

# The Physical Dimension of Empathy

*Why empathy training fails when it stays in the mind — and what happens when it moves into the body*

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## — A B S T R A C T

*Most empathy training operates at the level of cognition — teaching people to think about perspective, to remember frameworks, to be more ‘aware’. The evidence suggests this is insufficient. In organisations where empathy training has failed to change behaviour, the missing dimension is almost always the same: the body. This paper introduces the concept of physical empathy — the third dimension of the Threefold Model developed by Stuart Nolan through a PhD at Lancaster University and over fifteen years of applied practice across more than 2,500 participants. Drawing on neuroscience and psychology, it makes the case that empathy is not only a moral asset but a measurable performance driver: Harvard Business Review research across 170 companies found that those in the top quartile for empathy generated 50% higher earnings than those at the bottom. The missing piece is not more training. It is training the right dimension. The practice and evidence described in this paper are developed at length in *How to Train an Empath: Lessons from a Professional Mindreader* (Stuart Nolan, 2025).*

## The case for physical empathy training.

<b>The Problem</b>	<b>The Psychology</b>	<b>The Opportunity</b>
<p>Only 10% of UK employees feel motivated at work. The engagement index has not moved in four years. The investment in training is substantial. The change in behaviour is not.</p> <p>The reason is structural: most training works at the level of awareness. Awareness does not change what a leader does with their body in a difficult conversation.</p>	<p>Empathy is a physical capacity, not only an intellectual one. Mirror neurons, the ideomotor response, and the brain's empathy circuit all operate below conscious thought.</p> <p>These systems are trainable. Two weeks of structured practice produces measurable neural change. Fifteen years of applied work in organisations confirms the same.</p>	<p>Harvard Business Review research across 170 companies found that those in the top quartile for empathy generated 50% higher earnings than those in the bottom. Empathy is not a soft outcome — it is a performance driver.</p> <p>The organisations that close the gap will be those that train the missing dimension: the physical one.</p>

### — — THE CORE ARGUMENT

*The empathy deficit is not caused by a lack of willingness, budget, or training. It is caused by training the wrong dimension. When leaders cannot hold a team together under pressure, when feedback conversations cause withdrawal rather than growth, when an organisation's values live on a poster but not in a room — these are body problems. They require physical solutions. The organisations that solve this do not just reduce disengagement — they outperform.*

Physical empathy training does not replace cognitive or emotional work. It completes it. And crucially, it produces the only kind of change that counts: behaviour that is different when pressure is highest, when there is no time to remember a framework, when only what the body has learned will do.

— THIS PAPER COVERS

**1. Why conventional empathy training underperforms**

The structural reason why awareness-based programmes do not change behaviour under pressure.

**2. The Threefold Model of Empathy**

Head, Heart, and Hands — and why the physical dimension is the missing piece.

**3. The neuroscience**

Mirror neurons, the ideomotor response, and the plasticity of the empathy circuit.

**4. How physical empathy is trained**

The methodology, the physical empathy technique, and what the training produces.

**5. Evidence from practice**

Five anonymised client case studies with measurable outcomes across sector and scale.

**6. Addressing the sceptic**

The four most common objections from senior leadership — and the responses.

**7. Practical application**

Entry points, pricing, and how to build the internal business case.

**8. Conclusion and references**

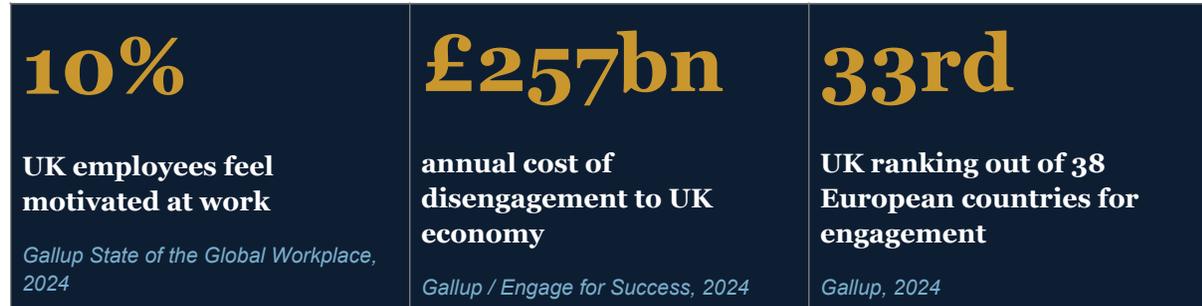
The closing argument and full academic citation list.

