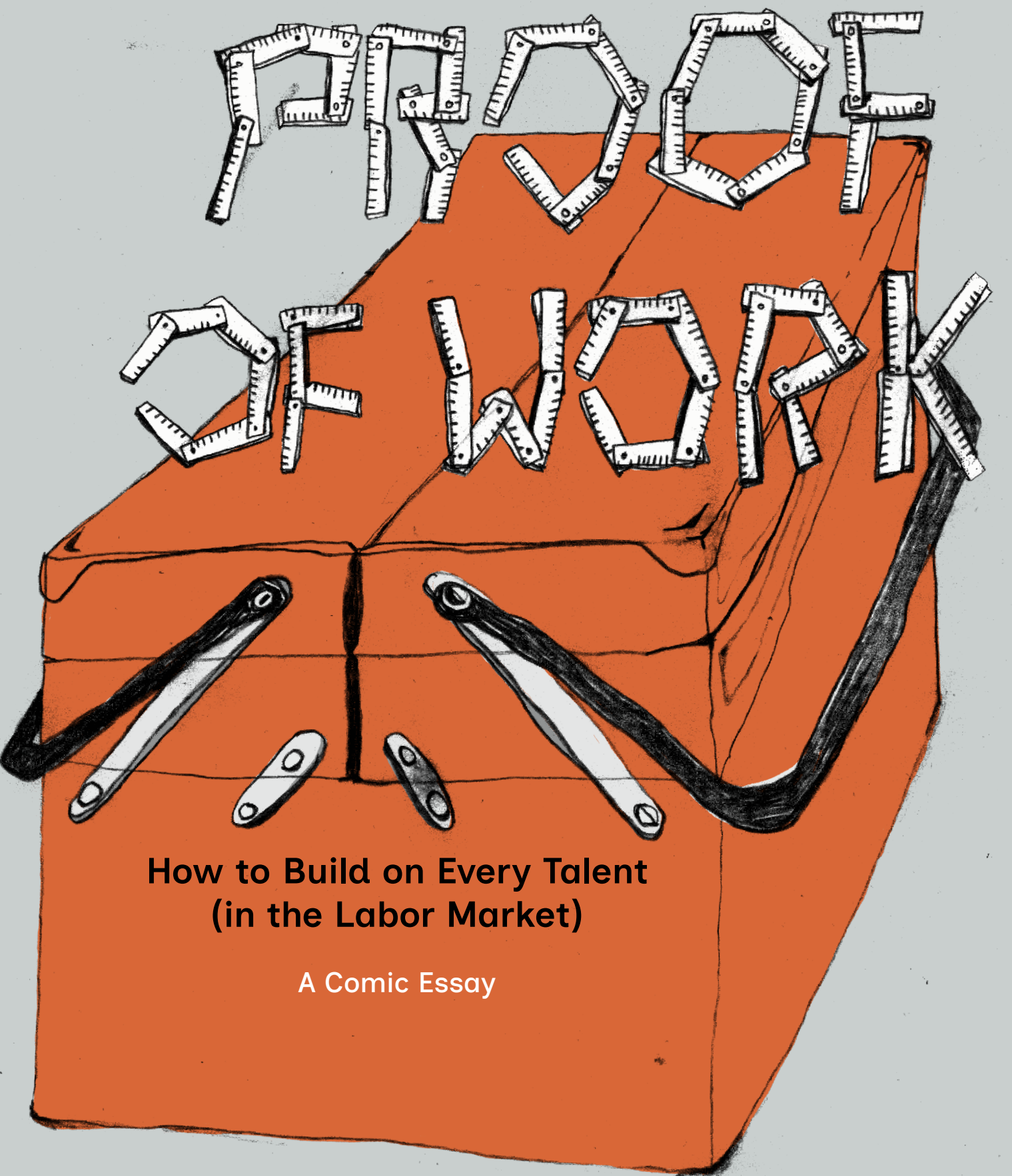


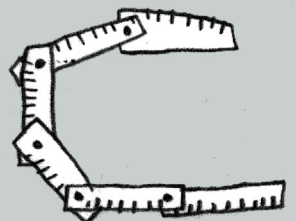
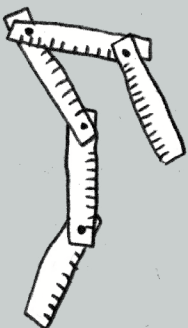
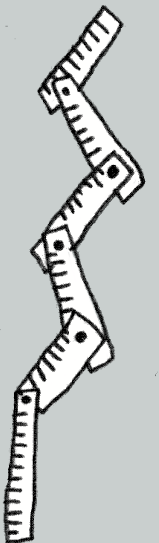
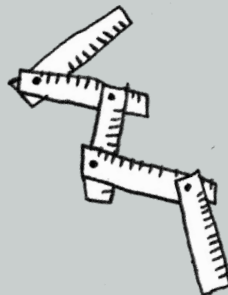
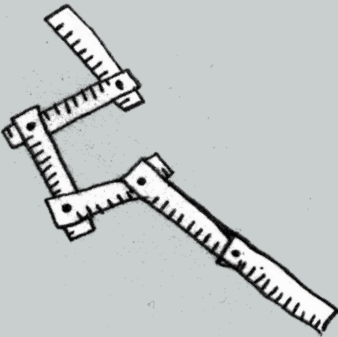
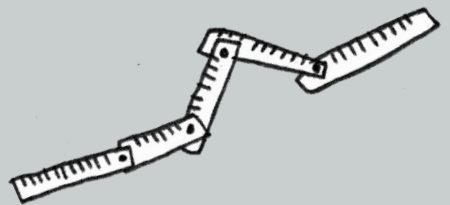
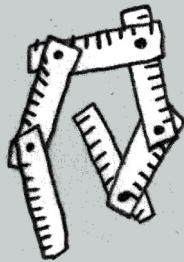
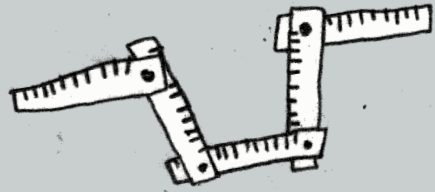
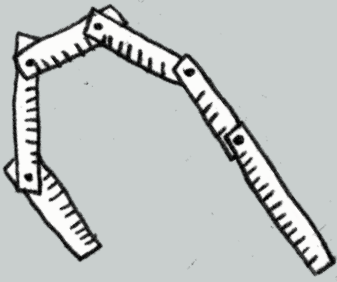


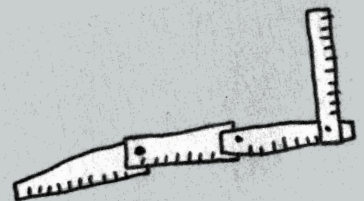
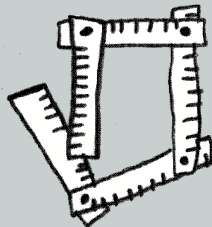
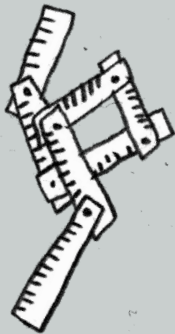
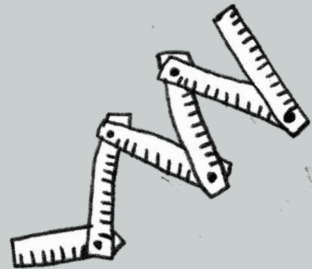
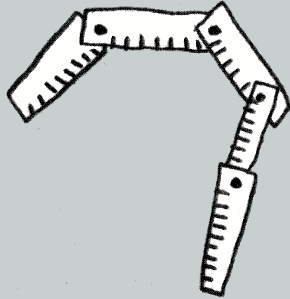
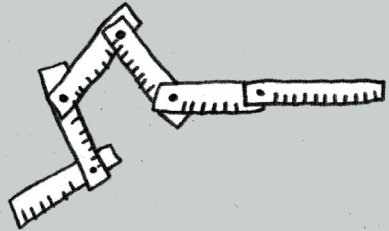
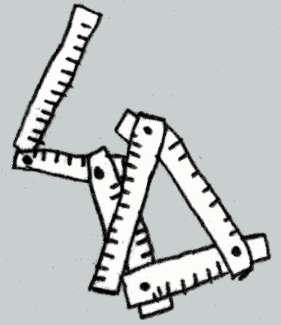
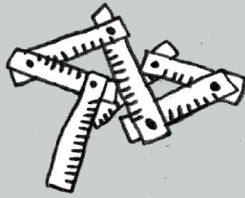
HOW TO
BUILD

**How to Build on Every Talent
(in the Labor Market)**

A Comic Essay

Miriam Beblo, Zoe Branczyk &
Julia Schneider aka Doc J Snyder





Impressum

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Autorinnen, postalisch zu erreichen unter:

Prof. Dr. Miriam Beblo,
Fakultät für Wirtschafts- und Sozialwissenschaften,
Universität Hamburg,
Welckerstr. 8, 20354 Hamburg, Germany
und per E-Mail unter info@comicproofofwork.org

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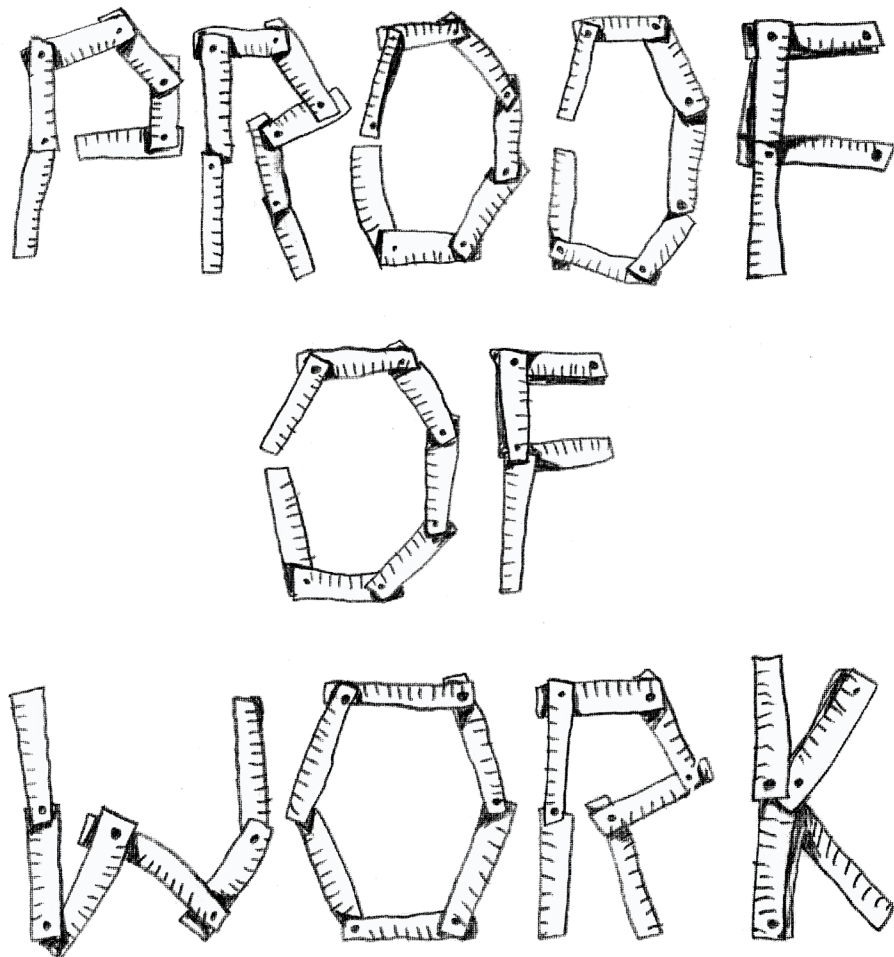
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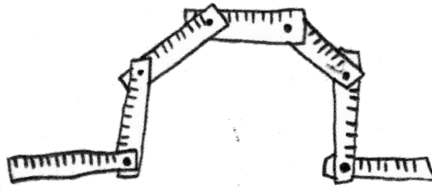
Miriam Beblo, University of Hamburg,
Welckerstr. 8, 20354 Hamburg, Germany
and by email at: info@comicproofofwork.org



How to Build on Every Talent (in the Labor Market)

A Comic Essay





Why this comic essay? Why now?

Today, diversity is often framed as a problem,
not a solution.

But data and research say otherwise.

In this comic, we present **Proof of Work:**
literal proof (empirical evidence) of tools that make labor
markets work better and fairer. To level the playing field.
And to build on every talent.

We need all backgrounds, all skills, all perspectives — and
yes, this includes you. But here's the thing: diverse teams
are not always easy to form or lead.

We all carry stereotypes, fears, and blind spots.

The selection of tools we present has been tested,
reviewed, and published in academic journals such
as AER, QJE, and Econometrica (yes, that's a real thing).

This comic is also a love letter to research and a
counter-narrative to those voices that spread myths
about merit, diversity, and fairness.

Take it with you on a train. Use it in a workshop. Slide it
across the desk to your CEO.

(Or maybe you are the CEO.)

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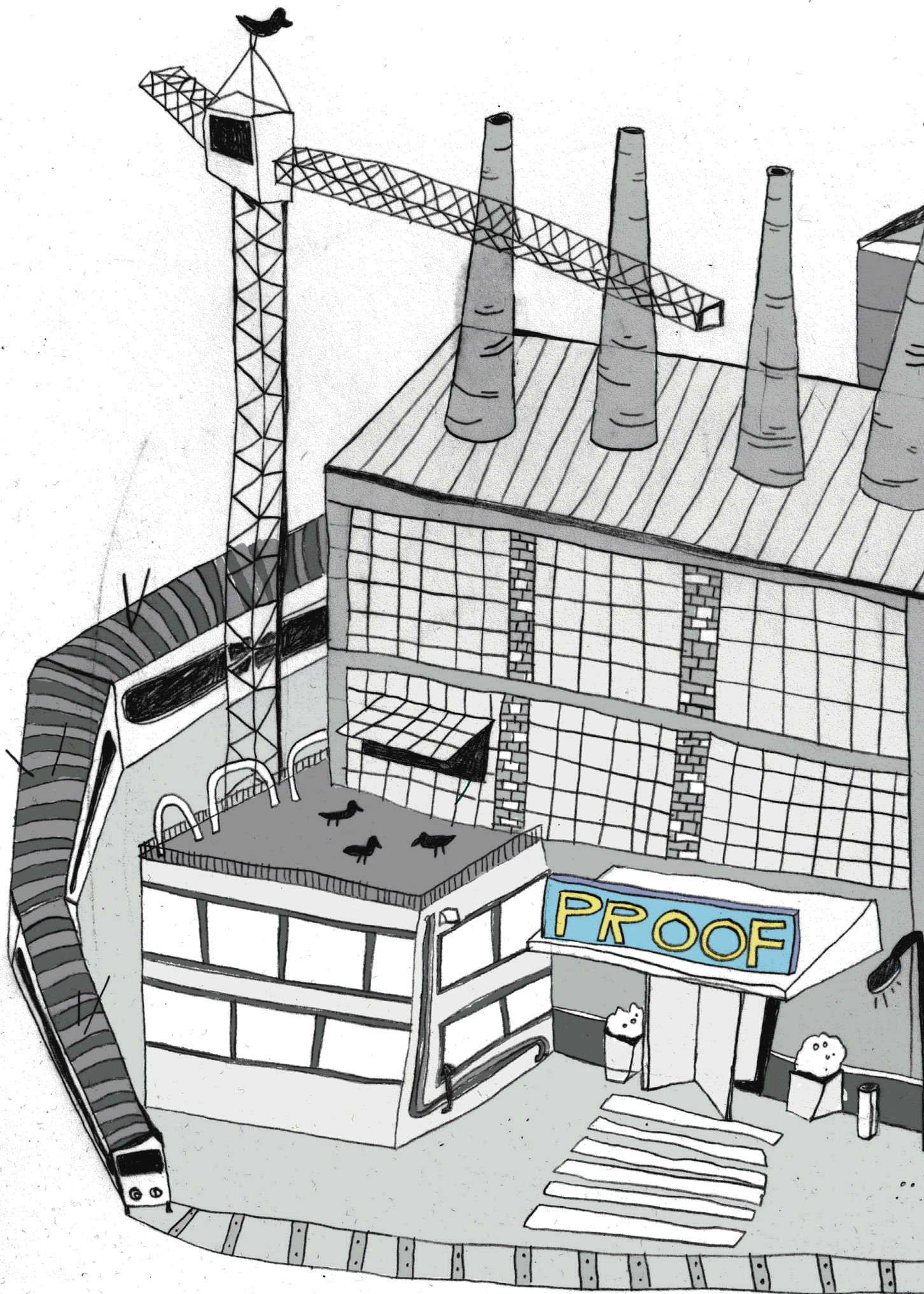


