

From: [Hiscox, Michael](#)
To: s22
Cc: [Oliver, Tara](#); s22; s22
Subject: framing of discussion of "Going Blind" and responses to questions to date [SEC=UNCLASSIFIED]
Date: Monday, 3 July 2017 9:34:29 AM

UNCLASSIFIED

Hi s22 ,

I typed up the below to help structure interviews with media and responses to the questions that are coming through so far ... (including those questions from the HR organization). Let me know what you think.

-M

Framing of the research (when asked to describe and summarize):

The starting point is **the big question** ... women are 50% of the population and 50% of graduates from university degrees in the most areas of social sciences and humanities (e.g., including government, public policy, history, law, and economics) ... and women make up 50% of the public service at entry-level. But **why, at the more senior levels** of the public service, does the proportion of positions held by women falls dramatically, to around 30 percent and below in many agencies (and of course, in comparable parts of the private sector, we see the same pattern).

Now, there are **several possible reasons for this lack of gender diversity** at the senior management level. In particular, there is a discussion of cultural and social pressures associated with family and parenting responsibilities, availability of flexible working arrangements, and so on.

One possible reason for the lack of female representation at more senior levels is **bias**; that is, people making hiring and promotion decisions may be, consciously or unconsciously, assessing female candidates unfairly, making explicit or implicit assumptions that women are less able than male counterparts to perform senior management roles.

If this is the case, introducing **de-identification** into the recruitment process could be a solution that would make the process **fairer** and improve diversity.

We set out to examine whether this was the case.

What we found was that there was, if anything, **a very slight bias** in shortlisting candidates for senior positions in favor of female candidates. That is, when an applicant was identified as female, she was about 3% more likely to be selected for the shortlist than if reviewers did not know her gender.

We see this as evidence that recruiters are supporting diversity as an organizational goal with a very subtle form of positive discrimination in favor of female candidates.

Q&A:

Do workforce affirmative action programs undermine the merit principle and/or fairness? (Why did we describe gender only as a “potentially irrelevant” characteristic?)

There is a broader debate to be had about the impacts of, and justifications for, affirmative action -- we are not addressing these issues in this piece of research.

Part of that broader debate involves the issue of what structural and cultural barriers women may have had to overcome to reach the same point as male counterparts at the application stage (making their on-paper accomplishments more meaningful, in context). From this point of view, affirmative action is a recognition of unmeasured merit and entirely in line with merit-based principles.

Part of that debate also involves the organizational benefits of diversity: the extant research indicates that more diverse teams are more innovative, creative, and successful. This is actually a major part of the basis for why the worlds' leading research universities and innovative companies favor some form of affirmative action (of diversity focus) in their hiring.

How much affirmative action is too much?

Opponents worry about merit and fairness, but they also worry about that it creates tensions in organizations and undermines the real achievements of women who are successful based on talent and hard work.

Supporters focus on the great variety of structural and cultural factors that make the playing field un-level for women.

Again, our research is not aimed at assessing the impact of affirmative action or how much positive discrimination is justified or appropriate given barriers encountered by females (as students and employees) in various fields.

But we encourage further discussion of these issues and further research to inform these discussions.

Do you believe there is gender-based discrimination in hiring for Australian public service?

This is a big question. Women are 50% of the population and 50% of graduates from university degrees in the most areas of social sciences and humanities (e.g., including government, public policy, history, law, and economics) that typically prepare people for public service jobs. Women make up 50% of the public service at entry-level. But at the more senior levels of the public service, the proportion of positions held by women falls dramatically, to around 30 percent and below in many agencies.

Now, there are several possible reasons for this lack of gender diversity at the senior management level. In particular, there is a discussion of cultural and social pressures associated

with family and parenting responsibilities, availability of flexible working arrangements, and so on. One other possible reason for the lack of female representation at more senior levels is bias; that is, people making hiring and promotion decisions may be, consciously or unconsciously, assessing female candidates unfairly, making explicit or implicit assumptions that women are less able than male counterparts to perform senior management roles.

If this is the case, introducing de-identification into the recruitment process could be a solution that would make the process fairer and improve diversity.

We examined just one part of the recruitment process: shortlisting of candidates for senior level positions. What we found was that there was, if anything, a very slight bias in shortlisting candidates for senior positions in favor of female candidates. That is, when an applicant was identified as female, she was about 3% more likely to be selected for the shortlist than if reviewers did not know her gender.

We see this as evidence that recruiters are supporting diversity as an organizational goal with a very subtle form of positive discrimination in favor of female candidates in the shortlisting stage of recruitment

There are other stages of recruitment that we have not assessed in this study and where bias (for or against female candidates may be more pronounced). For example, job advertisements may be worded in ways that discourage (or encourage) applications from female candidates. Job interviews and review panel discussions may be structured conducted in ways that make female candidates less (or more) likely to be favourable assessed compared with male counterparts. Our study does not examine these other parts of the recruitment process.

[What steps would you recommend for employers going forward?](#)

Many organizations, include government agencies, are trialling the de-identification of job applications as a way of mitigating bias at the early stages of the recruitment process and promoting diversity. Yet, the costs of de-identification can be high (manual de-identification of materials or development of a customized software platform) and the effects of de-identification are uncertain. The study highlights the need for caution as the impact of de-identification hinges critically upon the amount and direction of bias present in the status quo setting: introducing de-identification in a context in which recruiters are already exhibiting a positive bias towards women or minority groups can undermine efforts to promote diversity.

Our results help to demonstrate the importance of testing interventions to address gender equality and diversity before introducing them at full scale. The findings should provide impetus for employers to conduct rigorous evaluations of initiatives aimed at increasing gender and ethnic diversity at all levels.

DEPARTMENT OF THE PRIME MINISTER AND CABINET

PM&C
Secretary
Dr Gruen
Ms Kennedy
Ms Hatfield
Dodds
Mr Yeaman
Ms Tanja
Cvijanovic
Ms Emma
Greenwood

To: Prime Minister (for information before the report is published during the week of 26 June)

BETA REPORT - GOING BLIND TO SEE MORE CLEARLY: UNCONSCIOUS BIAS IN AUSTRALIAN PUBLIC SERVICE SHORTLISTING PROCESSES

Recommendations - that you

1. Note the findings of BETA's trial testing the effectiveness of de-identifying applications in eliminating unconscious bias.
2. Note that BETA intends to publicly release the report in the week of 26-30 June 2017.

Noted

MALCOLM TURNBULL

Date:

Comments:

Key Points:

1. BETA partnered with the APSC and 14 other APS agencies to test the impact of de-identifying applications at the shortlisting stage of recruitment. This was to examine whether de-identification helps to eliminate unconscious bias and promote hiring diversity (see report at **Attachment A**).
2. Evidence on the effects of de-identifying job applications is limited and mixed. In the 1970s and 1980s, a curtain between musicians and a jury helped improve the chances that women were selected for the American Symphony Orchestra, suggesting an unconscious bias towards men. To our knowledge, our study is the first of its kind for the public service.
3. What we found is that de-identifying applications at the shortlisting stage does not appear to assist in promoting diversity within the APS in hiring. Overall, APS officers discriminated in favour of female and minority candidates. The practical impact is that, if implemented, de-identification may frustrate diversity efforts. The results from the trial are presented in **Attachment B** and include:
 - a. Assigning female identities increases the probability the CV is shortlisted by 2.9% on average, relative to the de-identified version.
 - b. Assigning a male identity decreases the probability the CV is shortlisted by 3.2% on average, relative to the de-identified version.
 - c. The Indigenous female candidate was 22.2% more likely to be shortlisted on average when identified compared to the de-identified version.

