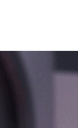


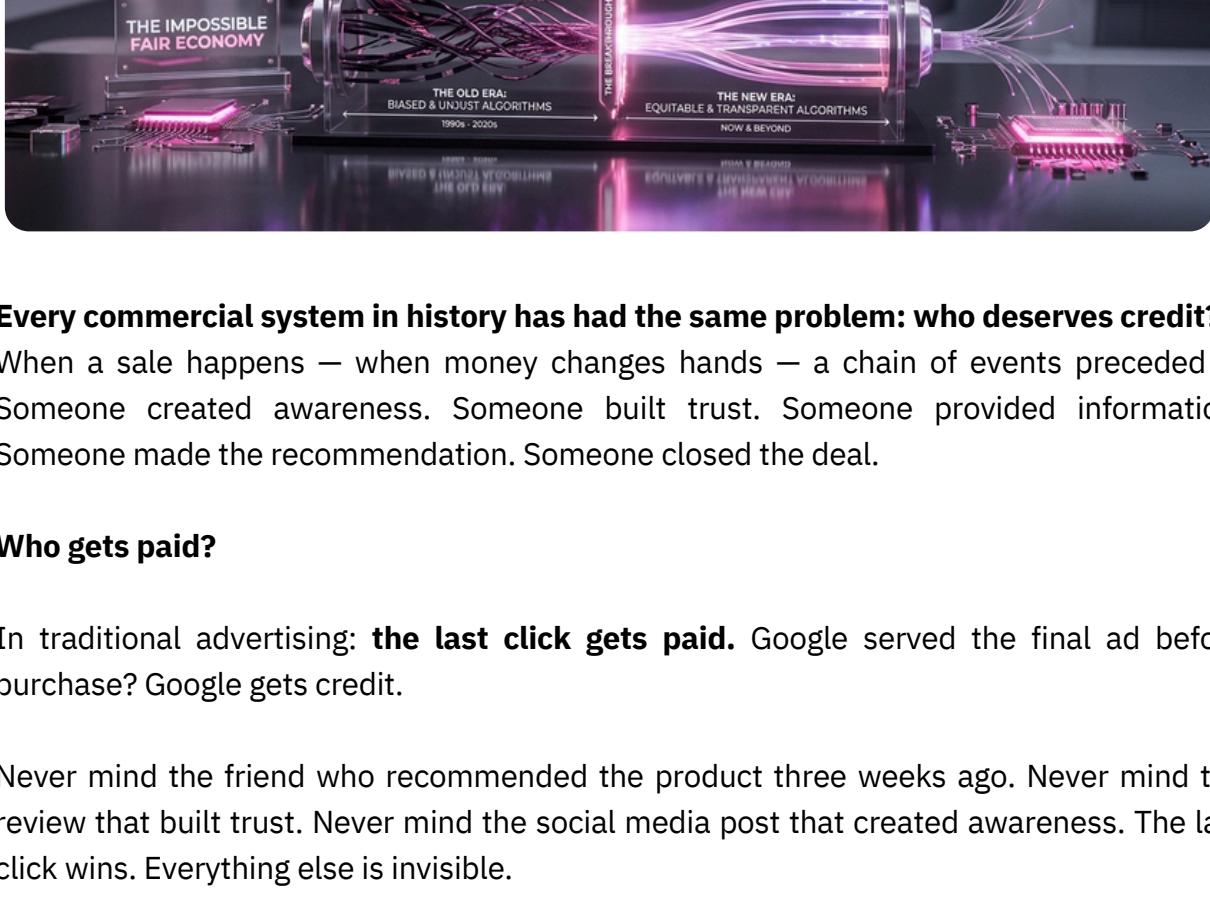
# THE IMPOSSIBLE FAIR ECONOMY — WHY FAIR ALGORITHMS HAVE NEVER EXISTED, UNTIL NOW



ROSE ZHU  
April 20, 2025

10 MIN READ

## The Fairness Problem Nobody Solved



**Every commercial system in history has had the same problem: who deserves credit?** When a sale happens — when money changes hands — a chain of events preceded it. Someone created awareness. Someone built trust. Someone provided information. Someone made the recommendation. Someone closed the deal.

### Who gets paid?

In traditional advertising: **the last click gets paid**. Google served the final ad before purchase? Google gets credit.