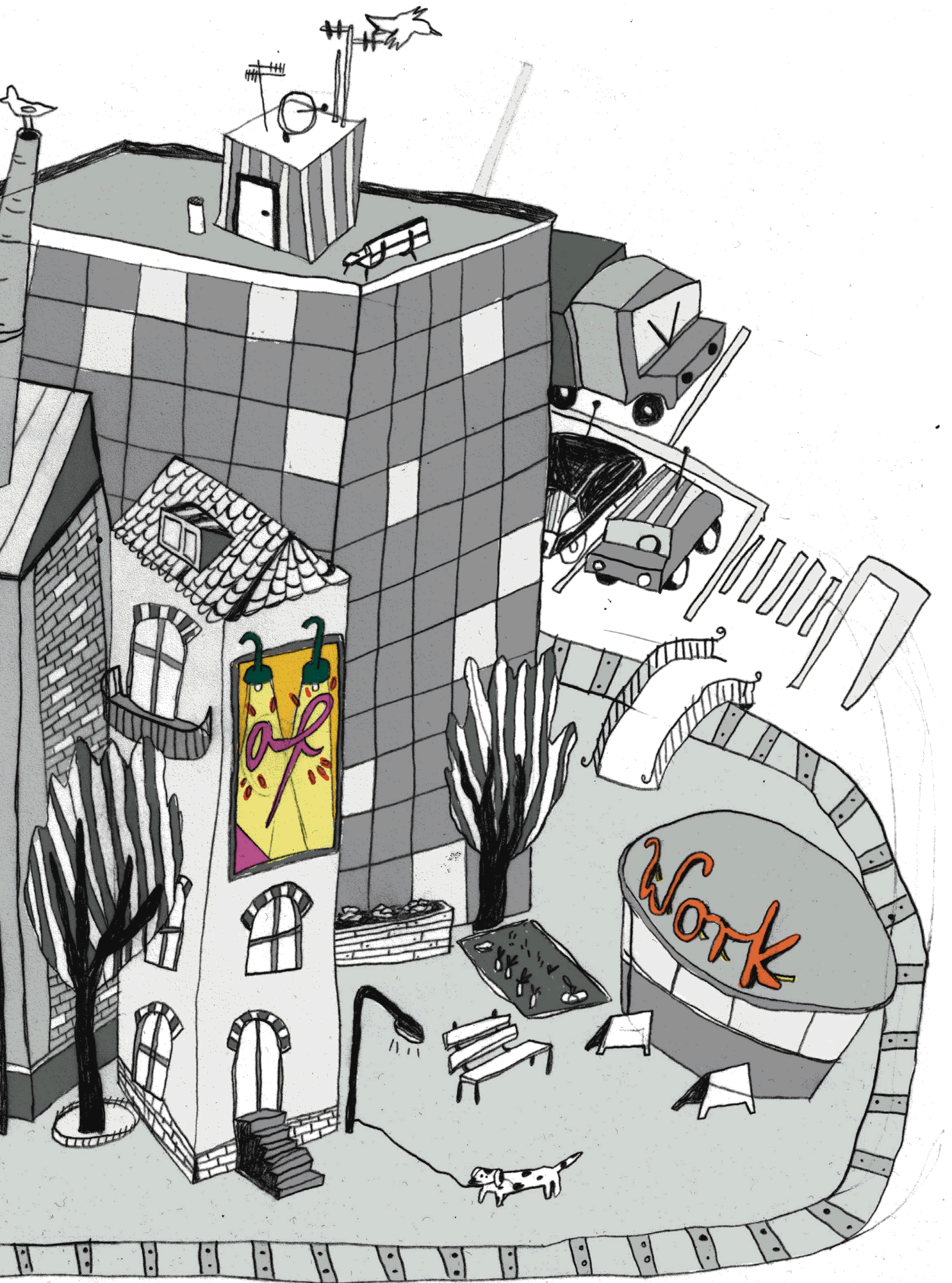
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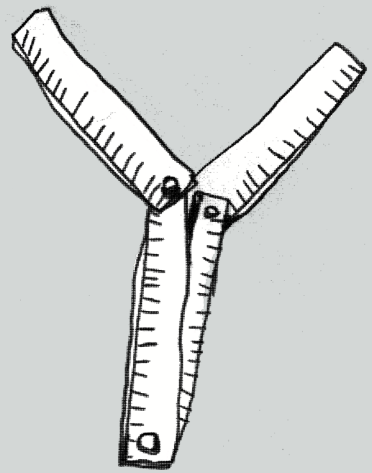
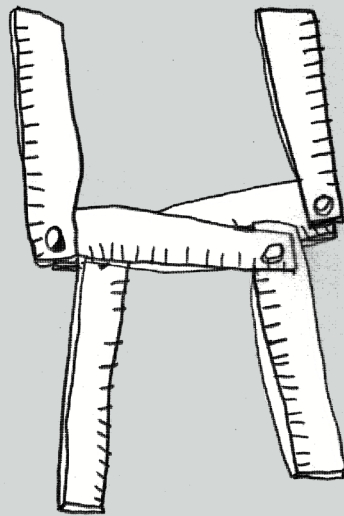
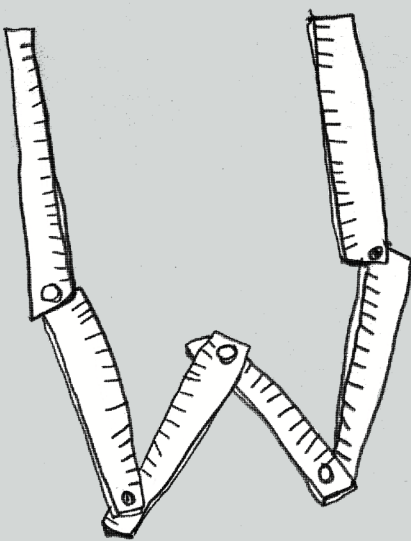
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Chapter I:



1. Diversity & Growth

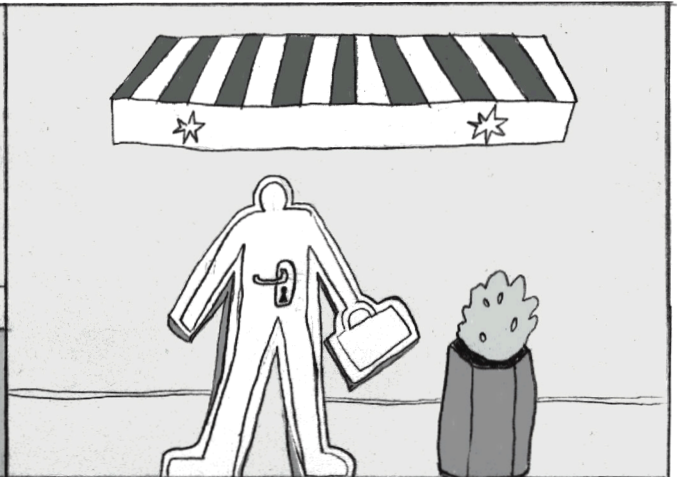
Chang-Tai Hsieh, Erik Hurst, Charles I. Jones & Peter J. Klenow (2019). The Allocation of Talent and U.S. Economic Growth. *Econometrica*, 87(5): 1439–1474.



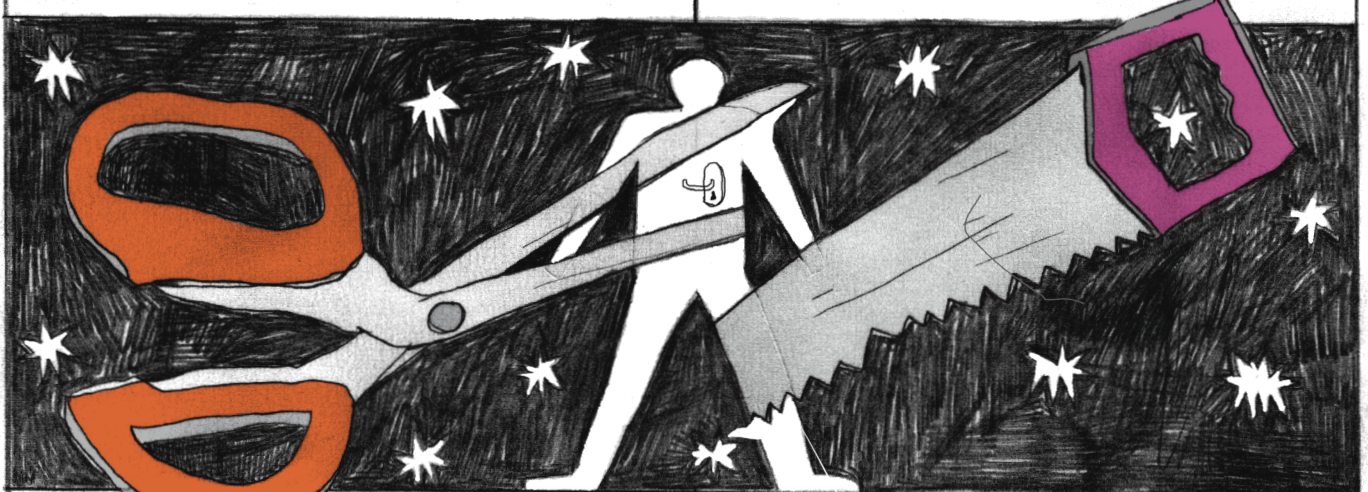
* The researchers used data from the U.S. Census (1960) and the Current Population Survey (1964–2010) to estimate how occupational shifts contributed to aggregate U.S. productivity growth. They applied counterfactual simulations based on a Roy model.



From rags to riches:
if you're talented and work hard,
you'll make it.

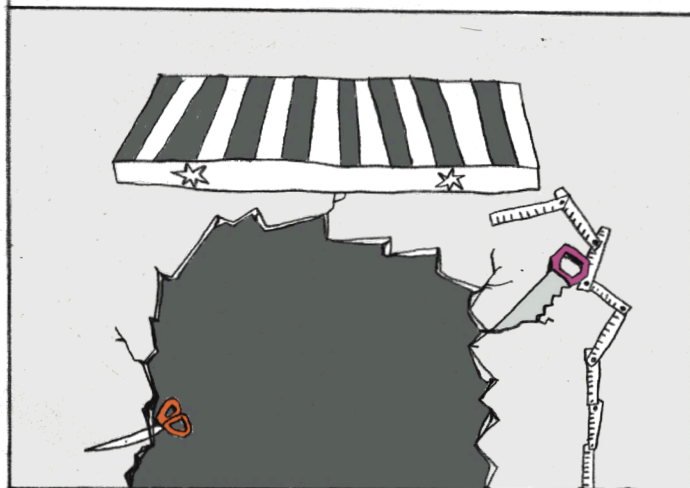


But across the world, barriers remain
— by race, gender, health, caste, class,
or connections.



Researchers studied the U.S., where occupation
barriers began to fall in the 1960s.

They wanted to know whether the
economy grows when more people gain
access to high-skilled jobs.



The result? 20-40% of U.S. growth
came from better allocation of talent.



Exclusion isn't just unfair. It's inefficient.

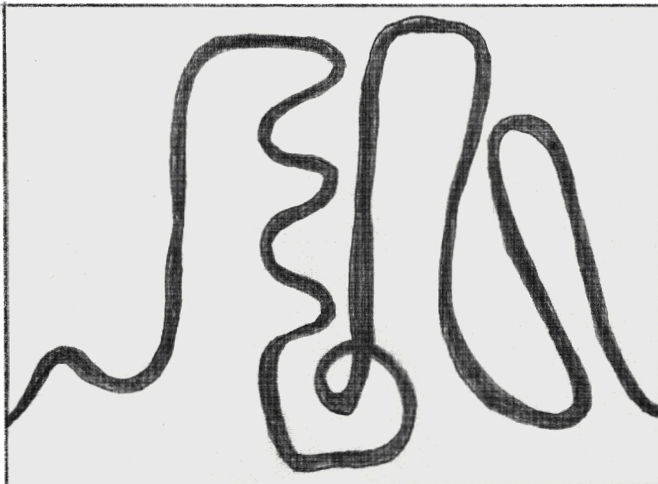


2. Diversity & Innovation

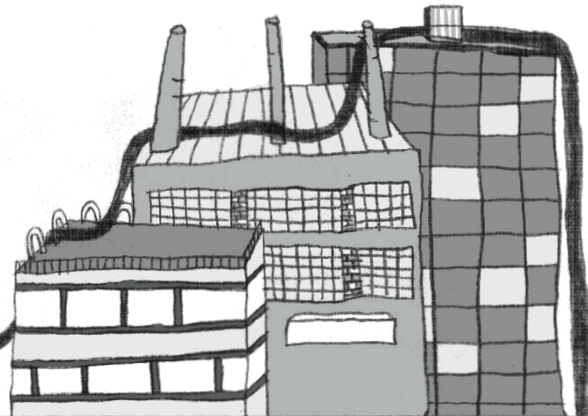
Bas Hofstra, Vivek V. Kulkarni, Sebastian Munoz-Najar Galvez, Bryan He, Dan Jurafsky & Daniel A. McFarland (2020). The Diversity-Innovation Paradox in Science. Proceedings of the National Academy of Sciences, 117(17): 9284–9291.



* Researchers studied the scientific novelty and citation impact of 1.2 million research papers from U.S. doctoral recipients from 1977 to 2015. They applied text analysis and machine learning to abstracts to determine the scientific novelty of the papers.



Today's big challenges (climate, demographics, transformations, you name it) require lots of really good new ideas.



Economists call these ideas innovations.



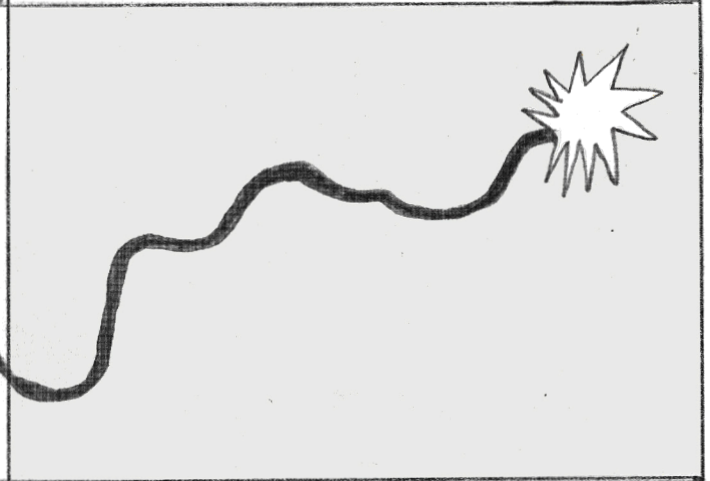
A study of 1.2 million research papers found that female and minority researchers make especially many innovative contributions.



Sounds good, right?



Yet their research takes longer to get published and receives fewer citations.



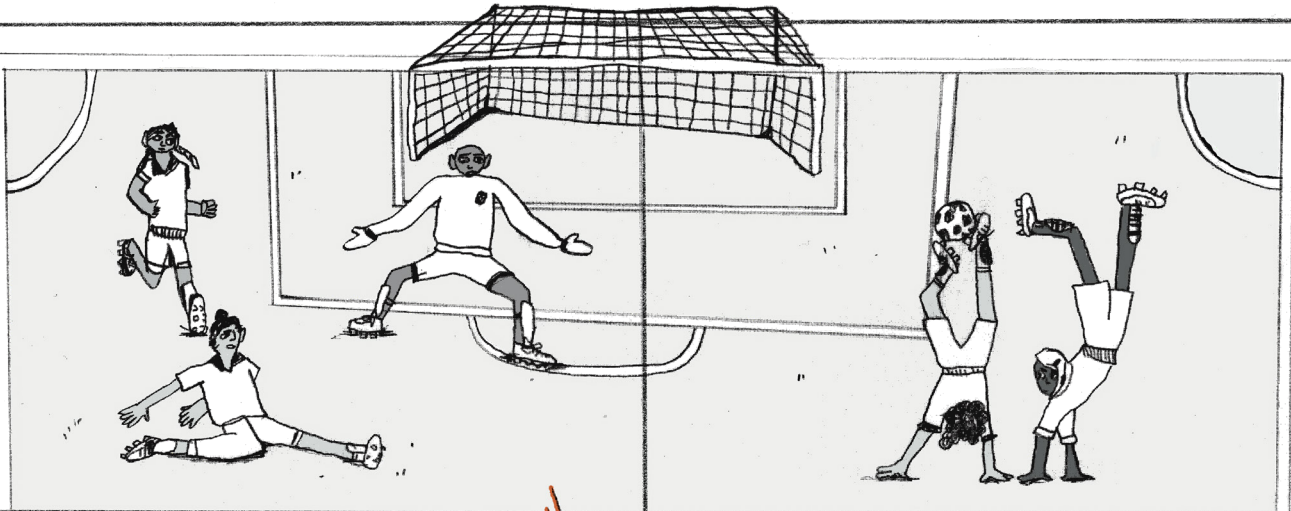
The ideas are often already here. What's missing is that they get heard.

3. Diversity & Excellence

Boris Groysberg, Jeffrey T. Polzer & Hillary Anger Elfenbein (2011). Too Many Cooks Spoil the Broth: How High-Status Individuals Decrease Group Effectiveness. *Organization Science*, 22(3): 722–737.



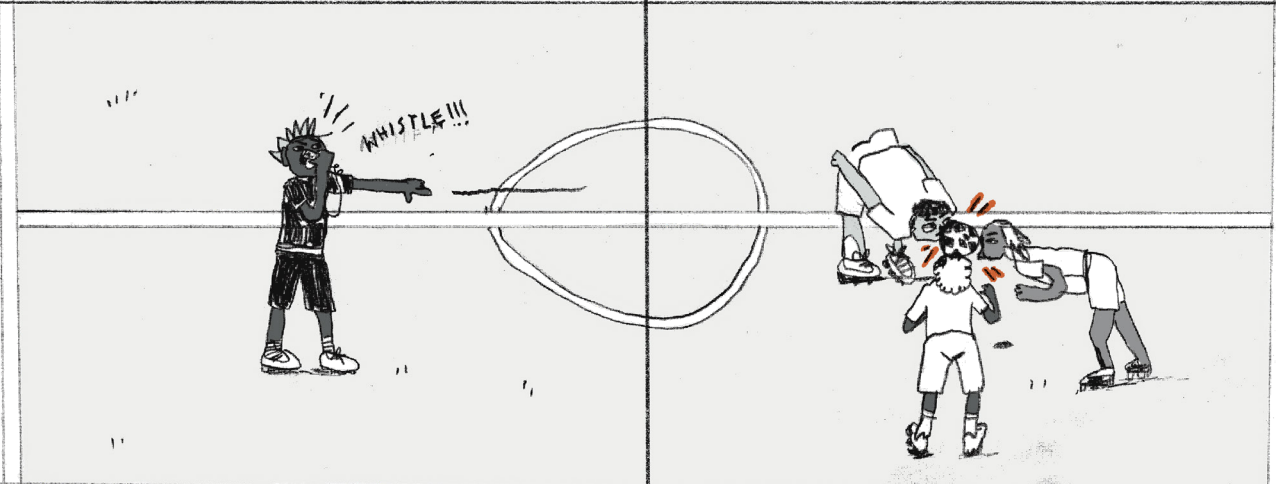
* The researchers analyzed data from U.S. Wall Street equity research departments collected between 1996 and 2001. They examined client ratings of departmental performance using panel regression models.



You might think this comic is about finding “the stars” — including the ones hidden in the margins.

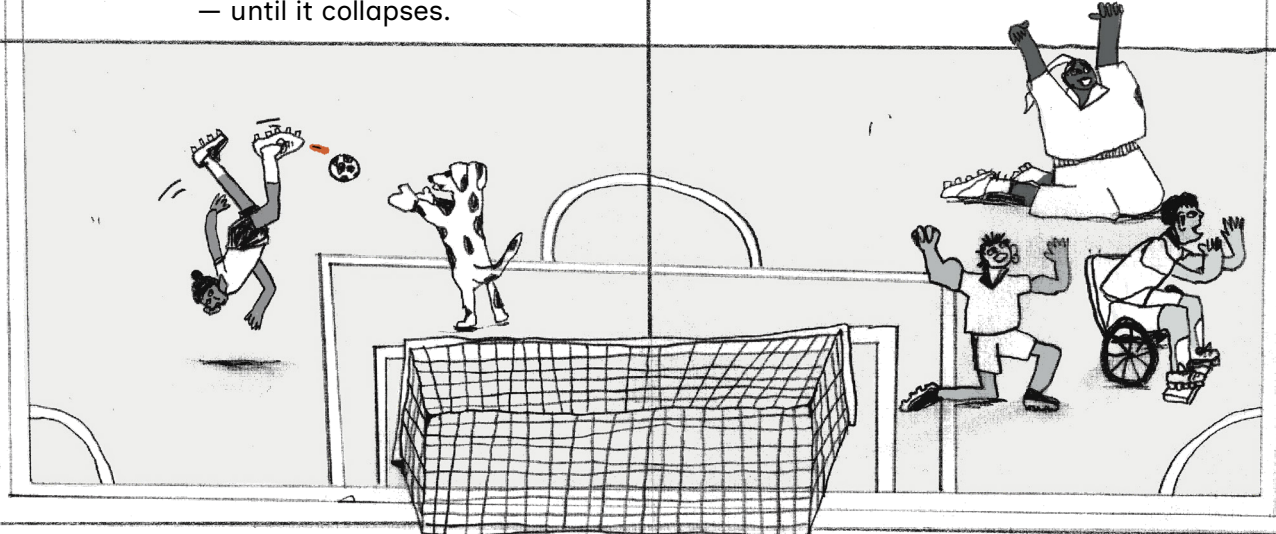


(And it’s true, there are many.)
But stars don’t necessarily shine brighter together.