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- d. The Indigenous male CV was 9.4% more likely to be shortlisted on average compared to when it is de-identified.
4. The results of this trial help to demonstrate the importance of testing interventions before introducing them at full scale. BETA proposes to build on these results by taking the trial 'to the field' (i.e. to test de-identification in a real recruitment process) in addition to trialling other behaviourally-informed interventions during recruitment where unconscious bias may be occurring.
5. BETA plans to share the results of this trial throughout the APS, and with other behavioural economics teams. Professor Hiscox will share the details of this trial at BX2017 in Singapore later this month.
6. Talking points and Q&As have been drafted to assist with media queries (**Attachment C**). Professor Hiscox will respond to any subsequent media inquiries.

Sensitivities:

7. This trial was conducted as a framed field experiment, meaning individuals knew they were part of a study, but were unaware that the study was focussed on unconscious bias. As a result, there is potential for subject reactivity or scrutiny bias (e.g. participants may have behaved differently to how they would in a real recruitment situation and/or may have guessed the purpose of the study). Voluntary participation may have attracted participants who were more likely to support diversity and gender equality.
8. There may also be some concerns about how generalisable the results of this trial are given that it has yet to be applied in a 'real world' setting.
9. We found that there was variation in behaviour across agencies. As such, generalised strategies in response to the results from this study should be approached with caution. The impact of de-identification will hinge critically upon the amount and direction of bias present in each agency.

Background:

10. Women are under-represented in management and executive level positions across the private and public sectors. In 2016, women comprised 59.0% of the APS, but accounted for 48.9% of its executive level officers and only 42.9% of its Senior Executive Service (SES) officers. These statistics may reflect gender discrimination in hiring and promotion processes as a result of unconscious cognitive biases that affect decision-making.

Policy Officer: Tara Oliver

Phone no: s22

Consultation: Australian Public Service

Commission; Secretaries Equality & Diversity
Council

s22

Advisor, BETA

21 June 2017

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ATTACHMENTS

ATTACHMENT A EMBARGOED REPORT ON GOING BLIND TO SEE MORE
CLEARLY: UNCONSCIOUS BIAS IN AUSTRALIAN PUBLIC SERVICE
SHORTLISTING PROCESSES

ATTACHMENT B TRIAL RESULTS

ATTACHMENT C TALKING POINTS AND Q&A



Australian Government

Document 2 - Attachment A

BETA

BEHAVIOURAL ECONOMICS TEAM OF
THE AUSTRALIAN GOVERNMENT

Going blind to see more clearly: unconscious bias in Australian Public Service shortlisting processes

June, 2017

Authors: Professor Michael J. Hiscox, Tara Oliver, Michael Ridgway,
Lilia Arcos-Holzinger, Alastair Warren and Andrea Willis



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BETA

BEHAVIOURAL ECONOMICS TEAM
OF THE AUSTRALIAN GOVERNMENT

Going blind to see more clearly: unconscious bias in Australian Public Service shortlisting processes

Results of a randomised controlled trial conducted by the Behavioural Economics Team of the Australian Government (BETA) in partnership with the Australian Public Service Commission

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The views expressed in this paper are those of the authors and do not necessarily reflect those of the Department of the Prime Minister and Cabinet or the Australian Government.

Acknowledgments

Special thanks to Professor Iris Bohnet (Harvard Kennedy School) and Kate Glazebrook (The Behavioural Insights Team) for feedback and suggestions. Our sincere thanks go to all of the people who generously donated their time to participate in the trial, to members of the working group from each participating agency who helped us understand their agencies better, and without whom this trial would not have been possible.

The trial was pre-registered on the BETA website and the American Economic Association registry: AEARCTR-001783.
<https://www.socialscienceregistry.org/trials/1783/history/11939>

WHO WE ARE

We are the Behavioural Economics Team of the Australian Government, or BETA.

We are the Australian Government's first central unit applying behavioural economics to improve public policy, programs and processes. Rather than expecting people to redesign their lives around government, our work encourages people-centred design, which means: simpler, clearer and faster public services.

We use behavioural economics, science and psychology to improve policy outcomes.

Our mission is to build behavioural economics capability across the public service and drive its use in policy design by testing what works, where and in what context.

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FOREWORD

We are excited to share the findings from our trial testing the impact of de-identifying applications for senior positions in the Australian Public Service (APS). The trial examines one critical part of the recruitment process, the way the APS initially evaluates applications and shortlists the top candidates to build the best possible workforce. The aim was to assess whether de-identifying applications would, by eliminating the effects of explicit or implicit bias, help promote gender equality and diversity in hiring at senior (executive) levels.

What we found is that de-identifying applications at the shortlisting stage of recruitment does not appear to assist in promoting diversity in hiring. In fact, in the trial we found that overall, APS officers generally discriminated in favour of female and minority candidates. This suggests that the APS has been successful to some degree in efforts to promote awareness and support for diversity among senior staff. It also means that introducing de-identification of applications in such a context may have the unintended consequence of decreasing the number of female and minority candidates shortlisted for senior APS positions, setting back efforts to promote more diversity at the senior management levels in the public service.

This is critically useful knowledge. It does not imply that the APS has solved the problem of gender equality at the executive levels and higher – or lack of diversity more generally – but it tells us that rather than putting the focus on bias in initial reviews of job applicants, it may be more valuable to direct attention to other stages of recruitment, including how positions are advertised, how interviews are conducted, and how hiring panels are selected and run. More attention can also be directed to processes that affect career trajectories, including performance reviews, evaluations for promotions, talent management and whether flexible working arrangements are available. Eliminating or mitigating problems in these areas will require innovative solutions and rigorous testing to discover what works.

Professor Michael J. Hiscox
Director, BETA

SUMMARY

This study assessed whether women and minorities are discriminated against in the early stages of the recruitment process for senior positions in the APS, while also testing the impact of implementing a 'blind' or de-identified approach to reviewing candidates.

Over 2,100 public servants from 14 agencies participated in the trial¹. They completed an exercise in which they shortlisted applicants for a hypothetical senior role in their agency. Participants were randomly assigned to receive application materials for candidates in standard form or in de-identified form (with information about candidate gender, race and ethnicity removed).

We found that the public servants engaged in positive (not negative) discrimination towards female and minority candidates:

- Participants were 2.9% *more* likely to shortlist female candidates and 3.2% *less* likely to shortlist male applicants when they were identifiable, compared with when they were de-identified.
- Minority males were 5.8% *more* likely to be shortlisted and minority females were 8.6% *more* likely to be shortlisted when identifiable compared to when applications were de-identified.
- The positive discrimination was strongest for Indigenous female candidates who were 22.2% more likely to be shortlisted when identifiable compared to when the applications were de-identified.