Never mind the friend who recommended the product three weeks ago. Never mind the review that built trust. Never mind the social media post that created awareness. The last click wins. Everything else is invisible.

In affiliate marketing: **the affiliate gets paid**. The person with the tracking link. Never mind that the affiliate's blog post was the third touchpoint in a five-touchpoint journey. Never mind that the customer's friend mentioned the product first. The affiliate had the link. The affiliate gets credit.

In MLM: **the upline gets paid**. The person who recruited you. And the person who recruited them. Regardless of who actually did the work. Regardless of who

actually influenced the sale. Position determines reward, not contribution.

**None of these systems are fair.** They all attribute credit based on position (last click, link owner, upline) rather than contribution (who actually influenced the decision).

**And the reason is simple: fair attribution is computationally and structurally hard.** It requires tracking every touchpoint. Following every chain. Measuring every influence. Distributing credit proportionally across multiple nodes, multiple hops, multiple timeframes. No system has ever done this. Until chain attribution.

### What Chain Attribution Actually Is

Chain attribution is the technical foundation that makes fair value distribution possible. Here's how it works:

**Step 1: Identity.** Every share, every recommendation, every referral is given a unique, trackable identity. When Person A shares a product with Person B, that share has an ID. When Person B shares with Person C, that share has a different ID — but it's linked to A's original share.

**Step 2: Chain Construction.** As shares propagate —  $A \rightarrow B \rightarrow C \rightarrow D \rightarrow E$  — the system constructs a chain. Every node is connected. Every hop is recorded. The system knows that E's purchase originated from A's share, passed through B, C, and D.

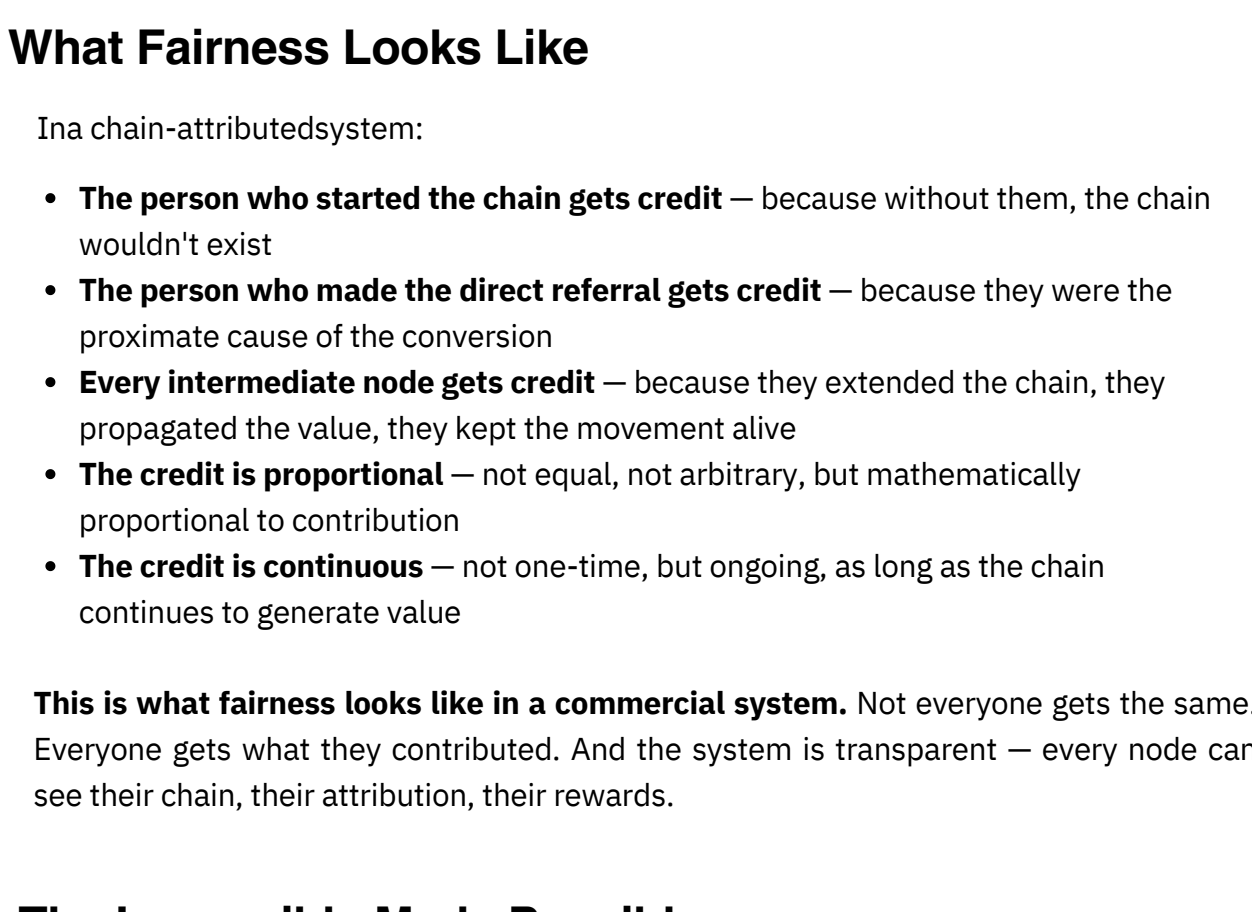
**Step 3: Contribution Weighting.** Not every node in the chain contributed equally. A started the chain — that's valuable. B was the direct referrer to C — that's valuable. D was the direct referrer to E — that's valuable. But the type of value is different at each node. The system weights contributions based on:

- **Proximity** (how close to the conversion)
- **Origination** (who started the chain)
- **Propagation** (who extended the chain)
- **Influence** (measurable engagement at each node)

**Step 4: Proportional Distribution.** Rewards are distributed across the chain proportionally to contribution. A gets a share. B gets a share. C gets a share. D gets a share. The shares are not equal — they're proportional. And they're calculated algorithmically, based on the chain structure and contribution weights.

**Step 5: Continuous Recalculation.** As the chain extends — as E refers F, F refers G — the attribution recalculates. A's contribution to the chain increases (because A originated a chain that's now seven nodes deep). The rewards adjust accordingly.

## Why This Has Never Existed Before



**Reason 1: Computational Complexity.** Tracking chains across multiple hops, multiple platforms, multiple timeframes — and recalculating attribution in real time — requires computational power that simply wasn't available (or affordable) until recently. Cloud computing, real-time data processing, and modern database architectures made it possible.

**Reason 2: Cross-Platform Identity.** Following a chain from WhatsApp to Instagram to a website to a physical store requires a unified identity system that works across platforms. This is technically challenging —but solvable with unique identifiers (links, codes, tokens) that persist across platforms.

**Reason 3: Nobody Tried.** This is the most honest reason. The advertising industry had no incentive to build fair attribution — because unfair attribution (last-click) benefited the platforms. The affiliate industry had no incentive — because single-hop attribution benefited the affiliates. The MLM industry had no incentive — because position-based attribution benefited the uplines.

**Fair attribution threatens every incumbent. It redistributes credit — and therefore money — from the entities that currently capture it (platforms, affiliates, uplines) to the entities that actually create it (people who influence purchase decisions through genuine trust). No wonder nobody built it. It's a revolution disguised as an algorithm.**

