# Battling Biases and Bottlenecks in Recruiting Using Data Science and Decision Science

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# TapRecruit uses NLP to understand and organize natural language career content

#### **Smart Editor for JDs**



Data-driven suggestions on both the content and language use in job descriptions.

#### Pipeline Health Monitoring



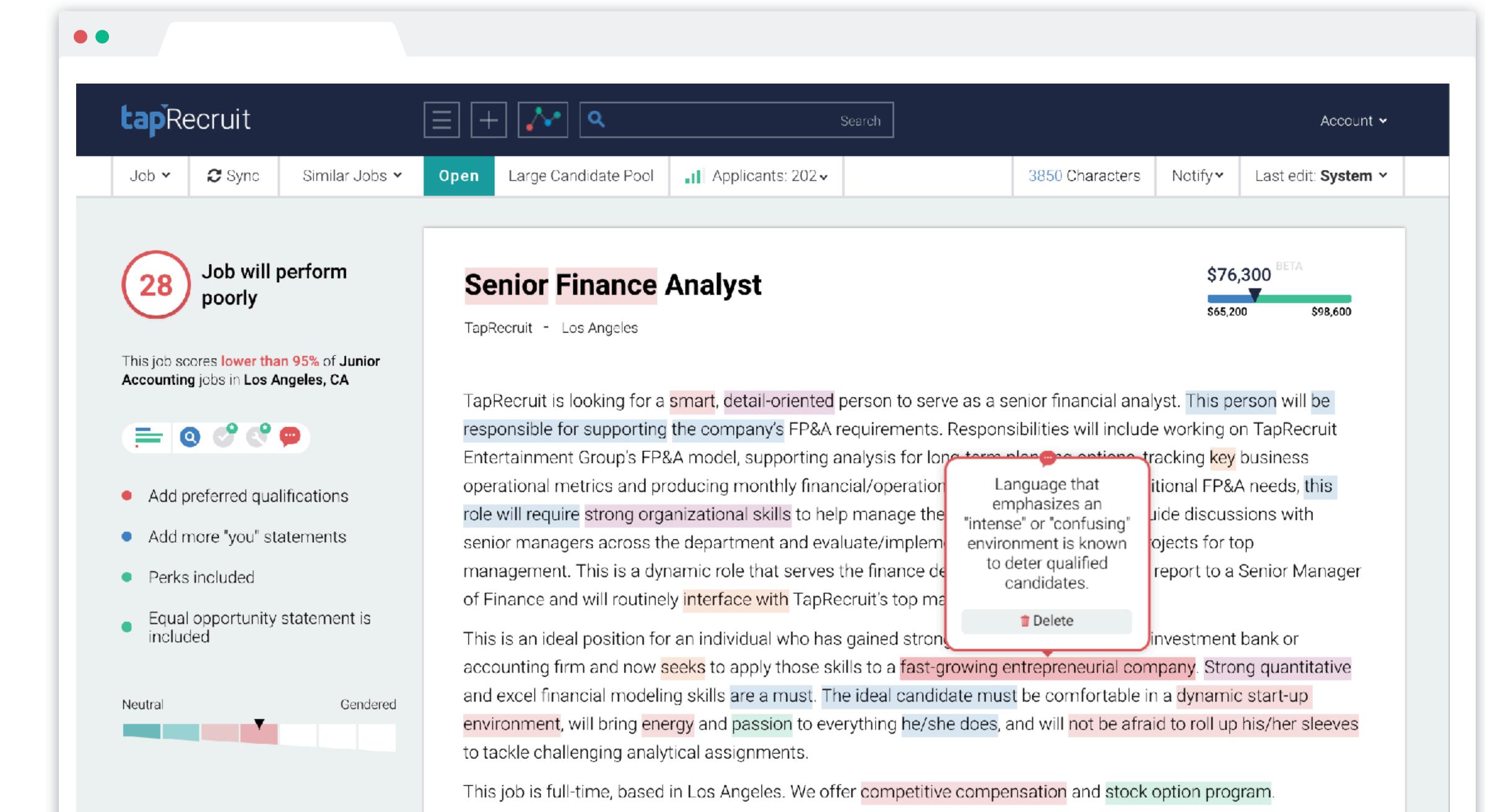
Analytics dashboards to help diagnose quality and diversity issues in talent pipelines.

#### **Salary Estimation**



Data-driven salary estimates based on a job's requirements rather than just title and location.





#### Language matters in job descriptions

#### Same title, Different job

#### Finance Manager Kraft Foods

Junior (3 Years)

No Managerial Experience

#### Finance Manager Roche

Senior (6-8 Years)

**Division Level Controller** 

Strategic Finance Role

MBA / CPA

#### Same Title

- Required Experience
- Required Responsibility
- Preferred Skill
- Required Education

#### Different title, Same job

#### Performance Marketing Manager

**PocketGems** 

#### **Mid-Level**

**Quantitative Focus** 

iBanking Expertise

**Data Analysis Tools (SQL)** 

**Consulting Experience Preferred** 

**MBA Preferred** 

#### Senior Analyst, Customer Strategy

The Gap

#### **Mid-Level**

**Quantitative Focus** 

Finance Expertise

**Relational Database Experience** 

External Consulting Experience Preferred

**BA in Accounting, Finance, MBA Preferred** 

- Required Experience
  - Required Skills
- Required Experience
- Required Skills
- Preferred Experience
- Preferred Education



