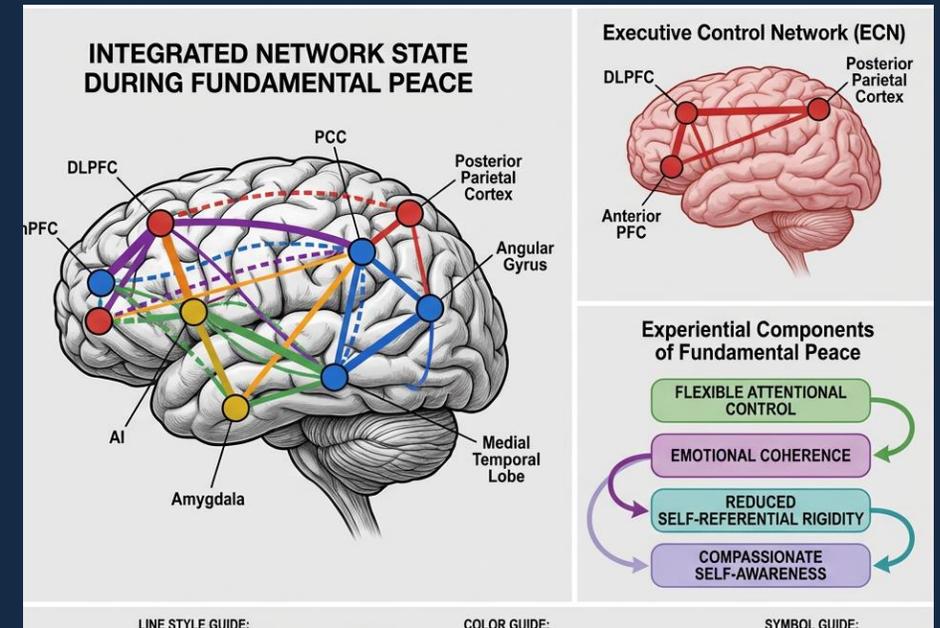


Hypnosis, Emotion Regulation, and the Emergence of Fundamental Peace

Presenting the model proposed in
Gallardo & Chetri, Behavioral Sciences 2026, 16, 395

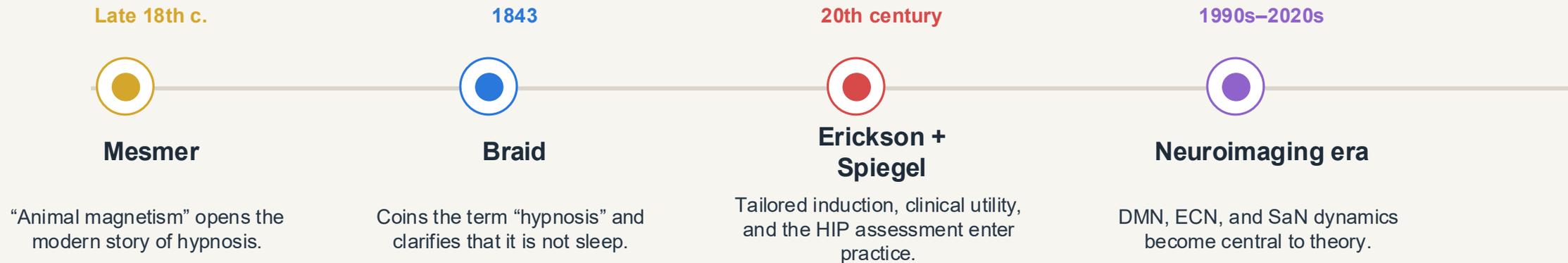
Luis Miguel Gallardo • Saamdu Chetri

A mechanistic account linking network reconfiguration, self-integration, and a measurable model of peace.



From Clinical Hypnosis to Network Science

The paper reframes hypnosis from a symptom-control technique to a psychobiological mechanism of regulation and self-integration.



