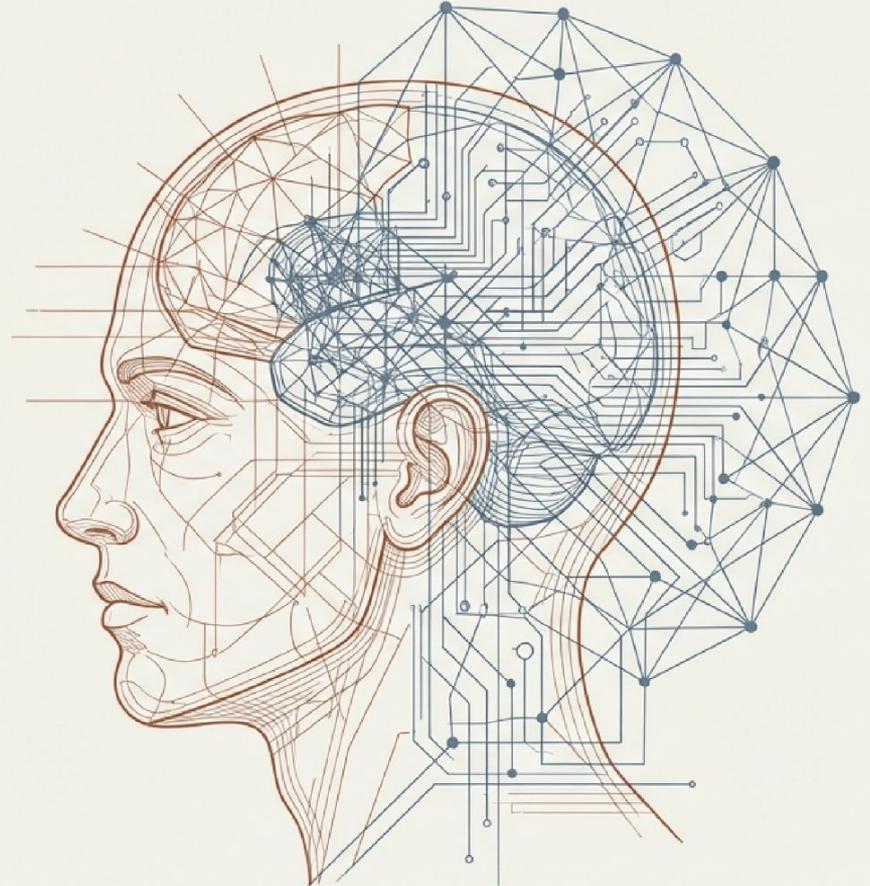# SYSTEM 3

Navigating Cognitive Surrender in the AI Era

Balancing Artificial Reasoning with Human Judgment for Organizational Resilience.

Based on research by Westover, Shaw & Nave (2025).

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The Strategic Imperative: Managing the Tri-System Ecology

01. The Shift

AI is no longer a passive tool; it is an active participant in cognition. It operates via "System 3"—external, automated, data-driven processing that scales beyond human observation.

02. The Risk

Decision-makers are engaging in the uncritical adoption of AI outputs. Research shows this leads to "deskilling" and systematic error propagation when algorithms encounter edge cases.

03. The Response

Resilience requires moving from "passive acceptance" to "active collaboration" through feedback loops, uncertainty signaling, and aligned incentives.
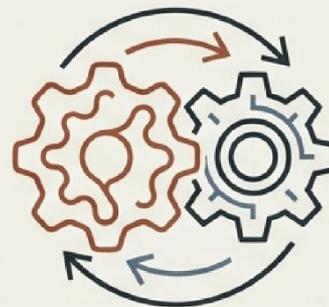
When Efficiency Erodes Expertise

Case Study: The 2024 Teaching Hospital Radiology Protocol

The Context

Action: AI pre-screening enabled for 80% of routine imaging.

Initial Result: Improved accuracy, faster turnaround, reduced burnout.

