

Antidotes to “Bad AI”: Novelty, transparency, and choice in IxD

"Moreover, if we move in the direction of making machines which learn and whose behavior is modified by experience, we must face the fact that every degree of independence we give the machine is a degree of possible defiance of our wishes."

—Norbert Wiener 1949

Antidotes to “Bad AI”: Novelty, transparency, and choice in IxD

IxDA PGH
September 2021

Paul Pangaro, PhD

President, American Society for Cybernetics &
Professor of Practice, Human-Computer Interaction Institute,
Carnegie Mellon University
ppangaro@cmu.edu

pangaro.com/ixda2021/ [@NewMacyMeetings](https://twitter.com/NewMacyMeetings)

Antidotes to "Bad AI" Pandemics

The word "pandemic" comes from "all" and "people" — something negative that affects everyone in our community.

Antidotes to "Bad AI" Pandemics

The word "pandemic" comes from "all" and "people" — something negative that affects everyone in our community. The Internet and digital devices connect to 4 billion people. "Today's AI" is inside technology we touch every day.

Antidotes to "Bad AI"

Pandemic of "Today's AI"

The word "pandemic" comes from "all" and "people" — something negative that affects everyone in our community. The Internet and digital devices connect to 4 billion people. "Today's AI" is inside technology we touch every day. Today's AI foments polarization, pushes irrelevant products, spreads social bias, and surveils our lives.

Antidotes to "Bad AI"

Pandemic of "Today's AI"

The word "pandemic" comes from "all" and "people" — something negative that affects everyone in our community. The Internet and digital devices connect to 4 billion people. "Today's AI" is inside technology we touch every day. Today's AI foments polarization, pushes irrelevant products, spreads social bias, and surveils our lives. **Its impact on our daily living is growing every day.**

Antidotes to "Bad AI"
Pandemic of "Today's AI"

Facebook & Instagram

Google & Youtube

Amazon

Twitter

...

Artificial Intelligence Inside (™)

Artificial Intelligence Inside (™)

~~Facebook & Instagram~~
Google & YouTube
Amazon
Twitter
...

CODE =

AUTOMATION =

~~CODIFICATION~~

PANDEMIC

Antidotes to "Bad AI"

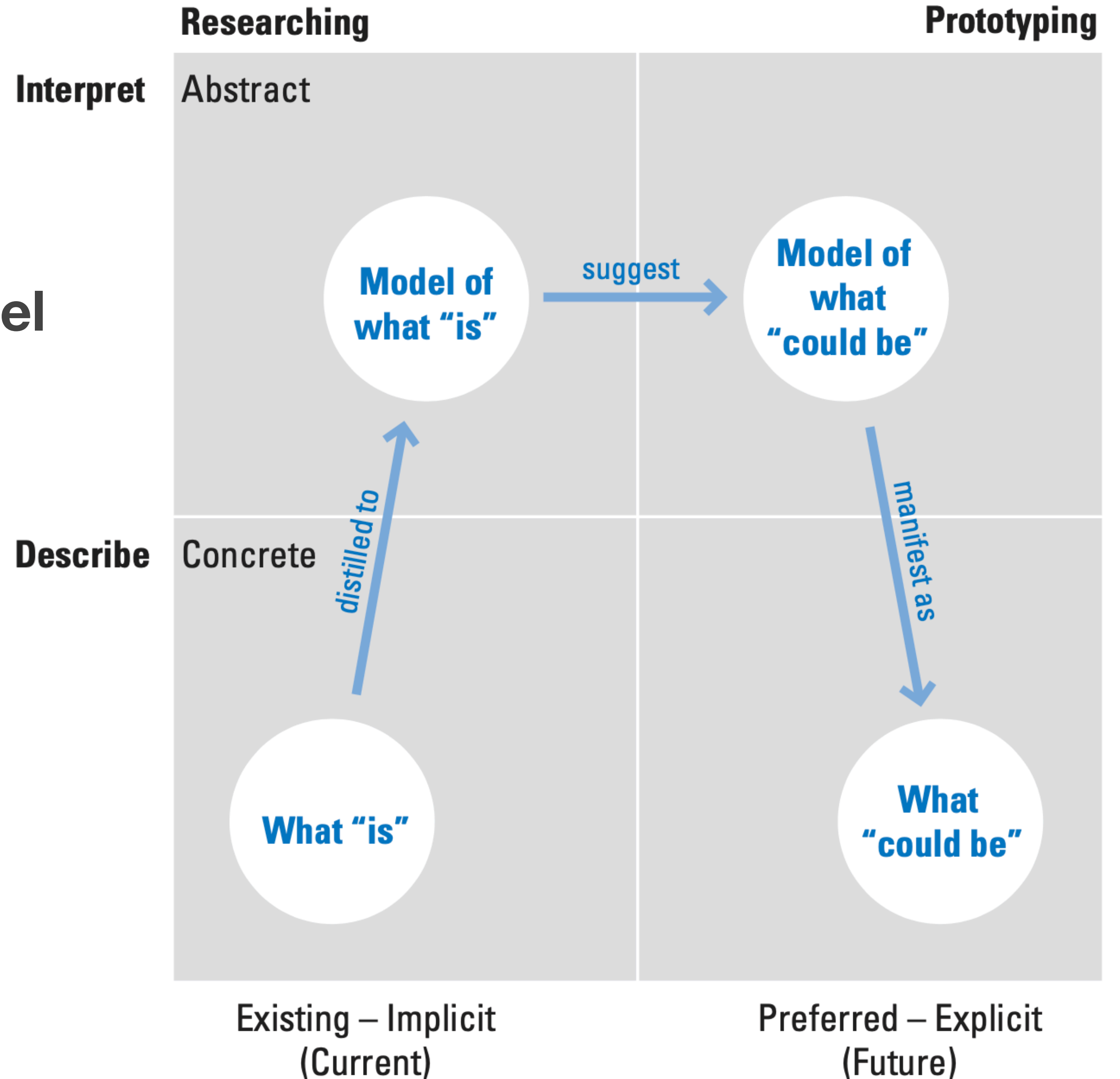
Pandemic of "Today's AI" = "Bad AI"

- ◉ Manipulation of attention by Internet platforms
 - ◉ Manipulation of sentiment in politics & elections
 - ◉ Loss of privacy through "surveillance capitalism"
 - ◉ Bias in law enforcement algorithms
 - ◉ Facial recognition leading to social control
 - ◉ Overpowering of human capacity & "Human Downgrading"
- AI is making the world we see and the world we live in.
- Human purpose is lost.

A Path Forward

Analysis-Synthesis Bridge Model

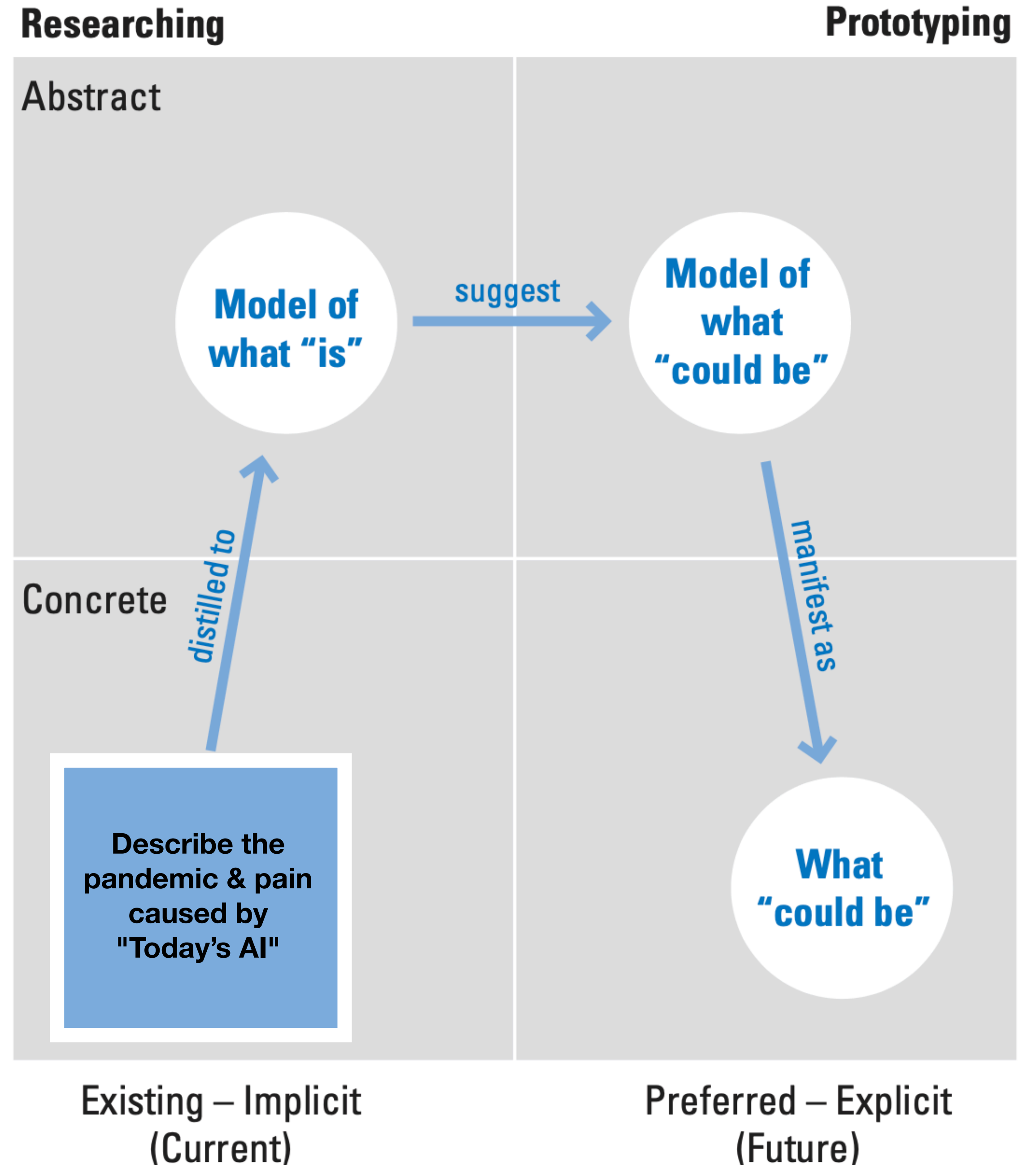
Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008



Describe

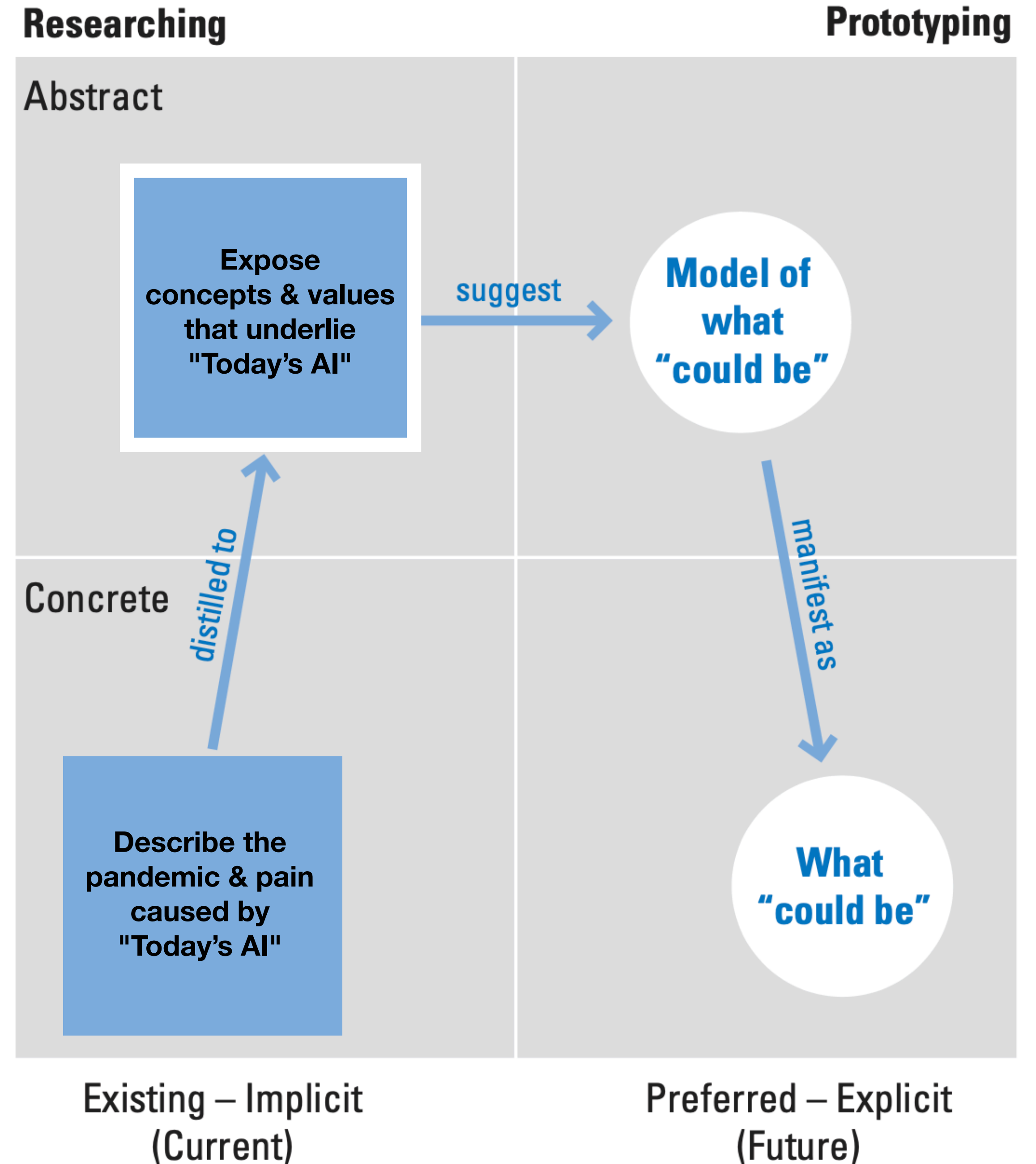
- Manipulation of attention by Internet platforms
- Manipulation of sentiment in politics & elections
- Loss of privacy through "surveillance capitalism"
- "Dark Patterns" & "Deep Fakes"
- Bias in law enforcement algorithms
- Facial recognition leading to social control
- Overpowering of human capacity

Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008



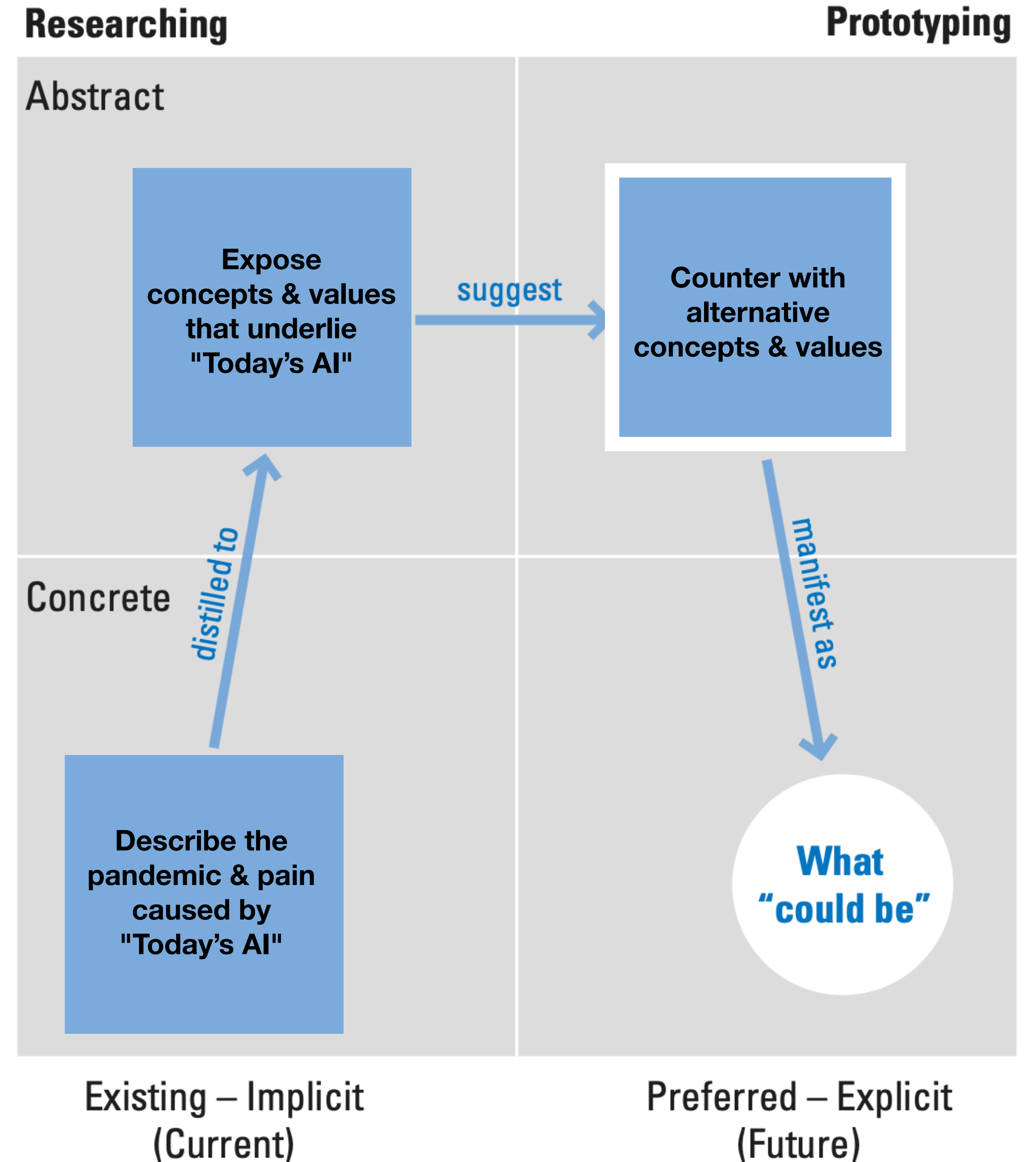
Expose

Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008



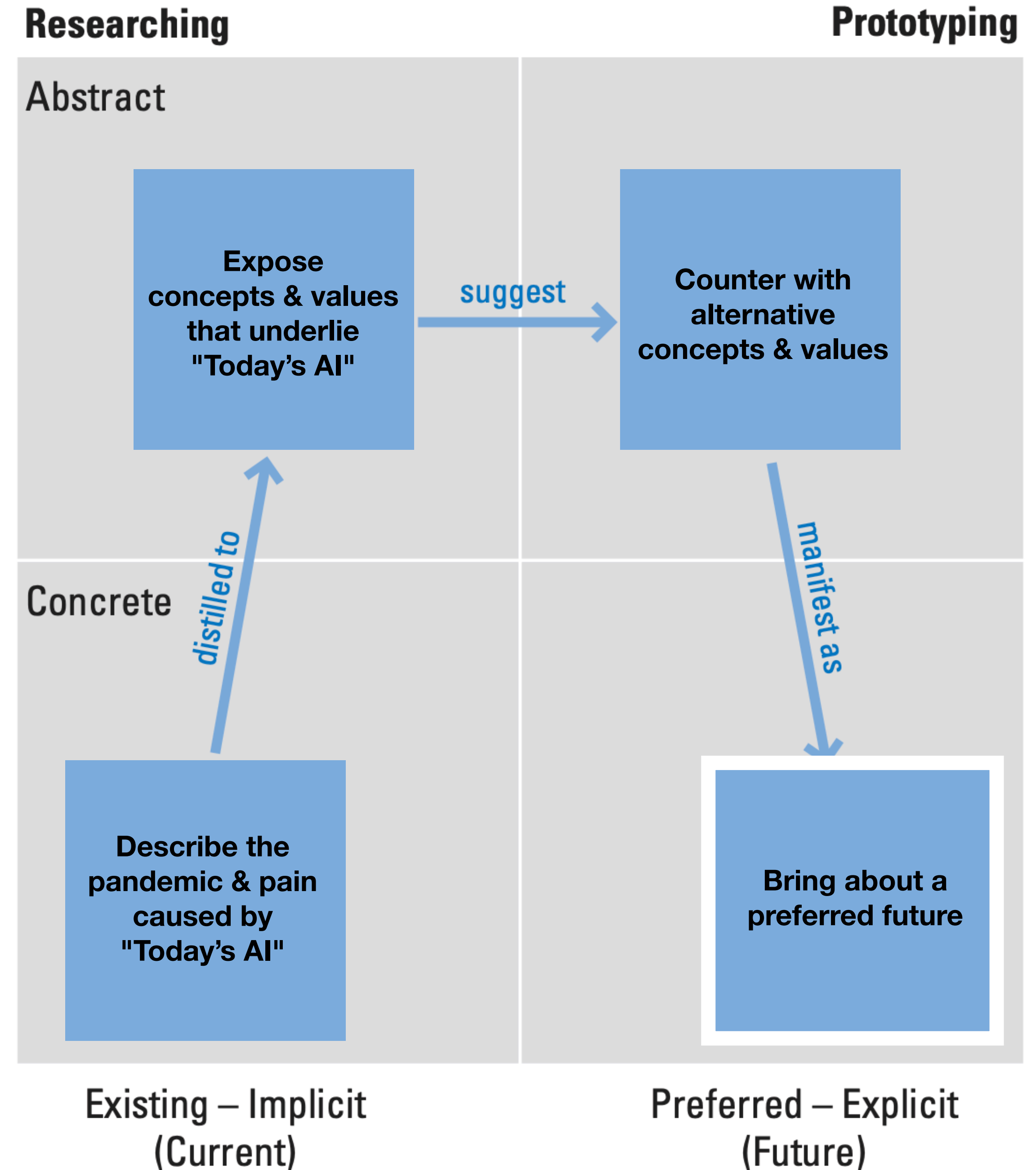
Counter

Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008



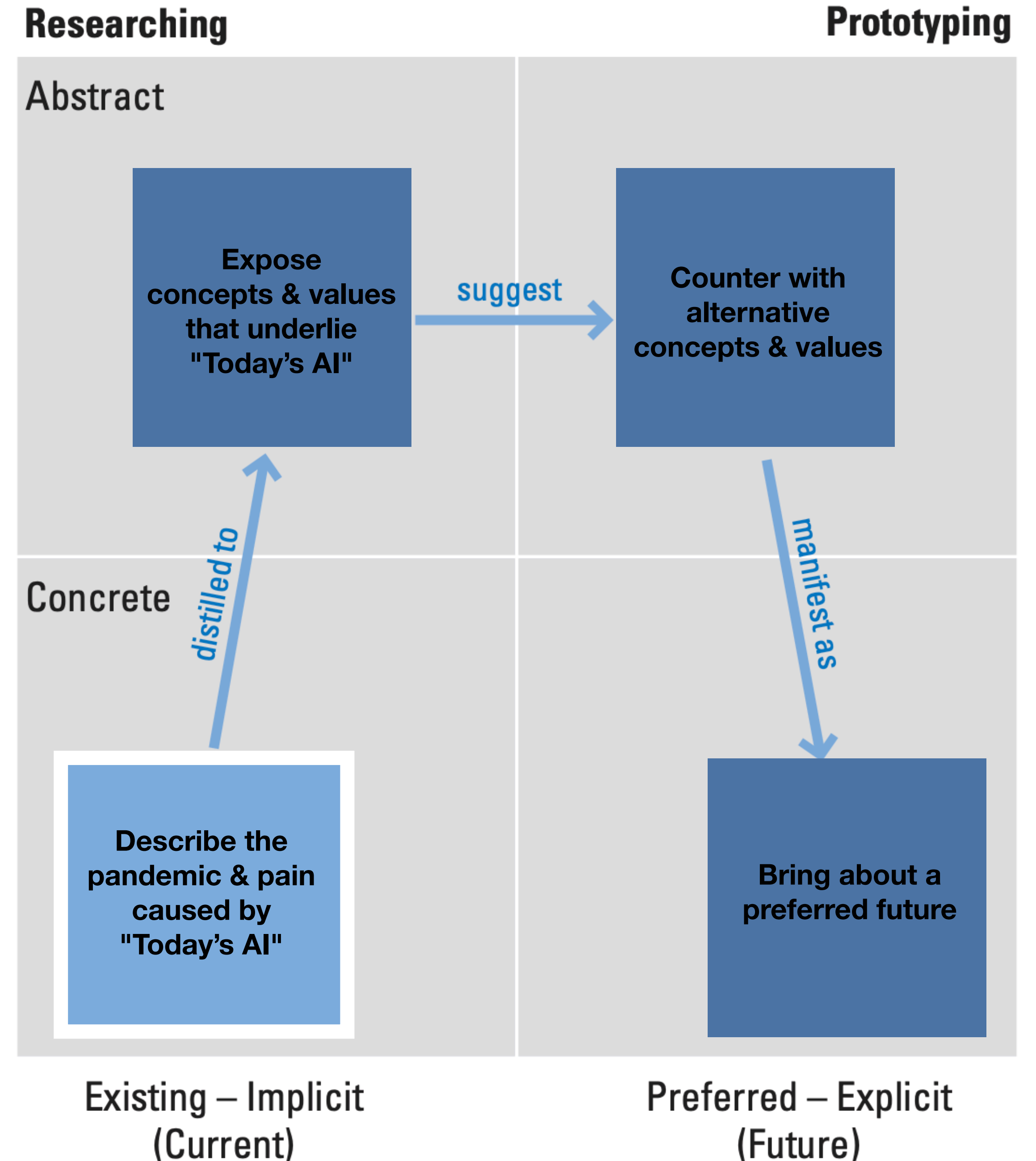
Improve

Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008



Describe

- Manipulation of attention by Internet platforms
- Manipulation of sentiment in politics & elections
- Loss of privacy through "surveillance capitalism"
- "Dark Patterns" & "Deep Fakes"
- Bias in law enforcement algorithms
- Facial recognition leading to social control
- Overpowering of human capacity

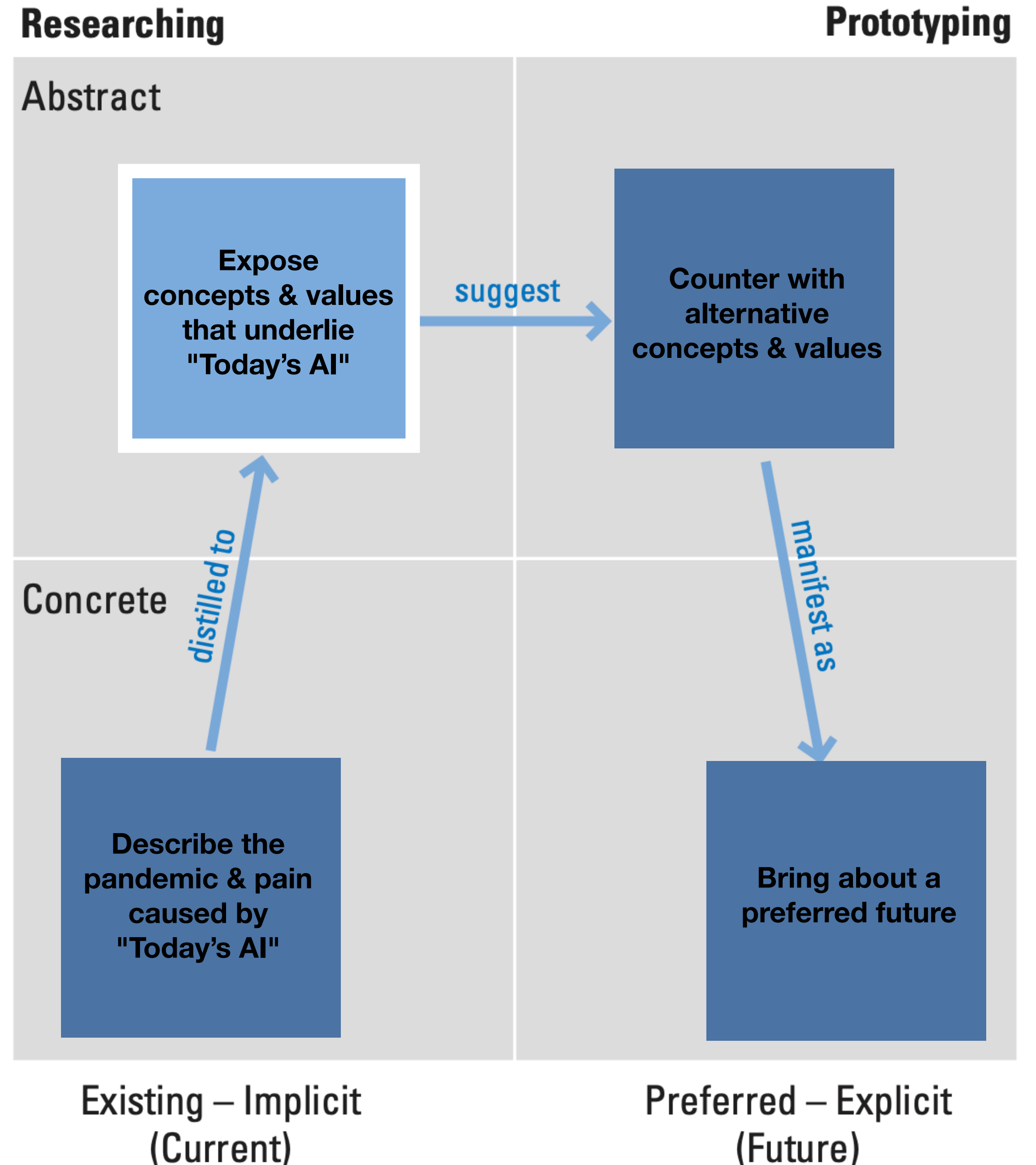


Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008

Expose

Digital technology forges a culture focused primarily on what computers can easily do. Most often for profit.

Values inherent in the code of Today's AI are so often at odds with being human.

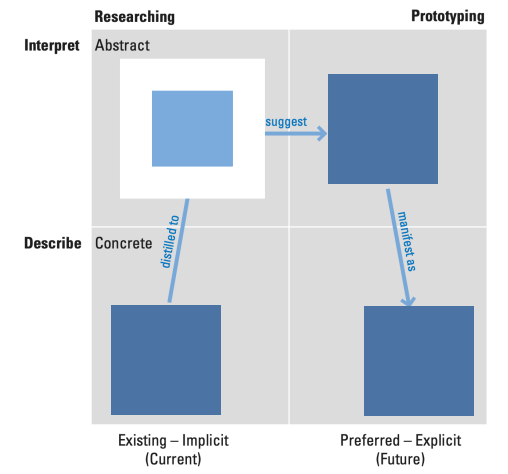


Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008

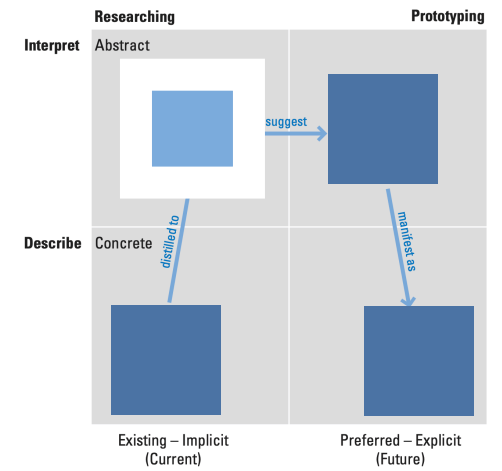
Premise — It's the "Digital Culture"

Digital technology forges a culture focused primarily on what computers can easily do. Most often for profit.

Values inherent in the code of Today's AI are so often at odds with being human.



Assumptions from Digital Culture



Digital Culture assumes:

- ◉ **interaction** is mechanistic
- ◉ **information** is objective
- ◉ **intelligence** is a process that sits inside a person or computer

So it "it becomes true" that:

- ◉ human behavior can be generalized and accurately predicted
- ◉ the same option offered at an interface has the same meaning for everyone
- ◉ machine prediction is intelligent—so the machine's selection need not be questioned or tested by the human

EXAMPLES

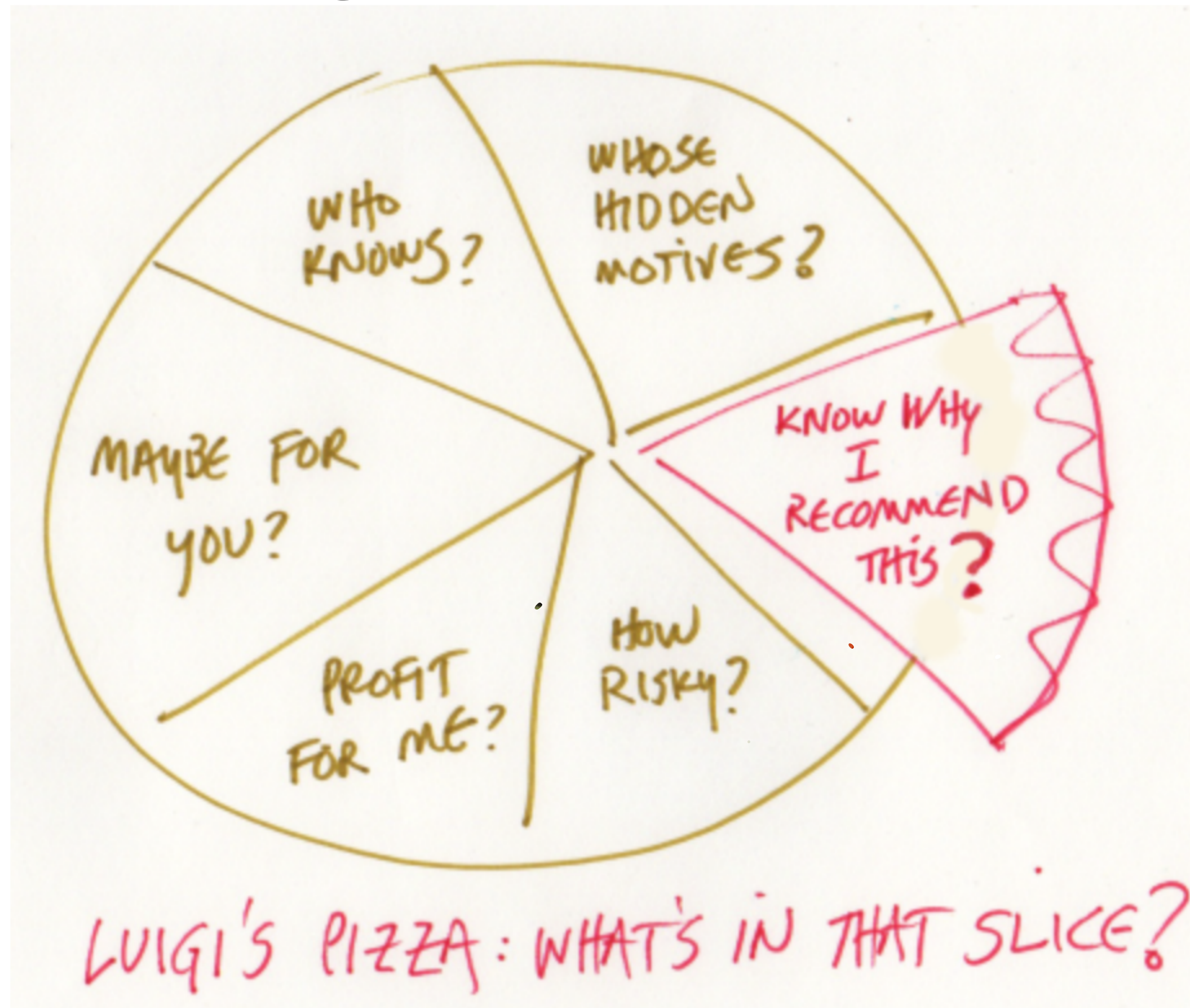
- **Google "Page Rank" — Lack of Transparent Intent**
You cannot learn why choices were offered
- **Youtube "Up Next" — Asymmetry of Control of Focus**
You cannot question or redirect choices offered
- **Facebook "News Feed" — Lack of Control of Choice**
You can decline options but not define them

CODE = CODIFICATION

- **Lack of Transparent Intent**
You cannot learn why choices were offered
- **Asymmetry of Control of Focus**
You cannot question or redirect choices offered
- **Lack of Control of Choice**
You can decline options but not define them

CODIFICATION enshrines values that control outcomes

The Parable of Luigi's Pizza



[More about Luigi's Pizza](#)

Premise—It's not Technology

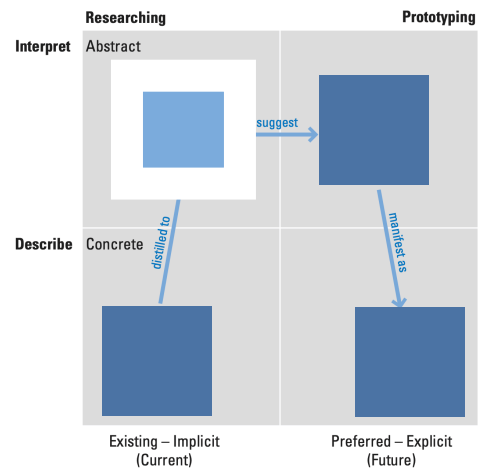
Technology itself is not at fault—it is how we fashion it and the traits we embed in it.

In pursuit of profit, we build engines that dazzle our brains and addict us to our human & biological vulnerabilities.

Novelty and choice, transparency and conversation can become the new core principles of Today's AI.

