

The Built Environment is Not Neutral

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Regulation-Centric Design™

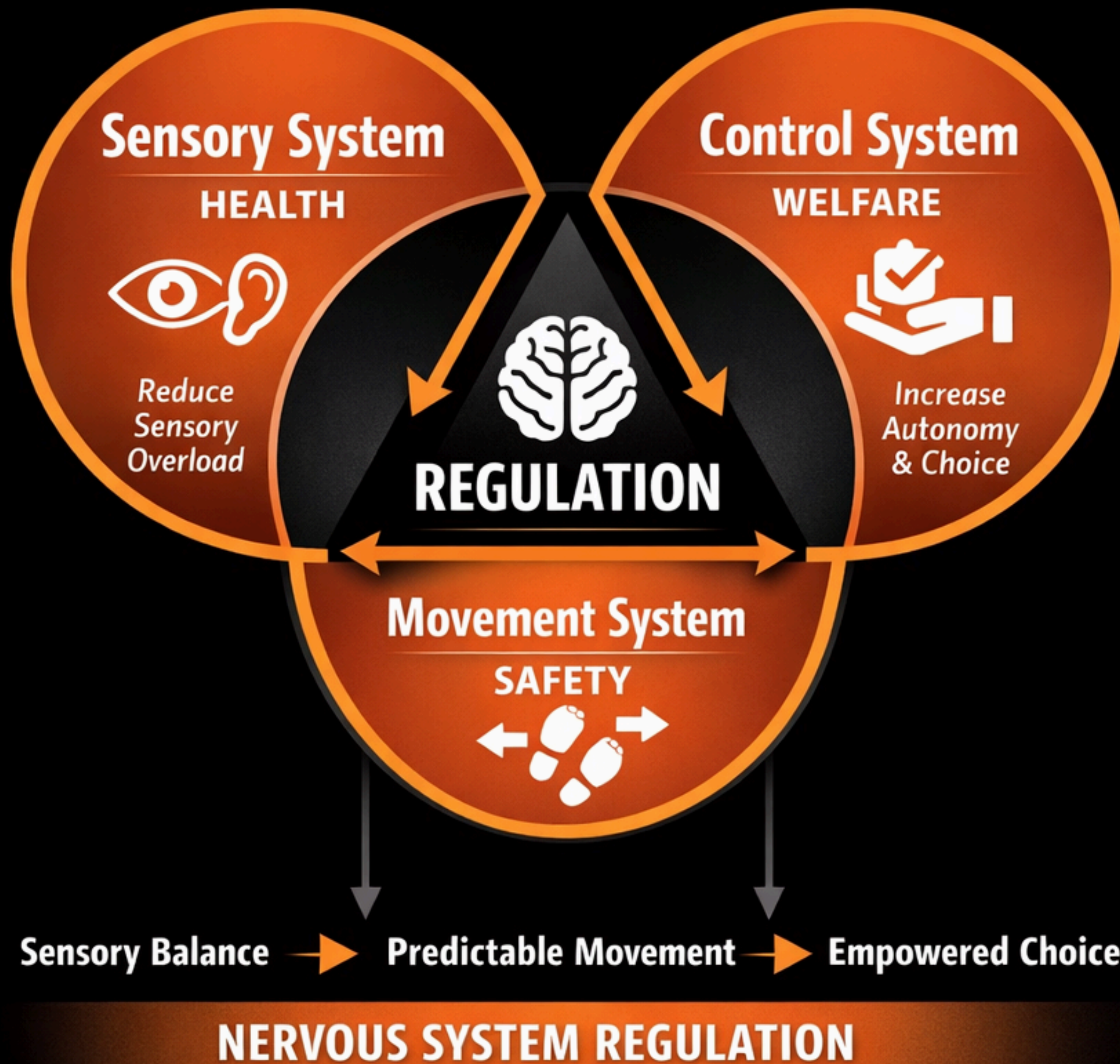
1. Sensory System (Health)
2. Movement System (Safety)
3. Control System (Welfare)

bottom line:

If one system fails, regulation fails.

If a space consistently produces dysregulation, it is not meeting Health, Safety, or Welfare—no matter how well it meets code.

System	Brain Need	Outcome
Sensory	regulation	Health
Movement	predictability	Safety
Control	autonomy	Welfare



You don't
experience a
space.
Your nervous
system does.

Common Beliefs (Wrong).

Behavior is a discipline issue

More structure = more control

Quiet = calm

Reality.

