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Hiring Discrimination Against Transgender Job Applicants - Considerations When Designing A Study

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Hiring Discrimination against Transgender Job Applicants - Considerations When Designing a Study

Purpose

This paper discusses the factors to consider when designing studies to measure hiring discrimination against transgender job applicants.

Design/Methodology/Approach

The paper builds on academic literature related to hiring discrimination and transgender employment to build a detailed discussion of the numerous factors and issues inherent in hiring discrimination against transgender job applicants. By isolating and describing a number of relevant considerations, the paper aims to act as a guide for future studies to build upon.

Findings

Three types of hiring discrimination studies are discussed: correspondence tests, in-person experiments, and student cohort experiments. Three main categories of factors relevant to an experiments design are then discussed: the legal context, industry/role factors, and transgender population-specific factors. A flow-chart detailing the research design-decision making process is given.

Research Limitations/Implications

The discussion within this paper will act as a reference and a guide for researchers seeking to address this dearth of empirical studies in the literature. The list is not exhaustive; while a number of factors relevant to transgender-specific studies are identified, there may be more that could affect an experiment's design.

Originality/Value

Hiring discrimination against transgender people has been recorded in many surveys, but there is little empirical measurement of this discrimination. To the author's knowledge, this paper is the first to examine the experimental design decisions related to transgender hiring discrimination. In doing so, it provides contributions for two primary audiences: those researching transgender employment issues but who have never conducted a study measuring hiring discrimination; and those who have previously conducted studies on hiring discrimination, but have not done so with reference to transgender job applicants.

1. Introduction

Transgender issues have never been under so much scrutiny. The transgender community, which has always been relatively small (Flores, Herman, Gates & Brown, 2016), has in recent years faced unprecedented attention, both positive and negative, by politicians, the media, and workplaces. Trump's ban on transgender service members serving in the military, and multiple states' proposed 'bathroom bills' (which attempt to block transgender people from using bathrooms corresponding to their gender identity) have garnered much media attention, and both criticism and praise from many advocacy groups. Workplaces, often in response to their LGBT employee networks or to external NGOs, are more frequently drafting and enacting transitioning policies and transgender-specific inclusion practices. Newspapers, magazines and websites dedicate many pages to celebrities with transgender, genderqueer, and nonbinary identities, styles, children or causes.

However, despite all this attention, academia – or at least certain domains within academia – has lagged behind. The business, management, and economics literatures have barely broached the subject of transgender people; little research has been conducted on the careers and workplace experiences of transgender employees (Collins, McFadden, Rocco and Mathis, 2015; McFadden and Crowley-Henry, 2016; Pepper and Lorah, 2008), and issues relating to transgender employees are in many cases subsumed (and therefore often minimized or ignored) under the broader LGBTQ grouping (McFadden, 2015). Quantitative research in particular is lacking (Law et al., 2011; McFadden and Crowley-Henry, 2016). With more people between 18 and 24 years old identifying as trans than in any other age group (Flores et al., 2016), organizations will be increasingly tasked in forthcoming years with ensuring that their workplaces are inclusive recruiters and employers. To do that, however, they must first be able to access evidence-based, empirical research that paints a true picture of the transgender employee's experience. Allowing the narrative to be constructed, reconstructed, twisted and wrought by popular media and politicians is therefore problematic.

In addition, there are multiple issues that are unique to the transgender community that do not affect cisgender (non-transgender) lesbian, gay or bisexual people, such as physically transitioning, socially transitioning, and the aforementioned bathroom issues. Transgender people also face higher homelessness and unemployment than cisgender people (Drydakis, 2017). While discrimination is a problem faced by each subgroup of the LGBTQ community,

the exact type of discrimination differs from group to group. Hiring discrimination, the focus of this paper, is a topic that has recently been studied in relation to lesbian and gay job applicants, in a number of different geographic, cultural, and organisational contexts (e.g. Ahmed, Andersson and Hammarstedt, 2013; Drydakis, 2009; Tilcsik, 2011; Weichselbaumer, 2003). Experiences of hiring discrimination have been recorded in many surveys of transgender participants (e.g. Badgett et al., 2007; Grant et al., 2011; McNeil, Bailey, Ellis and Regan, 2013; FRA, 2014; James et al., 2016, Leppel, 2016; Valfort, 2017), but only a very limited number of empirical studies, with mostly small sample sizes, have been conducted to quantitatively measure the level of discrimination against transgender job applicants (e.g. Bardales, 2013; Make The Road New York, 2010; Rainey & Imse, 2015; Winter et al., 2018). In his review of research on sexual orientation labor market outcomes, Drydakis (2019) highlights the need for more research on labor market outcomes for transgender people.

Part of the reticence to study transgender hiring discrimination may come from the relatively tiny size of the population and its associated perceived importance in comparison to other marginalized groups; in other words, it may not appear as pressing an issue as, for example, discrimination against females or ethnic minorities. Another reason, however, could be due to the complexity of the scenarios one must try to parse when conducting studies of this type; in effect, it appears to be too difficult a subject to even try broach. The very concept of 'transgender' is, for many societies and many individuals within those societies, a relatively new or novel consideration, despite the long history of non-cisgender identities within multiple geographical, cultural and religious arenas.

This article attempts to serve as a response to both of these possible misgivings, and as a research agenda, to hopefully fuel future research in this area. In relation to the complexity of the topic, the paper endeavors to break the process of measuring hiring discrimination against transgender job applicants into its most fundamental parts, and in this way to act as an introduction to experiments of this type for relative neophytes, while also providing detail specific to this under-researched population for both new and experienced scholars alike. In relation to the possible perceived insignificance of this topic relative to similar research with larger marginalized populations, the fundamental importance of studying this vulnerable population, and in particular measuring discrimination against them with an aim to address it more comprehensively, is discussed. This paper is thus part review and part research agenda,

bringing together the extant relevant literature on transgender and other minority populations from previous years in order to outline what can and must be done in the forthcoming years.

The rest of the paper is structured as follows. Firstly, the methods by which one may conduct research on this topic (including correspondence tests, in-person studies, and recruitment experiments using student cohorts) are discussed. Then, the paper follows a macro/meso/micro categorization to explore the various factors that should be considered when designing a study exploring this topic; at the macro level, the legal climates in which a study may be situated; at the meso level, various relevant aspects of the industry and roles focused upon; and at the micro level, factors specific to the transgender population and to the individual job applicant that should be considered in a test on hiring discrimination. Fig. 1 depicts this framework and structure. The structure used in this paper therefore follows the experiment design process itself – from initial conception and larger choice of method to the particular tweaks and customizations a researcher wishes to add to their study. Where appropriate, reference is made to existing studies that measure hiring discrimination, to provide exemplars that can help guide understanding of the experimental design process. Lastly, the conclusion summarizes the article's main points and discusses the implications for future researchers and for practice.

Before that, a note on terminology. As well as being a descriptive label in itself, the term transgender is often seen as an 'umbrella' term that includes any identities that do not conform to traditional characterizations of gender, including genderqueer, non-binary and agender (Collins et al., 2015). For simplicity, however, this paper uses transgender to refer only to transmen and transwomen, but it is hoped that the paper will also be of use those studying identities with the broader trans umbrella group. In addition, while it more acceptable, inclusive and common to simply refer to transgender people in relation to their gender identity (i.e. man or woman), for the purposes of differentiating between cisgender and transgender job applicants in an experiment design, the terms transmale/transman and transfemale/transwoman, along with cismale/cisman and cisfemale/ciswoman, will be used in this paper.

As shown in Fig. 1, attention is paid first to the initial choice one may take in the design of a study on transgender hiring discrimination- the choice of method.

2. Types of Experiments

As mentioned above, there are a number of methods one might use when seeking to measure hiring discrimination. Below, three popular designs are described, each of which has at least one known study concerning transgender job applicants. These designs are discussed with reference to transgender population-specific considerations that may warrant an adaptation of these designs. Reflections and proposals for such adaptations are discussed.

2.1 Correspondence Tests

The correspondence test (also known as correspondence experiment, field experiment and résumé experiment) is one of the most widespread methods to measure hiring discrimination. Correspondence tests are usually designed in one of two common ways – a single inquiry design or a matched-inquiry design (Flage, 2019). Firstly, the experimenter creates fictitious résumés that will be sent to real job adverts, usually within a defined geographical area and/or industry. At least two are created – they are alike in all aspects relevant to the jobs or industry being focused on (education, experience, etc.); the aim being to make both fictitious candidates equally qualified for the job. One key difference is included; a signal (or signals) on one résumé portrays the candidate as a member of the population the researcher is studying (e.g. African American, female, gay, pregnant, Muslim). The signal, naturally, varies depending on what characteristic or feature the researcher aims to convey. The résumés are then sent in response to job postings – either one résumé per job posting (the cisgender or transgender résumé is randomly chosen), or the pair of matched résumés. The amount of positive replies (in most cases, a 'callback', i.e. a request for the fictitious candidate to come for interview) is recorded for each candidate. Any difference in the positive responses between the two candidates can be interpreted as discrimination against one of them, as all relevant factors have been controlled for.

Since the first correspondence test was published (Jowell and Prescott-Clarke, 1970, on race-based hiring discrimination in Birmingham, UK) the method has been used to measure hiring discrimination against women (e.g. Riach and Rich, 1987), racial minorities (e.g. Bertrand and Mullainathan, 2004), gay men (e.g. Tilcsik, 2011), lesbians (e.g. Weichselbaumer, 2003, 2015), and Muslims (Pierné, 2013). The method has been adapted for technological advances, moving from mail-based applications and call-backs (e.g. Jowell and Prescott-Clarke, 1970), to an online and email-based experiment (e.g. Bardales, 2013; Baert, Cockx, Gheyle and Vandamme, 2015).

There have been very few correspondence tests conducted to measure hiring discrimination against transgender job applicants, and their samples sizes are quite limited in most. Bardales' (2013) experiment was conducted within two cities in Texas, Houston (where net discrimination was 37%), and San Antonio (21%). Rainy and Imse (2015) conducted a government-sponsored study on transgender hiring discrimination in the District of Columbia, and found that 48% of employers discriminated against a more qualified transgender applicant in favor of at least one less qualified cisgender applicant. Winter et al. (2018) conducted a larger-scale experiment in four countries in South East Asia, and found discrimination against both male and female transgender job applicants in each country and across a variety of job sectors, with cisgender applicants receiving, on average, 50.6% more positive responses to applications than transgender applicants. While the number of correspondence tests measuring transgender hiring discrimination is small, these first attempts give future researchers valuable insight into designing similar, larger-scale experiments in other contexts, and the potential issues that may arise whilst doing so.

The key component of the correspondence test, the signal, is where some of the complexity lies in conducting this experiment in relation to transgender job applicants. Probably the simplest signal to convey, gender, is performed by using names exclusive to one gender. It is important that the signaling characteristic remains an appropriate feature of a résumé, in case it raises the hirer's suspicion. In addition, however, the experimenter must be careful to ensure that the signal doesn't convey any other characteristics that might affect the hirer's decision to invite the candidate to interview or not (Tilcsik, 2011). Bardales (2013) manipulated both the experience section and the name of the transgender job applicant's résumé in order to signal they were a transfemale; the applicant is given experience in a "Male-to-female" group and a "Transgender Women's Group", and a 'legal name', in parentheses, follows the candidate's name at the top of the résumé. Winter et al. (2018) used two signals, with some variations associated with regional customs, to convey that the applicant was transgender – a gender/sex marker and a name marker. With the former, the transgender applicant used the term 'trans man' or 'trans woman', while the cisgender applicant used 'man' or 'woman'. With the latter, the transgender applicant's résumé had both the applicant's legal name and a preferred name, while the cisgender applicant had just one name.

These manipulations may still be a viable option in future research; however, in many jurisdictions, such as California and the Republic of Ireland, transgender people are able to

legally change their name and gender markers with less trouble or bureaucracy than before, and one might reasonably expect that they would prefer to known only by their new name, which could render this manipulation somewhat unrealistic in future studies, potentially leading to the hirer detecting the study.

As Badgett et al. (2007) and Tilcsik (2011) discuss, experience in a volunteer organization, such as that used by Bardales (2013), may additionally convey that the candidate is an activist and/or has a particular political leaning, which could (both positively or negatively) affect the hirer's decision to invite the candidate to interview or not (Flage, 2019). This effect can be moderated however; Drydakis's (2014) fictitious gay/lesbian applicant and heterosexual applicant both have experience in a volunteer organization (the former specifically in an LGBT organization), but this experience is by the time of application ended and somewhat outdated. Tilcsik's (2011) fictitious gay candidate has experience in a gay community organization, but the résumé highlights the managerial and financial skills the candidate has, which communicates that this experience more skill-based activities than political activism, and also renders the treatment less open to detection. In addition, Tilcik's (2011) heterosexual candidate has experience in a similarly left-leaning organization, as a control.

A key consideration when conducting a correspondence test is the possibility that the company advertising the job may become aware, or suspect, that they are subjects in a study and that their responses are being observed, and a result act in a less discriminatory and more socially-desirable fashion. The single-inquiry method would address this, but would require a larger sample (and thus, time and resources) to provide more statistical power (Flage, 2019). Researchers therefore have multiple choices to make that may affect the interpretation and perceived veracity of the résumés being used.