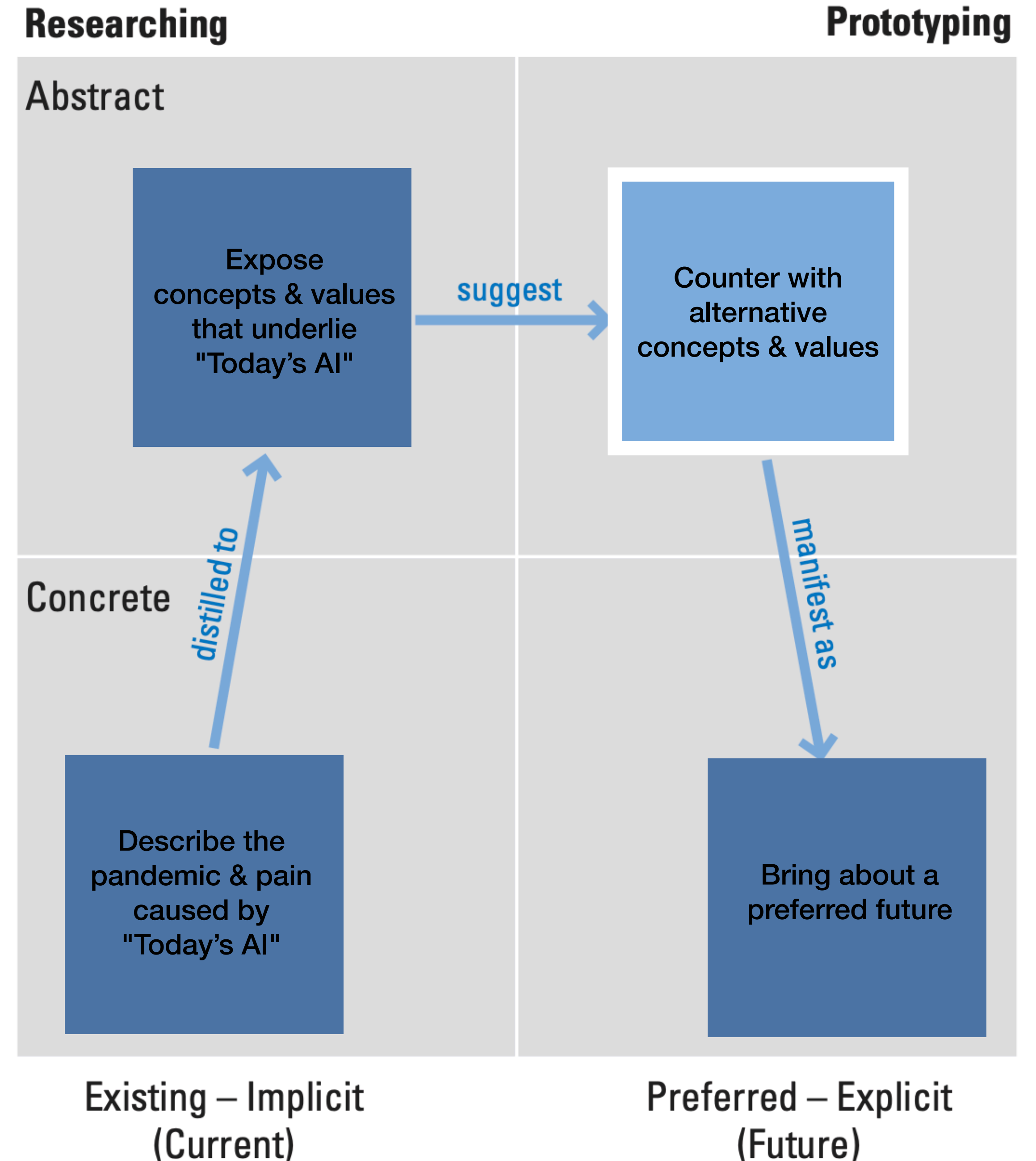
This is not the only option.

We can shift technology from **digital assumptions** and swing back toward our **analog** roots—our physical, organic, biological selves.



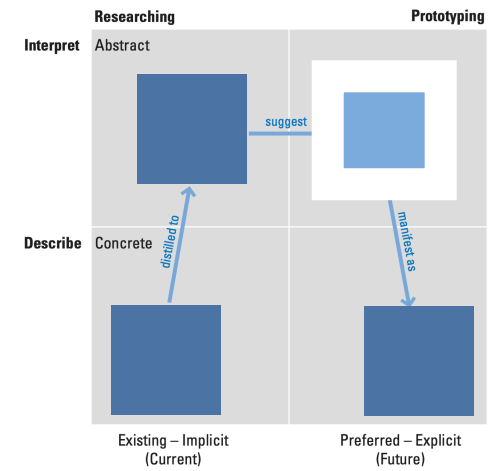
Counter

To upset the dominance of the pernicious algorithms of AI, we must design and propagate a set of humane, organic, and analog interactional frameworks.



Dubberly, Evenson, and Robinson, Interactions Magazine, Volume XV.2, March + April 2008

Countering with analog frameworks



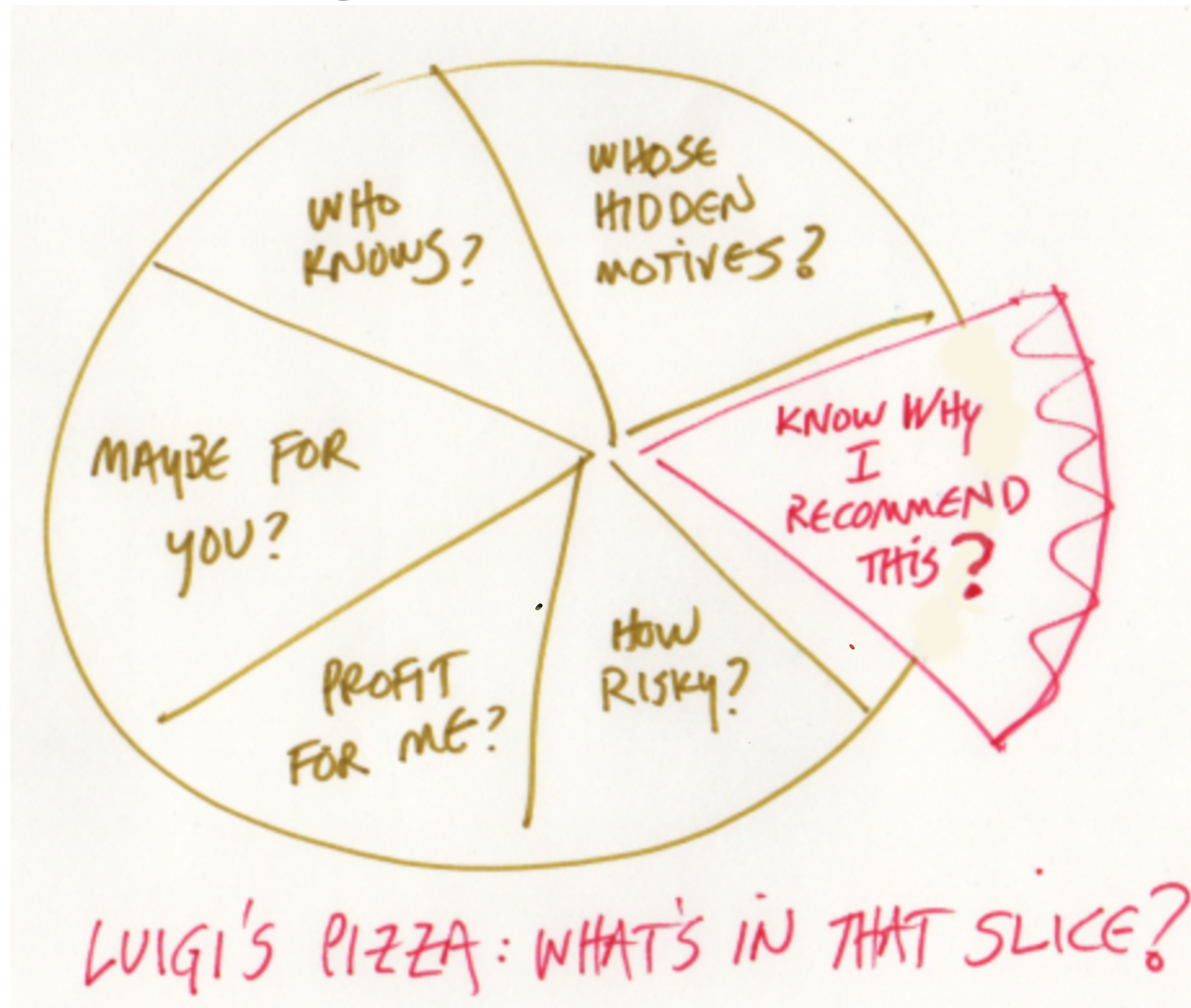
Digital Culture assumes:

- **interaction** is mechanistic
- **information** is objective
- **intelligence** is a process that sits inside a person or computer

“Analog frameworks” means:

- **interaction** can be conversational—inviting interpretation & responses from other contexts & understandings
- **information** can mean the triggering of ideas and reactions—the opening of new possibilities, ideas, & actions
- **intelligence** can be relational—an attribute of an interaction and not something inside a person or a box.

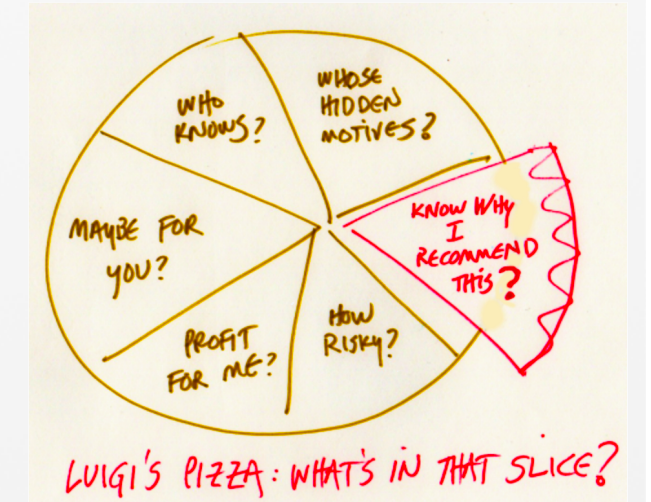
The Parable of Luigi's Pizza



[More about Luigi's Pizza](#)

CODE = CODIFICATION = DIGITAL

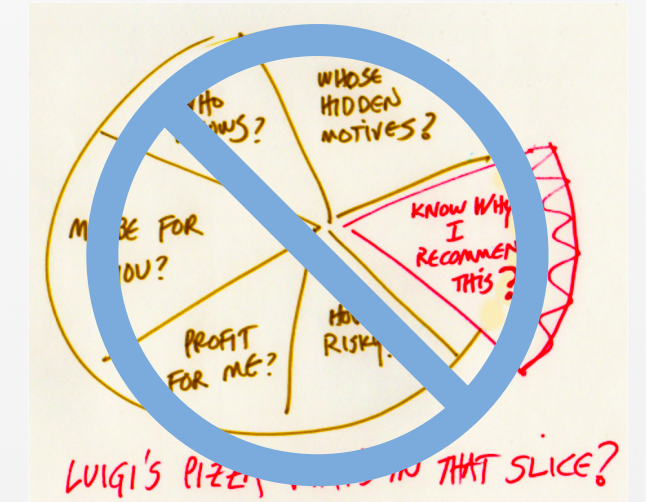
- **Lack of Transparent Intent**
You cannot learn why choices were offered
- **Asymmetry of Control of Focus**
You cannot question or redirect choices offered
- **Lack of Control of Choice**
You can decline options but not define them



CODE = CODIFICATION = ANALOG

- ~~Lack of Transparent Intent~~

"Why is Luigi's Pizza the best pizza?"



- Asymmetry of Control of Focus

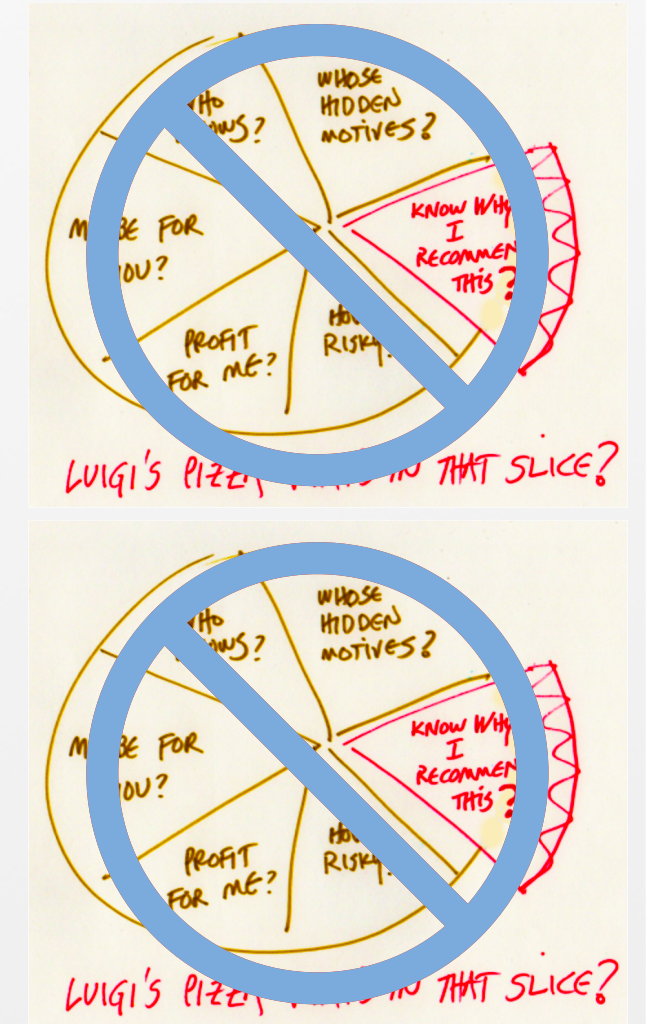
You cannot question or redirect choices offered

- Lack of Control of Choice

You can decline options but not define them

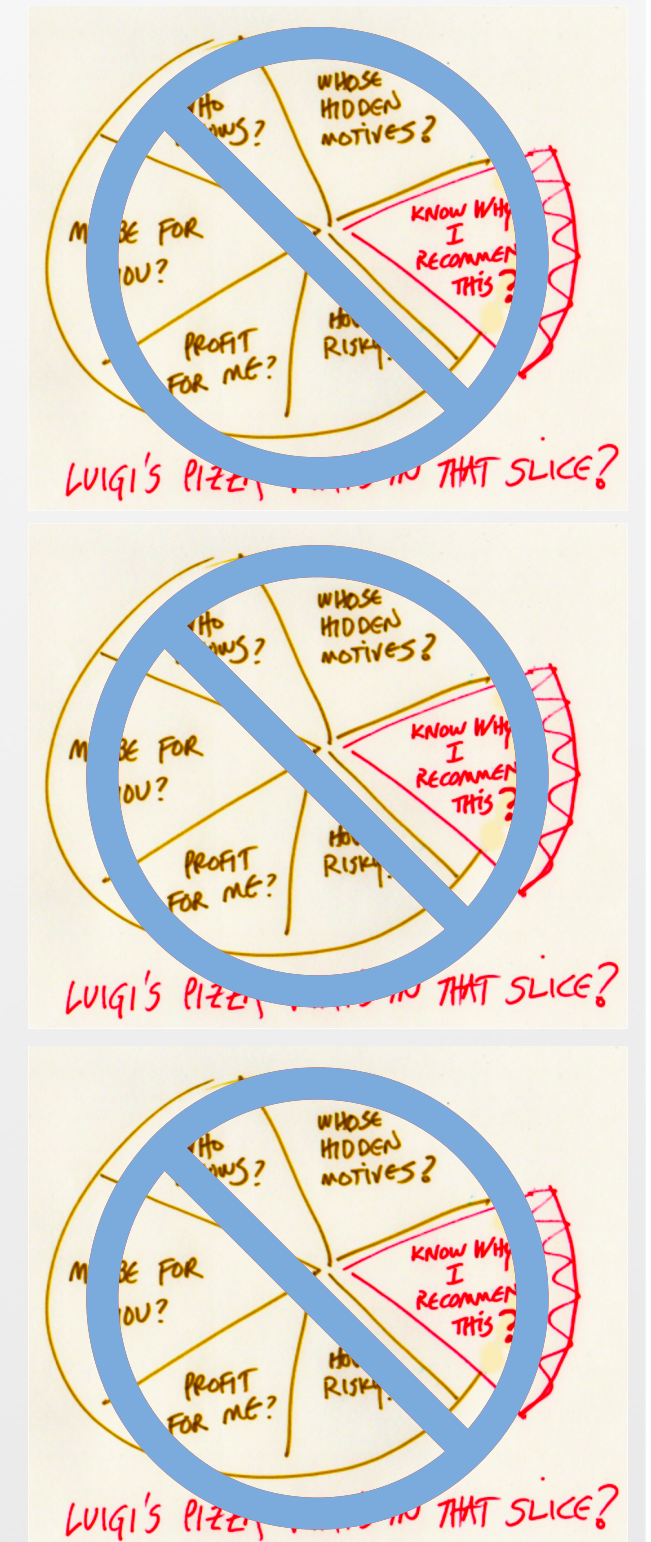
CODE = CODIFICATION = ANALOG

- ~~Lack of Transparent Intent~~
"Why is Luigi's Pizza the best pizza?"
- ~~Asymmetry of Collaborative Focus~~
"Does Luigi's serve gluten-free pizza?"
- Lack of Control of Choice
You can decline options but not define them



CODE = CODIFICATION = ANALOG

- ~~Lack of Transparent Intent~~
"Why is Luigi's Pizza the best pizza?"
- ~~Asymmetry of Collaborative Focus~~
"Does Luigi's serve gluten-free pizza?"
- ~~Lack of Coordinated Choice~~
"Why might I like this new dish?"



CODE = CODIFICATION = ANALOG

- **Transparent Intent**
"Why is Luigi's Pizza the best pizza?"
- **Collaborative Focus**
"Does Luigi's serve gluten-free pizza?"
- **Coordinated Choice**
"Why might I like this new dish?"

CODE = CODIFICATION = ANALOG

- **Transparent Intent**
"Why is Luigi's Pizza the best pizza?"
- **Collaborative Focus**
"Does Luigi's serve gluten-free pizza?"
- **Coordinated Choice**
"Why might I like this new dish?"

= CONVERSATION = ANALOG

CODE = CONVERSATION = ANALOG

- **Transparent Intent**
"Why is Luigi's Pizza the best pizza?"
- **Collaborative Focus**
"Does Luigi's serve gluten-free pizza?"
- **Coordinated Choice**
"Why might I like this new dish?"

Novelty and choice, transparency and conversation would become the new core principles of interaction.

