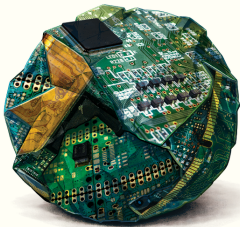


Luis Garicano, Jin Li, Yanhui Wu

Messy Jobs



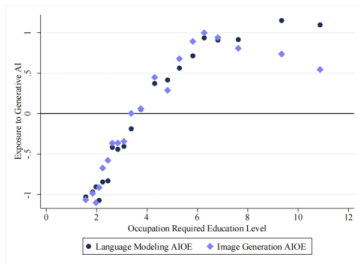
The Work That AI Cannot Reach

Book presentation

Luis Garicano

PIIE, September 25, 2026

Is task exposure the relevant variable?



Source: Felten et al. (2023)

Silicon Valley forecast

Most white-collar tasks will be “fully automated within twelve to eighteen months.”

Suleyman; Amodei and Altman say the same.

Messy Jobs

Our answer

True, exposure is highest for educated cognitive work.

But whether the job will be replaced depends on how **messy** the job is.

Framework (1): The autonomy threshold

Definition

The point at which AI stops assisting and starts operating alone: the finished output is good enough that paying a human to perform the task is no longer worth it.

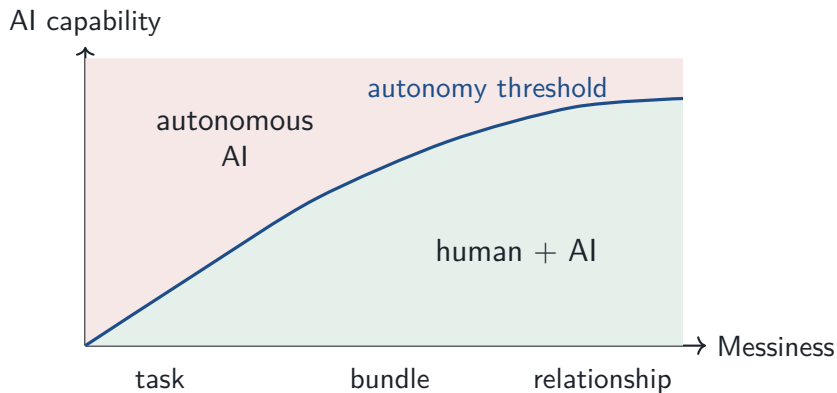
- ▶ **Below it**, AI complements.
- ▶ **Above it**, AI substitutes.

The change can be radical

Level 3 cars can drive themselves but need a human in the driver's seat ready to take over. Level 5 cars are fully autonomous.

This radically changes the economics: driving supply is no longer limited by human time.

Framework (2): What makes a job messy



Source: Messy Jobs, Figure 1.

A messy job is not necessarily a hard job

Computers are great at hard tasks! Coding a well-defined program can be hard, but it is still a clean task. Messiness comes from strong bundles and relationships.

Framework (3): Price theory throughout

We use price theory throughout the analysis.

Direct effect

Does AI raise worker productivity?

“A dissertation has become so easy, it will be possible to do it in 3 months.”

Equilibrium effect

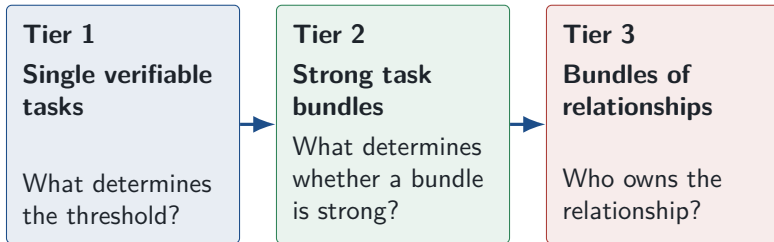
What remains scarce after everyone has AI?

Everyone can do a thesis in 3 months!

Supply and demand elasticities are key

- ▶ Do barriers to entry decrease?
- ▶ Is final demand elastic, or do we face satiation (the illumination example)?

