

# The collective architecture of large language models

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**Jon Dron, December 5th, 2024**



# “Collective intelligence”

a fuzzy, diversely applied term

- stigmergic and emergent swarms, flocks, hives, nests, trails, etc
- group behaviours towards intentional goals
- distributed cognition
- global brain
- 4E cognition
- community adaptability
- aggregate behaviours
- extended mind
- crowd wisdom
- connectomes
- etc
- etc



**stupid mobs, wise crowds, smart organizations, etc**



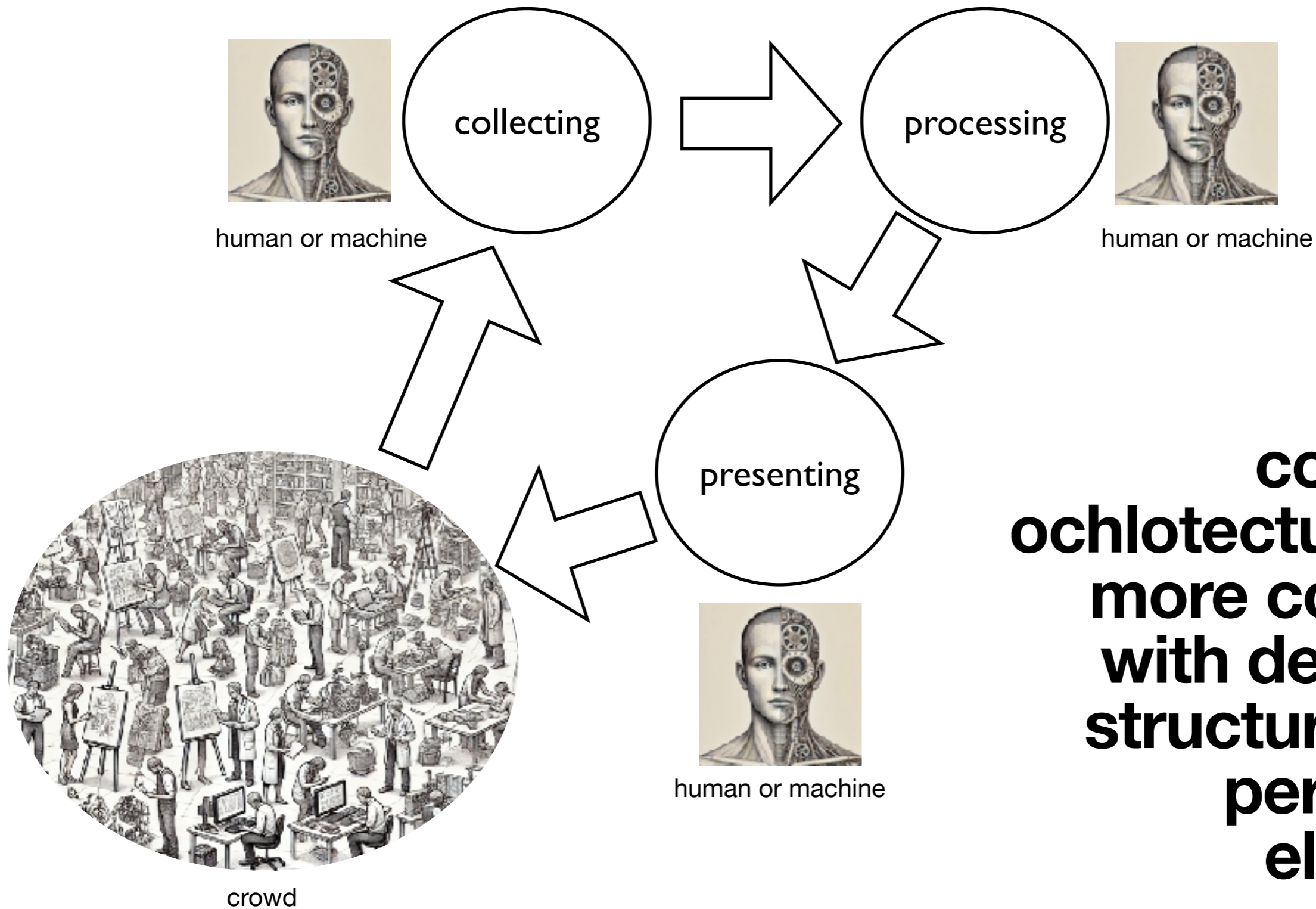
# ochlotecture:

From the Classical Greek ὄχλος (ochlos), meaning “multitude” and τέκτων (tektōn) meaning “builder”

# A few ochlotectural elements

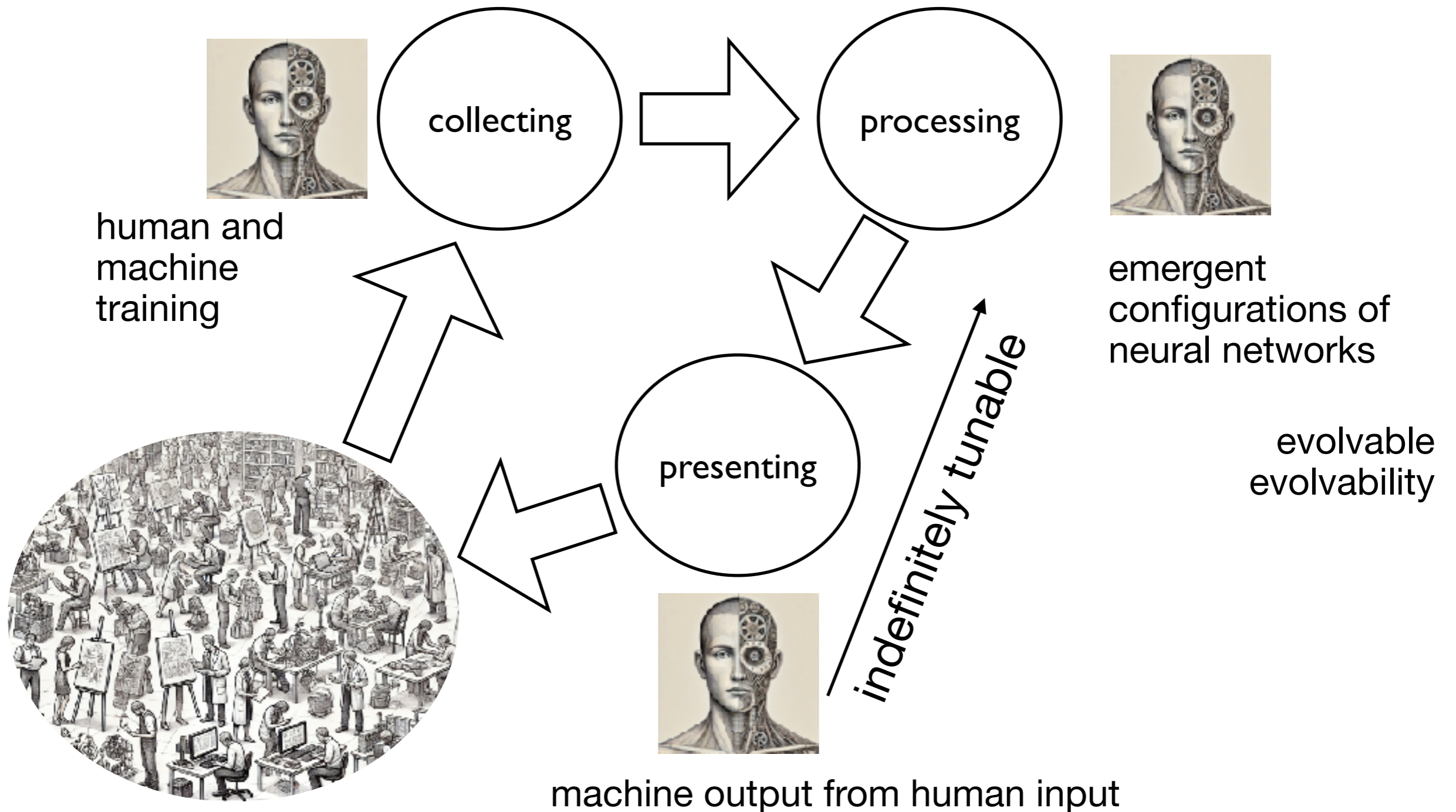
- rules
- membership
- EdgeRank
- room organization
- lecterns
- hierarchies
- norms
- wiki pages
- etc
- schedules
- Karma points
- uniforms
- rituals
- vocabularies
- discussion forums
- bulletin boards
- forms
- etc