A study of Wall Street analyst teams showed: performance rises with stars — until it collapses.

The tipping point: around 60% stars, and only 45% when expertise overlaps.



Too many stars in one team, and collaboration and effectiveness crumble.

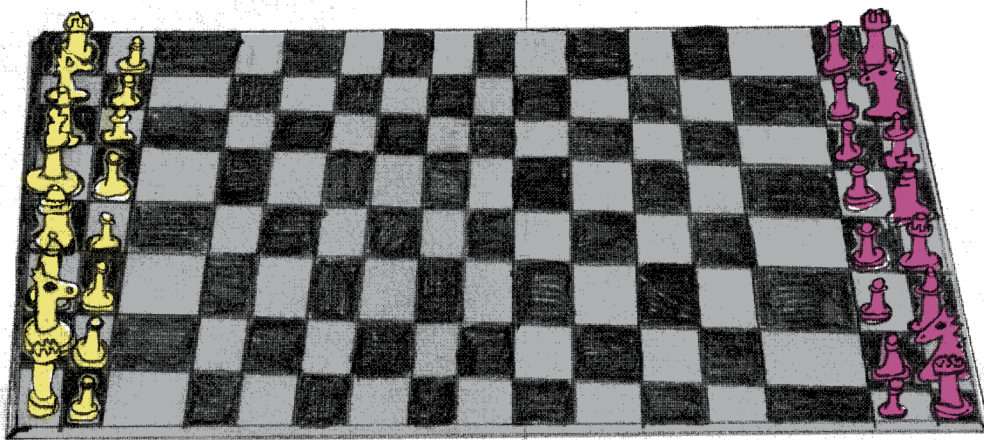
Excellence needs diverse talents that truly team up. (Soccer taught you that? PSG? Thought so.)

4. Diversity & Market Forces

Kaushik Basu (2017). Discrimination as Focal Point: Markets and Group Identity. Forum for Social Economics, 46(2): 128–138.

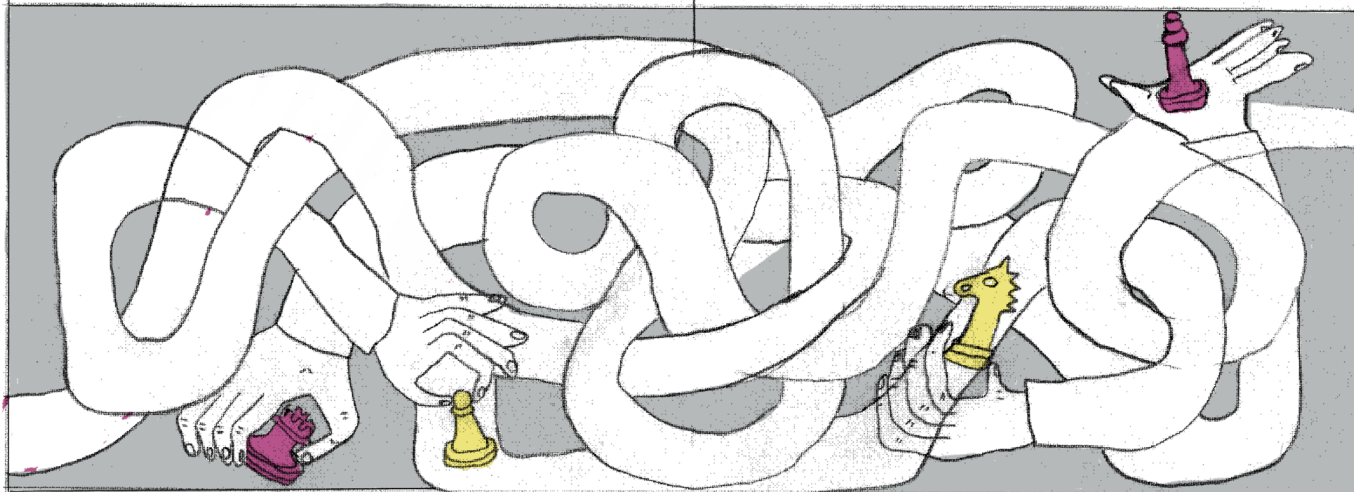


* The researcher presents a theory of discrimination where employers end up discriminating against certain groups, although all groups are a priori identical.



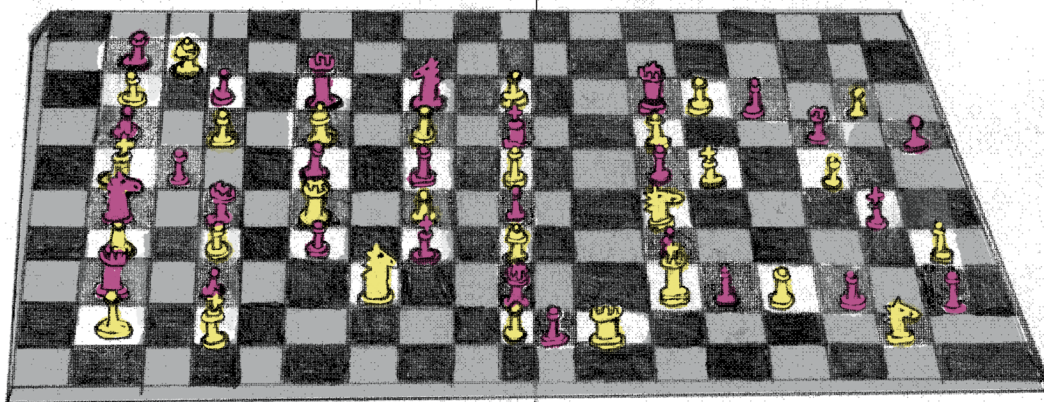
Diversity drives growth, innovation and excellence.

Yet, markets sometimes reward hiring from the same group,



when it is beneficial that all tasks are done by just one (strategic complementarity).

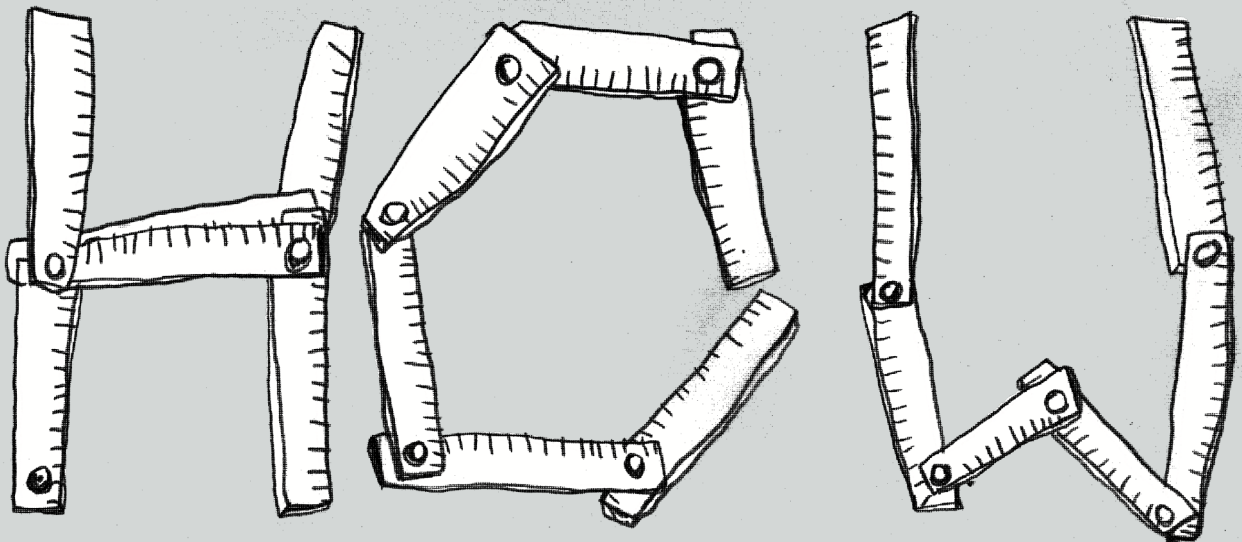
Discrimination not due to prejudice, but coordination gains.



In that case, market forces suppress diversity rather than promote it...

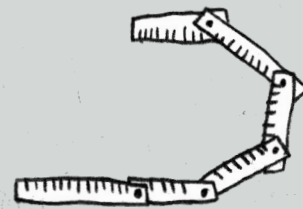
...and policy interventions become essential.

Chapter II:

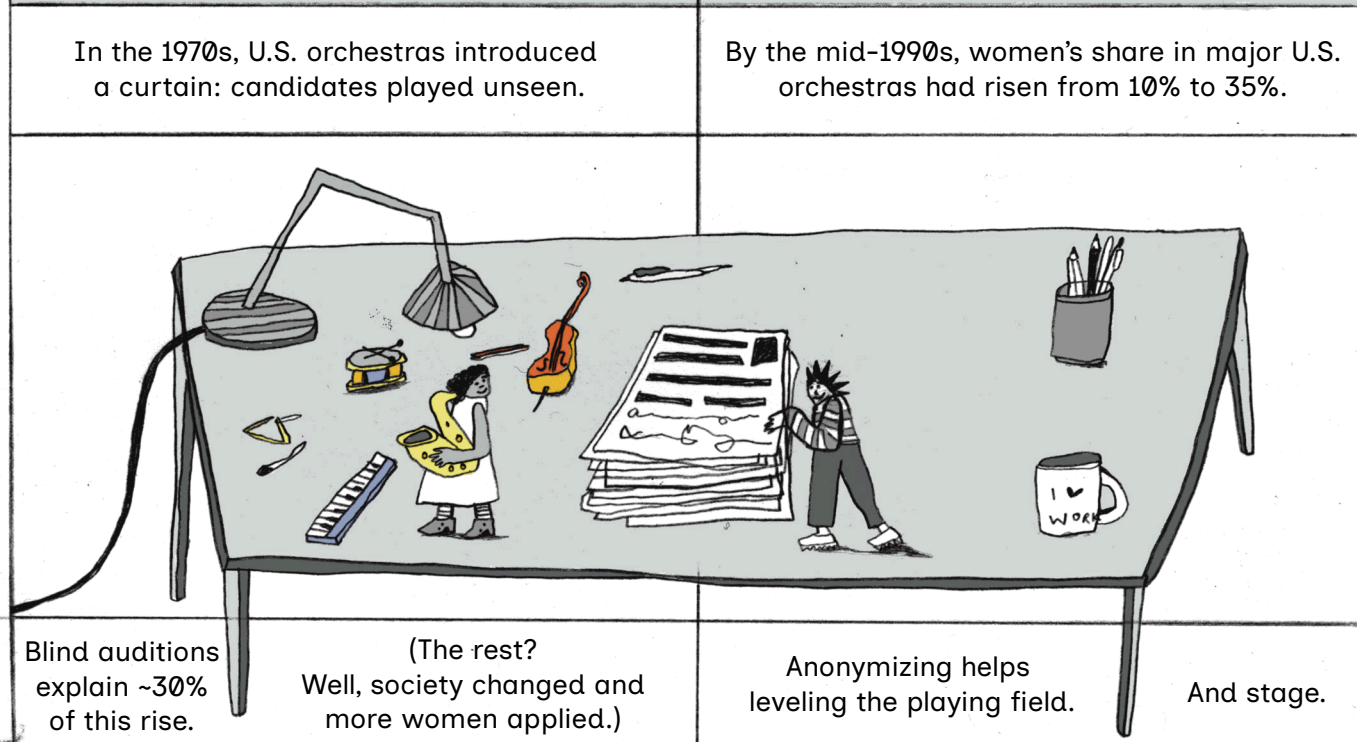
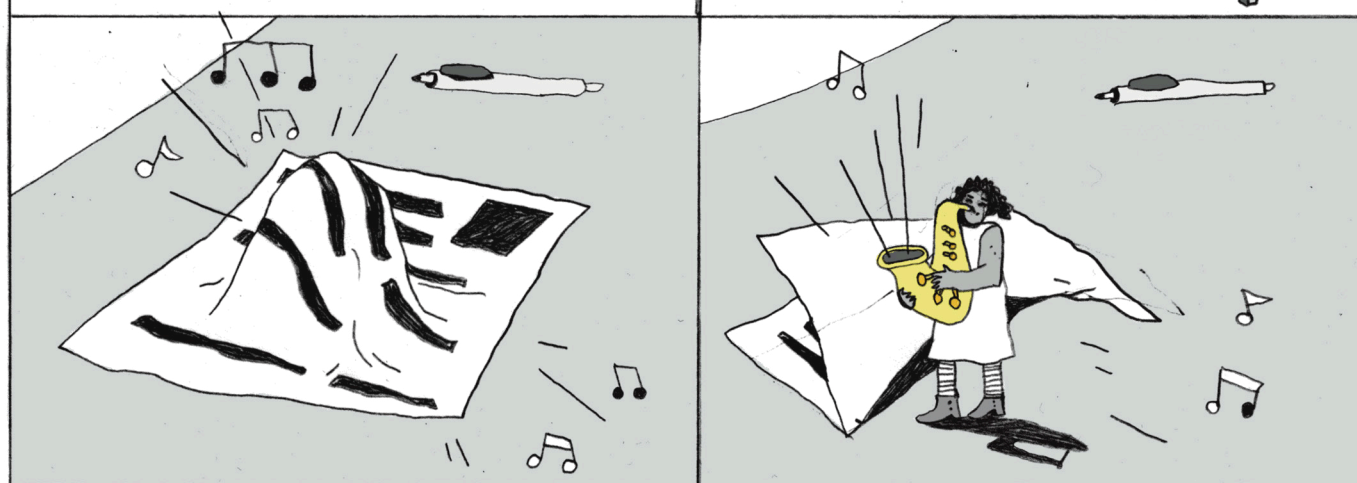
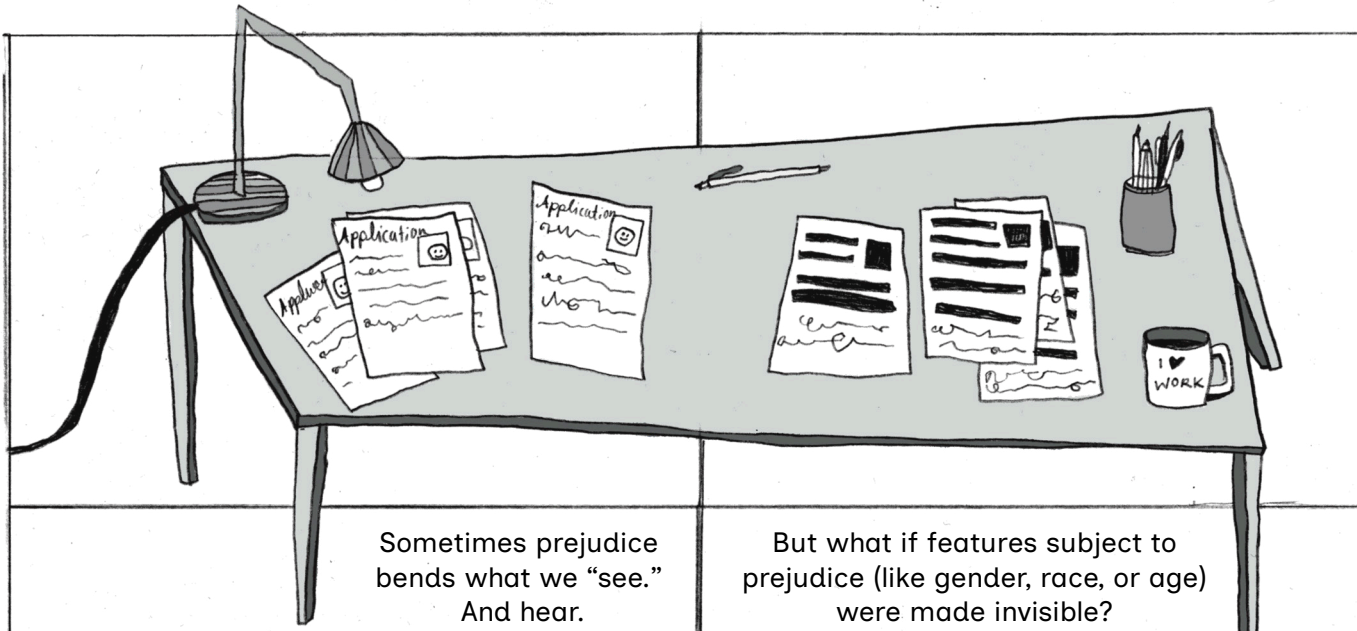


1. Anonymizing Hiring

Claudia Goldin & Cecilia Rouse (2000). Orchestrating Impartiality: The Impact of “Blind” Auditions on Female Musicians. *American Economic Review*, 90(4): 715–741.

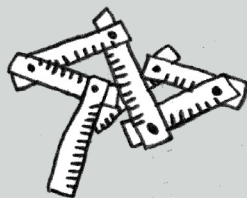


* Researchers used data from U.S. orchestras to study female advancement and hiring. The data included auditions from eight orchestras from the 1950s to 1995 and rosters from 11 orchestras from 1947 to 1996. The researchers applied difference-in-differences and individual fixed effects (blind vs. non-blind) to their data.



2. Rewarding Performance Over Presence

Julian V. Johnsen, Hyejin Ku & Kjell G. Salvanes (2024). Competition and Career Advancement. *Review of Economic Studies*, 91: 2954–2980.



* With linked employer–employee administrative data, covering the entire Norwegian population, and a difference-in-differences strategy, the authors analyzed men’s career trajectories before and after the 1993 paternity leave reform.



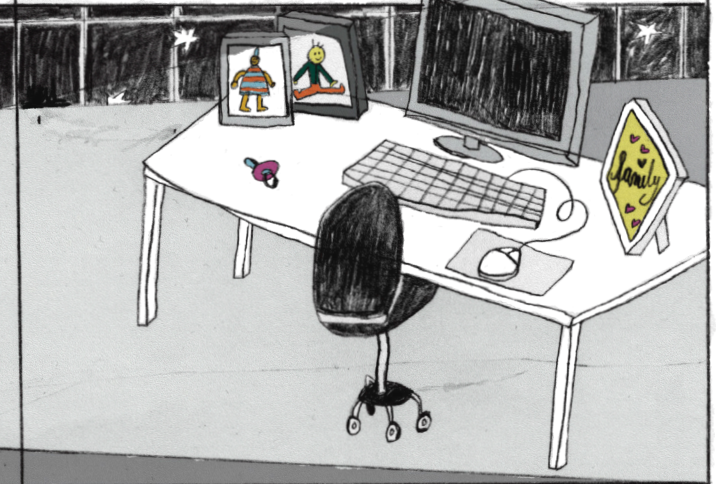
We like to think promotions are based on hard work and results.



