



Rediffusion
Consumer Lab



A FUNDAMENTAL
QUESTION ANSWERED

Yes GenAI Ads Perform As Well

A **Columbia University** study
shows AI ads match human-made ones



Carol Goyal
Aesthetic Intelligence Lab

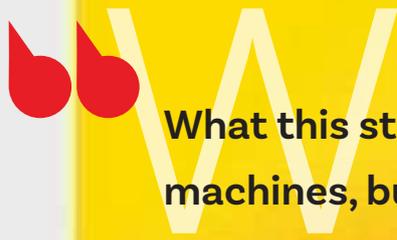


Artificial intelligence has become a visible part of the creative process. Not as a future promise, but as a working reality in everyday advertising. Brands are using it, agencies are testing it, and consumers are encountering it, often without realising it.

This report draws on findings from the study *AI in Disguise - Quasi-Experimental Analysis of a Large-Scale Deployment of AI-Generated Display Ads*, conducted by researchers Yannick Exner and Jochen Hartmann from TUM School of Management, Oded Netzer from Columbia Business School, Shunyuan Zhang from Harvard Business School and Ziqian Ding from Carnegie Mellon University in collaboration with Taboola. Using real-world

performance data, the study evaluates how AI-generated creative compares with human-made ads in driving consumer action at scale. Spanning hundreds of thousands of live campaigns across multiple industries, it analyses engagement, click-through rates, and conversion outcomes in real market conditions.

The report explores what these findings reveal about creative performance on par with human-made creativity today. Not just whether AI works, but how it works, when it works, and what audiences respond to most. At its core, this is a study of perception, authenticity, and effectiveness in an advertising landscape where creativity is no longer made by humans alone.

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What this study really shows us is not the rise of machines, but the resilience of human instincts. Advertising has always worked best when it feels real, familiar, and emotionally grounded. AI does not change that truth. In fact, it reinforces it. Tools will evolve, speed will increase, but the audience will continue to reward what feels human. The real challenge for brands is not whether to use AI, but how to use it without losing the texture of authenticity that builds trust.



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Chapter 1

When AI Stepped Into Creativity

For a long time, AI stayed on the sidelines of creativity. Useful for optimisation and scale, but trusted less with ideas. The fear was simple. Machine-made ads would feel empty and perform poorly.

The evidence says otherwise.





Across live campaigns, AI-generated ads perform on par with human-made ones. In several cases, they perform better. Not in test environments, but in real advertising conditions where attention and intent are earned, not assumed.

This signals a shift. AI creativity is no longer experimental. It is competitive.

What matters is not that AI can perform, but why. Success does not come with novelty or technical brilliance. It comes from familiarity. Ads that follow proven human creative principles win, no matter who or what made them.

