## The Glorious Future of WFH

## John R. Raben/Sullivan \& Cromwell Fellow Lecture at Yale Law School

Nick Bloom (Stanford)

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Three Section Talk (with a food theme ©)
>>>> Data: The New Normal in WFH
>>>> Managing WFH: The Hybrid Squeeze
>>>> Economics: Three impacts

## WFH is stabilizing at about 28\% of days: a 5-fold jump vs 2019

US full days worked from home, \%


Source: $\quad N=147,412$
(SWAA) $\quad N=432,904$ (HHP). SWAA data from survey responses weighted to match the US population. Pre-covid data from the American Time Use Survey. CHPS respondents weighted to match the US population aged 20 to 64 in households with incomes above $\$ 25,000$.

Survey
of Workplace Attitudes and Arrangements (Barrero, Bloom and Davis 2021) https://wfhresearch.com/

## Office occupancy also stabilizing at about 50\% of 2019 levels

Kastle office occupancy data


## Globally WFH is highest in North America, UK and Australasia, then Europe, Latin America and South Africa and then Asia



Employees are split into three groups - most firms have some of all


## WFH particularly high in tech and (to a lesser extent) finance

Current WFH: all wage and salary employees by industry



Source: Responses to the questions:

- Currently (this week) what is your work status?
- For each day last week, did you work a full day ( 6 or more hours), and if so where?

Notes: For each wave, we compute the percent of paid full days worked from home in the SWAA. The horizontal-axis location shows when the survey was in the field. The preCOVID figure is from the 2017-2018 American Time Use Survey. Before November 2020, we asked the first question above. Since November 2021, we have asked the second question. From November 2020 to October 2021, we back-cast responses to the current question using a regression model based on current-question responses and another question (not shown). We re-weight the sample of US residents aged 20 to 64 earning $\$ 10,000$ or more in 2019 or 2021 to match CPS shares by age-sex-education-earnings cells. $\mathrm{N}=143,410$

## The big WFH gap is in education: college grads have $\approx 2 x$ non-grads



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$\mathrm{N}=143,511$

SWAA data from May 2020 to June 2023
Smoothed with a 3 month centered moving average

Also see a hump-shape over the life-cycle in WFH levels and desires
Percentage of desired paid full days worked from home


Source: Full days worked from home as a percent of all paid workdays by age group in the Survey of Working Arrangements and Attitudes (Barrero, Bloom, and Davis, 2023b). We drop respondents who fail our attentioncheck questions.

[^0]$N=102666$

Four Key factors driving WFH choice (focus on the first two - the key drivers)

1. Happiness ( $\rightarrow$ recruitment and retention)
2. Productivity
3. Space
4. Talent

## Happiness: Employees like hybrid about as much as $8 \%$ more pay...



Source: Data from 17,087 responses through 2021, reweighted to match US population. Industries with 1000+ respondents. Details on https://wfhresearch.com/

## Results for one recent RCT on 1612 engineers, marketing and finance professionals found WFH reduced quit rates 35\%

Hybrid WFH lowered employee quit rates by 35\%

Tweets
Tweets \& replies
Media

Nick Bloom @I_Am_NickBloom • Jul 25
New RCT on 1612 employees, finding hybrid \#WFH

1) Reduced quit rates by $1 / 3$
2) Shifted hours from WFH days to office days \& weekends
3) Increased messaging and video calls (even in the office)
4) Generated a small productivity increase

Paper: bit.ly/3J4rL5|


Source: Attrition rates for 1612 engineers, marketing and finance professionals of Trip.com who were randomized between September 2021 and February 2022 by even and odd birthdays into control ( 5 -days a week in the office) and treatment (Mon, Tue and Thur in the office; Weds and Fri working from home). Difference statistically significant at the $5 \%$ level. Details in Bloom, Han and Liang (2022) "How Hybrid Work from Home Works Out".

Productivity: Fully-remote studies find range of impacts from -30\% to +13\% (average about -10\%), Hybrid appears to have about a flat impact

Fully Remote


Organized Hybrid (e.g WFH Mon \& Fri)


## WFH employees save 60 minutes a day on less commuting, and another 9 minutes a day on less personal grooming



Percent who shave when:


Percent who wear fresh clothes when:


Percent who put on makeup when:


Percent who brush their teeth when:


Percent who use deodorant when:


Space: Fully remote saves a lot of space (hybrid maybe a little), with space costs typically being about $10 \%$ to $20 \%$ of labor costs


Wages: Talent is cheaper in lower income areas, so fully-remote provides large wage savings (hybrid some from wider catchment area)

Across Countries


Across US States


## Hybrid looks great overall assessment for professionals that can WFH

|  | Fully in person | Organized Hybrid | Fully Remote |
| :---: | :---: | :---: | :---: |
| Happiness | \％ |  | 安 |
| Productivity |  | 事家安 | 家 |
| Rent | 俋 | \％ | 豳安安 |
| Talent | \％ | 为事 | 为为为 |

Conclusion：
A）Full 5－day in－person for professional is rare－dominated by organized hybrid
B）Hybrid vs Remote is about trade－offs－e．g．innovation and mentoring vs costs
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## Hybrid: Coordination - office benefits are being with co-workers

Qu: "What are the top three benefits of working on your employer's business premises?"


Notes: \begin{tabular}{r}
Among <br>

workers that | have |
| ---: |
| home | <br>

work-from | experience during the |
| :--- | <br>

COVID-19 pandemic. <br>
Responses to the <br>
question "What are the <br>
top benefits of working <br>
on your employer's <br>
business premises? <br>
Please choose up to <br>
three". Sample of <br>
N=20,732 workers in <br>
34 countries surveyed <br>
in April-May 2023. All <br>
values are available at <br>
https://bit.ly/Figures- <br>
GSWA-2023 <br>
\hline
\end{tabular}

## So large firms mostly planning team or company coordinated hybrid

Qu: "Who decides which days and how many days employees work remotely?"


Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business.

## Generating the hybrid squeeze of days into Tuesday to Thursday



Source: Flex Index (flex.scoopforwork.com) employee surveys and publicly available data on companies with a specific day / week office requirement. $\mathrm{N}=229$ companies. The Flex Index is presented by Scoop (scoopforwork.com).

Offices are being updated to support social office time - people mostly come to the office for in-person meetings, training and events

Massed offices and desks are out


Video-cubes and meeting spaces are in


## Strong performance reviews are critical for managing WFH

- Office employees can be (partly) evaluated by observing inputs - hours \& activity
- WFH employees instead need outcome evaluation - data, assessments \& discussion
- Importantly this is not surveillance, but "outcome" performance reviews



## So, how Leaders Can Make the Most of Hybrid WFH

1) Coordinate your team to come in on the same 2 or 3 days each week (eg T, W \& Th)
2) Promote in person meetings, events, coffee, training, lunches on those office days
3) Suggest cross-office zoom meetings and reading, writing, data etc on home days
4) Treat anchor day attendance like 2019 in person attendance - exemptions only for emergencies like a sick child, burst water pipe or illness.
5) Ensure there are strong output focused performance evaluation tools
6) For new hires (< 1 or 2 years) add an extra day in the office for mentoring

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## 1) The Donut Effect: almost 1m people have left US big city centers

Cumulative net flows Feb 2020 - June 2023 as \% of population


Source: Arjun Ramani and Nicholas Bloom "The Donut Effect", NBER Working Paper 2021 (updated 2023) using US Postal Service Change of Address Data https://nbloom.people.stanford.edu/sites/g/files/sbiybj4746/f/w28876.pdf

## Donut flight from big cities has stopped, but is not reversing

Top 12 US cities, monthly cumulative net population flows


## The Donut-Effect is also boosting suburban retail spending

MasterCard spending change heat map


Top 12 largest US cities retail spend, city center less suburb


## This Donut Effect on retail spending is a global phenomenon



## London



Major global cities sample ( $\mathrm{N}=118$ )


Notes: Constructed using Mastercard spending data. Each spending index is normalized such that the average 2019 value is 100; thus the difference has an average value of 0 in 2019. The level of the index can be interpreted as the relative growth of the city center vs the outer ring. Source Ramani, Alcedo and Bloom (2023)

## 2) Employees are living further from work



## Employees in their 30s are particularly living further from work



## Most of this is new hires - WFH has expanded firm's hiring circle



Notes: The sample contains employees of 5,793 firms in a balanced panel of firms in the Gusto payroll data. Employeelevel data are reweighted to match the CPS distribution by (age bin) X sex X major industry. Source: Authors' calculations using Gusto data.

## (3) "Golf effect" - weekday leisure boom



Note: Data for August 2019 and August 2022 for a sample of trips. Those included are trips in the INRIX database, which includes trips in vehicles with GPS and phones with location tracking turned-on. The trip needs to be to one of the 3,400 satellite identified gold courses and to have lasted more than two hours. We estimate we sample about $5 \%$ of total golf trips.

...the weekday increase happened throughout the day - for example a 178\% increase at 3pm on Wednesday


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## The "Golf-effect" will boost weekdays for many 'leisure' activities



## What about the FUTURE

.....I see a "Nike Swoosh"


Nicholas Bloom predicts a working-from-home Nike swoosh Firms, employees and society will all benefit, reckons the Stanford economist


## Technology effects - WFH is getting better at an accelerating pace

Share of New Patent Applications Supporting WFH


[^1] Davis, and Yulia Zhestkova. 2021. "COVID-19 Shifted Patent Applications toward Technologies that Support Working from Home."


New WFH technologies are being rapidly developed as the market for WFH products has increased $5 x$

For example, scheduling software, AV, virtual reality and holograms

Should continue to improve WFH


## US Employers agree - they predict rising WFH levels



## U.S. Executives Expect Remote Work to Keep Increasing

Management doesn't expect a return to pre-pandemic office life.

What share of your firm's full-time employees are in each category?


## Conclusions

1. WFH is here to stay, typically 2 days a week
2. Key to succeed is coordination so employees are in work together
3. Offices are being designed to focus on social working together

## Additional Slides

## There is a wide variation in what employees want...



Sample: Full-time wage and salary employees who are able to WFH. $\mathrm{N}=11439$

The graph back to 1965 shows the size of the pandemic-era WFH jump
Historical WFH share


WFH days doubling every 15 years prepandemic, so the 6fold pandemic increase is equal to 40 years of prepandemic growth.

# Female WFH employees save 12 minutes a day on less personal grooming and male WFH employees 7 minutes a day 



## But worth noting enforcement of office days is not always easy

What happens when employees stay home on office days


Notes: SWAA participants asked "How has your employer responded to employees who work on business premises fewer days than requested?" over June to September 2022 re-weighted to match US working population 20 to 64. $\mathrm{N}=$ 17,875. www.wfhresearch.com SBU participants asked "Currently, how does your firm deal with employees who work fewer days on business premises than required by company policy?" in September 2022 reweighted to match US firms. N= 335. www.atlantafed.org/SBU

Percent of respondents


[^0]:    Data pooled from January 2022 - February 2024.

[^1]:    Source: US Patent and Trademark Office new patent application files. Details in Bloom, Nicholas, Steven J.

