

Working Papers in Economics & Finance 2022-02

# Experimental research in public administration: a study of gender representation in the police

Federica Alberti, University of Portsmouth Karen Johnston, University of Portsmouth Foteini Kravariti, University of Portsmouth

Portsmouth Business School

https://www.port.ac.uk/about-us/structure-and-governance/organisational-structure/our-academ-ic-structure/faculty-of-business-and-law/portsmouth-business-school

# Experimental research in public administration: a study of gender representation in the police

Federica Alberti, Karen Johnston, Foteini Kravariti

# Highlights

- We study the symbolic effect of gender representation on organization attractiveness.
- We manipulate the gender representation of a police department in an online survey experiment.
- We find no effects of gender representation on attractiveness of the police department.

# Abstract

We draw on the theory of representative bureaucracy to examine as to whether there is symbolic effects of a passively representative public organization. In this study we experimentally examine whether the gender representation of a police department affects the extent to which citizens find the department as an attractive place of employment. The results of the study show that there are no significant effects overall.

# 1. Introduction

The extent to which a public organization is representative of a population and whether citizens perceive a more representative public organization as better performing, and more legitimate, trustworthy and fair has been an area of interest in public administration scholarship. In this study, we draw on the theory of representative bureaucracy and use an experimental methodology, by varying the gender representation of a police department to examine the extent to which citizens find the department organizationally attractive.

In public administration research, experimental methodology is emergent and we therefore draw upon the field of economics to investigate representative bureaucracy. In the field of economics experimental research has been used extensively, particularly on the analysis of individual decision-making, risk and uncertainty, games, bargaining, auctions, market behaviours (Hey, 1991). However, experimental research in the field of public administration is a relatively novel methodology (Jilke et al., 2015; Bouwman and Grimmelikhuijsen, 2016). Hassan and Wright (2020) argue that theoretical insights and research practices from other disciplines should be encouraged in public administration research. However, they acknowledge that the use of experimental methodology in public administration scholarship is somewhat weak and other disciplinary fields such as economics could provide guidance to strengthen public administration scholarship (Hassan and Wright, 2020). Similarly, Jilke et al (2015, p.71) state that: 'Clearly, an experimental public administration is in its infancy and will require more time and maturation to locate its place within the methodological toolbox of public administration scholars and practitioners.' Reviews of public administration research that used experimental methods showed that the experimental methodology is relatively nascent to the discipline with an increased use of experimental methods emerging from 2014 onwards (see Bouwman and Grimmelikhuijsen, 2016; Hansen and Tummers, 2020). Much of the research in public administration using experimental methods investigate government performance, decision making by public servants or citizens, and government information and communication (see Grimmelikhuijsen and Klijn, 2015; Bouwman and Grimmelikhuijsen, 2016; James and Moseley, 2014; James et al., 2017; Bellé, 2013).

A further research area using experimental methodology in public administration is the investigation of the symbolic effects of the passive representation of a public organization.

Passive representation refers to the extent to which a public organization reflects or mirrors the society it serves (Mosher 1968), i.e. a bureaucracy is passively representative to the extent that it employs a demographic or social group in numbers proportionate to the share of the population (Bradbury and Kellough, 2011). Symbolic representation is when a demographic or social group identifies with people like themselves in positions of authority (Theobald and Haider-Markel, 2009). Experiments on representation have tested the symbolic value for citizens of passive representation (Bishu and Kennedy 2020; Headley et al. 2021).

Riccucci, Van Ryzin and Lavena's (2014) used an online survey experiment varying the gender representation of a hypothetical domestic violence police unit (DVU) to test whether the passive representation was associated with citizens' perceptions of the unit's efficacy, trust and fairness; and whether there was an interaction of representativeness and perceptions of performance. The randomized experiment showed that if the legitimacy of the DVU increased on the basis of women's representation, then citizens were more willing to report domestic violence crimes (Riccucci et al., 2014). Furthermore, the study showed that the gender representativeness of the DVU had a causal effect on co-production behaviours (i.e. willingness to report domestic violence crimes) and perceptions of efficacy, trust and fairness (Riccucci et al., 2014). The causal effect of gender representativeness in terms of perceptions of efficacy, trust and fairness were greater for women who were more willing to co-produce with the police (Riccucci et al., 2014). However, the study showed no relationship between representativeness and performance. Riccucci et al. (2014) suggest that people may view representativeness as a distinct dimension of a public organization, and do not necessarily associate representativeness with performance in their perceptions of a public organization.