Adding "Senior" to a job title will make the candidate feel important

More qualified candidates will apply to roles that sound more senior

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#### **HEURISTIC 1:**

# Inflating job titles improves applicant pool quality

#### The growth and impact of inflated titles

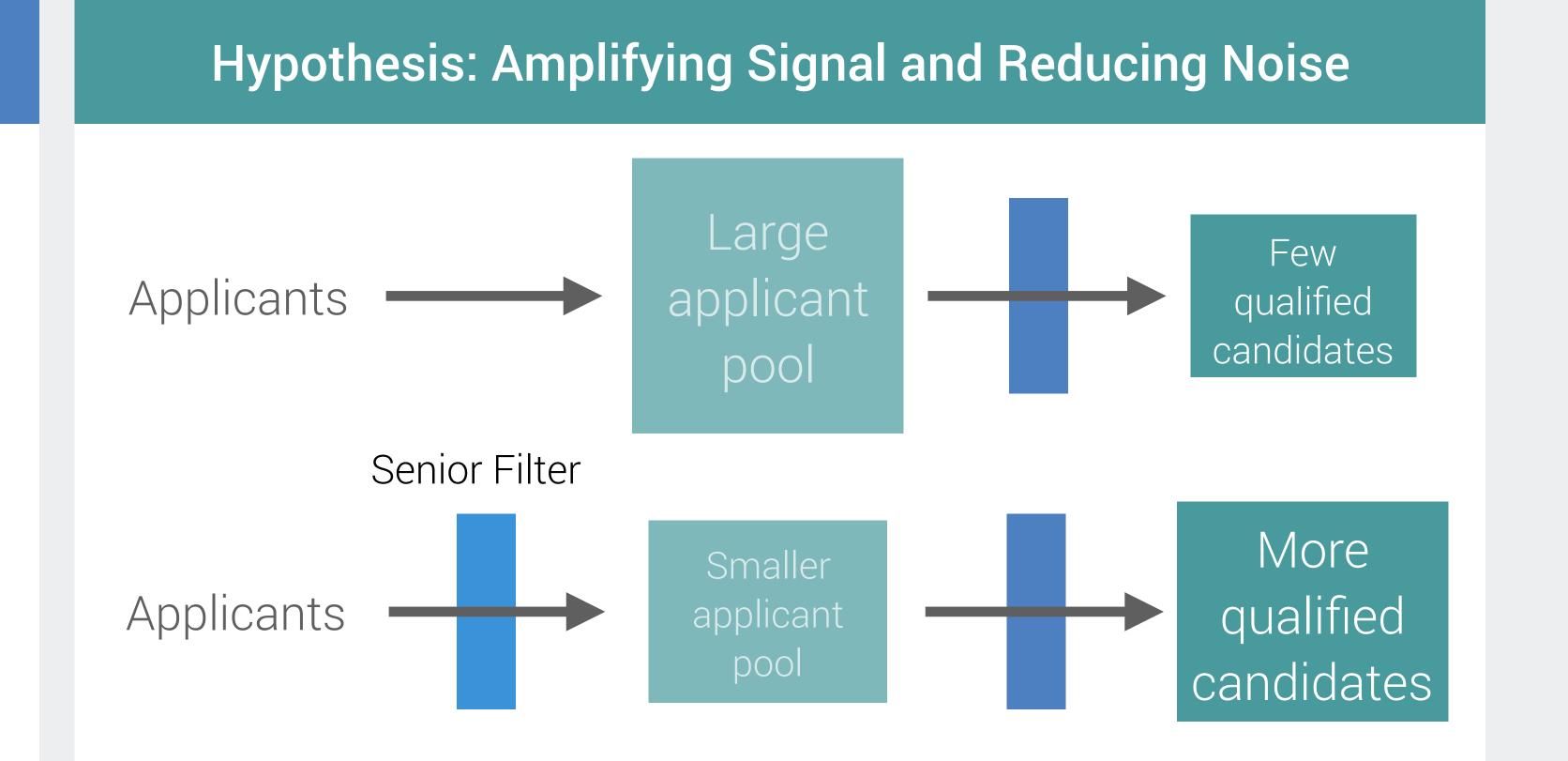
In data science, not SE

+30%

'Senior Data Scientist'

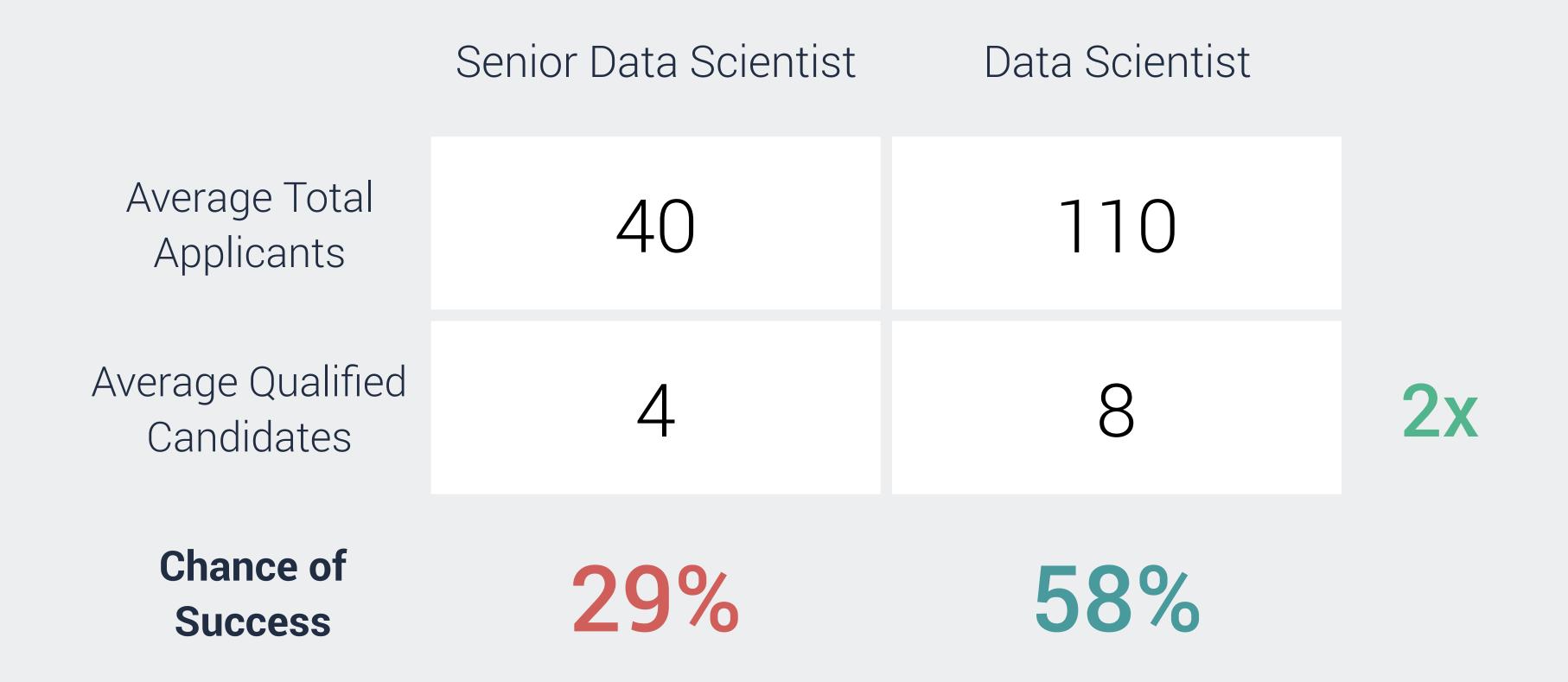
+10%

'Senior Software Engineer'



