Lecture 8: Meaning and Performance

Compensation in Organizations

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Ashraf, Bandiera, Minni, and Zingales (2025)
(Not Yet Published)

Meaning and Karl Marx?

> "What, then, constitutes the alienation of labor? First, the fact that labor is external to the worker; that in his work, he does not feel content but unhappy, does not develop freely his physical and mental energy...The worker therefore only feels himself outside his work, and in his work feels outside himself. He feels at home when he is not working, and when he is working he does not feel at home."
>
> — Marx, Karl, 1844. Estranged labor.

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  ▶ Can it be changed?

Adding Meaning to Our Model

▶ Change the cost of effort:

$$c(e) = \frac{e^2}{2(1 + \lambda_i m_{ij})}$$

▶ The cost of effort now varies across people and jobs!

▶ Meaning is measured by m_{ij} because:

$$\lim_{m_{ij} \to \infty} c(e) = \lim_{m_{ij} \to \infty} \frac{e^2}{2(1 + \lambda_i m_{ij})} = 0$$

▶ "If you love your job, you will never work a day in your life."

Source: Ashraf, Bandiera, Minni, and Zingales (2025)

Adding Meaning to Our Model

- A worker "sees meaning" if λ_i is large.

- If a worker does not see meaning, $\lambda_i = 0$, and we return to our original model!

- We add just what we need to capture "meaning."
  - We drop risk aversion.

  - Does dropping risk aversion matter?

Source: Ashraf, Bandiera, Minni, and Zingales (2025)

Some Other Updates

▶ The worker's job at the firm is labeled $j = p$.

▶ The worker's outside option is a job labeled $j = a$.

▶ We will solve this model once for general j treating base pay as exogenous.

▶ Finally, let output be: $y = \theta_i e$, where note the two changes.[1]

▶ The contract is based on output: $w_{ij}(y_{ij}) = \alpha_{ij} + \beta_{ij} y_{ij} = \alpha_{ij} + \beta_{ij} \theta_i e_{ij}$

Source: Ashraf, Bandiera, Minni, and Zingales (2025)

1. We can drop noise because the worker is risk neutral.

Solving the Model: Effort and Bonus

Proposition 1

The worker's equilibrium effort at job j is $e_{ij}^* = \beta\theta_i(1 + \lambda_i m_{ij})$, the firm's equilibrium bonus is $\beta^* = 1/2$.

Solving the Model

Proposition 2

The worker will take the job p rather than the outside option job a if:

$$\alpha_p - \alpha_a \geq \frac{\lambda_i \theta_i^2}{8}(m_{ia} - m_{ip})$$

Two types of workers at the firm:

▶ Those there for money: $\alpha_p - \alpha_a >> 0$.

▶ Those there for meaning: $m_{ip} - m_{ia} >> 0$.

The Experiment Increases λ_i from $\lambda_C \to \lambda_T$

The model replicates two impacts of the experiment:

1. Workers there for the salary tend to exit, workers there for meaning tend to stay, and this raises productivity.

$$\text{average } m_{ip} \uparrow \implies \text{ average } c(e) \downarrow \implies \text{ average } y \uparrow$$

Similar to the selection effect in Lazear (2000)!
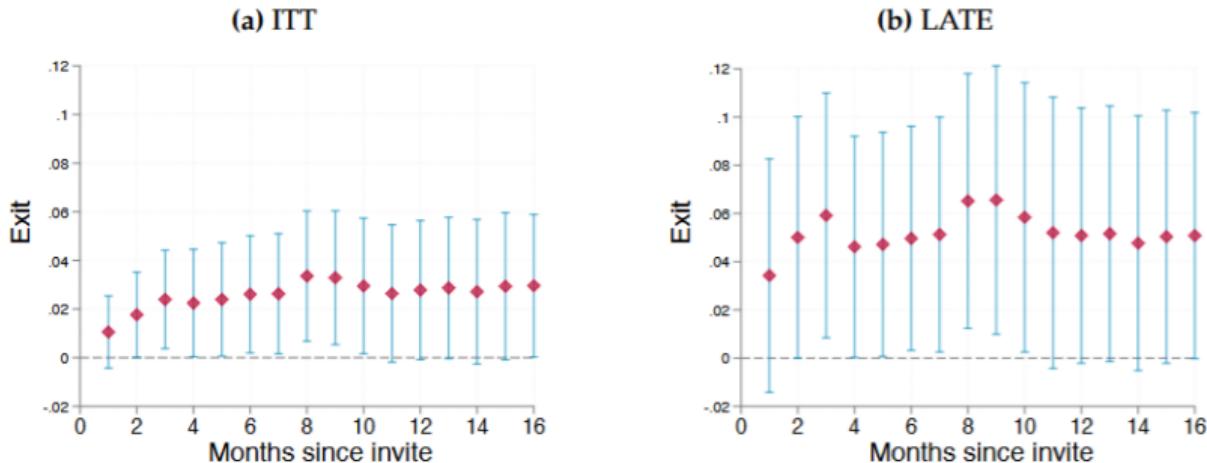
2. Workers who stay become more productive.

$$e_T^* = \frac{1}{2}\theta_i(1 + \lambda_T m_{ij}) > \frac{1}{2}\theta_i(1 + \lambda_C m_{ij}) = e_C^*$$

Similar to the productivity effect in Lazear (2000)!

Verification 1: Exit Increases Productivity

Figure IV: Worker exit

(a) ITT

(b) LATE

Notes. The figure reports ITT (*Received Invitation*) and LATE (*Did DYP*) estimated from cross-sectional regressions as in equations (1) and (2), as well as 95% confidence intervals based on Huber-White robust standard errors. When estimating LATE, the variable for participating in the DYP workshop, *Did DYP*, is instrumented with invitation treatment. All regressions include year-month and country fixed effects.