Riccucci, Van Ryzin and Li (2016) conducted a further experimental study within the context of a hypothetical recycling program to examine whether the number of female public officials influences citizens, in particular women's willingness to cooperate with government in recycling. The randomized experiment once again manipulated the gender representation of public officials in the recycling program. The findings of the study supported symbolic representation in that when the description of the recycling program included more female names of public officials, women's willingness to recycle increased (Riccucci et al., 2016). Thus, women were more willing to cooperate with government and co-produce policy outcomes (Riccucci et al., 2016). The study also demonstrated that gender representation applies to a policy domain that is not explicitly gendered or has a policy salience for women as in the case of domestic violence (Riccucci and Van Ryzin, 2017).

Van Ryzin et al. (2017) conceptually replicated their previous experimental study by locating the research within the policy domain of emergency services. In that study, gender representativeness of the public organization was manipulated to examine the willingness of citizens to donate time, money and blood to a local Citizen Corps (Van Ryzin et al. 2017). The experiment showed no symbolic representation effects with no significant relationship between gender representativeness of the public organization and responses from participants (Van Ryzin et al. 2017). They offered explanations for the lack of significant symbolic representation effects. Contrasting their findings from the previous study they suggested that: (1) the variances in the length of the description of the Citizen Corp (270 words) versus the recycling program (230 words) may have resulted in participants skim reading the text; (2) the Citizen Corp may have been perceived to involve multiple levels of government and institutional complexity which may have affected participants' perception; (3) the donation of time, money and blood may have been perceived as a higher cost compared to recycling; (4) the policy domain may not have incorporated values that are widely shared or services commonly encountered by many citizens; and (5) emergency services may be perceived as masculine (Van Ryzin et al., 2017).

Similarly, to the 2014 study, Riccucci, Van Ryzin and Jackson (2018) tested symbolic representation by varying the race representation of police officers in a hypothetical police department and how this influenced black and white citizens' perception of performance, trustworthiness and fairness of the police. The results of the survey experiment showed that perceived performance, trust and fairness increased among black citizens when the police department was composed of mostly black police officers (Riccucci et al. 2018).

Dantas Cabral, Peci and Van Ryzin (2021) used a field experiment within a Rio de Janeiro favela to investigate symbolic representation and the perception of public organizations (police and public schools) by citizens defined by the intersectionality of race, class and spatial segregation. Dantas Cabral et al. (2021) found that bureaucratic reputation was an important factor in the symbolic representation. Representation was less important when public schools have a positive reputation, and when bureaucratic reputation was negative, as in the case of the police, symbolic representation was more important (Dantas Cabral et al., 2021). The study also showed procedural justice or the way citizens expectations and perceptions of the police, has interactive effects with symbolic representation (Dantas Cabral et al., 2021). The symbolic representation of a representative leader within the bureaucracy was sufficient to increase citizens' expectations of fair treatment and improvements in the public organization (Dantas Cabral et al., 2021). The study confirmed the symbolic representation hypothesis that the existence of a representative bureaucracy can create more positive attitudes towards public organizations and better co-produced outcomes between bureaucrats and citizens (Ding et al., 2021).

The present study adds to this body of literature, by replicating the experimental research design of Riccucci et al.'s (2014; 2018) studies to investigate the extent to which citizens would find a police department organizationally attractive by varying the passive representation of gender.

#### 2. Experimental Design

Observational studies have reported the external validity of representative bureaucracy theory (see Gade and Wilkins, 2013) and experimental studies have reported high internal validity (see Jilke et al., 2016). This study therefore employed an experimental method, which involved a randomized 3 X 3 factorial design that was incorporated into an online survey. The merit of employing randomized survey experiments is that implicit bias can be controlled for (Porumbescu et al., 2021), which in this case enabled us to explore the relationship between gender representativeness and a police department's organizational attractiveness across diverse job applicants. The experimental design adhered to the recommended guidelines for experiments in public management (James et al., 2017).