Interestingly, male reviewers displayed markedly more positive discrimination in favour of minority candidates than did female counterparts, and reviewers aged 40+ displayed much stronger affirmative action in favour for both women and minorities than did younger ones.

Overall, the results indicate the need for caution when moving towards 'blind' recruitment processes in the Australian Public Service, as de-identification may frustrate efforts aimed at promoting diversity².

WHY WAS IT IMPORTANT TO CONDUCT THIS TRIAL?

Women are almost 50% of the Australian workforce, but are under-represented in management and executive level positions. This is evident not just in the private sector but also in many areas of the APS. In 2016, women comprised 59.0% of the APS as a whole, but accounted for 48.9% of its executive level officers and only 42.9% of its Senior Executive Service (SES) officers.

These statistics may reflect a range of factors, including the availability and adoption of flexible work arrangements that make it easier for individuals to balance the demands of work and family. The numbers may also reflect gender discrimination in hiring and promotion. Such discrimination can be especially difficult to overcome when it results from unconscious cognitive biases (see Box 1) that are so internalised that people are unaware that their decision-making processes are affected³.

BOX 1: COMMON BIASES AFFECTING RECRUITMENT

Affinity / Ingroup bias may lead recruiters to prioritise candidates who are similar to them or someone they know and enjoy working with

Confirmation bias is the tendency to focus on information that confirms initial impressions of a candidate

Groupthink can occur when members of a recruitment panel feel pressure to conform with the decision of other panel members and may suppress their own opinions so as not to disturb the perceived group consensus

Halo effect may lead recruiters to focus on salient pieces of information and this may influence the perception of other elements of a candidate's application

Status quo bias can occur when recruiters opt for the 'safer' choice of recruiting a candidate that is similar to previously hired candidates, then the riskier option of hiring a candidate with different characteristics and/or background

In 2016 the APS announced a comprehensive [Gender Equality Strategy](#) aimed at addressing gender imbalance across all agencies and supporting a range of initiatives, including training and awareness programs to help promote diversity. In this context, considerable attention has been focussed on de-identification of job applications (and 'gender-blind' processes in particular) as an approach that could help reduce discrimination and promote diversity in the APS. A number of APS agencies have experimented with 'blind' job application processes. However these changes have not been consistently implemented, nor the impact rigorously measured.

Unfortunately, the existing evidence on the effects of de-identifying job applications is limited and mixed. Several quasi-experimental studies in European countries have suggested de-identification could reduce bias in hiring

processes in some contexts, but may have no impact in contexts in which no discrimination is present initially and, more perversely, may actually undermine efforts to promote diversity when employers adopt a positive bias in favour of women or minorities. To date there have been no rigorous studies designed to assess the extent and nature of bias affecting recruitment into the APS or to evaluate the impact of introducing de-identification processes. A summary of one of the first studies on the impact of ‘blind’ processes is provided in Box 2.

BOX 2: CASE STUDY – THE IMPACT OF ‘BLIND’ AUDITIONS ON FEMALE MUSICIANS

In the 1970s and 1980s American symphony orchestras attempted to overcome biases in hiring by introducing a screen during auditions to conceal the identity of the musician from the jury evaluating the performance. In a well-known study analysing data on auditions and hiring by orchestras over this period, this study found that the use of blind auditions had a major impact on gender bias in orchestras, increasing the likelihood of female musicians being selected by 25-40%⁴.



WHAT INTERVENTIONS WERE TESTED?

Proponents of de-identifying job applications argue that even when members of hiring and promotion committees are trained to be attentive to gender equity and potential discrimination, implicit or unconscious bias can still play a large role and weigh against female and minority job candidates⁵. Recruiters and reviewers are influenced implicitly by stereotypes when making judgements and often favour candidates with similar characteristics to their own. The one sure way to eliminate these types of bias is to disable the 'fast-thinking' processes in the minds of reviewers who rely on these types of heuristics by removing information about the characteristics of the candidates that are not relevant to potential performance on the job (see Box 3 for the definition of a heuristic). Rather than focusing on retraining the mind, we have redesigned the process in an attempt to eliminate unconscious bias.

BOX 3: WHAT IS A HEURISTIC?

Heuristics are mental shortcuts we use to ease the cognitive load of making a decision. Taking shortcuts by using a 'rule of thumb' (e.g., choosing a 50/50 mix of two options, or "one of each", or the "middle of the road" option), making an 'educated guess' based on past experience, or even just looking at what other people are doing are all examples of applications of heuristics.

There are many potentially irrelevant characteristics that could be screened out from reviewers in order to remove biases. Besides gender, race or ethnic status, we might also consider any information about age, health status or conditions, disability, sexual orientation, political views, and socioeconomic status (reflected for instance, by address and education background). De-identification could be implemented at the initial stage of the review process when applications are shortlisted and scored, but could also be extended to later stages (e.g., recruitment committee deliberations) – although it is obviously quite difficult (albeit not impossible) to de-identify candidates at the interview stage. In the current study we focussed on removing information about the gender, race and ethnic status of job candidates from written materials available to reviewers during the initial shortlisting stage of the APS recruitment process.

We developed a set of applications for an executive level APS position, with each application consisting of a 2-page curriculum vitae (CV) for each candidate. We standardised the format in which information in each CV was presented, allowing for no variation in font size, type, or colour and no other graphical features (e.g., photographs), and placing all content in the same order. We created a de-identified version of each application, in which the candidate was referred to only by number, along with male and female versions in which the candidate was referred to by the same last name and either a male or female first name. Several of the names were associated with specific minorities (Indian, Chinese, and Middle Eastern) and one candidate was explicitly identified as being of Indigenous descent (via a checked box at the top of the CV)⁶.

By examining the way reviewers evaluated the same applications with no identifying information compared with when they had information about the gender and race or ethnic status of the candidates we are able to assess the extent and direction of bias as well as the impacts of introducing de-identification at this stage of the recruitment process. For example, we looked at how CV1 was ranked and then compared this to the same CV when it was presented with a male/female name to determine any differences in how it was assessed and ranked.



HOW WAS THE TRIAL DESIGNED?

The trial was an individually randomised controlled trial (RCT) – more precisely, a ‘framed field experiment’ – in which subjects were drawn from the population of interest and invited to take part in an exercise in a natural (‘field’) setting for research purposes. In this case, a sample of executive level (EL) and Senior Executive Service (SES) Band 1 officers within 14 APS agencies were invited to participate in the study. Participants were asked to assess 16 hypothetical candidates for an EL position on a hypothetical taskforce and select a shortlist of 5 candidates. The CVs described a set of 16 realistic candidates with varied characteristics in terms of education and work experience such that shortlisting task was challenging for reviewers. An online survey platform was used to complete the exercise.

BOX 4: WHAT IS A RANDOMISED CONTROLLED TRIAL (RCT)?

A randomised controlled trial (RCT) is the best way of telling if a policy is working. RCTs work by randomly assigning individuals (or other units) into different groups – usually one or more ‘treatment’ groups that participate in the new intervention, and a ‘control’ group that does not. The differences in outcomes across the groups are then compared. RCTs are considered the ‘gold standard’ for assessing causal impacts because a RCT determines the impact of an intervention or treatment compared to if nothing was changed.