But in many workplaces, being seen matters more. Long hours. No leave.



This culture rewards presence, not performance. It penalizes caregivers, and anyone who values balance.



Researchers studied a paternity leave reform in Norway that encouraged fathers to take time off.



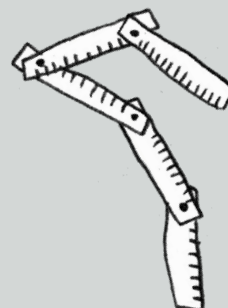
And indeed: Promotions went not to those who performed better but to those who stayed while others were on parental leave.



Rewarding performance, not presence, can break this trap.

3. Revealing Unconscious Bias

Alberto Alesina, Michela Carlana, Eliana La Ferrara & Paolo Pinotti (2024). Revealing Stereotypes: Evidence from Immigrants in Schools. *American Economic Review*, 114(7): 1916–1948.



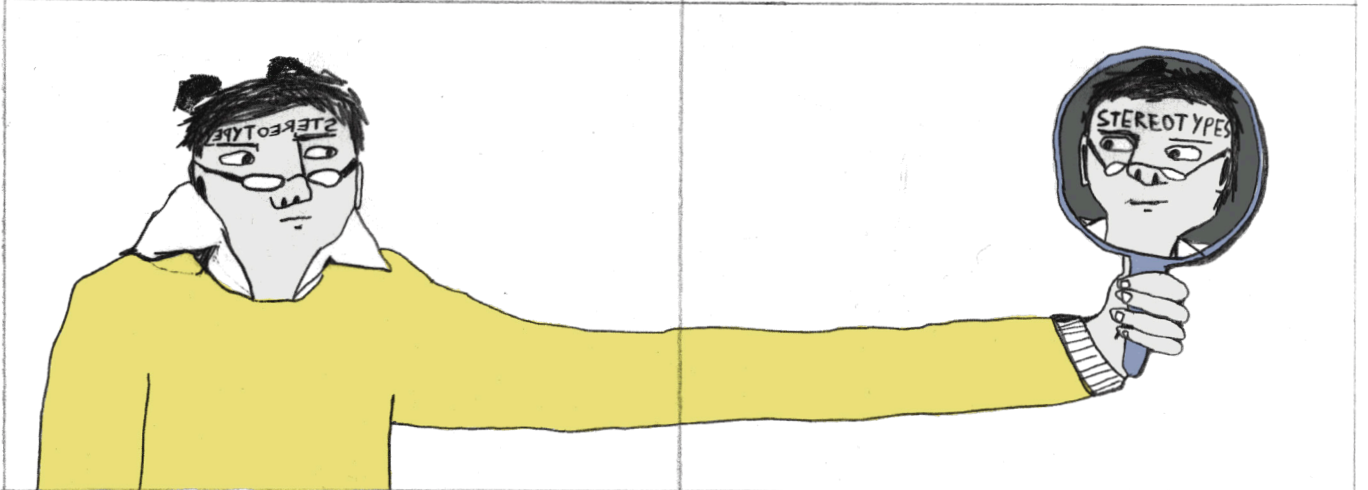
* The researchers examined the grade gap between native and immigrant students, overall failure rates, and how teachers graded mock exams with randomized student names. The study drew on data from Italy and combined a field experiment (2016/17) — randomizing the timing of personal IAT feedback — with an online experiment (2021) that randomized personalized versus generic debiasing interventions. The analysis used difference-in-differences models with teacher fixed effects.



We like to think we grade fairly — based on effort and ability.
But stereotypes skew judgment.



In an Implicit Association Test (IAT), 70–80% of Italian middle school teachers showed moderate-to-strong bias against immigrants.

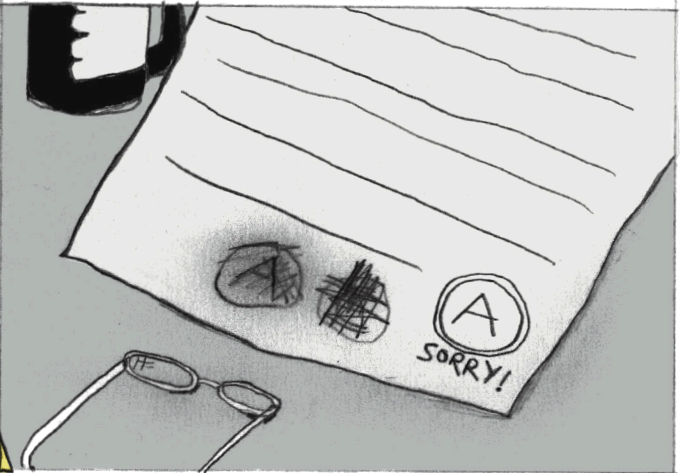


When teachers were told their own bias before grading their pupils, the grade gap between native and immigrant pupils shrank by ~ 1/3 of a grade...

... and failure rates of immigrant pupils halved.



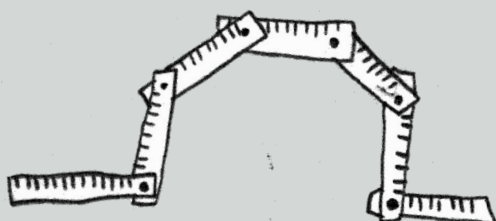
Generic bias messages helped, too; but strongly biased teachers needed to see their own IAT score in order to change.



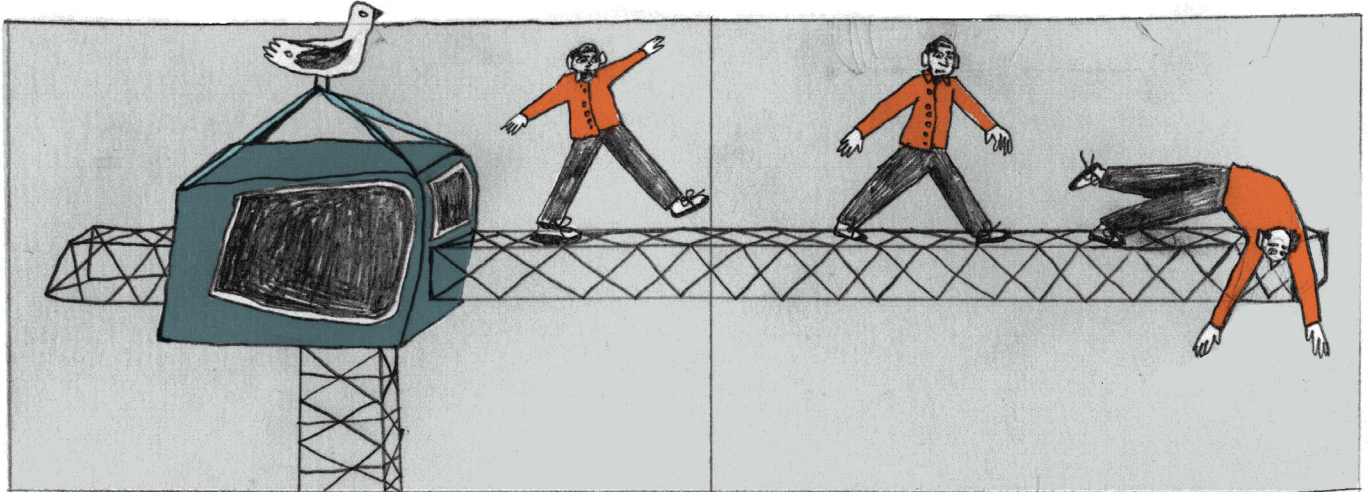
Revealing unconscious bias is a low-cost way to cut discrimination. In schooling and hiring.

4. Building Trust

Zoë Cullen, Will Dobbie & Mitchell Hoffman (2023). Increasing the Demand for Workers with a Criminal Record. *Quarterly Journal of Economics*, 138(1): 103–150.

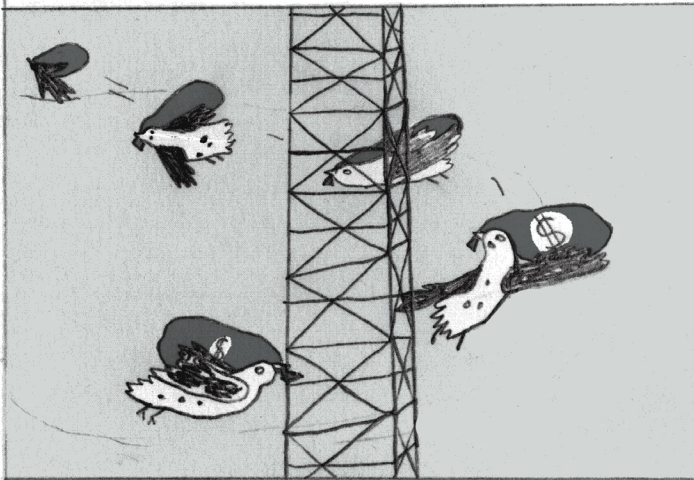


* In a 2020 field experiment on a large U.S. job platform, 1,500 hiring managers rated hypothetical applicants with and without criminal records. Each applicant was randomly assigned a trust signal as described.

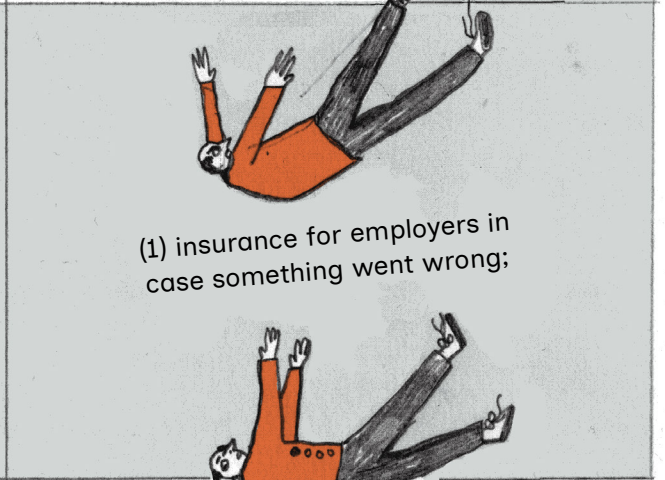


To prevent discrimination, California banned employers from asking about criminal records — because people with past convictions rarely got a fair chance.

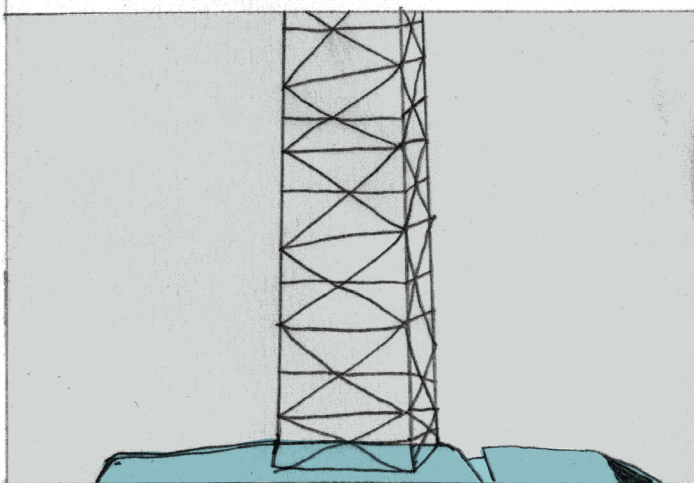
But employers still felt uneasy. If they couldn't ask, they guessed instead based on résumé gaps or neighborhoods.



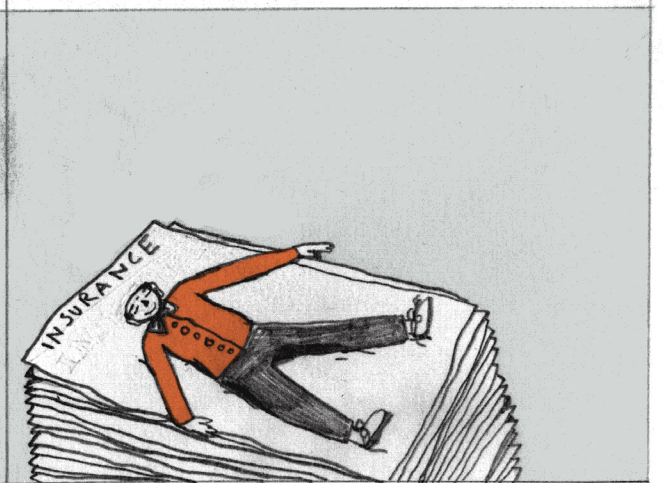
So researchers tested two ways to help employers feel safe without harming applicants:



(1) insurance for employers in case something went wrong;
(2) labeling applicants with a clean recent record good performance in their last job.



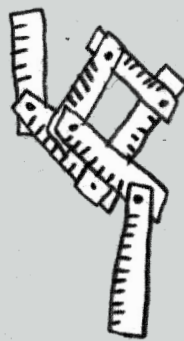
It worked: employers felt safer, and more applicants got interviews and job offers.



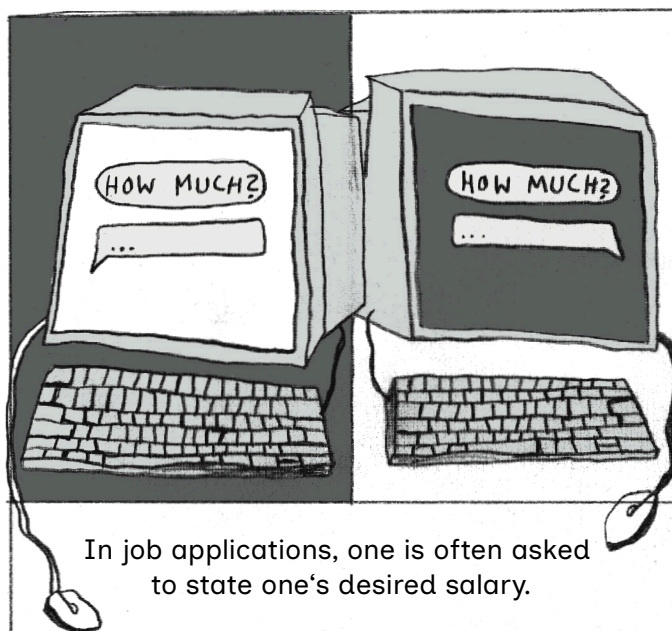
We can reduce fears, build trust and give people real chances at the same time.

5. Leveling the Pay

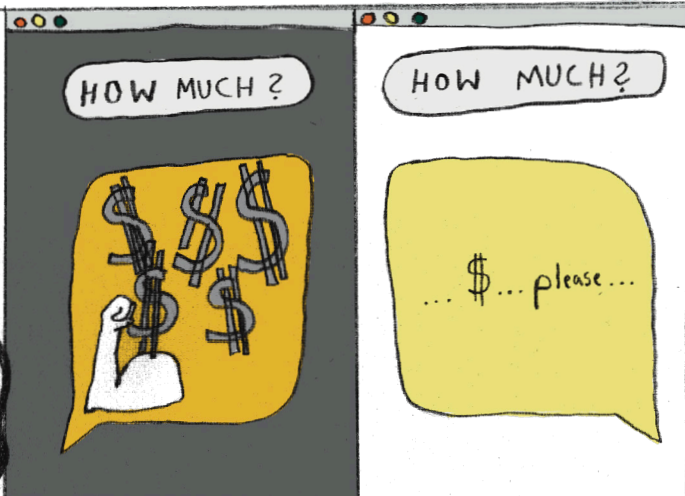
Nina Roussille (2024). The Role of the Ask Gap in Gender Pay Inequality. Quarterly Journal of Economics, 139(3): 1557–1610.



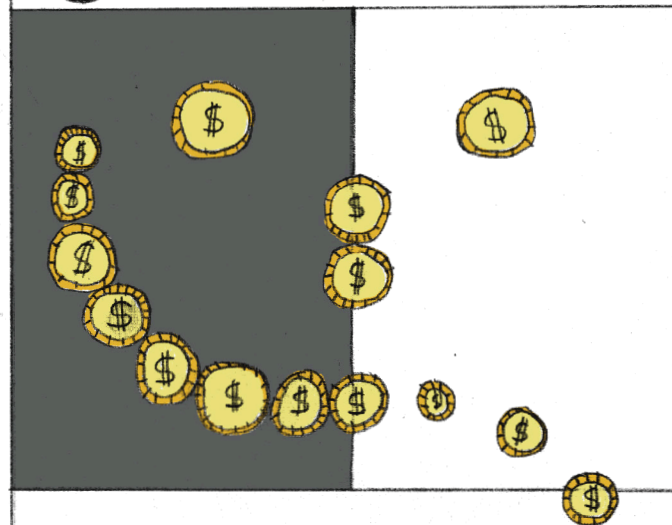
* The researcher compared the ask and bid salaries of a subset of candidates on the platform, for whom the answer box changed from empty to prefilled (with the median bid salary over the past 12 months for their respective location, job title and experience) before and after the change in 2018.



In job applications, one is often asked to state one's desired salary.



Women tend to have lower expectations and ask for less than men (and employers grant them less), despite similar resumes.



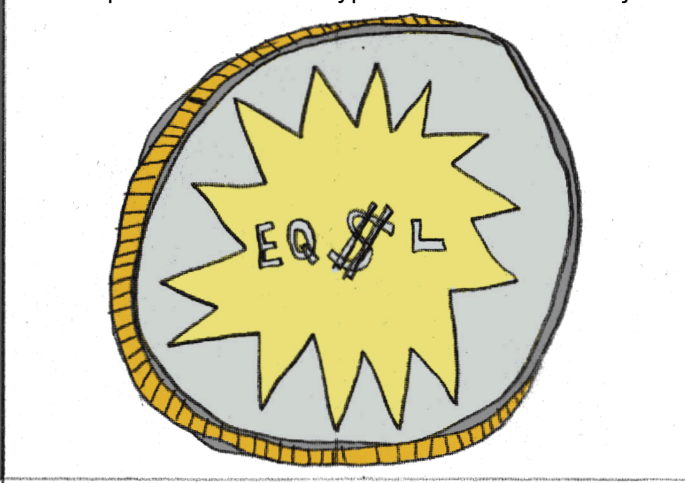
This ask gap explains most of the residual gender pay gap (i.e., after accounting for qualifications) on a US recruitment platform for high-wage engineering jobs.



The platform changed the way candidates had to state their desired salary from an empty box to a box prefilled with the typical offer for such a job.



With this information, women increased their ask salaries, eliminating the ask gap, whereupon employers increased their bid salaries.



