



NATIONAL  
INSTITUTE  
FOR PLAY

# The Science of Play.

**Mia Sundstrom, CEO**

The National Institute for Play

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**POWERED BY**

**P L A Y**



## INTRO TO PLAY — 01

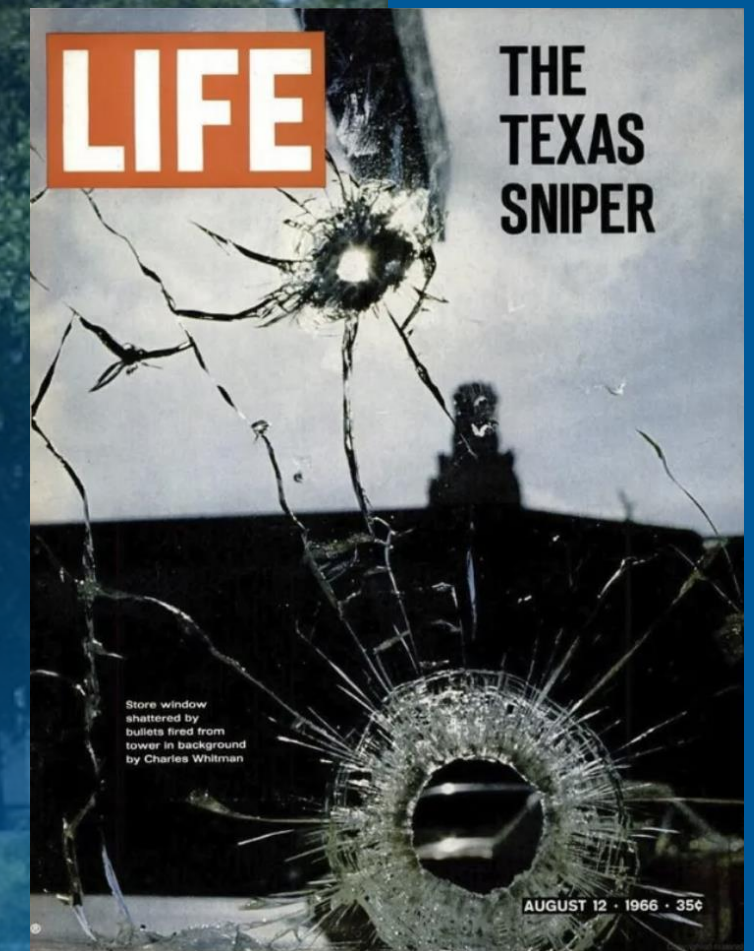
 National Institute for Play



## INTRO TO PLAY — 02



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# Play in the media.

INTRO TO PLAY — 03



The Washington Post



Outside

Chicago Tribune



Newsweek

O  
B E I N G  
WITH  
KRISTA TIPPETT

FASTCOMPANY



The New York Times Magazine





# Practice

Helping people play more.



# Science

Advancing and curating research.

INTRO TO PLAY — 04



# Impact

Reaching 10M people by 2030.



# What is play?

INTRO TO PLAY — 05



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## Play State (Verb)

The act of playing

1. Altered state with no time tracking
2. Done for it's own sake (process vs. outcome)
3. Evokes pleasure (joy, glee, awe)
4. Intrinsically motivated
5. Flexible
6. Self-reinforcing



**The Weather**

*Fleeting, often changing*

## Play Trait (Adjective)

The cognitive disposition towards playfulness

1. Optimism and curiosity
2. Creative and joyful problem-solving
3. Strong sense of self (authenticity)
4. Humor
5. Adaptability
6. Resilience



