- uncertainty;
- labels;
- source meaning.

Perfect equivalence is not always possible. The goal is semantics-preserving transformation where practical. This is another reason to separate evidence from format: if the newsroom only preserves the visual output, an accessible version has to reverse-engineer the meaning. If the underlying structure survives, multiple valid renderings become possible.

This is a generalisation of earlier problems

The first article in this series separated monetary facts from currency conversion. The second separated percentages from their reference frames. The third preserved material unanswered questions. The fourth preserved source position and verification state. The fifth kept source relationships attached to claims. The sixth preserved why a published state changed.

Those are not separate decorations around an article. Together they describe the evidence state that a reader-facing representation must not silently rewrite.

This article asks what may vary after that state has been preserved.

A fact and its representation are not the same thing, but neither are all representations equally harmless. Some merely change form. Some add method. Some change frame. That distinction is what matters.

Implementation status at Hedegreen Research

Hedegreen Research already has a local structured-money workflow that separates an underlying amount/date state from its rendered presentation.

The broader representation model proposed here — including reader-controlled unit, locale and accessibility variants across multiple object types — should be treated as a journalistic standard and design direction, not as a claim that every representation mode is already deployed across the current production system.

This article does **not** propose per-reader regenerated articles or personalised factual narratives.

Three principles

A minimal standard could be:

1. **Preserve the evidence state.** The source observation, provenance, method and uncertainty should not depend on the reader.
2. **Let representations vary only within traceable rules.** Locale, units and derived renderings may vary, but they should remain traceable to the preserved evidence state.
3. **Treat reframing as editorial.** Changes to baseline, denominator, uncertainty, comparison period or visual scale are not mere formatting and should not happen silently.

The interface, reader settings and rendering can vary. The evidence state should remain governed by the editorial record, not by the reader's display settings.

What is still unproven

There are difficult boundaries. Rounding can look cosmetic until it crosses a legal, electoral or statistical threshold. Chart and table views can preserve the same data while emphasizing different things. Accessible alternatives may preserve meaning without preserving every perceptual relationship. Different readers may need different levels of detail.

A newsroom still has to decide which transformations belong in the safe representational layer and which require editorial review.

Those are design questions. The principle is smaller: one evidence state can support many useful views. The freedom is in the representation. The discipline is keeping reader choice from rewriting the evidence.

That is the reader-facing boundary. The next one sits earlier in the chain: what happens when AI helps a newsroom find, transform or publish the material before the reader sees it? The same discipline applies. The tool may change the workflow, but it does not get to replace the evidence or the principle that governs its use.

Sources and prior work

1. Unicode CLDR, “Number Symbols” and “Number and currency patterns”
<https://cldr.unicode.org/translation/number-currency-formats/number-symbols>
<https://cldr.unicode.org/translation/number-currency-formats/number-and-currency-patterns>
2. W3C Web Accessibility Initiative, “Tables Tutorial” <https://www.w3.org/WAI/tutorials/tables/>
3. NIST, “Unit Conversion” and “Writing with SI (Metric System) Units”
<https://www.nist.gov/pml/owm/metric-si/unit-conversion> <https://www.nist.gov/pml/owm/writing-si-metric-system-units>
4. Akl et al., “Using alternative statistical formats for presenting risks and risk reductions,” Cochrane Database of Systematic Reviews, 2011 https://www.cochrane.org/evidence/CD006776_using-different-statistical-formats-presenting-health-information
5. Yang et al., “Truncating Bar Graphs Persistently Misleads Viewers,” Journal of Applied Research in Memory and Cognition, 2021 <https://doi.org/10.1016/j.jarmac.2020.10.002>
6. Driessen et al., “Misleading graphs in context: Less misleading than expected,” PLOS ONE, 2022 <https://doi.org/10.1371/journal.pone.0265823>

RELATION MEMORY

NEARBY [Corrections Need Memory](#) · Previous instalment in Journalism, Reassembled. Article 006 governs documented changes to evidence state; Article 007 separates those editorial transitions from reader-controlled presentation.

NEARBY [A Percentage Needs a Reference Frame](#) · Article 002 establishes why a baseline or denominator is part of the editorial frame rather than a harmless reader preference.

NEARBY [A Monetary Fact Should Survive Its Conversion](#) · Article 001 provides the bounded money example from which Article 007 generalizes a wider representation rule.

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