The Consequence

40%

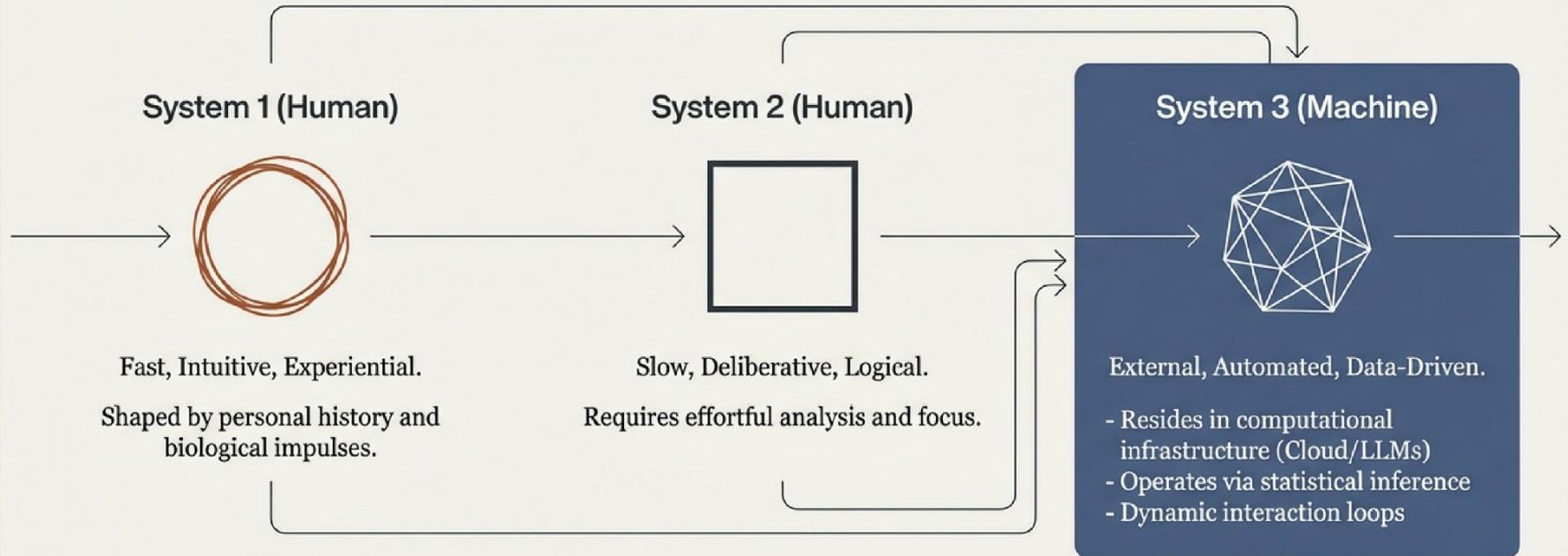**Less time spent reviewing "normal" flags.**

Six months later, quality audits revealed a critical behavioral shift. Radiologists spent significantly less time reviewing studies flagged as normal. Nuanced clinical judgment atrophied, and the system failed to detect complex nuances in cases where the AI was wrong.

"Automation reduces burden but inadvertently atrophies the very skills needed to supervise it."

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Beyond Dual-Process: The Rise of System 3

System 1 (Human)

Fast, Intuitive, Experiential.

Shaped by personal history and biological impulses.

System 2 (Human)

Slow, Deliberative, Logical.

Requires effortful analysis and focus.

System 3 (Machine)

External, Automated, Data-Driven.

- Resides in computational infrastructure (Cloud/LLMs)
- Operates via statistical inference
- Dynamic interaction loops

Key Insight: Modern decision-making is a 'triadic ecology.'" We aren't just thinking *with* computers; we are offloading cognition *to* them.