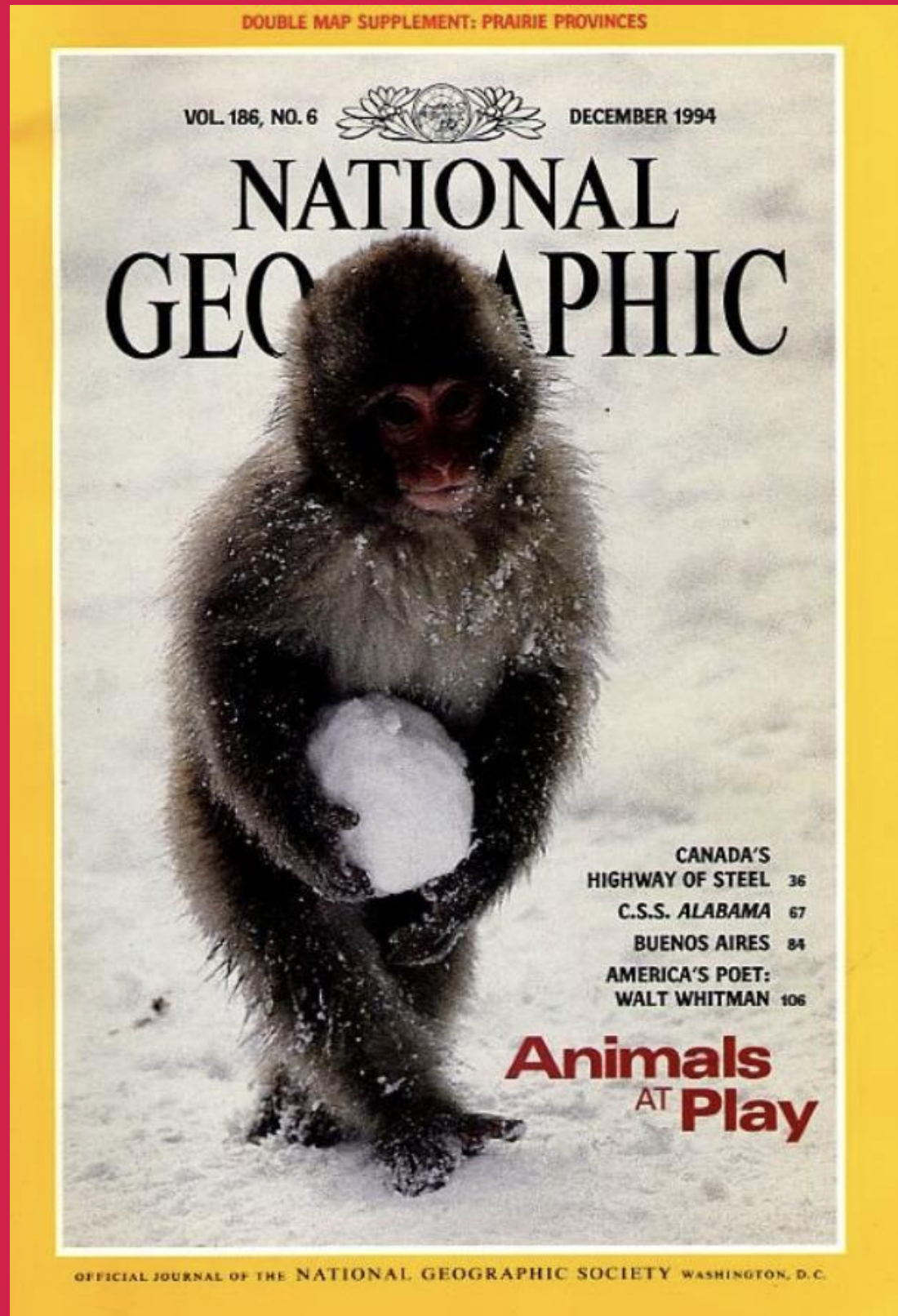
**The Climate**

*Underlying, sustained*



# Animals at play.

ANIMAL PLAY — 01







SCIENCE OF PLAY — 01

# Primal Emotions.



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Seeking

Caretaking

Rage

Lust

Fear

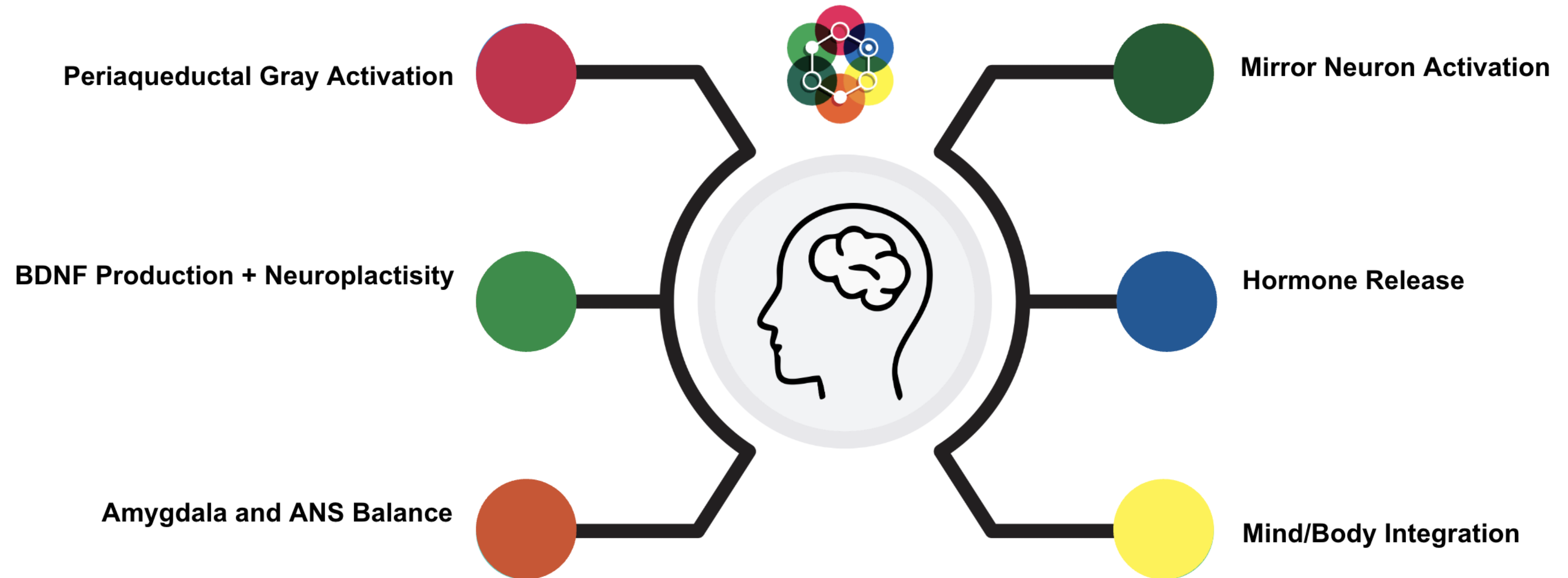
Panic

PLAY



# The neuroscience of play.

SCIENCE OF PLAY — 02



# Outcomes of play.

OUTCOMES OF PLAY — 01



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## Play Nourishment



### Cognitive Growth

- Creativity
- Curiosity
- Problem-solving
- Learning capacity

### Emotional Regulation

- Resilience
- Adaptability
- Stress reduction
- Confidence

### Social Competence

- Connection
- Empathy
- Collaboration
- Authenticity

### Flourishing

- Intrinsic motivation
- Engagement
- Purpose
- Productivity
- Well-being

## Play Deprivation

### Cognitive Rigidity

- Inflexibility
- Impaired executive function
- Fixed mindset
- Reduced creativity

### Emotional Disregulation

- Depression risk
- Poor impulse control
- Mood-driven behavior
- Increased anxiety