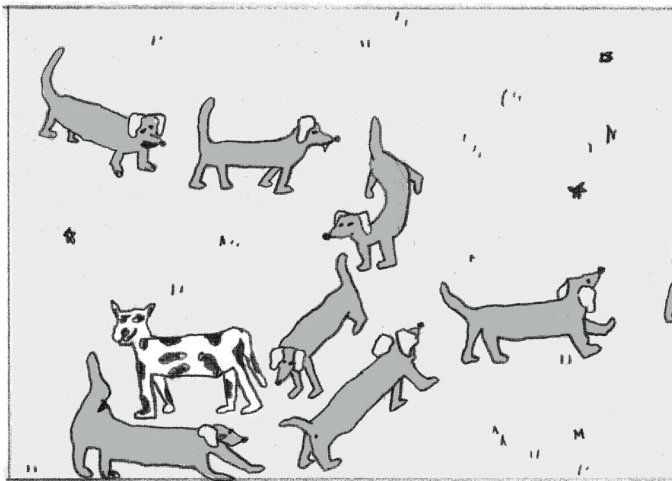
Wage information helps to correct women's underassessment of their market value, leveling the pay and reducing the gender pay gap.

6. Diversifying Leadership

Christopher F. Karpowitz, Stephen D. O'Connell, Jessica Preece & Olga Stoddard (2024). Strength in Numbers? Gender Composition, Leadership, and Women's Influence in Teams. *Journal of Political Economy*, 132 (9): 3077–3112.



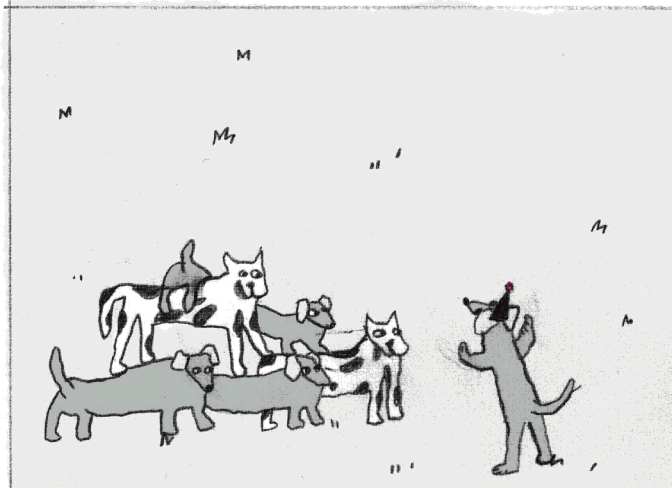
* The researchers ran two field experiments over time with students enrolled in a competitive accounting program and a more general education course in the United States. They recorded weekly group meetings and team building exercises and collected individual survey responses and program performances to compare women's influence in the teams. They also assigned the gender of the team leader at random (treatment).



In male-dominated groups, women's input is often undervalued. That's why a "token woman" in a corporate board may have little effect.



In two field experiments, researchers observed mixed-gender groups with either male or female majorities.



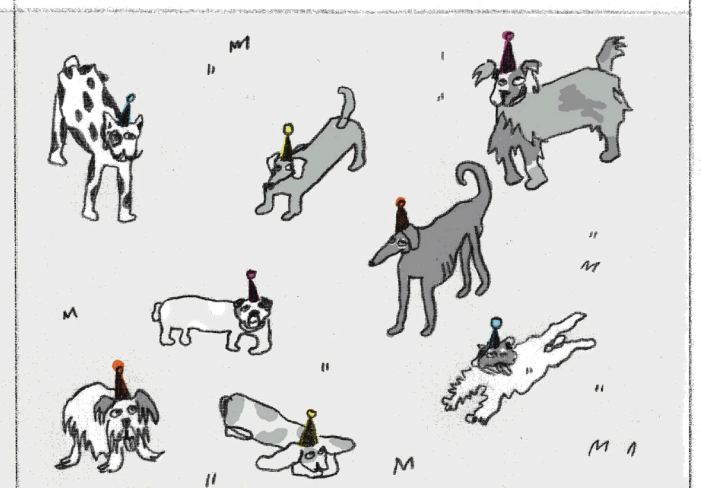
When in minority, women were less likely perceived as influential or chosen as spokespersons. Minority men did equally well as majority men.



But when a team leader was randomly assigned, female-led groups gave more voice to women than male-led ones.



The reason? Women less often vote for women, men more often for men.

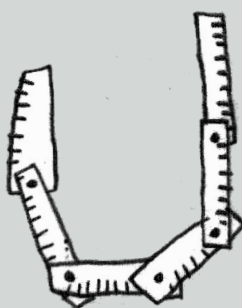


Making women lead reduces discrimination. It might work for other "minorities" too.

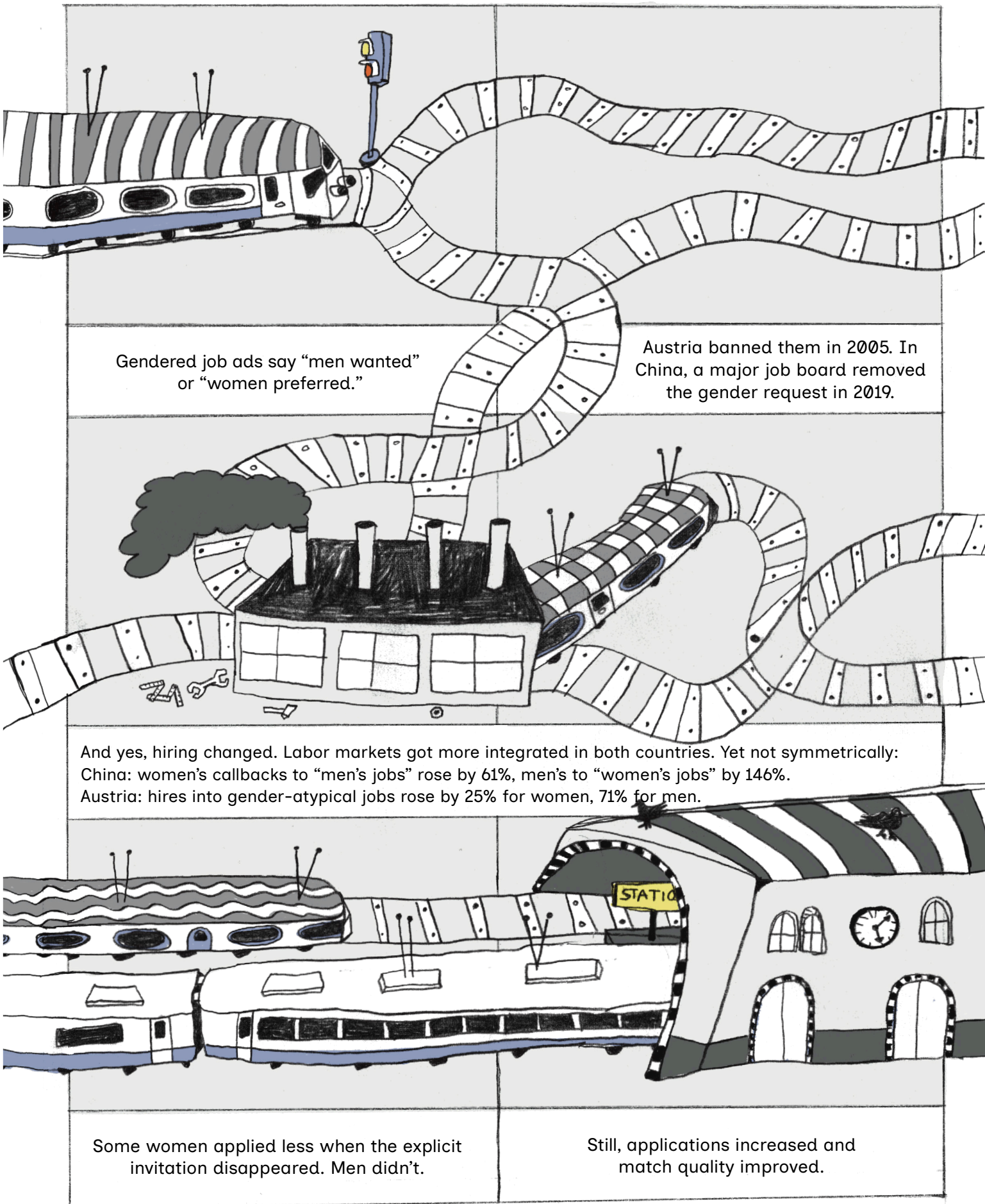
7. Ungendering Job Ads

David Card, Fabrizio Colella & Rafael Lalive (2024). Gender Preferences in Job Vacancies and Workplace Gender Diversity. *Review of Economic Studies*, 92 (4): 2437–2471.

Peter Kuhn & Kailing Shen (2023). What Happens When Employers Can No Longer Discriminate in Job Ads? *American Economic Review*, 113 (4): 1013–1048.



* Researchers studied the impact of banning gendered job ads on hiring into gender-atypical jobs, callbacks, applications, and workplace diversity. One study was based on data from Austria (AMS job ads linked to social security records, 2000–2010), the other one on China (117,390 job ads and 3.1 million applications, 2019 policy change). A difference-in-differences method was employed for the Austrian data and a regression discontinuity approach for the Chinese data.



Gendered job ads say “men wanted” or “women preferred.”

Austria banned them in 2005. In China, a major job board removed the gender request in 2019.

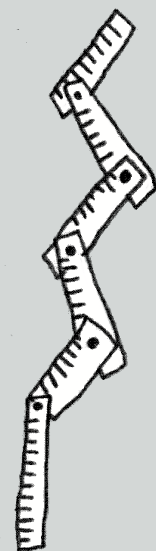
And yes, hiring changed. Labor markets got more integrated in both countries. Yet not symmetrically: China: women’s callbacks to “men’s jobs” rose by 61%, men’s to “women’s jobs” by 146%. Austria: hires into gender-atypical jobs rose by 25% for women, 71% for men.

Some women applied less when the explicit invitation disappeared. Men didn’t.

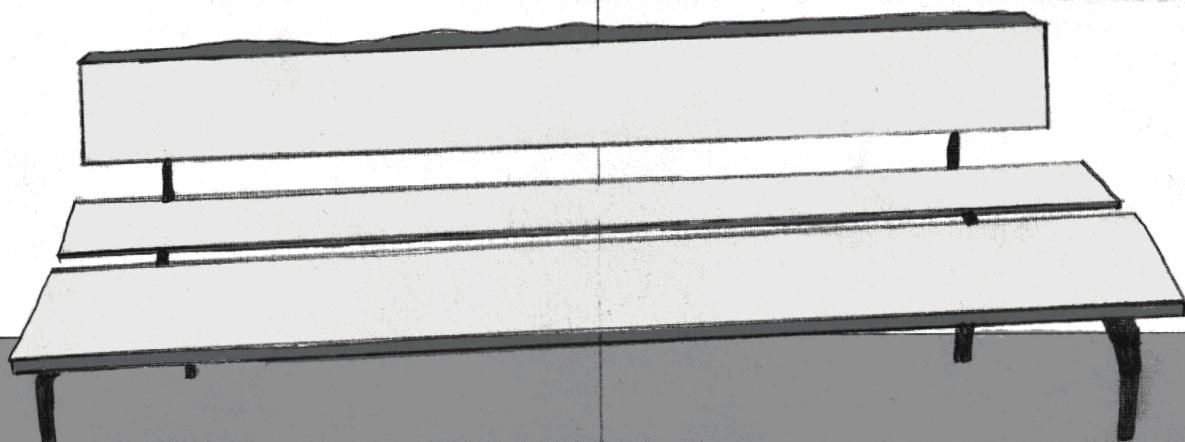
Still, applications increased and match quality improved.

8. Closing the Gap From Below

Ellora Derenoncourt & Claire Montialoux (2021). Minimum Wages and Racial Inequality. *Quarterly Journal of Economics*, 136 (1): 169–228.

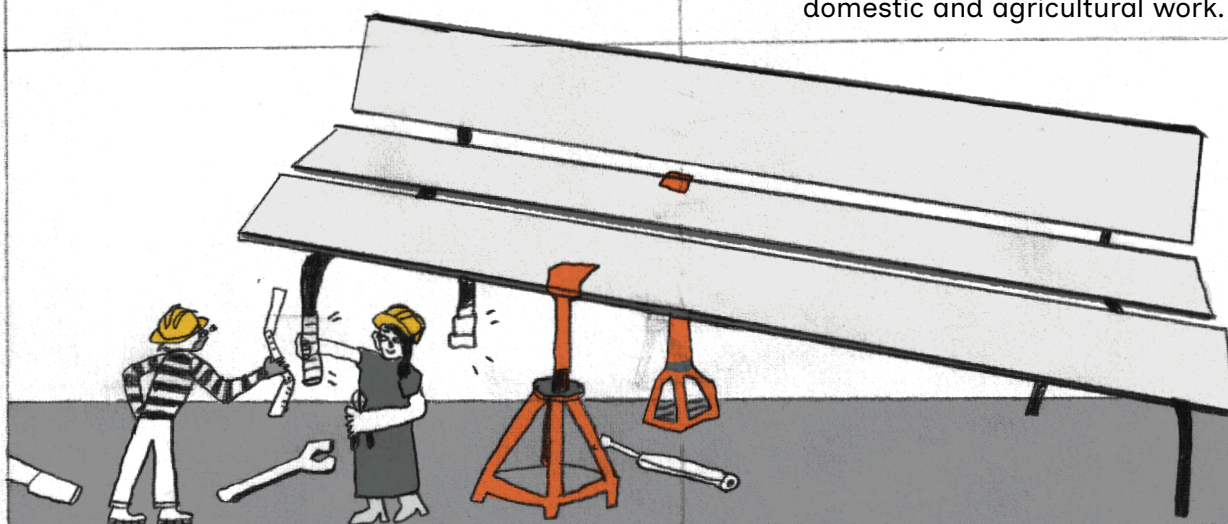


* Researchers studied the wages and employment of Black and white workers in newly covered vs. unaffected industries using data from the U.S. Census microdata (1960) and the CPS (1967–1980) and applying the difference-in-differences method.



For decades, Black workers in the U.S. earned far less than white workers, even in the same jobs.

The 1938 minimum wage law excluded jobs mostly held by Black workers like domestic and agricultural work.



In 1966, the law was expanded, a core demand of the civil rights movement. Suddenly, 1 in 3 Black workers was covered.

The result: the Black-white pay gap shrank by over 20%.

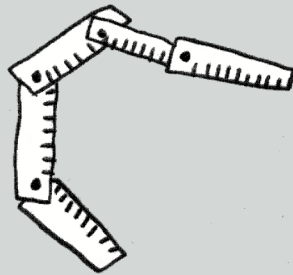


And no: it didn't cost jobs.

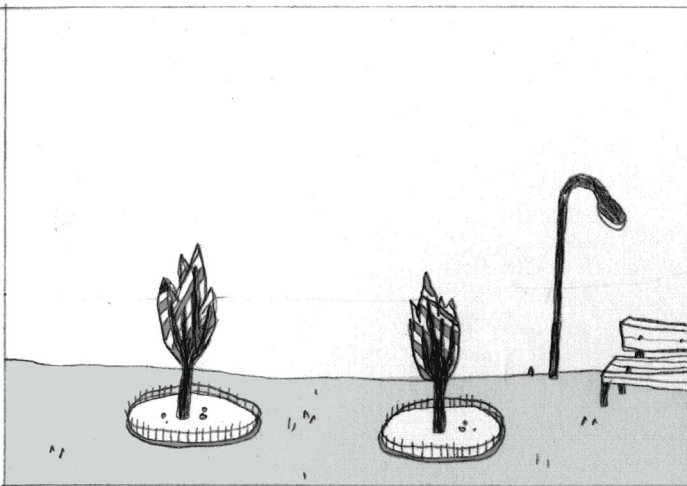
Some gaps can be closed by minimum standards.

9. Mentoring

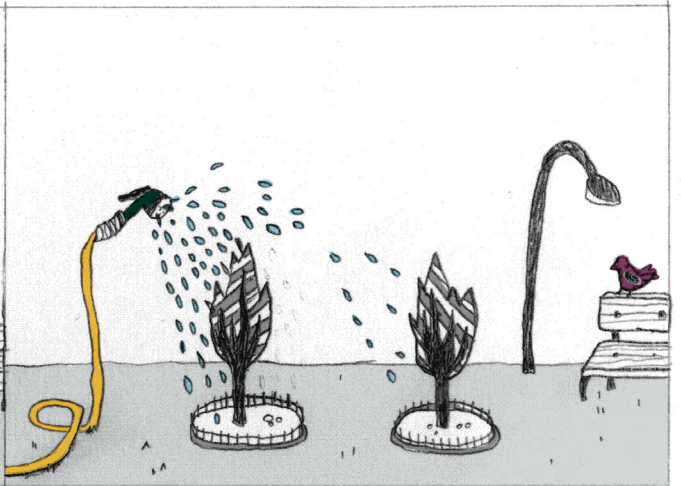
Sven Resnjanskij, Jens Ruhose, Simon Wiederhold, Ludger Woessmann & Katharina Wedel (2024). Can Mentoring Alleviate Family Disadvantage in Adolescence? A Field Experiment to Improve Labor Market Prospects. *Journal of Political Economy*, 132 (3): 1013–1062.



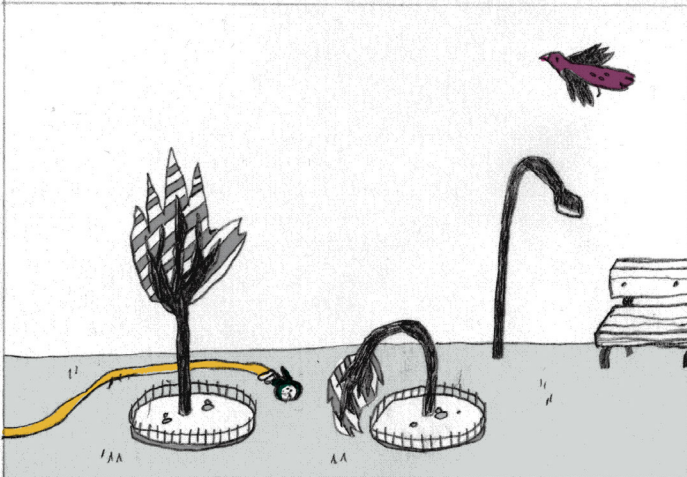
* In a randomized-controlled trial in Germany, researchers randomly assigned teenagers from disadvantaged and non-disadvantaged background to either a mentoring program or a control group. The study measured academic performance, self-confidence, social skills through surveys and standardized tests before and after the intervention.



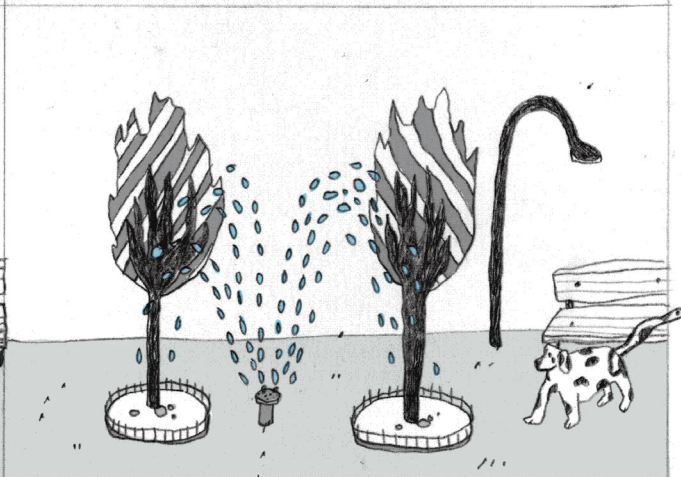
Children from disadvantaged backgrounds have lower chances at school and when entering into the labor market.