Key shift in this review: hypnosis is treated as a coordinated change in attention, salience, and self-referential processing — not simply a set of therapeutic suggestions.

Why This Review Was Needed

Problem

The article is motivated by four gaps in the hypnosis literature — and one integrative thesis.

1 Brain changes ≠ clinical model

Neural findings existed, but they were not coherently linked to mechanisms and outcomes.

2 Long-term regulation unclear

The field explained acute symptom relief better than lasting shifts in self-regulation.

3 Wellness underdeveloped

Most outcome work tracked symptom reduction more than integrated positive functioning.

4 No operational peace construct

Concepts like self-coherence lacked a clear empirical definition and measurement pathway.

Core thesis

Hypnotic induction reorganizes large-scale brain networks in ways that can improve emotion regulation, reduce dissociative fragmentation, and generate the integrated experiential state the paper calls Fundamental Peace.



FP definition

A 4-component operational construct



Mechanistic model

Network → cognition → experience



Measurement path

Scales, tasks, neural markers

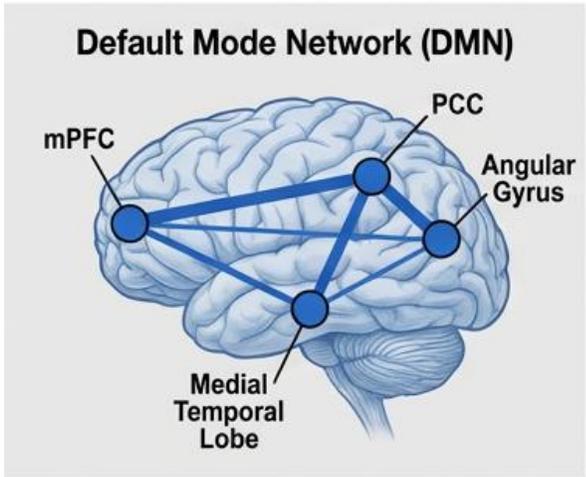


Testable predictions

Clear future experiments

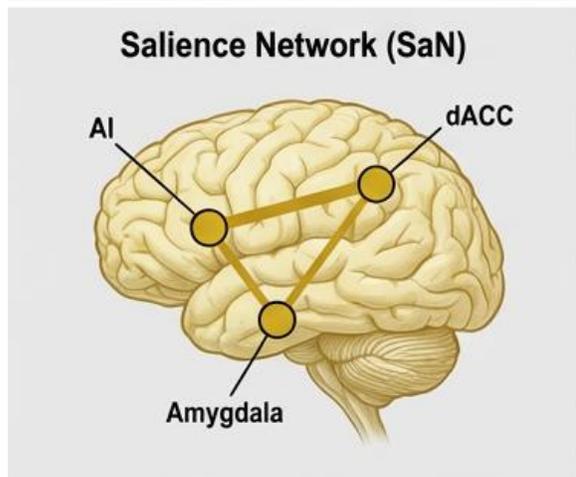
The Triple-Network Frame

The paper uses Menon's triple-network model to explain how hypnotic states reorganize cognition, emotion, and self-processing.



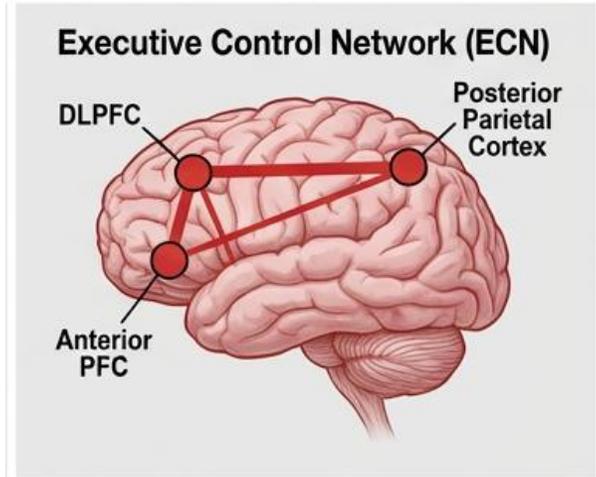
Default Mode Network (DMN)

Self-referential thought, autobiographical memory, mind-wandering, and a continuous sense of self.