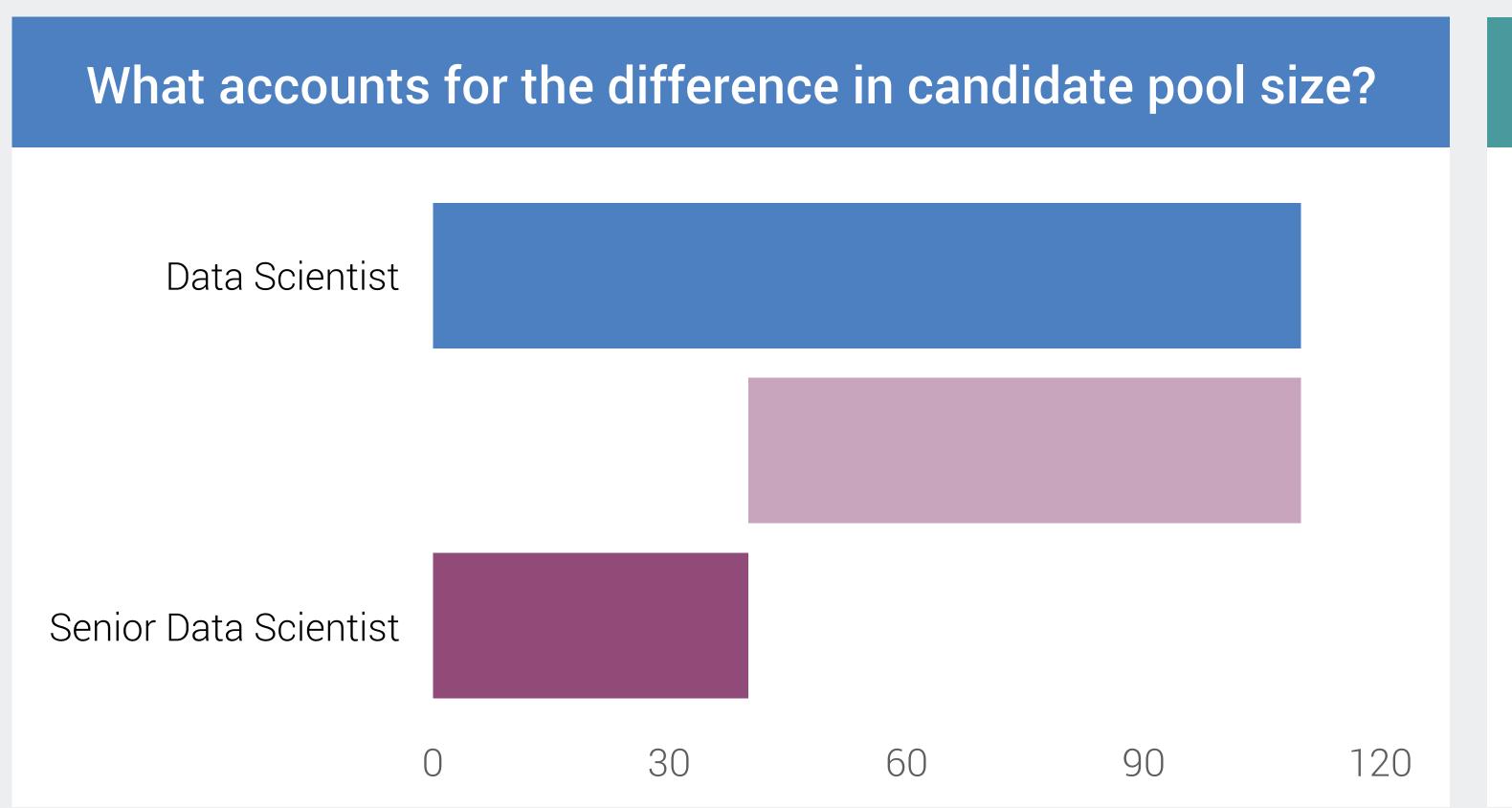


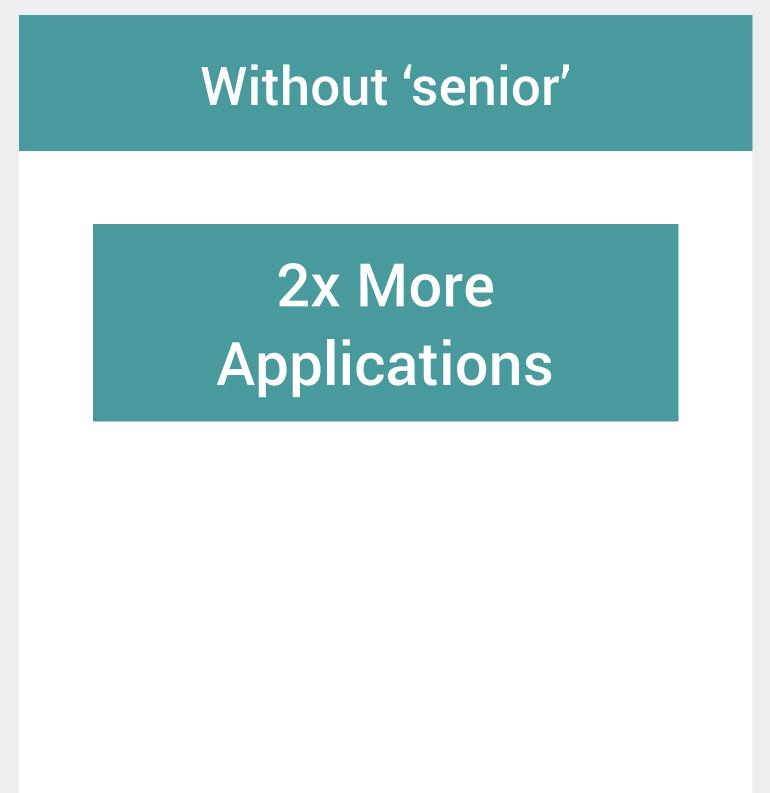
#### Title inflation does not live up to its promise