As depicted in Figure 1, the experiment started with a warm-up statement that helped participants familiarize themselves with the overall scope of the study. Participants were then advised to read a hypothetical job advert for a police officer position, which was located either in the US or UK (depending on participants' location), and to answer the survey questions as if they were applying for the position. Participants were then randomly assigned to one of the three treatment groups (A, B or C), which presented identical organizational descriptions and benefits offered, but manipulated the passive gender representation for three police departments. Similar to experimental studies investigating gender representativeness in the police context (see Riccucci et al., 2014), we manipulated the job advert with a male majority (Group A), a gender-balanced representation (Group B) and a scenario where women were the majority (Group C).

After reading the job advert, participants were asked to respond to the same set of ten questions related to organizational attractiveness (see Table 1 for the full list of questions). We adapted Highhouse et al.'s (2003) scale for organizational attractiveness to measure the three components of organizational attractiveness, i.e. general attractiveness (e.g. 'This organization

is attractive to me as a place for employment'); intentions to pursue (e.g. 'I would exert a great deal of effort to work for this organization'); and reputational prestige (e.g. 'Employees are probably proud to say they work at this organization'). To build upon the existing representative bureaucracy theory all scale questions of organizational attractiveness were considered as dependent variables and were evaluated by using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Cronbach's alpha for general attractiveness, intentions to pursue, and reputational prestige was .90, .90, and .77, respectively. Passive representation of gender and the gender of participants were the independent variables.

Table 1: Scale of Organizational Attractiveness

Q1:	This organization is attractive to me as a place for employment.
Q2:	I am interested in learning more about this organization.
Q3:	I would accept a job offer from this organization.
Q4:	I would make this organization one of my first choices as an employer.
Q5:	I would exert a great deal of effort to work for this organization.
Q6:	I would recommend this organization to a friend looking for a job.
Q7:	Employees are probably proud to say they work at this organization.
Q8:	There are probably many who would like to work at this organization.
Q9:	The organization offers the possibility of working together with different people.
Q10:	I think I could fit into this organization.

Data was collected using an online survey via Prolific during March 2021. Prolific is a popular online platform that has been internationally used to collect data from representative samples (see Mellis and Bickel, 2020). It has been commented that Prolific is more ethical compared to other online platforms because a minimum pay for participants is agreed upon in advance (Palan and Schitter, 2018), which provides higher quality data (Peer et al., 2017). Participants

received a nominal payment for completing the survey (GBP 0.88 or USD 1.20 per five minutes participation). Prolific enabled us to recruit from the US and UK linking participants to two online surveys hosted on Qualtrics, that is a survey for US-based and another for UK-based participants. The same experiment design and questions were used for all participants with exception of ethnic and race categorizations. These categorizations were in accordance with respective countries' national census surveys. Age was a further demographic question in the survey, and questions on employment status and length of service were also included in the survey given that the experiment involved issues of employment. In line with Porumbescu et al. (2021) and Riccucci et al. (2014), we determined the minimum number of participants per treatment group to be 200, so at least 1200 in total. We received 1260 responses in total with n = 642 for the US sample and n = 618 for the UK sample.

We ran confirmatory factor analysis (CFA) using SPSS Amos 26 to evaluate the fit of the threefactor model measuring organizational attractiveness. The results showed that the three-factor model had the best goodness-of-fit (Hu and Bentler, 1999) compared to alternative models (see Table 2) supporting that the three constructs of organizational attractiveness are distinct.



Figure 1: Outline of the Experimental Design

Table 2: Confirmatory Factor Analysis for the Constructs of Organizational Attractiveness

Model	$\chi^2$	df	CFI	TLI	IFI	RMSEA
Three-factor model	112.15	25	.99	.98	.99	.05
Two-factor model: general attractiveness and intentions to pursue	70.82	13	.99	.98	.99	.06
Two-factor model: general attractiveness and prestige	65.79	8	.98	.97	.98	.08
Two-factor model: intentions to pursue and prestige	118.55	13	.98	.97	.98	.08
One-factor model	652.40	35	.93	.91	.93	.12

*Note:* CFI is the comparative fit index; TLI is the Tucker-Lewis index; IFI is the incremental fit index; and RMSEA is the root-mean-square error of approximation.

