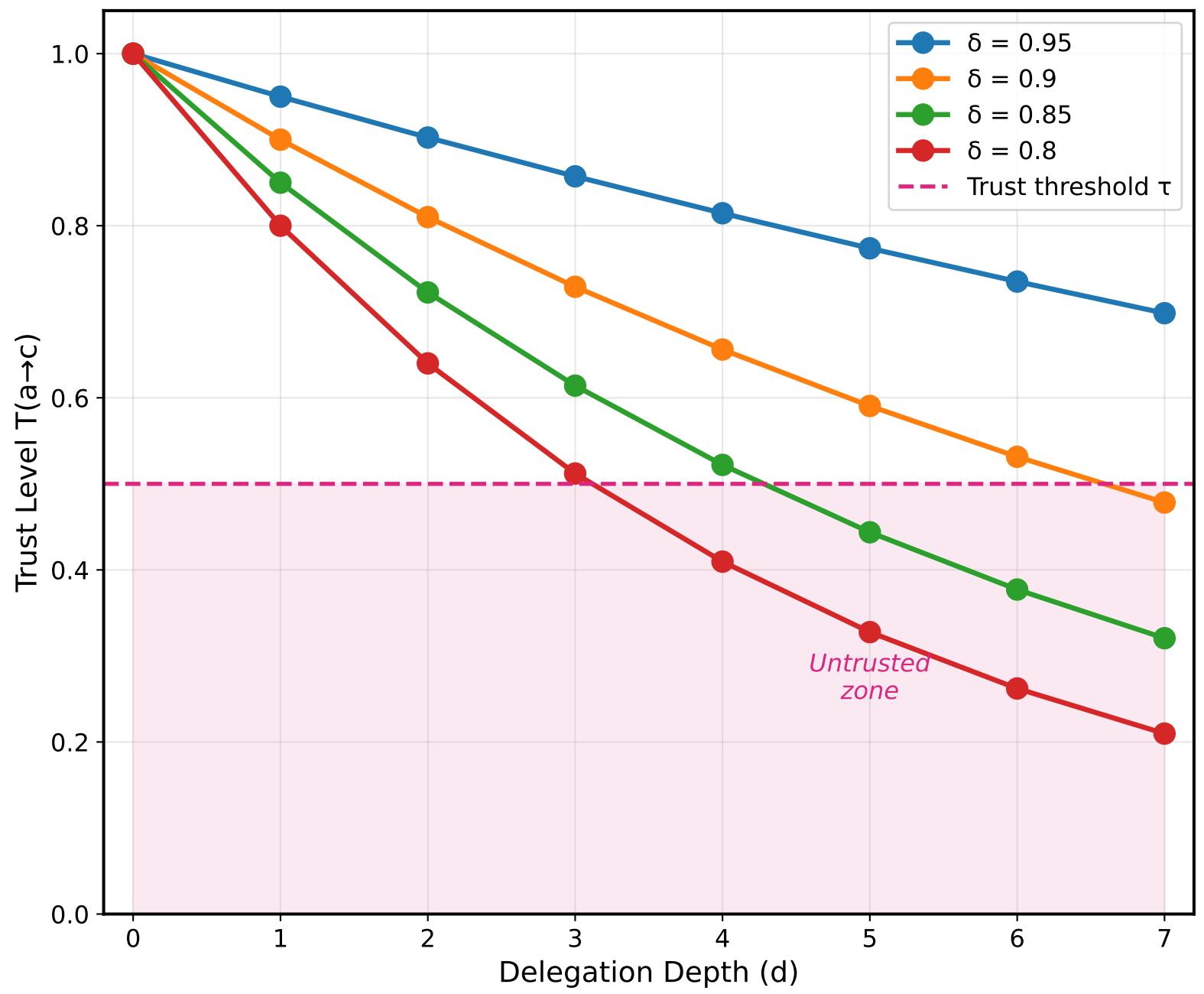


A. Trust Decay: $T(a \rightarrow c) \leq \delta^d \cdot T(a \rightarrow b)$



B. Trust Update Mechanism

$$T'(a \rightarrow b) = \alpha \cdot T(a \rightarrow b) + \beta \cdot \text{outcome} + \gamma \cdot \text{consensus}$$

where: $\alpha + \beta + \gamma = 1$ (normalization)

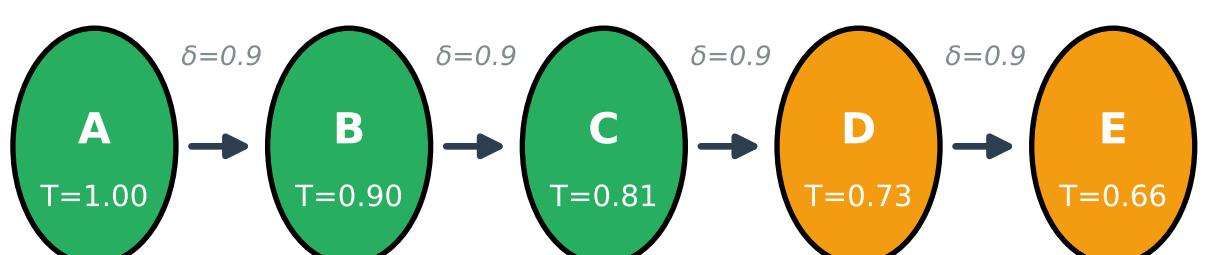
Historical Trust
 $\alpha \cdot T(a \rightarrow b)$

Outcome Verification
 $\beta \cdot \text{outcome}$

Peer Consensus
 $\gamma \cdot \text{consensus}$

Updated Trust $T'(a \rightarrow b)$

C. Bounded Delegation Chain (Theorem 3.1)

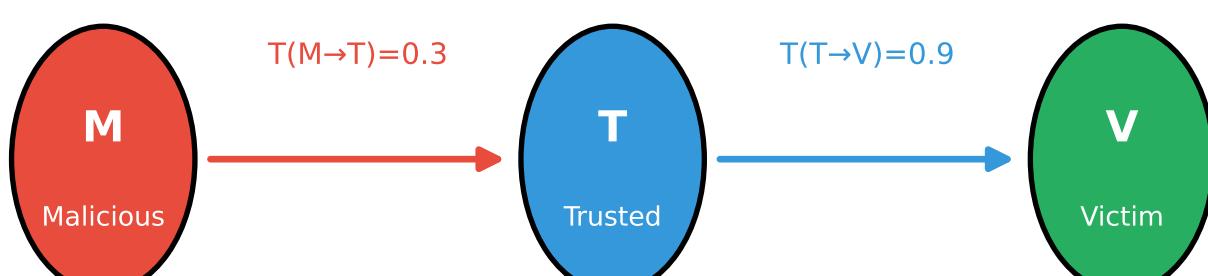


$$T(A \rightarrow E) \leq \delta^4 \cdot T(A \rightarrow B) = 0.9^4 \times 1.0 = 0.66$$

Trust bounded exponentially: prevents trust amplification

D. Trust Laundering Prevention

Attack Attempt: Malicious \rightarrow Trusted \rightarrow Target



$$T(M \rightarrow V) \leq \delta \cdot T(M \rightarrow T) = 0.9 \times 0.3 = 0.27 < \tau$$

Delegated trust BLOCKED - below threshold