Salience Network (SaN)

Detects what matters right now and helps switch between internal and external modes.



Executive Control Network (ECN)

Goal-directed attention, working memory, cognitive flexibility, and deliberate regulation.

Hypnosis is proposed to matter because it changes how these networks coordinate — especially by reducing DMN dominance and strengthening ECN–SaN coordination.

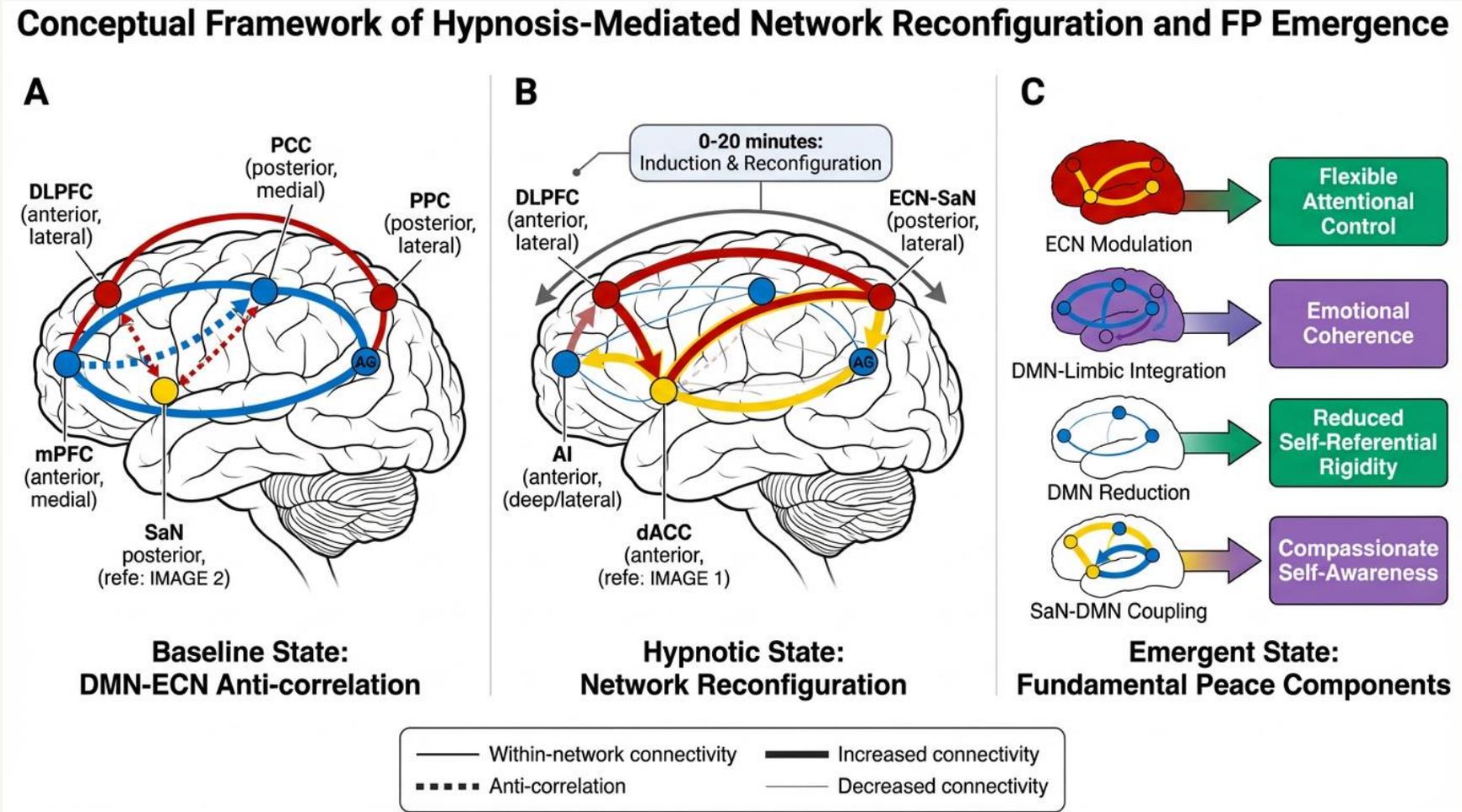
Figure 1 | Network Reconfiguration → Fundamental Peace