# 3. Results

Figures 2 to 5 show the histograms of responses to the ten questions in the three treatment groups, broken down by the gender of participants, in the US sample (Figures 2 and 3) and UK sample (Figure 4 and 5). The modal response to all questions from both male and female

participants in the US sample was 2 (i.e. 'disagree'), indicating that the vast majority of individuals (i.e. 97.7% in the US sample) did not find the police department organization attractive. Similarly, in the UK sample the modal response to all questions from female participants was 2, whereas the modal response from male participants was 2 with the exception of only one question, Q4, for which the modal response was 3 (i.e. 'neither agree nor disagree'). Like the US sample, this indicates that nearly all participants (i.e. 98.2% of the UK sample) did not find the police department attractive. In both samples, individuals who identified themselves as 'none gender specific' rated the attractiveness of the department higher compared to male and female participants. However, the average modal response across the ten questions was slightly higher in the US sample (i.e. 3.89 out of 5) than in the UK sample (i.e. 2.75 out of 5).

We performed ANOVA tests with Bonferroni correction (using STATA 17) to compare the distributions of responses between the three treatment groups, as well as between the three gender categories. The results of these tests are summarised in Tables 3 and 4 for the US sample and Tables 5 and 6 for the UK sample.

In the US sample, except for Q7 and Q8, there was statistically significant difference between the three genders, especially between individuals who identified themselves as 'none gender specific' and the other two gender categories, but no difference between males and females. There was also some statistically significant difference between the three treatment groups, with the male majority department (Group A) being the most attractive of all, but only for Q2, Q4, and Q9.

There were more statistically significant differences between treatment groups in the UK sample, compared to the US sample, with the gender representation of the police department having a significant effect on the attractiveness of the department organization in response to

all questions bar Q8, and the gender balanced department (Group B) being the *least* attractive of all. On the other hand, there were no statistically significant differences between genders in response to the majority of questions. Only in response to Q3 and Q10 there was a significant difference between genders, which was mainly driven by the higher rating from 'none gender specific' participants compared to male and female ones, like in the US sample. In contrast, in response to Q4 and Q8 there was a significant difference between genders with male participants rating the organization higher than female ones. Otherwise, there was no difference between male and female participants, like in the US sample.



Figure 2: Distributions of Responses to Q1 to Q5 by Gender of Respondents and Gender Representation of the Department, US Sample.



Figure 3: Distributions of Responses to Q6 to Q10 by Gender of Respondents and Gender Representation of the Department, US Sample.



Figure 4: Distributions of Responses to Q1 to Q5 by Gender of Respondents and Gender Representation of the Department, UK Sample.



Figure 5: Distributions of Responses to Q6 to Q10 by Gender of Respondents and Gender Representation of the Department, UK Sample.

Gender representation			Gender		
Prob > F 0.0475			Prob > F 0.0001		
Q1	Mean difference (p-value):		Mean difference (p-value):		
	Group B - Group A	-0.25096	Mala Famala	-0.1385	
		(-0.071)	Wale - Pellale	(0.383)	
	Group C - Group A	-0.21995	None conder specific Female	1.15032	
		(0.144)	None gender specific - Feinale	(0.000)	
	Group C - Group B	0.03101	None conder specific Male	1.28882	
		(1.000)	None gender specific - Male	(0.000)	
	Prob > F	0.019	Prob > F	0.0002	
	Mean difference (p-value):	•	Mean difference (p-value):		
	Group B - Group A	-0.28113	Male - Female	-0.0849	
02		(0.049)		(1.000)	
Q2	Group C - Group A	-0.29063	None gender specific - Female	1.23036	
		(0.041)	Tone gender speeme Temate	(0.000)	
	Group C - Group B	-0.0095)	None gender specific - Male	1.31523	
		(1.000)	Tone gender speeme Trute	(0.000)	
	Prob > F	0.5299	Prob > F	0.0049	
	Mean difference (p-value):		Mean difference (p-value):		
	Group B - Group A	-0.12589	Male - Female	-0.1448	
03		(0.781)		(0.347)	
<b>X</b> <sup>3</sup>	Group C - Group A	-0.06578	None gender specific - Female	0.79151	
		(1.000)	S	(0.028)	
	Group C - Group B	0.06011	None gender specific - Male	0.93632	
		(1.000)		(0.007)	
	Prob > F	0.0075	Prob > F	0.0018	
	Mean difference (p-value):	0.05540	Mean difference (p-value):	0.11.5	
	Group B - Group A	-0.35749	Male - Female	-0.115	
04		(0.006)		(0.689)	
	Group C - Group A	-0.23225	None gender specific - Female	0.99682	
		(0.137)		(0.005)	
	Group C - Group B	0.12524	None gender specific - Male	1.11182	
		(0.847)		(0.001)	
	Prob > F	0.325	Prob > F	0.0001	
	Mean difference (p-value):	0 1 6 5 1 7	Mean difference (p-value):	0.0110	
	Group B - Group A	-0.1651/	Male - Female	-0.2113	
05		(0.510)		(0.097)	
ζ.	Group C - Group A	-0.14546	None gender specific - Female	1.0/346	
		(0.686)		(0.003)	
	Group C - Group B	0.01971	None gender specific - Male	1.28477	
		(1.000)		(0.000)	