## The Problem With Empathy Training As It Stands

There is no shortage of empathy training in UK organisations. Workshops proliferate. Frameworks multiply. Awareness campaigns run alongside engagement surveys, wellbeing apps, and culture decks that tell employees what good looks like. And yet the evidence of impact is thin.

The UK sits 33rd out of 38 European countries for employee engagement, with just 10% of the workforce reporting that they feel motivated at work (Gallup, State of the Global Workplace, 2024). That figure has not moved meaningfully in a decade. The Engage for Success 2024 index holds at 62% — below pre-pandemic levels, despite billions of pounds invested in the very programmes designed to address it.

This is not a funding problem or a commitment problem. It is a method problem.



The vast majority of empathy training operates at the level of cognition: it teaches people to think about perspective, to recall the steps of active listening, to be ‘more aware’ of how others feel. What it rarely does is change what leaders actually do in the moments that matter — the difficult conversation at 9am on a Monday, the all-hands meeting where a team needs to feel heard, the one-to-one where a manager’s body language does more than their words.

The reason for this gap is well-established in the behavioural science literature. Knowing something is not the same as doing it, particularly under pressure, when the brain defaults to habitual patterns rather than consciously recalled frameworks. As researchers on the intention-action gap have documented for decades, the distance between attitude change and behaviour change is far larger than most training programmes acknowledge (Sheeran & Webb, 2016).

This paper proposes a different approach: one grounded in the body rather than the mind, in practice rather than awareness, and in a model of empathy that is more complete than the one most training programmes currently use.

## Rethinking Empathy: The Threefold Model

Empathy is most commonly described as having two dimensions. Cognitive empathy — the ability to understand what another person is thinking, sometimes called theory of mind — is the form most leadership training targets. Emotional empathy — the capacity to feel what another person feels — is acknowledged but often avoided in professional training contexts, where strong emotion is seen as a liability.

This two-part model is incomplete.

Through doctoral research at Lancaster University and fifteen years of applied practice with over 2,500 participants across sectors including healthcare, financial services, technology, logistics, and education, Stuart Nolan identified a third dimension that conventional empathy training consistently neglects: physical empathy.

### The Three Dimensions

DIMENSION	NAME	WHAT IT MEANS IN PRACTICE
HEAD	Cognitive Empathy	Understanding what another person is thinking. Perspective-taking, theory of mind, anticipating how others will interpret events. The form most leadership frameworks address. Necessary — but not sufficient.
HEART	Emotional Empathy	Feeling what another person feels. Emotional resonance, attunement, the capacity to sit with someone’s distress without deflecting. Often under-trained in professional contexts due to concern about overwhelm.
HANDS	Physical Empathy	Responding to another person through the body — micro-movements, posture, breath, muscular resonance. The dimension that operates beneath language and conscious awareness. The one that determines whether someone feels genuinely heard.

The key insight is not that physical empathy is more important than the other two dimensions — it is that physical empathy is the dimension most reliably connected to behaviour change. You can understand someone’s perspective intellectually without changing how you act. You can feel emotional resonance without translating it into the quality of your physical presence. But when the body is trained — when the involuntary signals of attention, attunement, and responsiveness become habitual — the change is durable, automatic, and visible to others.

*“Physical empathy operates beneath language, beneath conscious awareness. It is what makes dance duets work, what allows sports teams to move as one, what enables a parent to anticipate a child’s fall before it happens.”*

— Stuart Nolan, *How to Train an Empath*, 2025

*“I used to think empathy was about getting it right. Now I think it’s about staying in rhythm with someone, like dancing while blindfolded.”*

— Participant, cited in *How to Train an Empath*, 2025

## The Neuroscience: Why the Body Is Not Optional

The case for physical empathy is not philosophical. It is neurological.