Conversation is the Heart of Interaction

IxDA Pittsburgh — November 2019

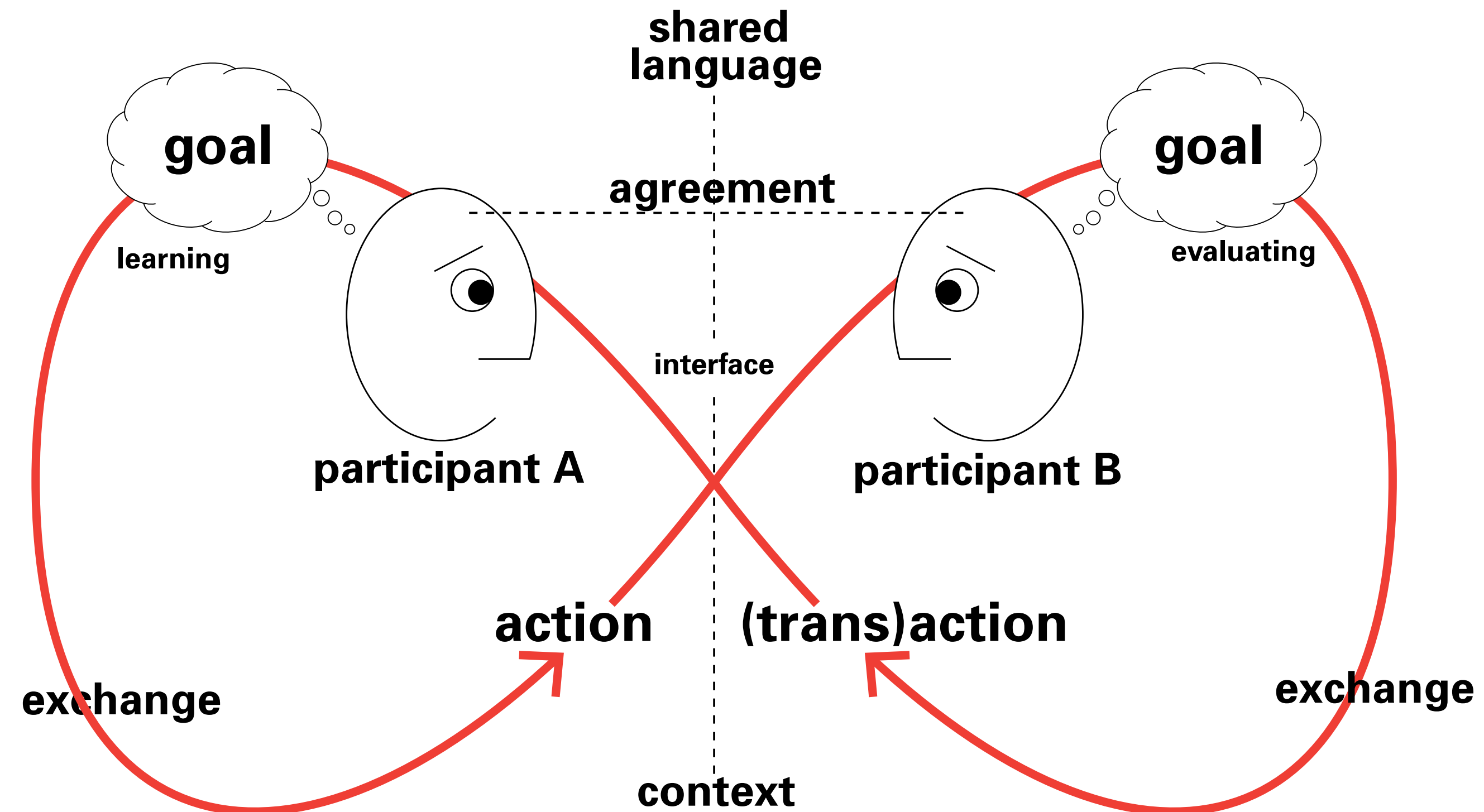
Paul Pangaro
Professor of Practice
Human-Computer Interaction Institute
Carnegie Mellon University

pangaro.com/ixda2019/

Conversation is the Heart of Interaction

IxDA Pittsburgh — November 2019

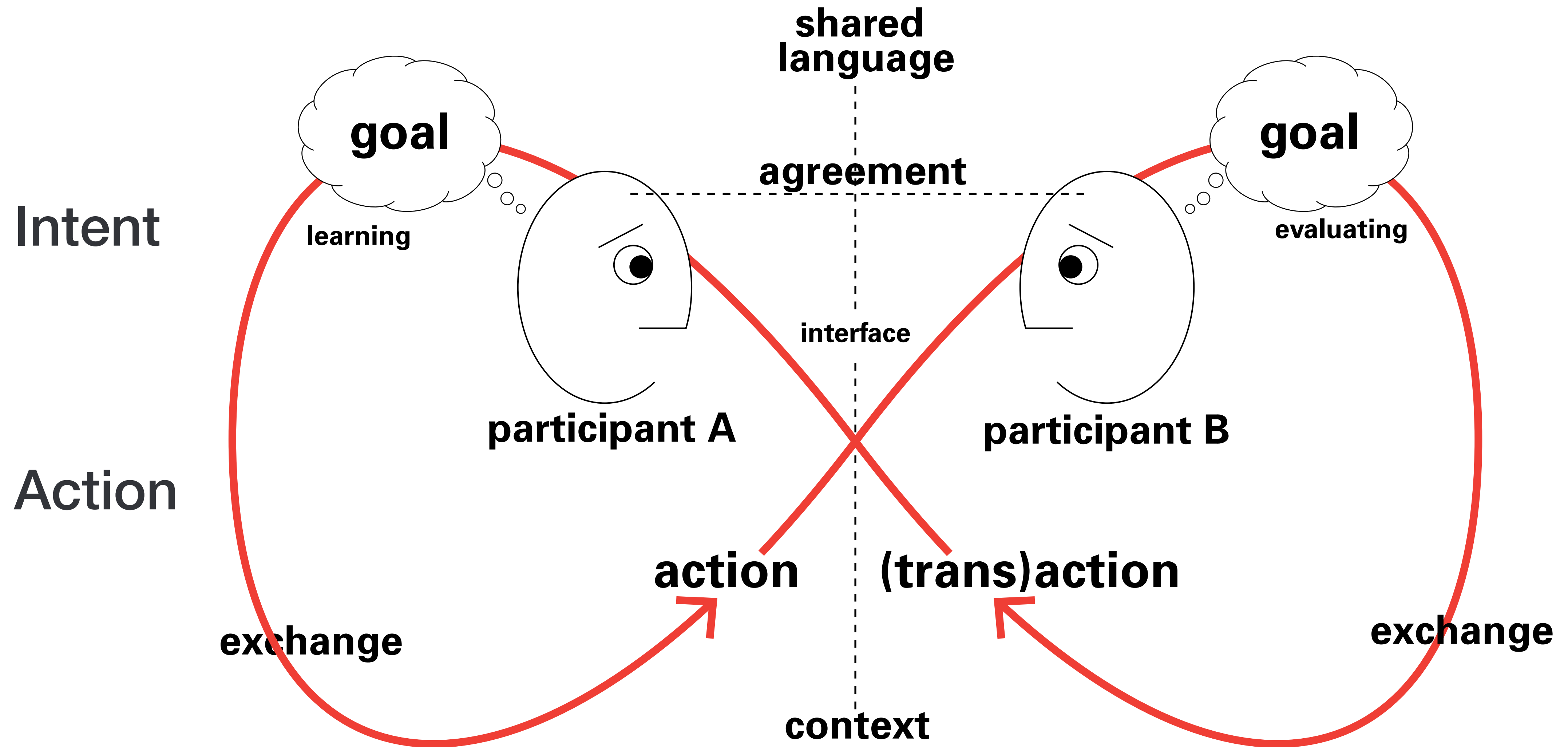
Conversation Model



[Click for Abstract and Slides](#)
[See also Economy of Insight](#)

Conversation is the Heart of Interaction

IxDA Pittsburgh — November 2019



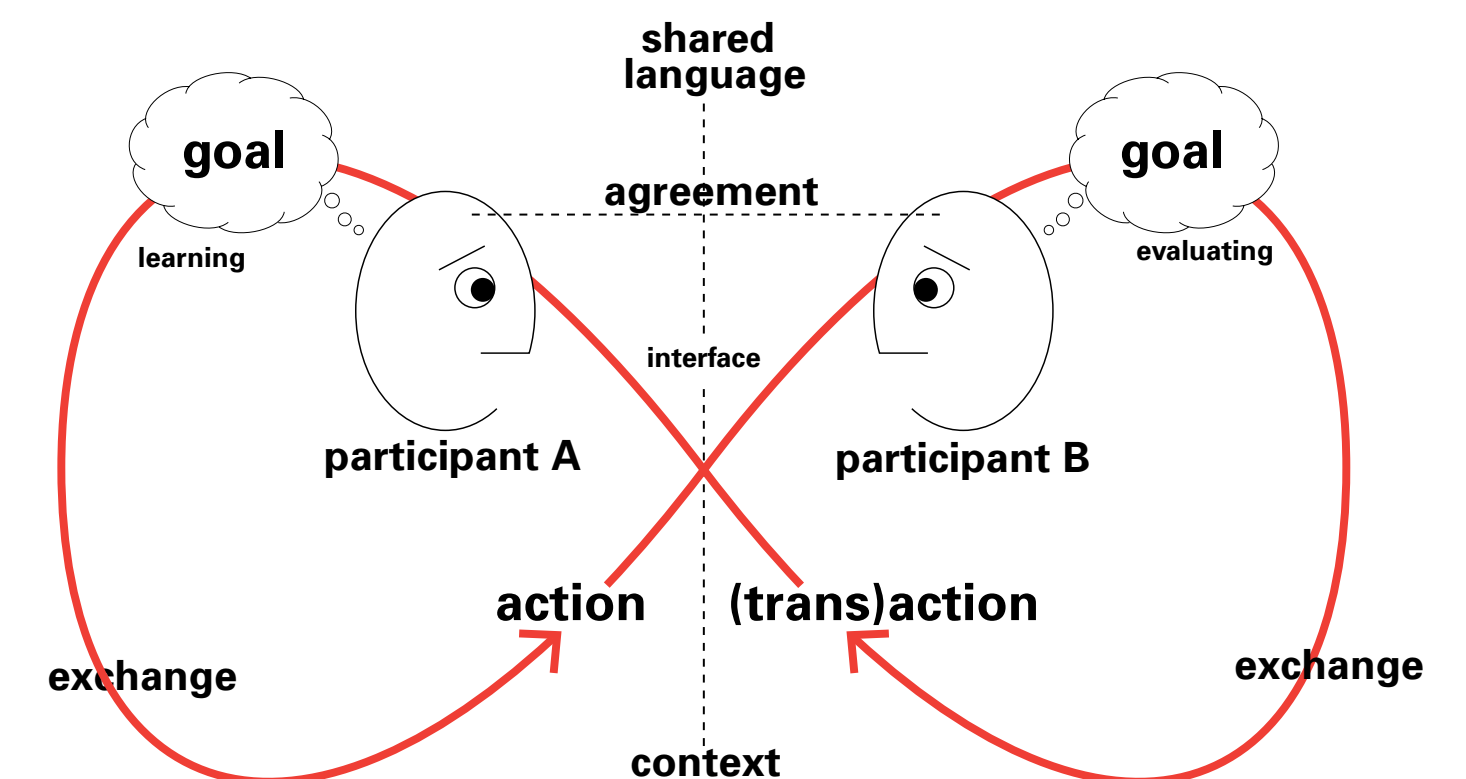
Conversation is the Heart of Interaction

IxDA Pittsburgh — November 2019

What may follow from conversation?

- *shared history*
- *relationship*
- *trust*
- *respect*
- *unity.*

All these require conversation.



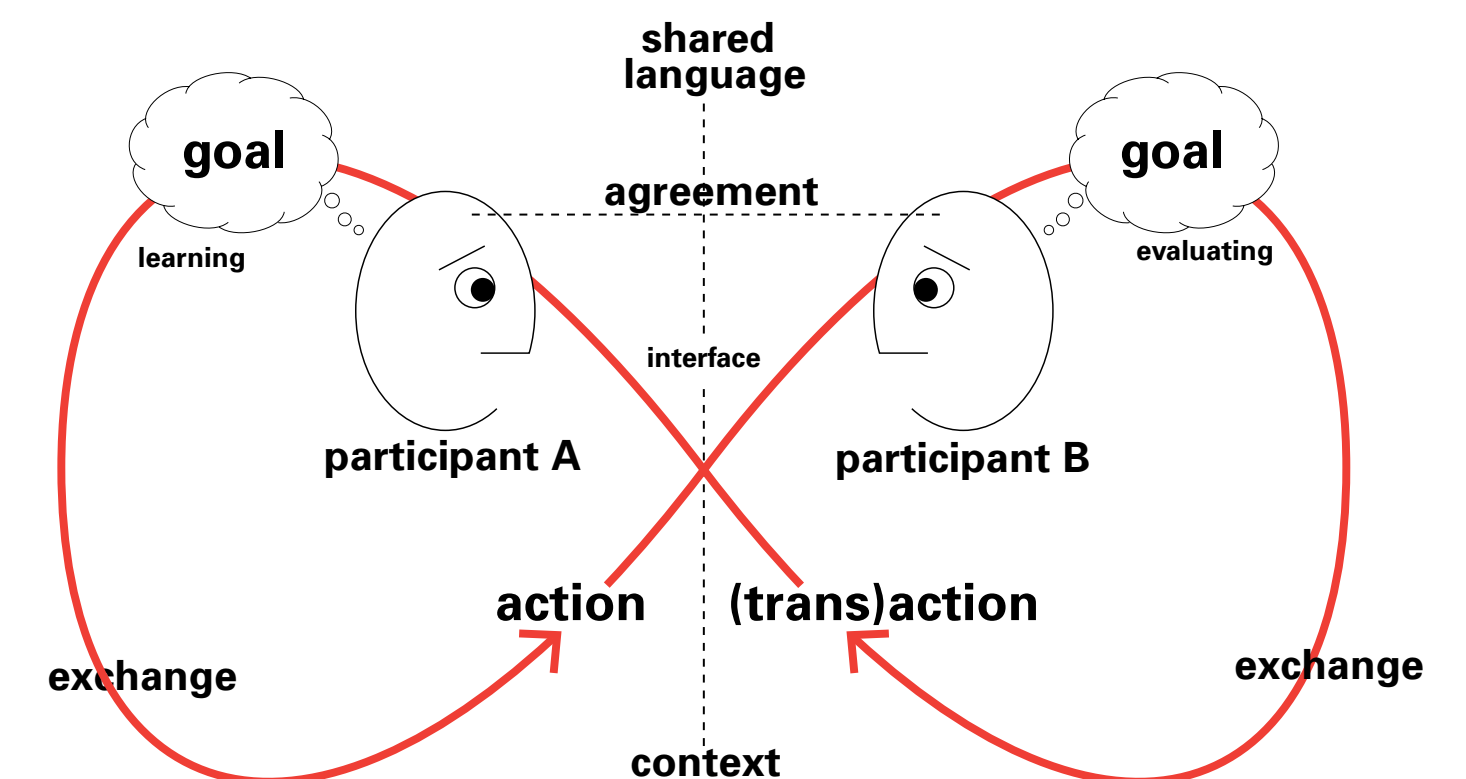
Conversation is the Heart of Interaction

IxDA Pittsburgh — November 2019

What does conversation enable?

- ***community***
- ***commerce***
- ***culture***
- ***government***
- ***society.***

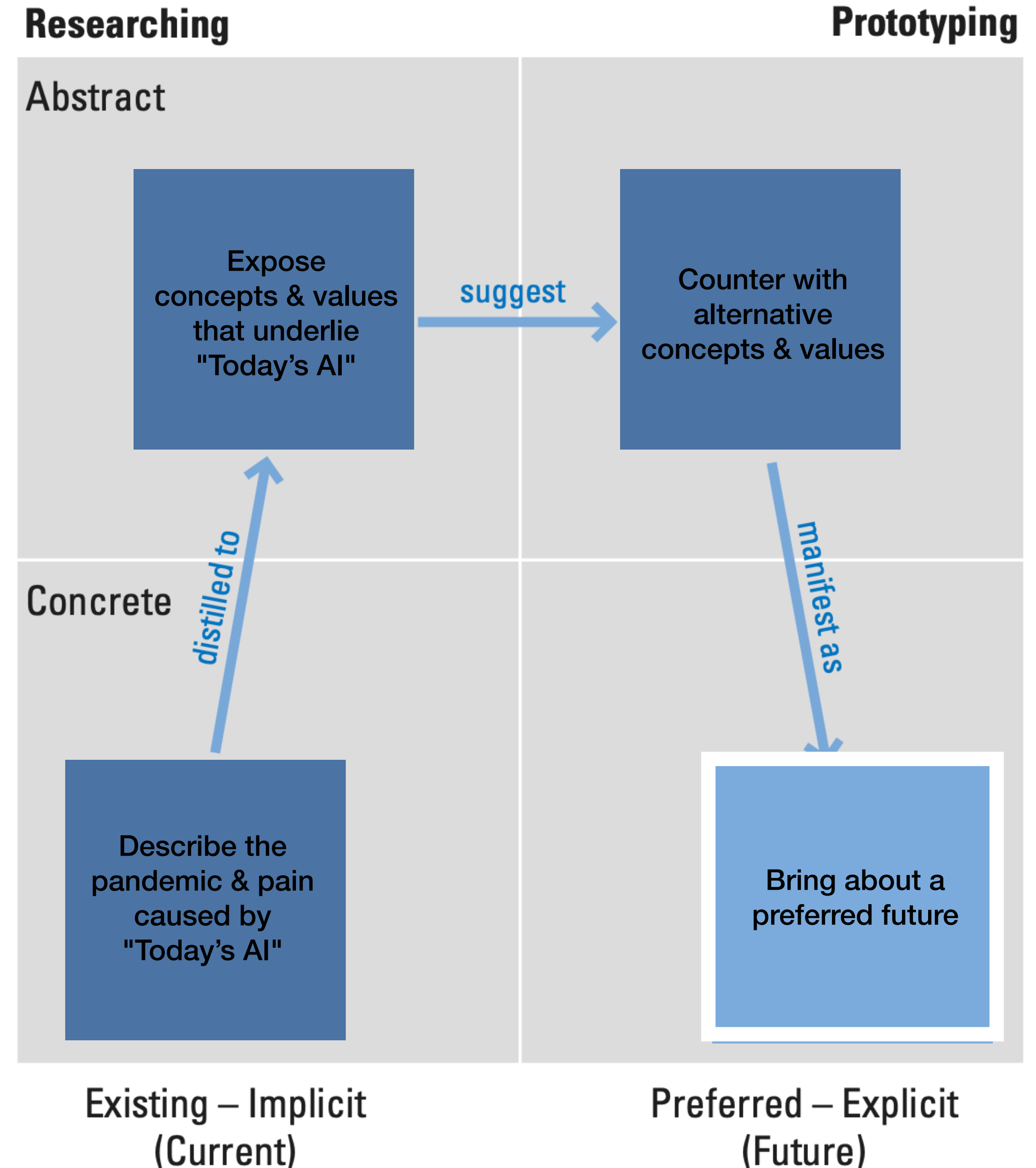
All these demand conversation.



A preferred future

To upset the dominance of the pernicious algorithms of AI, we must design and propagate a set of humane, organic, and analog interactional frameworks.

If we bring forth replacements for the algorithms of Today's AI, we can begin to have a positive effect and better serve our social fabric.