There is therefore an onus on one using the correspondence test design to ensure that the résumés used (a) unambiguously convey that the fictitious candidate is transgender, (b) look real enough that the hirer doesn't recognize that an experiment is being conducted, and (c) don't contain any factors that could potentially unintentionally convey additional information about the candidate. A potential remedy to each of these concerns could be to simply add a legal name in parentheses after the candidate's name on the résumé, following Bardales (2013), but also include the previous name within the relevant experience section (e.g. *"Sales Associate, as John Smith"*). In doing so, a hirer questioning why someone would out themselves as transgender on their résumé (and potentially realizing that it is a fake used as

part of an experiment) would presume they have done so because they have experience under a different name that is relevant to the role applied for. This résumé treatment is not uncommon for transgender jobseekers, and the decision whether or not to list one's previous names is a commonly encountered issue (Transgender Law Center, 2016). In using this signal, it is made clear that the candidate is transgender, the résumé is still realistic looking, and no potentially confounding variables are introduced.

Correspondence tests remain a popular option for studies focusing on hiring discrimination at the job application stage of the recruitment process; however, the method does have its constraints. For example, this method focuses solely on the application stage of the hiring process – discrimination could still occur later in the process, but not be found at this stage. It should also be noted that this method takes a lot of resources to conduct successfully – each application and the tracking of call-backs requires time, effort, and sustained focus on behalf of the researcher(s). An alternative to the correspondence test is the in-person study, discussed below, which can address different aspects and stages of the recruitment process.

2.2 In-Person Studies

Before correspondence tests were first conducted, Daniels (1968) conducted a similar experiment, but instead of using matched résumés, employed pairs of actors to attend job interviews. Audit studies, or, as they are called here for clarity, in-person studies, have been used to measure hiring discrimination in relation to gender (e.g. Neumark, Bank and Van Nort, 1996), race (e.g. Kenney and Wissoker, 1994), and, in the first and perhaps only one of its kind, transgender identity (Make The Road New York, 2010). While the correspondence test method above is designed to measure discrimination at the first stage of the hiring process (the job application), the in-person method measures it at the second stage (the job interview), and so can focus on a different part of, and different factors within, the job application process. Like correspondence tests, in-person studies focus on the real labor market, and allow the experimenter more control over the variables that they feel are relevant to hiring, in comparison to a statistical analysis of existing data (Heckman and Siegelman, 1993). Discrimination experienced at the job interview stage is an important factor to consider when discussing hiring discrimination against transgender job applicants, and in-person studies provide insight into this stage where other methods (i.e. correspondence tests and student cohorts) cannot. In addition, when combined with field notes or debrief

interviews, the actors in these studies could provide experiential information that could serve as valuable, descriptive qualitative data on discrimination, and a suitable counterpart to quantitative analyses. Make the Road New York (2010) conducted the only in-person study involving transgender job applicants, to the author's knowledge. Two pairs of actors, of varying genders and races, were employed to act as job-seekers within Manhattan, and brought with them to interviews equivalent (fictitious) résumés. The researchers found a net rate of discrimination of 42% against transgender job applicants. Like Bardales (2013), this study also used a small sample size, but this study outlines factors and issues that can be useful for researchers considering or conducting an in-person study to measure transgender hiring discrimination.

In-person studies may be criticized, however, because the crucial similarity between the two job applicants/actors in all aspects except the test characteristic can be difficult to achieve – many variables may unintentionally be implicated (Heckman and Siegelman, 1993; Neumark, 2012; Neumark and Rich, 2019). Because the researcher conducting the study naturally can't be present at the interview, there is a loss in control in the experiment's execution, in comparison to correspondence tests. There is also the possibility of bias on behalf of the actors involved, who may consciously or subconsciously confound the experiment (Heckman and Siegelman, 1993). Heckman and Siegelman (1993) offer a well-known critique of both correspondence tests and in-person studies, where they argue that these experiments often do not address group differences in the variance of unobservable determinants of productivity. While the experimenter may perfectly match the assumed relevant characteristics pertaining to both candidates' merit (such as education, experience, etc.), there may still exist certain unobservable characteristics that could affect the hirer's decision. A correctly designed experiment should render these unobservable characteristics equal across both groups, however, Heckman and Siegelman (1993) argue that it is the (presumed) *dispersion* of these unobservable characteristics within each group that could bias the results in either way. In this context, if a hirer were to consider that there were certain characteristics (of which the experimenter has no knowledge) that would affect a potential employee's productivity, and furthermore believed that there was more variation in the degree of these characteristics in transgender people in comparison to the cisgender people (or vice-versa), this would be implicated in the overall net discrimination found in the analysis (i.e. it could seem that there is less or more discrimination present than there actually is). Baert, Cockx, Gheyle and Vandamme (2015) and Carlsson, Fumarco and Rooth (2014) find that this perceived group

variance is higher in minority groups because the hirer is usually less familiar with that group. Therefore, any measurements of discrimination against transgender job applicants should bear this in mind, as well as Neumark's (2012) method of correcting for this potential bias.

There are therefore advantages and disadvantages to in-person studies, and its usage should therefore be predicated on the particular aspects of hiring discrimination the research is focusing upon. For example, in addition to research concentrating on the job interview stage of the hiring process, in-person studies could provide a viable alternative to correspondence tests or student cohort experiments in research that involves an element of visual signaling, such as a study focusing on gender conformity, discussed in Section 3.3.3 below.

2.3 Student Cohorts

While correspondence tests allow a direct measurement of labor market discrimination, they can be, as noted above, complex to perform and require a relatively long data collection period. In-person studies may be more suitable for more visual manipulations, but can be resource-intensive and be difficult to design successfully. A potential alternative to these two tests is to use student cohorts to make fictitious hiring decisions; in other words, to base the hiring discrimination study not within the real labor market but within a laboratory setting. Student cohorts have been used in studies of hiring discrimination against candidates with facial disfigurements (e.g. Stevenage and McKay, 1999), those with foreign accents (Hosada and Stone-Romero, 2010), and those with a criminal history (Varghese, Hardin, Bauer, and Morgan, 2009).

The exact procedure when using a student cohort can vary according to the test characteristic, and doesn't have to solely be based on résumés. For example, Hosada and Stone-Romero (2010), measuring discrimination against those with foreign accents, had their students listen to a recorded audio interview as well as reading a résumé, before making an employment decision. Stevenage and McKay's (1999) study related to facial disfigurement used a photograph along with the résumé. Van Borm and Baert (2019) conducted their study exploring the mechanisms underlying transgender labour market discrimination using a student cohort, the only such study known to the author. They found that their participants, while not intrinsically biased against fictitious transgender candidates themselves, did rate the transgender applicant lower than a similar cisgender applicant when asked whether customers

and co-workers, respectively, would enjoy collaborating with the applicant. This raises the possibility of discrimination not directly from the hirer, but (it is presumed by the hirer) from a colleague or customer, which is explored in more detail in the Industry factors section below.

In comparison to the other experimental designs discussed, there are a number of advantages to using a student cohort, including the ease of access to a large cohort (from the researcher's or their colleagues' classes), and the relative ease of capturing responses. Because the experimenter has more control over the process than with the other two methods, they can more easily isolate a particular variable of interest to investigate. However, a criticism of using student cohorts in studies like this is that their decisions may not be comparable to hirers in the real labor market (Hosada and Stone-Romero, 2010). Students are, of course, not a stakeholder in the business; while a recruiter, HR employee or manager may face negative job-related consequences if they hire an unsuitable candidate, the students involved in fictitious recruitment experiments are not under this pressure. Agents in the real job market may therefore be more cautious in their hiring decisions, and see hiring a transgender job applicant as more of a risk (either because of their own prejudices, because of assumed prejudices on behalf of their colleagues or co-workers, or because of productivity-related generalizations of the transgender community) than students who are simply making a one-off, consequence-free, hiring decision. In addition, students have been found to be, on average, more socially liberal (Bailey and Williams, 2016), possibly leading to a more favorable evaluation of minority candidates. Student participants are also aware that they are taking part in a study and may thus act in a more socially desirable manner (Van Borm and Baert, 2019), and can also be aware of the experimenter's research interests and therefore the area of investigation, potentially leading to additional bias. Because of the relative ease in collecting data and isolating a variable in comparison to the other methods above, and their ability to mimic real hiring decisions, student cohorts provide a viable alternative to correspondence tests and in-person studies. However, because they are by design not situated in the real labor market, extra care and perhaps additional studies should be involved to ensure any generalization of the results is correct. The next part of this paper explores additional relevant factors to consider when conducting an experiment measuring transgender hiring discrimination.

3. Mediating Factors

As we have seen above, there are a number of different experiment designs one may use to measure transgender hiring discrimination, and each design lends its own strengths, weaknesses and particular focus. However, once a method has been chosen, there remains an equally complex process in designing the experiment itself. The following sections discuss the various factors that a researcher must be cognizant of in order to carry out a viable and effective study on this topic.

3.1 Legal Factors

A major factor to consider in designing an experiment such as this is whether or not legislation designed to protect transgender employees and potential employees is present in the location being studied, as different rates of discrimination might be measured in jurisdictions with anti-discrimination protections in place. Associated with this are the differences in socio-political climate; presumably areas with a more socially liberal outlook are more likely to have protective laws of this type. Protection may be city or county-based (an ordinance) or country-wide, depending on the particular country's administrative structures. The question of whether existing anti-discrimination legislation is extended to cover transgender people is somewhat uniquely open to interpretation, and therefore requires the researcher to explicitly confirm before conducting their study. While the European Commission had previously stated that the protected grounds of 'sex' could be extended only to those who had undergone *gender reassignment* (i.e. excluding those who had not fully physically transitioned), in 2015 they revised their position to include *gender identity* (which includes all transgender people) under the 'sex' grounds (TGEU, 2015).

The legal situation in the USA is less certain, however, and is an illustrative example of the ambiguity with regards transgender employment protection in many countries' jurisdictions at present. At the time of writing (September 2019) there is no federal law in the USA that explicitly outlaws discrimination on the basis of gender identity (Movement Advancement Project, 2017). Multiple actors have argued for and against these protections, with the specific point of contention being the exact interpretation of Title VII of the Civil Rights Act of 1964, which prohibits discrimination in employment on the basis of sex, inter alia. Meanwhile, at state level, twenty-two states prohibit transgender employment discrimination, and at least 225 cities and counties (Human Rights Campaign, 2019). There is therefore a

great deal of variation in the degree of employment protection that transgender people have across different states and cities, and researchers seeking to measure transgender hiring discrimination in the USA, and in other countries with similarly variability, should therefore be cognizant of this possibly mediating factor when designing a study.

As well as being cognizant of the legislative context in which one is basing their study, another consideration is that the study in itself could seek to measure of the effectiveness of legislation designed to protect transgender employees from discrimination. Bardales' (2013) correspondence test discussed above, measured both the level of hiring discrimination against transgender job applicants and how well the laws present in two cities affected the rate of discrimination recorded. However, although protections may differ from area to area, many organizations may offer their own non-discrimination policies that include transgender employees, and presumably, transgender job applicants, which may run counter to the prevailing legal protections in the organization's surrounding region. This is discussed in the *Industry and Role Factors* section below.

3.2 Industry and Role Factors

The industry and role for which the fictitious candidates are applying will naturally be of importance and interest to researchers. Below, industry and role factors that may be more prevalent, relevant, or important in studies of transgender hiring discrimination are outlined. While they are discussed discretely below, in actuality these factors will coalesce; it is up to the researcher(s) to decide what and how to isolate these variables when designing their study. At the risk of complicating a study, but also to provide more findings, multiple factors may also be investigated.

3.2.1 Customer-facing roles and co-worker discrimination

In customer-facing roles, such as bank clerk or sales assistant, negative treatment against transgender candidates might potentially occur not because the hiring manager is themselves discriminatory, but because they believe that the customers themselves may react negatively to having a transgender person attend to them. As discussed above, Van Borm and Baert (2019) found that their student cohort rated transgender candidates lower than cisgender candidates when asked if their colleagues or customers would enjoy collaborating with them.

Similarly, anticipated discrimination from existing employees in the organization could be a reason for a hirer's negative response. More research is needed to empirically explore these concepts in relation to transgender job applicants. For example, an experiment could explore not only discrimination against transgender job applicants in comparison to cisgender applicants, but also on contexts that differ in the degree to which customers are involved. For example, part of a study could focus upon customer facing retail workers and the other part upon non-customer facing retail workers. If discrimination was found to be higher in the former context, one could infer that this it is based upon customer-based discrimination.

Researchers could investigate both customer-based and co-worker-based discrimination together or separately, and in doing so, garner insights into the varying experiences of transgender employees and job applicants in different industries.