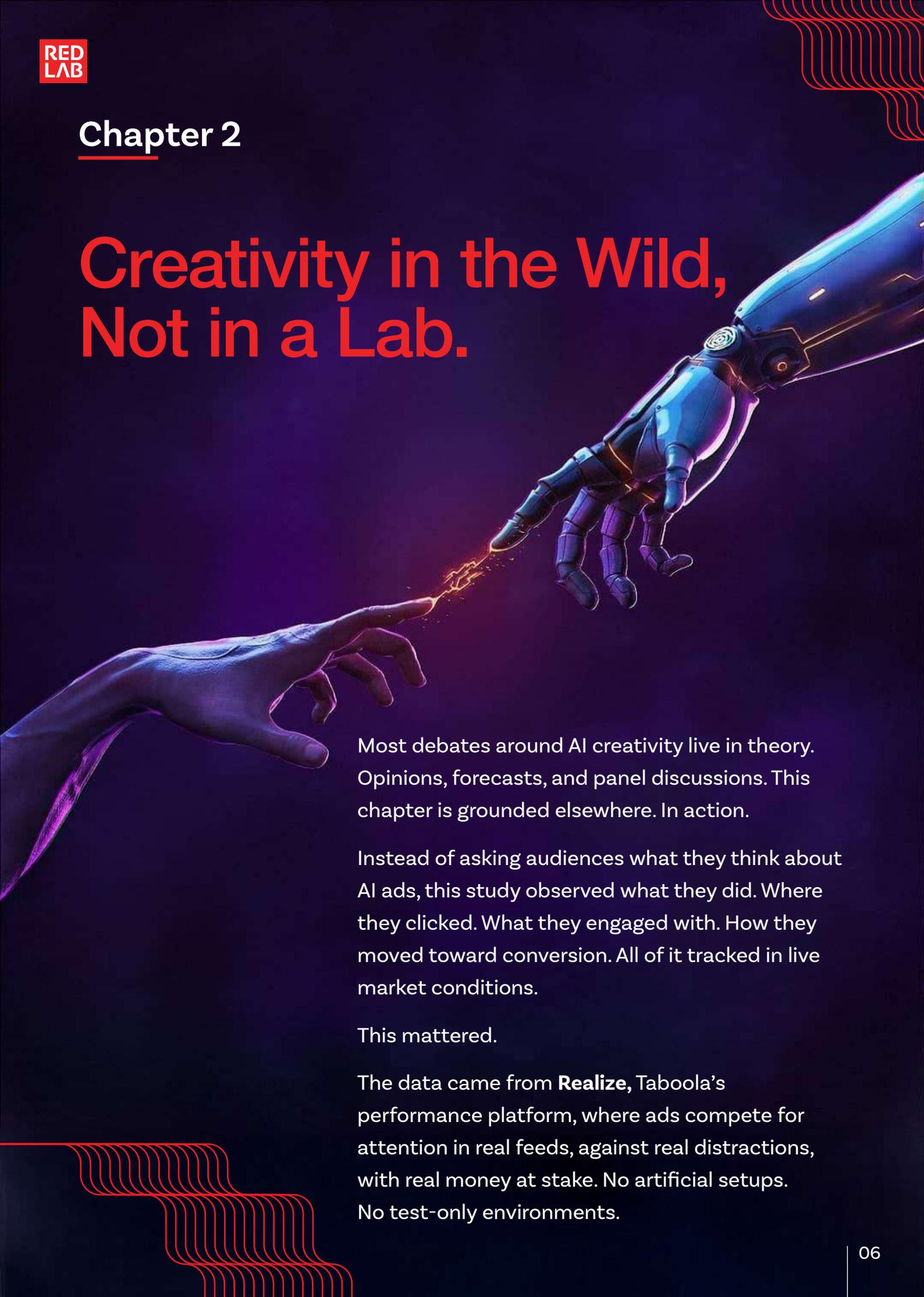
The long-held worry around low-quality clicks also falls apart. Engagement remains strong. Conversion quality holds steady. Scale does not dilute intent.

**The real divide is not
human versus machine.
It is authentic versus artificial.**

**And that is where the
creative conversation changes.**

Chapter 2

Creativity in the Wild, Not in a Lab.



Most debates around AI creativity live in theory. Opinions, forecasts, and panel discussions. This chapter is grounded elsewhere. In action.

Instead of asking audiences what they think about AI ads, this study observed what they did. Where they clicked. What they engaged with. How they moved toward conversion. All of it tracked in live market conditions.

This mattered.

The data came from **Realize**, Taboola's performance platform, where ads compete for attention in real feeds, against real distractions, with real money at stake. No artificial setups. No test-only environments.

WHY THIS EVIDENCE HOLDS WEIGHT

300,000+

Ads Analysed

500 Million+

Impressions Observed

3 Million+

Real Clicks Recorded

This is not a moment in time.

It is a pattern, repeated across scale.



NOT ONE INDUSTRY NOT ONE AUDIENCE

The ads spanned multiple categories.

- ◆ Personal finance
- ◆ Food and drink
- ◆ Education



Each category carries different levels of trust, urgency, and intent. This allowed the study to go beyond whether AI works, and focus on where and when it works best.

