



# How Cognitive Science Can Power Smarter Marketing

Unlocking Consumer Behavior  
in a Distracted, Emotion-Driven World

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## The Battle for Action

# Marketers Don't Just Compete for **Attention**. They Compete Against **Cognition**.

In today's digital marketplace, brands aren't just competing against each other—they're competing against the limits of human attention.

There's a viral claim that humans now have an average attention span of 8 seconds, shorter than a goldfish. While that makes for a catchy headline, it's not exactly accurate.<sup>1</sup> However, the stat resonated because it feels true: **attention has become more fragmented, more selective, and more difficult to earn** than ever before.

We live in an era of digital overload. Consumers are bombarded daily with ads, messages, videos, and posts, all vying for a limited slice of cognitive real estate. For marketers, the **central challenge is** no longer just reaching audiences but **cutting through the noise** in ways that stick.

**The solution? Cognitive science.**



## Why Cognitive Science Matters for Marketing

Simply put, cognitive science is the study of the mind. It's an interdisciplinary field where researchers in psychology, neuroscience, linguistics, behavioral economics, and related disciplines explore how people **think, remember, decide, and act.**

That reality makes cognitive science uniquely relevant to marketing.

At its core, marketing is about influencing people's behavior. And as decades of research shows, human behavior is rarely purely rational. In fact, it's often emotional, instinctive, and shaped by mental shortcuts.<sup>2</sup>

### Familiar, "Irrational" Behaviors

We delay simple decisions, like choosing a movie, even with endless options.

We're drawn to emotional headlines over more informative ones.

We respond to how something looks or feels over what it explicitly says.

Though these behaviors may not seem optimal, they aren't flukes. They're fundamental features of how the human mind works. Cognitive science helps explain why we so often make choices that seem irrational on the surface—because real minds rely on shortcuts, emotions, and biases. By understanding those patterns, marketers can create messages, experiences, and strategies that resonate more deeply with the right audiences.



## Two Systems, One Mind

# Dual-System Theory

To work with the mind rather than against it, marketers must first understand how people think.

One of most influential models in psychology is the dual-system theory,<sup>3</sup> which proposes that two distinct systems shape how we think, feel, and decide.

### System 1

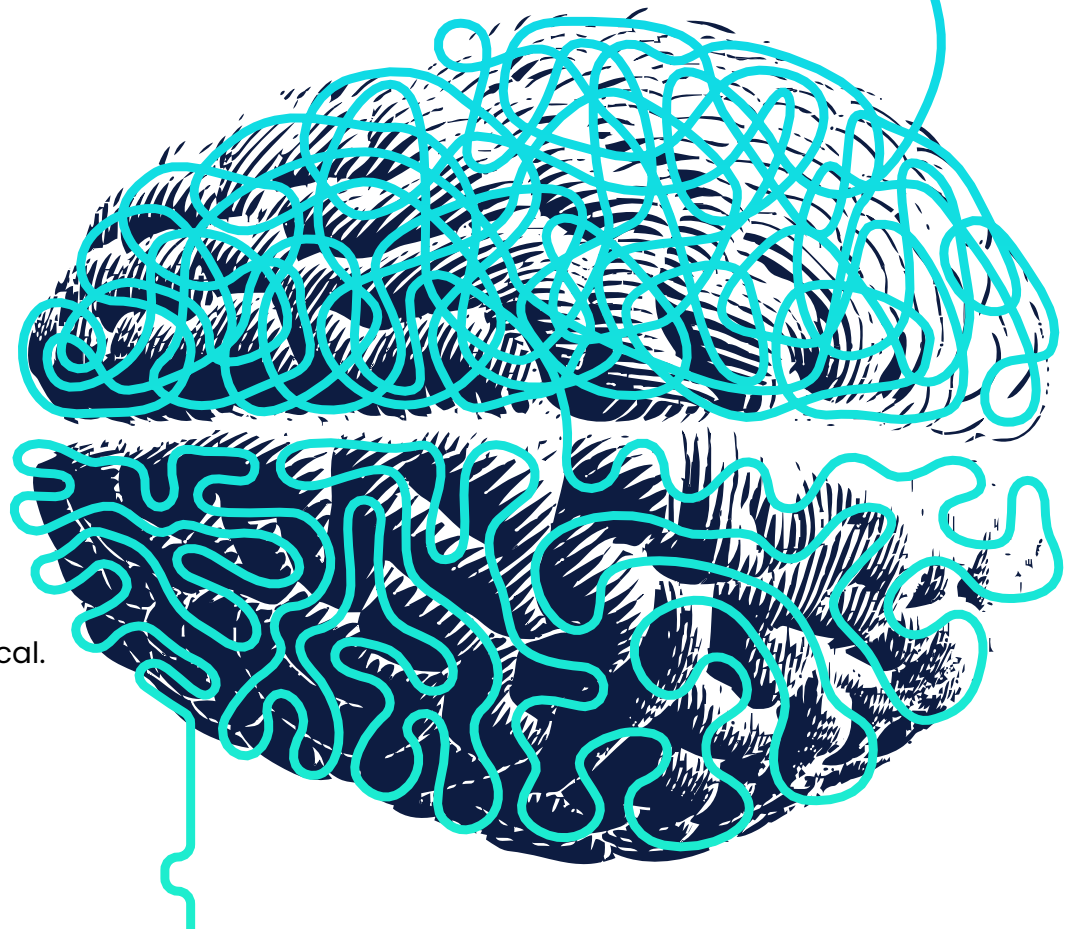
Fast, intuitive, and emotional.