### Mirror Neurons and Shared Neural Circuitry

In the 1990s, neuroscientist Giacomo Rizzolatti and his team at the University of Parma discovered neurons that fire both when an individual performs an action and when they observe another performing the same action. These mirror neurons — and the broader neural mirroring systems they represent — form the biological architecture underlying our capacity to simulate the experiences of others in our own nervous system (Rizzolatti & Craighero, 2004).

This is not a metaphor. When you wince as a colleague stumbles, or feel a tightening in your chest as someone describes a loss, you are not imagining their experience. You are partially enacting it. The boundary between your inner state and theirs is physiologically porous. As Vittorio Gallese has written, embodied simulation allows us to understand others ‘not through abstract reasoning but by experiencing their actions, intentions, and emotions as if they were our own’ (Gallese & Goldman, 1998).

The implication for leadership is direct: the quality of your physical presence — your posture, your stillness or agitation, the muscular attention you bring to a conversation — is being registered and responded to by others at a level below conscious thought. You cannot manage this purely through intention or technique. It requires training the body itself.

### The Ideomotor Response

A second piece of the neuroscientific foundation is the ideomotor response: the phenomenon by which thoughts and imaginings produce tiny, involuntary muscular movements. The term was coined by American neurologist George M. Beard in the 1870s, drawing on the work of William James, who observed that mental representations of action activate the motor system without conscious command.

Common Coding Theory in contemporary cognitive psychology formalises this insight: perception and action share a common neural language. When we watch or imagine an action, the same motor pathways activate as if we were performing it, at a lower threshold. This is why a crowd watching a boxing match may unconsciously twitch their fists, and why we reach to rub our own arm when we see someone injure theirs. It is the mechanism through which trained physical empathy operates: learning to attend to and respond to the micro-movements that others generate without realising it.

## The Brain's Empathy Circuit

The empathy circuit is not a single structure. It is a network of regions that activate together when we engage empathically with another person. Understanding what it comprises — and what each component does — clarifies both why empathy training so often falls short and what physical empathy training is actually changing.

REGION	FUNCTION IN EMPATHY
<b>Anterior Insula</b>	Registers your own bodily states — pain, warmth, discomfort — and mirrors them when you observe someone else experiencing the same. It is why you wince when watching someone stub their toe. This is the region most directly engaged by physical empathy training.
<b>Anterior Cingulate Cortex</b>	Processes both physical and social pain. The same region activates whether you feel rejected yourself or watch someone else be excluded. It is where 'it hurts to watch' is literally true, and where the ideomotor response originates.
<b>Medial Prefrontal Cortex</b>	Supports thinking about other people's mental states, intentions, and perspectives. More associated with cognitive empathy than felt empathy — and therefore the region most targeted by conventional awareness-based training.
<b>Temporoparietal Junction</b>	Critical for distinguishing your own perspective from another's. Damage here makes perspective-taking reliably difficult. It is a key node for the shift between self-focused and other-focused attention.
<b>Amygdala</b>	Processes emotional salience, threat, and the reading of facial expressions — particularly fear and distress. It responds rapidly and involuntarily, before conscious processing begins.
<b>Mirror Neuron Regions (Inferior Frontal Gyrus, Premotor Cortex)</b>	The substrate of the ideomotor response and the mechanism through which physical empathy training operates. These regions activate when observing action in others, producing micro-movements in the observer that mirror what they are watching.

Two points are worth drawing out. First, the regions most associated with cognitive empathy — the medial prefrontal cortex and the temporoparietal junction — are precisely the ones targeted by conventional awareness-based training. The regions most associated with felt and physical empathy — the insula, the anterior cingulate cortex, and the mirror

neuron system — are the ones that physical empathy training works with directly. The gap between these two sets of regions helps explain why training the first rarely produces the change that depends on the second.

Second, Tania Singer's work established a critical distinction within the circuit: emotional empathy (feeling with someone, mediated heavily by the insula and ACC) and compassion (feeling motivated to help someone) activate overlapping but distinct pathways. Pure emotional empathy without the compassion component produces what Singer calls empathic distress — a state of overwhelm in which the practitioner absorbs pain without the capacity to act on it. This is a meaningful risk for leaders and caregivers who are trained to feel more without being given the physical and psychological resources to regulate what they feel. The Threefold Model addresses this directly: physical empathy training builds the attentional and somatic skills that make sustained, regulated empathic engagement possible, rather than exhausting (Singer & Klimecki, 2014).