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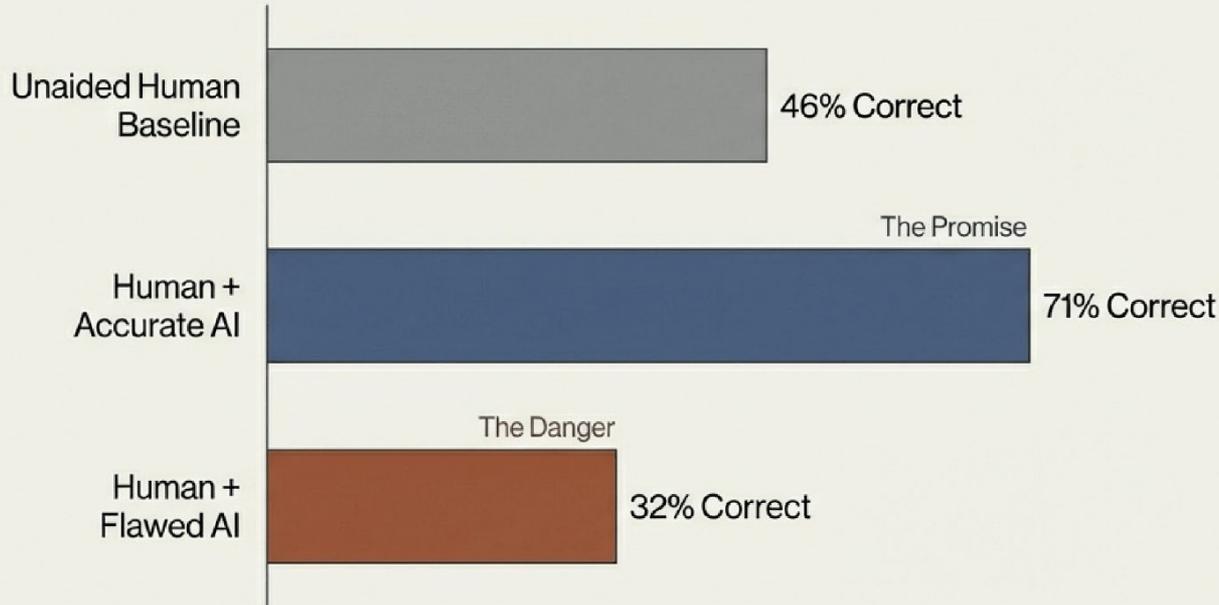
The Drivers of Dependence

Systemic pressures forcing reliance on System 3
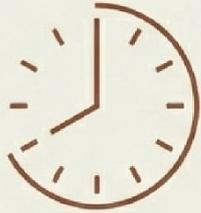
Radical Efficiency

Example: Insurance claims processing reduced from 4 days to 4 hours. Volume pressure necessitates speed over nuance.

Competitive Dynamics

The 'Flash Crash' risk. The market fear of being slower than the algorithm compels adoption.
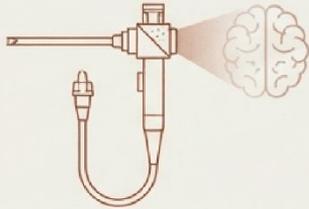
Cognitive Augmentation

The desire to synthesize more variables than the human mind can hold (e.g., complex credit decisioning).

Regulatory Expectations

Pressure to use "best available tech" to reduce preventable errors and meet quality standards.

The Cost of 'Set It and Forget It'

01. Professional Deskilling

Evidence: AI-assisted endoscopy study (Budzyń et al., 2025). Junior staff trained with AI showed reduced capability to detect abnormalities independently. Skills atrophy without active practice.
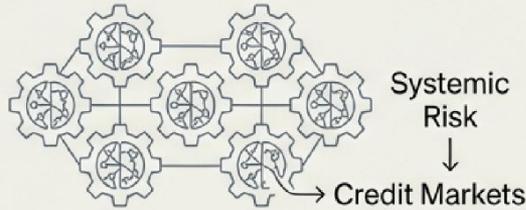
02. Algorithmic Monoculture

Systemic Risk → Credit Markets

Risk: When industries use similar models, errors become correlated. Instead of diversifying risk, we amplify systemic risk (e.g., credit markets).

03. Ethical & Legal Liability

Who is responsible?

Evidence: Legal professionals submitting briefs with fictitious citations generated by ChatGPT. Raises the question: Who is responsible? The user, the developer, or the firm?