Table 3: Results of ANOVA Tests Between Gender Representations of the Police Department and Between Gender of Respondents, Q1 to Q5, US Sample

	Gender representation		Gender	
	Prob > F	0.1058	Prob > F	0.0008
	Mean difference (p-value):		Mean difference (p-value):	
06	Group B - Group A	-0.22454	Mala Famala	0.04305
		(0.120)		(1.000)
QU	Group C - Group A	-0.16162	None gender specific - Female	1.12548
		(0.422)	None gender speeme - I emate	(0.001)
	Group C - Group B	0.06292	None gender specific - Male	1.08243
		(1.000)	Tone gender speeme Trute	(0.001)
	Prob > F	0.299	Prob > F	0.3197
	Mean difference (p-value):		Mean difference (p-value):	T
	Group B - Group A	-0.14195	Male - Female	-0.0506
07	······································	(0.362)		(1.000)
<b>C</b> .	Group C - Group A	-0.06519	None gender specific - Female	0.31062
		(1.000)		(0.647)
	Group C - Group B	0.07676	None gender specific - Male	0.36124
		(1.000)		(0.450)
	Prob > F	0.59/1	Prob > F	0.3927
	Mean difference (p-value):	0.06710	Mean difference (p-value):	0.0046
	Group B - Group A	-0.06719	Male - Female	-0.0346
Q8		(1.000)		(1.000)
	Group C - Group A	-0.08889	None gender specific - Female	0.30106
		(0.994)		(0.080)
	Group C - Group B	-0.0217	None gender specific - Male	(0.53508)
	Droh > E	0.000	Droh > E	0.002
	$\Gamma 100 > \Gamma$ Mean difference (n value):	0.000	$\Gamma 100 > \Gamma$ Mean difference (n value):	0.002
	Weath difference (p-value).	-0 56099	Wean difference (p-value).	-0.1266
	Group B - Group A	(0,000)	Male - Female	(0.396)
Q9		-0 36541	None gender specific - Female	0.81465
	Group C - Group A	(0.001)		(0.01403)
		0 19558		0.94121
	Group C - Group B	(0.155)	None gender specific - Male	(0.002)
	Prob > F	0.1452	Prob > F	0.0001
	Mean difference (p-value):	011.02	Mean difference (p-value):	0.0001
	Group B - Group A	-0.21183		-0.154
0.10		(0.237)	Male - Female	(0.356)
Q10	Group C - Group A	-0.19746	None gender specific - Female	1.2673
		(0.308)		(0.000)
	Group C - Group B	0.01437	None gender specific - Male	1.4213
		(0.000)		(0.000)

Table 4: Results of ANOVA Tests Between Gender Representations of the Police Departmentand Between Gender of Respondents, Q6 to Q10, US Sample