3.2.2 Male and Female Dominated Industries

Male-dominated industries, such as law enforcement, construction, and engineering, and female-dominated industries, such as nursing, primary education, and counseling, have been used in multiple studies of hiring discrimination against straight male and female, lesbian and gay candidates (e.g. Ahmed et al., 2013; Riach and Rich, 1995, 2006). Masculinized industries are defined by Collins and Callahan (2012: 455) as those which involve "men embodying heterosexual work styles", a definition which highlights not only the pervasiveness of males but also of heterosexuality in these industries. Indeed, gay men often have safety, stress and marginalization concerns in working in such industries (Collins and Callahan, 2012; Collins, 2013, 2015; Rumens and Broomfield, 2012), while lesbians can face harassment based on their sexuality, their gender, or a combination of both (Wright, 2008; 2013). Ahmed et al. (2013) found that gay male applicants are discriminated against in typically male-dominated occupations, while lesbian applicants are discriminated against in typically female-dominated occupations. Riach and Rich (1995, 2006) found that women were discriminated against in typically male-dominated occupations. They also found that men were discriminated against in female-dominated occupations (Riach and Rich, 2006). More recently, Drydakis et al. (2018) found that women with more traditionally masculine personality traits had a greater likelihood of gaining access to male- and female-dominated occupations. There is thus an established literature that shows that the existing gender breakdown of an industry is implicated in hiring discrimination against job applicants.

The rate of discrimination against transgender job applicants in either male- or female-dominated industries remains virtually unknown. However, a study looking at this topic may shine a light not only on the experiences on transgender employees but on gendered occupations in general. There are a number of combinations, and possible outcomes, that would be implicated in such a study, wherein the complexity (but also, one could argue, the importance) lies. For example, how do recruiters in a male-dominated industry (e.g. construction) react, on average, to a transmale applicant: in a similar sense to cismale applicants (no transgender-based discrimination), less favorably than cismale applicants but more favorably than cisfemale applicants (transgender-based discrimination present to a lesser degree than sex-based discrimination), or less favorably than any cisgender applicants (trans-based discrimination more prominent than sex-based discrimination)? Carefully-designed studies could reveal the extent to which transgender applicants, both transmale and transfemale, face discrimination in both male- and female-dominated industries, and may also uncover some more generalized findings about the role of gender in these industries. However, regardless of whether or not the researcher includes gendered occupations in their analysis, they should at the least be aware of the existence of male-and female-dominated industries and roles, and either include or control for them in their experiment design, in case they inadvertently distort the collected data.

3.2.3 Large and Small Organizations

As discussed in the *Societal Factors* section, many countries may play host to wide variations in the level of protection against transgender employment discrimination. However, many multi-national organizations have non-discrimination policies that include gender identity – 85% of the Fortune 500 (HRC, 2019). These policies may or may not run counter to the laws or ordinances present in the location of the office wherein a job posting is situated. Smaller organizations, however, may not extend their non-discrimination policies to gender identity, or may not have a formalized non-discrimination policy at all, instead following local legislative and cultural contexts. While Baert, De Meyer, Moerman and Omey (2018) did not find a relationship between firm size and hiring discrimination against female, ethnic minority, or older candidates, it is possible that the recency with which transgender issues have gained attention (relative to gender, age and ethnicity discrimination) might result in lesser-developed policies and practices within smaller organizations. In addition, even if a

smaller organization has such a policy, their small staff size and the fact that transgender people make up only a tiny part of the population (Flores et al., 2016) could mean that these policies have not actually been used or actively enforced. Experimenters could therefore develop a study that investigates the size of an organization, the presence/absence of trans-inclusive policies, and the amount of hiring discrimination against transgender job applicants.

Larger organizations may also use different methods of screening in their recruitment process. Computer-assisted screening of résumés is a feature in many large organizations, where an algorithm, rather than a human, decides whether or not to send a candidate past the first stage of the application process. While these algorithms have recently courted some controversy with regard to gender bias (Reuters, 2019), they may in future become more commonly used, and are a consideration for researchers designing hiring discrimination experiments involving larger organizations.

3.2.4 High Skill and Low Skill Occupations

The differences between high skill and low skill occupations present another consideration for researchers examining hiring discrimination against marginalized groups. A low skill occupation will, almost by definition, have lower barriers to entry and therefore is more likely to have more applicants; a high skill occupation would have a higher threshold and arguably would have fewer applicants for a job opening. With the former, taste-based discrimination (Becker, 1957, explored below) may be more prevalent, as the hirer could more easily afford to choose not to hire a qualified transgender applicant, because there would most likely be an equally qualified cisgender applicant, and would be less likely to get caught in the act of discrimination. In high-skill occupations, as the applicant pool gets smaller, the economic penalty for not choosing the most qualified applicant because they were transgender would get steeper, as similarly skilled applicants may not be present. Baert et al. (2015) found that candidates with a foreign sounding name would have to apply for twice as many applications for occupations where recruitment was easy. Where recruitment was not easy (e.g. high labor market tightness), the candidate with the foreign sounding name and the native-sounding control candidate received an equal amount of callbacks, suggesting there may be a relationship between hiring discrimination and labor market tightness. Flage (2019) finds in a meta-analysis of hiring discrimination against gay and lesbian job applicants that significantly less discrimination can be found in recruitment for high skill jobs than in low

skill jobs. He points out that, in addition to having more freedom to discriminate because of the higher volume of applications, employers also focus more on skills when recruiting for positions that involve more responsibility and/or specialized skills (e.g. banker). Personal characteristics (such as sexual orientation or being transgender) would therefore be implicated to a higher degree in low skilled jobs.

Transgender job applicants may therefore similarly face increased levels of discrimination in slack labour markets, or when applying for low skill jobs. An exploration of high/low skill occupations and/or labor market tightness with regards to transgender job applicants would not only provide much-needed data on this employee cohort's experiences, but would also shed light on hiring discrimination in general, by exploring the phenomenon in various different occupations and settings.

3.3 Population-Specific Factors

As stated above, the term transgender can refer to a number of non-cisgender identities, such as transman, transwoman, and genderqueer, and transgender is often used as an umbrella term to describe any identity that does not conform to traditionally binarized notions of gender. Those with certain intersectional identities, where multiple marginalized identities exist in concert (such as an African American transwomen) face discrimination of different severities and types. When one wants to measure hiring discrimination against transgender job applicants, then, they must first decide on *which* subpopulation(s) within the transgender community they want to base their study upon, as the complicated interplay of these multiple considerations may result in complicated or even unworkable data. Some of the population factors, explored below, will be more of a consideration in studies focusing on résumé experiments, while other factors may be implicated in studies concerning face-to-face interviews or recruitment experiments involving photographs.

3.3.1 Taste-based Discrimination and Statistical Discrimination

Two concepts are often cited when attempting to explain the underlying mechanisms of labor market discrimination against minority workers: *taste-based discrimination* and *statistical discrimination*. Becker (1957) is credited with the former; taste-based discrimination, as the name suggests, relates to discrimination arising from an aversion on behalf of the hirer for

working with a member of a particular group, or a preference for working for a member of another group, regardless of either worker's perceived productivity (Becker, 1957). For transgender workers, taste-based discrimination would possibly most accurately be related to transphobia, "an emotional disgust toward individuals who not conform to society's gender expectations" (Hill and Willoughby, 2005: 533), which is an unavoidable, prevalent and observable phenomenon in many aspects of society and the lives of transgender people (Hill and Willoughby, 2005).

The other concept that is commonly associated with labor market discrimination, statistical discrimination, is credited to Phelps (1972) and Arrow (1973), and arises not from a distaste on the part of the hirer but because the hirer has imperfect information about the individual applicant and must "fill in the blanks". They instead use the individual applicant's membership of a group to decide whether or not to hire them, by making generalizations about the group itself. A hirer may therefore stereotype an applicant as probably having certain undesirable characteristics that could interfere with their productivity and, not from any particular distaste for the applicant's group itself, but from this presumption, will decide not to hire them (Phelps, 1972).

There has been very little research conducted to explore these two concepts in relation to transgender job applicants, and more is needed to explore the roles of and interplay between taste-based discrimination and statistical discrimination in the labor market. Von Borm and Baert (2018) found no taste-based discrimination on behalf of the hirer, but did find evidence suggesting statistical discrimination in relation to health. The roles of taste-based discrimination and statistical discrimination in transgender hiring discrimination, while easily hypothesized, appear to remain as yet empirically tested in the real labor market.

One potential way of investigating this could be to use applications that include more information (e.g. by including more experience, more education, or a reference letter) in addition to applications with standard information (e.g. just a résumé), as in Drydakis (2012; 2014). While an experiment may reveal that transgender job applicants receive fewer call-backs than cisgender applicants, the exact nature of this discrimination would remain unknown. By including an information variable into the analysis, one can determine whether statistical discrimination, taste-based discrimination, or both forms are at play.

For example, if the addition of information leads to a dramatic decline in the rate of discrimination, then one may infer that statistical discrimination is the main cause of the

reduced amount of callbacks for the transgender applicant. The hirer is making generalizations about the transgender applicant because of imperfect information, which is then rectified with the increased information provided – they are, as Flage (2019) puts it, 'reassured' by the presence of additional information. If the addition of information to an application results in roughly the same rate of discrimination for the transgender applicant, then taste-based discrimination can be said to be occurring – the hirer's prejudice is affecting their choice in applicant, regardless of the amount of information they have. If the addition of information leads to a decline in the rate of discrimination, but there is still significant discrimination present, then the presence of a combination of taste-based and statistical discrimination can be inferred. By introducing an information variable, the experiment design is made more complex – a 2x2 design (transgender/cisgender x standard information/more information) rather than a simple comparison (transgender versus cisgender). However, this complexity is perhaps justified by the enhanced explanatory power the study will have as a result.

Distinguishing between statistical discrimination and taste-based discrimination is important because, as Neumark (1999) suggests, determining the cause of discrimination can help identify how best to counter it. For example, antidiscrimination legislation can help address taste-based discrimination; if statistical discrimination is present then other more informative means of assessing a candidate's productivity should be used.

3.3.2 Transmen and Transwomen

As discussed above, previous literature has shown that cisgender women and men face hiring discrimination in male and female-dominated occupations, respectively. However, women often face increased and varied forms of employment discrimination, including wage discrimination, the 'sticky floor', and the 'glass ceiling'. Similarly, survey evidence and qualitative research has found that transwomen often face increased, and different forms of, discrimination than transmen (Schilt and Wiswall, 2008; Grant et al., 2011) and, like with cisgender women, transwomen face a workplace 'gender penalty' (Schilt, 2006). This has important implications for the design of a study measuring transgender hiring discrimination; gender differences between transgender job applicants is a variable that should be either included or controlled for in an analysis.

However, the different levels of discrimination faced by transmen and transwomen are complicated by gender stereotyping within industries and occupations (see above).

Genderqueer individuals may also face hiring discrimination, but, because this identity has only recently been given attention, any discrimination they face could result from ignorance rather than outright hatred. Like the discussion on male and female-dominated industries above, determining rates of discrimination against transmen versus transwomen may render some interesting findings and discussions in relation to gender in the workplace in general.

3.3.3 Gender Conformity

As discussed above, the transgender umbrella term includes not only those who transition fully from male to female or female to male, but also those who identify with both and neither genders. The latter's visual gender expression may therefore not match traditional binarized ideals of gender expression. Another consideration unique to transgender candidates is that of *passing*, i.e., one's ability to appear as a cisgender person of one's desired gender identity. A transwoman who *passes*, therefore, would appear to most or all as a cisgender woman. In their development of a scale to measure transphobia, Hill and Willoughby (2005: 534) also discussed genderism: "an ideology that reinforces the negative evaluation of gender non-conformity or an incongruence between sex and gender... a cultural belief that perpetuates negative judgments of people who do not present as a stereotypical man or woman". As Budge, Tebbe and Howard (2010) find in their qualitative study, those who do not conform to traditional gender norms or do not pass will be more likely to encounter a negative hiring decision based on a genderist reaction to their appearance. Similarly, Leppel's analysis of data from the National Transgender Discrimination Study shows that perceived gender incongruence increased the likelihood that a transgender person was out of the labor force.

Discrimination arising from gender non-conformity is, of course, predicated on the assumption that the hirer can *see* the gender non-conforming applicant in question. An in-person study could therefore be useful in this instance. A correspondence test may be a viable option, but only in particular countries – one would most likely have to convey this visual information using a photograph on the résumé, which is not customary in many countries, but is common in others countries such as Germany, Japan, and China. Winter et al. (2018) used photos in their correspondence test on transgender hiring discrimination, but only for the two countries (Singapore and Malaysia) wherein it is customary to include a photo. Rich (2018) argues that the researcher cannot completely control the experiment when they use photos, as photos can convey some information unintentionally (for example, Rich's discussion

included perceived attractiveness, which would be another variable in an experiment involving gender conformity). An alternative to the visually-based experiment may be to include non-binary or alternative gender pronouns, such as *they/them*, *ze/hir, xe/xem*, but because these and the purpose they serve are less well known, the experimental manipulation may not work as well as hoped. There are thus a number of different avenues, each with their advantages and disadvantages, which a researcher may take to measure hiring discrimination on the basis of gender conformity or non-conformity of transgender job applicants.

