

# How we think *through play*

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**Promote** experimentation

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**and** risk-taking

[ Q ] Why do children play?

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[ P ] Play helps children **learn**.

[ARG] **Play facilitates opportunities for reflection to occur.**

[ARG] **Reflection allows for “intellectualizing” of play experience**

# learn.

Proximate Children play because it is fun and rewarding.

## **[ARG] Evolutionary Account**

Ultimate  
increases  
fitness

Intelligent species play because it (amongst other things) prepares for navigating future uncertainties.



# Evolutionary Account

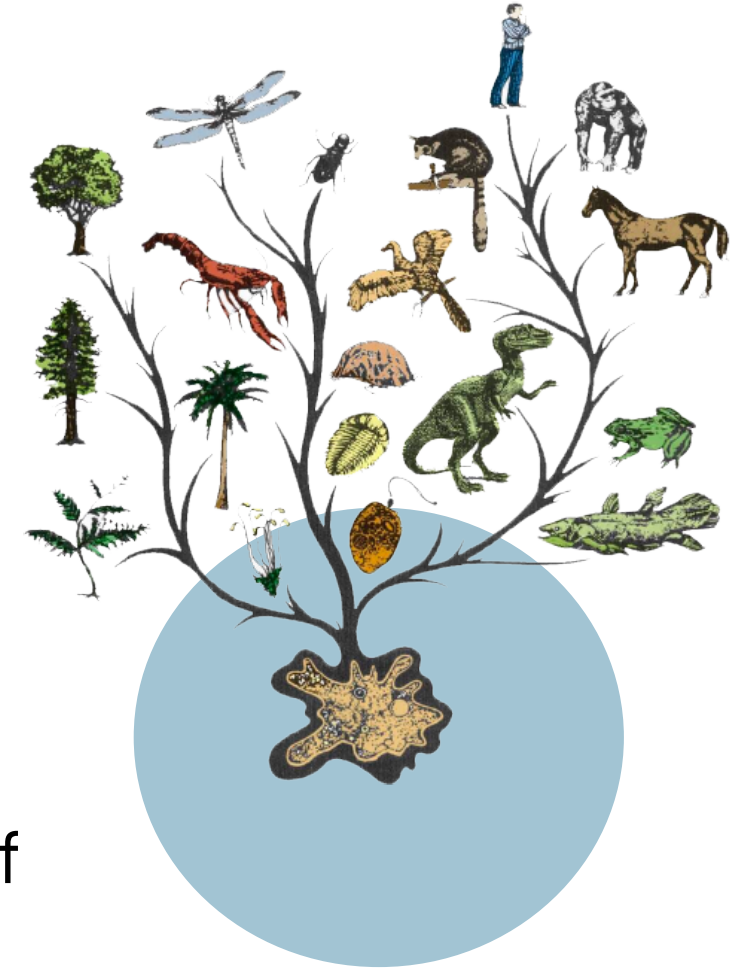
**Practice of complex movements** and coordination, **development of musculature** and improvement of **physical balance**

(Baldwin & Baldwin, 1977; Groos, 1898; Fagan, 1981)

Assist in the **acquisition of communication skills** (Poirier & Smith, 1974)