The paper's first figure moves from baseline anti-correlation, to induction-driven reconfiguration, to the four experiential FP components.

A Baseline DMN-ECN anti-correlation

B Induction + reconfiguration

C Emergent FP components



What the Evidence Base Already Supports

The strongest quantitative evidence is for analgesia; the most theory-rich promise is for emotion regulation and trauma-related integration.

85

controlled experimental trials

meta-analysis of hypnotic pain relief

>3,600

participants

included in the Thompson et al. synthesis

Robust

pain reduction effects

moderated by hypnotic suggestibility

| Evidence stream | Representative finding from the paper | What it supports |
|-------------------------------|--|---|
| Neuroimaging | Hypnotic states reliably reduce DMN activity and often strengthen ECN–SaN coordination. | The network reconfiguration hypothesis. |
| Pain meta-analysis | Hypnotic analgesia shows consistent experimental pain reduction across paradigms. | Clinical potency is not just anecdotal. |
| Pediatric procedures | Evidence supports reduced anxiety, needle distress, pain, and peri-procedural burden. | Hypnosis is clinically versatile beyond adult pain. |
| Trauma / dysregulation | Clinical work suggests gains in dissociation and emotional dysregulation when carefully applied. | Integration mechanisms deserve direct testing. |

Hypnotic responsiveness is trait-like, clinically relevant, and important for tailoring expectations and methods.

Approximate population distribution



Low
10–15% **Moderate**
70–80% **High**
10–15%

Stronger responsiveness often predicts larger clinical effects — especially in analgesia — but low hypnotizability does not eliminate therapeutic benefit.

| Instrument | Format | Time | Best use |
|------------|---|----------|------------------------------------|
| SHSS | Individual standardized induction + suggestions | ~60 min | Research gold standard |
| HGSHS | Group administration | Shorter | Screening larger samples |
| HIP | Brief clinical induction profile | 5–10 min | Clinical tailoring and feasibility |

Clinical implication

- Use assessment to set expectations and choose induction style.
- HIP is especially practical when time is limited in medical or psychiatric settings.
- The paper emphasizes that clinical benefit is still possible without “classic” hypnotic phenomena.

Fundamental Peace: The Paper's Core Construct

FP is defined as a dynamic state of integrated regulatory capacity — not merely calmness, positivity, or non-reactivity.

Working definition

“Integrated regulatory capacity under changing conditions.”

Operationally, the paper defines FP as a dynamic neuro-experiential state characterized by four mutually reinforcing qualities:

- flexible attentional control without effortful suppression
- emotional coherence across self-states
- reduced self-referential rigidity
- compassionate self-awareness

Not just equanimity. Not just well-being. Not just flow.