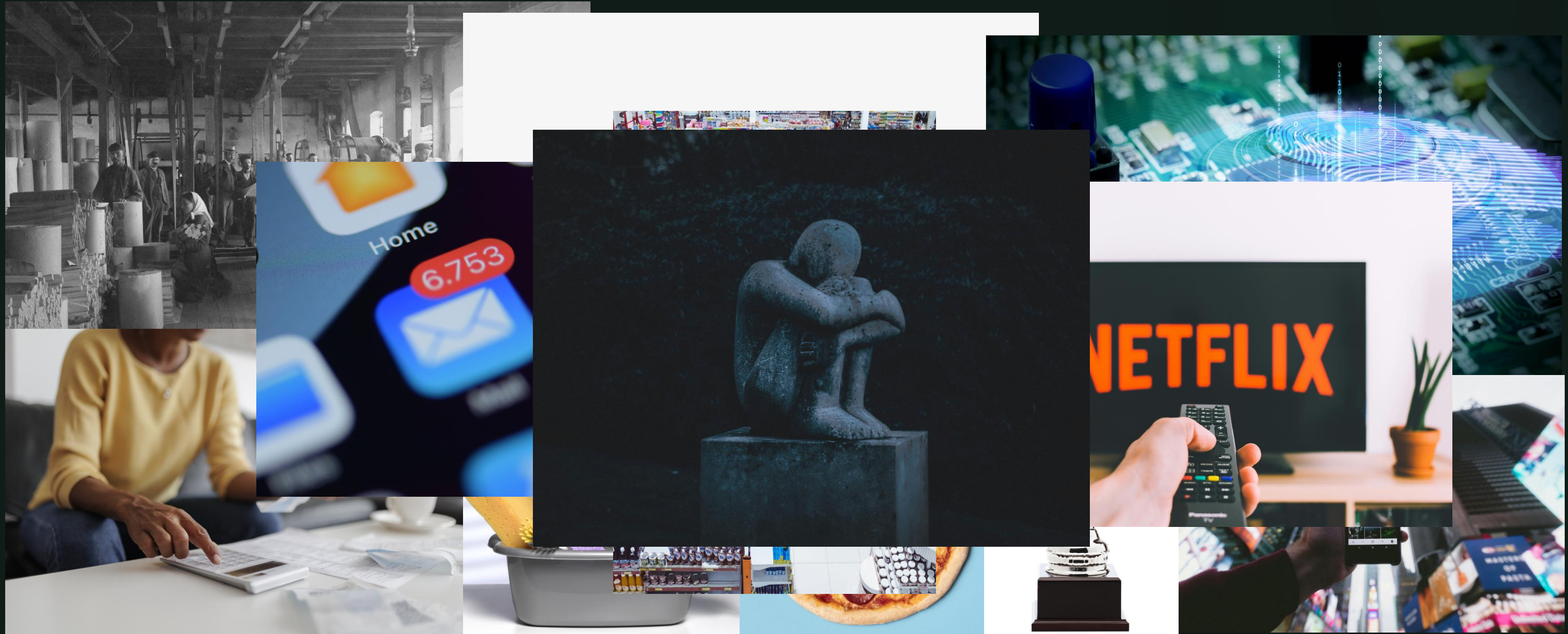
### Social Impairment

- Social withdrawal
- Difficulty reading social cues
- Lack of empathy
- Reduced collaborative capacity

### Diminished Well-being

- Addictive predilections
- Lack of engagement and purpose
- Propensity for violence





## OUTCOMES OF PLAY — 02

# Why don't we play more?





**70%**

Of US kids burn out of their sport by age 13.

(Aspen Institute)

**40%**

Of U.S. school districts reduced or eliminated recess since the mid 2000s

(CDC)

**8 hours**

Less free play time per week for children today than children in 1981

(American Journal of Play)

**1 in 10**

young U.S. children play outside once a week or less

(American Journal of Play)

**The decline in play.**





# The need for play.

40%

Of US high school students feel persistently sad

(CDC)

4.8 hrs

Is the average time a US teen is spending on Social Media apps daily.

(Gallup)

1 in 6

People are experiencing loneliness worldwide

(WHO)

10T

The cost of disengagement globally

(Gallup)





#1

Predictor of student flourishing study  
by Harvard was shared laughter with  
others

(Harvard)

40%

Reduction in student stress with more  
recess, measured through hair cortisol

(Children)

8x

Is how much more likely a teen who  
plays sports is to still be active at  
age 24.

(Aspen Institute)

RQ

Stanford Innovation is placing  
relational intelligence as the most  
important skillset.

(Stanford)

The case for play.





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BRIAN SUTTON SMITH

“The opposite of  
work isn’t play.  
*It’s depression.*”