A FAIR CREATIVE FACE-OFF

To remove bias, AI and human ads were matched carefully.

- ◆ Same advertiser
- ◆ Same campaign
- ◆ Same day
- ◆ Same objective
- ◆ Same landing page

Only one thing changed:

How the creative was made.



AI IN THE REAL WORKFLOW

AI-generated ads were created using GenAI Ad Maker within the Realize platform. This meant AI was tested as part of everyday creative production, not as an isolated experiment.

THE CORE OUTCOME

When targeting, budgets, and media variables are stripped away, creativity stands alone. At this scale, performance leaves little room for illusion.

Once creativity is studied in the real world, belief gives way to evidence.

Chapter 3

When AI Stopped Playing Catch-Up

There was a time when AI creative lagged behind human work. That gap has closed.

At scale, AI-generated ads are no longer trailing human-made ones. They are matching them. In several instances, they are quietly outperforming them.

Across the dataset, click-through rates for AI and human ads move almost in parallel. The difference is not dramatic, but it is steady. On average, AI-generated ads attract slightly higher engagement.

The significance lies beyond the numbers. AI is not winning because it is more imaginative. It is winning because it is competent enough to operate within the same creative rules that humans follow.

PERFORMANCE IS ABOUT APPEARANCE, NOT AUTHORSHIP

When ads are grouped by how they look to consumers, a clearer pattern emerges.

- ◆ Ads that appear human-made perform the strongest
- ◆ This holds true even when those ads are actually AI-generated
- ◆ Ads that look artificial underperform, regardless of who created them

Visual familiarity becomes the deciding factor.

A Level Playing Field

Under strict comparisons, the gap nearly disappears.

- ◆ Same campaign
- ◆ Same audience
- ◆ Same timing

AI and human ads deliver statistically equivalent results. At this point, the origin of the creative fades. Execution takes over.

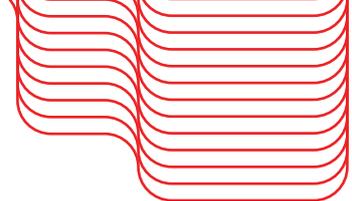
No Shortcut Clicks

Engagement quality remains intact.

- ◆ Call to action response stays strong
- ◆ No spike in low-intent or curiosity clicks
- ◆ No drop in downstream effectiveness

AI delivers attention without weakening intent.