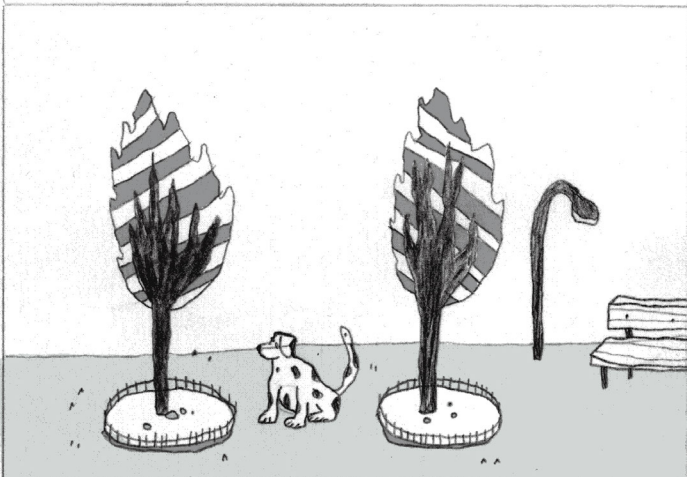
Academic success seems to rely as much on family support as it does on individual ability and effort.



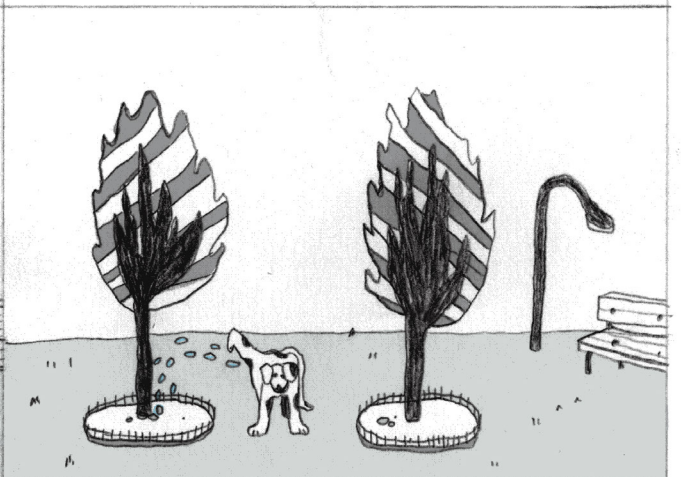
Researchers evaluated a program where randomly selected teenagers received one-to-one mentoring from university students.



The mentees showed significantly better grades, social skills and labor market orientation than teens in the control group.



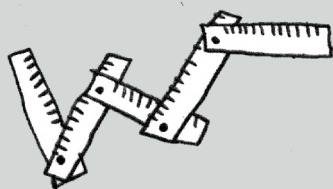
The mentoring effect was largest among teens from families with lower socioeconomic status, and persisted even after three years.



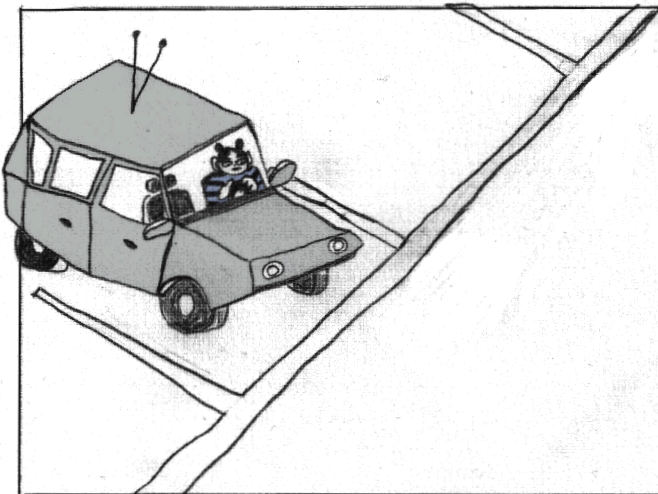
Targeted mentoring can boost social mobility.

10. Tutoring

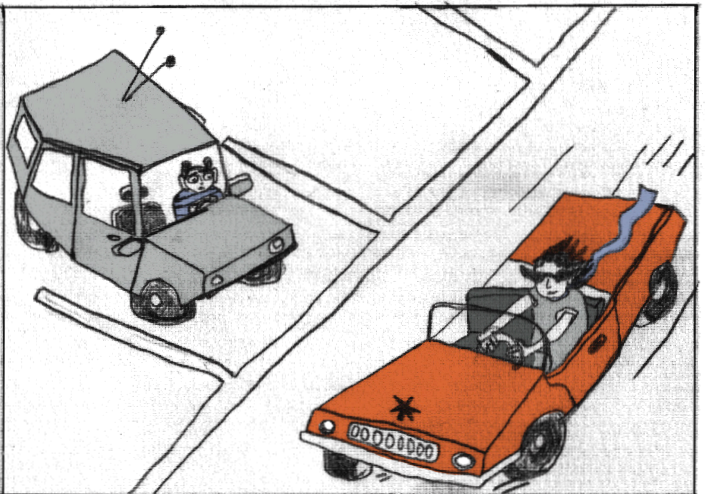
Jonathan Guryan, Jens Ludwig, Monica P. Bhatt, Philip J. Cook, Jonathan M. V. Davis, Kenneth Dodge, George Farkas, Roland G. Fryer Jr., Susan Mayer, Harold Pollack, Laurence Steinberg & Greg Stoddard (2023). Not Too Late: Improving Academic Outcomes among Adolescents. American Economic Review, 113 (3): 738–765.



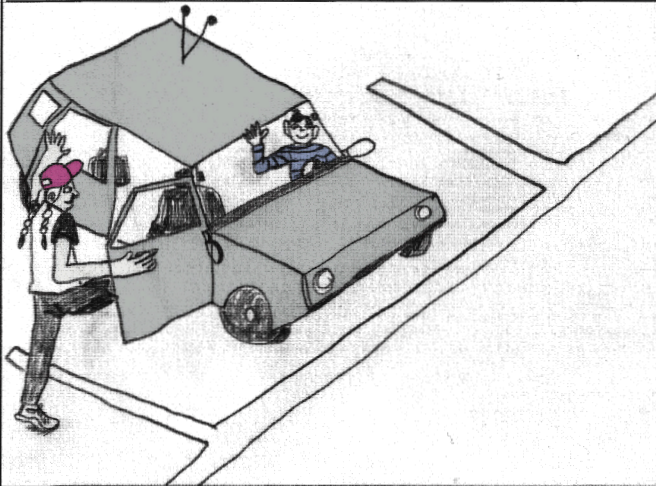
* The study analyzed data from 5,343 ninth- and tenth-grade students in Chicago public high schools between 2013 and 2015. It measured math test scores, grades, and course failure rates. The researchers conducted two randomized controlled trials providing daily 45–50 minute two-on-one math tutoring sessions by paraprofessional tutors.



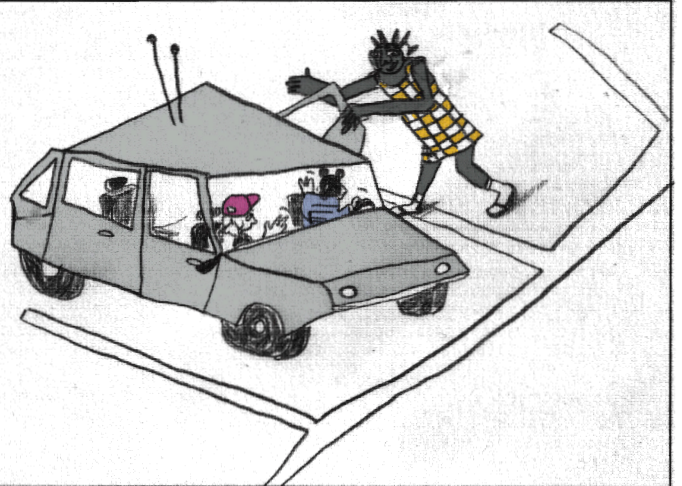
Many tough things in life get easier when you can ask for help the moment you're stuck.



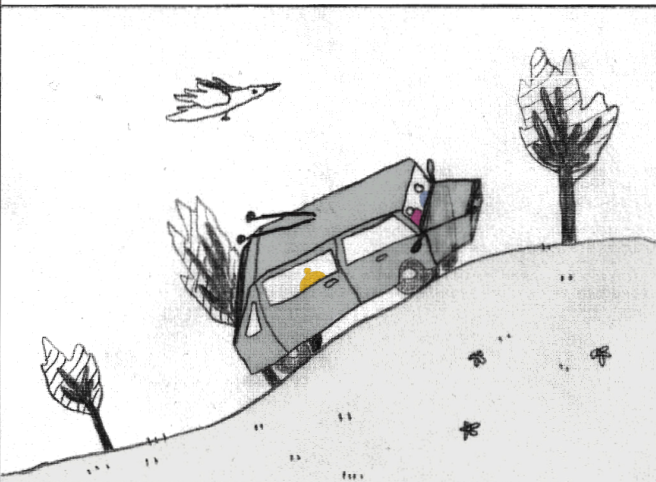
That's one reason why teens with highly educated parents often end up with better grades. And better jobs later on.



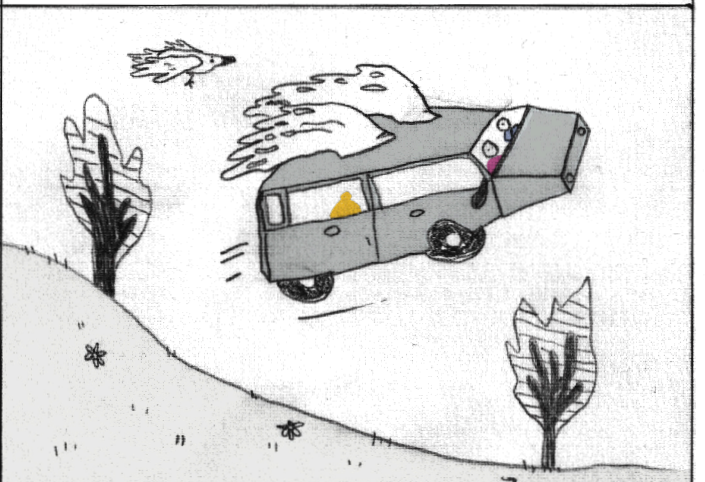
Fair? Not really. But a centuries-old method helps: Personal tutoring.



In one program, teens got daily math tutoring. Two students. One tutor.



And it worked: math grades improved by about half a grade. Failure rates dropped by nearly 50%.



Tutoring can lift you up, even later in life.

11. Standardizing Careers

Barbara Biasi & Heather Sarsons (2022). Flexible Wages, Bargaining, and the Gender Gap. *Quarterly Journal of Economics*, 137 (1): 215–266.

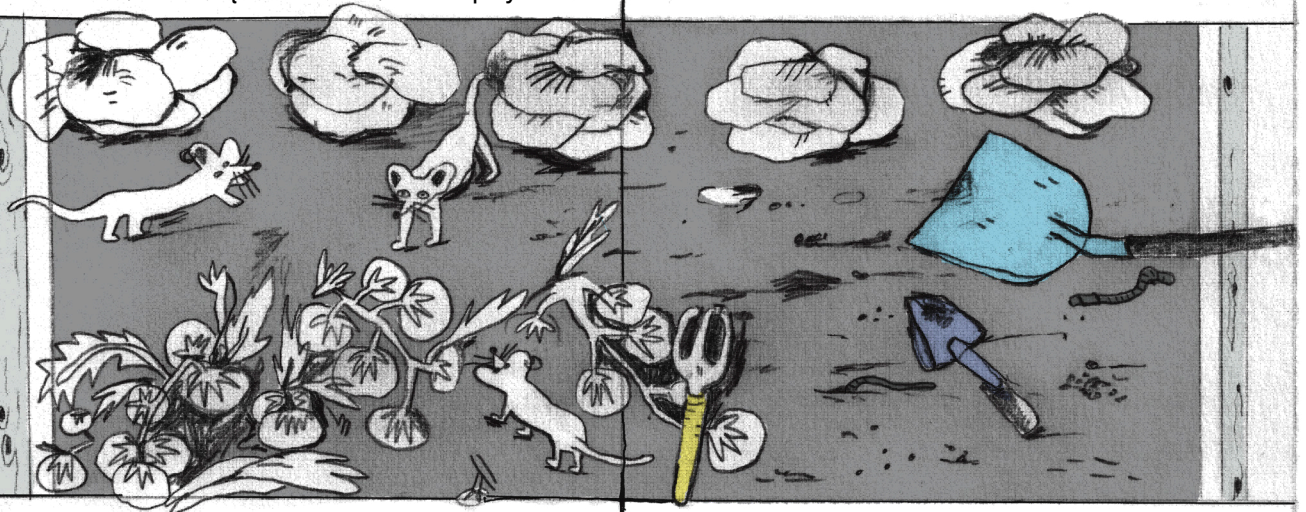


* Using administrative data on Wisconsin's public school teachers from 2006 to 2016, together with a statewide survey of about 10,000 teachers, the authors examined the outcome of gender pay gaps after the expiration of collective bargaining agreements. They applied event-study and difference-in-differences methods.



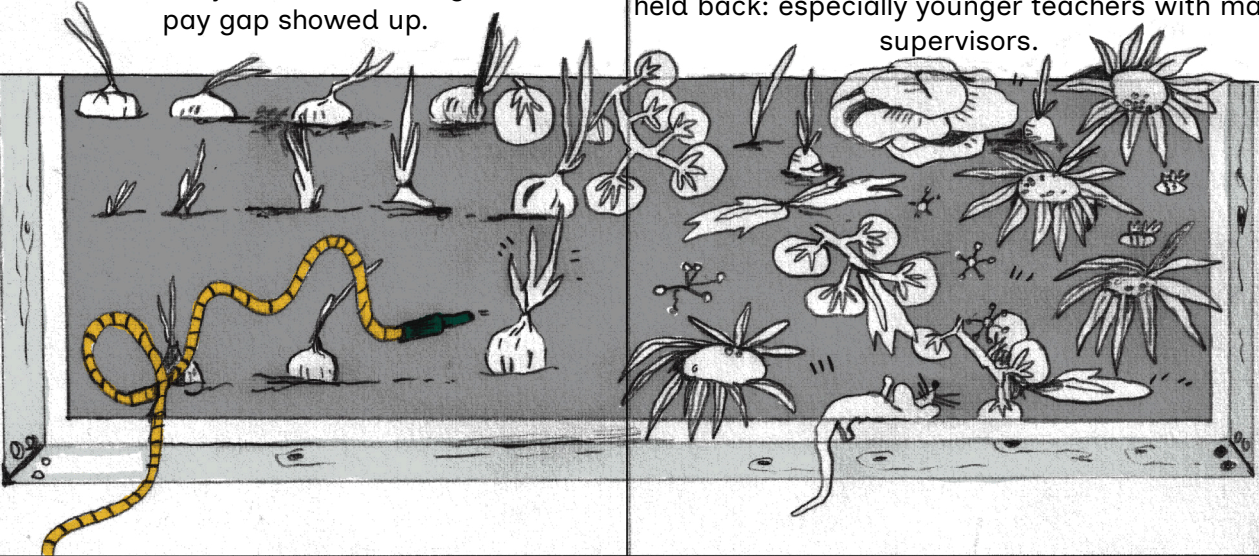
For years, teachers in Wisconsin were paid according to union-set schedules: same function, same qualification, same pay.

In 2011, a reform allowed schools to negotiate salaries with teachers individually.



And suddenly, the well-known gender pay gap showed up.

Men negotiated higher wages. Women held back: especially younger teachers with male supervisors.



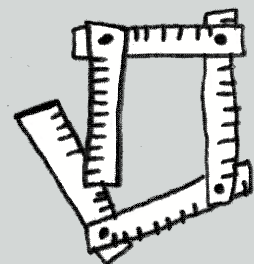
Without standards, privilege determines.

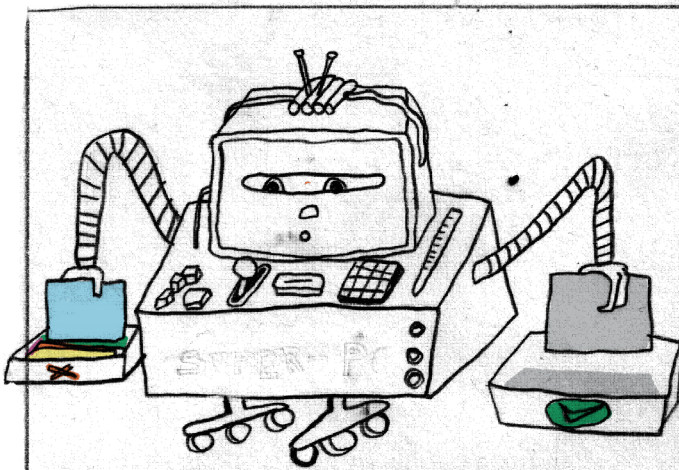
With standards, function and qualification does.

12. Exploring AI

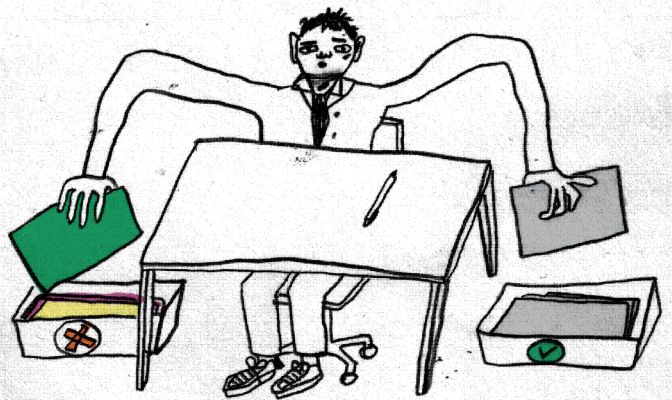
Danielle Li, Lindsey Raymond & Peter Bergman (2025). Hiring as Exploration. Review of Economic Studies, advance article: 1–41.

* The study analyzed 88,666 job applications submitted between 2016 and 2019 to a U.S. Fortune 500 professional services firm. It compared two résumé-screening algorithms, focusing on interview-to-hire rates and the demographics of hires. The supervised learning model predicted hiring success solely from past data, while the exploration model — a contextual bandit — combined predicted success with an exploration bonus for uncertain candidates.