To summarize, there are a great deal of factors to consider when designing an experiment to measure hiring discrimination against transgender job applicants. Some factors (e.g. gender) should be borne in mind whatever the exact focus of the investigation, while other factors (e.g. gender conformity) may be purposefully included by the experimenter. The concluding section provides a flowchart that shows all of the tests and factors discussed above, and discusses the implications, contributions and limitations of this paper.

4. Conclusion

4.1 Designing a Study to Measure Transgender Hiring Discrimination

As we have seen above, choosing a research design is a lot more complex than just choosing the basic method; one must decide what exactly it is they want to research, and, crucially, resolve how to exclude the other mediating factors from their analysis. The flow-chart in Fig. 2 shows a research design decision-making process that follows from the discussion above. Firstly, the experimenter chooses their method. After that, they choose the aspect arguably most pervasive to a study of hiring discrimination; the legal context in which the study takes place, with *path a* in Fig. 2 representing a study based in a context with legal protections and *path b* representing a study based in a context without them. Like Bardales (2013), the aim of the study may not just be to study hiring discrimination but also to investigate how effective protections are in combating it, so a researcher may choose to situate their study in both contexts (*path c*).

---- Insert Figure 2 around here ---

After choosing which legal context they want to base their study within, a researcher may decide to investigate if and how transgender hiring discrimination operates in different industries and roles. As discussed above, there are several different contexts and

considerations one might want to include in their study, including male-dominated industries and/or female-dominated industries (*path d*), high and low skill occupations (*path e*), large and small organizations (*path f*), and the possibility of taste-based proxy discrimination with regard to customers or co-workers (*paths g* and *h*, respectively). If none of these factors are to be investigated, *path i* can be chosen.

Once a particular role or industry factor has been chosen (or not chosen), the factors specific to the transgender population that the researcher wishes to investigate can then be decided upon. At this point, one can decide on which combination of test group and control group to investigate (*paths k, l, m, n, o*), whether they want to investigate statistical or taste-based discrimination (*path p*), or whether their primary focus should be on gender conformity and its effect on hiring (*path j*).

Additional mediating factors may be added by following the red line back to the previous set of factors (e.g. if one wished to measure hiring discrimination on the basis of customers (*g*) in a female-dominated industry (*d*). In addition, as discussed above, this paper focuses only on a number of characteristics most salient to transgender job applicants. Many studies on labor market discrimination have implicated other general personal characteristics, such as educational attainment (e.g. Drydakis, 2012), marriage status (e.g. Allegretto and Arthur, 2001; Drydakis, 2012; Weichselbaumer, 2015), and criminal history (e.g. Vargheese, Hardin, Bauer and Morgan, 2009), each of which may also be relevant to this discussion. However, as Van Borm and Baert (2018) conclude, adding complexity to a research design may result in an overly complicated analysis, and increases the possibility of errors on behalf of a researcher. With the literature on this topic at such a nascent stage, it may behoove researchers to focus more on general topics to firstly establish an empirical literature on transgender hiring discrimination, before moving to more specific contexts, combinations, or scenarios.

4.2 Implications and Recommendations for Future Researchers

This paper can hopefully help simplify the experiment design process, and help fuel further research to address the dearth in empirical quantitative research on hiring discrimination against transgender job applicants. The contribution is aimed at two audiences – researchers of transgender, LGBTQ or broader diversity and inclusion topic, and/or researchers who have previously studied labor market discrimination but haven't previously focused on transgender

job seekers. The former audience is introduced to three main methods of measuring hiring discrimination, while both audiences can see how these methods can be adapted for and theoretically extended to a transgender-specific study. The paper synthesizes the existing literatures on both transgender career/work experiences and on previous studies of hiring discrimination to outline what factors one should be cognizant of when designing a study on this topic. The design process is a complicated one, and this paper has hopefully simplified and demystified the main steps to take.

Table 1 below outlines the main advantages and disadvantages, resource requirements and risk of detection associated with each of the three commonly used methods of measuring hiring discrimination discussed in this paper. One can see that each method can be used in different contexts, and the choice of method will depend on which variables the experimenter wishes to investigate. Used in combination, Table 1 and Figure 2 can provide an accessible tool to help researchers design, plan and execute a successful study.

-- Insert Table 1 around here –

As well as simplifying the design process, this paper has outlined some topics that are under-researched and thus require further attention. In addition, the sections below discuss major geographic areas and identities that would benefit from further investigation.

4.2.1 Areas of Study

Within the business and management literature, research focusing on general transgender issues is overwhelmingly centered on the USA (McFadden & Crowley-Henry, 2016). In his exhaustive review of correspondence experiments performed since 2005, Baert (2018) highlights that almost two thirds of correspondence test have been performed in Europe, with other countries, including some with the largest populations in the world, having no correspondence experiments performed. In addition, as noted above, there appears to been only one experiment performed in relation to transgender job applicants in Europe (Van Borm and Baert, 2019), and only three (with quite small samples) conducted in the USA (Bardales, 2013; Make The Road New York, 2010; Rainey & Imse, 2015). To the author's knowledge, only one experiment (Winter et al., 2018) has been conducted in Asia. The state of the literature on this topic, therefore, can be likened to a blank slate, and thus there is ample opportunity and a pressing need for more research to be conducted around the world.

Sensitivity should, however, be shown when researching non-cisgender identities in other countries; other terminologies, identities, traditions or groups may be present in local cultures that do not resemble the prevailing Western context. For example, within the Indian subcontinent, *hijra* occupy a particular space within Hinduism, are seen as the favored devotees of the Lord Rama, and can bestow blessings, yet are marginalized and often have to perform sex work or engage in begging to survive (Khan et al., 2009). While *hijra* could clumsily be compared to transfemales in the West, they are a distinct and separate group, a third gender, with particular traditions, challenges and issues (Kalra, 2012). Other areas with third gender or transgender inhabitants include Albania (the *sworn virgins*) (Dickemann, 1997), Samoa (*fa'afafine*) (Schmidt, 2003) and the Arabian Peninsula (*khanith)* (Murray, 1997). Western concepts and phenomena may or may not be applicable to these populations; this also has yet to be tested.

4.2.2 Non-Traditional and Intersectional Transgender Identities

Although it may be disappointing that there has been very little empirical measurement of hiring discrimination against transgender job applicants, the fact that there are few studies could be seen as somewhat of an advantage. Less well-known transgender identities, such as genderqueer, nonbinary, or agender, could be built in these studies from the very start, allowing a fuller picture of the entire transgender community to emerge.

Intersectional identities can lead to some quite specific outcomes; while the differences in experience between transmen and transwomen have been discussed above, race and socioeconomic status are also implicated. For example, a recent survey (Edelman et al., 2015) reports that transgender people of color in the USA were more likely to have been denied a job than white transgender people – 49% versus 30%, respectively. Similarly, Leppel (2016) highlights how unemployment is more likely for Hispanic and African American transgender people. Other such combination of identities may lead to distinctive outcomes in studies on hiring discrimination, and would provide valuable detailed and nuanced information on the state of transgender experiences in the labor market. In deciding (for the sake of simplicity or otherwise) not to consider other personal identities such as ethnicity and social class, one may run the risk of contributing to a suite of studies that has as its primary focus the experiences of white, middle-class transgender job applicants, resulting in a one-dimensional and less representative literature.

4.2.4 Limitations

This paper has investigated a number of factors at the legal, industry/role and population level, presented in Figure 2, that one might take into account when researching hiring discrimination against transgender job applicants. However, as mentioned, this list is not exhaustive; there are a potentially huge number of factors that could affect the hiring process and could be taken into account when designing a study; this paper has presented only a few major factors. In addition, this paper acts only as an introduction to designing a study on transgender hiring discrimination – a first step for novitiates to the study of hiring discrimination and/or measuring discrimination specifically against transgender job applicants. Although they are shown here on a simple choice framework, one must also be cognizant that the factors and tests presented may involve varying degrees of difficulty to execute successfully; ultimately, the choice of test and factors focused upon must be followed, by necessity, by a deep dive into the literature and previous similar studies.

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Fig. 1 The stages involved in designing a study on hiring discrimination against transgender job applicants.

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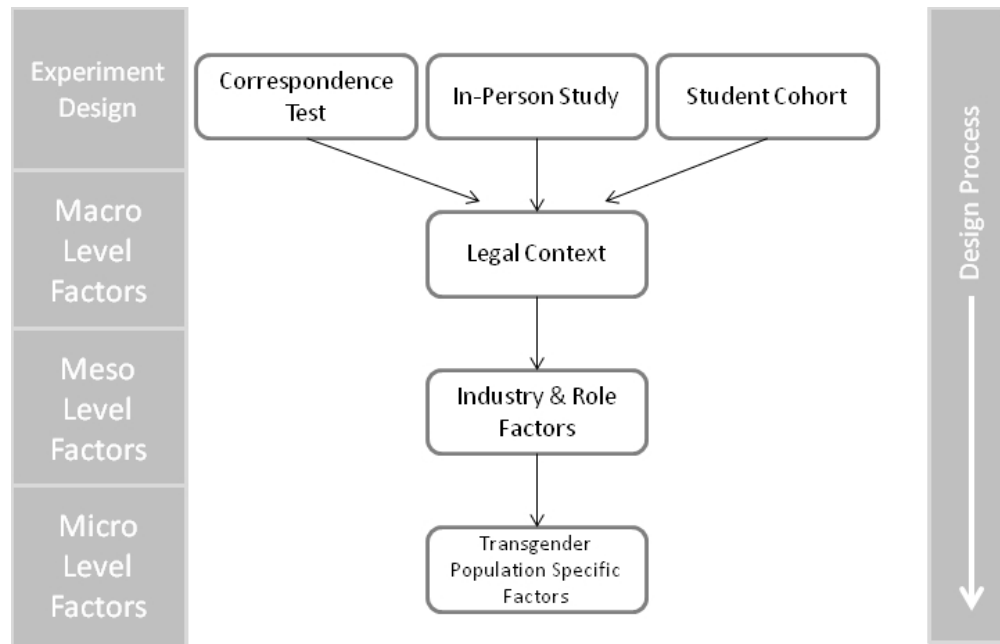41
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Correspondence Test | In-Person Study | Student Cohort

Legal Context

a. Legal Protections   b. No Protections   c. Both contexts

Industry/Role Factors

d. Male-/Female-Dominated Industry

e. High/Low Skill

f. Large/Small Organization   g. Customer-Based Discrimination

h. Co-worker-Based Discrimination

i. None

Add Factor

Population-Specific Factors

j. Gender conforming/non-conforming

k. Transmale vs. Transfemale

l. Transmale vs. Cismale

m. Transfemale vs. Cismale   n. Transmale vs. Cisfemale

o. Transfemale vs. Cisfemale

p. Taste-based/Statistical Discrimination
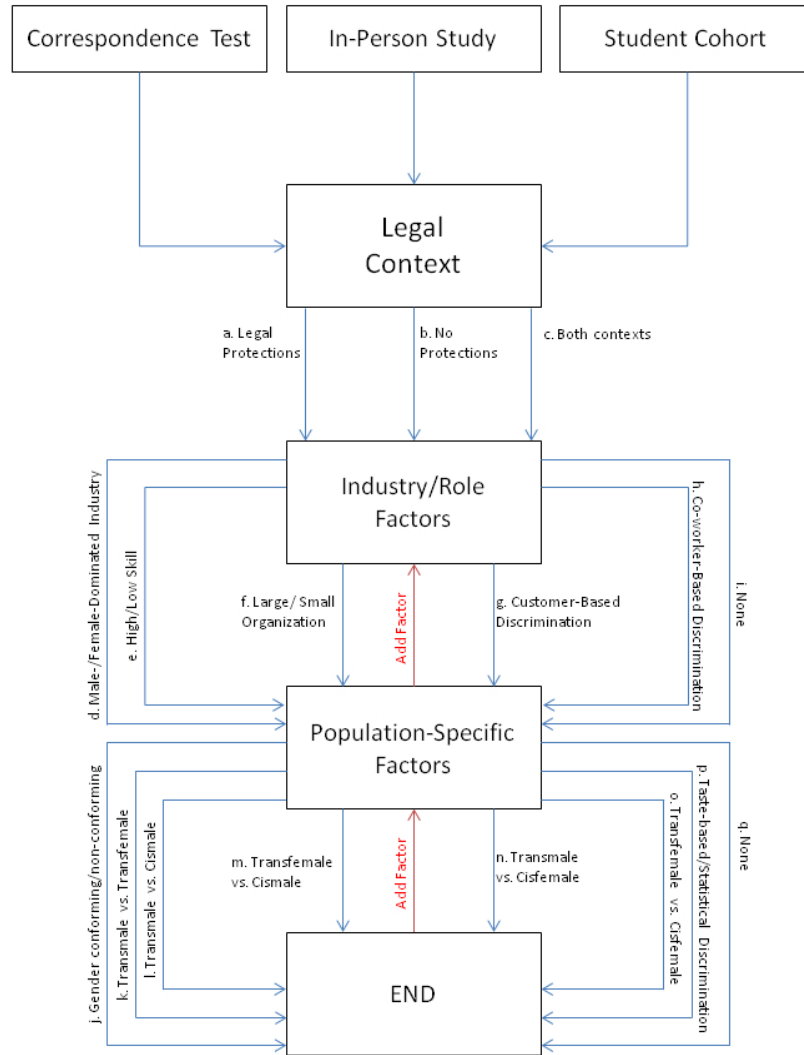
q. None

Add Factor

END

Fig. 2. The major stages and factors involved in the design of a transgender hiring discrimination study.