More information about RCTs is available [here](#).

Participants were randomly assigned to one of three groups to review the CVs in either de-identified (treatment) or usual identified (control) format. There were 2 control groups, each with 8 candidates identified as women and 8 as men; the only difference between the 2 control groups was that the first names used for the CVs in control group 1, were substituted with a similar first name of the opposite gender in control group 2 (e.g. the name Gary Richards in control group 1 became Wendy Richards in control group 2). To test for minority bias, in each control group there were 3 minority-sounding names included and 1 candidate was identified on their CV’s as being Indigenous.

FIGURE 1: TRIAL DESIGN - STANDARDISED CV CONTENT FOR CONTROL AND TREATMENT GROUPS



Note: Participants were randomised into three groups and asked to review CVs and shortlist the best five candidates. Participants in Control Group 1 saw the CVs including the names of each candidate. Participants in Control Group 2 saw the exact same CVs - but with one important difference: each name was substituted with a name of the opposite gender. Participants in the Treatment Group saw the exact same CVs but instead of names they were simply labelled CV1, CV2 and so on.

RESULTS OF THE TRIAL

Although the effect of de-identification is modest, it points to the existence of a form of subtle affirmative action taking place among reviewers. The public servants reviewing the job applicants engaged in discrimination that favoured female applicants and disadvantaged male candidates.

Figure 1 reports the key results on gender bias as a probability of being shortlisted. For a given set of CVs, assigning female identities increases the probability of the CV being shortlisted by 2.9% on average relative to the de-identified version. For the same set of CVs, assigning a male identity decreases the probability the CV is shortlisted by 3.2% on average. Both of these differences are small but are statistically significant at the 99% confidence level (meaning that the same result would be found 99% of the time if this exercise were repeated over and over again in the actual population). What this means is that, in practice, if applications were de-identified, we could expect that the likelihood of any female candidate being shortlisted would fall by 2.9%, on average, while likelihood of any male candidate being shortlisted would go up by 3.2%. Note that all results are reporting the probability of being shortlisted, not how the proportion of males and females in the shortlist composition changes with de-identification.

FIGURE 2: GENDER BIAS - WHAT IS THE EFFECT OF IDENTIFICATION ON THE SHORTLIST

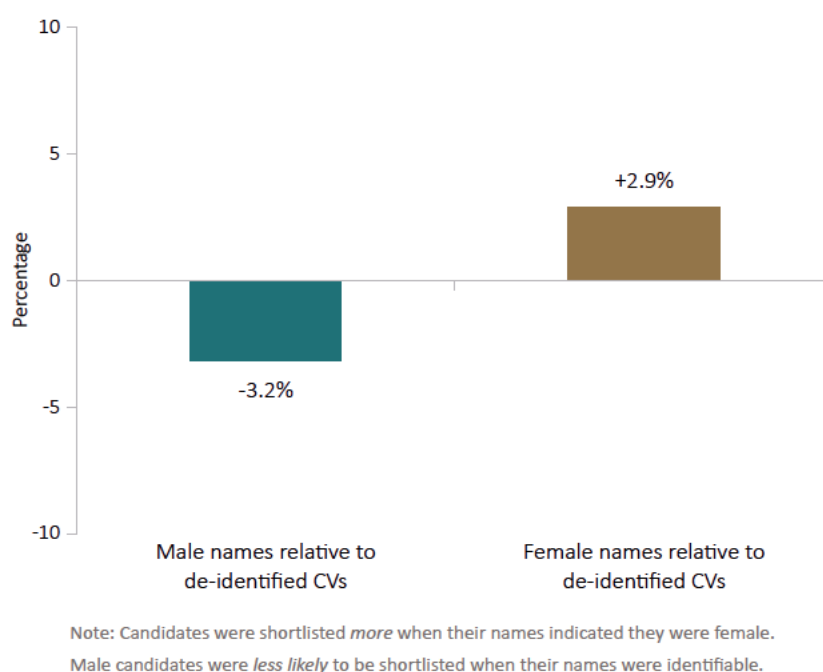
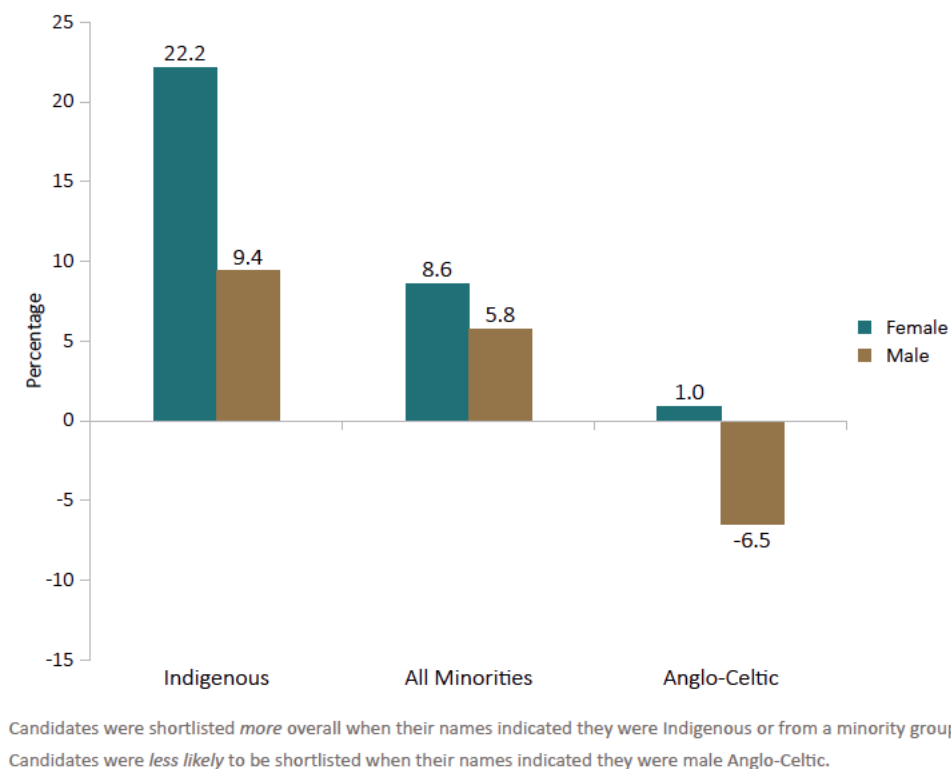


Figure 2 reports the results of the analysis of minority bias. Affirmative action towards the Indigenous female candidate is the largest, being 22.2% more likely to be shortlisted on average when identified compared to the de-identified condition. On the other hand, the identified Indigenous male CV is 9.4% more likely to be shortlisted on average compared to when it is de-identified. In absolute terms most minority candidates are on average more likely to be shortlisted when named compared to the de-identified condition, but the difference for the Indigenous female candidate is the only one that is statistically significant at the 95% confidence level.