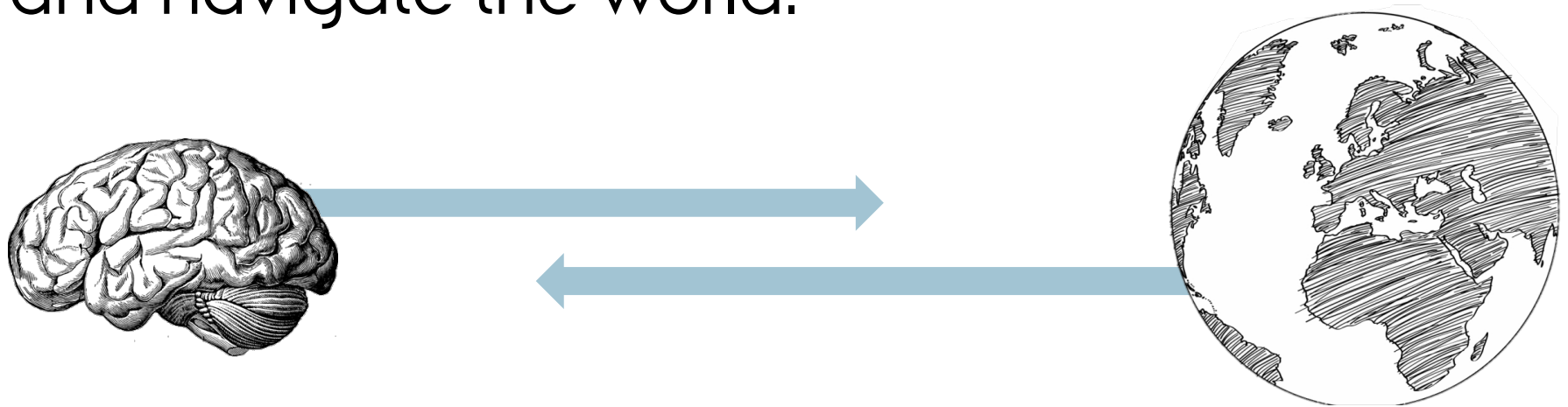
Enable constructions of **working knowledge** of the environment (Bateson, 2002)

Constitute training for **unexpected situations** (Spinka, Newberry & Bekoff, 2001)



# learning

**[Def]** Updating of mental models used to interpret and navigate the world.



(Clark, 2015; Friston, 2010; Hohwy, 2013; Wiese & Metzinger, 2017)



**[P] Play helps  
children learn**

*when playing  
for plays sake*

“Learning through play *in schools*  
involves play *with* a purpose.”

Pedagogy of Play Blog (2019, January 31)

[ Q ] Can play help children learn in formalized learning environments where...

**Learning ≈ explicit knowledge**

**Play ≈ guided/facilitated play**



# Reflection

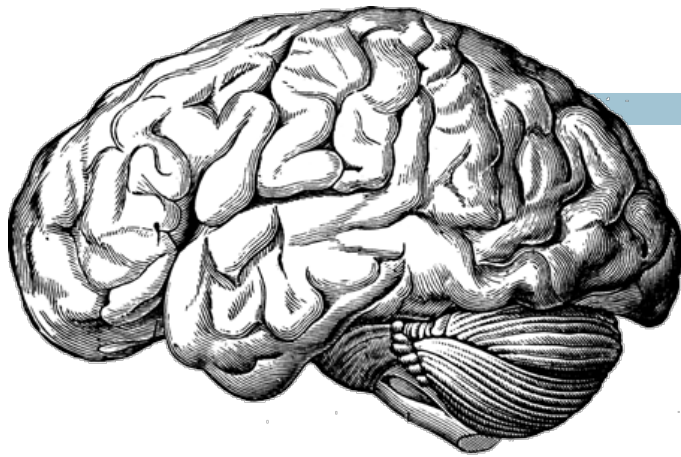


## Self-motivated behaviour

## Educational Frame

[DEF]

