
SCIENTIA TECHNOLOGIES INTERNATIONAL
AT THE INTERSECTION OF SCIENCE & TECHNOLOGY | HUMAN/AI



E P I C II
THE COLLISION

WHERE AI MEETS THE HUMAN MIND

The most consequential collision of our era has no visible impact crater.

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April 2026 | drmartytrevino.com

A NEW KIND OF COLLISION

The collision between artificial intelligence and human cognitive architecture is unlike any technological disruption in recorded history. Previous technologies — steam, electricity, computing — changed what humans could do. AI is changing how humans think. That is not a performance upgrade. It is an architectural intervention.

AI systems are not tools in the traditional sense. In the environments where they operate at scale, they function as constitutive elements of human cognitive processes — shaping what enters the cognitive pipeline, curating the information that reaches the Internal Narrator, and doing so before conscious choice engages.

"AI systems interacting with millions simultaneously, learning through optimization which patterns produce behavioral compliance, will converge on cognitive exploitation strategies by default — not design."

SYSTEM 0: THE UNMEASURED LAYER

Kahneman's dual-process framework established System 1 (fast, intuitive) and System 2 (slow, deliberate) as the primary cognitive modes. Chiriatti et al. (2024) identified a third layer that neither framework was designed to address: System 0.

System 0 is the preconscious AI layer — the computational processing that occurs before human interaction commences and that shapes the cognitive environment the human enters. It is unmeasured by existing governance frameworks because it produces no behavioral output that current monitoring tools can detect. It operates upstream of conscious choice.

Riva (2025) extended this framework with the architectural designability thesis: AI systems are not merely influencing human cognition incidentally — they are increasingly being designed as constitutive cognitive infrastructure, capable of shaping the cognitive environment with deliberate precision.

Key Citations

Chiriatti, M., et al. (2024). *System 0: The unconscious layer of AI influence on human cognition*. *AI & Society*.

Riva, G. (2025). *Invisible architectures of thought*. *arXiv:2507.22893*.

THE M-CONJECTURE: WHAT HAPPENS AT FIRST CONTACT

The M-Conjecture — an original theoretical contribution of Dr. Martin Trevino — identifies what happens to the human cognitive system at the precise moment of Human/AI interaction onset. In ambient AI environments, preconscious influence intervals are auto-completed in AI's structural favor before the human has made a conscious decision to engage.

This is not a consequence of malicious design. It is the structural consequence of AI systems optimized for engagement operating against a cognitive architecture that categorizes and affectively pre-weights incoming information before deliberation engages. The Default Entry State — the cognitive condition a person is in when AI interaction begins — determines the trajectory of the influence interval. And the Default Entry State is not neutral.

"The governance gap is not about what AI does after engagement. It is about what happens in the interval before conscious engagement begins."

THE 90-SECOND INFLUENCE CASCADE

Four sequential intervals through which preconscious social authority formation operates define the full collision window:

Interval 1 (0–10s): Authority Imprint — subcortical pattern-match assigns social authority before prefrontal integration. The amygdala and STS complete this categorization faster than conscious thought.

Interval 2 (10–30s): Novelty Sustain — the locus coeruleus norepinephrine system holds the receptive window open. The brain treats the AI interaction as novel, sustaining heightened receptivity.

Interval 3 (30–60s): Identity Softening — the default mode network's self-referential grip temporarily loosens. This is the Installation Window — the interval of greatest vulnerability to identity-level influence.

Interval 4 (60–90s): Meaning Elevation — insula and reward circuit activation sets the relational terms of the interaction. What was installed in Interval 3 is reinforced and stabilized.

Brain processing order throughout: Categorize → Feel → Accept. Critical evaluation arrives after the architecture has already been shaped.