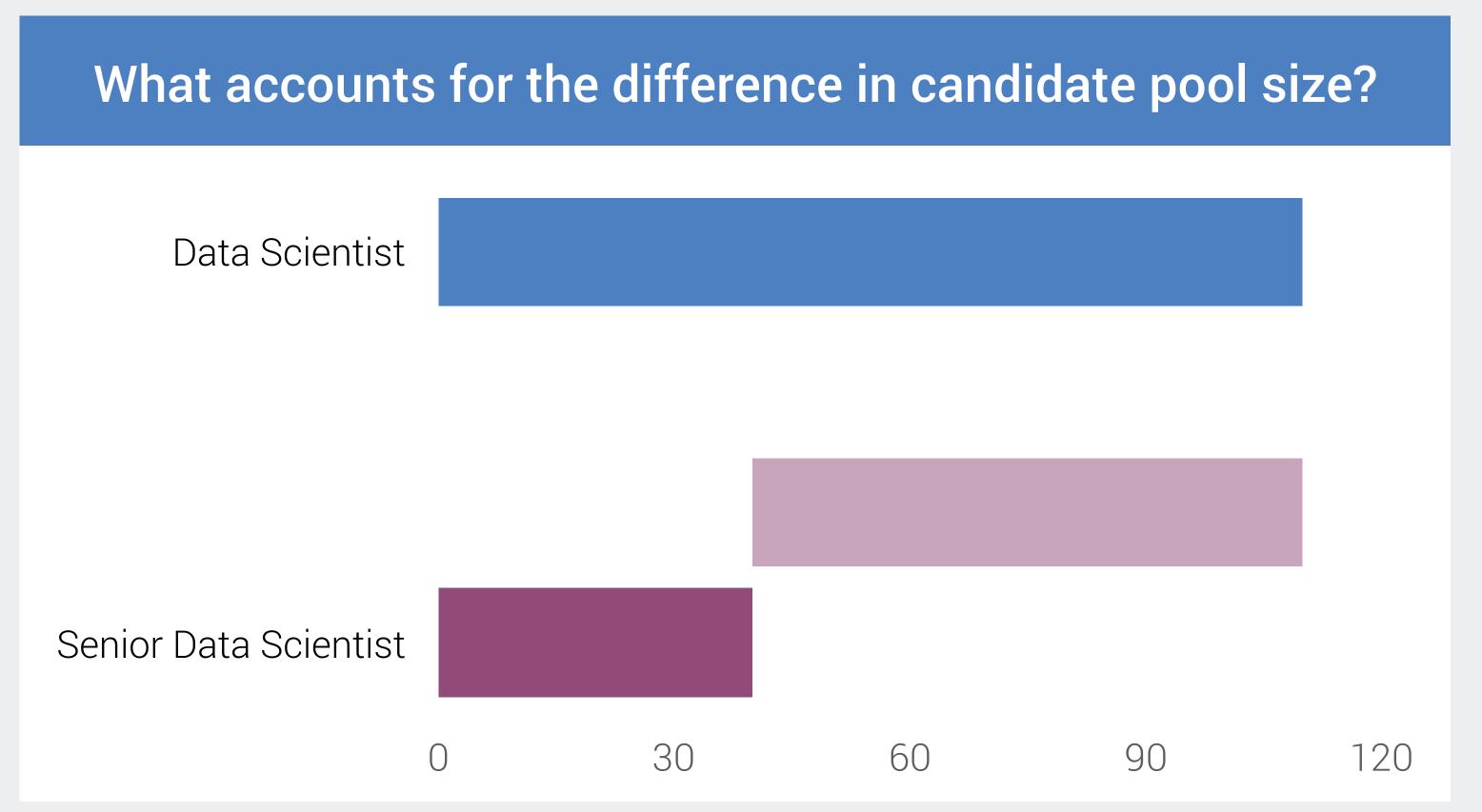
#### Jobs with inflated titles are hit twice