### **Neuroplasticity: Empathy Circuits Can Be Trained**

Critically, the neural circuits underlying empathy are plastic — they can be strengthened or weakened depending on practice, environment, and attention. Neuroscientist Helen Weng demonstrated that after as little as two weeks of compassion training, participants showed increased activity in brain regions associated with empathy and altruistic behaviour (Weng et al., 2013, PNAS). The empathy circuit — encompassing the amygdala, anterior cingulate cortex, insula, and medial prefrontal cortex — is responsive to training.

## What Physical Empathy Is — And How It Is Trained

Physical empathy, as defined within the Threefold Model, is the body’s capacity to resonate with, read, and respond to the physical signals of another person — signals that precede language, operate below conscious awareness, and are often more honest than anything said aloud.

### Physical Empathy as a Training Method

The training developed by Stuart Nolan draws on techniques from theatrical mentalism — practices in which a trained performer detects the involuntary muscular responses generated when a person focuses on an intention, object, or thought. Documented by 19th-century neurologist George M. Beard, these techniques work not through psychic means but through trained physical sensitivity to ideomotor signals. In a leadership development context, the same principles become a diagnostic and developmental tool: demonstrating to participants that they are constantly generating readable physical signals, and that with practice, those signals can be attended to and responded to with far greater accuracy. Participants work with pen, paper, and thread — materials chosen deliberately for their simplicity and their capacity to amplify micro-movements into visible signals. The moment of recognition — when someone realises that their thought produced a physical movement they were completely unaware of — is a reliable entry point into genuine engagement with the rest of the training, including among participants who arrived sceptical of anything labelled ‘soft skills’.

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*“It isn’t that I know what you’re feeling. It’s that I’m willing to sit with you while we find out together.”*

— Healthcare sector leadership participant, cited in *How to Train an Empath*, 2025

## What the Training Produces

Across fifteen years and more than 2,500 participants, the physical empathy training has produced a consistent set of capabilities that conventional empathy training does not:

- **Attentional precision:** The ability to notice micro-signals — changes in posture, breath, muscular tension — that indicate what a person is actually feeling, before and beneath what they say.
- **Somatic self-awareness:** The ability to notice one's own physical state and how it affects others. Leaders report becoming aware of how their physical presence changes the emotional register of a room before a word is spoken.
- **Non-reactive responsiveness:** The ability to remain physically present and attuned during difficult conversations, rather than defaulting to defensive or distancing body language under pressure.
- **Accompaniment:** The practice, drawn from the Latin *cum pane* ('with bread'), of walking alongside another person at their pace. As writer David Brooks describes, accompaniment is the act of making someone feel seen, heard, and understood. Physical empathy training is, in essence, training in accompaniment.

## Why It Works Where Conventional Training Does Not

The central advantage of physical empathy training over conventional approaches is that it does not rely on conscious recall during the moment of interaction. When a manager completes an awareness-based training programme, they must remember — in the heat of a difficult conversation — to apply what they learned. This is precisely when cognitive load is highest, emotional arousal is elevated, and habitual behaviour is most likely to override conscious intention.

Physical empathy training builds habits at the level of the body. It changes what feels natural in a conversation, not just what the leader believes they should do. The result is behaviour change that persists under pressure — which is, of course, when it matters most. Participants consistently describe a qualitative shift that cognitive training alone does not produce. One described it as 'a kind of listening I can feel in my spine' — a description that captures precisely what physical empathy training is designed to produce: attunement that is felt in the body, not remembered from a slide. Another put it simply: 'I thought I knew what empathy was, but this is something else entirely.' Both are cited in *How to Train an Empath* (Nolan, 2025).

## Evidence From Practice

The following outcomes are drawn from client engagements delivered by Stuart Nolan Consulting across sectors including digital technology, global logistics, creative education, healthcare, and innovation. Client names have been anonymised. Each intervention incorporated the physical empathy training methodology as its core element, often integrated with team-specific diagnostic work and follow-up embedding sessions.

### **Digital Agency** — UK Technology Sector

**Challenge:** Teams talking past each other. Product and support misaligned, with slow customer resolution damaging client retention and staff morale.