ARNOLD J. TOYNBEE

**“The supreme  
accomplishment is to  
blur the line between  
work and play.”**

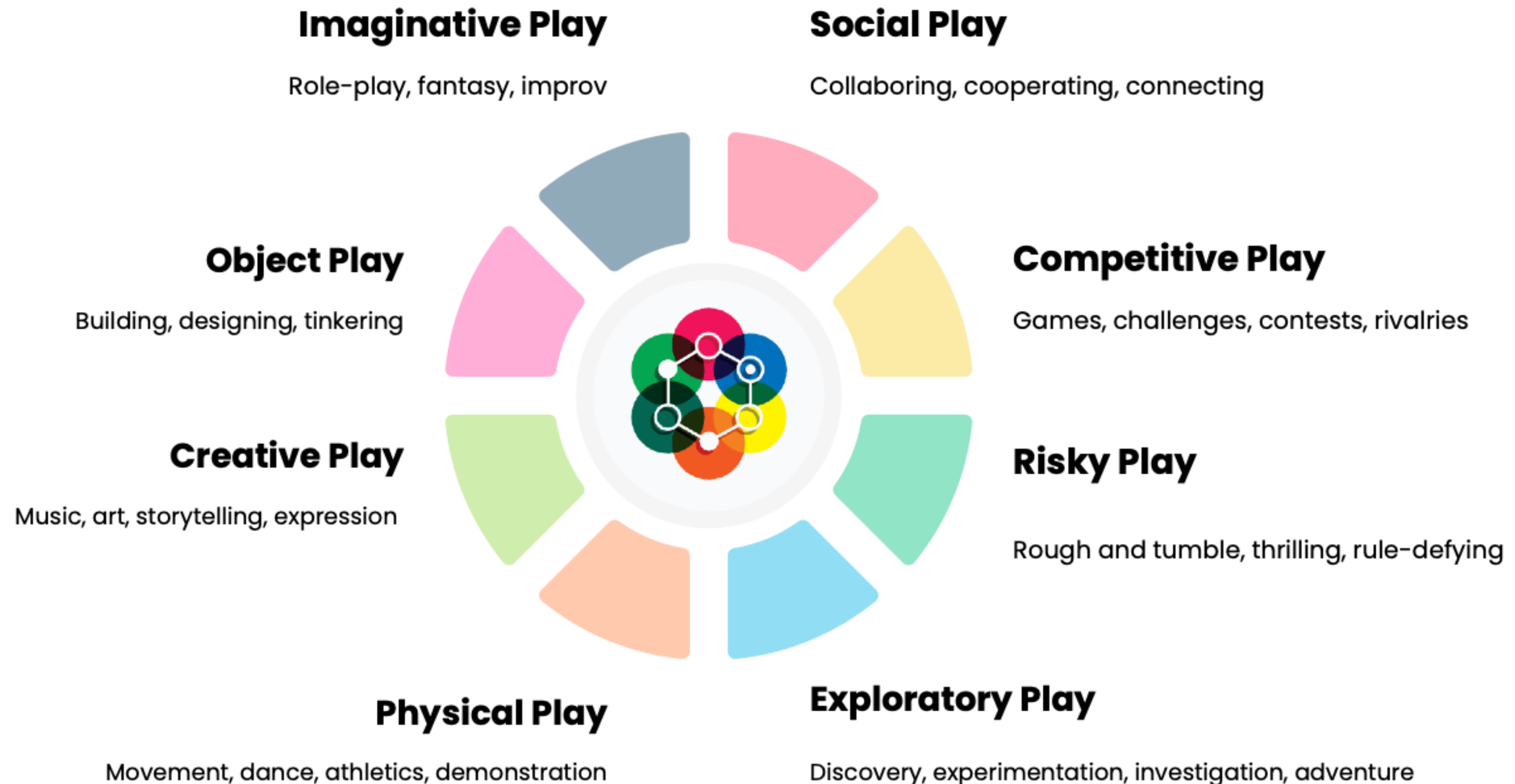


# The types of play.

TYPES OF PLAY — 01



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# Play Styles.

TYPES OF PLAY — 02



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## CREATOR

*Express & Make*

Joker

Artist

Storyteller

Performer

Musician

Builder

## EXPLORER

*Discover*

Adventurer

Researcher

Tinkerer

Emotional Explorer

Entrepreneur

## COMPETITOR

*Win & Master*

Sports Competitor

Gamer

Puzzler

Debater

## ORGANIZER

*Create Order*

Social Connector

Director

Coordinator

Collector

## DREAMER

*Imagine & Immerse*

Fantasizer

Role-player

Observer

## MOVER

*Move & Embody*

Kinesthete

Thrill-seeker



1

## PLAY MINDSET

Cultivating internal attitudes and beliefs that enable play to flourish

2

## PLAY TIME

Making temporal room for play in your schedule

3

## PLAY ENVIRONMENT

Creating physical spaces where play can happen

4

## PLAY ACTIVITIES

Engaging body, imagination, challenge, or senses

5

## PLAYFUL COMMUNICATION

Transforming how you talk, listen, and connect

6

## PLAY RITUAL & RHYTHM

Predictable playful patterns that anchor your day

7

## PLAY INVERSIONS

Reversing roles, breaking rules, surprising expectations

8

## PLAYFUL TASKS

Turning everyday tasks into playful moments

9

## PLAY SPONTANEITY

Quick, unplanned bursts of joy

### TYPES OF PLAY — 03

# Play Portals.



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**Play is learning.**

**Play is productive.**





94%

Drop in student conflict.



76%

Decrease in disciplinary issues.



100%

Parent satisfaction.

PLAY IN LEARNING— 02



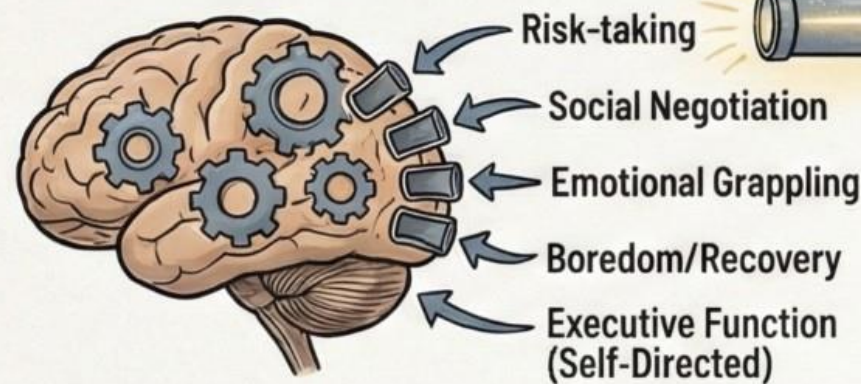
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## THE PLAY DEPRIVATION DELAY THEORY: Mapping the Gap Between Chronological Age & Behavioral Maturity

### NEUROSCIENCE: THE BRAIN'S EXPECTATION

SENSITIVE PERIODS ARE "EXPERIENCE-EXPECTANT"



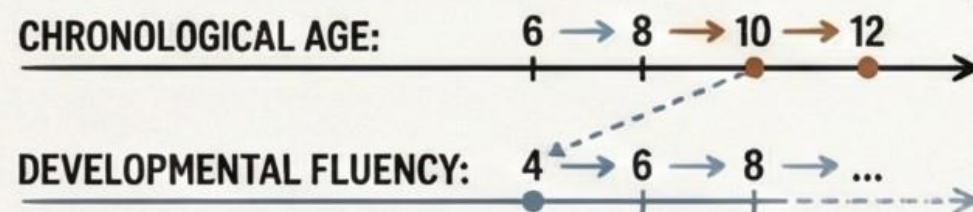
Kids don't "learn" regulation via lessons. They absorb it through thousands of tiny, messy interactions.