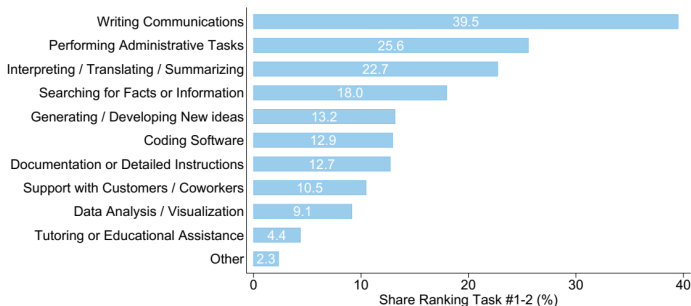
Three tiers of the autonomy threshold



Roughly:

- ▶ **Tier 1:** coder, junior contract lawyer, journalist working off the wire.
- ▶ **Tier 2:** nurse, litigation lawyer, tech sales, journalist doing “shoe-leather” reporting.
- ▶ **Tier 3:** entrepreneur, senior manager, consultant doing AI implementation.

Tier 1 jobs



Clean, verifiable tasks

AI can learn quickly and accurately and cross the autonomy threshold.

“In which tasks is GenAI most useful?” From Bick, Blandin, and Deming (2025), “The Rapid Adoption of Generative AI.”

Tier 1: Earnings fall after a large supply shock

The Silicon Valley story

For a clean task, AI is a sudden jump in supply.

- ▶ Task prices and wages go down.

Limited by:

- ▶ Technology
- ▶ Regulation
- ▶ Consumer preference for “humanness”

Tier 2: Strong bundles of tasks

Hinton's famous error

In 2016: the end of radiologists' jobs.

- ▶ 2025: **725+** radiology AI models.
- ▶ Maximum demand for radiology residencies.

The job is much more than the task

The threshold for the whole job is higher than for any one task.

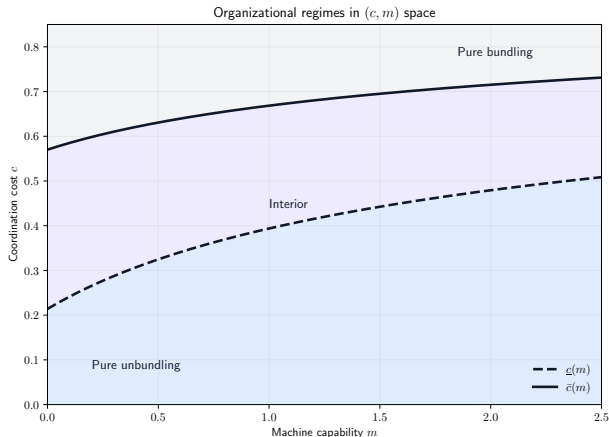
A strong bundle

A bundle is **strong** when splitting it destroys value.

Three conditions:

1. **Unpredictable demand**
2. **Production spillovers**
3. **Indivisible measurement**

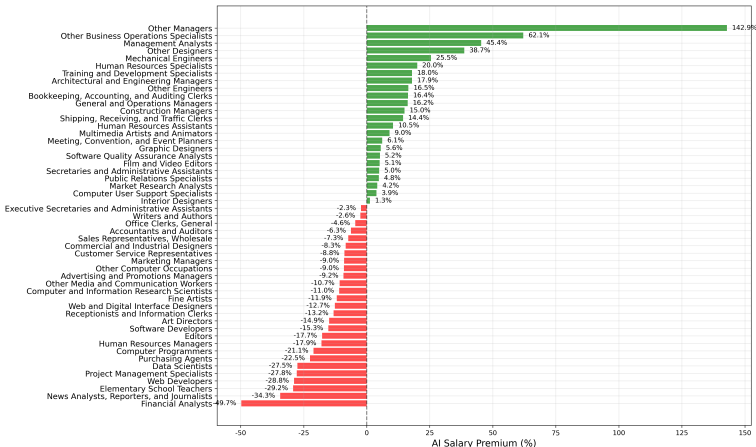
Bundle or unbundle?