# Basic collective ochlotecture



**Many  
human  
collective  
ochlotectures are  
more complex,  
with designed,  
structural, and  
performed  
elements**

# LLMs as general-purpose collectives



# Education

**1) A technology through which we learn to operate the technologies of our cultures and societies**



**2) A technology through which we form identities, attitudes, values, ways of thinking, ways of relating to others, ways of being**

# Until now, automation has replaced **hard** technique

(playing a correct role in a technology's orchestration)



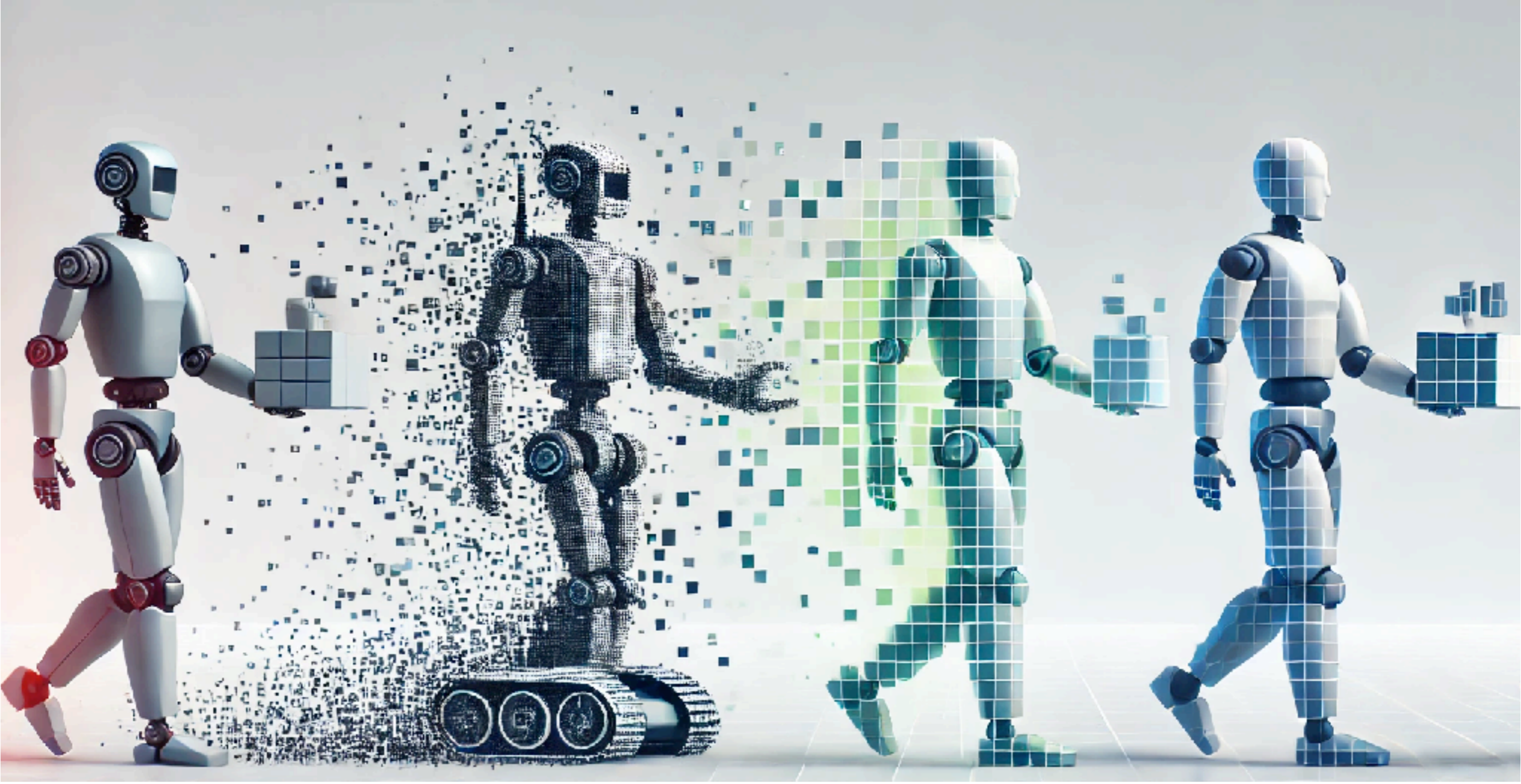
# Generative AIs replace **soft** technique