Table 1. Three commonly-used methods of measuring hiring discrimination, and their advantages, disadvantages, resources and risk of detection

	Advantages / Foci	Disadvantages/Potential Pitfalls	Resources Requirements	Detection Risk
Correspondence Tests	Situated in the real labor market; A large sample can be garnered over time; Focuses on first stage of recruitment – application.	Heckman & Siegelman's (2012) group variation in unobserved variables critique.	Experiment is time-intensive and requires monitoring over a potentially significant period of time, in order to garner enough observations; Aside from set-up and researcher wages, no additional costs required.	Matched-pairs of résumés increases detection risk; Single-inquiry decreases detection risk but requires more observations to attain statistical power equivalent to matched-pairs.
In-Person Studies	Situated in the real labor market; Is especially useful for experiment including visual aspects; Focuses on second stage of recruitment – the interview.	Must control for many other observable variables; Experimenter is not present and therefore has less control; The actors used may be biased and un/intentionally affect the results; Heckman & Siegelman's (2012) group variation in unobserved variables critique.	Resource-intensive as actors must be trained to act in a consistent and similar manner; A large sample would require relatively more resources to obtain; Financial costs involved in paying actors for their involvement.	As above, matched-inquiry increases detection risk; single-inquiry decreases risk at the cost of statistical power; Risk of detection if actors are not trained adequately.
Student Cohorts	Presumably easier to access a sample and capture responses; Focuses on first stage of recruitment – application; Experimenter has more control and can isolate variables of interest more readily.	Not situated in the real labor market; Student participants may not accurately resemble real hirers as they have no stake in a firm; Student participants may be more socially liberal than general public, thus affecting hiring decisions.	Financial resources may be required to offer a stipend for complete participation; Potentially less-time intensive as data can be captured at a set time rather than over a period of time.	Student participants will be aware that they are taking part in a study, and may act in a socially-desirable way; They may also be aware of the likely topic of investigation before the experiment begins.

Hiring Discrimination against Transgender Job Applicants - Considerations When Designing a Study

Purpose

~~The purpose of this paper~~This paper ~~is to provide a discussion~~discusses ~~of~~ the factors to consider when designing studies to measure hiring discrimination against transgender job applicants.

Design/Methodology/Approach

The paper builds ~~on previous research~~ on ~~hiring discrimination, and~~ academic literature ~~and surveys~~ related to ~~transgender employment~~hiring discrimination and ~~,~~transgender employment to build a detailed discussion of the numerous factors and issues inherent in hiring discrimination against transgender job applicants. By isolating and describing a number of relevant considerations, the paper aims to act as a guide for future studies to build upon.

Findings

Three types of hiring discrimination studies are discussed: correspondence tests, in-person experiments, and student cohort experiments. Three main categories of factors relevant to an experiments design are then discussed: the legal context, industry/role factors, and transgender population-specific factors. A flow-chart detailing the research design-decision making process is given.

Research Limitations/Implications

The discussion within this paper will act as a reference and a guide for researchers seeking to address this dearth of empirical studies in the literature. The list is not exhaustive; while a number of factors relevant to transgender-specific studies are identified, there may be more that could affect an experiment's design.

Originality/Value

Hiring discrimination against transgender people has been recorded in many surveys, but there is little empirical measurement of this discrimination. To the author's knowledge, this paper is the first to examine the experimental design decisions related to transgender hiring discrimination. ~~In doing this, it addresses a dearth in the literature and aims to spark further conversations and studies of this nature to further expand our knowledge of these~~

employeesIn doing so, it provides contributions for two primary audiences: those researching transgender employment issues but who have never conducted a study measuring hiring discrimination; and those who have previously conducted studies on hiring discrimination, but have not done so with reference to transgender job applicants. -

1. Introduction

Transgender issues have never been under so much scrutiny. The transgender community, which has always been relatively small (Flores, Herman, Gates & Brown, 2016), has in recent years faced unprecedented attention, both positive and negative, by politicians, the media, and workplaces. Trump's ban on transgender service members serving in the military, and multiple states' proposed 'bathroom bills' (which attempt to block transgender people from using bathrooms corresponding to their gender identity) have garnered much media attention, and both criticism and praise from many advocacy groups. Workplaces, often in response to their LGBT employee networks or to external NGOs, are increasingly more frequently drafting and enacting transitioning policies and transgender-specific inclusion practices. Newspapers, magazines and websites dedicate many pages to celebrities with transgender, genderqueer, or and nonbinary identities, styles, children or causes.

However, despite all this attention, academia – or at least certain domains within academia – has lagged behind. The business, management, and economics literatures have barely broached the subject of transgender people; little research has been conducted on the careers and workplace experiences of transgender employees (Collins, McFadden, Rocco and Mathis, 2015; McFadden and Crowley-Henry, 2016; Pepper and Lorah, 2008), and issues relating to transgender employees are in many cases subsumed (and in so doing therefore often minimizsed or ignored) under the broader LGBTQ grouping (McFadden, 2015). Quantitative research in particular is lacking (Law et al., 2011; McFadden and Crowley-Henry, 2016). With more people between 18 and 24 years old identifying as trans than in any other age group (Flores et al., 2016), organizsations will be increasingly tasked in forthcoming years with ensuring that their workplaces are inclusive recruiters and employers. To do that, however, they must first be able to access evidence-based, empirical research that paints a true picture of the transgender employee's experience. Allowing the narrative to be constructed, reconstructed, twisted and wrought by popular media and politicians is therefore problematic.

In addition, there are multiple issues that are unique to the transgender community that do not affect cisgender (non-transgender) lesbian, gay or bisexual people, such as physically transitioning, socially transitioning, and the aforementioned bathroom issues. Transgender people also face higher homelessness and unemployment than cisgender people (Drydakis, 2017). While discrimination is a problem faced by each subgroup of the LGBTQ community, the exact type of discrimination differs from group to group. Hiring discrimination, the focus of this paper, is a topic that has only recently been studied in relation to lesbian and gay job applicants, in a number of different geographic, cultural, and organisational contexts (e.g. Ahmed, Andersson and Hammarstedt, 2013; Drydakis, 2009; Tilcsik, 2011; Weichselbaumer, 2003). Experiences of hiring discrimination have been recorded in many surveys of transgender participants (e.g. Badgett et al., 2007; Grant et al., 2011; McNeil, Bailey, Ellis and Regan, 2013; FRA, 2014; Grant et al., 2011; James et al., 2016, Leppel, 2016; Valfort, 2017), but only a very limited number of empirical studies, with mostly small sample sizes, have been conducted to quantitatively measure the level of discrimination against transgender job applicants (e.g. Bardales, 2013; Make The Road New York, 2010; Rainey & Imse, 2015; Winter et al., 2018). In his review of research on sexual orientation labor market outcomes, Drydakis (2019) highlights the need for more research on labor market outcomes for transgender people.

Part of the reticence to study transgender hiring discrimination may come from the relatively small tiny size of the population and its associated perceived importance in comparison to other marginalizsed groups; in other words, it may not appear as pressing an issue as, for example, discrimination against females or ethnic minorities. Another reason, however, could be due to the complexity of the scenarios one must try to parse when conducting studies of this type; in effect, it is appears to be too difficult a subject to even try even broach. The very concept of 'transgender' is, for many societies and many individuals within those societies, a relatively new or novel consideration, despite the long history of non-cisgender identities within multiple geographical, cultural and religious arenas.

This article attempts to serve as a response to both of these possible qualmsmisgivings, and as a research agenda, to hopefully fuel future research in this area. In relation to the complexity of the topic, the paper endeavoursendeavors to break the process of measuring hiring discrimination against transgender job applicants into its most fundamental parts, and in this way to act as an introduction to experiments of this type for relative neophytes, while also providing detail specific to this under-researched population for both new and experienced

scholars alike. In relation to the possible perceived insignificance of this topic relative to similar research with ~~other,~~ larger ~~, marginalised~~marginalized populations, the fundamental importance of studying this vulnerable population, and in particular measuring discrimination against them with an aim to address it more comprehensively, is discussed. This paper is thus part review and part research agenda, bringing together the extant relevant literature on transgender and other minority populations from previous years in order to outline what can and must be done in the forthcoming years.

The rest of the paper is structured as follows. Firstly, the methods by which one may conduct research on this topic (including correspondence tests, in-person studies, and recruitment experiments using student cohorts) are discussed. Then, the paper follows a macro/meso/micro categorization to explore the various factors that should be considered when designing a study exploring this topic; at the macro level, the legal climates in which a study may be situated; at the meso level, various relevant aspects of the industry and roles focused upon; and at the micro level, ~~the~~ factors specific to the transgender population and to the individual job applicant~~-specific factors~~ that should be considered in a test on hiring discrimination. Fig. 1 depicts this framework and structure. ~~In summation~~ ,—Tthe structure used in this paper therefore follows the experiment design process itself — ;—from initial conception and ~~the~~ larger choice of ~~experiment~~ method to the particular ~~smaller~~ tweaks and customizsations a researcher wishes to add to their study. Where appropriate, reference is made to existing studies that measure hiring discrimination, to provide exemplars ~~to~~ that can help guide understanding of the experimental design process. Lastly, the conclusion summarizses the article's main points and discussesd the implications for future researchers and for practice.

Before that, a note on terminology. As well as being a descriptive label in itself, the term transgender is often seen as an 'umbrella' term that includes any identities that do not conform to traditional characterizsations of gender, including genderqueer, non-binary and agender (Collins et al., 2015). For simplicity, however, this paper uses transgender to refer only to transmen and transwomen, but it is hoped that the paper will also be of use those studying identities with the broader trans umbrella group. In addition, while it more acceptable, inclusive and common to simply refer to transgender people in relation to their gender identity (i.e. man or woman), for the purposes of differentiating between cisgender and transgender job applicants in an experiment design, the terms transmale/transman and

transfemale/transwoman, along with cismale/cisman and cisfemale/ciswoman, will be used in this paper.

As shown in Fig. 1, attention is paid first to the initial choice one may take in the design of a study on transgender hiring discrimination- the choice of ~~experiment type~~method.

2. Types of Experiments

As ~~discussed~~ mentioned above, there are a number of ~~experimental designs~~methods one might use when seeking to measure hiring discrimination. Below, three popular designs are described, each of which has at least one known study concerning transgender job applicants. These designs are discussed with reference to transgender population-specific considerations that may warrant an adaptation of these designs. Reflections and proposals for such adaptations are discussed.

2.1 Correspondence Tests

The correspondence test (also known as correspondence experiment, field experiment and résumé experiment) is one of the most ~~wide-spread~~widespread ~~study designs~~methods ~~that~~ to measure~~s~~ hiring discrimination. Correspondence tests are usually designed in one of two common ways – a single inquiry design or a matched-inquiry design (Flage, 2019). Firstly, the experimenter creates fictitious résumés that will be sent to real job adverts, usually within a defined geographical area and/or industry. At least two are created – they are alike in all aspects relevant to the jobs or industry being focused on (education, experience, etc.); the aim being to make both fictitious candidates equally qualified for the job. One key difference is included; a signal (or signals) on one résumé portrays the candidate as a member of the population the researcher is studying (e.g. African American, female, gay, pregnant, Muslim). The signal, naturally, varies depending on what characteristic or feature the researcher aims to convey. The résumés are then sent in response to job postings – ;either one résumé per job posting (the cisgender or transgender résumé is randomly chosen), or the pair of matched résumés. The amount of positive replies (in most cases, a 'callback', i.e. a request for the fictitious candidate to come for interview) is recorded for each candidate. Any difference in the positive responses between the two candidates can be interpreted as discrimination against one of them, as all relevant factors have been controlled for.

Since the first correspondence test was published (Jowell and Prescott-Clarke, 1970, on race-based hiring discrimination in Birmingham, UK) the method has been used to measure hiring discrimination against women (e.g. Riach and Rich, 1987), racial minorities (e.g. Bertrand and Mullainathan, 2004), gay men (e.g. Tilcsik, 2011), lesbians (e.g. Weichselbaumer, 2003, 2015), and Muslims (Pierné, 2013). The method has been adapted for technological advances, moving from mail-based applications and call-backs (e.g. Jowell and Prescott-Clarke, 1970), to an online and email-based experiment. (e.g. Bardales, 2013; Baert, Cockx, Gheyle and Vandamme, 2015).