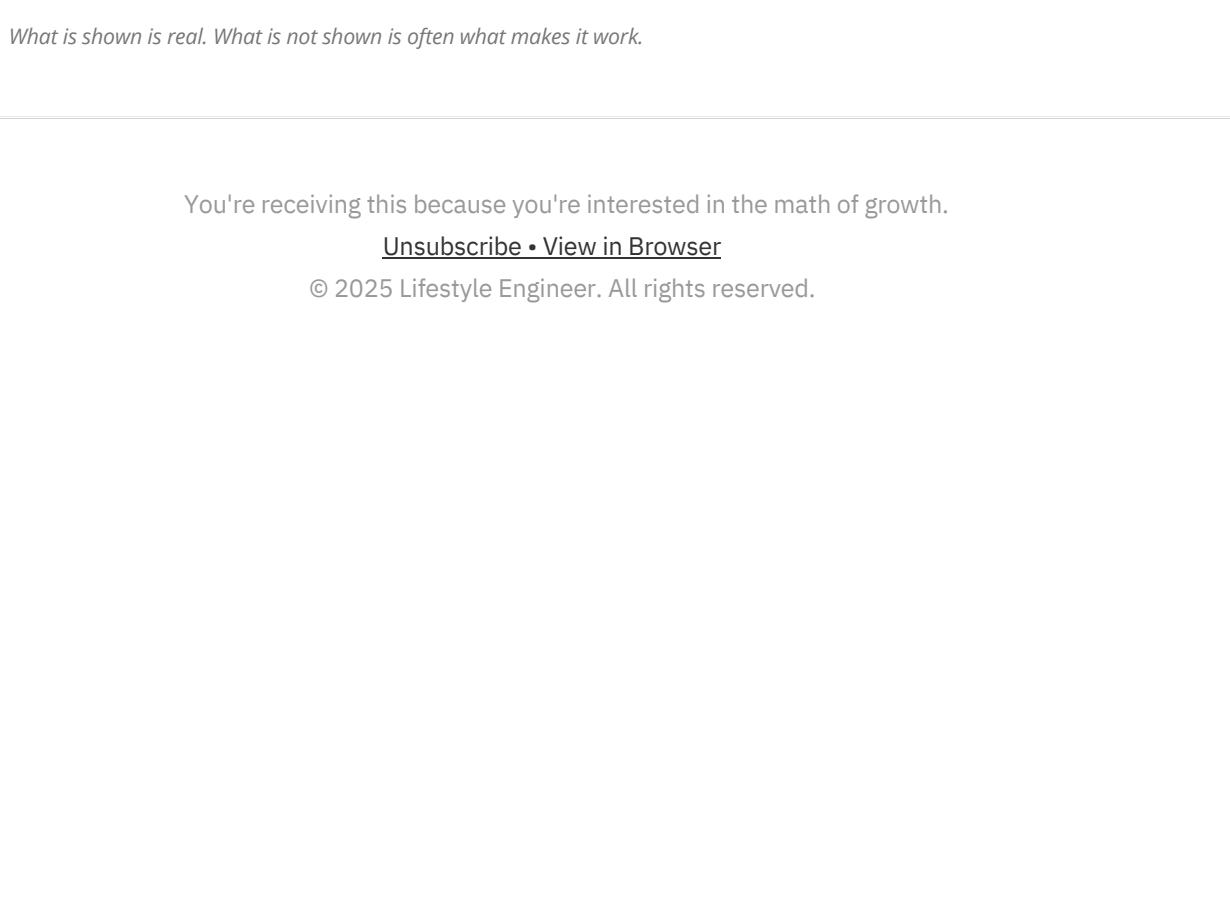
## What Fairness Looks Like

In a chain-attributed system:

- **The person who started the chain gets credit** — because without them, the chain wouldn't exist
- **The person who made the direct referral gets credit** — because they were the proximate cause of the conversion
- **Every intermediate node gets credit** — because they extended the chain, they propagated the value, they kept the movement alive
- **The credit is proportional** — not equal, not arbitrary, but mathematically proportional to contribution
- **The credit is continuous** — not one-time, but ongoing, as long as the chain continues to generate value

**This is what fairness looks like in a commercial system.** Not everyone gets the same. Everyone gets what they contributed. And the system is transparent — every node can see their chain, their attribution, their rewards.

## The Impossible Made Possible



For decades, economists and technologists said fair attribution was impossible. Too complex. Too many variables. Too many platforms. Too many touchpoints. Too much noise.

**They were right — with the tools they had.** But the tools have changed. Real-time data processing. Cross-platform identity resolution. Graph databases that can model chains of arbitrary depth. Machine learning that can weight contributions across multiple dimensions.

**The impossible is now possible.**

Not as a theory. As operational technology. As infrastructure that can be deployed, measured, and optimized. And when fair attribution becomes possible, everything changes. Because suddenly, the people who actually drive commerce — the recommenders, the sharers, the advocates, the trust-builders — are visible. Measurable. Rewardable. The Invisible Economy becomes the Visible Economy. And the Visible Economy is fair.

*All case studies, systems, and use cases presented are based on real-world implementations across multiple countries, industries, and business models. For confidentiality and strategic integrity, names, brands, and identifiable details have been intentionally altered or generalized.*

*This is not to obscure reality, but to protect it. Many of these engagements involve large-scale ecosystems, proprietary restructuring, and commercially sensitive intelligence that, if disclosed prematurely or taken out of context, could be misinterpreted, misapplied, or exploited. The insights shared here are therefore distilled representations—accurate in principle, proven in execution, but selectively framed.*

*What is shown is real. What is not shown is often what makes it work.*

You're receiving this because you're interested in the math of growth.

[Unsubscribe](#) • [View in Browser](#)

© 2025 Lifestyle Engineer. All rights reserved.