FIGURE 3: MINORITY BIAS - WHAT IS THE EFFECT OF IDENTIFICATION ON THE SHORTLIST



When we examined specific sub-groups of APS staff we also discovered some interesting differences in behaviours. In particular:

- Overall, male reviewers displayed markedly more discrimination in favour of minority candidates than did female reviewers. Male reviewers were 11.6% more likely to shortlist minority men and 13.6% more likely to shortlist minority females, while female reviewers were only 1.84% more likely to shortlist minority men and 5.5% more likely to shortlist minority females, compared to the de-identified condition.
- APS staff aged 40+ displayed much stronger affirmative action in favour of female minorities than did staff under the age of 40. These reviewers were 10.0% more likely to shortlist minority females, while younger reviewers were only 5.8% more likely to shortlist female minorities, compared to the de-identified condition.
- APS staff working in human resources roles applied strong affirmative action in favour of both females and minorities: they were 9.0% more likely to shortlist females and 41.4% more likely to shortlist female minorities, compared to the de-identified condition.

- There was considerable variation in behaviour across agencies. For example, reviewers in some agencies appeared not to favour female or minority candidates to any significant extent. The agency displaying the strongest affirmative action for minority men was 55.4% more likely to shortlist minority men on average, when they could be identified, compared with when the candidates were de-identified.

The results from this trial demonstrate that, on the whole, public servants engage in positive discrimination towards female and minority candidates. De-identification of CVs in such a context has the effect of decreasing the number of female and minority candidates shortlisted for executive level APS positions.

To our knowledge, this study is the first of its kind to implement a rigorous trial to assess bias and measure the effect of de-identification in recruitment for a senior management position, certainly in the Australian (public or private sector) context. One previous Australian study pointed to discrimination disadvantaging ethnic minority applicants seeking entry-level employment (this involved sending fake CVs to job advertisements that did not require post-school qualifications, and subsequently measuring how call back rates varied across different ethnic groups)⁷. We find very different results when focussing on recruitment into executive level positions in the public service, where recruiters appear to be positively discriminating in favour of female and minority candidates.



LIMITATIONS OF THE TRIAL

There were some potential limitations to the study. In particular, as participation in this study was voluntary, it is possible that it attracted participants who are more likely to support diversity and gender equality. To address this issue, we gathered separate evidence via a survey conducted several weeks after the trial that asked a broad set of APS officers at the same levels their views on a range of issues. The survey evidence showed that attitudes towards diversity and gender equality among participants in our trial were representative of the broader population of employees at the same levels. The study sample was not distinctive or unusual in terms of their views on these issues.

Another important point to note is that, as this was a framed field experiment in which individuals knew they were part of a study, there is potential for subject reactivity or scrutiny bias. Even though this was a familiar task for participants, it is possible that they behaved differently than they would in a real recruitment situation. While we cannot control for the exercise being hypothetical, we were able to include design features that allowed us to mitigate reactivity and actually identify participants who might have guessed that the study was examining bias via their responses to some additional survey questions at the end of the exercise. When these few participants are excluded from the analysis, the results are unchanged. Our results would be further validated by a field trial using a real recruitment process to test the impact of de-identification of CVs on shortlisting.



POLICY LESSONS

Many organisations, including APS and other public sector agencies in Australia, are trialling the de-identification of job applications as a way of attempting to mitigate bias at the early stages of the recruitment process and promote diversity. Yet, the costs of de-identification can be high and the effects of de-identification are largely unknown. The existing evidence on the effects of de-identification is limited and mixed. Most importantly, the impact of de-identification can be expected to hinge critically upon the amount and direction of bias present in each agency. Given there were variations in the degree of affirmative action applied across sub groups and agencies in specific circumstances it may be appropriate to de-identify a selection process.

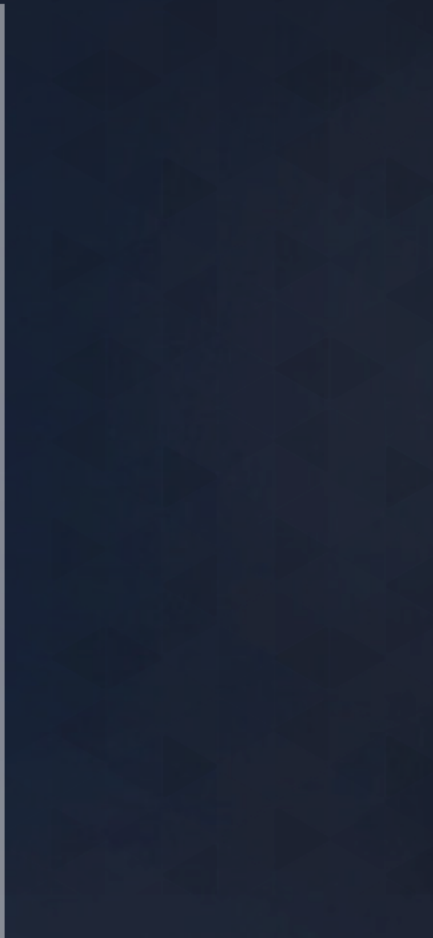
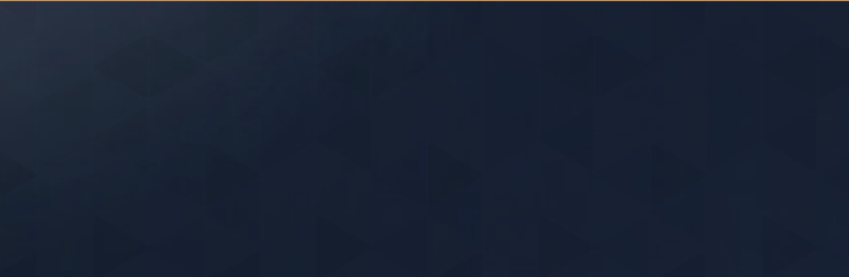
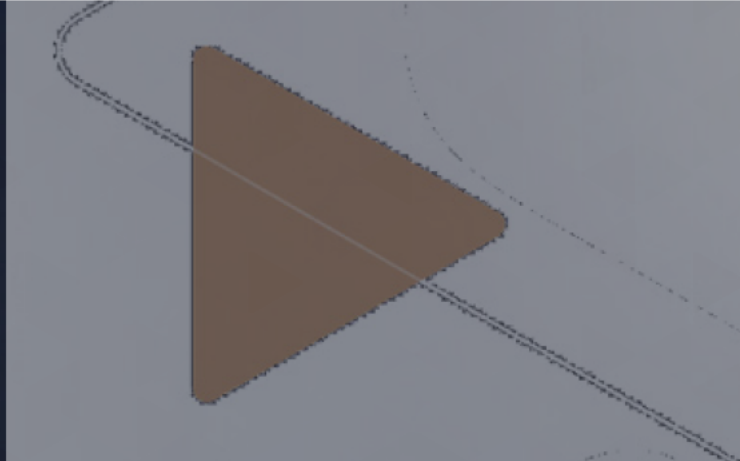
The overall implications of our study are that on average, across a broad range of APS agencies, introducing de-identification would have the unintended consequence of setting back efforts to promote more diversity at the senior management level in the public service. As things stand, senior public servants appear to be promoting diversity in the way they make decisions when selecting job candidates for shortlists during the initial stage of the recruitment process. This is not possible if applications are de-identified.