There have been very few correspondence tests conducted to measure hiring discrimination against transgender job applicants, and their samples sizes are quite limited in most. Bardales' (2013) experiment was conducted within two cities in Texas, Houston (where net discrimination was 37%), and San Antonio (21%). Rainy and Imse (2015) conducted a government-sponsored study on transgender hiring discrimination in the District of Columbia, and found that 48% of employers discriminated against a more qualified transgender applicant in favour of at least one less qualified cisgender applicant. Winter et al. (2018) conducted a larger-scale experiment in four countries in South East Asia, and found discrimination against both male and female transgender job applicants in each country and across a variety of job sectors, with cisgender applicants receiving, on average, 50.6% more positive responses to applications than transgender applicants. While the number of correspondence tests measuring transgender hiring discrimination is small, these first attempts give future researchers valuable insight into designing similar, larger-scale experiments in other contexts, and the potential issues that may arise whilst doing so.

The key component of the correspondence test, the signal, is where some of the complexity lies in conducting this experiment in relation to transgender job applicants. Probably the simplest signal to convey, gender, is performed by using names exclusive to one gender. It is important that the signalling characteristic remains an appropriate feature of a résumé, in case it raises the hirer's suspicion. In addition, however, the experimenter must be careful to ensure that the signal doesn't convey any other characteristics that might affect the hirer's decision to invite the candidate to interview or not (Tilcsik, 2011). Bardales (2013) manipulated both the experience section and the name of the transgender job applicant's résumé in order to signal they were a transfemale; the applicant is given experience in a "Male-to-female" group and a "Transgender Women's Group", and a 'legal name', in parentheses, follows the candidate's name at the top of the résumé. Winter et al. (2018) used

two signals, with some variations associated with regional customs, to convey that the applicant was transgender – a gender/sex marker and a name marker. With the former, the transgender applicant used the term 'trans man' or 'trans woman', while the cisgender applicant used 'man' or 'woman'. With the latter, the transgender applicant's résumé had both the applicant's legal name and a preferred name, while the cisgender applicant had just one name.

These manipulations may still be a viable option in future research; however, in many jurisdictions, such as California and the Republic of Ireland, transgender people are able to legally change their name and gender markers with less trouble or bureaucracy than before, and one might reasonably expect that they would prefer to known only by their new name, which could render this manipulation somewhat unrealistic in future studies, potentially leading to the hirer detecting the study.

As Badgett et al. (2007) and Tilcsik (2011) discuss, experience in a volunteer organizsation, , such as that used by Bardales (2013), may additionally convey that the candidate is an activist and/or has a particular political leaning, which could (both positively or negatively) affect the hirer's decision to invite the candidate to interview or not (Flage, 2019). This effect can be moderated however; Drydakis's (2014) fictitious gay/lesbian applicant and heterosexual applicant both have experience in a volunteer organization (the former specifically in an LGBT organization), but this experience is by the time of application ended and somewhat outdated. Tilcsik's (2011) fictitious gay candidate has experience in a gay community organization, but the résumé highlights the managerial and financial skills the candidate has, which communicates that this experience more skill-based activities than political activism, and also renders the treatment less open to detection. In addition, Tilcik's (2011) heterosexual candidate has experience in a similarly left-leaning organization, as a control.

A key consideration when conducting a correspondence test is the possibility that the company advertising the job may become aware, or suspect, that they are subjects in a study and that their responses are being observed, and a result act in a less discriminatory and more socially-desirable fashion. The single-inquiry method would address this, but would require a larger sample (and thus, time and resources) to provide more statistical power (Flage, 2019). Researchers therefore have multiple choices to make that may affect the interpretation and perceived veracity of the résumés being used.

There is therefore an onus on one using the correspondence test design to ensure that the résumés used (a) unambiguously convey that the fictitious candidate is transgender, (b) look real enough that the hirer doesn't recognize that an experiment is being conducted, and (c) don't contain any factors that could potentially unintentionally convey additional information about the candidate. A potential remedy to each of these concerns could be to simply add a legal name in parentheses after the candidate's name on the résumé, following Bardales (2013), but also include the previous name within the relevant experience section (e.g. *"Sales Associate, as John Smith"*). In doing so, a hirer questioning why someone would out themselves as transgender on their résumé (and potentially realizsing that it is a fake used as part of an experiment) would presume they have done so because they have experience under a different name that is relevant to the role applied for. This résumé treatment is not uncommon for transgender jobseekers, and the decision whether or not to list one's previous names is a commonly encountered issue (Transgender Law Center, 2016). In using this signal, it is made clear that the candidate is transgender, the résumé is still realistic looking, and no potentially confounding variables are introduced.

Correspondence tests remain a popular option for studies focusing on hiring discrimination at the job application stage of the recruitment process; however, as discussed, the method does have its limitationsconstraints. For example, this method focuses solely on the application stage of the hiring process – discrimination could still occur later in the process, but not be found at this stage. It should also be noted that this experimental designmethod takes a lot of resources to conduct successfully – each application and the tracking of call-backs requires time, effort, and sustained focus on behalf of the researcher(s). An alternative to the correspondence test is the in-person study, discussed below, which can address different aspects and stages of the recruitment process.

2.2 In-Person Studies

Before correspondence tests were first conducted, Daniels (1968) conducted a similar experiment, but instead of using matched résumés, employed pairs of actors to attend job interviews. Audit studies, or, as they are called here for clarity, in-person studies, have been used to measure hiring discrimination in relation to gender (e.g. Neumark, Bank and Van Nort, 1996), race (e.g. Kenney and Wissoker, 1994), and, in the first and perhaps only one of its kind, transgender identity (Make The Road New York, 2010). While the correspondence

test method above is designed to measure discrimination at the first stage of the hiring process (the job application), the in-person method measures it at the second stage (the job interview), and so can focus on a different part of, and different factors within, the job application process. Like correspondence tests, in-person studies focus on the real labor market, and allow the experimenter more control over the variables that they feel are relevant to hiring, in comparison to a statistical analysis of existing data (Heckman and Siegelman, 1993). Discrimination experienced at the job interview stage is an important factor to consider when discussing hiring discrimination against transgender job applicants, and in-person studies provide insight into this stage where other methods (i.e. correspondence tests and student cohorts) cannot. In addition, when combined with field notes or debrief interviews, the actors in these studies could provide experiential information that could serve as valuable, descriptive qualitative data on discrimination, and a suitable addendum counterpart to quantitative analyses. Make the Road New York (2010) conducted the only in-person study involving transgender job applicants, to the author's knowledge. Two pairs of actors, of varying genders and races, were employed to act as job-seekers within Manhattan, and brought with them to interviews equivalent (fictitious) résumés. The researchers found a net rate of discrimination of 42% against transgender job applicants. Like Bardales (2013), this study also used a small sample size, but this study outlines factors and issues that can be useful for researchers considering or conducting an in-person study to measure transgender hiring discrimination.

In-person studies may be criticizsed, however, because the crucial similarity between the two job applicants/actors in all aspects except the test characteristic can be difficult to achieve – many variables may unintentionally be implicated (Heckman and Siegelman, 1993; Neumark, 2012; Neumark and Rich, 2019). Because the researcher conducting the study naturally can't be present at the interview, there is also a loss in control in the experiment's execution, in comparison to correspondence tests. There is also the possibility of bias on behalf of the actors involved, who may consciously or subconsciously confound the experiment (Heckman and Siegelman, 1993). Heckman and Siegelman (1993) offer a well-known critique of both correspondence tests and in-person studies, where they argue that these experiments often do not address group differences in the variance of unobservable determinants of productivity. While the experimenter may perfectly match the assumed relevant characteristics pertaining to both candidates' merit (such as education, experience, etc.), there may still exist certain unobservable characteristics that could affect the hirer's decision. A correctly designed

experiment should render these unobservable characteristics equal across both groups, however, Heckman and Siegelman (1993) argue that it is the (presumed) *dispersion* of these unobservable characteristics within each group that could bias the results in either way. In this context, if a hirer were to consider that there were certain characteristics (of which the experimenter has no knowledge) that would affect a potential employee's productivity, and furthermore believed that there was more variation in the degree of these characteristics in transgender people in comparison to the cisgender people (or vice-versa), this would be implicated in the overall net discrimination found in the analysis (i.e. it could seem that there is less or more discrimination present than there actually is). Baert, Cockx, Gheyle and Vandamme (2015) and Carlsson, Fumarco and Rooth (2014) find that this perceived group variance is higher in minority groups because the hirer is usually less familiar with that group. Therefore, any measurements of discrimination against transgender job applicants should bear this in mind, as well as Neumark's (2012) method of correcting for this potential bias.

There are therefore advantages and disadvantages to in-person studies, and its usage should therefore be predicated on the particular aspects of hiring discrimination the research is focusing upon. For example, in addition to research concentrating on the job interview stage of the hiring process, in-person studies could provide a viable alternative to correspondence tests or student cohort experiments in research that involves an element of visual signalling, such as a study focusing on gender conformity, discussed in Section 3.3.3 below.

2.3 Student Cohorts

While correspondence tests allow a direct measurement of labor market discrimination, they can be, as noted above, complex to perform and require a relatively long data collection period. In-person studies may be more suitable for more visual manipulations, but can be resource-intensive and be difficult to design successfully. A potential alternative to these two tests is to use student cohorts to make fictitious hiring decisions; in other words, to base the hiring discrimination study not within the real labor market but within a laboratory setting. Student cohorts have been used in studies of hiring discrimination against candidates with facial disfigurements (e.g. Stevenage and McKay, 1999), those with foreign accents (Hosada and Stone-Romero, 2010), and those with a criminal history (Varghese, Hardin, Bauer, and Morgan, 2009).

The exact procedure when using a student cohort can vary according to the test characteristic, and doesn't have to solely be based on résumés. For example, Hosada and Stone-Romero (2010), measuring discrimination against those with foreign accents, had their students listen to a recorded audio interview as well as reading a résumé, before making an employment decision. Stevenage and McKay's (1999) study related to facial disfigurement used a photograph along with the résumé. Van Borm and Baert (2019) conducted their study exploring the mechanisms underlying transgender labour market discrimination using a student cohort, the only such study known to the author. They found that their participants, while not intrinsically biased against fictitious transgender candidates themselves, did rate the transgender applicant lower than a similar cisgender applicant when asked whether customers and co-workers, respectively, would enjoy collaborating with the applicant. This raises the possibility of discrimination not directly from the hirer, but (it is presumed by the hirer) from a colleague or customer, which is explored in more detail in the Industry factors section below.

In comparison to the other experimental designs discussed, there are a number of advantages to using a student cohort, including the ease of access to a large cohort (from the researcher's or their colleagues' classes), and the relative ease of capturing responses. Because the experimenter has more control over the process than with the other two methods, they can more easily isolate a particular variable of interest to investigate. However, a criticism of using student cohorts in studies like this is that their decisions may not be comparable to hirers in the real labor market (Hosada and Stone-Romero, 2010). Students are, of course, not a stakeholder in the business; while a recruiter, HR employee or manager may face negative job-related consequences if they hire an unsuitable candidate, the students involved in fictitious recruitment experiments are not under this pressure. Agents in the real job market may therefore be more cautious in their hiring decisions, and see hiring a transgender job applicant as more of a risk (either because of their own prejudices, because of assumed prejudices on behalf of their colleagues or co-workers, or because of productivity-related generalizations of the transgender community) than students who are simply making a one-off, consequence-free, hiring decision. In addition, students have been found to be, on average, more socially liberal (Bailey and Williams, 2016), possibly leading to a more favourable evaluation of minority candidates. Student participants are also aware that they are taking part in a study and may thus act in a more socially desirable manner (Van Borm and

Baert, 2019), and can also be aware of the experimenter's research interests and therefore the area of investigation, potentially leading to additional bias.

~~The exact procedure when using a student cohort can vary according to the test characteristic, and doesn't have to solely be based on résumés. For example, Hosada and Stone-Romero (2010), measuring discrimination against those with foreign accents, had their students listen to a recorded audio interview as well as reading a résumé, before making an employment decision. Stevenage and McKay's (1999) study related to facial disfigurement used a photograph along with the résumé. Van Borm and Baert (2019) conducted their study exploring the mechanisms underlying transgender labour market discrimination using a student cohort, the only such study known to the author. They found that their participants, while not intrinsically biased against fictitious transgender candidates themselves, did rate the transgender applicant lower than a similar cisgender applicant when asked whether customers and co-workers, respectively, would enjoy collaborating with the applicant. This raises the possibility of discrimination not directly from the hirer, but (it is presumed by the hirer) from a colleague or customer, which is explored in more detail in the Industry factors section below.~~

Because of the ~~associated~~ relative ease in collecting data and isolating a variable in comparison to the other methods above, and their ability to mimic real hiring decisions, student cohorts provide a viable alternative to correspondence tests and in-person studies. However, because they are by design not situated in the real labor market, extra care and perhaps additional studies should be involved to ensure any generalisation of the results is correct. The next part of this paper explores additional relevant factors to consider~~,~~ when conducting an experiment measuring transgender hiring discrimination.