(orchestrating a technology)





**No “they” there**



**Collective model collapse**

# Ochlotects for human connection



**Partners, not tools**

**Education as community,  
not product**

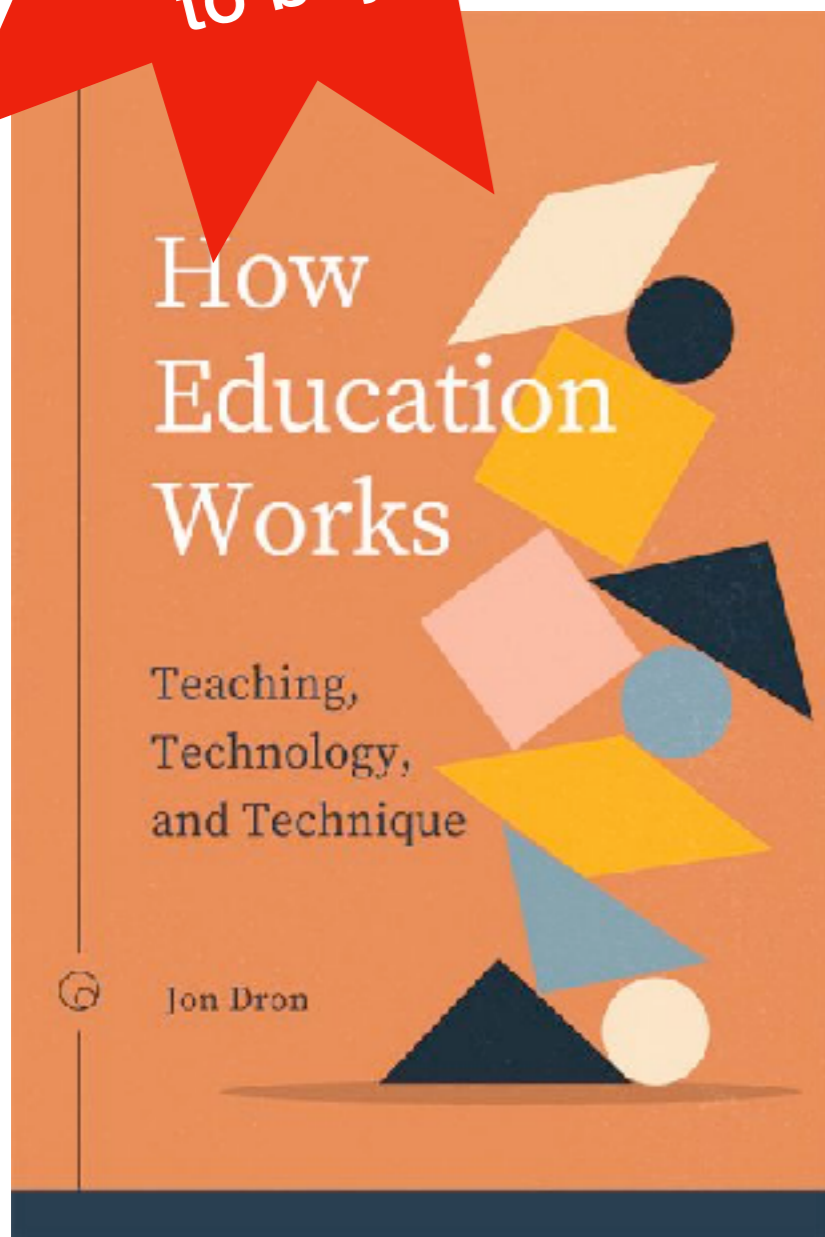


**Embracing  
the tacit**

**Decoupled learning  
and credentials**



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# Thank you



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other books involving collectives

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