

PIECEWORK

ALKHATIB, BERNSTEIN, AND LEVI @ CHI 2017

**ON-DEMAND WORK IS A MODERN INSTANTIATION OF A
MUCH OLDER PHENOMENON — PIECEWORK.**

**THE HISTORICAL ARC OF PIECEWORK CAN SHED LIGHT ON PERSISTENT QUESTIONS
IN THIS ONGOING PHENOMENON OF ON-DEMAND WORK.**

PAYMENT FOR OUTPUT RATHER THAN FOR TIME

Textiles



Automobiles



Metalwork

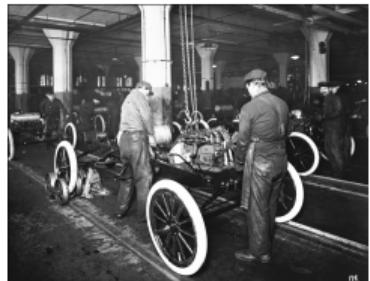


PAYMENT FOR OUTPUT RATHER THAN FOR TIME

Textiles



Automobiles



Metalwork



Crowd work



Upwork

UBER

Gig Work

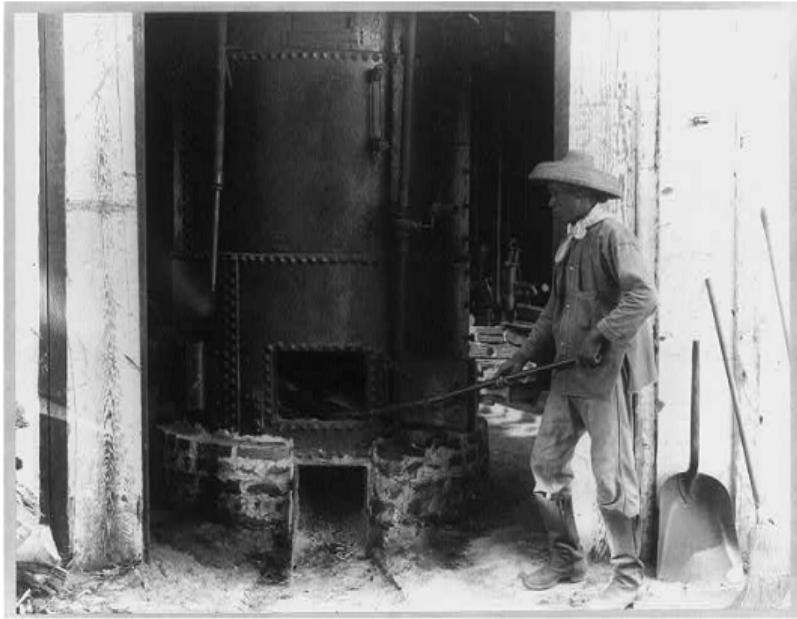


How will technology affect the complexity of on-demand work?

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What are the **limits** of complexity in on-demand work?

Farms



- Formalization of piecework:
payment for results
Chadwick 1865
- Dynamic piece rates

Textiles

- Distributed workers



- Assuming common skills

Matchstick Girls

- Strict management
- Formalizing work methods



Farms



Textiles



Matchstick Girls



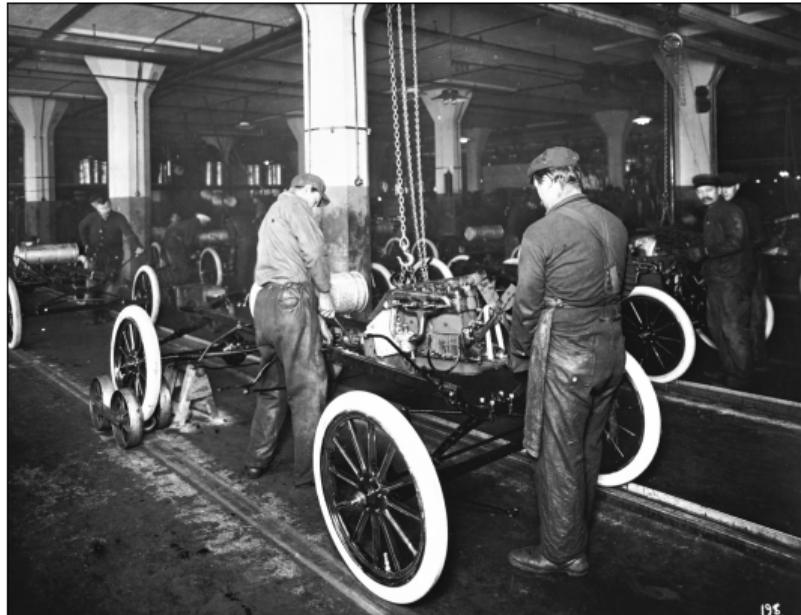
Trains



- “Efficiency experts” measured how long it would take to do various jobs
(Cunningham 1911)
- These measurements would be used to assign pay rates for each specific task
(Jewell 1921)

Automobiles

- Consolidating and training workers
(*Fordism*)
(Schoenberger 1988; Tolliday and Zeitlin 1986)



- Measuring and evaluating workers by very carefully defined instructions
(*Taylorism*)
(Taylor 1911)

Planes

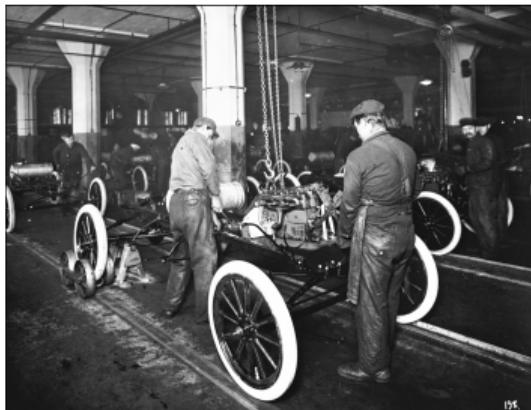
- Men drafted during World War II
- Factories turned to a new workforce who had neither conventional training nor experience
- **Specialized training and assignment**



Trains



Automobiles



Planes



Conceptualization is directed toward the task of generating interpretations of matters already in hand [...] But that does not mean that theory has only to fit (or, more carefully, to generate cogent interpretations of) realities past; it also has to survive – intellectually survive – realities to come.

– Geertz 1973

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Good theories give us analytical power

for the past

for the present

for realities to come

ON-DEMAND WORK'S LIMITS

We'll be able to make stronger assumptions of what people know



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ON-DEMAND WORK'S LIMITS

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...but we probably won't be able to get much further than piecework did.