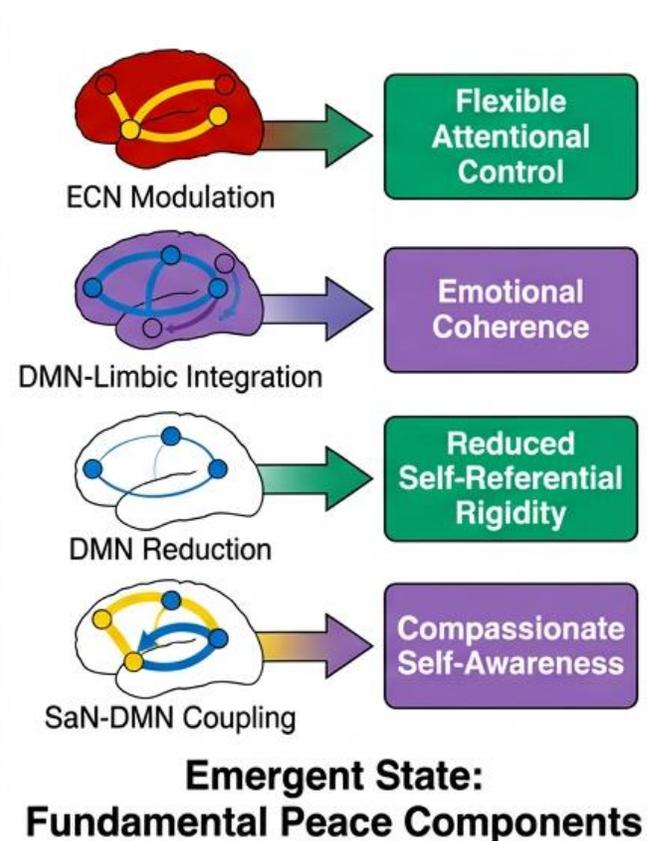


Table 1 | FP Components, Neural Correlates, and Measures

Table

This is the operational heart of the paper: each FP component is tied to a distinct neural pattern and a concrete measurement strategy.

| FP component | Operational definition | Neural correlate | Measurement approach |
|--|--|---|--|
| Flexible attentional control | Direct and sustain attention without continuous effortful suppression. | Enhanced ECN–SaN coupling; greater dIPFC–ACC coordination. | SART / ANT; attentional flexibility tasks; absorption scales. |
| Emotional coherence | Integration across self-states without dissociative fragmentation. | Flexible DMN–ECN connectivity; reduced rigid anti-correlation. | Narrative coherence coding; dissociation scales; autobiographical integration tasks. |
| Reduced self-referential rigidity | Less repetitive, rigid, self-focused thinking and rumination. | Reduced DMN activity in PCC / mPFC; lower DMN connectivity. | Rumination scales; self-concept flexibility; mind-wandering measures. |
| Compassionate self-awareness | Kind, non-judgmental observation of one’s own experience. | Reduced defensive processing; more balanced DMN–ECN coordination. | Self-compassion, self-critical response, and decentering measures. |

Table 2 | How FP Differs from Related Constructs

Table

The paper positions FP as a dynamic regulatory capacity rather than a single mood state, evaluative judgment, or task-specific experience.

Reference point: FP = flexible attention + emotional coherence + reduced self-rigidity + compassionate self-awareness.

| Construct | Main emphasis | Typical measure | What FP adds / changes |
|---------------------------------|--|---|--|
| Equanimity | Even-minded non-reactivity; affective neutrality. | Equanimity scales; affect ratings. | FP includes active engagement and coherence across self-states — not neutrality alone. |
| Psychological well-being | Purpose, growth, mastery, positive self-evaluation. | Ryff Scales of Psychological Well-Being. | FP is regulatory capacity, not a global evaluation of life quality. |
| Nondual awareness | Awareness without subject–object division. | Nondual Awareness Dimensional Assessment. | FP retains functional self-awareness and emphasizes integration rather than dissolution. |
| Flow | Optimal task absorption with reduced self-consciousness. | Flow State Scale. | FP is not task-bound and includes coherence + compassion as core features. |
| Mindfulness | Present-moment attention with acceptance. | FFMQ, MAAS. | FP goes beyond present-focus by emphasizing cross-time coherence and self-integration. |

Measuring FP Now: Use a Multi-method Battery

The paper is explicit: there is no validated FP scale yet, so measurement must triangulate across self-report, behavior, and neural markers.

Current best practice: build a component profile, not a single unvalidated FP score.