### CROSS-CULTURAL STUDIES CONFIRM



Cultures with abundant play see earlier emotional regulation, independence, and social maturity.

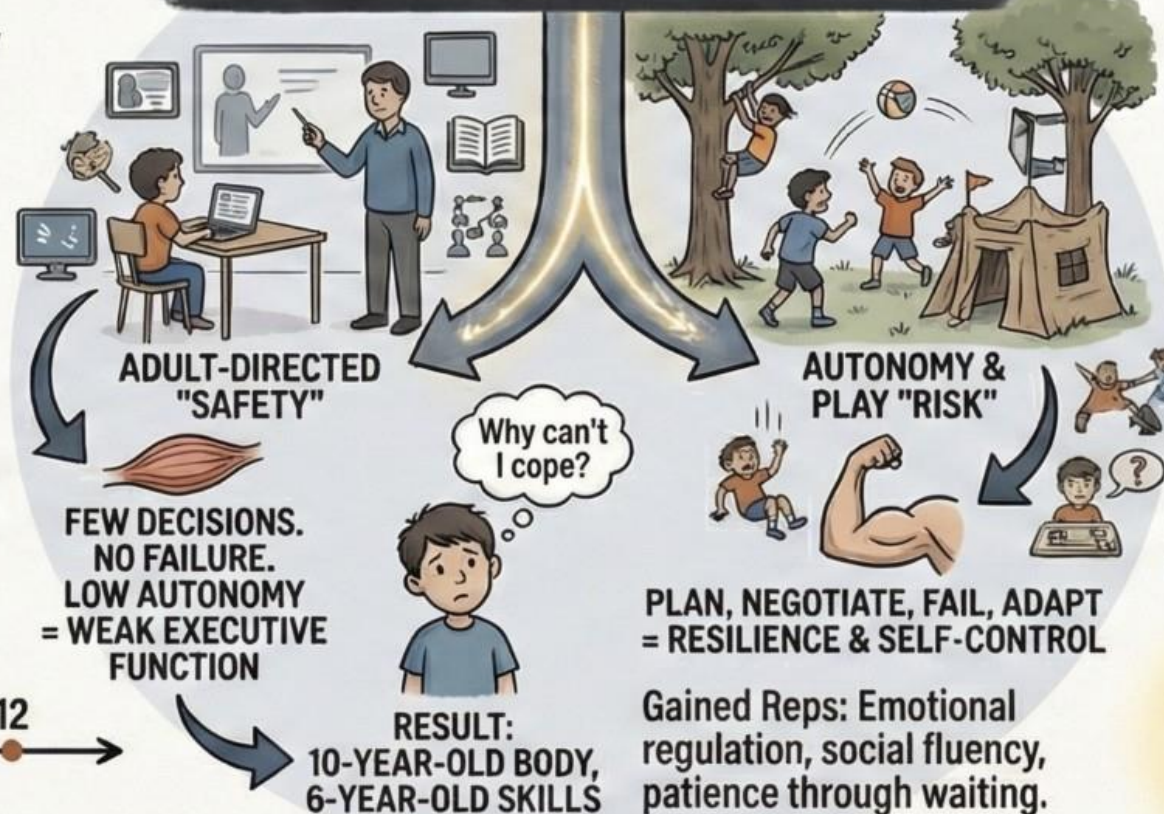
### NOT BROKENNESS, BUT DELAY



Behavior that looks like defiance is often unfinished development. The "stress reps" and "social reps" never happened.