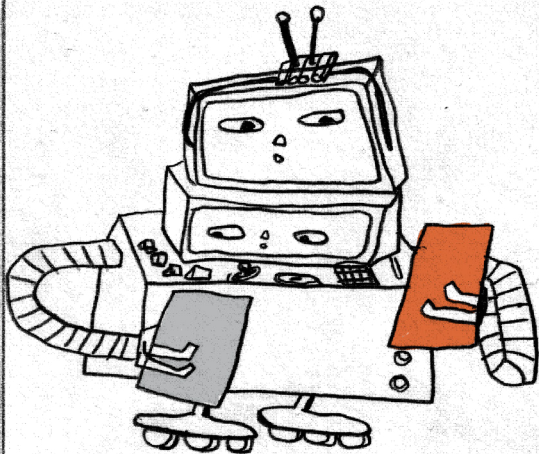




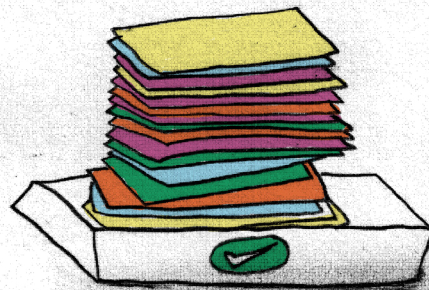
AI in hiring is controversial. Too often it just recommends the “same as always” type of candidate.



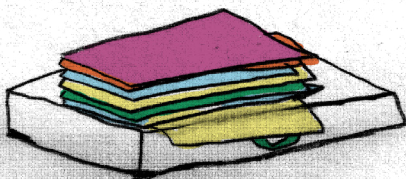
Humans are not fairer. We often ignore stronger candidates based on “gut feeling.”



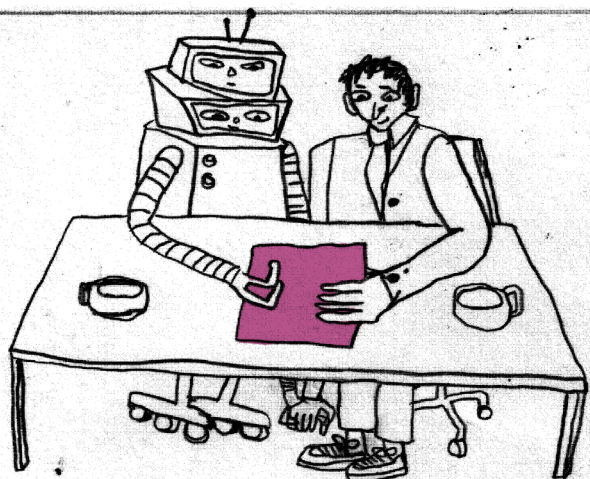
Standard AI learns from past hiring data and copies past bias.



Researchers tested a new algorithm: it gave extra chances to underrepresented candidates. More of them got invited and many proved strong.



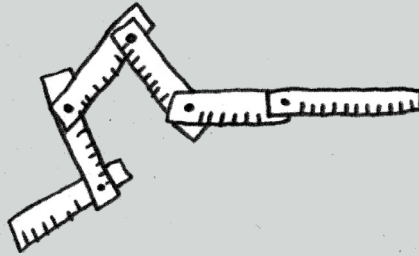
Result: The interview-to-hire rate tripled (27% vs. 10% humans). Minority share rose to 15% (vs. 10% humans and 5% standard AI).



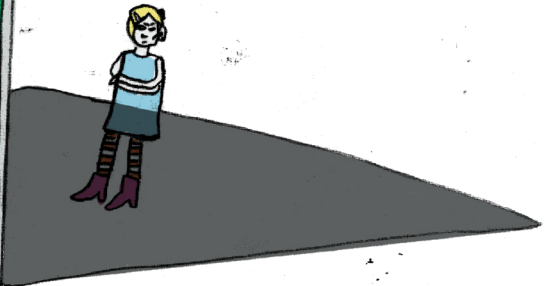
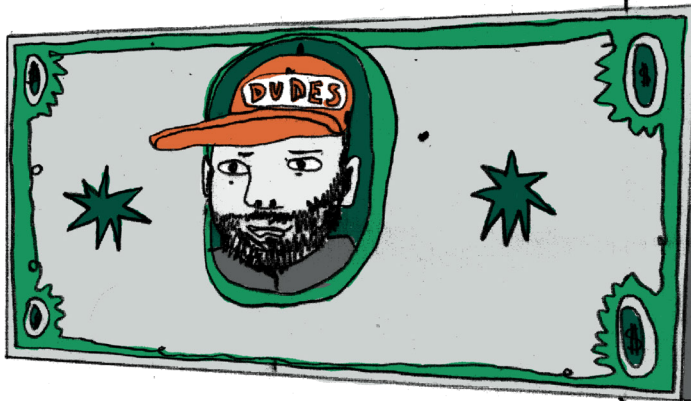
Exploring AI can reveal hidden potential and make hiring more efficient. Depending on desire, design and data.

13. Granting Financial Control

Erica Field, Rohini Pande, Natalia Rigol, Simone Schaner, and Charity Troyer Moore (2021). On Her Own Account: How Strengthening Women's Financial Control Impacts Labor Supply and Gender Norms. *American Economic Review*, 111 (7): 2342–75.



* The study is based on a randomized field experiment in 197 villages in rural India with 5851 eligible couples.



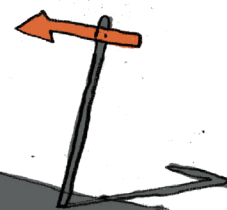
Sometimes, people are held back in the labor market, because there are strong ideas of who should have a job and who shouldn't.

Well, those norms are responsive, as researchers detected in rural India.



They motivated women to take a job by giving them (a) their own bank account, (b) training in using the account and (c) wage deposits on their account (instead of their husband's).

And indeed, those women who received the training and the deposit were employed more often than women who only got an account.

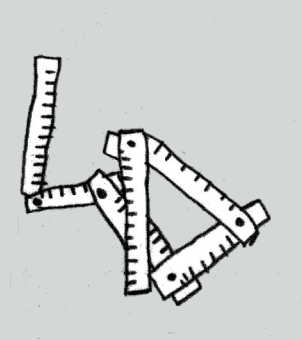


Over time, the empowered women even adapted their norms about working and what they perceived as accepted behavior.

Granting financial control helps to liberate female employment from norms.

14. Fixing Beliefs

Leonardo Bursztyn, Alessandra L. González & David Yanagizawa-Drott (2020). Misperceived Social Norms: Women Working Outside the Home in Saudi Arabia. *American Economic Review*, 110 (10): 2997–3029.



* The researchers first ran a survey to find out about men's private support of women working outside the home in Saudi Arabia. They then used the survey result in an experiment where they informed only one half of the participants about the agreement rate and observed whether the behavior changed in comparison to the uninformed control group.



Women in Saudi Arabia need their husband's consent to work outside the home, as was the case in Germany until the 1970s.



Interestingly, most Saudi men support the idea that their wives work outside, but very few women actually do...



...so researchers asked, whether men underestimate other men's support and whether fixing their beliefs would increase women's work.



They gave one group of men the true agreement rate with women's work (87%) and left the other group uninformed.



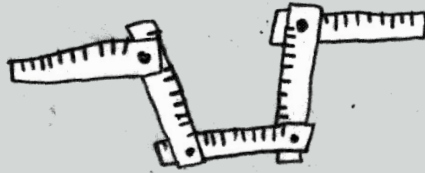
Those who learned the truth signed their wives up for a job matching program more often (by 36%) and - after a few months - their wives had applied for a job more often (almost doubled).



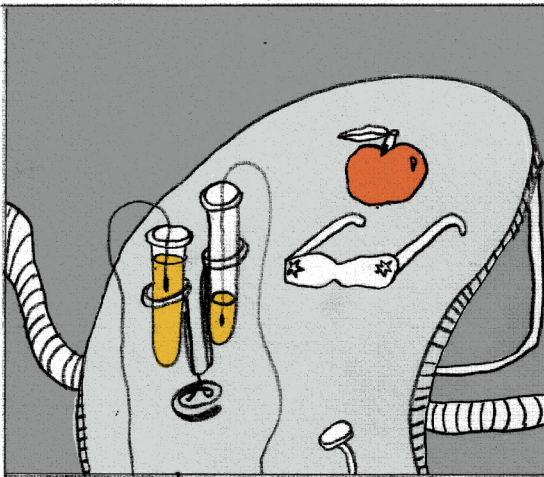
Yes, it does.

15. Generating a Sense of Fit

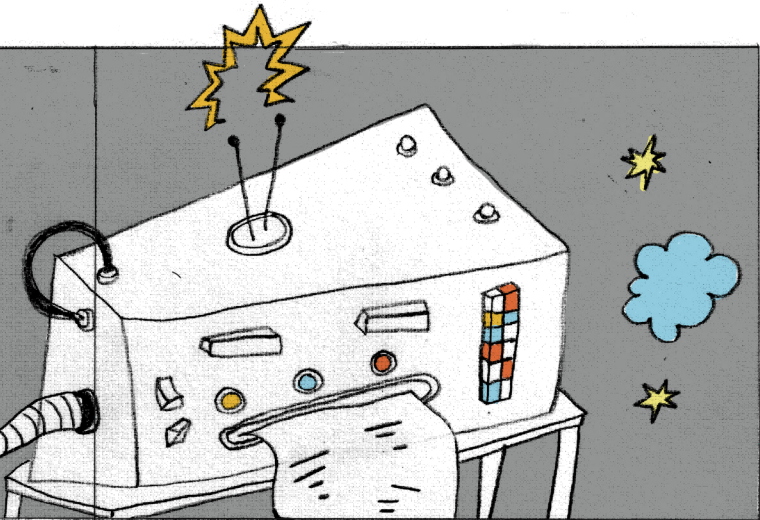
Thomas Breda, Julien Grenet, Marion Monnet & Clémentine Van Effenterre (2023). How Effective Are Female Role Models in Steering Girls Towards STEM? Evidence from French High Schools. *Economic Journal*, 133 (653): 1773–1809.



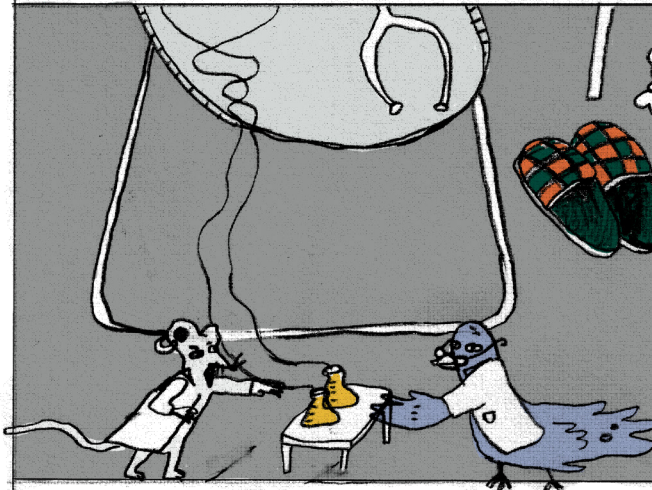
* The researchers studied classroom interventions in a field experiment in France. About 3000 high school students in grade 10 and 12 were exposed to 56 female role models working in a science-related job.



Female employees are underrepresented in high paying occupations, esp. in STEM (science, technology, engineering, math).



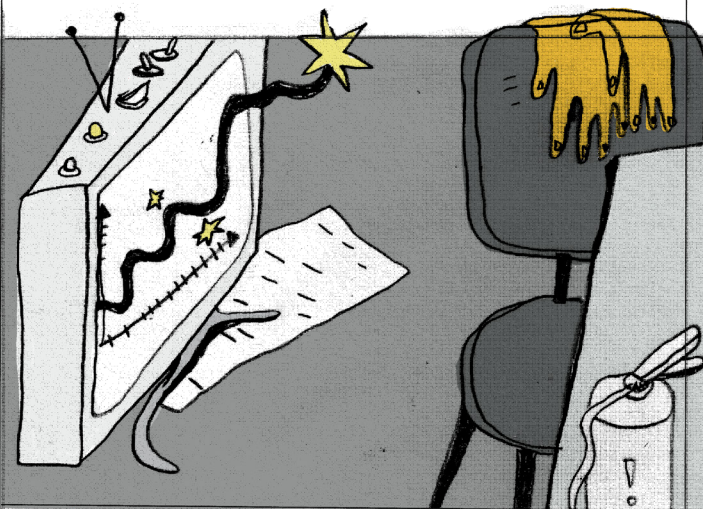
In France, female science professionals and researchers shared their experience in STEM jobs with randomly selected students in high schools.



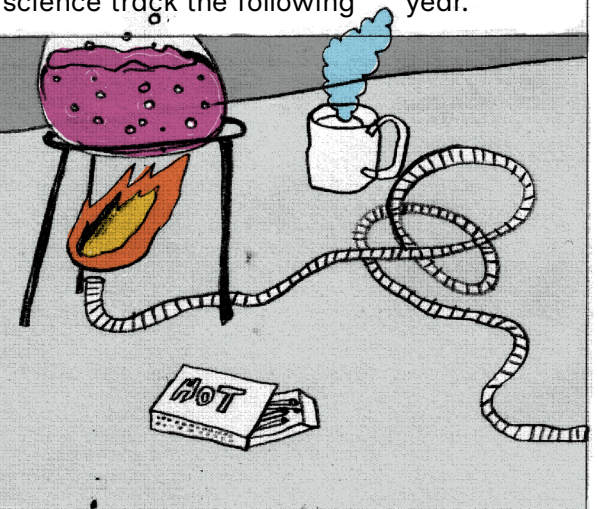
Afterwards, these students perceived gender roles in science differently.



Particularly female students perceived a career in science more positively and more often chose a science track the following year.



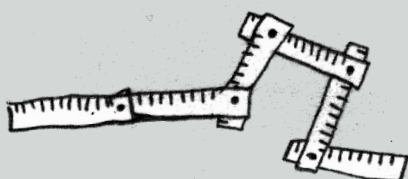
Professionals were more effective than researchers in carrying this positive image.



So, role models help generating a sense of fit (more than emphasizing under-representation).

16. Shifting Union Priorities

Viola Corradini, Lorenzo Lagos, Garima Sharma, Collective Bargaining for Women: How Unions Can Create Female-Friendly Jobs, *The Quarterly Journal of Economics*, Volume 140, Issue 3, August 2025, Pages 2053–2105.

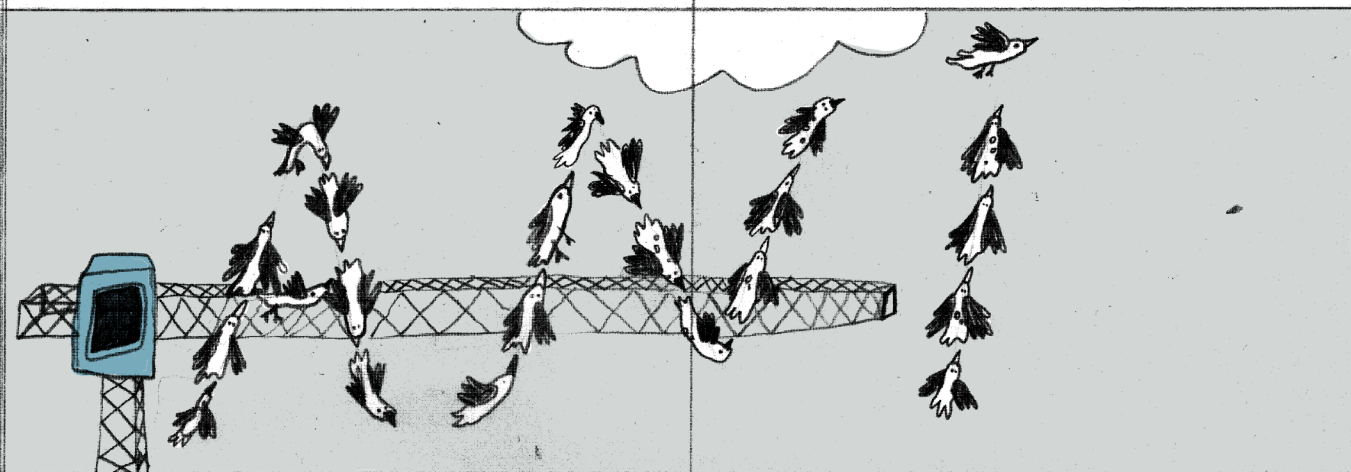


* Using a difference-in-differences design that exploits variation in union affiliation with the federation, the study evaluates the impact of “bargaining for women” on female-friendly amenities in collective bargaining agreements and workplace practices in Brazil. Outcomes are measured using job queueing behavior and separation rates, as well as firm-level data on wages, employment, profits, turnover, and absenteeism for 4409 unions with 211,569 collective bargaining agreements.



Employees join forces in unions to bargain for better working conditions and pay.

As the majority of employees are men, male interests are usually prioritized.



In 2015, the largest trade union federation in Brazil shifted its focus to bargaining for women.

This increased female friendly job amenities such as working time without lowering wages or firm profits.

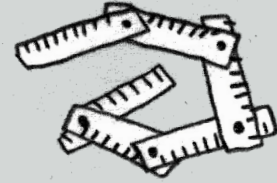


Firms that offered these amenities were more demanded by women: more applications and fewer quits.