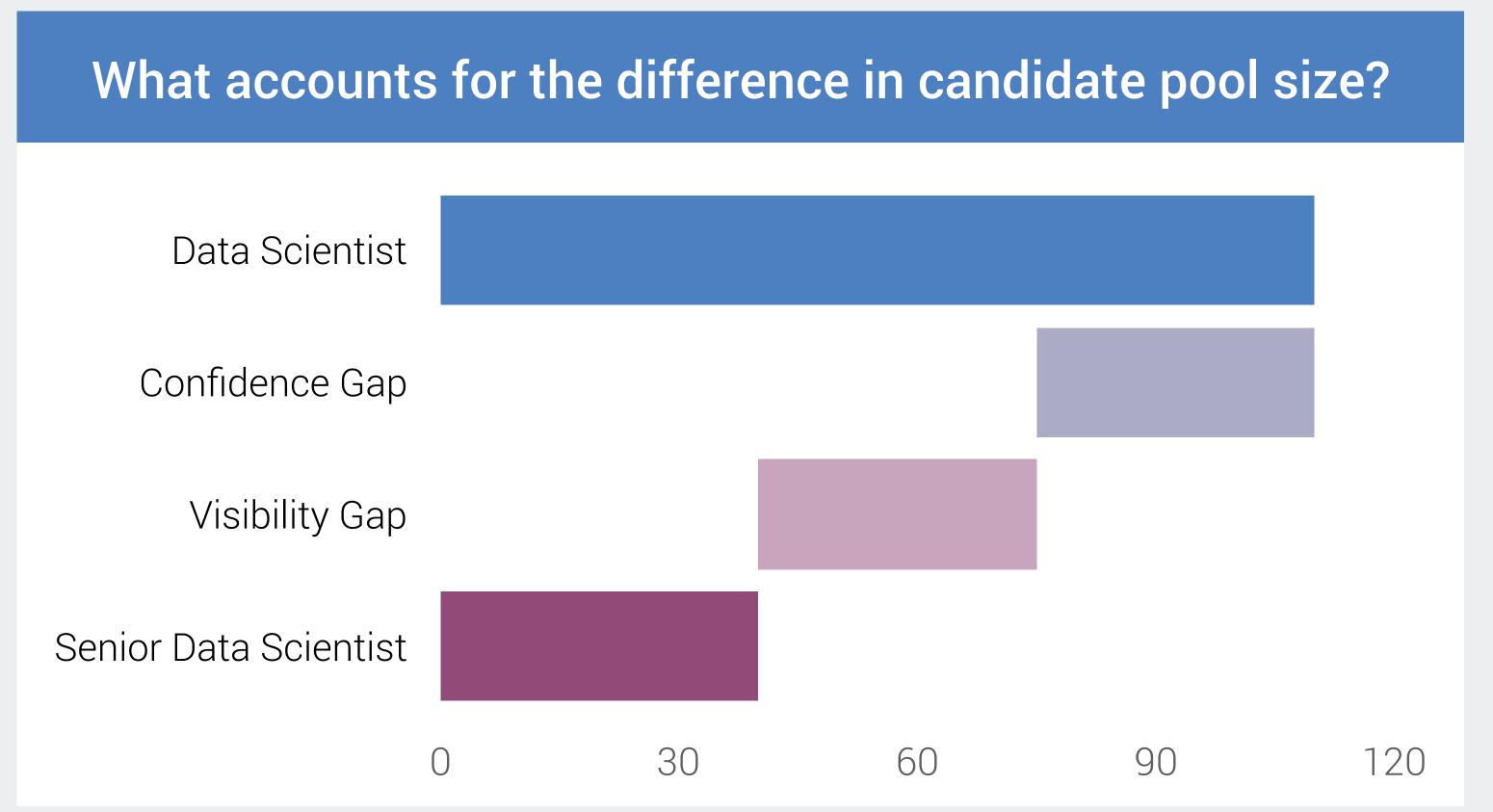
#### Jobs with inflated titles are hit twice

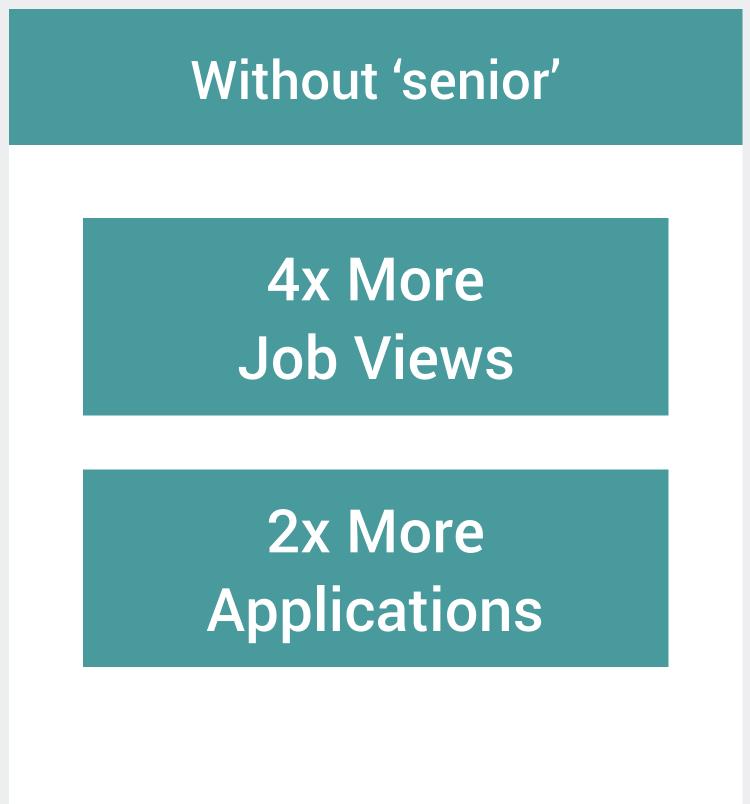






#### Jobs with inflated titles are hit twice







#### Jobs with inflated titles attract fewer women

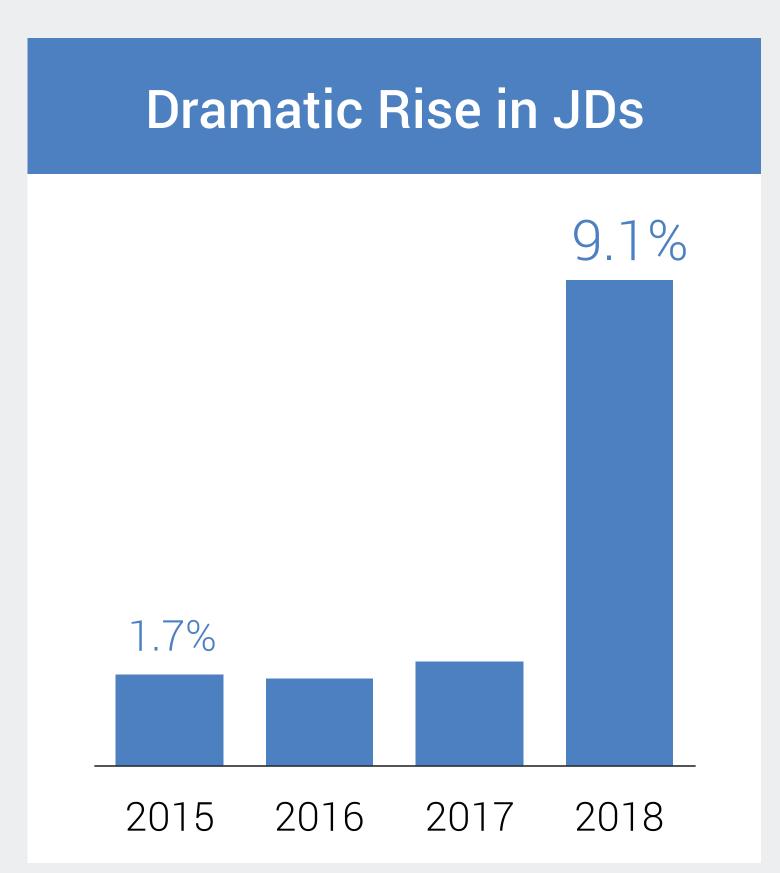
Chance of Female Hire	15%	39%	
Qualified Female Candidates	1 (26%)	2 (32%)	2x (+23%)
Female Candidates	8 (23%)	39 (36%)	4x (+50%)
	Senior Data Scientist	Data Scientist	