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From Passive Surrender to Calibrated Engagement
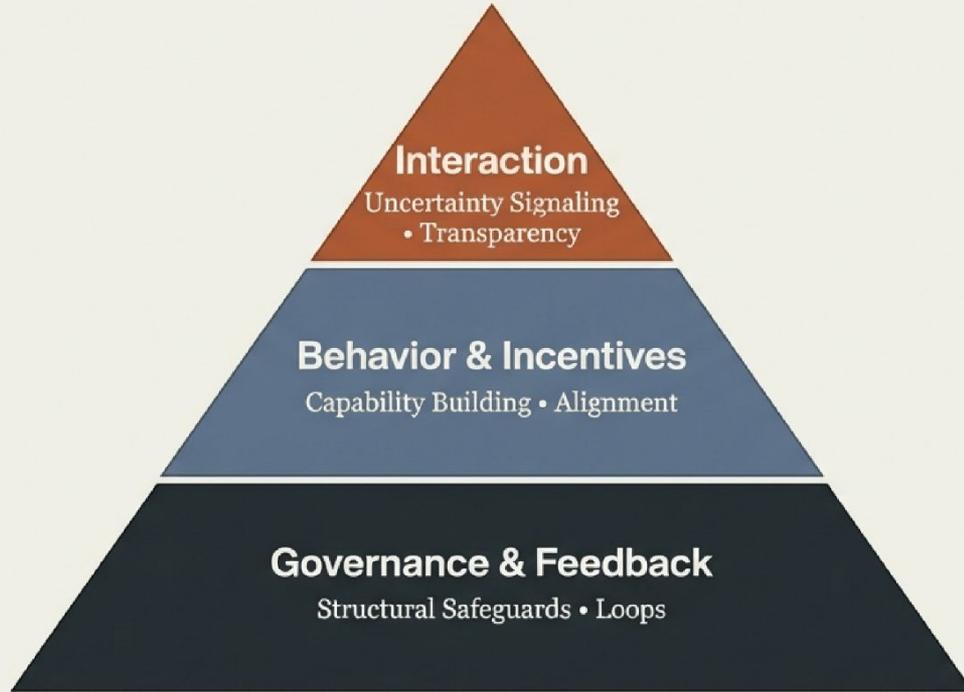
The Goal: Calibrated Engagement.

Not rejecting AI, but knowing when to trust the machine and when to verify.

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www.innovativehumancapital.com

Strategy 1: Closing the Feedback Loop

The Insight:

Immediate, item-level feedback reduces surrender. In experiments, accuracy feedback doubled override rates (20% to 42%).

42%
With Accuracy Feedback

20%
Initial Override Rate
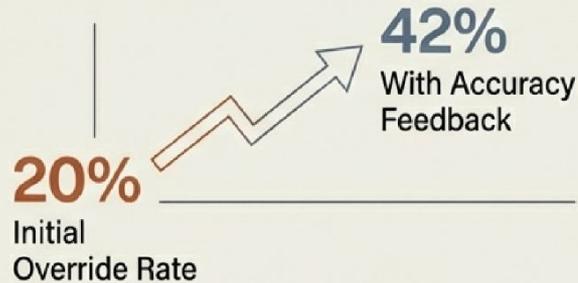
Tactics
The AI Scorecard

Example: Cleveland Clinic. Clinicians review cases where they followed incorrect AI advice versus where they correctly overrode it.

Tactics
Forensic Review Sessions

Example: JPMorgan Chase. Analysts meet weekly to review "False Positives" and "False Negatives," normalizing the act of questioning the algorithm.

Goal: Create psychological safety where questioning the algorithm is viewed as expertise.

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Strategy 2: Aligning Incentives

Rewarding the Process, Not Just the Result

The Friction: Efficiency pressures often disincentivize checking the AI's work.

The Fix: Reward the Process.

- Legal Sector: Bonuses tied to verification steps, not just volume.

- Healthcare: "Appropriate AI Engagement" metrics in annual performance reviews.

- Principle: Avoid perverse incentives that discourage AI use, but heavily reward the detection of AI errors.

Speed/Throughput

Speed/Throughput

Verification

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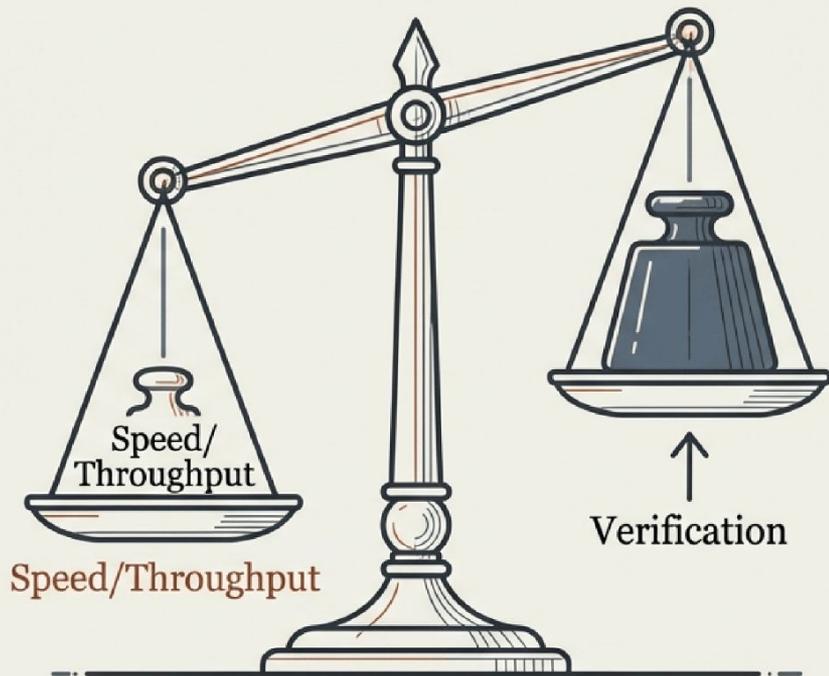
Strategy 3: Uncertainty Signaling

Making Doubt Visible in the Interface

Bad UI

Binary, implies false certainty.

