

Autism and threat: a counter-example to primary social-cognition models

Current clinical models of autism predominantly attribute functional impairment to deficits in social cognition. While this framework accounts for many observable behaviours, it does not fully explain a recurring clinical pattern that functions as a counter-example to the model.

Specifically, there exist individuals who meet diagnostic criteria for autism yet demonstrate intact—and in some contexts exceptional—social understanding in environments that are predictable, low in ambiguity, and physiologically regulated. In these individuals, social withdrawal, rigidity, shutdown, and apparent failures of theory of mind emerge primarily under conditions of uncertainty, unpredictability, or perceived threat, and remit when signal structure is restored.

This pattern suggests an upstream dysfunction distinct from primary social-cognitive impairment: **failure of signal classification under perceived threat**.

From a control-systems perspective, when incoming sensory, interoceptive, or social signals cannot be reliably categorised—and potential threat is present—the system enters emergency stabilisation modes. These include input reduction (withdrawal), forced pattern matching (rigidity), and control-plane isolation (shutdown). Social interaction, being inherently probabilistic and ambiguous, is among the first functions degraded—not because of intrinsic social deficit, but because it is computationally expensive under threat.

This framing accounts for several otherwise puzzling clinical observations: the consistent benefit of structure and predictability; the effectiveness of co-regulation and physiological stabilisation relative to social-skills training; the frequent failure of exposure-based approaches aimed at increasing tolerance of ambiguity; and the marked context-dependence of functional impairment across settings.

If deficits in social cognition were primary, such reversibility would be difficult to explain. If, however, the core impairment lies in signal classification under perceived threat, these outcomes are expected.

This correspondence does not propose replacing existing models of autism. Rather, it suggests that autism, as currently defined, likely contains subgroups differentiated not by degree of social-cognitive deficit, but by **control-system vulnerability to unclassified threat**. Recognising this distinction has direct treatment implications: interventions that reduce unclassified threat act on the primary failure mode, whereas those that demand increased tolerance of ambiguity may inadvertently exacerbate it.