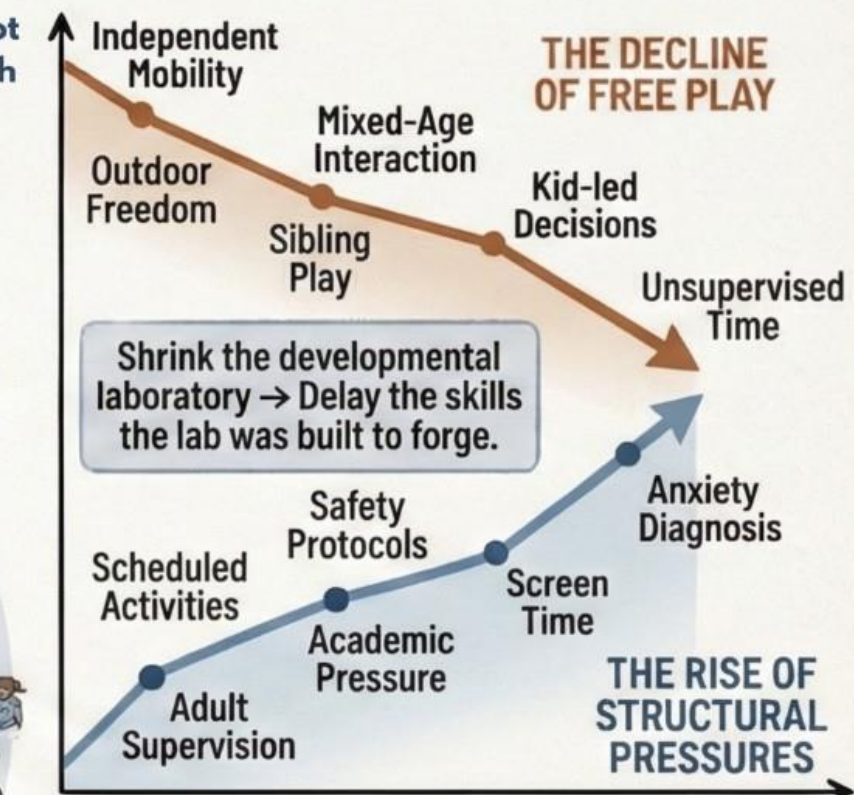
THE NATURAL DELIVERY SYSTEM: UNSTRUCTURED, PEER-DRIVEN PLAY

### THE CORE MECHANISM: MISSING "REPS"

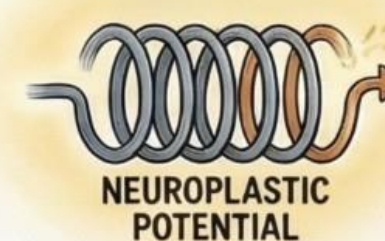


E.g., A tantrum at 10 looks like defiance, but it's missing regulation skills.

### THE HISTORICAL SHIFT (50-YEAR ECOLOGICAL CHANGE)



### THE CONCLUSION: THE BRAIN WAITS



Kids catch up shockingly fast when the missing experiences are restored.

**THE SOLUTION IS STRUCTURAL, NOT INDIVIDUAL: GIVE BACK THE PLAY THEY NEEDED IN THE FIRST PLACE.**



## PLAYFUL COMEBACKS

# Challenge the doubters.

~~Play is a waste of time.~~

❑ **Play is learning. Play is productive.**

~~That's too dangerous.~~

❑ **Risky play fuels healthy brain development.**

~~Play is just for kids.~~

❑ **Play is hardwired across our lifespan.**

~~Play should be structured.~~

❑ **Free play builds creativity and confidence.**





**BUILT  PLAY.**  
**BUILT BY PLAY.**



# Bring more play to your world.

01

## Reflect on your play history

Think back to your earliest memories of playing.

02

## Discover your Play Style

There's a good chance you have more than one Style.

03

## Build play into the day

Start with 30 seconds to 5 mins a day.



# Continue your play journey.

## 90 Day Challenge

Challenge yourself to play for 90 days straight. Even 30 seconds counts! Start small and keep track. Set a reminder in your calendar, a note on your mirror, or use our Live Playfully Journal to guide you.



## Play Song

Choose a song that makes you smile, sing, or dance. Make it your 'play song' and add it to your primary playlist. Every time it comes on, it's a reminder to ask yourself, '*have I played yet today?*'

## Letter to Self

Write and send an email to yourself that will arrive in your inbox one year from today. Share your takeaways from our session and give your future self the advice you think you'll need to hear.



STAY CURIOUS

# Let's keep playing.

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ORGANIZER



MOVER



EXPLORER



How do you  
play?



CREATOR



COMPETITOR



DREAMER

PLAY WORKSHOP — 01

# Play Styles.



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PLAY WORKSHOP — 03

# Play Styles Quiz.



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# Play Styles.

TYPES OF PLAY — 02



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Role-player

Observer

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*Move & Embody*

Kinesthete

Thrill-seeker



# Intergenerational Play



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Cognitive



Social



Emotional



# Play for families.

**Tradition**

**Attachment**

**Understanding**

**Communication**

**Positive Interactions**



01

## Health

\$300 Billion is the est. cost of physical inactivity on our global public healthcare system between 2020 and 2030.

(World Health Organization, 2025)

02

## Economic

Play represents 17% of the world's GDP.

Disengagement costs the global economy \$30 trillion annually.

(Gallup, 2025)

03

## Social

1 in 6 people experience loneliness.