3. Mediating Factors

As we have seen above, there are a number of different experiment designs one may use to measure transgender hiring discrimination, and each design lends its own strengths, weaknesses and particular focus. However, once ~~an overall experiment~~a method ~~type~~ has been chosen, there remains an equally complex process in designing the experiment itself. The following sections discuss the various factors that a researcher must be cognizant of in order to carry out a viable and effective study on this topic. ~~As discussed above, the structure follows a macro, meso, micro framework, with the larger choice such as where to base the~~

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~~study discussed first, then various industry and role factors, and then the minor tweaks and variations that arise from studying the transgender population in particular.~~

3.1 Legal Factors

A major factor to consider in designing an experiment such as this is whether or not legislation designed to protect transgender employees and potential employees is present in the location being studied, ~~because~~ as different rates of discrimination might be measured in jurisdictions with anti-discrimination protections in place. Associated with this are the differences in socio-political climate; presumably areas with a more socially liberal outlook are more likely to have protective laws of this type. Protection may be city or county-based (an ordinance) or country-wide, depending on the particular country's administrative structures. The question of whether existing anti-discrimination legislation is extended to cover transgender people is somewhat uniquely open to interpretation, and therefore requires the researcher to explicitly confirm before conducting their study. While the European Commission had previously stated that the protected grounds of 'sex' could be extended only to those who had undergone *gender reassignment* (i.e. excluding those who had not fully physically transitioned), in 2015 they revised their position to include *gender identity* (which includes all transgender people) under the 'sex' grounds (TGEU, 2015).

The legal situation in the USA is less certain, however, and is an illustrative example of the ambiguity with regards transgender employment protection in many countries' jurisdictions at present. At the time of writing (September 2019) there is no federal law in the USA that explicitly outlaws discrimination on the basis of gender identity (Movement Advancement Project, 2017). Multiple actors have argued for and against these protections, with the specific point of contention being the exact interpretation of Title VII of the Civil Rights Act of 1964, which prohibits discrimination in employment on the basis of sex, inter alia. Meanwhile, at state level, twenty-two states prohibit transgender employment discrimination, and at least 225 cities and counties (Human Rights Campaign, 2019). There is therefore a great deal of variation in the degree of employment protection that transgender people have across different states and cities, and researchers seeking to measure transgender hiring discrimination in the USA, and in other countries with similarly variability, should therefore be cognizant of this possibly mediating factor when designing a study.

As well as being cognizant of the legislative context in which one is basing their study, another consideration is that the study in itself could seek to measure of the effectiveness of legislation designed to protect transgender employees from discrimination. Bardales' (2013) correspondence test discussed above, measured both the level of hiring discrimination against transgender job applicants and how well the laws present in two cities affected the rate of discrimination recorded. However, although protections may differ from area to area, many organizations may offer their own non-discrimination policies that include transgender employees, and presumably, transgender job applicants, which may run counter to the prevailing legal protections in the organization's surrounding region. This is discussed in the *Industry and Role Factors* section below.

3.2 Industry and Role Factors

The industry and role for which the fictitious candidates are applying will naturally be of importance and interests to researchers. Below, industry and role factors that may be more prevalent, relevant, or important in studies of transgender hiring discrimination are outlined. While they are discussed discretely below, in actuality these factors will coalesce; it is up to the researcher(s) to decide what and how to isolate these variables when designing their study. At the risk of complicating a study, but also to provide more findings, multiple factors may also be investigated.

3.2.1 Customer-facing roles and co-worker discrimination

In customer-facing roles, such as bank clerk or sales assistant, negative treatment against transgender candidates might feasibly potentially occur not because the hiring manager is themselves discriminatory, but because they believe that the customers themselves may react negatively to having a transgender person attend to them. As discussed above, Van Borm and Baert (2019) found that their student cohort rated transgender candidates lower than cisgender candidates when asked if their colleagues or customers would enjoy collaborating with them. Similarly, anticipated discrimination against the job applicant byfrom existing employees in the organizsation could be a reason for hiring discrimination against the transgender job applicanta hirer's negative response. More study research is needed to empirically explore these concepts in relation to transgender job applicants. For example, an

experiment could ~~not only~~ explore not only discrimination against transgender job applicants in comparison to cisgender applicants, but also ~~center their study~~ on contexts that differ in the degree to which customers are involved. For example, ~~, e.g.~~ part of ~~the~~ a study ~~focused~~ could focus ~~up~~on customer facing ~~sales assistants~~retail workers and the other part ~~up~~focused on ~~accountants~~non-customer facing retail workers. If discrimination was found to be higher in the former context, one could infer that ~~this~~ it is based upon customer-based discrimination.

Researchers could investigate both customer-based and co-worker-based discrimination together or separately, and in doing so, garner insights into the varying experiences of transgender employees and job applicants in different industries.

3.2.2 Male and Female Dominated Industries

Male-dominated industries, such as law enforcement, construction, and engineering, and female-dominated industries, such as nursing, primary education, and ~~counselling~~counseling, have been used in multiple studies of hiring discrimination against straight male and female, lesbian and gay candidates (e.g. Ahmed et al., 2013; Riach and Rich, 1995, 2006). Masculini~~z~~sed industries are defined by Collins and Callahan (2012: 455) as those which involve "men embodying heterosexual work styles", a definition which highlights not only the pervasiveness of males but also of heterosexuality in these industries. Indeed, gay men often have safety, stress and marginalization concerns in working in such industries (Collins and Callahan, 2012; Collins, 2013, 2015; Rumens and Broomfield, 2012), while lesbians can face harassment based on their sexuality, their gender, or a combination of both (Wright, 2008; 2013). Ahmed et al. (2013) found that gay male applicants are discriminated against in typically male-dominated occupations, while lesbian applicants are discriminated against in typically female-dominated occupations. Riach and Rich (1995, 2006) found that women were discriminated against in typically male-dominated occupations. They also found that men were discriminated against in female-dominated occupations (Riach and Rich, 2006). More recently, Drydakis et al. (2018) found that women with more traditionally masculine personality traits had a greater likelihood of gaining access to male- and female-dominated occupations. There is thus an established literature that shows that the existing gender breakdown of an industry is implicated in hiring discrimination against job applicants.

The rate of discrimination against transgender job applicants in either male- or female-dominated industries remains virtually unknown. However, a study looking at this topic may

shine a light not only on the experiences on transgender employees but on gendered occupations in general. There are a number of combinations, and possible outcomes, that would be implicated in such a study, wherein the complexity (but also, one could argue, the importance) lies. For example, how do recruiters in a male-dominated industry (such ase.g. construction) react, on average, to a transmale applicant: in a similar sense to cismale applicants (no transgender-based discrimination), less favourably than cismale applicants but more favourably than cisfemale applicants (transgender-based discrimination present to a lesser degree than sex-based discrimination), or less favourably than any cisgender applicants (trans-based discrimination is more prominent than sex-based discrimination)? Carefully-designed studies could reveal the extent to which transgender applicants, both transmale and transfemale, face discrimination in both male- and female-dominated industries, and may also uncover some more generalized findings about the role of gender in these industries. However, regardless of whether or not the researcher includes gendered occupations in their analysis, they should at the least be aware of the existence of male-and female-dominated industries and roles, and either include or control for them in their experiment design, in case they inadvertently distort the collected data.

3.2.3 Large and Small Organizations

As discussed in the *Societal Factors* section, many countries may play host to wide variations in the level of protection against transgender employment discrimination. However, many multi-national organizations have non-discrimination policies that include gender identity – 85% of the Fortune 500 (HRC, 2019). These policies may or may not run counter to the laws or ordinances present in the location of the office wherein a job posting is situated. Smaller organizations, however, may not extend their non-discrimination policies to gender identity, or may not have a formalized non-discrimination policy at all, instead following local legislative and cultural contexts. While Baert, De Meyer, Moerman and Omey (2018) did not find a relationship between firm size and hiring discrimination against female, ethnic minority, or older candidates, it is possible that the recency with which transgender issues have gained attention (relative to gender, age and ethnicity discrimination) might result in lesser-developed policies and practices within smaller organizations. In addition, even if a smaller organization has such a policy, their small staff size and the fact that transgender people make up only a tiny part of the population (Flores et al., 2016) could mean that these

policies have not actually been used or <u>actively</u> enforced. Experimenters could therefore develop a study that investigates the size of an <u>organization</u>, the presence/absence of trans-inclusive policies, and the amount of hiring discrimination against transgender job applicants.

Larger <u>organizations</u> may also use different methods of screening in their recruitment process. Computer-assisted screening of résumés is a feature in many large <u>organizations</u>, where an algorithm, rather than a human, decides whether or not to send a candidate past the first stage of the application process. While these algorithms have recently courted some controversy with regard to gender bias (Reuters, 2019), they may in future become more commonly used, and are a consideration for researchers designing hiring discrimination experiments involving larger organi<u>z</u>ations.

3.2.4 High Skill and Low Skill Occupations

The differences between high skill and low skill occupations present another consideration for researchers examining hiring discrimination ~~(against any marginalised group~~ <u>against marginalized groups</u>~~)~~. A low skill occupation will, almost by definition, have lower barriers to entry and therefore is more likely to have more applicants; a high skill occupation would have a higher threshold and arguably would have fewer applicants for a job opening. With the former, taste-based discrimination (Becker, 1957, explored below) may be more prevalent, as the hirer could more easily afford to choose not to hire a qualified transgender applicant, because there would most likely be an equally qualified cisgender applicant<u>, and would be less likely to get caught in the act of discrimination.</u>~~.~~ In high-skill occupations, as the applicant pool gets smaller, the economic penalty for not choosing the most qualified applicant because they were transgender would get steeper, as similarly skilled applicants may not be present.

~~In a similar vein,~~ Baert et al. (2015) found that candidates with a foreign sounding name would have to apply for twice as many applications for occupations where recruitment was easy. Where recruitment was not easy (e.g. high labor market tightness), the candidate with the foreign sounding name and the native-sounding control candidate received an equal amount of callbacks, suggesting there may be a relationship between hiring discrimination and labor market tightness. <u>Flage (2019) finds in a meta-analysis of hiring discrimination</u>

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against gay and lesbian job applicants that significantly less discrimination can be found in recruitment for high skill jobs than in low skill jobs. He points out that, in addition to having more freedom to discriminate because of the higher volume of applications, employers also focus more on skills when recruiting for positions that involve more responsibility and/or specialized skills (e.g. banker). Personal characteristics (such as sexual orientation or being transgender) would therefore be implicated to a higher degree in low skilled jobs.

Transgender job applicants may therefore similarly face increased levels of discrimination in slack labour markets, or when applying for low skill jobs. An exploration of high/low skill occupations and/or , or similarly, labor market tightness w, with regards to transgender job applicants ,-would not only provide much-needed data on this employee cohort's experiences, but would also shed light on hiring discrimination in general, by exploring the phenomenon in various different occupations and settings.

3.3 Population-Specific Factors

As stated above, the term transgender can refer to a number of non-cisgender identities, such as transman, transwoman, and genderqueer, and transgender is often used as an umbrella term to describe any identity that does not conform to traditionally binarized notions of gender. Those with certain intersectional identities, where multiple marginalized identities exist in concert (such as an African American transwomen) face discrimination of different severities and types. When one wants to measure hiring discrimination against transgender job applicants, then, they must first decide on *which* subpopulation(s) within the transgender community they want to base their study upon, as the complicated interplay of these multiple considerations may result in complicated or even unworkable data. Some of the population factors, explored below, will be more of a consideration in studies focusing on résumé experiments, while other factors may be implicated in studies concerning face-to-face interviews or recruitment experiments involving photographs.

3.3.1 Taste-based Discrimination and Statistical Discrimination

Two concepts are often cited when attempting to explain the underlying mechanisms of , or reasons for, labor market discrimination against minority workers: *taste-based discrimination* and *statistical discrimination*. Becker (1957) is credited with the former; taste-based

discrimination, as the name suggests, relates to discrimination arising from an aversion on behalf of the hirer for working with a member of a particular group, or a preference for working for a member of another group, regardless of either worker's perceived productivity (Becker, 1957). For transgender workers, taste-based discrimination would ~~no doubt~~possibly most accurately be related to transphobia, "an emotional disgust toward individuals who not conform to society's gender expectations" (Hill and Willoughby, 2005: 533), which is an unavoidable, prevalent and observable phenomenon in many aspects of society and the lives of transgender people (Hill and Willoughby, 2005).

The other concept that is commonly associated with labor market discrimination, statistical discrimination, is credited to Phelps (1972) and Arrow (1973), and arises not from a distaste on the part of the hirer but because the hirer has imperfect information about the individual applicant and must "fill in the blanks". They instead use the individual applicant's membership of a group to decide whether or not to hire them, by making ~~generalisations~~ generalizations about the group itself. A hirer may therefore stereotype an applicant as probably having certain undesirable characteristics that could interfere with their productivity and, not from any particular distaste for the applicant's group itself, but from this presumption, will decide not to hire them (Phelps, 1972).