Bringing about a preferred future

Novelty, transparency, and choice in IxD

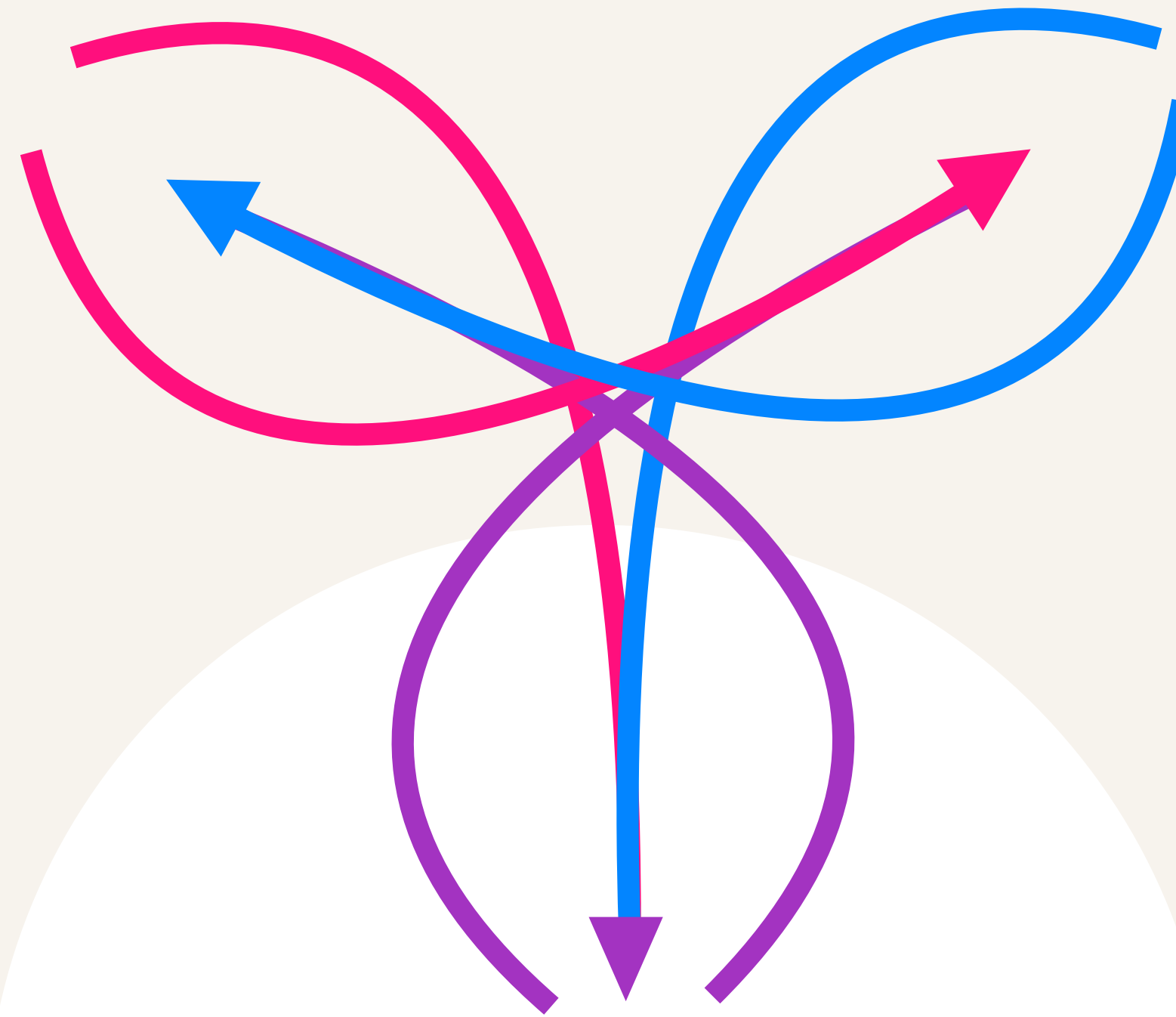
Our goal is to design and integrate new classes of interactional systems with today's AI and digital technologies to **create and promote** a new category of **analog interactional frameworks.**

Analogic Frameworks – Alternatives to Today's AI

DATA-ANIMATED

binary
discrete
deterministic
artificial
representational
specific
predictive

transactional



SOCIALLY-ANIMATED

biological
fluid
open-ended
organic
resonant
ambiguous
uncertain

conversational

Cybernetics

bilingual sensibility

Digital

Analog

Cybernetics

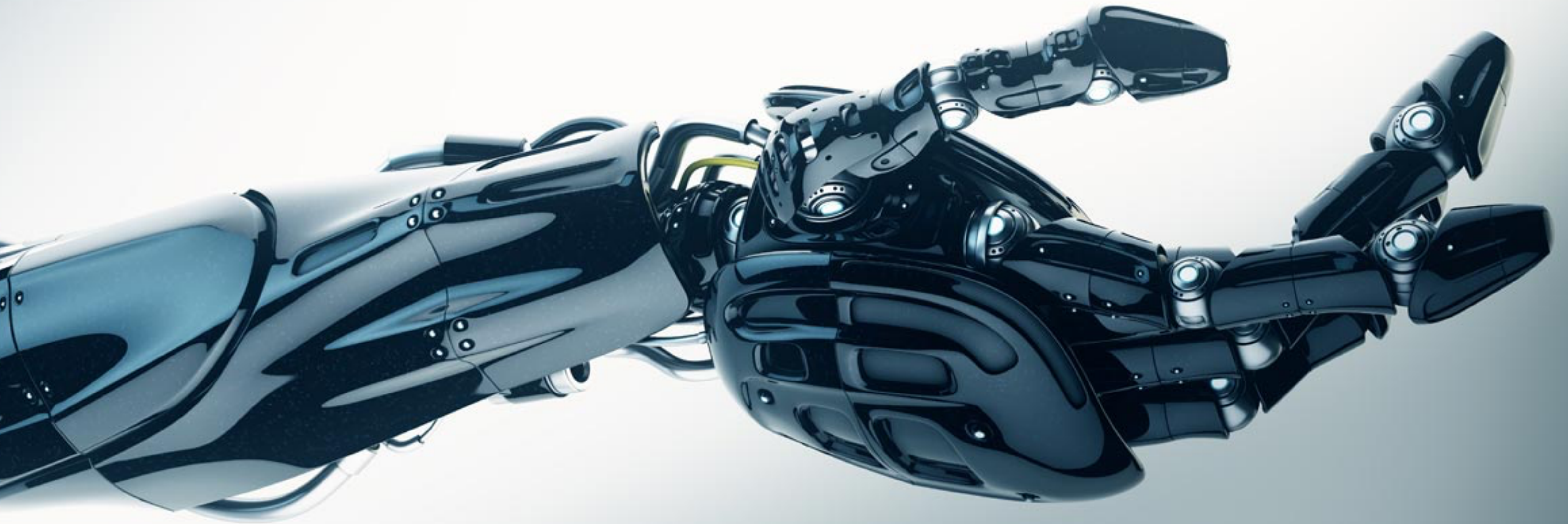
Why is Cybernetics “bilingual”?

How can it help create analog interactional frameworks?

Cybernetics is not Robotics



Cybernetics is not Biomechatronics

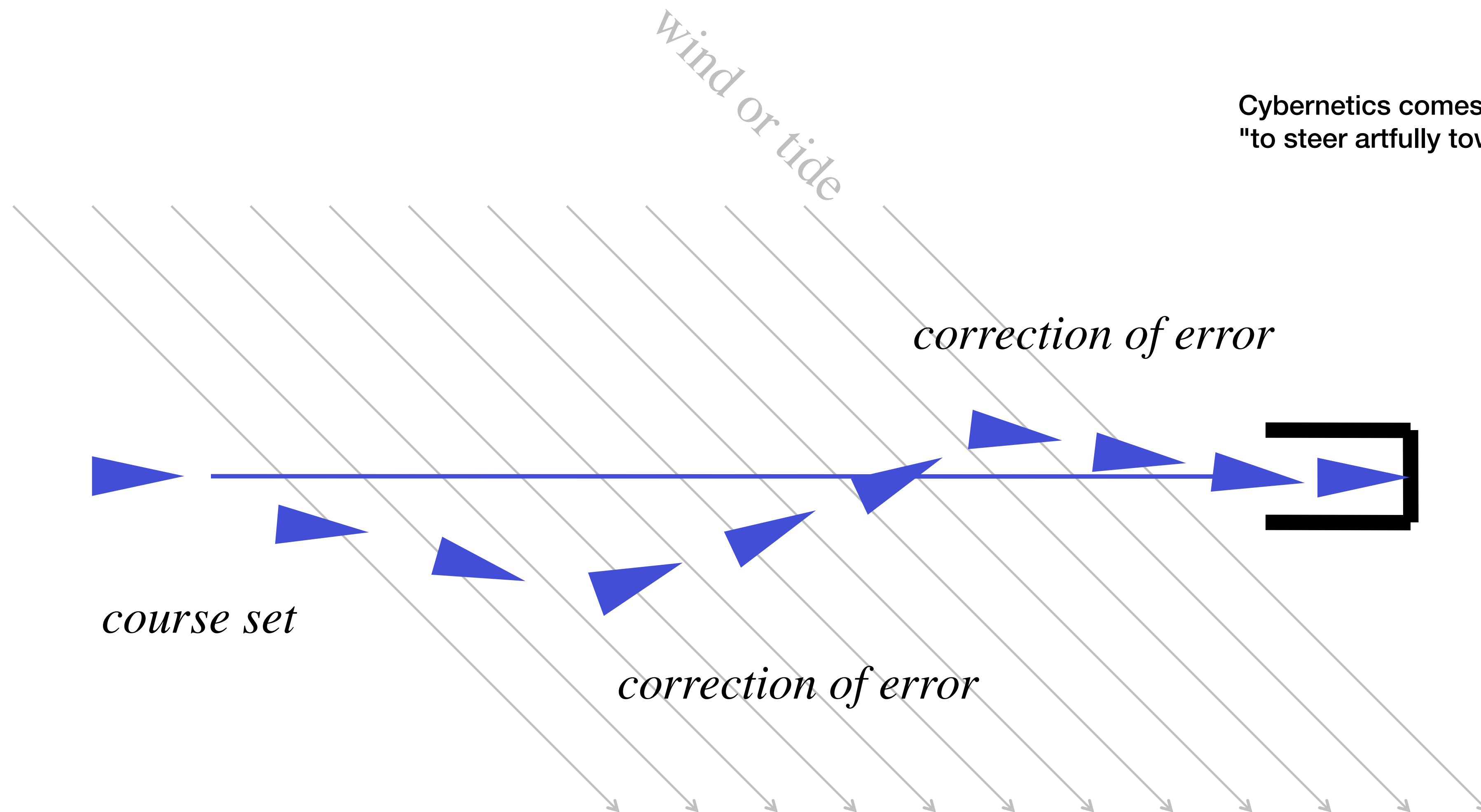


Cybernetics is not AI

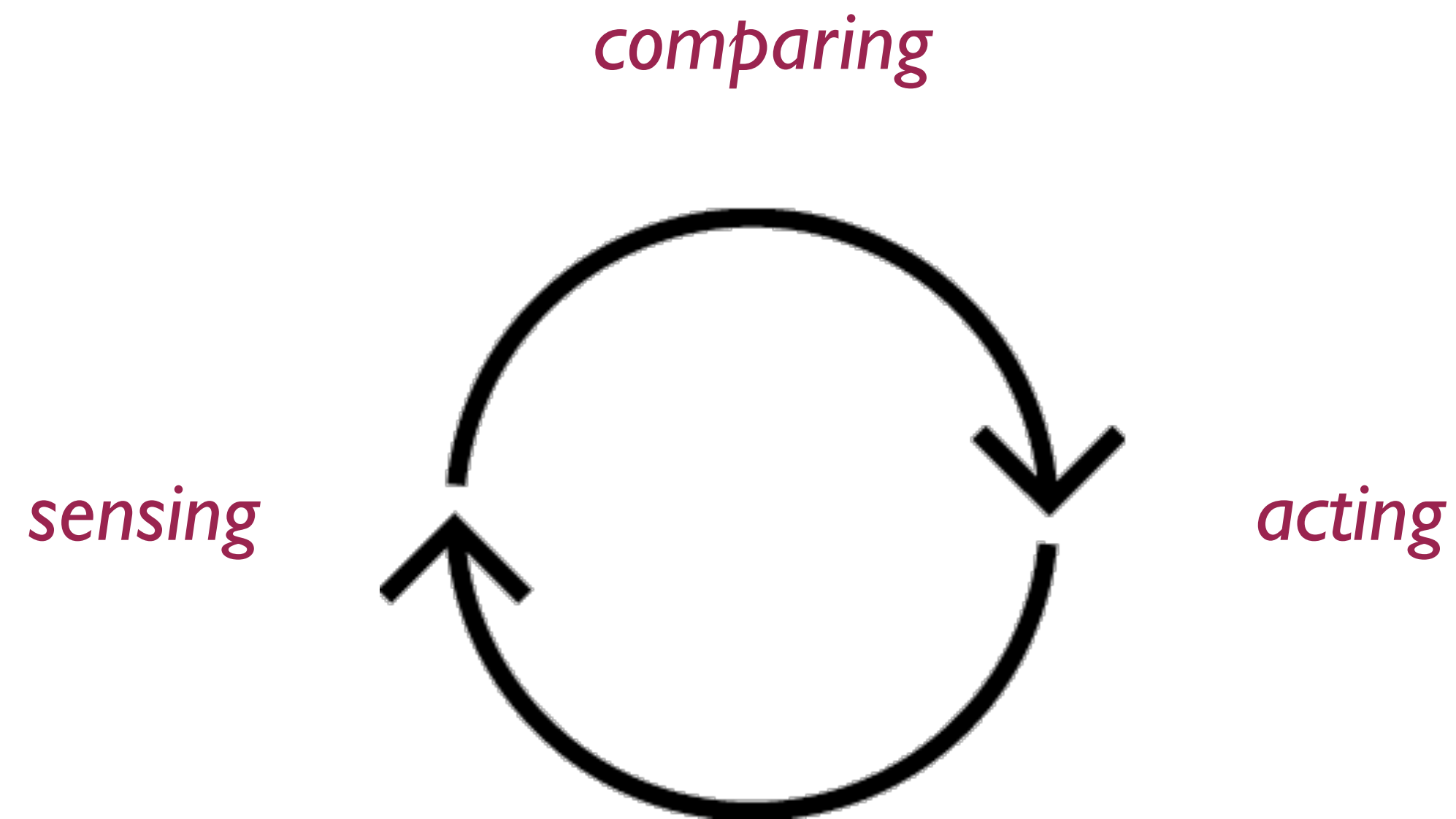
Cybernetics is not AI
Cybernetics is not Biomechatronics
Cybernetics is not Robotics
Cybernetics is not Chips in Your Brain
... and Cybernetics is not Freezing Dead People!

Cybernetics is "the art of steering"

Cybernetics comes from the Greek,
"to steer artfully toward a goal."



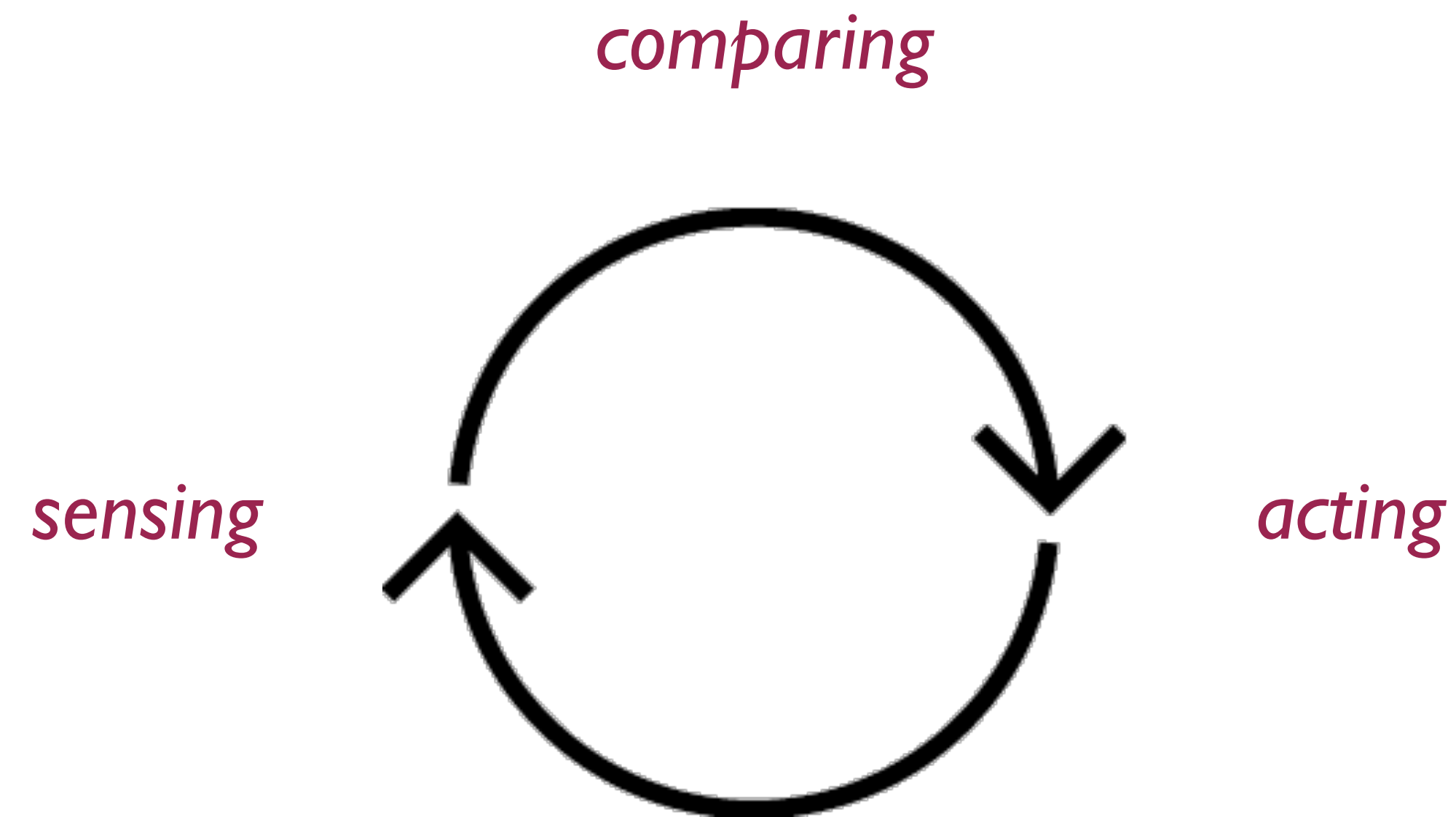
Cybernetics is "the art of steering"



Cybernetics comes from the Greek, "to steer artfully toward a goal."

Cybernetics is the art and science of feedback and goals.

Cybernetics is about systems with purpose



Cybernetics comes from the Greek, "to steer artfully toward a goal."

Cybernetics is the art and science of feedback and goals.

Cybernetics | Neural Nets | AI

McCulloch-Pitts neurons	1943	- "Neural Nets" are born
Macy Meetings on Circularity	1946-1953	- swarms the <i>Zeitgeist</i>
<i>Cybernetics</i> by Wiener	1948	- influences generations
Dartmouth AI Conference	1956	- <i>contra</i> Cybernetics
Symbolic AI rises	1956-1980	- AI swarms the zeitgeist
<i>Perceptrons</i> kills neural nets	1969	- Minsky denies von Foerster
Cybernetics languishes	1956-2010	- AI influences generations
Hinton brings back neural nets	1980s	- Expert Systems come & go
Internet brings Big Data	2000s	- NN swarm the <i>Zeitgeist</i>
"Surveillance Capitalism"	2000s-2020s	- "Wicked Problems" prevail

Cybernetics is very different from AI

Cybernetics = Origin of Neural Nets & AI

1940s **Cyberneticians invent Neural Nets**

1960s **AI = Symbolic AI (not Neural Nets)**

1980s **AI = Expert Systems (not Neural Nets)**

2010s **AI = Neural Nets + Big Data + Massive Compute**

2020s **"Today's AI" = AI everywhere in our lives**

But Cybernetics is very different from AI

Cybernetics

"Performative Ontology"

Design for action with emergent goals
Embodied interaction
Circular causality
Evolutionary viability / resilience

Could be applied anywhere
Lost the competition with computers
Stolen & elided by French intellectuals
Reduced to the prefix "cyber-"
Yet... undergoing a resurgence

"Today's AI"

"Intelligence Inside"

Design for efficiency & scale
Transactional interaction
Input / output fulfilment
Efficiency / reliability

Limited to digital infrastructure
Grew from "smaller, cheaper, faster"
Became an industry, a market
Makes alternatives unthinkable
Overwhelms daily living

Cybernetics | "Today's AI"

Why & how does Cybernetics move us forward?