However, it remains clear that more work needs to be done to address the problem of gender inequality. The shortlisting stage of recruitment is one small piece of the diversity puzzle. Other stages of recruitment could be tested, including how positions are advertised, what information is requested from applicants, how interviews are conducted, and how hiring panels are selected and run. We also need to study factors that influence career trajectories once candidates are hired including opportunities for training and professional development, talent management, performance reviews, evaluations for promotions and flexible working arrangements. It is encouraging to see increased focus and activity in this space with many government and private sector organisations experimenting with different approaches and implementing new policies to attempt to improve diversity. Significant biases may be at work in each of these areas and eliminating or mitigating them will require innovative solutions and rigorous testing to discover what works.

Our results help to demonstrate the importance of testing interventions to address diversity before introducing them at full scale. An intervention that was thought to enhance the chances of individuals from traditionally disadvantaged groups being shortlisted for a senior role in the APS by removing bias, would have, in all likelihood, lessened their chances. The findings provide impetus for conducting more rigorous evaluations of new (and existing) initiatives aimed at countering explicit and implicit forms of discrimination and increasing gender, racial and ethnic diversity at all levels.

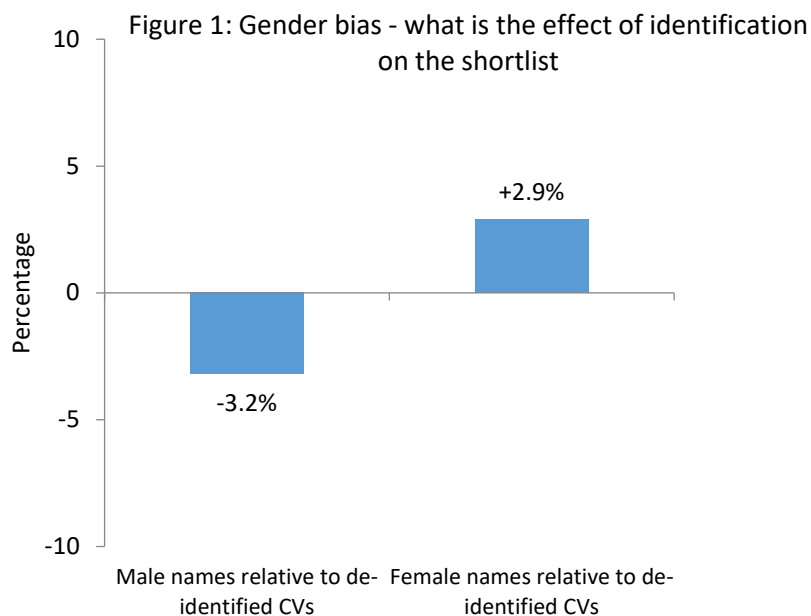
ENDNOTES

1. Department of Agriculture & Water Resources, Australian Taxation Office, Attorney General's Department, Department of Defence, Department of Foreign Affairs & Trade, Department of Employment, Department of Environment and Energy, Fair Work Ombudsman, Department of Health, Department of Industry, Innovation & Science, Offices of National Assessments, Department of the Prime Minister & Cabinet, Department of Social Services, Department of the Treasury
2. For a full report on the study, please see: Michael J. Hiscox and Lilia Arcos-Holzinger. 2017. "Going Blind to See More Clearly: The Effects of De-Identifying Job Applications in the Australian Public Service. BETA Working Paper 2017-1. Canberra.
3. Bertrand, M., Chugh, D., & Mullainathan, S. (2005). Implicit discrimination. *American Economic Review*, 94-98.
4. Goldin, C., & Rouse, C. (2000). Orchestrating impartiality: The impact of "Blind" Auditions on Female Musicians. *The American Economic Review*, 90(4), 715-741.
5. Norton, M. I., Vandello, J. A., & Darley, J. M. (2004). Casuistry and social category bias. *Journal of personality and social psychology*, 87(6), 817.
6. We acknowledge that Indigenous Australians are the traditional custodians and ancestors of Australia. As Indigenous Australians represent a small percentage of the overall population of Australia they can experience similar disadvantages to ethnic minorities. Hence, throughout the remainder of this report Indigenous Australians will be included in the analysis reported under 'minorities' whilst acknowledging that Indigenous cultures are complex and diverse.
7. Booth, A. L., Leigh, A., & Varganova, E. (2012). Does ethnic discrimination vary across minority groups? Evidence from a field experiment. *Oxford Bulletin of Economics and Statistics*, 74(4), 547-573.



Attachment B: results of the trial

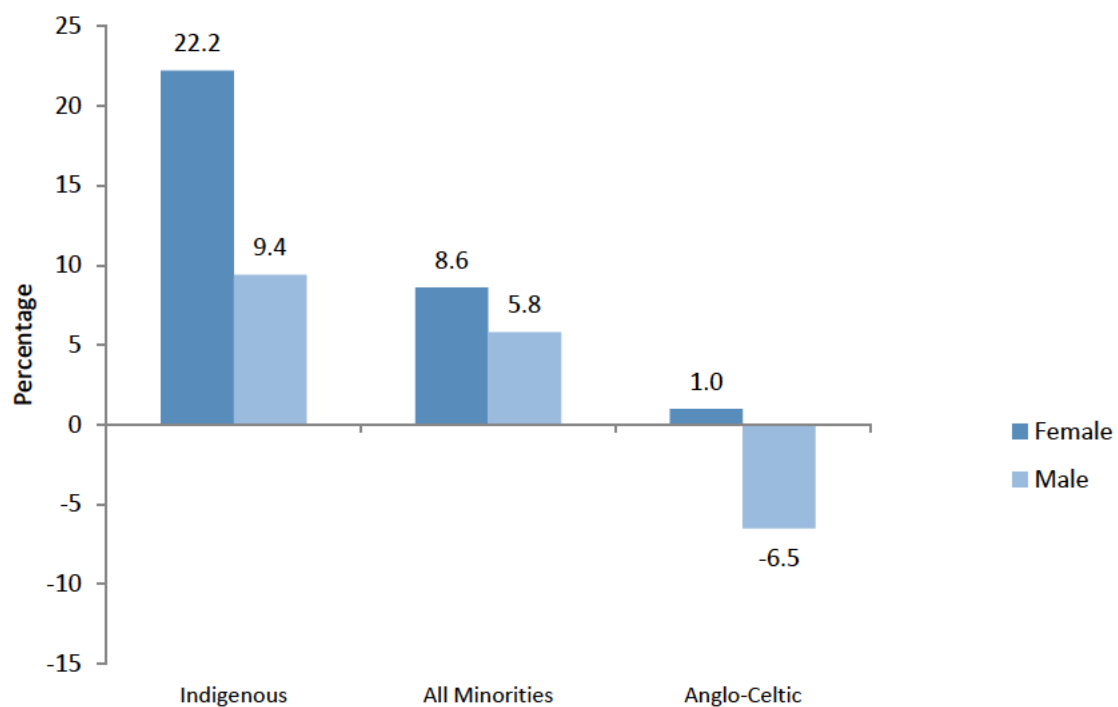
Figure 1 reports the key results on gender bias as a probability of being shortlisted. For a given set of CVs, assigning female identities increases the probability of the CV being shortlisted by 2.9% on average relative to the de-identified version. For the same set of CVs, assigning a male identity decreases the probability the CV is shortlisted by 3.2% on average. Both of these differences are small but are statistically significant at the 99% confidence level (meaning that the same result would be found 99% of the time if this exercise were repeated over and over again in the actual population). What this means is that, in practice, if applications were de-identified, we could expect that the likelihood of any female candidate being shortlisted would fall by 2.9%, on average, while likelihood of any male candidate being shortlisted would go up by 3.2%. Note that all results are reporting the probability of being shortlisted, not how the proportion of males and females in the shortlist composition changes with de-identification.