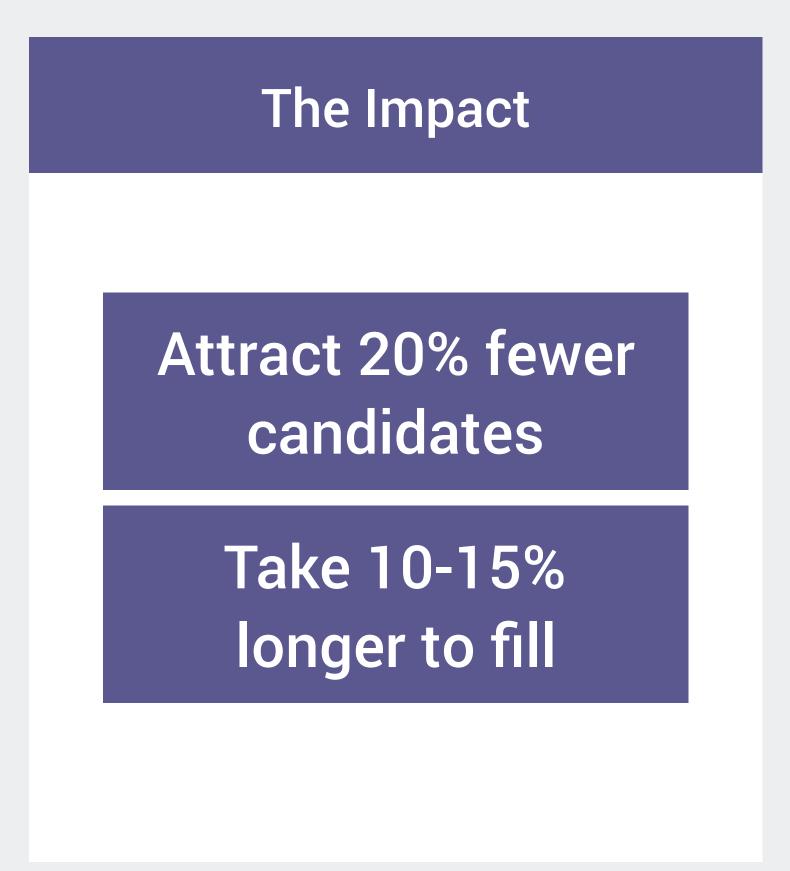
**HEURISTIC 2:** 

## It's all about the money

#### The paradox of the 'competitive salary'









# 62% of jobseekers consider perks and benefits critical factors in deciding on jobs

but few companies mention their perks and benefits

F500 + Public Co.