Behavior = nervous system output

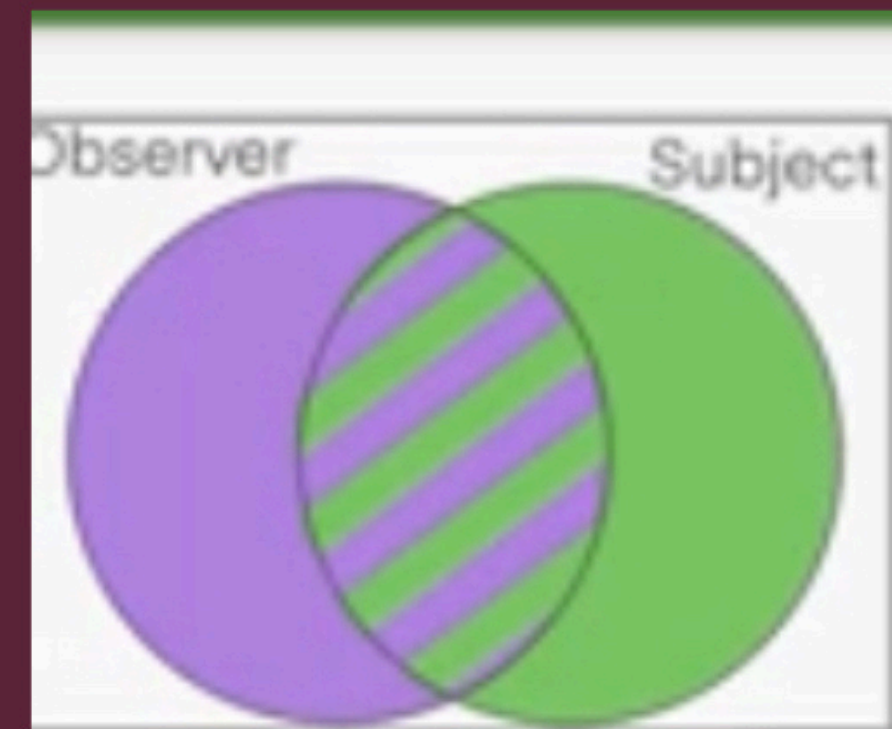
Predictability > control

Silence ≠ safety

Classroom Nervous System — Hierarchy of Learning —



— If the Body Isn't Safe, The Brain Can't Learn. —





Every space is doing one of
two things:
Regulating
Dysregulating
There is no neutral

INDUSTRY PROBLEM

We design for:
aesthetics
efficiency
supervision

We ignore:
sensory load
emotional safety
cognitive access



So what actually
happens in the brain?

BRAIN SCIENCE

When the brain perceives stress:

Amygdala activates

Prefrontal cortex goes offline

Learning shuts down

Behavior = Communication

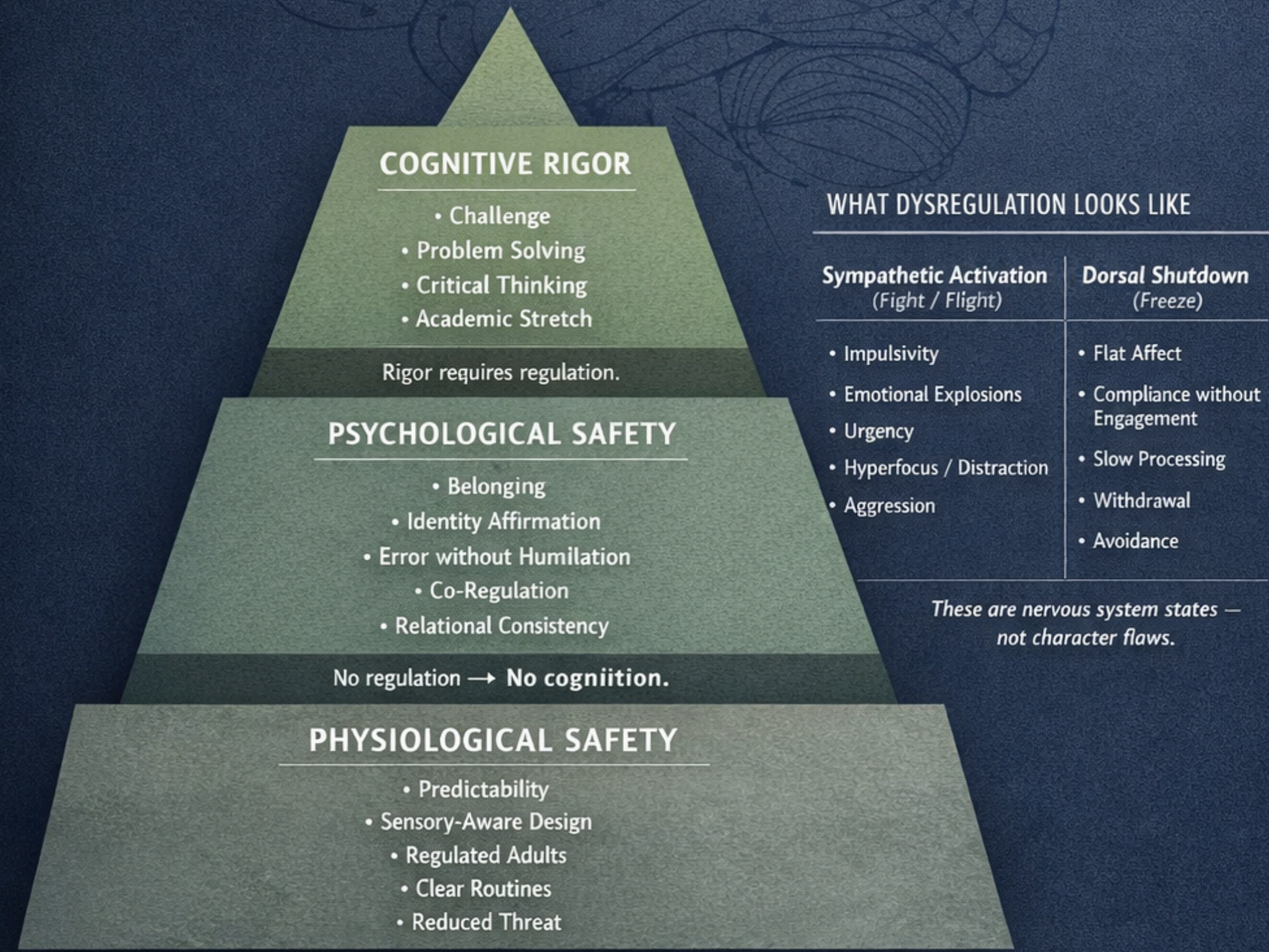
YOU CAN'T PUNISH A NERVOUS SYSTEM INTO LEARNING.