Verification 2: Stayers Productivity Increased

Table II: Worker performance

	(1) Perf. Score < 80	(2) 80 ≤ Perf. Score < 125	(3) Perf. Score ≥ 125
Panel A: Worker Performance Score			
Did DYP (LATE)	-0.053***	0.064*	-0.010
	(0.020)	(0.034)	(0.028)
Received Invitation (ITT, Total Effect)	-0.026***	0.030*	-0.004
	(0.010)	(0.016)	(0.014)
Received Invitation (ITT, Selection Effect)	-0.013	0.005	0.008
	(0.010)	(0.012)	(0.009)
Baseline control mean	0.104	0.775	0.121
Baseline control S.D.	0.305	0.418	0.327
N	64706	64706	64706

The model has several additional implications:

1. The meaning-pay frontier will flatten.
   High salary, low meaning workers leave because they start to value meaning.
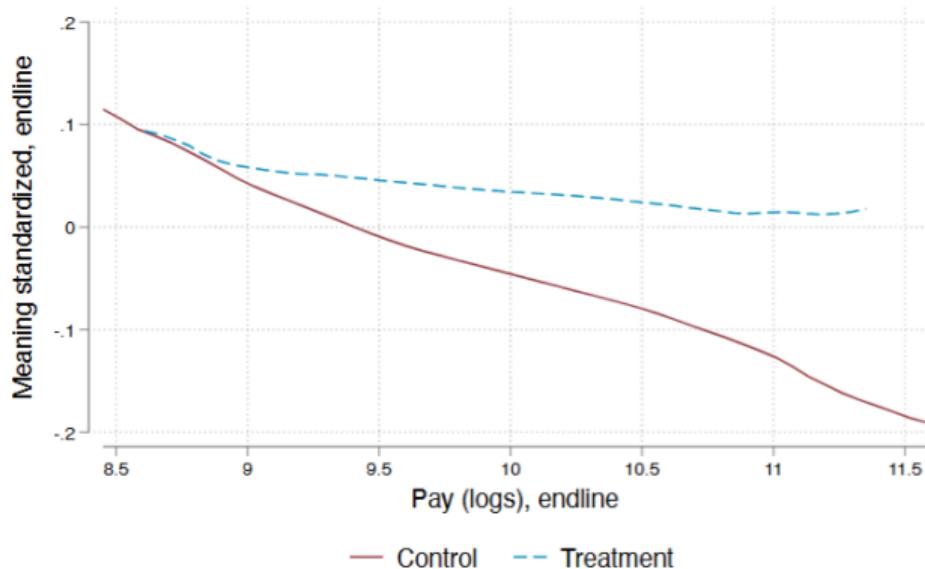
2. Treated workers that stay have increased utility.
   Compute utility on the board.

Additional Implication 1: Flattening the Meaning-Pay Frontier

Figure V: Pay and meaning

Difference in slope for treatment = 0.153 (s.e.=0.078, p-val=0.05).

Notes. Local polynomial smooth plot for the relationship between standardized meaning and pay in logs. Kernel bandwidth is 0.6. The reported differences in slopes uses a linear regression model with robust standard errors.

Additional Implication 2: Increased Utility for Treated Stayers

Table III: Meaning and happiness

	(1) Meaning	(2) Job satisfaction	(3) Happiness
Did DYP (LATE)	0.111**	0.230***	0.149**
	(0.053)	(0.068)	(0.069)
Received Invitation (ITT)	0.081**	0.168***	0.109**
	(0.038)	(0.049)	(0.051)
Control mean	4.888	5.338	4.846
Control S.D.	0.801	1.289	1.183
N	1264	1264	1264

Notes. This table reports LATE (*Did DYP*) and ITT (*Received Invitation*). When estimating LATE, the variable for participating in the DYP workshop, *Did DYP*, is instrumented with invitation treatment. All regressions include country fixed effects, and Huber-White robust standard errors are reported. Outcome variables are standardized using the corresponding baseline control mean and standard deviation, while the reported control means and control standard deviations are raw endline values. Each outcome variable is an index constructed from survey questions on meaning, job satisfaction, and happiness, respectively, where workers declare how much they agree with statements related to the three themes, from 1 (strongly disagree) to 7 (strongly agree). See Table B.2 for the construction of these indices. See further Table A.4 or a breakdown of the effects on questions and sub-indices that are used to construct the *Meaning* variable.

Who Chose to Find Their Meaning?

	Panel B: Compliers vs. non-compliers		
	(1)	(2)	(3)
	Did not do DYP	Did DYP	Difference
Female	0.436	0.537	0.105***
	(0.496)	(0.499)	(0.029)
Tenure (years)	8.794	6.970	-1.889***
	(10.195)	(9.145)	(0.522)
Age	37.511	34.967	-2.034***
	(11.007)	(10.577)	(0.599)
Perf. Score	95.578	99.538	3.165**
	(23.766)	(21.244)	(1.533)
Pay	24,199.535	25,183.459	237.828
	(12,667.279)	(13,277.416)	(517.967)
Bonus	2,412.534	2,234.107	98.881
	(2,221.344)	(2,216.021)	(88.457)
Observations	491	968	1,459

Notes. This table reports mean and standard deviations (in parentheses) in columns (1) and (2). Column (3) reports differences in means and corresponding robust standard errors (in parentheses) after controlling for country fixed effects. Panel (a) compares treatment and control workers, while panel (b) compares the compliers and non-compliers in the treatment group.