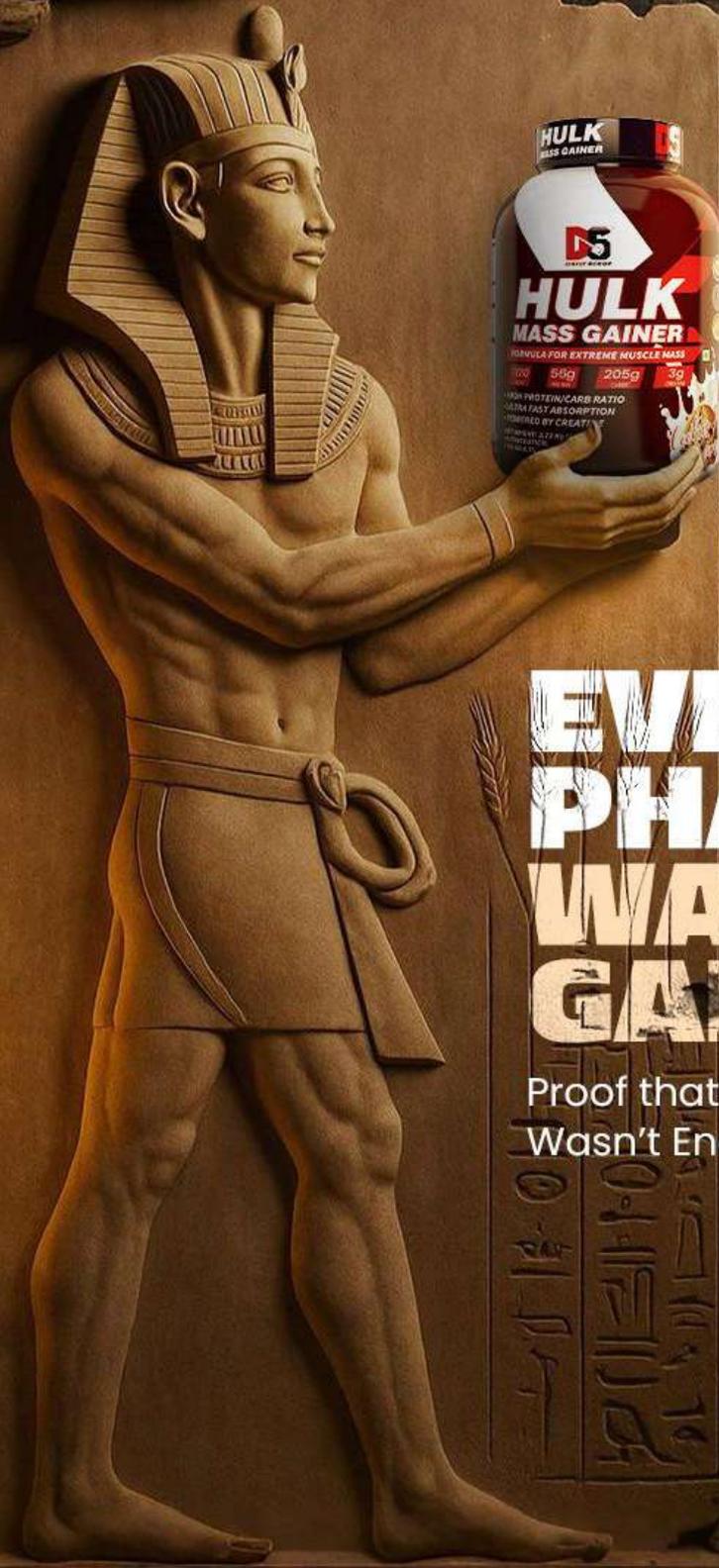




The Shift

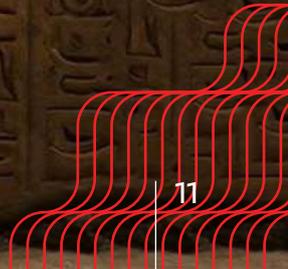
AI has reached performance parity without rewriting the playbook. It succeeds by following it.

The conversation has moved on. The question is no longer whether AI-generated ads can perform. It is whether they can do so without looking artificial.



**EVEN
PHARAOHS
WANTED
GAINS!**

Proof that Building Pyramids
Wasn't Enough



Chapter 4

When Belief Shapes Performance

At a certain point, performance stops being about metrics and starts being about perception. This chapter sits exactly at that point.

Beyond clicks and conversions, the study examined how people think about ads. Specifically, whether viewers believe an ad was made by a human or by AI, and how that belief influences response.

What emerges is not clarity, but confusion. And that confusion matters.