TEACH THE BRAIN FIRST

THE REGULATION → LEARNING FRAMEWORK

The Nervous System Is the Foundation of Education



COGNITIVE RIGOR

- Challenge
- Problem Solving
- Critical Thinking
- Academic Stretch

Rigor requires regulation.

PSYCHOLOGICAL SAFETY

- Belonging
- Identity Affirmation
- Error without Humiliation
- Co-Regulation
- Relational Consistency

No regulation → No cognition.

PHYSIOLOGICAL SAFETY

- Predictability
- Sensory-Aware Design
- Regulated Adults
- Clear Routines
- Reduced Threat

WHAT DYSREGULATION LOOKS LIKE

Sympathetic Activation (Fight / Flight)	Dorsal Shutdown (Freeze)
<ul style="list-style-type: none"> • Impulsivity • Emotional Explosions • Urgency • Hyperfocus / Distraction • Aggression 	<ul style="list-style-type: none"> • Flat Affect • Compliance without Engagement • Slow Processing • Withdrawal • Avoidance

These are nervous system states — not character flaws.

Health = Sensory + Emotional Regulation

lighting (lux levels, glare)
acoustics (decibel ranges)
density



“Classrooms often sit at 60–70 dB. That’s equivalent to constant background traffic.”

VISION



Safety =
Predictability +
Movement
Include:
clear pathways
visual exits
transition flow

Welfare = Dignity + Access

Include:
flexible seating
choice zones
autonomy

MISSION

When Design Fails the Nervous System

Sensory **×** – Movement **×** – Control **×**
overload chaos escalation



Dysregulation



Behavior



Exclusion



Case Example:

Transition Meltdowns

Student escalates daily during transitions

Staff implement behavior plan → no change

Environment adjusted:

reduced hallway noise

staggered transitions

added exit option

Result: behavior decreased without intervention

Design Variables

4 Drivers:

Light

Sound

Texture

Flow



LIGHT

natural vs fluorescent
dimmable
glare control

SOUND

- acoustic panels
- carpeting
- spacing

FLOW

transitions
bottlenecks
furniture placement

Regulation Audit

The question is not: “Is this space functional?”
The question is: “How does this space feel to the nervous system?”

Regulation Audit Questions

Where does noise spike?

Where is movement congested?

Where is control removed?

Where can someone regulate?

Redesigning with Regulation in Mind

Traditional Classroom



Traditional Classroom

- fluorescent lights
- loud transitions
- no exit
- crowded seating

VS

Regulation-Centric




Regulation-Centric

- layered lighting
- predictable flow
- regulation space
- flexible seating



INTERACTIVE ACTIVITY



Regulation Audit: Seeing Space Through the Nervous System

Most design evaluations focus on function,
flow, or aesthetics.

We're going to shift that lens.

For the next few minutes, I want you to
evaluate a space—
not as a designer...

...but as a nervous system.”

Choose a space:

A classroom

A hallway

A public learning space

Or... this room right now

Evaluate through 3 systems:

1. Sensory System (Health)
2. Movement System (Safety)
3. Control System (Welfare)

REGULATION AUDIT GRID

System Where Stress Occurs Where Regulation
is Supported Design Fix
Sensory (Health)
Movement (Safety)
Control (Welfare)

SENSORY (HEALTH)

Where is sensory load highest?

harsh lighting?

echo / noise?

visual clutter?

crowded visuals?

MOVEMENT (SAFETY)

Where does movement break down?

bottlenecks

tight seating

unclear pathways

transitions

CONTROL (WELFARE)

Where is control removed?

- no choice seating
- no quiet space
- no exit option
- rigid structure

**You cannot separate
behavior from
environment.**



THANK YOU

Leave me a review