1 Self-report proxies

- Five Facet Mindfulness Questionnaire (FFMQ)
- Self-Compassion Scale (SCS)
- Experiences Questionnaire (EQ)
- Absorption Scale

2 Behavioral & cognitive tasks

- SART / Attention Network Test
- Reappraisal and emotion interference tasks
- Self-reference / rumination paradigms
- Narrative coherence coding

3 Neural & peripheral markers

- Resting-state DMN connectivity
- Task fMRI for ECN–SaN coupling
- EEG: frontal alpha asymmetry / midline theta
- HRV as an autonomic flexibility marker

Interpretation rule: combine subjective experience + task performance + network flexibility whenever possible.

A Practical FP Assessment Design

A strong study or clinical protocol should assess FP across time — before, during, after, and beyond hypnotic work.



Future need identified by the paper: a dedicated FP scale grounded in the 4-component model and validated psychometrically over time.

Mechanistic Model Overview

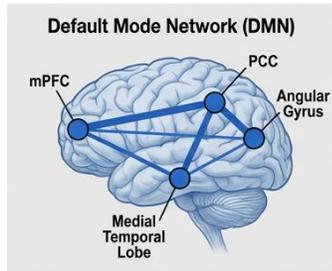
The model unfolds in three phases — sequential, but overlapping — from network reconfiguration to experiential integration.



FP emerges when the four experiential components begin to reinforce each other in a positive feedback loop.

Pathways 1–2: Attention and Self-rigidity

The first two pathways explain how hypnosis can loosen habitual self-focus and make attention both more stable and more effortless.

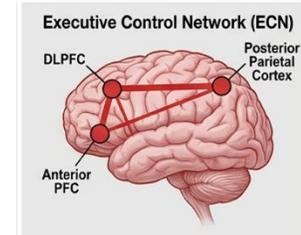
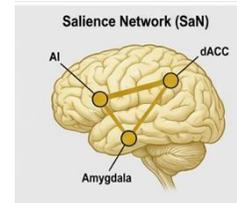


Pathway 1

DMN reduction → reduced self-referential rigidity

- Focused induction interrupts habitual self-focused loops in PCC / mPFC.
- This creates a window for more flexible self-representation and less rumination.
- Repeated practice may increase flexibility in when DMN patterns are engaged.

Measures: rumination, self-concept flexibility, mind-wandering, DMN connectivity



Pathway 2

ECN–SaN coupling → flexible attentional control

- Salience detection and goal-directed attention become more coordinated.
- Attention is experienced as focused yet relaxed — sustained without chronic suppression.
- That configuration may be ideal for learning, suggestion, and reorganization.

Measures: SART / ANT, absorption, frontal midline theta, ECN–SaN coupling

Pathways 3–4: Coherence and Compassion

The second pair of pathways explains how altered network coordination can reduce fragmentation and support kinder, more integrated self-awareness.

Pathway 3

Altered DMN–ECN connectivity → emotional coherence

- Less rigid anti-correlation allows emotional memory and regulatory control to co-occur.
- This may help integrate dissociated or compartmentalized experience.
- The subjective outcome is continuity across self-states rather than fragmentation.

Measures: dissociation, narrative coherence, autobiographical integration, DMN–ECN flexibility

Pathway 4

Reduced defensive processing → compassionate self-awareness

- Absorbed, decentered states may lower the need for defensive distortion.
- This creates space for honest self-observation with less identification and reactivity.
- Self-compassion becomes more accessible because the observing stance is kinder and less threatened.