It's our automatic, "gut" response, and it kicks in first.

### System 2

Slower, more deliberate, and logical.

It's our reasoning, "mindful" mode.



Most marketing strategies are built for System 2: they focus on product specs, rational benefits, and detailed comparisons. But much of consumer behavior is guided by System 1 — fast, emotional, and often subconscious.

In short, the most effective marketing doesn't just appeal to logic, it taps into emotion.





# Five Cognitive Levers for Marketing

In the sections that follow, we'll highlight five key principles from cognitive science that shape consumer behavior.

These principles explain why attention is so scarce, how memory really works, what drives trust, and why emotion trumps logic in decision-making.

Each principle is backed by behavioral research and paired with practical takeaways for marketers who want to connect more deeply and effectively with their audiences.

**Attention**

**Memory**

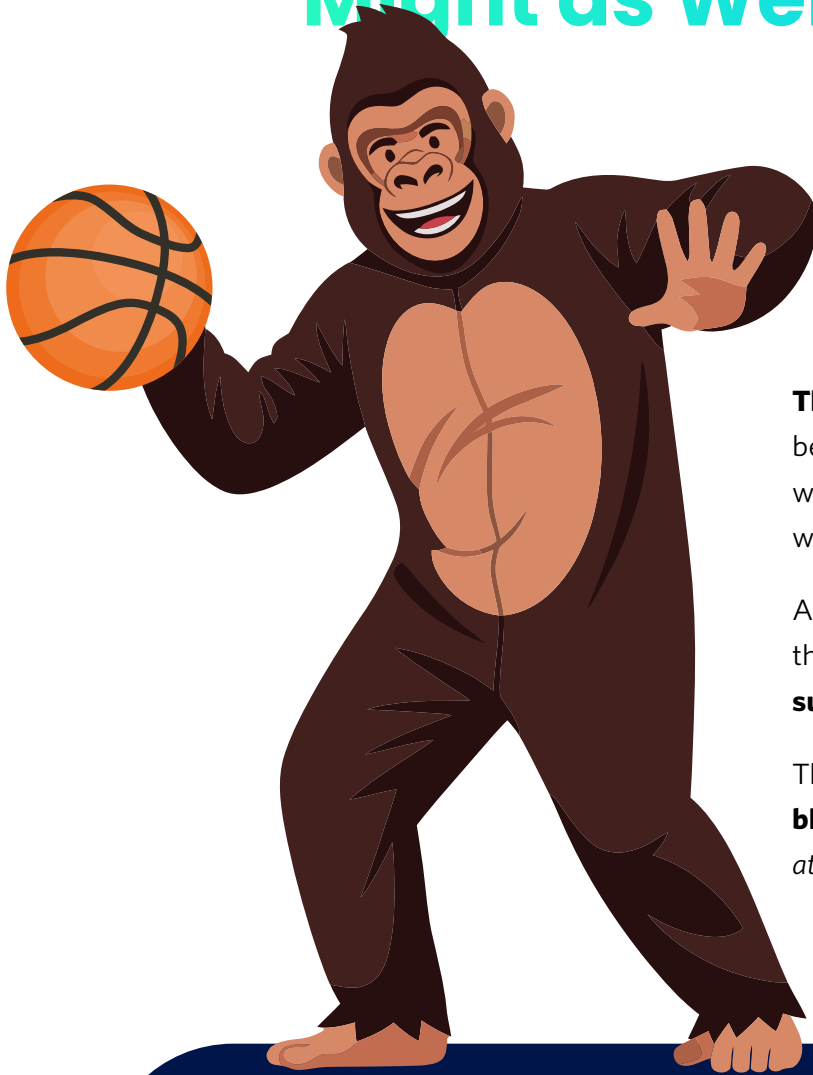
**Decision Making**

**Trust**

**Emotion**

## COGNITIVE PRINCIPLE #1: ATTENTION

## What We Don't Notice, Might as Well Not Exist



Great marketing starts by earning attention.

**The Invisible Gorilla<sup>4</sup>** experiment illustrates this beautifully. In this famous study, participants were asked to count how many times players in white passed a basketball.

About **50% of viewers**, completely focused on the task, **failed to notice a person in a gorilla suit walking** through the scene.

This is a clear example of **inattentional blindness** — *we miss what we're not paying attention to.*

### Marketing Takeaway

- People miss what they're not looking for
- You can't assume your message will be seen just because it's present
- Design should guide attention intentionally to the key message or Call to Action



## COGNITIVE PRINCIPLE #2: MEMORY

# Staying in the Consumers Mind

Once you've captured attention, the next challenge is staying in someone's mind. But memory doesn't treat every detail equally.