Candidates were shortlisted *more* when their names indicated they were female.
Male candidates were *less likely* to be shortlisted when their names were identifiable.

Figure 2 reports the results of the analysis of minority bias. Affirmative action towards the Indigenous female candidate is the largest, being 22.2% more likely to be shortlisted on average when identified compared to the de-identified condition. On the other hand, the identified Indigenous male CV is 9.4% more likely to be shortlisted on average compared to when it is de-identified. In absolute terms most minority candidates are on average more likely to be shortlisted when named compared to the de-identified condition, but the difference for the Indigenous female candidate is the only one that is statistically significant at the 95% confidence level.

Figure 2: Minority bias - what is the effect of identification on the shortlist



Candidates were shortlisted *more* overall when their names indicated they were Indigenous or from a minority group.
Candidates were *less likely* to be shortlisted when their names indicated they were male Anglo-Celtic .

BETA report: Going blind to see more clearly

Talking Points and Q&As

Talking Points

- Women are under-represented in management and executive level positions across the private and public sectors.
- It is possible that the gender imbalance in APS leadership may be due to gender discrimination in recruitment processes.
- To test this theory, 14 departments and over 2,000 people participated in a study to ascertain if de-identification or 'blinding' job applications by removing candidate's personal details during the APS shortlisting process could help fix this issue.
- The results showed that blinding a CV at the shortlisting stage of recruitment does not appear to assist in promoting diversity in hiring decisions on average
- In fact, APS officers generally discriminated *in favour* of female and minority candidates.
- This trial highlights the importance of testing to discover what *actually* works.
- This trial is an important step in improving the way we recruit staff to ensure that recruitment decisions are not influenced by unrelated factors or unconscious biases.
- The APS is committed to ensuring that recruitment and selection processes are fair, based on merit and importantly, free from bias.

If asked:

Why was this study conducted?

- Having a workforce that is diverse, inclusive and reflects society is important.
- In 2016, women comprised 59.0% of the APS as a whole, but accounted for 48.9% of its executive level officers and only 42.9% of its Senior Executive Service (SES) officers.
- Achieving gender equality in APS leadership is a key action set out in the APS Gender Equality Strategy.

Why do you think gender discriminations occurs in the recruitment process?

- This isn't necessarily because of explicit discrimination – it may be occurring because of our unconscious biases, or shortcuts we all use when we make decisions.
- It is common to want to hire someone who is like us, or who reminds us of someone we have worked well with previously.
- This is an example of a cognitive bias where we are influenced by irrelevant factors that may prevent us from making the best decision.

What is de-identification or 'blinding'?

- 'Blinding' is a simple concept: to focus on what really matters, we hide the things that don't.

- We've seen this work in American Symphony Orchestras in the 1970s and 1980s where a curtain between musicians and a jury helped improve the chances that women were selected for the American Symphony Orchestra.
- Today, reality TV uses a similar concept for people auditioning for a popular singing competition, by 'blinding' the judges to the appearance of candidates.
- We are not aware of any existing studies that have been done to trial the effect of de-identification in the APS context.

What is the shortlisting trial?

- The Behavioural Economics Team of Australia (BETA), worked with the Australian Public Service Commission (APSC) in partnership to rigorously test the extent of unconscious bias at the shortlisting stage of APS recruitment processes.

Who participated in the shortlisting exercise?

A total of 2,108 staff at the Executive Level 1, Executive Level 2, and SES Band 1 classifications from the following agencies within the APS participated in the shortlisting exercise:

1. Department of Agriculture & Water Resources
2. Australian Taxation Office
3. Attorney General's Department
4. Department of Defence
5. Department of Foreign Affairs & Trade
6. Department of Employment,
7. Department of Environment and Energy
8. Fair Work Ombudsman
9. Department of Health,
10. Department of Industry, Innovation & Science
11. Offices of National Assessments
12. Department of the Prime Minister & Cabinet
13. Department of Social Services
14. Department of the Treasury

The APSC partnered with BETA on the design of the trial, but no APSC staff participated in the trial.

What were the results of the trial?

The results of the trial indicated that, on average:

- de-identifying applications at the shortlisting stage of recruitment does not appear to assist in promoting diversity in hiring decisions;
- overall, APS officers generally discriminated in favour of female and minority candidates;
- positive discrimination was strongest for Indigenous female candidates who were 22.2% more likely to be shortlisted when identifiable compared to when CVs were de-identified;
- although the effect of de-identification is modest, it points to the existence of a form of subtle discrimination (or affirmative action) that favours female and minority applicants, and disadvantages male candidates;
- results varied by agency, and also by gender and age group.

Will agency results be publicly available? Which agencies displayed the most/least bias?

- Publicly available results are presented at an aggregate level across all participating agencies.
- Where participation rates were sufficiently high to detect statistically significant results, agency-level data will be provided to individual agencies.
- It will be up to individual agencies to make their data available.

How did BETA and the APSC ensure the exercise was conducted to a high ethical standard?

- The trial was subjected to ethics review All BETA research projects involving human participants are subject to, and compliant with, the National Statement on Ethical Conduct in Human Research.
- The trial did not involve real applicants or positions. Participants understood that they were considering fictitious applicants and positions.

Should other organisations be applying 'blind' recruitment processes?

- The results of this trial confirms that it is important to check how people actually behave, compared to how you think they will behave.
- This is why BETA is aiming to replicate this study in the field to produce further evidence of behaviour.
- There are a range of new recruitment platforms which are being developed to redesign the process to eliminate unconscious bias.
- Where there is positive bias in an organisation towards females or minorities, a flexible approach which promotes diversity in hiring may still be of assistance.

Project Staff (for Communications staff to contact for urgent enquiries)

s22

From: [Hiscox, Michael](#)
To: s22
Cc: s22
Subject: FW: "Going Blind to See More Clearly": a question [SEC=UNCLASSIFIED]
Date: Tuesday, 4 July 2017 9:13:04 AM

UNCLASSIFIED

I will reply ...