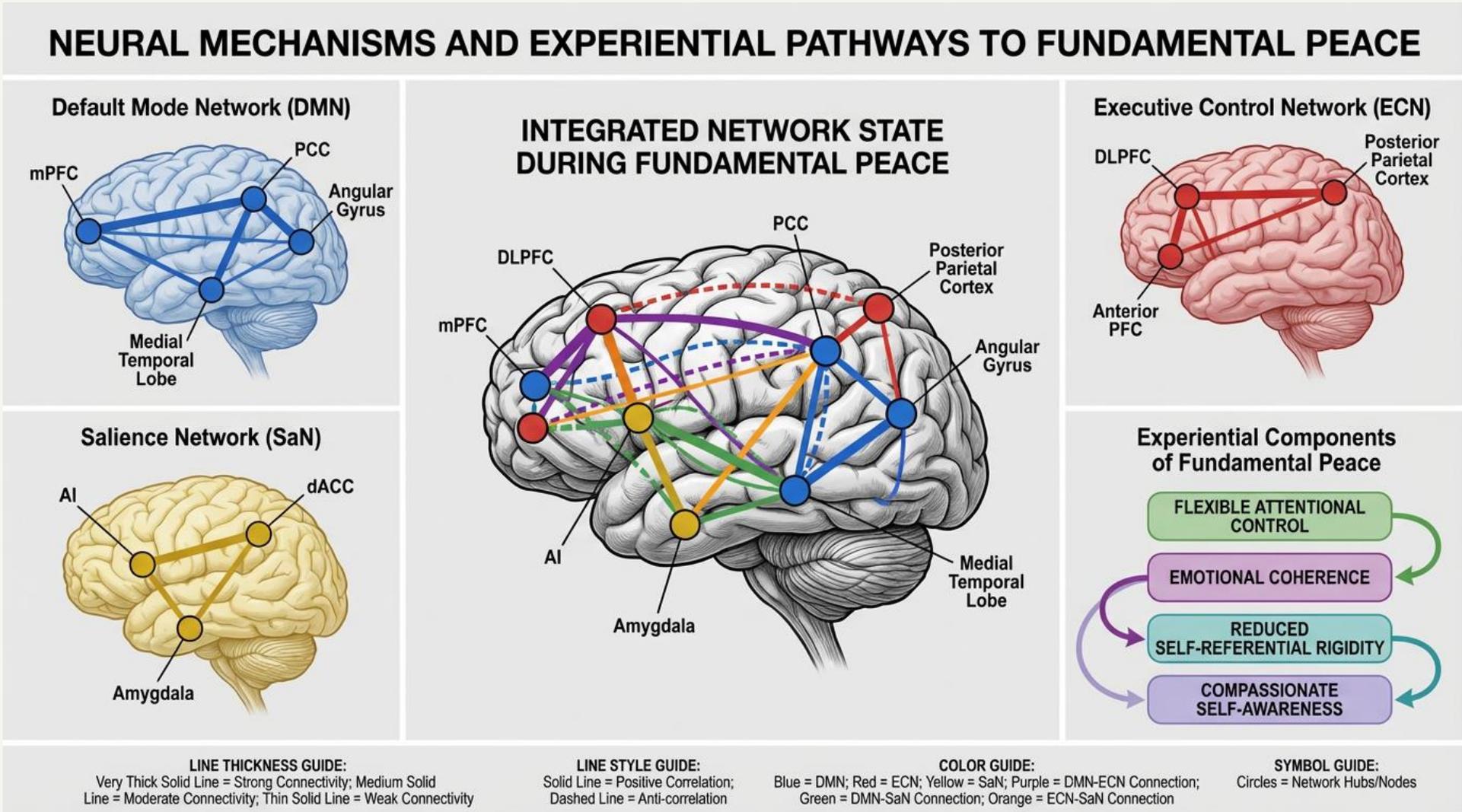
Measures: self-compassion, decentering, self-critical responses, self-evaluation tasks



Figure 2 | Integrated Network State during FP

Figure

The second figure depicts FP not as one region “turning on”, but as a flexible configuration across networks and experiential loops.



What the Model Predicts — and What Modulates It

A strength of the paper is that it offers direct, falsifiable predictions rather than only a conceptual metaphor.