**The Serial Position Effect**<sup>5</sup> is a psychological phenomenon where a person is most likely to remember the first and last items in a list and forget the middle.

Say an ad lists these product benefits:

- ✓ Fast Shipping
- ✓ Sustainable Packaging
- ✓ Affordable Pricing
- ✓ Long battery life
- ✓ 24/7 customer support

Most people will walk away remembering **fast shipping** and **customer support**, but **not the middle three**.

According to the **Von Restorff Effect**,<sup>6</sup> we remember things that stand out or break the pattern, like a vivid color splash or a headline that subverts expectations.



## Marketing Move

- Put your strongest, most distinctive benefits at the start or end of your list.
- Avoid burying key value props in the middle.
- Make one element visually distinctive



## COGNITIVE PRINCIPLE #3: DECISION-MAKING

# Less Really Is More

The number of choices can dramatically influence purchasing decisions. In a classic study,<sup>7</sup> when consumers saw one of two conditions:

## 24

### Jam Flavors

60% stopped but  
only **3%** purchased

## 6

### Jam Flavors

Fewer stopped, but  
**30%** purchased



## COGNITIVE PRINCIPLE #4: TRUST

# First Impressions Last

## Trust Forms in Seconds

We make snap judgments — often before we read a single word. Students who watched just 6 seconds of silent video clips formed impressions of professors that closely matched full end-of-semester evaluations.<sup>8</sup>



### Marketing Takeaway

- First impressions matter
- Design, tone, and visual cues shape trust instantly.
- A polished, confident brand presence earns attention and belief.



## COGNITIVE PRINCIPLE #5: EMOTION

# We Often Feel Before We Think

Emotion might be the most powerful force in decision-making.

In the **Iowa Gambling Task**,<sup>9</sup> people choose from four card decks. Some decks are good, others are bad, but they don't know which is which. The goal is to win as much money as possible.

Most learn to avoid the bad decks after 40-50 picks. But **after just 10, their bodies already react**. Participants have a physiological stress response near the riskier decks before they are consciously aware.

This reveals something important: **Gut instincts guide behavior before conscious reasoning kicks in.**



## Marketing Takeaway:

Tapping into emotion through storytelling, design, or brand tone can drive decisions before all facts are available.



# Where Marketing Data Meets the Mind

## How We Go Beyond the What to *Predict the Why*

Cognitive science gives marketing data depth.

It helps us **understand why** people engage, purchase, or hesitate.

It reveals what resonates, and why it differs person to person.

Because every **action starts in the mind.**

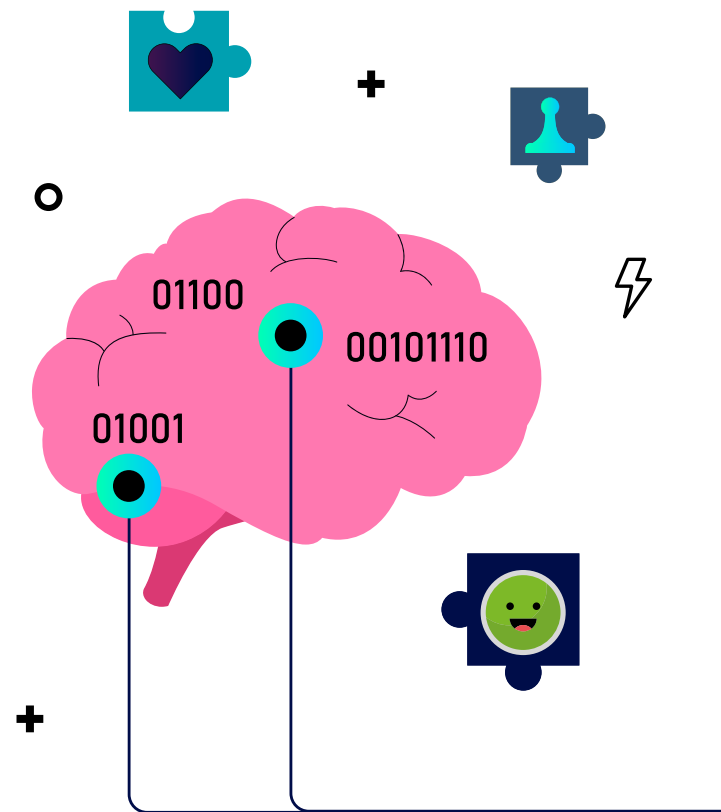
Some people act fast.

Some reflect.

Some crave urgency.

Some freeze with too many options.

Mental traits like impulsivity or decision style are measurable, and they shape how people respond.



This is how we go beyond the what to **predict the why** and influence what happens next.

That's the power of Cognitive Science.





### About the Author

## Dr. Christina Tworek

Dr. Christina Tworek leads the Cognitive Sciences team at Alliant. She holds a PhD in Psychology from UIUC, where she studied how people form beliefs and make decisions across the lifespan. She has extensive experience in quantitative market research methods, advanced data analysis, and human psychology.

She is published in top academic journals including PNAS and Psychological Science. [Follow her on LinkedIn](#)

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