High coordination cost c keeps tasks bundled; low c allows them to be separated as AI improves. Garicano, Li, Wu (2026).

Same job title: Postings requiring AI vs. those that do not

AI Salary Premium by Occupation Category



- **Wage premium:** managers, operations, coordinators (strong bundles).
- **Wage penalty:** financial analysts, data scientists, developers, journalists.

Major Chinese hiring platforms, Aug 2024–Jun 2025.

AI changes the knowledge hierarchy from above and below

Robots below

AI solves the routine problems that juniors used to solve.

Ide-Talamas (2025)

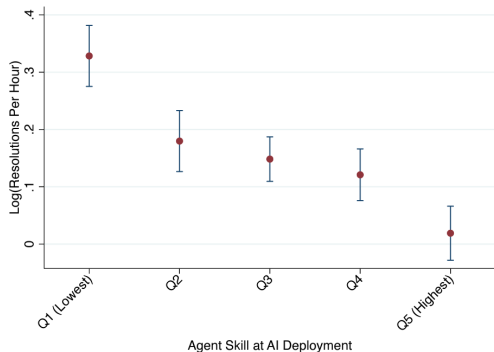
- ▶ Experts get more leverage, increasing inequality through scale effects (e.g. Meta's offers to software engineers).

Robots above

AI solves difficult problems that less expert workers could not solve by themselves.

- ▶ A nurse practitioner still cares for the patient's body and spirit, but can now diagnose more health conditions.
- ▶ Wages depend on supply, demand, and the strength of the bundle.

Robots above: Lower cognitive barriers, a new middle class



**Robots above,
in the data**

Brynjolfsson et al.
(2025)

Customer support agent
experiment

Source: Brynjolfsson, Li, and Raymond (2025), "Generative AI at Work."

Tier 3: A nexus of relationships

- ▶ Organizations are coalitions with conflicting goals.
- ▶ Does AI remove the need for human authority and the implementation of change?
- ▶ Relational jobs also matter in markets: as Alex Imas has argued, there is a humanness premium.

1. Authority: Win-lose decisions

- ▶ Win-win decisions do not require authority. Authority matters when choices create winners and losers.
 - Engineering wants higher performance; finance wants lower costs.
- ▶ Someone must impose a choice under unforeseen contingencies not covered by the contract.
- ▶ Hart and Moore's **residual decision right**: the power to decide in states not specified by contract.

Politics is the ultimate messy job

The Silicon Valley view misses the bottleneck: power, not data.

London needs 88,000 homes a year. In the first nine months of 2025, there were just 3,248 housing starts.

The problem is politics. AI will change nothing here.

Why authority is hard to assign to AI

The limits of agentic AI

Tacit, relational knowledge

Local, unwritten knowledge. Why share it?

Accountability and liability

Who pays when an agent breaches a contract or harms a third party?

Procedural fairness

Why the meeting?
Part of the process is to ensure everyone is heard.

Someone must have authority to override the AI

Unless we are willing to give up control entirely, à la Hugging Face.

2. Implementation

- ▶ AI is **architectural change**: everything must move together.
- ▶ Workers adopt AI privately. Organizations do not.
- ▶ The destination is unknown.
- ▶ Resistance to change.
- ▶ Scarcity: implementation requires knowledge of technology, politics, and process.

The organization must be rebuilt

Screening

Ch. 9

Verification

Ch. 10

Standards

Ch. 11

Careers

Ch. 12

Three tiers, three economies

Algorithmic economy

Tier 1

Cognition at near-zero cost.
Who captures value?

The messy middle

Tier 2

Most careers.
Bundled work that survives.

Relational work

Tier 3

Authority, implementation, authenticity.

Conclusion: The economy of messy jobs

Production

Capital deepening (classic automation results).

Firms

The boundary moves both ways. Firms get smaller but matter more as they retain a larger share of tasks and remain repositories of messy, relational, trust-based work.

Ideas

AI makes **Tier 1** idea tasks cheaper. The scarce work becomes testing and implementing the better ones.