From: s47F On
Behalf Of s47F
Sent: Tuesday, 4 July 2017 7:38 AM
To: hiscox@fas.harvard.edu
Cc: Hiscox, Michael <Michael.Hiscox@pmc.gov.au>
Subject: "Going Blind to See More Clearly": a question

Dear Prof. Hiscox,

I read with great interest your recent paper, "Going Blind to See More Clearly." While understanding the need for diversity in the workplace, I am also deeply concerned about how young men are doing in the developed world as compared to young women (<https://www.economist.com/news/international/21645759-boys-are-being-outclassed-girls-both-school-and-university-and-gap>), so the tendency for respondents to choose women when they knew the gender of the applicant troubled me.

s47F, I recognize my own personal forebodings about the future for young males. But as someone with keen interest in gender issues, I am also troubled by more than 20 years of data showing that young men are seriously lagging behind young women throughout their educational experiences.

One piece of data I did not see in your paper, about which I am quite curious is this: Among the respondents, was there a difference in choice for male respondents vs. female ones? *That is, were men more or less likely than women to short-list the female applicant?*

S47F

Looking forward to hearing from you.

Sincerely yours,

s47F



From: s22
To: [Complaints](#)
Cc: [Oliver, Tara](#); s22 [Hiscox, Michael](#)
Subject: RE: Regarding the conclusion of a study [SEC=UNOFFICIAL]
Date: Monday, 3 July 2017 3:41:00 PM

Unofficial

Hi Complaints

Please find below a response back to s47F .

Thanks

s22

Hi s47F

Thanks you for your feedback.

The Behavioural Economics Team of Australia (BETA) is working [across government](#) on a [range of projects](#) to trial the use of behavioural economics. These practices ensure greater accountability and transparency to test what works and facilitate the sharing of knowledge with our fellow researchers and other interested parties.

The key question we were looking to explore through this research is why women are approximately 50% of the workforce, and more than 50% of the APS, but are underrepresented at senior levels with the APS. Achieving gender equality in APS leadership is a key priority outlined in the APS Gender Equality Strategy 2016-19.

One possible reason for the lack of female representation at more senior levels is bias; that is, people making hiring and promotion decisions may be, consciously or unconsciously, assessing female candidates unfairly, making explicit or implicit assumptions that women are less able than male counterparts to perform senior management roles. This trial set out to test this, and provides valuable information on hiring current hiring practices in the public service.

Regards

BETA

s22



From: s47F
Sent: Sunday, 2 July 2017 2:40 PM
To: Complaints
Subject: Regarding the conclusion of a study

Hello complaints team,

I have a complaint about:

<https://pmc.gov.au/resource-centre/domestic-policy/going-blind-see-more-clearly-unconscious-bias-australian-public-services-shortlisting-processes>

Particularly this conclusion of the results:

"Overall, the results indicate the need for caution when moving towards 'blind' recruitment processes in the APS, as de-identification may frustrate efforts aimed at promoting diversity."

As an Australian Citizen, I expect public service officials to be hired based on merit. The tax revenues of this country should go towards funding competent employees who work on behalf of the country. The conclusion above is at odds with this as it specifies competency is at odds with promoting diversity.

If a company released a study/conclusion such as this, what kind of response would shareholders have? They would not care about diversity, they would wish the company to hire the best, brightest and most competent people for the job. It is in the same vein, that I wish for my governing body to only choose employees that are going to further the

governing body's main goal - increasing efficiency of said organisation. A diversified but less competent pool of staff does not achieve this outcome.

As an aside, any study where the participants know they are being measured is almost useless anyway. This is evident from the surprising 22%+ additional likelihood that an aboriginal female is chosen when applicants were identifiable, which I'm sure was quite surprising to those unaware of the possibility of "virtue signalling". Whoever conducted this study has wasted a lot of time and resources that could be better used elsewhere.

This is probably the wrong email address for my complaint, so if this needs to be passed on to a different area, or better yet: to tell me my "complaint has been received, thank you for your feedback" then so be it.

Kind regards,

s47F

Deng, Yilin

From: BETA
Sent: Monday, 3 July 2017 4:28 PM
To: s47F
Subject: RE: Why are you so blind to facts? [SEC=UNCLASSIFIED]

UNCLASSIFIED

Hi s47F

Thanks you for your feedback.

The Behavioural Economics Team of Australia (BETA) is working across government on a range of projects to trial the use of behavioural economics. These practices ensure greater accountability and transparency to test what works and facilitate the sharing of knowledge with our fellow researchers and other interested parties.

The key question we were looking to explore through this research is why women are approximately 50% of the workforce, and more than 50% of the APS, but are underrepresented at senior levels with the APS. Achieving gender equality in APS leadership is a key priority outlined in the APS Gender Equality Strategy 2016-19.

One possible reason for the lack of female representation at more senior levels is bias; that is, people making hiring and promotion decisions may be, consciously or unconsciously, assessing female candidates unfairly, making explicit or implicit assumptions that women are less able than male counterparts to perform senior management roles. This trial set out to test this, and provides valuable information on hiring current hiring practices in the public service.

Regards

The team at BETA



BETA | Behavioural Economics Team of the Australian Government
beta@pmc.gov.au | www.pmc.gov.au/beta

From: s47F
Sent: Sunday, 2 July 2017 1:49 AM
To: Hiscox, Michael J. <hiscox@fas.harvard.edu>
Subject: Why are you so blind to facts?

Dear Prof. Hiscox,

A recent ABC article I came across with described the gigantic failure of your goals, which is the equality of outcome. The fact that under blindness to ethnic or gender status of a person creates an uneven distribution of workers shows that people of different genders or ethnic groups have different abilities.

You may argue that women and minorities are discriminated against their entire lives, thus their weaker CVs (compared to white males) lead to the results of your study. Fine. That's a fair point, although very hard to show empirically.

However, you've also shown that adding a male name reduces the chances of a person getting a job and having a female name increases it. Does this not show that males are the ones being discriminated against? You and people like you's escapade of cosmic justice have caused society to discriminate against males.

Unless, of course, this is your end goal. Creating an equal society by reducing the skills and capabilities of everyone who's better than a group you've chosen. To which then you're not blind to the facts, you're just evil.

From: [Hiscox, Michael](#)
To: s47F
Cc: s22 hiscox@fas.harvard.edu
Subject: Australian Public Service blind recruitment trial [SEC=UNCLASSIFIED]
Date: Monday, 3 July 2017 2:47:03 PM

UNCLASSIFIED

Dear s47F

Thanks for your message and question. I am copying s22, part of BETA, who is keeping account of feedback so we can take all comments on board. But just as a quick response I would note that the study was explicitly addressing the issue of whether some form of bias might be disadvantaging female candidates applying for senior level positions in the public service. While women make 58% of the APS as a whole, they account for only **38%** of its Senior Executive Service officers at the highest two levels (Bands Two and Three). So, in this context, "diversity" refers to more equal representation for women.

Best,
-Michael

From: s47F
Sent: Monday, 3 July 2017 12:22 PM
To: Hiscox, Michael J. <hiscox@fas.harvard.edu>
Subject: Australian Public Service blind recruitment trial

Dear Professor Hiscox

You were quoted on the ABC News as saying "We should hit pause and be very cautious about introducing this as a way of improving diversity, as it can have the opposite effect".

Women already make up 58% of the Australian Public Service workforce, so the blind recruitment exercise appeared to be slightly redressing this imbalance.

Were you quoted out of context? If not, what did you mean by the word 'diversity'?

s47F

s47F