- ◉ developed before AI—and was AI's foundation
- ◉ embodies "the art and science" of purposive systems
- ◉ offers detailed models of regulation in complex adaptive systems
- ◉ brings an ethical imperative to human action
- ◉ founded as transdisciplinary / antidisciplinary *
- ◉ applies across siloed disciplines
- ◉ embraces the unknowable and the unpredictable

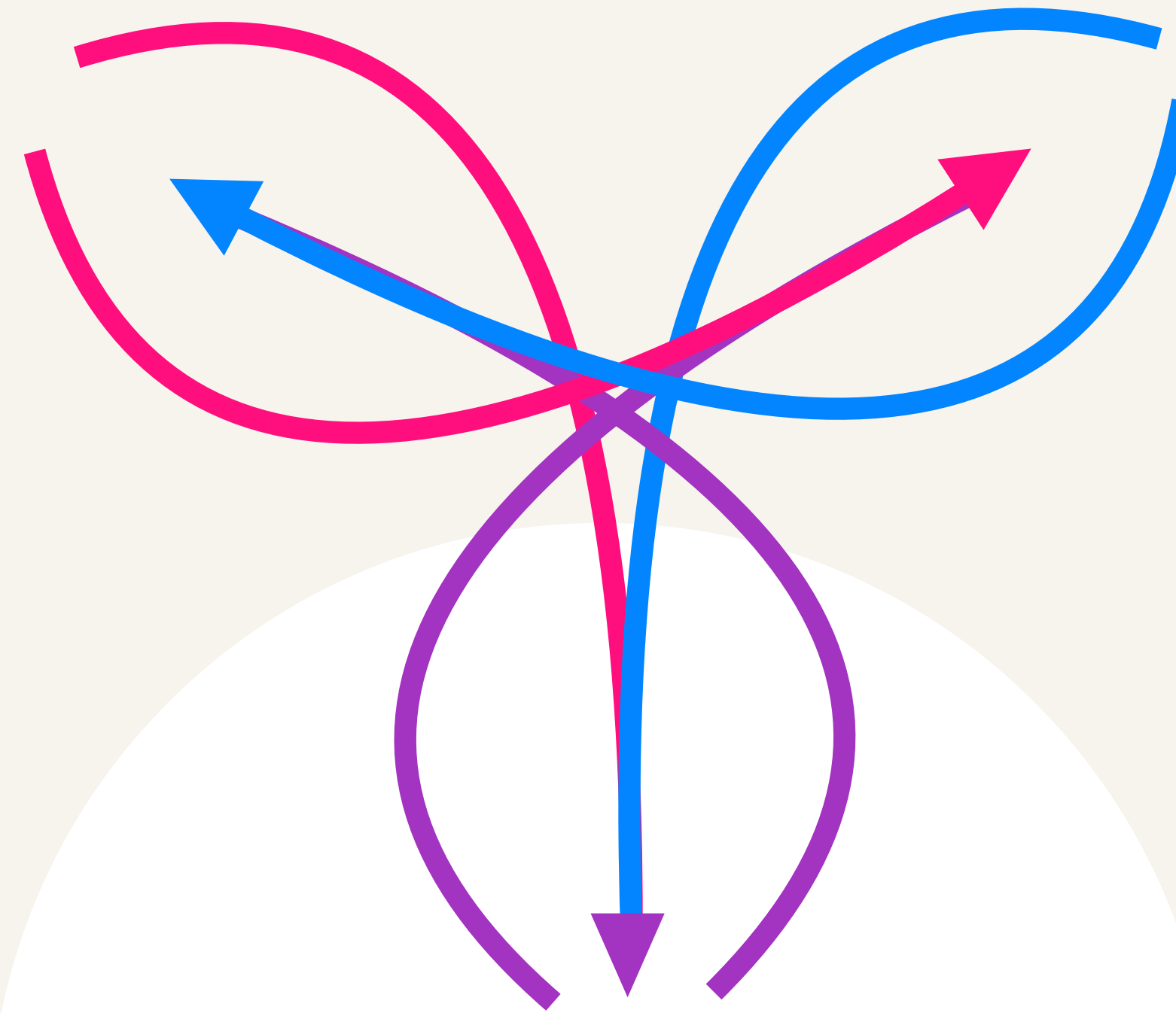
* Andrew Pickering coined "antidisciplinarity" in "Ontology and Antidisciplinarity", 2010

Analogic Frameworks – Alternatives to Today's AI

DATA-ANIMATED

binary
discrete
deterministic
artificial
representational
specific
predictive

transactional



SOCIALLY-ANIMATED

biological
fluid
open-ended
organic
resonant
ambiguous
uncertain

conversational

Cybernetics

bilingual sensibility

Digital

Analog

Conversation is the Heart of Interaction

IxDA Pittsburgh — November 2019

Paul Pangaro
Professor of Practice
Human-Computer Interaction Institute
Carnegie Mellon University

pangaro.com/ixda2019/

Cybernetic Serendipity

Serendipity

the faculty of making
happy chance discoveries by means of control and communication machines
both human and electronic

An exhibition

In addition to the exhibition
the following activities will be held
at the Institute of Contemporary Arts
during the course of the exhibition
and in connection with it:
Lectures, discussions, seminars and
workshops.

and
other
serendipitous
manifestations

Institute
of Contemporary
Arts

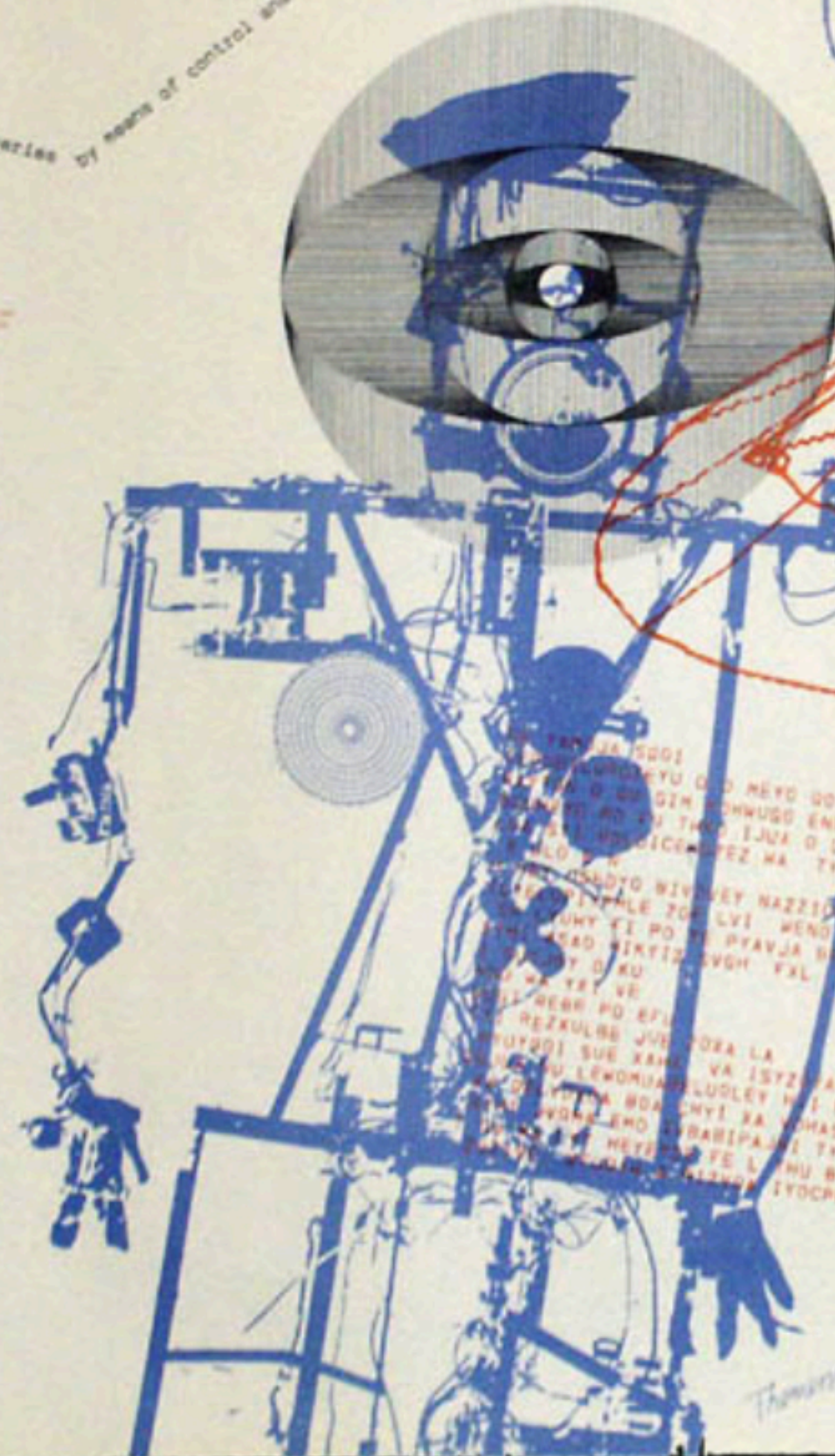
August 2 - October 20



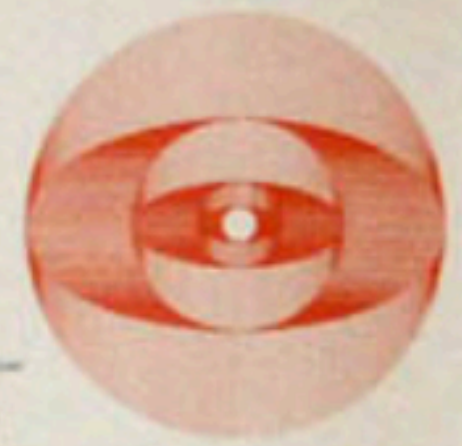
Institute of Contemporary Arts
South House, The Mall, London WC1R 4EJ
August 2 - October 20

Director: Thomas, Deborah
Deputy: Proctor, John
Secretary: Proctor, John
Telephone: 274 8111

Exhibition by arrangement with the Institute of Contemporary Arts
100, South House, The Mall, London WC1R 4EJ
Selling Price: 1.00



CYBERNETIC
SERENDIPITY
LECTURES



Thursday August 6
Tuesday August 13
Thursday August 15
Tuesday August 20
Tuesday August 27
Tuesday September 3
Thursday September 5
Tuesday September 10
Thursday September 12
Thursday September 19
Tuesday September 24
Thursday September 26
Tuesday October 1
Tuesday October 8
Thursday October 10
Thursday October 17

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

Dr. J. G. Bennett
Lecturer in the Faculty of Information
Science, University of London, England
and the author of
SERENDIPITY IN THE CONTEMPORARY WORLD
and
SERENDIPITY AND THE CONTEMPORARY WORLD

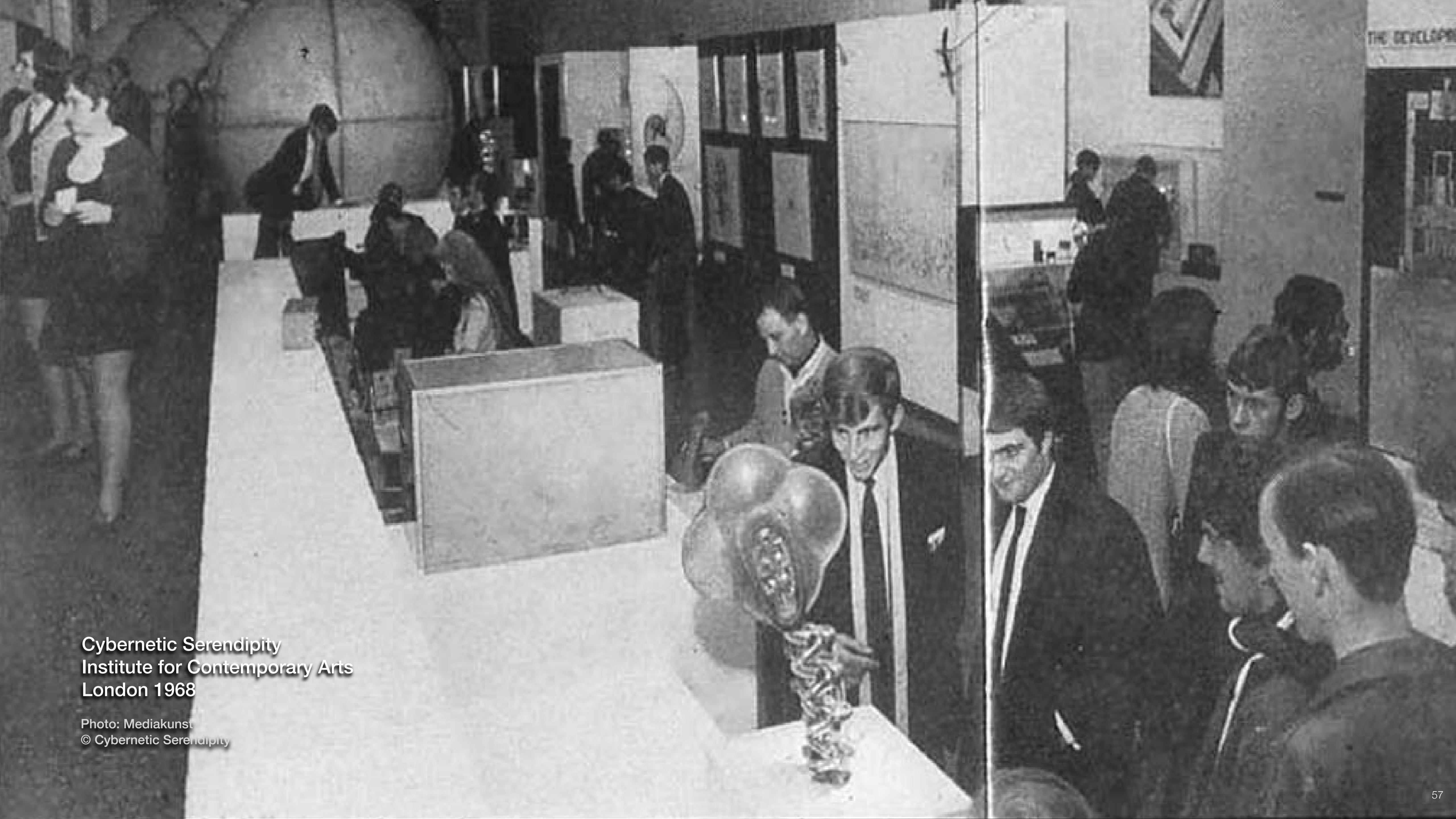
Exhibition poster by Franciszka Themerson

Photo: Mediakunst
© Cybernetic Serendipity



Cybernetic Serendipity
Institute for Contemporary Arts
London 1968

Photo: Mediakunst
© Cybernetic Serendipity



Cybernetic Serendipity
Institute for Contemporary Arts
London 1968

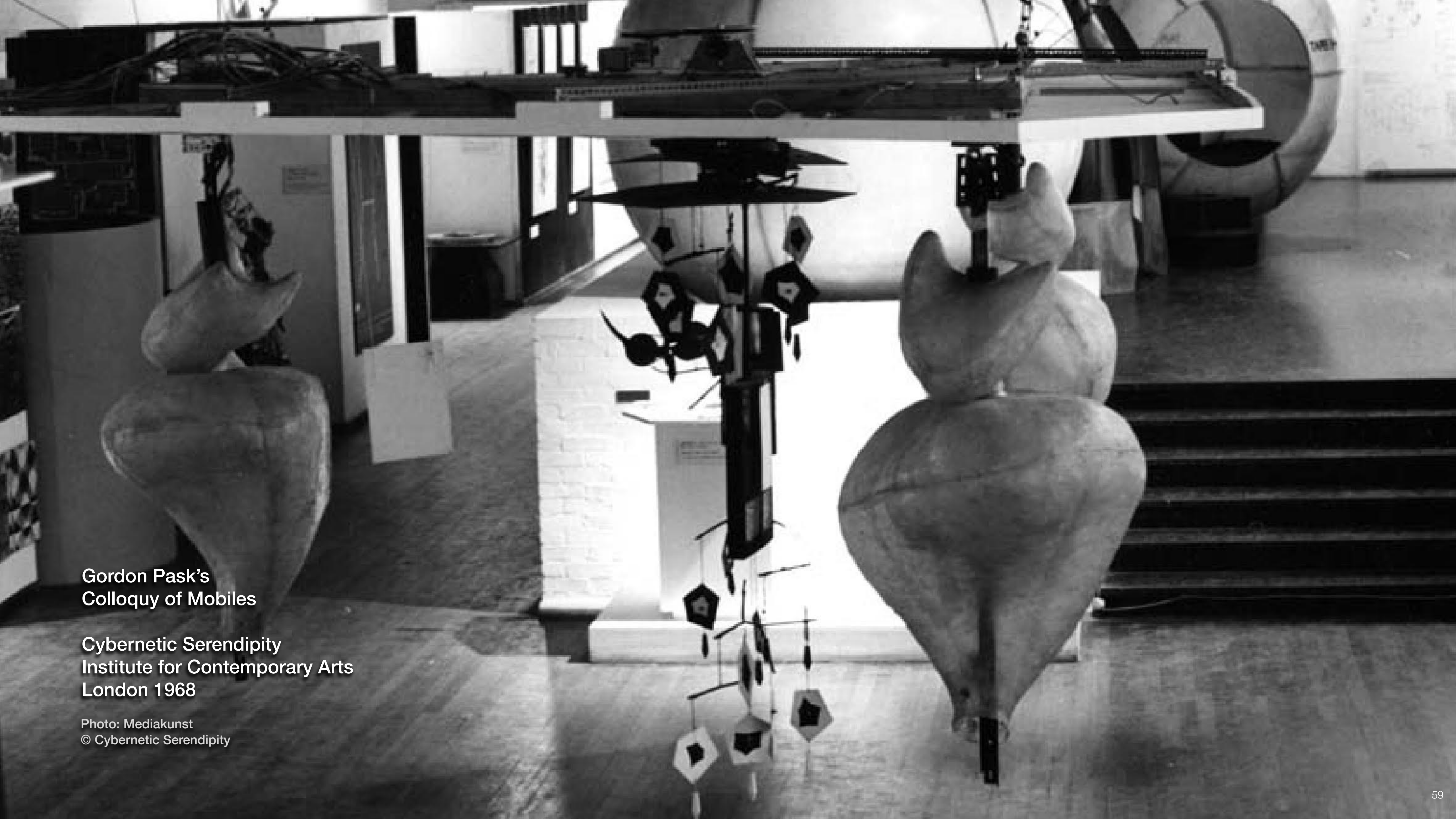
Photo: Mediakunst
© Cybernetic Serendipity