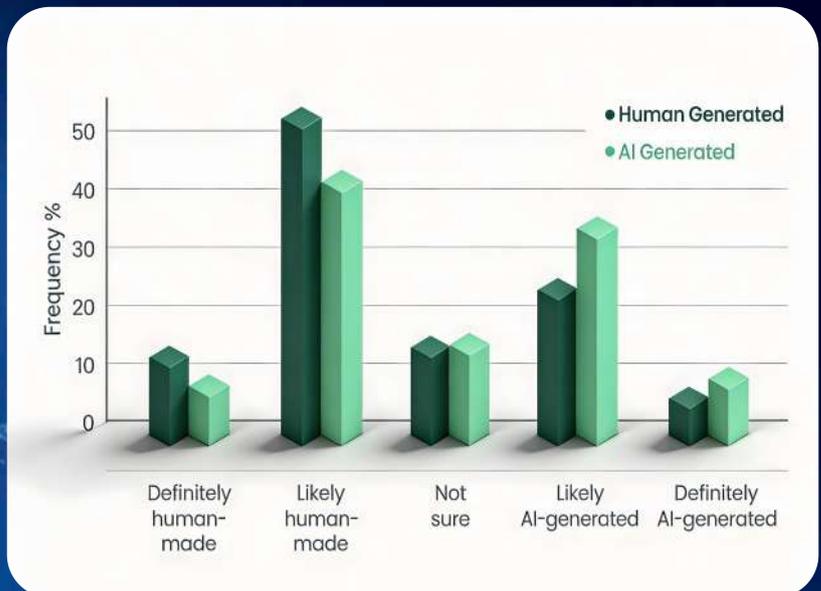
WHAT THE PERCEPTION STUDY REVEALS

When ads are grouped by how they look to consumers, a clearer pattern emerges.

- ◆ Nearly half of AI-generated ads were perceived as human-made
- ◆ Consumers regularly failed to identify the true origin of an ad
- ◆ The line between human and machine creativity is already blurred

In simple terms, people are guessing. And often, they are guessing wrong.

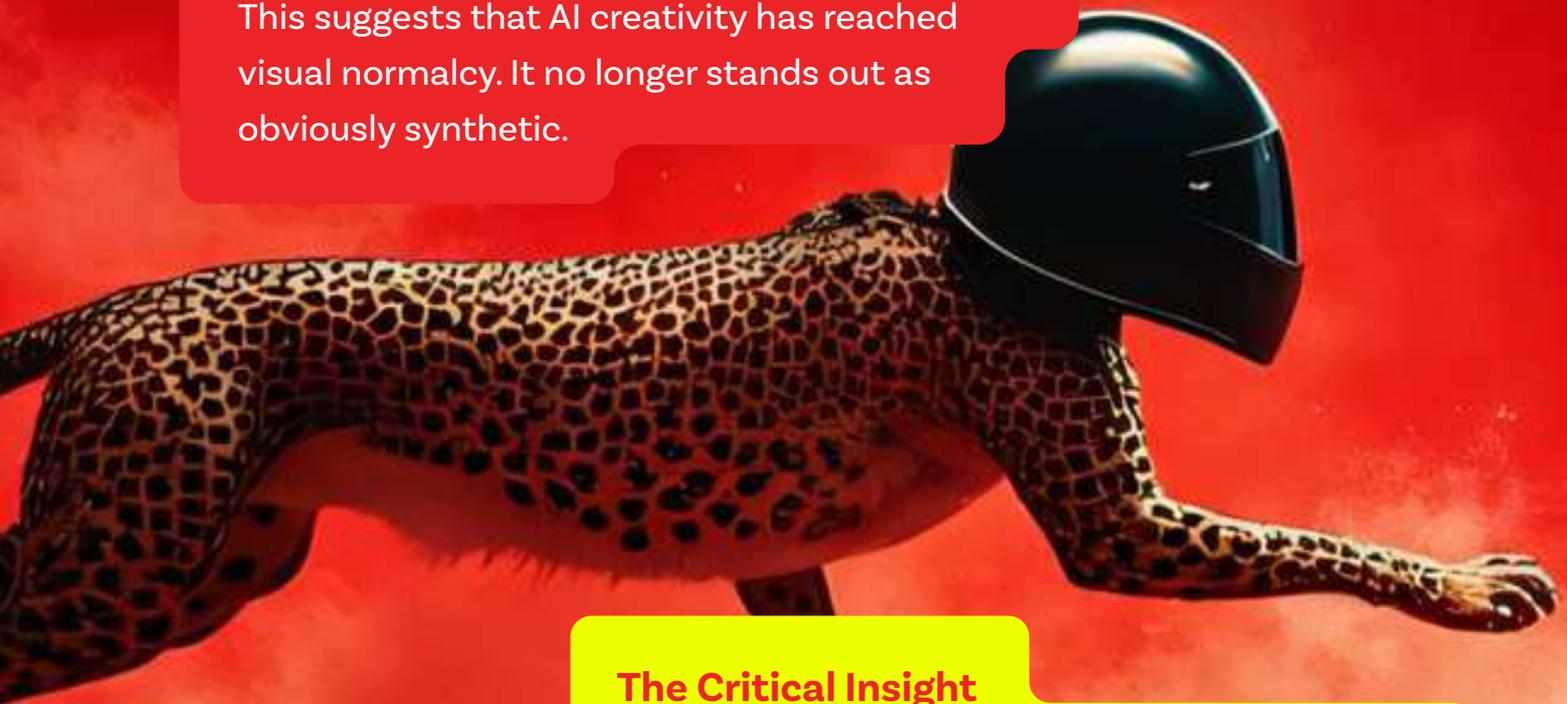
The perception distribution shows a clear pattern.