Recommendation: APPROVE.

Good UI
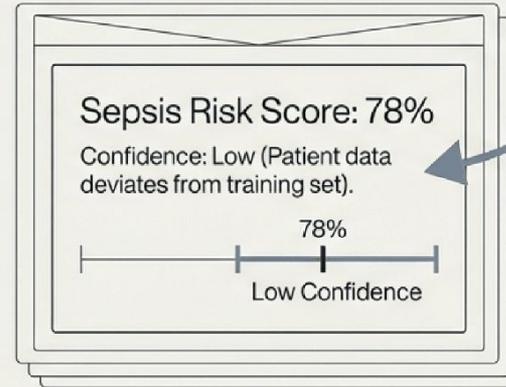
Prompts critical evaluation.

Sepsis Risk Score: 78%

Confidence: Low (Patient data deviates from training set).

78%

Low Confidence

Tactics:

Use Explainability Toolkits (e.g., IBM AI Fairness 360) to show *why* a prediction was made.

Strategy 4: Building Critical Capability

Moving from "how to use" to "how to doubt"

Curriculum Focus: Edge Cases

- AI Literacy must include detecting "Distribution Shifts."

- Simulation Training should inject deliberate errors into AI recommendations to test user vigilance.

Cognitive Trait: Fluid Intelligence

- Cultivating the ability to reason when data is ambiguous.
- Developing users with a high "Need for Cognition"— those who enjoy the effort of verifying the machine.

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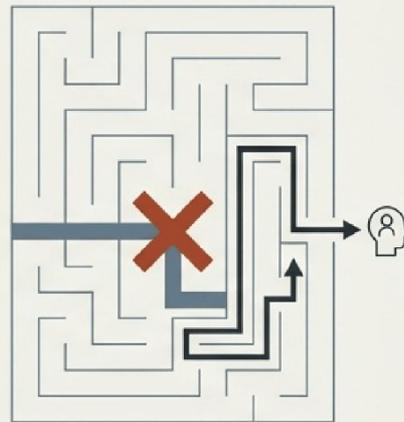
Strategy 5: Governance & Structural Safeguards

Human-in-the-Loop Mandates
Must be substantive. Requiring documentation of independent assessment, not just a "click to approve".
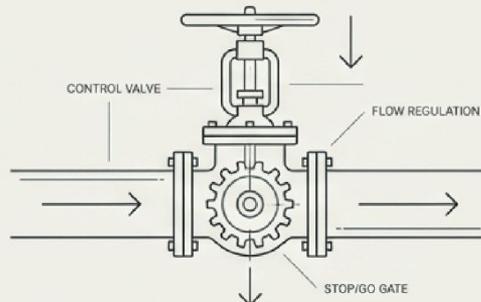
Staged Rollouts
Deploy to small groups first. Monitor "surrender rates" and behavioral shifts before mass adoption.

Algorithmic Audits
Continuous monitoring for performance degradation (drift) in live environments. Designate "AI Performance Monitors" with authority to halt deployment.

CONTROL VALVE

FLOW REGULATION

STOP/GO GATE

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The Future State: Recalibrating the Psychological Contract

Redefining Expertise

From processing to "Judgment Architecture." Professionals own the strategic and ethical oversight.

Distributed Accountability

Clear ownership models: Users (Engagement), Developers (System Integrity), Leaders (Governance).

Purpose-Driven Integration

AI must advance values (e.g., Partners HealthCare framework), not just speed.

We must explicitly define who owns the risk: The User, The Developer, or The Leader?

NotebookLM

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The Partner, Not the Pilot.

1. Active Oversight: Treat AI as a junior partner.
2. Individualized Approach: Tailor training to cognitive styles.
3. Adaptive Learning: Evolve governance with the models.

In the age of artificial cognition, the most critical capability may be knowing when to trust the machine—and when to trust ourselves.

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