Gender representation			Gender		
Prob > F 0.0034			Prob > F 0.0802		
01	Mean difference (p-value):		Mean difference (p-value):		
	Group B - Group A	-0.22301	Mala Famala	0.00535	
		(-0.071)	Wate - Temate	(1.000)	
Q1	Group C - Group A	0.0648	None gender specific - Female	0.77892	
		(1.000)	None gender speeme - remate	(0.075)	
	Group C - Group B	0.28781	None gender specific - Male	0.77358	
		(0.004)	None gender speerne Male	(0.078)	
	Prob > F	0.0193	Prob > F	0.0649	
	Mean difference (p-value):	1	Mean difference (p-value):	1	
	Group B - Group A	-0.167	Male - Female	0.0582	
02		(0.203)		(1.000)	
~~	Group C - Group A	0.08666	None gender specific - Female	0.80984	
		(1.000)	Tione gender speerite Temate	(0.069)	
	Group C - Group B	0.25366	None gender specific - Male	0.75163	
		(0.017)		(0.104)	
	Prob > F	0.0029	Prob > F	0.0093	
	Mean difference (p-value):		Mean difference (p-value):		
	Group B - Group A	-0.22852	Male - Female	0.10697	
03		(0.038)		(0.468)	
<b>C</b> -	Group C - Group A	0.07392	None gender specific - Female	1.01686	
		(1.000)		(0.013)	
	Group C - Group B	0.30244	None gender specific - Male	0.9099	
		(0.003)		0.0227	
	Prob > F	0.000	Prob > F	0.0237	
	Mean difference (p-value):	0.42055	Mean difference (p-value):	0.20692	
	Group B - Group A	-0.42933	Male - Female	(0.041)	
Q4		(0.000)		(0.041)	
	Group C - Group A	-0.03394	None gender specific - Female None gender specific - Male	(0.37424)	
		(1.000)		(0.442)	
	Group C - Group B	(0.001)		(1,000)	
	Dreh > E 0.02		Proh > F	(1.000)	
	$100 > 1^{\circ}$ Mean difference (n-value):	0.0295	$100 > 1^{\circ}$ Mean difference (n-value)	0.270	
	Group B - Group A	-0.23/12	Wean difference (p-value).	0 10283	
		(0.064)	Male - Female	(0.658)	
Q5	Group C - Group A	$23E_{-}05$	None gender specific - Female	0.46557	
		(1,000)		(0.717)	
	Group C - Group B	0 23415	None gender specific - Male	0 36275	
		(0.065)		(1,000)	
		(0.003)		(1.000)	

Table 5: Results of ANOVA Tests Between Gender Representations of the Police Department and Between Gender of Respondents, Q1 to Q5, UK Sample

	Gender representation		Gender	
	Prob > F	0.0021	Prob > F	0.108
	Mean difference (p-value):		Mean difference (p-value):	
06	Group B - Group A	-0.29526	Mala Famala	0.10033
		(0.002)	Wale - Pellale	(0.454)
Qu	Group C - Group A	-0.11478	None gender specific Female	0.55878
		(0.523)	None gender speeme - Pennare	(0.272)
	Group C - Group B	0.18049	None gender specific Male	0.45845
		(0.100)	None gender speeme - Male	(0.495)
	Prob > F	0.0089	Prob > F	0.4276
	Mean difference (p-value):	1	Mean difference (p-value):	1
	Group B. Group A	-0.21796	Male - Female	0.04576
07	Gloup D - Gloup A	(0.010)		(1.000)
Q'	Group C - Group A	-0.05211	None gender specific - Female	-0.2824
	Group C - Group A	(1.000)	Tone gender speeme - I emaie	(0.981)
	Group C - Group B	0.16585	None gender specific - Male	-0.3282
	Group C - Group B	(0.076)	None gender speeme - Male	(0.764)
	Prob > F	0.2465	Prob > F	0.002
	Mean difference (p-value):		Mean difference (p-value):	
	Group B - Group A	-0.12479	Male - Female	0.2125
08		(0.293)		(0.002)
Q0	Group C - Group A	-0.04674	None gender specific - Female	0.31194
		(1.000)	None gender speeme - I emate	(0.847)
	Group C - Group B	0.07805	None gender specific - Male	0.09944
		(0.905)	None gender speeme - Male	(1.000)
	Prob > F	0.006	Prob > F	0.4448
	Mean difference (p-value):		Mean difference (p-value):	
	Group B. Group A	-0.25063	Male - Female	-0.0593
00	Gloup B - Gloup A	(0.010)	Wate - Pennate	(1.000)
Q9	Group C. Group A	-0.02624	None gender specific - Female	0.28759
	Group C - Group A	(1.000)		(1.000)
	Group C. Group B	0.22439	None conder specific Male	0.34687
	Group C - Group B	(0.027)	None gender specific - Male	(0.895)
	Prob > F	0.0102	Prob > F	0.0206
	Mean difference (p-value):		Mean difference (p-value):	
	Group B - Group A	-0.231	Mala Famala	0.0148
Q10		(0.069)		(1.000)
	Group C - Group A	0.06168	None conden analifia Escuela	1.0993
		(1.000)	Tione gender specific - remaie	(0.016)
	Group C - Group B	0.29268	None gender specific - Male	1.0845
		(0.012)		(0.018)