Gordon Pask's
Colloquy of Mobiles

Cybernetic Serendipity
Institute for Contemporary Arts
London 1968

Photo: Mediakunst
© Cybernetic Serendipity



Gordon Pask's
Colloquy of Mobiles

Cybernetic Serendipity
Institute for Contemporary Arts
London 1968

Photo: Mediakunst
© Cybernetic Serendipity



Gordon Pask's
Colloquy of Mobiles

Cybernetic Serendipity
Institute for Contemporary Arts
London 1968

Photo: Gordon Pask Archive

**Gordon Pask in front of a male mobile
of his own design**

**Cybernetic Serendipity
Institute for Contemporary Arts
London 1968**

Photo: Gordon Pask Archive
University of Vienna



Yolanda Sonnabend, prominent theatre and ballet designer for the Royal Ballet, designer of Colloquy's female mobiles

Photo: © Johnny Dewe-Mathews











Colloquy of Mobiles
Centre Pompidou
Paris 2020

Gordon Pask—Analog Interaction

Colloquy of Mobiles

Autonomous agents that converse and cooperate

Bilingual sensibility—organic & social, machinic & digital

Information triggers response, does not determine it

Intelligence in the interaction, not stand-alone

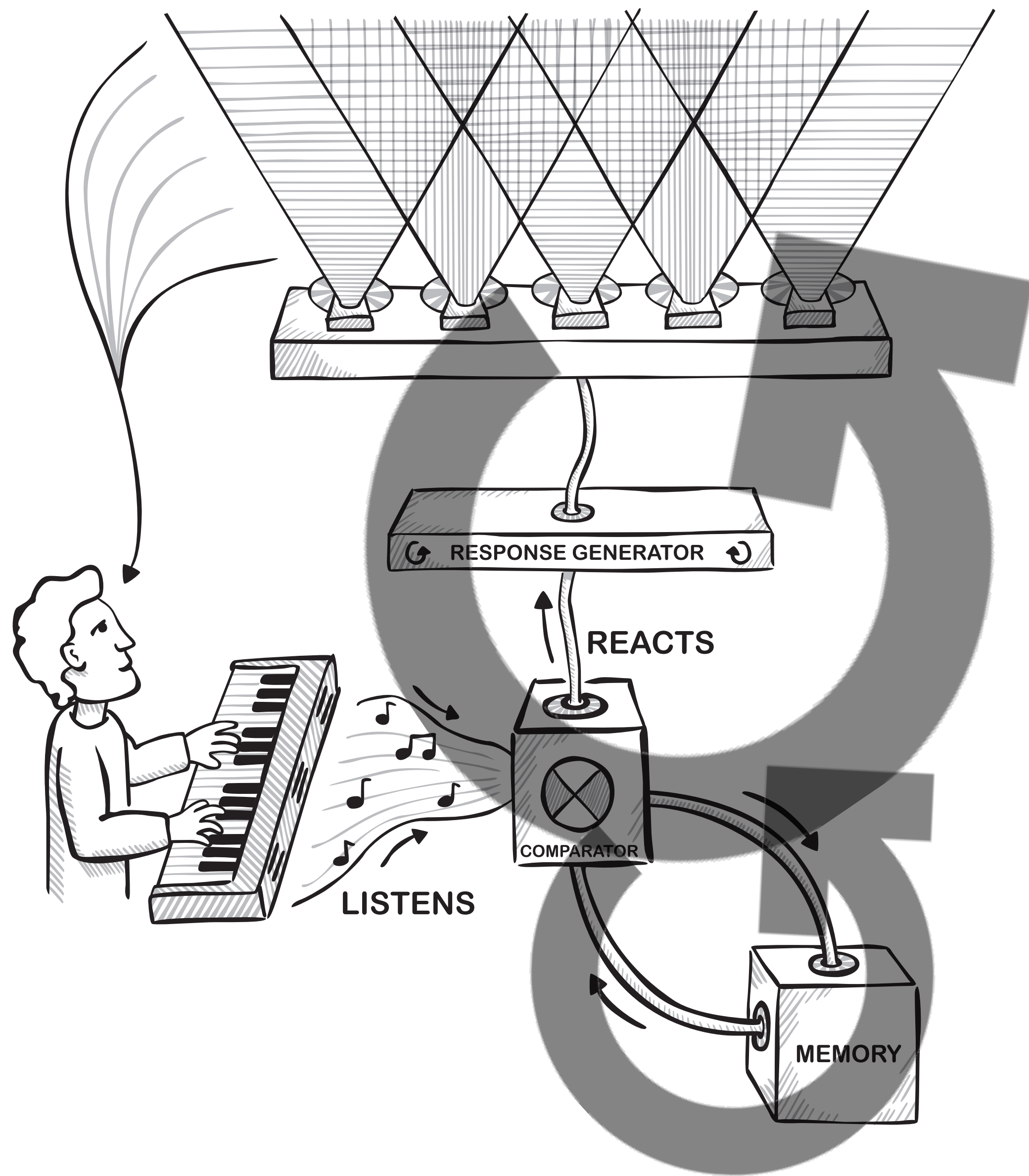
Gordon Pask

Goals of Conversation Theory

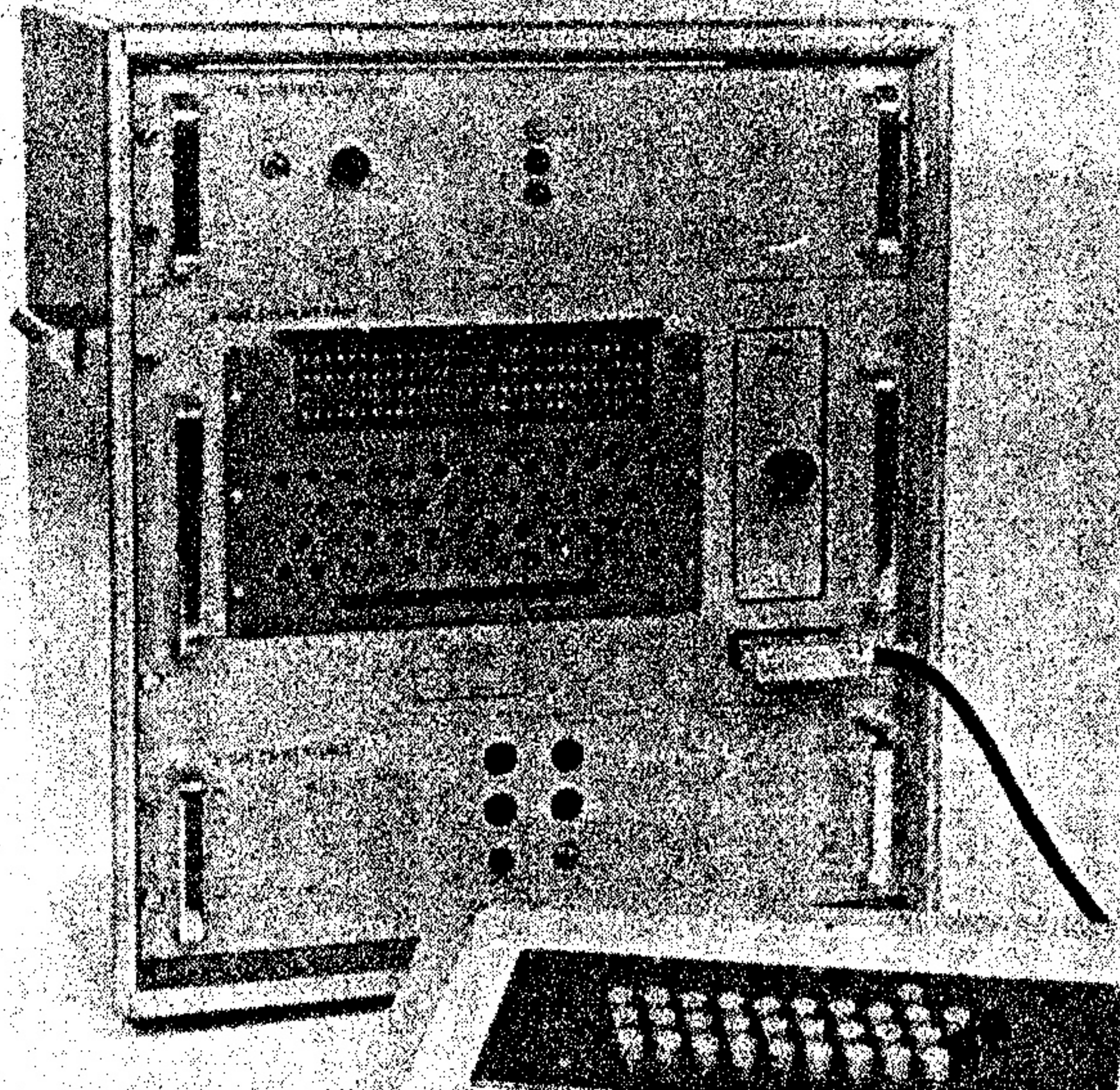
To rigorously understand what makes conversation work—
and to make machines conversant like humans.

To rigorously understand how systems learn—
and to make machines that learn like humans.

Gordon Pask's Musicolour
mid-1950s



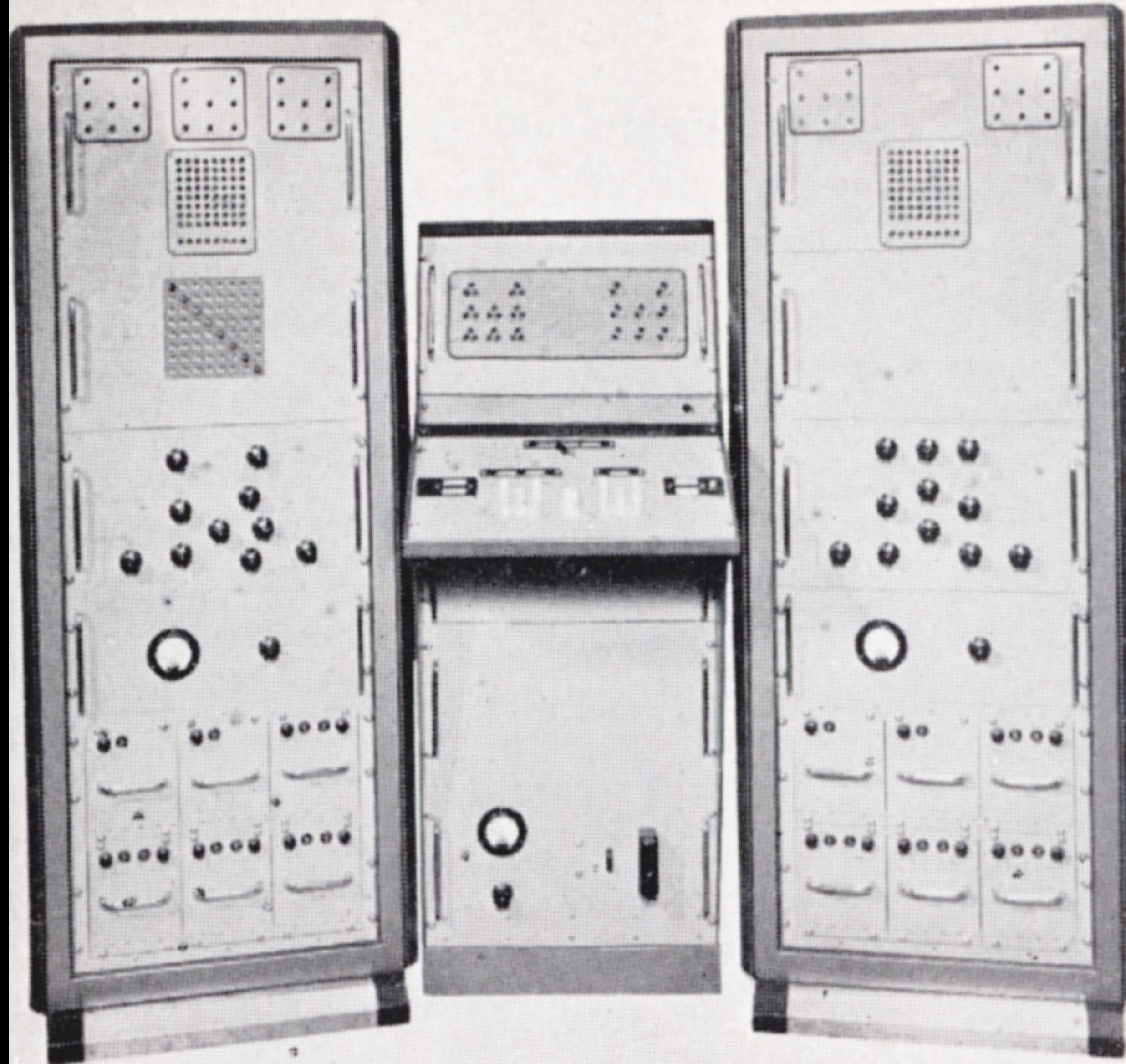
Gordon Pask's S.A.K.I.
Self-Adaptive Keyboard Instructor
1956



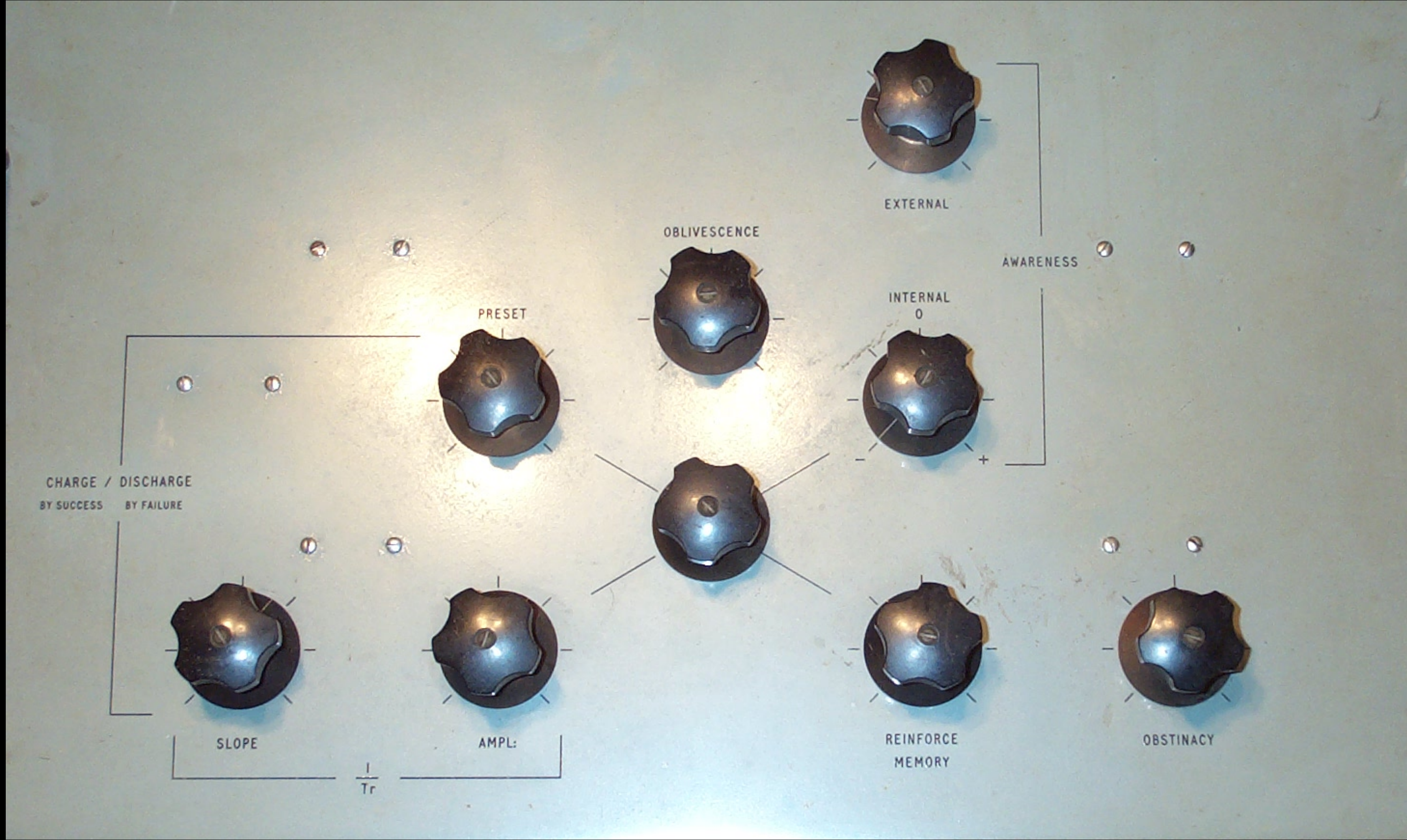
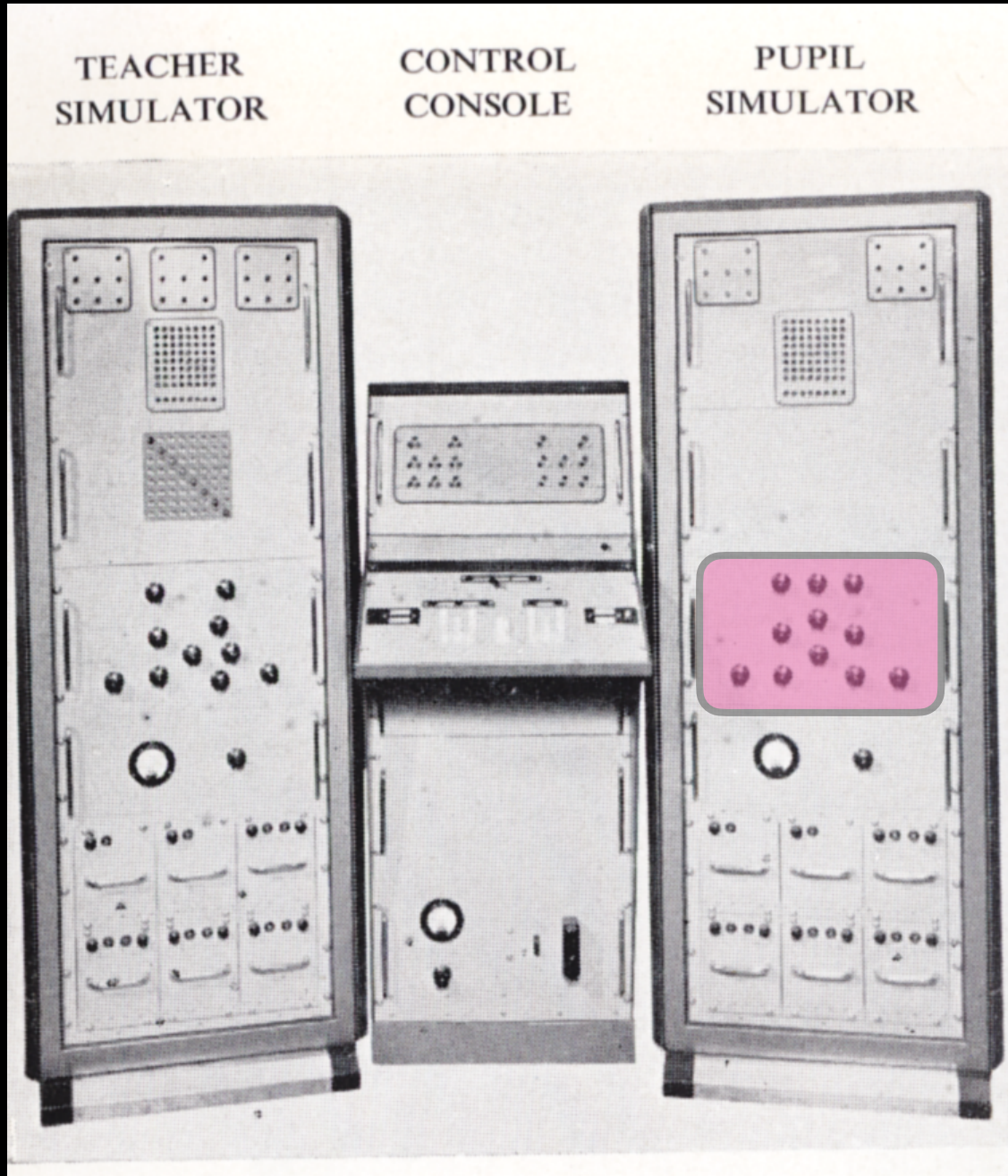
TEACHER
SIMULATOR