Under strict comparisons,
the gap nearly disappears.

- ◆ Most ads, whether human-made or AI-generated, cluster around “likely human-made”
- ◆ Very few ads are confidently identified as AI-generated
- ◆ Uncertainty remains high, with a noticeable share of viewers selecting “not sure”

This suggests that AI creativity has reached visual normalcy. It no longer stands out as obviously synthetic.



The Critical Insight

Performance is not shaped by who made the ad.
It is shaped by what the ad appears to be.

- ◆ Ads perceived as human-made enjoy higher engagement
- ◆ Ads perceived as AI-generated face a performance penalty
- ◆ This penalty applies even when the ad was actually made by a human

Perception overrides reality.

HUNTING THREAT

NOT JUST WATCHING.

What This Changes for Creatives

Under strict comparisons, the gap nearly disappears.

- ◆ Disclosure does not matter as much as the design signal
- ◆ Visual cues drive judgment faster than rational thought
- ◆ Artificial-looking ads trigger skepticism before content is processed

The Core Finding

Consumers are not rejecting AI.

They are rejecting anything that feels artificial.

In a feed-driven world, the first filter is not intelligence. It is instinct.

Chapter 5

The Advantage of Not Looking Artificial

When ad performance is filtered through perception, one result stands out clearly. The highest performing ads are not the most advanced or the most polished. They are the ones that do not look like they were made by AI.

AI-generated ads that were perceived as human-made delivered the strongest click-through rates across all groups. They outperformed not only AI ads that looked artificial but also human-made ads that failed to feel natural.

This establishes a clear hierarchy of performance.

Human-feeling ads win.
Artificial-feeling ads lose.



YOU'RE NOT YOU
WHEN YOU'RE HUNGRY.



Importantly, the penalty for looking artificial applies universally. Ads perceived as AI-generated underperform even when they were actually created by humans. The audience response is driven by appearance, not authorship.

This finding reinforces a simple rule. Perceived artificiality is the real risk factor in modern advertising. Not AI itself.

In practice, this means creativity that feels natural, familiar, and emotionally grounded will always outperform work that feels engineered, regardless of who or what created it.



Chapter 6

The Visual Signals That Give AI Away



Audiences may struggle to identify who made an ad, but they are remarkably sensitive to how an ad feels. This chapter looks at the visual cues that trigger the perception of artificiality and the ones that quietly build trust.

To understand this, researchers analysed visual features and used machine learning models to predict whether an ad would be perceived as AI-generated. The goal was not to judge creativity but to decode recognition patterns.



THE SIGNALS THAT MAKE ADS LOOK LIKE AI

Certain visual traits consistently pushed ads into the “AI-generated” category in the viewer’s mind.

- ◆ Highly stylised or overly polished visuals
- ◆ Heavy colour saturation
- ◆ Strong symmetry and visual perfection

These elements signal construction rather than reality. They feel designed, not lived-in.





THE STRONGEST SIGNAL OF HUMAN-NESS

Against all other factors, one element stood out.

Human faces.