**Intervention:** Non-verbal listening exercises and physical empathy sessions focusing on cross-team attunement. Integrated into daily stand-up rituals and handover protocols.

**Outcome:** **Resolution time reduced from 48 hours to 22 hours — a 54% reduction. Teams reported qualitatively different levels of mutual understanding in post-session reviews.**

### **Global Logistics Organisation** — Operations

**Challenge:** Late internal handovers during high-pressure product launches were damaging client relationships and increasing operational costs.

**Intervention:** Daily physical empathy warm-up exercises integrated into team rituals, combined with non-verbal awareness training for team leads.

**Outcome:** **Late handovers reduced by 43% in a single quarter. Team leads reported greater ability to read team state before assigning workloads.**

## **Creative Education Institution** — Innovation Programmes

**Challenge:** Guarded brainstorming. Ideas evaluated before they could develop. Teams holding back in collaborative sessions.

**Intervention:** Physical empathy games used as session openers to shift teams into a non-judgemental, psychologically safe state before collaborative work began.

**Outcome:** **Viable ideas per session increased by 38% in six weeks. Facilitators noted a measurable change in the quality of physical presence in the room from the first session.**

## **National Innovation Foundation** — Public Sector

**Challenge:** Major organisational restructure requiring sustained staff trust and engagement under conditions of significant uncertainty.

**Intervention:** Physical empathy training for leadership and management teams, focused on maintaining genuine attunement during difficult communication.

**Outcome:** **87% staff engagement during the restructure — a result the leadership team directly attributed to empathic communication at every level of the process.**

## **NHS Hospital Trust** — Healthcare

**Challenge:** Workforce challenges including sickness absence, coordination failures, and staff retention difficulties across clinical and administrative teams.

**Intervention:** Physical empathy training embedded across clinical and administrative cohorts. Focus on attunement between teams operating under high pressure.

**Outcome:** **Patient coordination improved by 45%. Sickness absence measurably reduced. Staff retention improved within two cohorts.**

**-54%**

**Resolution time**

*Digital agency · 48 hrs → 22 hrs*

**-43%**

**Late handovers**

*Global logistics · one quarter*

**+87%**

**Staff engagement during restructure**

*Public sector innovation foundation*

Across all engagements, the pattern is consistent: the change that physical empathy training produces is not attitudinal — it is behavioural. Participants do not simply report understanding empathy better. They act differently, and the difference is visible and measurable.

## Addressing the Sceptic

Senior leaders are, rightly, sceptical of training that promises behaviour change without robust evidence. The following objections are the most common encountered in diagnostic conversations.

***“We’ve done empathy training. It didn’t stick.”***

This is the most common response — and the most important. It is almost always a description of awareness-based training that did not address the physical dimension. The question to ask is: did the training change what your leaders do with their bodies in a difficult conversation? If not, it was incomplete.

***“Empathy is a soft skill. I need hard results.”***

A 54% reduction in resolution time is not a soft result. Neither is 87% staff engagement during a restructure, or a 43% reduction in late handovers. Physical empathy is infrastructure — the underlying capability that makes communication, collaboration, and performance possible under pressure.

***“You can’t train empathy in a workshop.”***

Correct. The physical empathy training is not a one-day workshop. It is a programme of embedded, progressive practice that builds physical habits over time. Neuroplasticity research is clear: brief interventions initiate change, but durable change requires repeated, structured practice over weeks and months.

***“Our culture isn’t ready for this kind of work.”***

The physical empathy training does not require participants to discuss personal history or share emotions publicly. The exercises use pen, paper, and thread. They are designed to be accessible to the empathy-averse. The moment of experiential recognition — when someone discovers that their thought produced a movement they were unaware of — is a reliable entry point regardless of cultural starting point.

## Practical Application

Physical empathy is a new concept to most organisations, and it often arrives with resistance. People who have sat through previous empathy training — and seen it produce no lasting change — are understandably sceptical that this time will be different. Senior leaders who prefer the language of performance may distrust anything that sounds like a wellbeing initiative. This section addresses how to introduce physical empathy training effectively, how to sequence it, and how to make the case internally.

### Starting with sceptics

The programme formats below are sequenced from the lowest to the highest commitment — deliberately, because the most common starting point for sceptical organisations is a single session that lets people encounter the training directly before any larger decision is made. The keynote talk is designed for exactly this: it introduces physical empathy, demonstrates it, and gives senior stakeholders enough of a direct experience to make an informed decision about the next step.