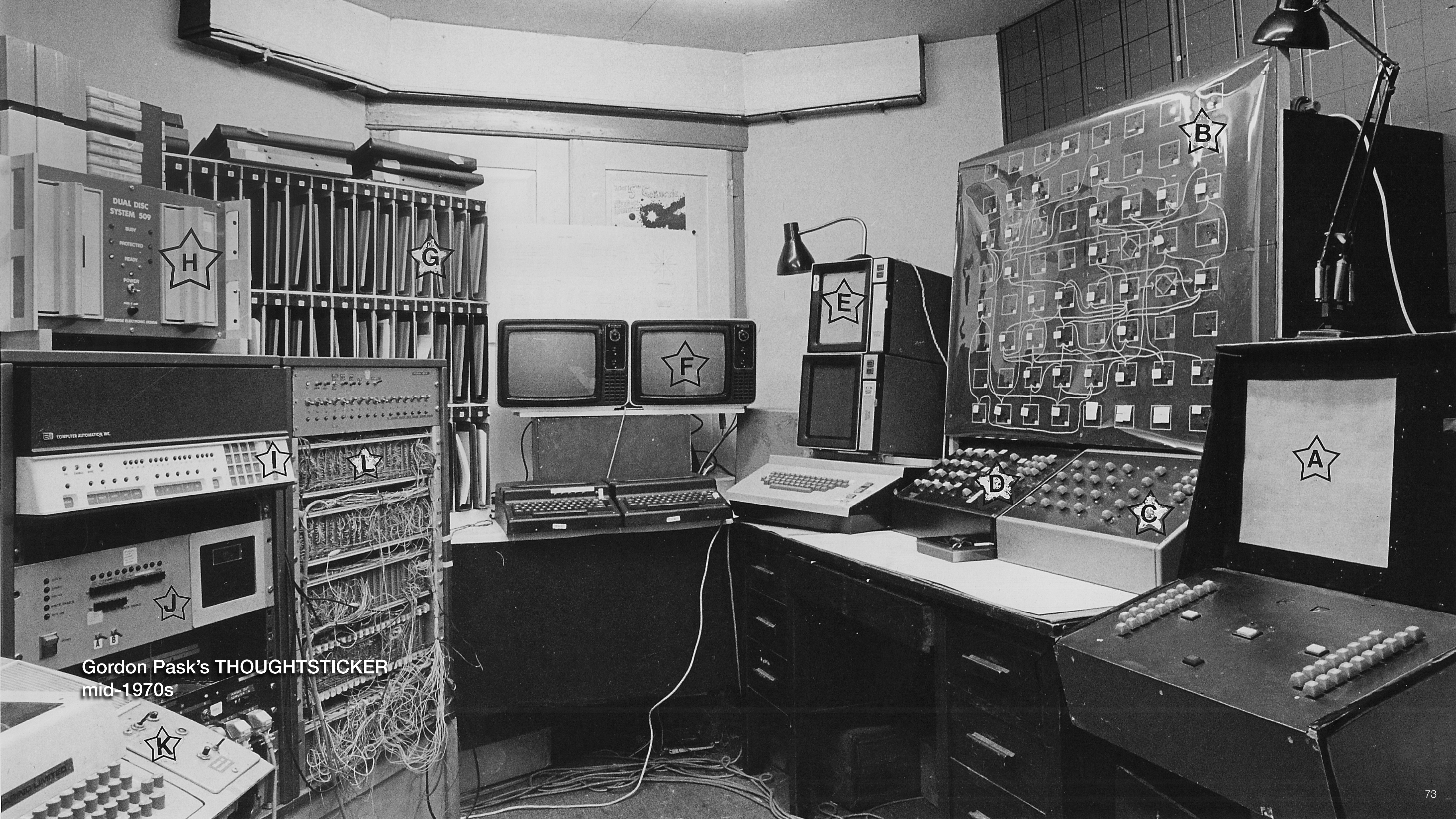
CONTROL
CONSOLE

PUPIL
SIMULATOR



Gordon Pask's Eucrates
Neural Net teaching machine
1958





Gordon Pask's THOUGHTSTICKER
mid-1970s

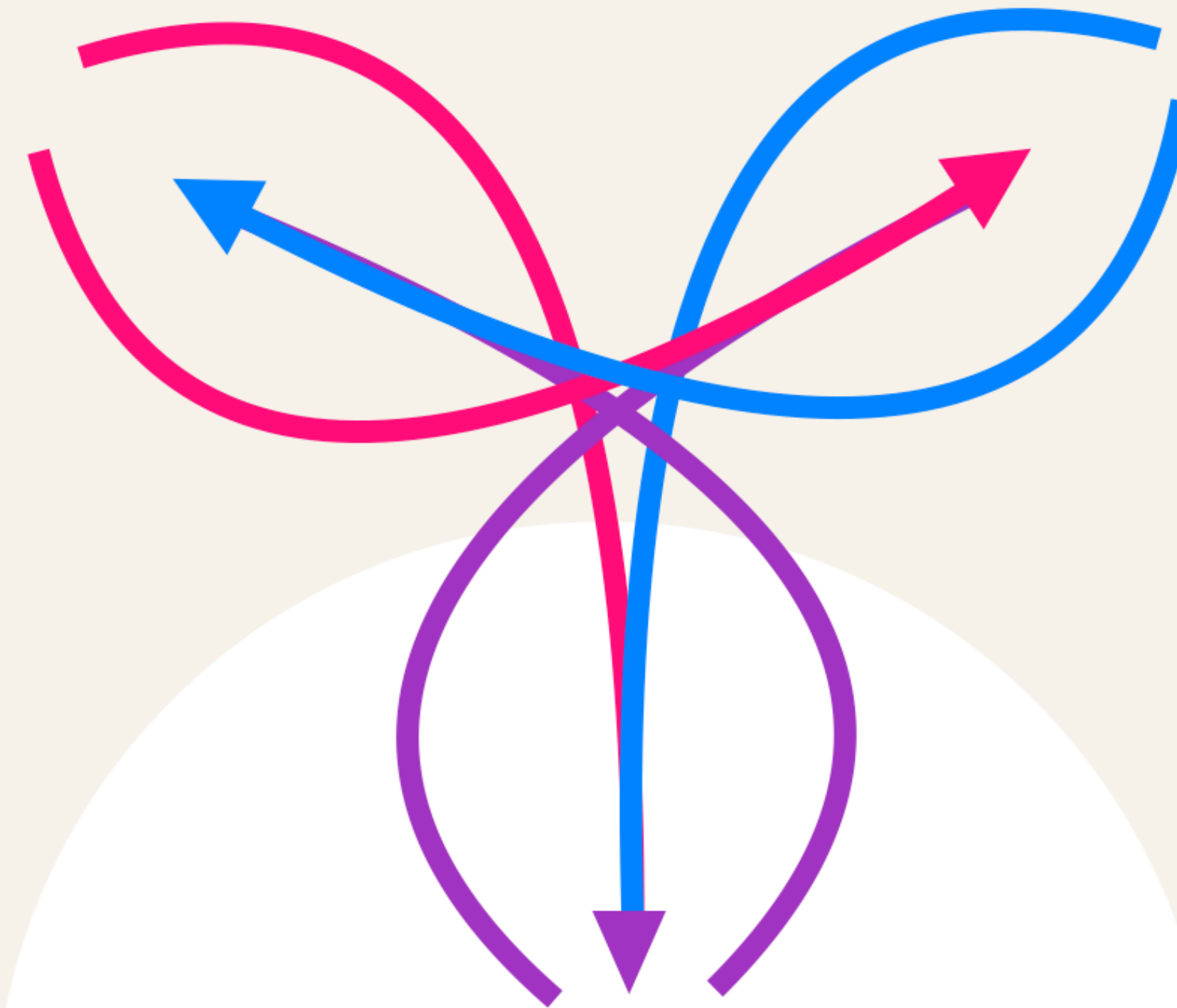
Analogic Frameworks — Alternatives to Today's AI

DATA-ANIMATED

binary
discrete
deterministic
artificial
representational
specific
predictive
transactional

SOCIALLY-ANIMATED

biological
fluid
open-ended
organic
resonant
ambiguous
uncertain
conversational



Cybernetics
bilingual sensibility

Digital

Analog

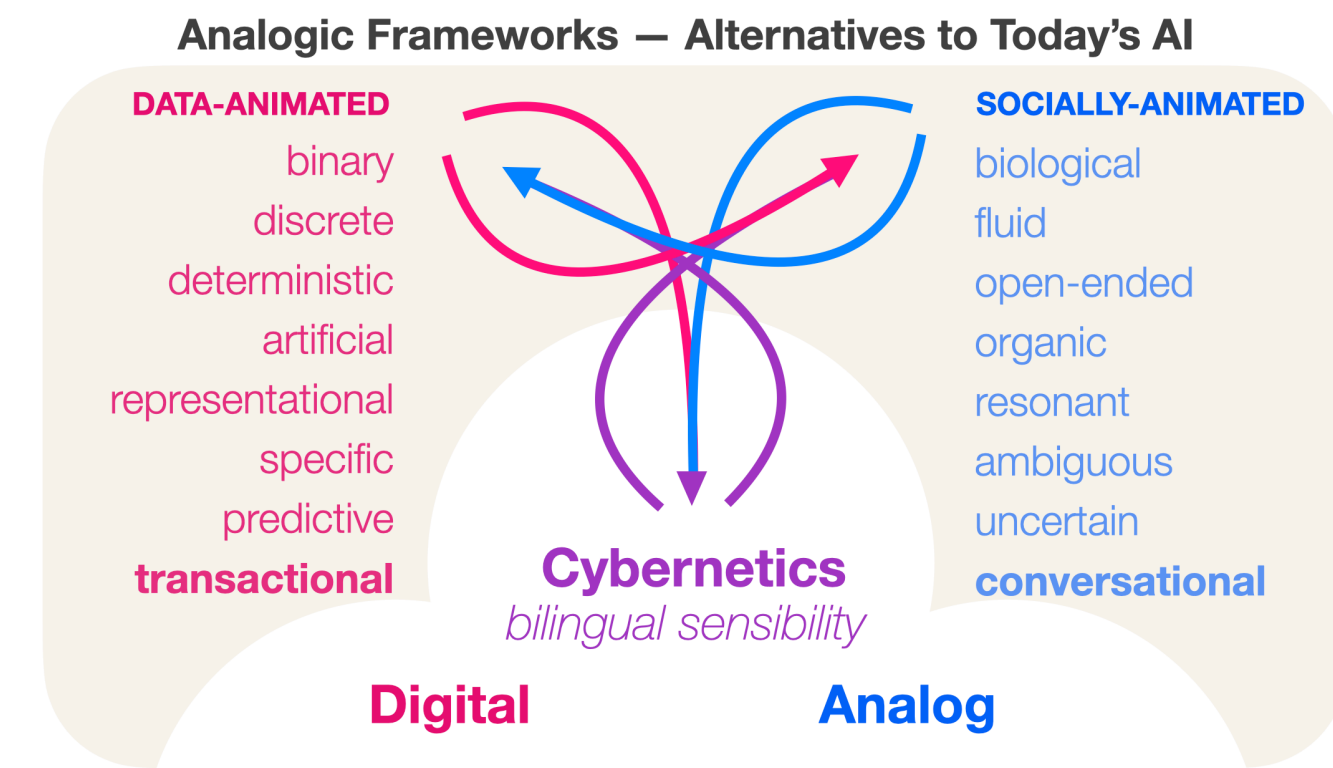
Bringing about a preferred future

Novelty, transparency, and choice in IxD

Our goal is to design and integrate new classes of interactional systems with today's AI and digital technologies to **create and promote** a new category of **analog interactional frameworks.**

Bringing about a preferred future

A Bilingual Synthesis



"What if an AI system could facilitate conversations among human participants across distances and times in a way that generates a continually changing configuration of ideas?

"These ideas could then be sources for conversations that could provide new input to the system...

"Perhaps it would better embody the emancipatory and participative epistemology that cybernetics has come to embrace."

— *Dr Larry Richards*

CYBERNETICS

CIRCULAR CAUSAL AND FEEDBACK MECHANISMS
IN BIOLOGICAL AND SOCIAL SYSTEMS

#NEW MACY MEETINGS

Edited by

HEINZ VON FOERSTER

DEPARTMENT OF ELECTRICAL ENGINEERING
UNIVERSITY OF ILLINOIS
CHAMPAIGN, ILL.

Assistant Editors

MARGARET MEAD

AMERICAN MUSEUM OF NATURAL HISTORY
NEW YORK, N. Y.

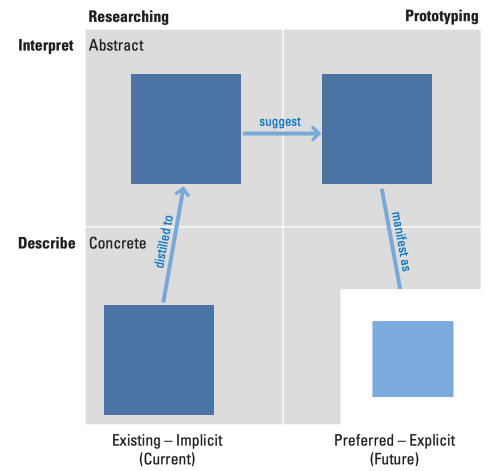
HANS LUKAS TEUBER

DEPARTMENT OF PSYCHIATRY AND NEUROLOGY
NEW YORK UNIVERSITY COLLEGE OF MEDICINE
NEW YORK, N. Y.

Sponsored by the

JOSIAH MACY, JR. FOUNDATION
NEW YORK, N. Y.

Bringing about a preferred future #NewMacy in the 21st Century



Create and promote analog interactional frameworks

a. Identify participants & examples

- find current examples
- characterize their qualities
- fan out to find related efforts
- develop database
- share openly and seek critique

b. Characterize contexts where AI is now influential or prevalent

- gather types of AI algorithms
- deconstruct search, recommenders, social...
- build models of today's AI algorithmic types
- share openly and seek critique

c. Establish a new paradigm of analog interactional systems

- match AI contexts to new frameworks
- prioritize for impact & importance
- gather experts to evolve the frameworks
- share openly and seek critique
- produce and distribute outcomes as design patterns, toolkits, and workshops

d. Code new systems & disseminate

- prototype these alternatives as open source
- critique with sociologists, economists, MBAs...
- add to curricula for designers, coders...

#NewMacy Conversations

Summary of activities

- ◉ Launched at Seminar at Carnegie Mellon, March 2020
- ◉ On-going conversations in association with the American Society for Cybernetics, from April 2020
- ◉ Cybernetics and Designing for Action, September 2020
- ◉ #NewMacy Meeting Experiment #1, September 2020
- ◉ Presentation at AI Agora at TU Delft, December 2020
- ◉ Manifesto document, March 2021
- ◉ Responding to the Pandemic of "Today's AI" evolving draft
- ◉ #NewMacy Meeting #2: "Urgent Questions" in response to "Today's AI", ASC Series Event, September 2021

What's next

- ◉ Advancing the plan to respond to Today's AI
- ◉ Formulating Conversations for October 2021
- ◉ Interactive Session at RSD10 held at TU Delft
- ◉ Designing for variety in #NewMacy Conversations
- ◉ Reaching GenZ (18 to 25 year-olds) to represent their worldview and values on upcoming generations
- ◉ Seeking #NewMacy Network organizations
- ◉ Seeking #NewMacy Network individual participants
- ◉ Continuing to build #NewMacy Advisory Council

Antidotes to "Bad AI"

Novelty, transparency, and choice in IxD

Today I have argued that:

- ◉ Digital culture contributes to the Pandemic of "Today's AI."
- ◉ Human experiences of interaction, information, and intelligence are compromised.
- ◉ **Analog interactional frameworks** can be organic, conversational, and humane.
- ◉ Cybernetics offers **bilingual sensibility** to bridge the analog & the digital.
- ◉ Promoting **new design patterns & working prototypes** can bring positive change.
- ◉ Urgency of the need and scale of the challenge requires that we convene **#NewMacy Conversations** in a **Network of #NewMacy Meetings**.

#NewMacy Network + #NewMacy Meetings

#NewMacy in the 21st Century

Let us bring about a rich mesh of collaborations among individuals and organizations— across disciplines, geographies, and generations.

We will be deliberate about what we wish to conserve as analog, biological, social beings— and then use technology to serve our principles.

We are excited to see what can emerge.

Please join us.

#NewMacy Meeting #3

October 16 2021 — 12.00 US Eastern

Email for details
Paul Pangaro
ppangaro@cmu.edu

american society
for cybernetics

#newmacy



#NewMacy Network + #NewMacy Meetings

Thank you.

Special thanks to:

Igor Perko
Karen Kornblum
Deborah Forster
Andy Pickering
Larry Richards
Bernard C.E. Scott
Andrew Schmookler
Mark Sullivan
Ben Sweeting
Claudia Westermann

[@NewMacyMeetings](https://twitter.com/NewMacyMeetings)
pangaro.com/ixda2021/

"Moreover, if we move in the direction of making machines which learn and whose behavior is modified by experience, we must face the fact that every degree of independence we give the machine is a degree of possible defiance of our wishes."

—Norbert Wiener 1949

Antidotes to "Bad AI": Novelty, transparency, and choice in IxD

Thank you.

Links

[#NewMacy-Related Links](#)

[#NewMacyMeeting #1](#)

[Cybernetics, AI, and Ethical Conversations](#)

[Pickering, "The Next Macy Conference"](#)

[Pickering, "Ontology and Antidisciplinarity"](#)

[Wiener 1949, NYTimes article by John Markoff](#)

Paul Pangaro
ppangaro@cmu.edu

[@NewMacyMeetings](#)
pangaro.com/ixda2021/