Six testable predictions

- 1 Greater DMN reduction should predict lower self-rigidity and rumination.
- 2 Enhancing ECN–SaN coupling should increase hypnotic responsiveness and FP access.
- 3 Trauma-related dissociation should map onto altered baseline DMN–ECN patterns.
- 4 The four FP components should correlate and outperform any one component alone.
- 5 Self-hypnosis practice should shift resting-state flexibility over time.
- 6 Network reconfiguration should mediate clinical gains beyond baseline suggestibility.

Key moderators

Hypnotic suggestibility

Baseline network organization

Trauma history / dissociative tendencies

Therapeutic alliance and context

These factors should shape who benefits, how strongly, and through which pathways.

Clinical Applications and Implementation

The paper's model matters clinically because it suggests how hypnosis may support integration, not just immediate symptom relief.

Trauma treatment

- Work within a “window of tolerance”.
- Facilitate communication across dissociated self-states / ego states.
- Anchor internal safe places and self-regulatory resources.

Emotion-regulation training

- Practice reappraisal under hypnosis.
- Use somatic regulation and autonomic down-shifting.
- Build compassionate self-talk and self-hypnosis skills.

Integration with therapies

- CBT and exposure work
- Mindfulness-based approaches
- Psychodynamic and somatic therapies

Implementation caution: formal hypnosis training is recommended in general, and trauma-focused work requires specialized trauma-informed expertise and supervision.

Limits, Ethics, and Cultural Scope

The paper is ambitious, but it explicitly acknowledges where the evidence is thin and where careful ethical practice matters.

Evidence limits

- Most hypnosis neuroimaging studies remain small and underpowered.
- Induction methods, suggestions, and control conditions are heterogeneous.
- Causal relationships between network changes and experience still need direct tests.

Ethical safeguards

- Use informed consent and address myths about “loss of control”.
- Avoid suggestive memory work that risks false memories.
- Watch for dependency, boundary issues, and scope-of-practice problems.

Cultural scope

- The model is built mainly from WEIRD samples.
- Self-integration may not be valued or conceptualized the same way across cultures.
- Measures and interventions need cross-cultural validation and adaptation.

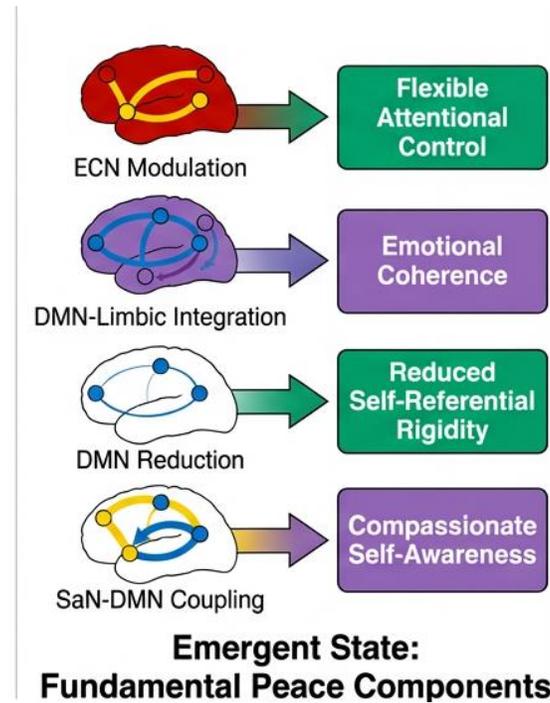
Take-home Message

Close

The paper leaves us with a research program: define FP clearly, measure it rigorously, and test whether hypnotic practice reliably grows it.

Four takeaways

- 1 Hypnosis may operate as a mechanism of large-scale network reconfiguration — not only as symptom suggestion.
- 2 Fundamental Peace is a dynamic, integrated regulatory capacity under changing conditions.
- 3 Measure FP with multi-method profiles now; build a validated FP scale next.
- 4 The highest-value tests are longitudinal, mechanistic, and cross-cultural.



“Unlike equanimity or well-being, Fundamental Peace represents integrated regulatory capacity under changing conditions.”

Questions?