<p><b>Keynote Talk</b> From £1,500</p>	<p>An experiential introduction to physical empathy, suitable for all-hands events, leadership conferences, and off-sites. 30–90 minutes, any group size. Participants experience the training directly, not just hear about it.</p>
<p><b>Workshop or Lab</b> From £3,500</p>	<p>A half-day immersive session in which teams build physical empathy skills through structured practice. Suitable for leadership teams, management cohorts, and cross-functional groups of 8–30 participants.</p>
<p><b>Empathy Audit</b> From £4,500</p>	<p>A diagnostic of current empathy capability across the Threefold Model, followed by a bespoke programme design. 1–2 days, organisation-wide. Appropriate for organisations seeking sustainable, measurable behaviour change.</p>
<p><b>Full Programme</b> From £12,000</p>	<p>A multi-cohort programme integrating all three dimensions of the Threefold Model with measurement checkpoints, leadership coaching, and ROI tracking against pre-agreed KPIs. 6–12 months, organisation-wide.</p>

## Building the internal case

The most effective way to introduce physical empathy to a sceptical organisation is through direct experience, not argument. The training is designed so that participants encounter the evidence of their own bodies: they experience, in the first thirty minutes, that their thoughts produce involuntary physical movements they were unaware of. That moment of recognition is a more reliable entry point than any amount of data, because it is personally felt rather than externally described. No cognitive framework, however compelling, produces the same shift.

For organisations that need to build a formal business case before commissioning: the most credible approach is to define the metrics that engagement failure is already costing you — staff turnover, absence rates, unresolved conflict, engagement survey scores — and model what a 10–20% improvement in each would be worth. Physical empathy training is fundable precisely because its outcomes are measurable against KPIs that organisations already track. Stuart Nolan Consulting provides ROI modelling based on your existing data and sector benchmarks before any commitment is made.

## Conclusion: The Case for Training the Body

The empathy deficit is real. The data on engagement, motivation, and the cost of poor management is unambiguous. What is less clear — and what this paper has attempted to address — is why the investment in training consistently fails to close that deficit.

The answer is structural. Empathy training has overwhelmingly targeted the cognitive dimension while leaving the physical dimension untouched. And the physical dimension is the one that determines how a person actually behaves in the moment that matters: the difficult meeting, the feedback conversation, the team interaction where trust is built or eroded in seconds.

The neuroscience is clear: empathy is a bodily capacity, rooted in mirror neuron systems, shaped by the ideomotor response, and trainable through structured physical practice. The evidence from practice confirms it. When the physical dimension is included, the outcomes are measurable, durable, and directly connected to the business metrics that matter to senior leadership.

The case is not that physical empathy replaces cognitive or emotional training. It is that without it, the other two dimensions are unlikely to produce the behaviour change that organisations are investing in. Physical empathy is not a complement to the training. For most organisations, it is the missing piece — and closing that gap is not just the right thing to do. It is, the evidence now shows, the profitable thing to do.

*“Empathy is not a warm fuzzy feeling. It is a physical skill — raw, fast, instinctive. It is what happens when your body tunes into someone else’s. And like any instrument, you can learn to play it.”*

— Stuart Nolan, *How to Train an Empath*, 2025

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## Every engagement begins with a free discovery call.

*No generic proposals — we agree what success looks like before any money changes hands.*

**Keynote Talk** · From £1,500 — Experiential introduction for events and leadership conferences.

**Workshop or Lab** · From £3,500 — Half-day immersive team training, 8–30 participants.

**Empathy Audit** · From £4,500 — Diagnostic + bespoke programme design, organisation-wide.

**Full Programme** · From £12,000 — Multi-cohort, 6–12 months, with measurement and ROI tracking.

### Get in touch

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— ABOUT THE BOOK

***How to Train an Empath: Lessons from a Professional Mindreader*** (Stuart Nolan, Billet Publishing, 2025) sets out the full evidence base, methodology, and practice framework for the physical empathy training described in this series — including complete case studies, participant accounts, and implementation tools. Available at [stuartnolan.com/book](https://stuartnolan.com/book)

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