**Reflection:** Conscious process to navigate unresolved uncertainty. Simplified: Conscious processing of surprise.

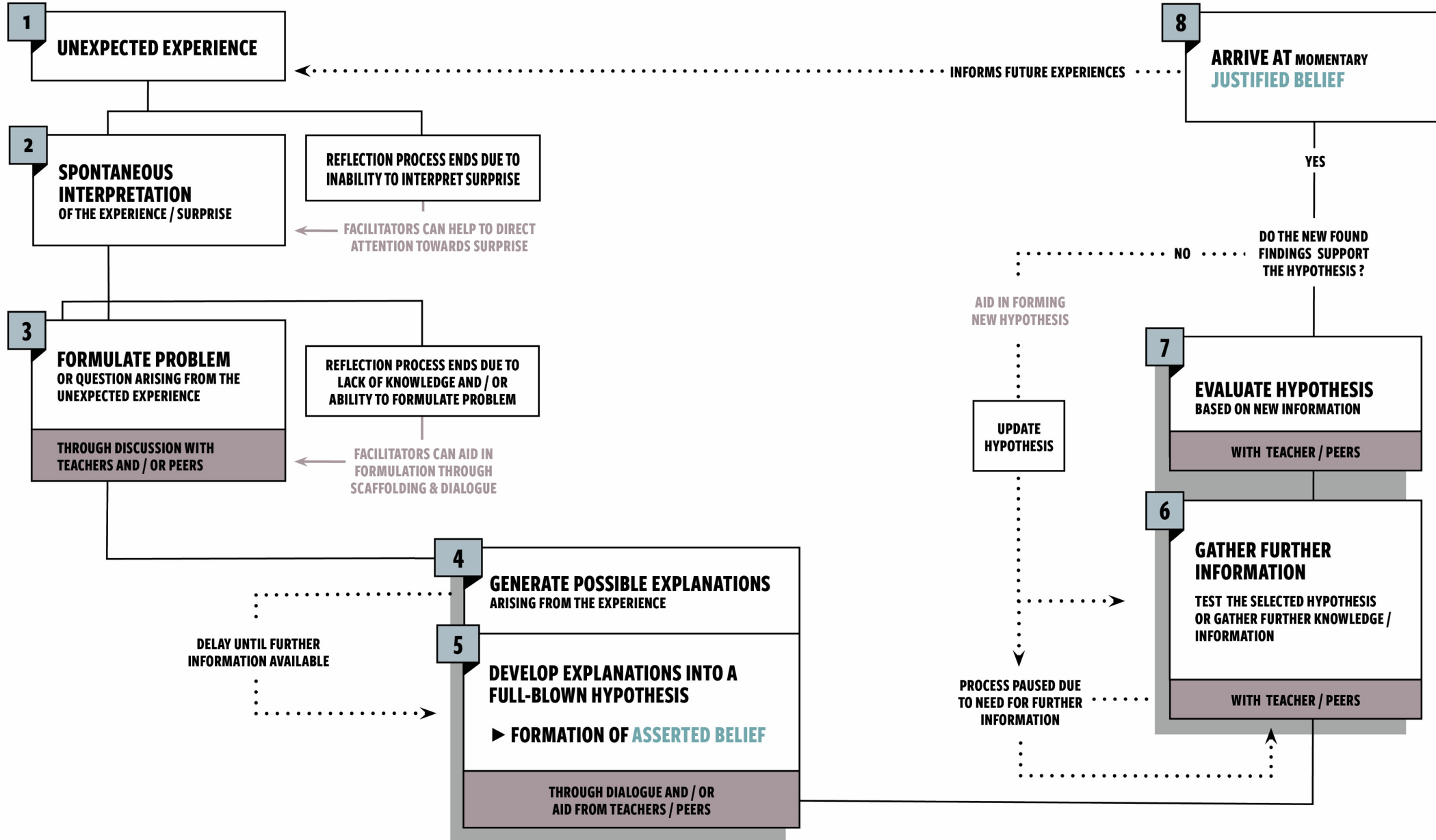


**Mismatch - Unresolved  
Error in Mental Model**



FACILITATORS CAN PROVIDE SETTINGS THAT OFFER OPPORTUNITIES FOR UNEXPECTED EXPERIENCES TO OCCUR

# FACILITATED REFLECTION





- Predictive processing model of play
- Definition:  
Play is a behaviour in which the agent **seeks or creates** surprising situations that gravitate towards **sweet-spots** of relative complexity (unpredictability) with the goal of resolving surprise.

Snap of Marc's  
presentation earlier

**[ARG] Play facilitates opportunities for reflection to occur as it provides perplexing experiences that can illicit the reflection process.**

**[ARG] For Educators: Reflection also allows for “intellectualizing” of play experience**

(e.g., translating procedural knowledge of Scratch into declarative knowledge on coding)



**“We do not learn from  
experience, we learn  
from reflecting on  
experience.”**

Nb. Often attributed to Dewey, yet it is most likely a paraphrasing of two chapters in *Democracy & Education* and *How We Think*.

# What questions, puzzles and wonders do you have?

Learn more about **Playtrack** at <https://interactingminds.au.dk/projects/playtrack/>  
and **Pedagogy of Play** at <http://pz.harvard.edu/projects/pedagogy-of-play#xlink>