

Signal Distortion, Feedback Loops, and Reality Drift

How Optimized Systems Amplify the Wrong Signals

Framework Note #5 — Reality Drift (2023–2026)

A. Jacobs

The Basic Pattern

Modern information systems rely on signals to determine what content spreads and what disappears.

Platforms must decide which posts to promote, which videos to recommend, and which stories to surface to large audiences.

Because it is impossible to directly measure meaning, quality, or truth at scale, platforms instead rely on **behavioral signals**.

Examples include:

- clicks as a proxy for interest
- shares as a proxy for importance
- watch time as a proxy for value
- engagement as a proxy for relevance

At first these signals function as useful indicators.

They help platforms identify content that appears to resonate with audiences.

But as optimization intensifies, a familiar pattern emerges.

Algorithms increasingly prioritize the signals themselves rather than the underlying value those signals were meant to represent.

Signal distortion occurs when systems optimize behavioral signals faster than those signals remain aligned with real informational value.

When Signals Become Targets

Signal-based systems begin to drift when the indicators used to measure attention become the primary targets of optimization.

In these situations:

- engagement replaces informational value
- virality replaces importance
- emotional intensity replaces relevance
- visibility replaces substance

The signal no longer measures interest.

The signal becomes the target of optimization.

Once this shift occurs, content increasingly evolves to maximize the signals that drive algorithmic distribution.

The result is a feedback loop in which the most visible signals become the most amplified.

This process gradually reshapes the information environment.

Related Concepts Across Fields

Different fields describe this phenomenon using different language.

Media researchers often refer to **algorithmic amplification**, where platform algorithms disproportionately promote certain types of content based on engagement signals.

Economists and platform analysts describe similar dynamics through the **attention economy**, where competition for user attention drives optimization toward highly stimulating content.

Technology critics often describe the outcome as **engagement optimization**, where systems increasingly prioritize interactions such as clicks, shares, and reactions.

Although these concepts emphasize different aspects of the system, they describe the same structural pattern: **optimization targeting signals that are easier to measure than the underlying informational value they were meant to represent.**

How Signal Distortion Emerges

The shift from signal measurement to signal distortion typically unfolds in several stages.

Stage 1 — Signal measurement

Platforms introduce metrics that track how users interact with content.

These signals help guide early recommendation systems.

Stage 2 — Algorithmic optimization

Recommendation algorithms increasingly optimize for signals that correlate with engagement.

Content that produces strong reactions becomes more likely to be promoted.

Stage 3 — Feedback loop amplification

As algorithms repeatedly promote the strongest signals, creators adapt their content to trigger those signals.

This may include:

- emotionally intense headlines
- outrage-driven commentary
- simplified narratives
- content designed for maximum shareability

Signals that produce stronger reactions spread further.

Stage 4 — Signal dominance

Eventually the signals themselves shape the information environment.

Content that generates measurable reactions becomes far more visible than content optimized for accuracy, depth, or nuance.

Examples Across Platforms

Signal distortion appears across many digital platforms.

Social media feeds

Platforms such as TikTok, Instagram, and Facebook rank content according to engagement signals like watch time, likes, and shares.

Content that triggers strong emotional reactions is therefore more likely to spread widely.

Video recommendation systems

YouTube and similar platforms optimize recommendations for watch time and viewer retention.

Creators often adapt by producing increasingly attention-grabbing formats designed to maintain engagement.

News and media ecosystems

Online media environments frequently reward stories that generate strong reactions.

Outrage, controversy, and emotionally intense narratives tend to spread faster than slower, more nuanced reporting.

Creator economies

Influencers and content creators learn to produce material that aligns with the signals rewarded by platform algorithms.

Over time this encourages content styles designed primarily to maximize visibility rather than informational value.

Signal Distortion and Reality Drift

Within the Reality Drift framework, signal distortion represents one of the mechanisms through which information systems gradually lose alignment with the realities they were meant to represent.

As algorithms increasingly optimize behavioral signals, those signals become progressively detached from the informational value they once approximated.

Engagement increases.

Virality accelerates.

Content spreads faster than ever.

Yet the informational environment may become more distorted.

The system continues functioning, but it increasingly amplifies signals that are easy to measure rather than signals that reliably reflect reality.

Recognizing the Pattern

Signal distortion often remains difficult to detect from within the system.

From the perspective of the platform, engagement metrics appear healthy.

Activity levels remain high.

Content circulates continuously.

Yet observers may notice that the most visible material increasingly favors emotional intensity, polarization, or simplified narratives.

This produces a common perception in modern media environments:

The system appears highly active and responsive while gradually amplifying signals that do not reliably correspond to informational value.

Understanding signal distortion helps explain why highly optimized media systems can feel increasingly manipulative, polarized, or artificial even as their engagement metrics continue to improve.

Related phrases and concepts

This mechanism is often described using different terminology across media and technology analysis:

- signal distortion
- algorithmic amplification
- engagement optimization
- attention economy dynamics
- outrage amplification
- virality-driven distribution
- systems rewarding visible signals over real value

Across domains, these descriptions refer to the same structural dynamic: **optimization systems gradually amplify the signals that trigger attention rather than the information those signals were meant to represent.**

Signals and Information Filtering

Digital platforms must filter enormous volumes of information in order to decide what becomes visible. To accomplish this, complex informational environments are compressed into measurable signals such as clicks, shares, and watch time. When optimization systems begin amplifying these signals directly, the filtering process can gradually reshape the information environment itself.