Table 6: Results of ANOVA Tests Between Gender Representations of the Police Departmentand Between Gender of Respondents, Q6 to Q10, UK Sample

#### 4. Conclusion

Although there has been an increasing use of experimental methods in public administration, we add to this body of research by investigating the extent to which passive representation of gender affects the organizational attractiveness of a public organization – in this study a police department.

We found that for both the US and UK sample, overall, both male and female participants did not find the police department organizationally attractive. However, there were some nuances in the results, that is participants who identified as 'none gender specific' rated the attractiveness of the police department higher that participants who identified themselves as male or female. Interestingly, the police department that passively represented men as a majority in the department was the most attractive to participants, but only on one measure of general attractiveness, intention to apply, and prestige.

We conclude from this study that the passive representation of gender does not have symbolic effects in the case of the police in the US and UK. Our results are not consistent with extant studies on passive and symbolic representation. A plausible explanation for the finding, drawing upon the theory of gender role congruity (see Eagly and Karau, 2002), is that passively representative police department with a male majority is congruent with the socio-gender role perception of men occupying masculine spaces or workplaces (Silvestri, 2017; Van Ryzin et al., 2017). In other words, a police department with a gender-balance or passive representation of women as a majority may be incongruent to societal gender roles and mores.

We suggest that further studies are required to understand the boundary conditions of representation (see Van Ryzin et al. 2017) and the perceptions or reputations of public organizations impacts upon representation (see Lee and Van Ryzin 2020).

This study adds to an emerging body of experimental methodology in public administration and has important implications for police departments in the ability to attract diverse citizens to public service.

# Acknowledgements

The study was funded through the University of Portsmouth, Faculty of Business and Law Research Fund. We are also grateful to Prof. Oliver James (University of Exeter) for his time in advising on and reviewing the experimental research design.

# References

- Bellé, N., 2013. Experimental evidence on the relationship between public service motivation and job performance. Public Administration Review. 73(1): 143-153.
- Bishu, S., Kennedy, A. R., 2020. Trends and gaps: A meta-review of representative bureaucracy. Review of Public Personnel Administration. 40 (4): 559–88.
- Bouwman, R., Grimmelikhuijsen, S., 2016. Experimental public administration from 1992 to
  2014: A systematic literature review and ways forward. International Journal of Public
  Sector Management. 29(2), 110-131.
- Bradbury, M., Kellough, J. E., 2011. Representative bureaucracy: Assessing the evidence on active representation. The American Review of Public Administration 41 (2): 157–67.
- Dantas Cabral, A., Peci, A., Van Ryzin, G. G., 2021. Representation, reputation and expectations towards bureaucracy: Experimental findings from a favela in Brazil. Public Management Review. doi: 10.1080/14719037.2021.1906934.