Large, clear human faces were the single most powerful driver of human perception and engagement. Ads with faces felt more authentic, more trustworthy, and more relatable.

This effect is visible even in performance numbers.

- ◆ Ads perceived as human-made delivered CTRs as high as **1.55 percent**, even when they were AI-generated
- ◆ Human-made ads perceived as human showed CTRs around **1.03 percent**
- ◆ AI-generated ads that still looked human achieved **1.31 percent CTR**

By contrast, ads perceived as AI-generated collapsed in performance.

- ◆ AI-generated ads, clearly identified as AI dropped to **0.20 percent CTR**

The difference is not marginal. It is structural.



WHY THIS MATTERS

Interestingly, AI-generated ads were more likely to include prominent human faces than many human-made ads. This is not accidental. The AI tools used in the study were trained on long-standing creative best practices, including the use of authentic human imagery to create an emotional connection.

In other words, AI has learned what humans sometimes forget.

THE CORE INSIGHT

Artificiality is visual, not technical.

Audiences are not reacting to algorithms. They are reacting to cues. When an ad looks polished beyond reality, it raises distance. When it looks human, it builds trust.

In a world where AI can generate anything, the most powerful creative move remains unchanged. Show a real face. Let it feel real.



Chapter 7

Where AI Works Best & Where It Needs Care

AI does not perform uniformly across categories. Context still shapes outcomes.

Strong performance emerges in sectors where decisions are frequent and comparison-driven. **Personal finance** shows clear gains. **Food and drink** follow closely. In these categories, AI-generated ads integrate naturally into everyday decision-making moments.

Other sectors respond more cautiously. **Education**, in particular, shows muted results. The stakes are higher. Trust builds more slowly. Audiences look for reassurance, not speed.

The lesson is simple. AI is powerful but not universal. Its impact depends on the category expectations and consumer mindset.



THE QUALITY QUESTION, ANSWERED.

A major concern around AI creative has been quality. More clicks, less intent. The data does not support this fear.

AI-generated ads maintain or improve click through rates. Conversion performance remains stable. There is no evidence of inflated curiosity clicks or irrelevant traffic.

Scale does not come at the cost of substance.

THE TAKEAWAY

- ◆ AI works best when it fits the category rhythm
- ◆ Fast decisions reward it
- ◆ High-trust decisions test it

Used strategically, AI expands reach without weakening outcomes.

Chapter 8



What This Means for Advertisers



The findings point to a clear shift. AI is no longer a future capability. It is a present tool. When used effectively, AI performs at the same level as human-created content, even when scaled.

AI-generated ads can match human performance across large campaign volumes. In the right conditions, they can go further. The strongest results appear when AI avoids obvious machine-like signals and aligns with familiar creative patterns.



The decisive factor is not the technology. It is perception.

Ads that feel artificial underperform, regardless of who created them. Ads that feel human build trust and engagement, even when generated by AI. The audience response is emotional first, technical last.



For advertisers, this reframes the role of AI. It is not a shortcut to creativity. It is an accelerator of good creative judgement.

Speed and efficiency are real advantages. But success depends on restraint.

On choosing authenticity over polish.

On prioritising human faces, natural composition, and emotional clarity.

The takeaway is simple. AI does not lower the creative bar. It raises it.

Used thoughtfully, AI allows brands to scale what already works, without sacrificing performance or credibility.

Conclusion

The Creative Rule Has Not Changed

Generative AI is no longer on the margins of advertising. It is embedded in how creative work is produced, tested, and scaled.

What this research makes clear is simple. AI-generated ads can perform strongly in real-world conditions. With the right execution, they can even exceed traditional benchmarks. Not because they are new, but because they follow the same creative principles that have always worked.

Authenticity still wins. Human signals still matter. Familiarity still builds trust.

AI does not replace creativity. It reveals it. When aligned with human-centred thinking, AI becomes a tool of precision and scale, not compromise.

The future of advertising will not be defined by who creates the ad. It will be defined by how real it feels to the person seeing it.

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