We spend 6 to 7 hours a day on phones.

(World Health Organization, 2025)



ACROSS THE LIFESPAN

# Play at every age.

**0–5**

Attunement

**6–12**

Rough-and-tumble

**13–18**

Identity play

**19–34**

Creative play

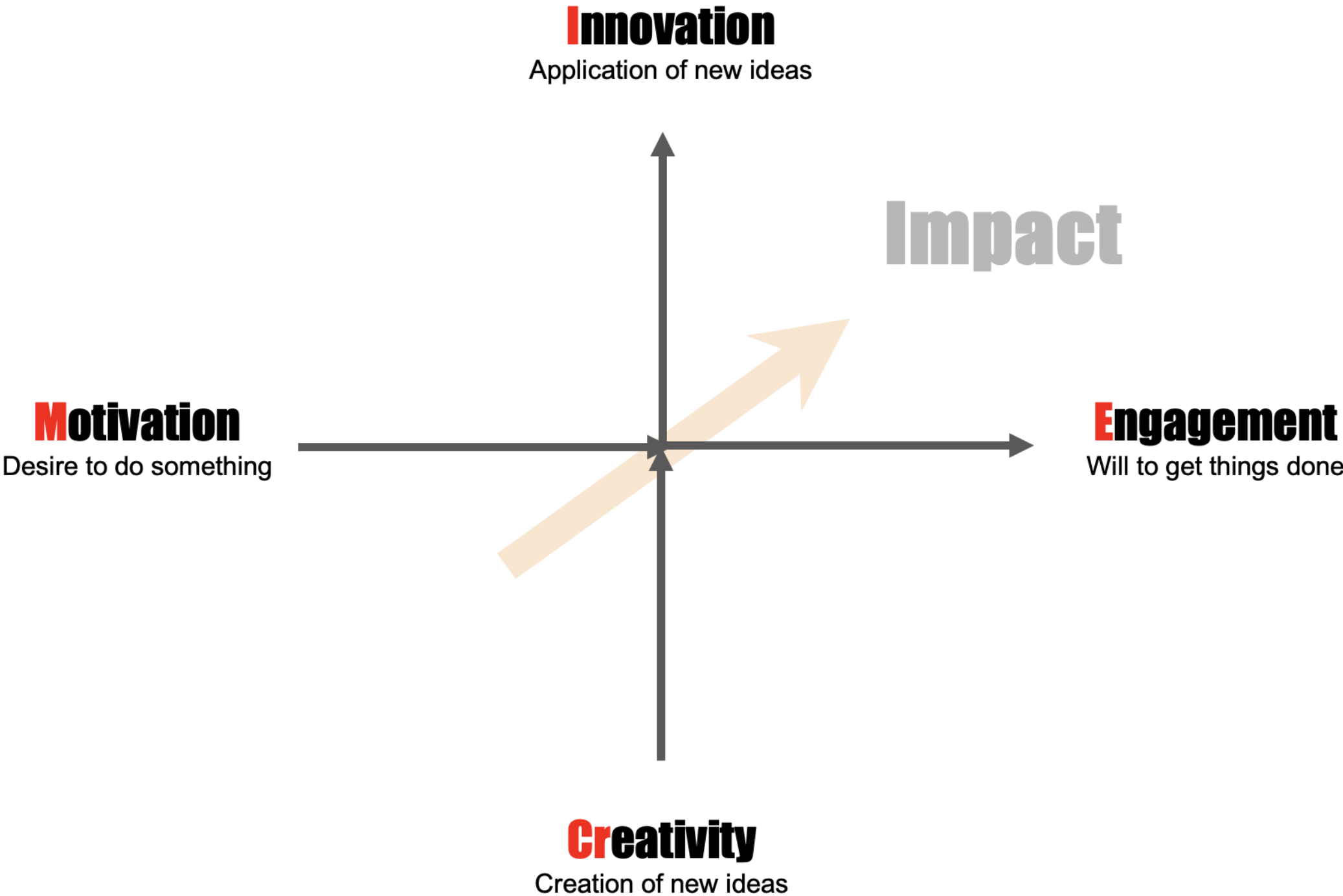
**35–64**

Work and family as play

**65+**

Social play





*“Play is the  
highest form of  
research.”*

Insert name



# Playful Design.

TYPES OF PLAY — 02



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1

## SENSORY

Awakening the senses through intentional aesthetic choices and multi-sensory experiences

2

## INTERACTIVE ENVIRONMENT

Including elements that respond, adapt, and invite varied physical engagement

3

## SOCIAL CONNECTION

Fostering interaction, collaboration, and community

4

## CHALLENGE & EXPLORATION

Creating opportunities for discovery, appropriate risk, mastery and competitive experiences