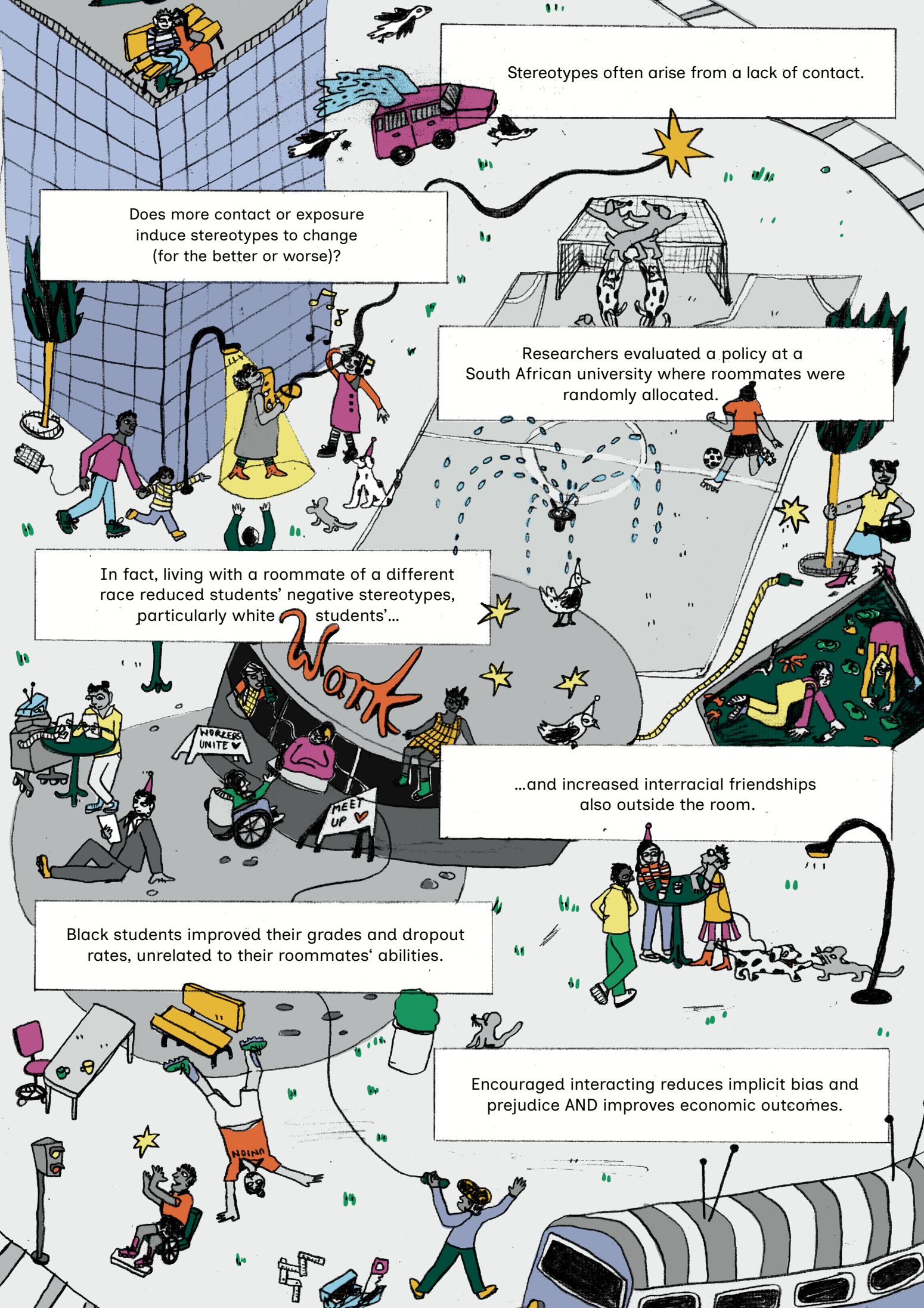
Win-Win: Shifting union priorities improved workplaces without meaningful trade-offs and benefited both workers and employers.

17. Interacting

Lucia Corno, Eliana La Ferrara & Justine Burns (2022). Interaction, Stereotypes, and Performance: Evidence from South Africa. *American Economic Review*, 112 (12): 3848–3875.



* The study exploits a university housing policy that randomly assigned first-year students to double rooms at a large South African university in 2012 to examine how interracial interaction affects stereotypes, attitudes, and academic performance. Data were collected through three survey waves, implicit association tests (IATs), and laboratory experiments.



Stereotypes often arise from a lack of contact.

Does more contact or exposure induce stereotypes to change (for the better or worse)?

Researchers evaluated a policy at a South African university where roommates were randomly allocated.

In fact, living with a roommate of a different race reduced students' negative stereotypes, particularly white students'...

...and increased interracial friendships also outside the room.

Black students improved their grades and dropout rates, unrelated to their roommates' abilities.

Encouraged interacting reduces implicit bias and prejudice AND improves economic outcomes.

GLOSSARY

How Research Proves What Really Works

To prove what really works, you would like to see the same person in two parallel worlds at the same time: one world with a change or an intervention, one world without. Since this is impossible, we need research methods to construct a hypothetical world that comes as close as possible to this parallel concept.

Building a convincing hypothetical world is challenging, though.

Anecdotes like “my grandfather smoked and lived to 86” must fail because they ignore the possibility that he might have lived even longer without smoking and because robust conclusions need more than single data points. Another challenge is to find a suitable comparison group.

Creating a hypothetical world that reveals true causation (X leads to Y) rather than mere correlation requires careful design.

This is how science evolves: it gets better in designing these hypothetical worlds.

The following methods show how the studies presented in this comic constructed their hypothetical worlds. While these are all respected approaches, it is always wise to ask: How well was this hypothetical world built? Do the data and methods create a convincing case? Your critical perspective matters in determining how much trust you place in the findings.

Randomized Controlled Trial (RCT)

Researchers randomly assign participants to treatment and control groups and only the treated experience an intervention. The hypothetical world is: the control group that continues without an intervention.

Difference-in-Differences

Researchers compare two groups before and after (difference-) a change that affects only one of them (in-difference). The hypothetical world is: the group that didn't experience the change.

Laboratory Experiment

Researchers test interventions with participants (mostly students) in a laboratory. The hypothetical world is: participants who don't receive the intervention.

Field Experiment

Researchers test real-world interventions with real-world people (instead of students). The hypothetical world is: those who don't receive the intervention.

Fixed-Effects Model

Researchers track the same entities (people or firms). The hypothetical world is: the same entity in a state where the intervention never happened, while all its inherent traits are held constant (fixed).

Regression Discontinuity & Event Study

Researchers analyze outcomes around specific cutoffs or events. The hypothetical world is: those just below a cutoff, or the expected trend without the event.

Correspondence / Audit Study

Researchers send out nearly identical applications differing only in one trait. The hypothetical world is: applicants with the reference trait.

Roy Model

Researchers analyze real-world labor market data and compare it to a simulated scenario without discrimination or barriers. The hypothetical world is: how jobs would be allocated if only skills and comparative advantage mattered.

Implicit Association Test (IAT)

Researchers measure automatic mental associations through response times.

The hypothetical world is: responses unaffected by unconscious bias.

Text Analysis & Machine Learning

Researchers use algorithms to detect patterns in language.

The hypothetical world is: what standard or conventional language would predict.

Exploration Algorithm (Bandit)

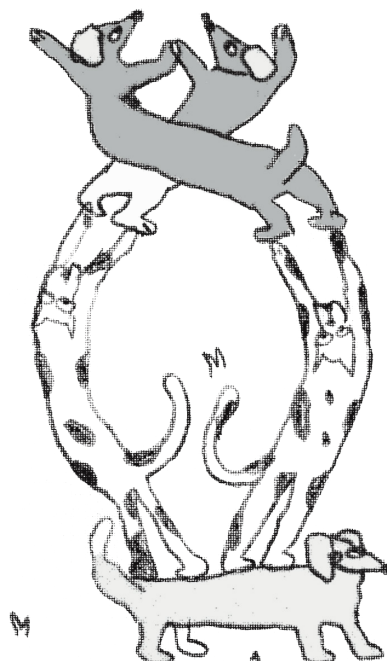
Researchers use AI that balances predicted success with uncertainty.

The hypothetical world is: an AI that only replicates past (human) decisions.

Structural Estimation

Researchers combine theory with observed real-world decisions.

The hypothetical world is: simulated choices under different conditions.



ABOUT US

Miriam Beblo

Professor of Economics.
She is engaged in empirical analyses of labor and family policy. Loves bringing evidence into practice — and art.

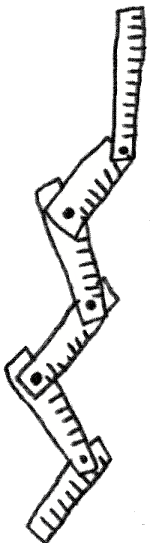
Get in touch: miriam.beblo@uni-hamburg.de
More: www.wiso.uni-hamburg.de



Zoe Branczyk

Illustrator and Comic Artist.
She lives in Mainz where she spends her time drawing, making up strange stories, thinking about sheep and walking by the water.
She has worked with multiple musicians and labels.
In her work, she likes to keep social and political issues in mind. Zoe is an active Member of the Bühne für Menschenrechte e.V.
There is always room to learn.

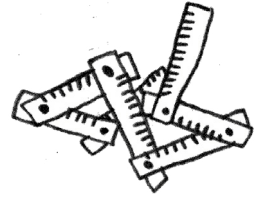
Get in touch: zoeczyk@gmail.com
More: zoebranczyk.com



Julia Schneider | Doc J Snyder

Comic Essayist & Labor Market Economist exploring AI, society & complexity. Her work moves between analysis and imagination, using textual density and art to make systems of work, technology, and power visible. With a PhD in economics and experience in AI consultancy, she turned to artistic research to explore what happens in between disciplines and perspectives. Her works have been shown in museums and media across Europe and often emerge in collaboration with other artists and researchers.

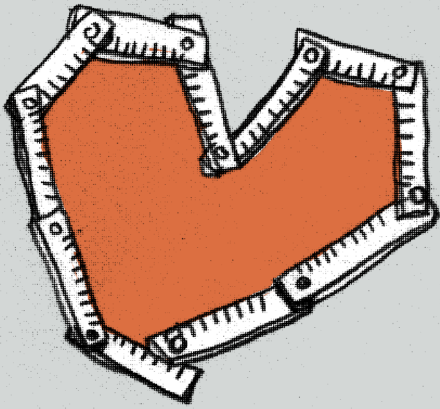
Get in touch: hello@docjsnyder.net
More: docjsnyder.net



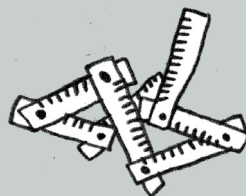
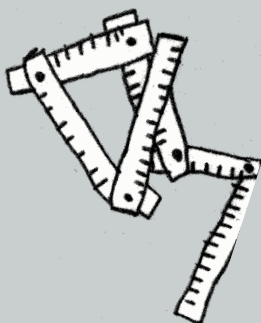
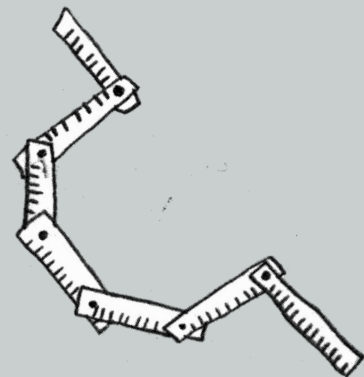
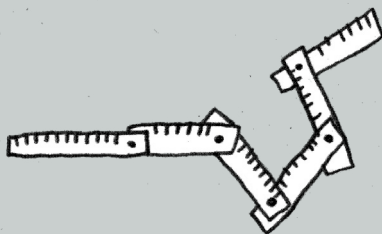
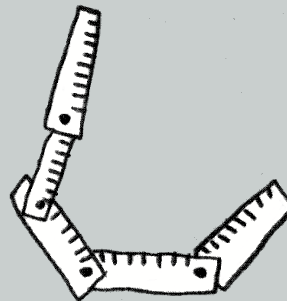
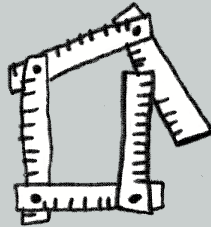
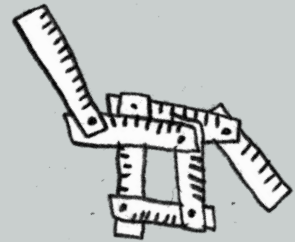
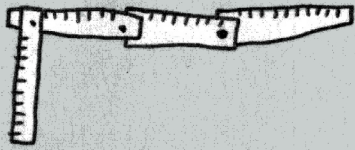
I understand that people are tired of complexity and long for simple answers. I do too.
Our comic offers a simple answer grounded in research:
Homogeneity will not save us.

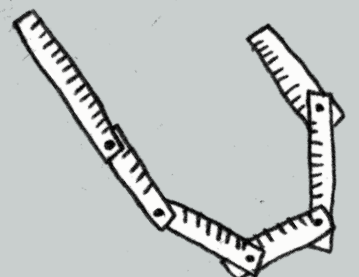
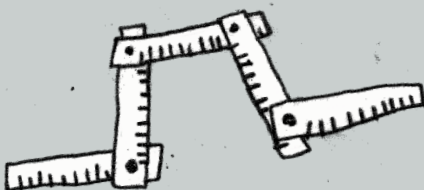
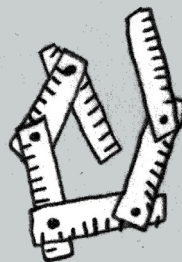
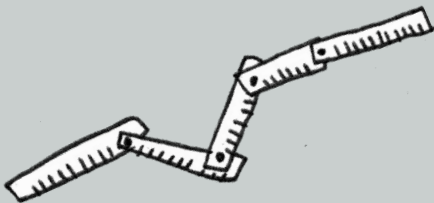
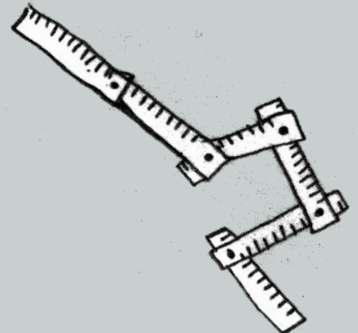
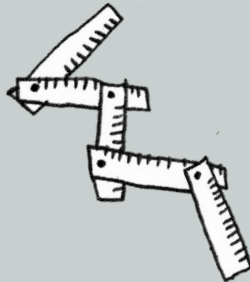
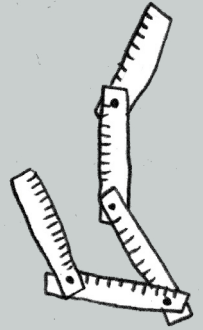
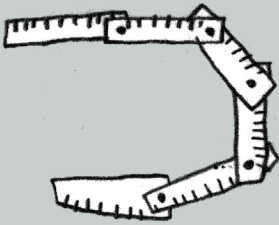
Through art, we present some of that research while acknowledging that the world producing this knowledge, economics, academia, and even the three of us authors, is not exactly a model of diversity itself.
At the same time, those seemingly rigid identities (“women”, “men”, “the disadvantaged”, “the privileged”...) are fluid.
Still, they carry real weight in the world.
The challenge is to work with these categories while remembering that our identities exist on a spectrum.

I don't understand it all and all I can do is try to unlearn and discover little by little.
There is a big gap in data, and data's language.
Working on this project has made it more than clear.
It kept on helping me to acknowledge and question my own position. Therefore we tried to break it up, in words and visually. Always knowing that we, as a group, are also not the most diverse. Privilege should be shared.
How lucky am I to do what I love most, call it a job, call it work (at least part-time) and get to connect with so many people to pick up knowledge from.



This book is dedicated to our mentors, teachers and
collaborators, research assistants and editors,
the ones who feel like home,
and to all who weave with us the enduring fabric of
collective strength.



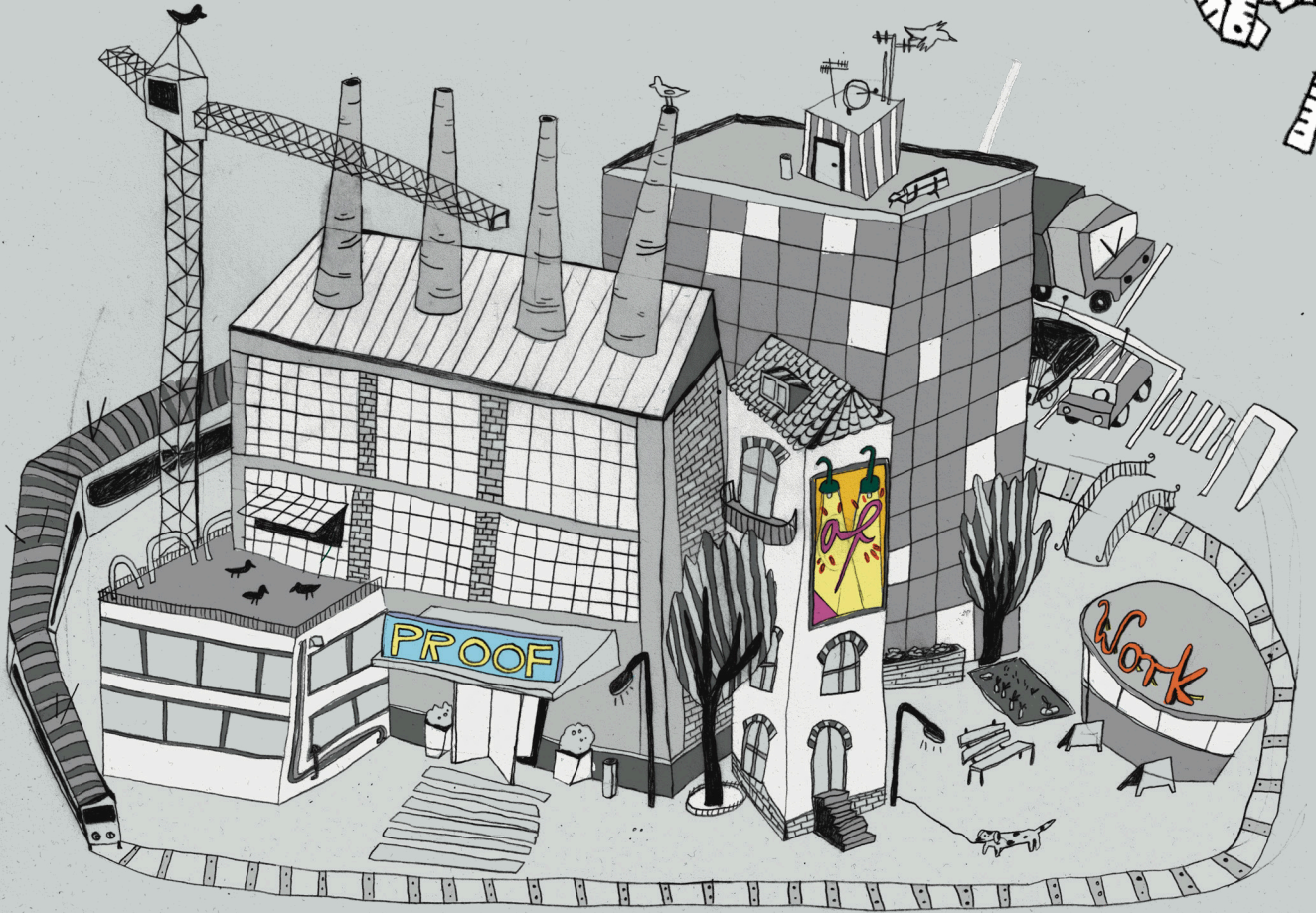
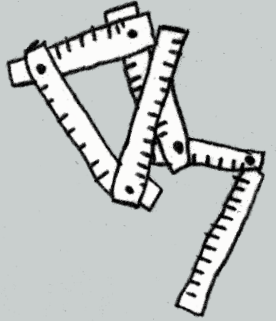


“A comic for forward thinking leaders that want to understand in an easy and fun way how to leverage and attract global talent.”

Janina Kugel, Non Executive Director and Senior Advisor

“Proof of Work is a wake-up call for every leader — it shows how smarter, fairer workplaces unlock both productivity and innovation.”

Prof. Dr. Dr. h.c. Monika Schnitzer, Chairwoman of the German Council of Economic Experts



Today, diversity is often framed as a problem, not a solution.
But data and research say otherwise.

In this comic, we present **Proof of Work**: literal proof (empirical evidence) of tools that make labor markets work better and fairer. To level the playing field. And to build on every talent. Because exclusion isn't just unfair, it's inefficient.

This is either:

- Your new toolkit, backed by top academic journals
- The perfect gift for anyone curious about labor markets and how they can work better for everyone
- A showcase how hard science meets comic to offer an understanding of structures and power