- Eagly, A.H., Karau, S.J., 2002. Role congruity theory of prejudice toward female leaders. Psychological Review, 109(3): 573-598.
- Gade, D. M., Wilkins, V. M., 2013. Where did you serve? Veteran identity, representative bureaucracy, and vocational rehabilitation. Journal of Public Administration Research and Theory 23 (2): 267–88.
- Grimmelikhuijsen, S., Klijn, A., 2015. The effects of judicial transparency on public trust: Evidence from a field experiment. Public Administration, 93(4): 995-1011.
- Hansen, J., Tummers, L., 2020. A systematic review of field experiments in public administration. Public Administration Review. 80(6): 921-931.
- Hassan, S., Wright, B.E., 2020. The behavioral public administration movement: A critical reflection. Public Administration Review. 80(1): 163-167.
- Headley, A. M., Wright, J. E., Meier, K. J., 2021. Bureaucracy, democracy, and race: The limits of symbolic representation. Public Administration Review. doi: 10.1111/puar.13358
- Hey, J. 1991. Experiments in economics. Oxford: Blackwell.
- Highhouse, S., Lievens, F., Sinar, E. F., 2003. Measuring attraction to organizations.Educational and Psychological Measurement. 63 (6): 986–1001.
- Hu, L., Bentler, P. M. 1999. Cut-off criteria for fit indexes in covariance structure analysis:Conventional criteria versus new alternatives. Structural Equation Modelling. 6 (1): 1–55.
- James, O. J., Jilke, S., Petersen, C., Van de Walle, S. 2015. Citizens' Blame of Politicians for Public Service Failure: Experimental Evidence about Blame Reduction through Delegation and Contracting. Public Administration Review. 76(1): 83:93.

- James, O. J., Jilke, S.R., Van Ryzin, G.G., 2017. Behavioural and experimental public administration: Emerging contributions and new directions. Public Administration. 95(4): 865-873.
- James, O., Moseley, A., 2014. Does performance information about public services affect citizens' perceptions, satisfaction, and voice behaviour? Field experiments with absolute and relative performance information. Public Administration. 92(2): 493-511.
- Jilke, S., Van Ryzin, G. G., Van de Walle, S., 2016. Responses to decline in marketized public services: An experimental evaluation of choice overload. Journal of Public Administration Research and Theory. 26 (3): 421–32.
- Jilke, S., Van de Walle, S., Kim V., 2015. Generating usable knowledge through an experimental approach to public administration. Public Administration Review. 76(1): 69-72.
- Lee, D., Van Ryzin ,G. G., 2020. Bureaucratic reputation in the eyes of citizens: An analysis of US federal agencies. International Review of Administrative Sciences. 86 (1): 183–200.
- Mellis, A. M., Bickel, W. K., 2020. Mechanical Turk data collection in addiction research: Utility, concerns and best practices. Addiction. 115 (10): 1960–68.
- Mosher, F. C. 1968. Democracy and the public service. New York, NY: Oxford University.
- Palan, S., Schitter, C. 2018. Prolific. ac—A subject pool for online experiments. Journal of Behavioral and Experimental Finance. 17 (1): 22–27.
- Porumbescu, G. A., S. J. Piotrowski, and V. Mabillard. 2021. Performance information, racial bias, and citizen evaluations of government: Evidence form two studies. Journal of Public Administration Research and Theory. 31 (3): 523–41

- Riccucci, N. M., Van Ryzin, G. G., 2017. Representative bureaucracy: A lever to enhance social equity, coproduction, and democracy. Public Administration Review, 77 (1): 21–30.
- Riccucci, N. M., Van Ryzin, G. G., Lavena, C. F., 2014. Representative bureaucracy in policing: Does it increase perceived legitimacy? Journal of Public Administration Research and Theory. 24 (3): 537–51.
- Riccucci, N. M., Van Ryzin, G. G., Jackson, K., 2018. Representative bureaucracy, race, and policing: A survey experiment. Journal of Public Administration Research and Theory. 28 (4): 506–18.
- Riccucci, N. M., Van Ryzin, G. G., Li, H. 2016. Representative bureaucracy and the willingness to coproduce: An experimental study. Public Administration Review. 76 (1): 121–30.
- Silvestri, M., 2017. Police culture and gender: Revisiting the 'cult of masculinity'. Policing: A Journal of Policy and Practice. 11(3): 289-300.
- Theobald, N. A., Haider-Markel, D. P., 2009. Race, bureaucracy, and symbolic
  representation: Interactions between citizens and police. Journal of Public Administration
  Research and Theory. 19 (2): 409–26
- Van Ryzin, G. G., Riccucci, N. M., Li, H. 2017. Representative bureaucracy and its symbolic effect on citizens: A conceptual replication. Public Management Review. 19 (9): 1365–79.