Unicorns

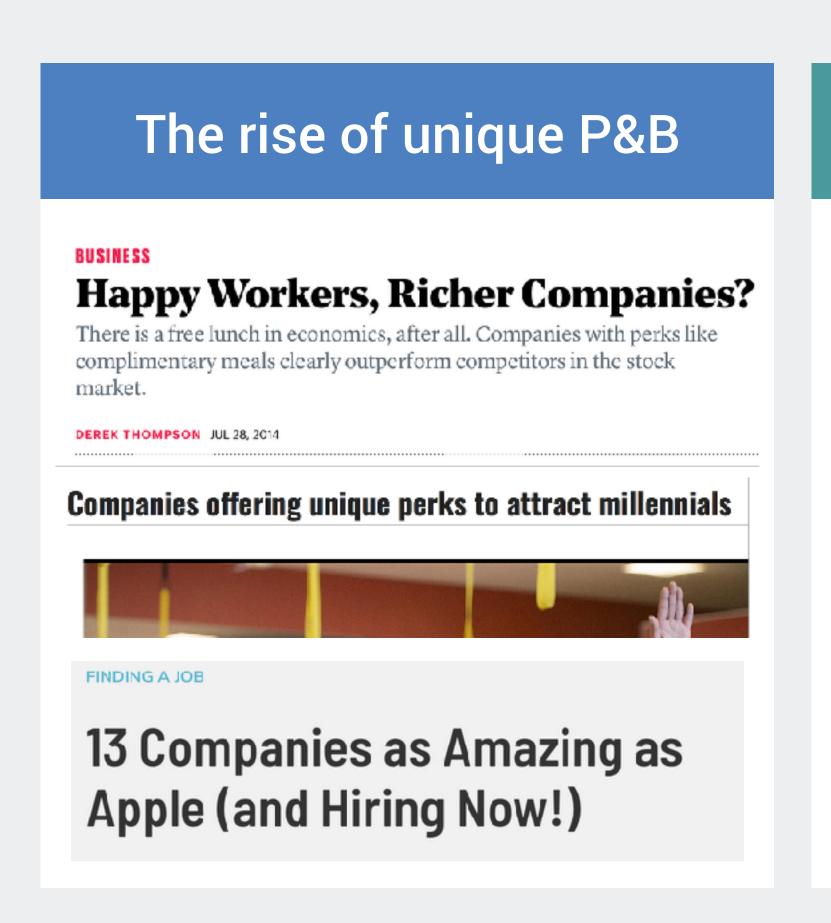
Startups

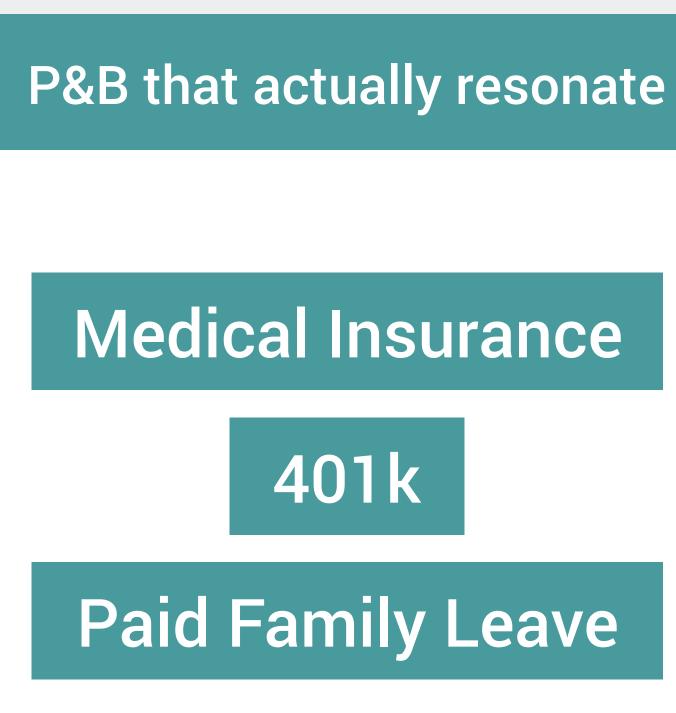
16%

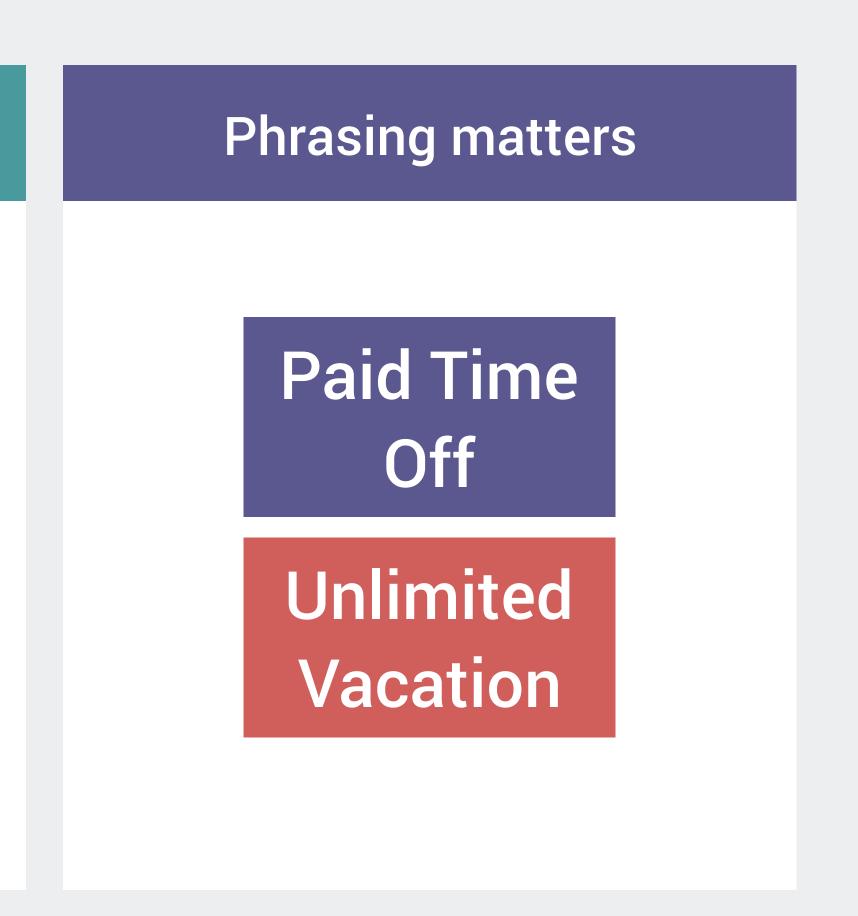
8%

40%

#### One weird perk that attracts great candidates!





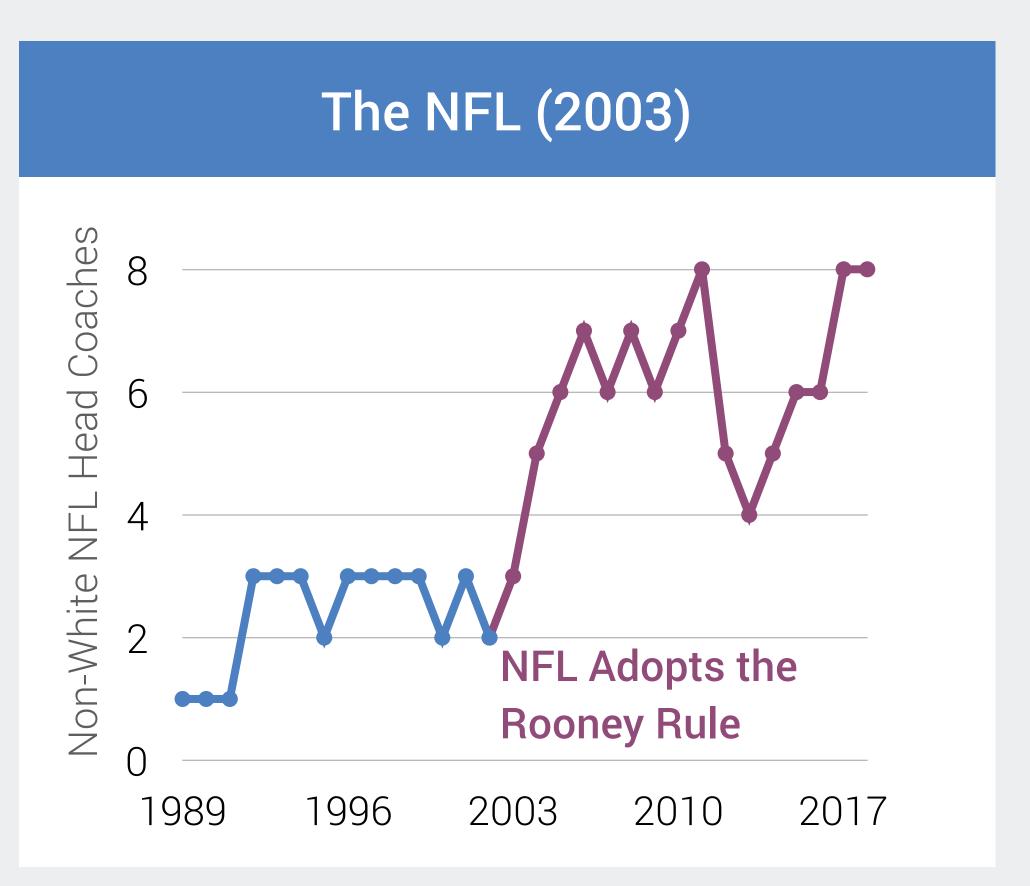




**HEURISTIC 3:** 

## Diversity can be 'hacked'

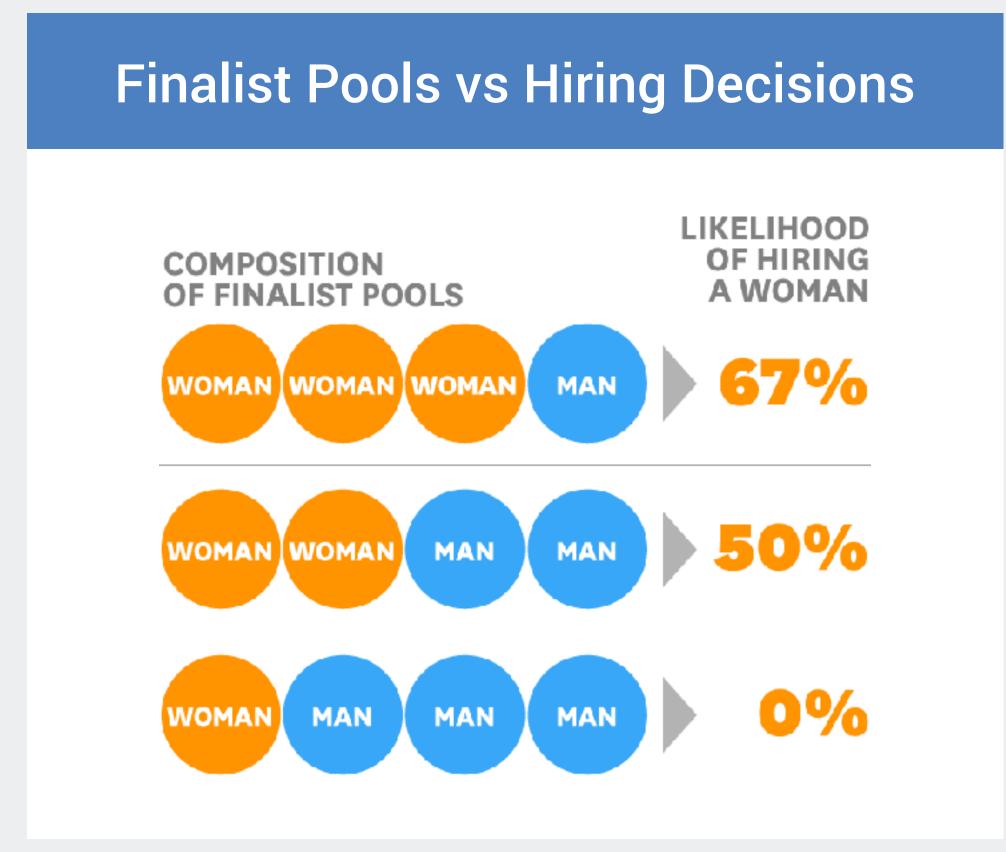
#### The Rooney Rule combats lack of representation



#### Big Tech (2016) Facebook is using the same approach the NFL took to increase diversity in the league Richard Feloni Jan. 24, 2016, 10:35 AM SILICON VALLEY After Amazon Adopts Rooney Rule, Black Lawmakers Call for More Diversity in Tech Tech Accountability Caucus co-chair says congressional hearings, meetings can help keep pressure on Silicon Valley What Pinterest is learning from the Pittsburgh Steelers about diversity

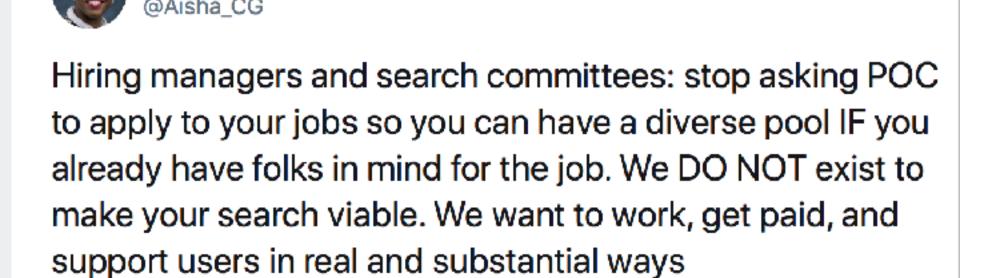


#### Real world implications of the Rooney Rule



Ref: Johnson, Heckman & Chan, HBR 2016.

#### Candidate Backlash





🦆 Eddie F of the Boyz 🦆

Speaking from the perspective of a hiring manager: 99
Speaking from the perspective of a Black woman who has better things to do with her time than be the Rooney Rule candidate in a sham of a recruiting process: 99
99



## Representative candidate pools drive fairer outcomes

Chance of Female Hire	19%	43%	
Qualified Female Candidates	<b>1</b> (16%)	4 (34%)	4x (+100%)
Female Candidates	11 (27%)	38 (38%)	3x (+40%)
	40 Candidates	100 Candidates	



#### **HEURISTIC 1:**

#### Job title inflation improves applicant pools

- Title inflation decreases signal with no change to noise
- The double-whammy of the visibility and confidence gaps

#### **HEURISTIC 2:**

#### It's all about the money

- Competitive salary makes you uncompetitive
- The 'boring' benefits are not boring to candidates

#### **HEURISTIC 3:**

#### Diversity can be hacked

- Representative candidate pools -> representative workforces

### Thank you EGG Conference!

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