There has been very little research conducted to explore these two concepts in relation to transgender job applicants, and more is needed to explore the roles of and interplay between taste-based discrimination and statistical discrimination in the labor market. ~~In one such study, however,~~ Von Borm and Baert (2018) ~~empirically tested hiring discrimination against transgender candidates in an attempt to discern whether the root cause was taste-based discrimination or statistical discrimination. Using a student cohort that evaluated fictitious transgender and cisgender job applicants, they~~ found no taste-based discrimination on behalf of the hirer, but did find evidence suggesting statistical discrimination in relation to health. ~~The authors did, however, find that the participants were less likely to hire a transgender applicant when asked to consider the applicant collaborating with co-workers and customers – as explored in more detail above.~~ The roles of taste-based discrimination and statistical discrimination in transgender hiring discrimination, while easily hypothesi~~z~~sed, appear to remain as yet empirically tested in the real labor market.

One ~~possible~~ potential way of investigating this could be to use ~~high-quality and low-quality~~ applications that include more information (e.g. by including more experience, more

education, or a reference letter) in addition to applications with standard information (e.g. just a résumé), as in Drydakis (2012; 2014). While an experiment may reveal that transgender job applicants receive fewer call-backs than cisgender applicants, the exact nature of this discrimination would remain unknown. By including an information variable into the analysis, one can determine whether statistical discrimination, taste-based discrimination, or both forms are at play.

For example, if the addition of information leads to a dramatic decline in the rate of discrimination, then one may infer that statistical discrimination is the main cause of the reduced amount of callbacks for the transgender applicant. The hirer is making generalizations about the transgender applicant because of imperfect information, which is then rectified with the increased information provided – they are, as Flage (2019) puts it, 'reassured' by the presence of additional information. If the addition of information to an application results in roughly the same rate of discrimination for the transgender applicant, then taste-based discrimination can be said to be occurring – the hirer's prejudice is affecting their choice in applicant, regardless of the amount of information they have. If the addition of information leads to a decline in the rate of discrimination, but there is still significant discrimination present, then the presence of a combination of taste-based and statistical discrimination can be inferred. By introducing an information variable, the experiment design is made more complex – a 2x2 design (transgender/cisgender x standard information/more information) rather than a simple comparison (transgender versus cisgender). However, this complexity is perhaps justified by the enhanced explanatory power the study will have as a result.

Distinguishing between statistical discrimination and taste-based discrimination is important because, as Neumark (1999) suggests, determining the cause of discrimination can help identify how best to counter it. For example, antidiscrimination legislation can help address taste-based discrimination; if statistical discrimination is present then other more informative means of assessing a candidate's productivity should be used. ~~. Bertrand and Mullainathan (2004) use high-quality and low quality résumés when investigating race-based discrimination to investigate the differences in call-backs for high and low-quality White and African-American applications. By providing a high quality application for a transgender candidate (e.g. by including more relevant experience, more prestigious education, or a glowing reference letter), the experiment provides more information about the candidate's productivity, meaning the hirer has less need to generalise (and engage in statistical~~

~~discrimination). The experiment could then interpret any discrimination that does occur as being more likely to be taste-based rather than statistical.~~

3.3.2 Transmen and Transwomen

As discussed above, previous literature has shown <u>that</u> cisgender women and men face hiring discrimination in male and female-dominated occupations, respectively. However, women often face increased and varied forms of employment discrimination, including wage discrimination, the 'sticky floor', and the 'glass ceiling'. Similarly, survey evidence and qualitative research has found that transwomen often face increased, and different forms of, discrimination than transmen (Schilt and Wiswall, 2008; Grant et al., 2011), and, like with cisgender women, transwomen face a workplace 'gender penalty' (Schilt, 2006). This has important implications for the design of a study measuring transgender hiring discrimination; gender differences between transgender job applicants is a variable that should be either included or controlled for in an analysis.

However, the different levels of discrimination faced by transmen and transwomen are complicated by gender stereotyping within industries and occupations (see above). Genderqueer individuals may also face hiring discrimination, but, because this identity has only recently been given attention, any discrimination they face could result from ignorance rather than outright hatred. Like the discussion on male and female-dominated industries above, determining rates of discrimination against transmen versus transwomen may render some interesting findings and discussions in relation to gender in the workplace in general.

3.3.3 Gender Conformity

As discussed above, the transgender umbrella term includes not only those who transition fully from male to female or female to male, but also those who identify with both and neither genders. The latter's visual gender expression may therefore not match traditional binarized ideals of gender expression. Another consideration unique to transgender candidates is that of *passing*, i.e., one's ability to appear as a cisgender person of one's desired gender identity. A transwoman who *passes*, therefore, would appear to most or all as a cisgender woman. In their development of a scale to measure transphobia, Hill and Willoughby (2005: 534) also discussed genderism: "an ideology that reinforces the negative evaluation of gender non-conformity or an incongruence between sex and gender... a cultural belief that perpetuates negative judgments of people who do not present as a stereotypical man or woman". As Budge, Tebbe and Howard (2010) find in their qualitative study, those

who do not conform to traditional gender norms or do not pass will be more likely to encounter a negative hiring decision based on a genderist reaction to their appearance. Similarly, Leppel's analysis of data from the National Transgender Discrimination Study that perceived gender incongruence increased the likelihood that a transgender person was out of the labor force.

ThisDiscrimination arising from gender non-conformity is, of course, is presumably predicated on the assumption that the hirer can *see* the gender non-conforming applicant in question. An in-person study could therefore be useful in this instance. A correspondence test may be a viable option, but only in particular countries – one would most likely have to convey this visual information using a photograph on the résumé, which is not customary in many countries, but is common in others countries such as Germany, Japan, and China. Winter et al. (2018) used photos in their correspondence test on transgender hiring discrimination, but only for the two countries (Singapore and Malaysia) in wherein which it is customary to include a photo. Rich (2018) argues that the researcher cannot completely control the experiment when they use photos, as photos can convey some information unintentionally (for example, Rich's discussion included perceived attractiveness, which would be another variable in an experiment involving gender conformity). An alternative to the visually-based experiment may be to include non-binary or alternative gender pronouns, such as *they/them*, *ze/hir, xe/xem*, but because these and the purpose they serve are less well known, the experimental manipulation may not work as well as hoped. There are thus a number of different avenues, each with their advantages and disadvantages, which a researcher may take to measure hiring discrimination on the basis of gender conformity or non-conformity of transgender job applicants.

To summarizse, there are a great deal of factors to consider when designing an experiment to measure hiring discrimination against transgender job applicants. Some factors (e.g. gender) should be borne in mind whatever the exact focus of the investigation, while other factors (e.g. gender conformity) may be purposefully selected included by the experimenter. The concluding section provides a flowchart that shows all of the tests and factors discussed above, and discusses the implications, contributions and limitations of this paper.

4. Conclusion

4.1 Designing a Study to Measure Transgender Hiring Discrimination

As we have seen above, choosing a research design is a lot more complex than just choosing the basic method; one must decide what exactly it is they want to research, and, crucially, resolve how to exclude the other mediating factors from their analysis. The flow-chart in Fig.ure 2 shows a research design decision-making process that follows from the discussion above. Firstly, the experimenter chooses their methods. After that, they choose the aspect arguably most pervasive to a study of hiring discrimination; is the legal context in which the study takes place, with *path a* in Fig. 2 representing a study based in a context with legal protections and *path b* representing a study based in a context without them. Like Bardales (2013), the aim of the study may not just be to study hiring discrimination but also to investigate how effective protections are in combating it, so a researcher may choose to situate their study in both contexts (*path c*).

---- Insert Figure 2 around here ---

After choosing which legal context they want to base their study within, a researcher may decide to investigate if and how transgender hiring discrimination operates in different industries and roles. As discussed above, there are several different contexts and considerations one might want to include in their study, including male-dominated industries and/or female-dominated industries (*path d*), high and low skill occupations (*path e*), large and small organizsations (*path f*), and the possibility of taste-based proxy discrimination with regard to customers or co-workers (*paths g* and *h*, respectively). If none of these factors are to be investigated, *path i* can be chosen.

Once a particular role or industry factor has been chosen (or not chosen), the factors specific to the transgender population that the researcher wishes to investigate can then be decided upon. At this point, one can decide on which combination of test group and control group to investigate (*paths k, l, m, n, o*), whether they want to investigate statistical or taste-based discrimination (*path p*), or whether their primary focus should be on gender conformity and its effect on hiring (*path j*).

Additional mediating factors may be added by following the red line back to the previous set of factors (e.g. if one wished to measure hiring discrimination on the basis of customers (*g*) in a female-dominated industry (*d*). In addition, as discussed above, this paper focuses only on a number of characteristics most salient to transgender job applicants. Many studies on labor market discrimination have implicated other general personal characteristics, such as educational attainment (e.g. Drydakis, 2012), marriage status (e.g. Allegretto and Arthur,

2001; Drydakis, 2012; Weichselbaumer, 2015), and criminal history (e.g. Vargheese, Hardin, Bauer and Morgan, 2009), each of which may also be relevant to this discussion. HoweverHowever, as Van Borm and Baert (2018) conclude, adding complexity to a research design may result in an overly -complicated analysis, and increases the possibility of errors on behalf of a researcher. With the literature on this topic at such a nascent stage, it may behoove researchers to focus more on general topics to firstly establish an empirical literature on transgender hiring discrimination, before moving to more specific contexts, combinations, or scenarios.

4.2 Implications and Recommendations for Future Researchers

This paper can hopefully help simplify the experiment design process, and help fuel further research to address the dearth in empirical quantitative research on hiring discrimination against transgender job applicants. The contribution is aimed at two audiences – researchers of transgender, LGBTQ or broader diversity and inclusion topic, and/or researchers who have previously studied labor market discrimination but haven't previously focused on transgender job seekers. New researchersThe former are audience is introduced to three main methods of measuring hiring discrimination, while both new and experienced researchersaudiences can see how these methods can be adapted for and theoretically extended for to a transgender-specific study. The paper synthesizses the existing literatures on both transgender career/work experiences and on previous studies of hiring discrimination to outline what factors one should be cognizant of when designing a study on this topic. The design process is a complicated one, and this paper has hopefully simplified and demystified the main steps to take.

Table 1 below outlines the main advantages and disadvantages, resource requirements and risk of detection associated with each of the three commonly used methods of measuring hiring discrimination discussed in this paper. One can see that each method can be used in different contexts, and the choice of method will depend on which variables the experimenter wishes to investigate. Used in combination, Table 1 and Figure 2 can provide an accessible tool to help researchers design, plan and execute a successful study.

-- Insert Table 1 around here –

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As well as simplifying the design process, this paper has outlined some topics that are under-researched and thus require further attention. In addition, the sections below discuss major geographic areas and identities that would benefit from further investigation.

4.2.1 Areas of Study

Within the business and management literature, research focusing on general transgender issues is overwhelmingly centerered on the USA (McFadden & Crowley-Henry, 2016). In his exhaustive review of correspondence experiments performed since 2005, Baert (2018) highlights that almost two thirds of correspondence test have been performed in Europe, with other countries, including some with the largest populations in the world, having no correspondence experiments performed. In addition, as noted above, there appears to been only one experiment performed in relation to transgender job applicants in Europe (Van Borm and Baert, 2019), and only three (with quite small samples) conducted in the USA (Bardales, 2013; Make The Road New York, 2010; Rainey & Imse, 2015). To the author's knowledge, only one experiment (Winter et al., 2018) has been conducted in Asia. The state of the literature on this topic, therefore, can be likened to a blank slate, and thus there is ample opportunity and a pressing need for more research to be conducted around the world.

Sensitivity should, however, be shown when researching non-cisgender identities in other countries; other terminologies, identities, traditions or groups may be present in local cultures that do not resemble the prevailing Western context. For example, within the Indian subcontinent, *hijra* occupy a particular space within Hinduism, are seen as the favoured devotees of the Lord Rama, and can bestow blessings, yet are marginalised and often have to perform sex work or engage in begging to survive (Khan et al., 2009). While *hijra* could clumsily be compared to transfemales in the West, they are a distinct and separate group, a third gender, with particular traditions, challenges and issues (Kalra, 2012). Other areas with third gender or transgender inhabitants include Albania (the *sworn virgins*) (Dickemann, 1997), Samoa (*fa'afafine*) (Schmidt, 2003) and the Arabian Peninsula (*khanith)* (Murray, 1997). Western concepts and phenomena may or may not be applicable to these populations; this also has yet to be tested.

4.2.2 Non-Traditional and Intersectional Transgender Identities

Although it may be disappointing that there has been very little empirical measurement of hiring discrimination against transgender job applicants, the fact that there are few studies could be seen as somewhat of an advantage. Less well knownwell-known transgender identities, such as genderqueer, nonbinary, or agender, could be built in these studies from the very start, allowing a fuller picture of the entire transgender community to emerge.

Intersectional identities , where an individual has a combination of marginalised identities, can lead to some quite specific outcomes; while the differences in experience between transmen and transwomen have been discussed above, race and socioeconomic status are also implicated. For example, a recent survey (Edelman et al., 2015) reports that transgender people of color in the USA were more likely to have been denied a job than white transgender people – 49% versus 30%, respectively. Similarly, Leppel (2016) highlights how unemployment is more likely for Hispanic and African American transgender people. Other such combination of identities may lead to distinctive outcomes in studies on hiring discrimination, and would provide valuable detailed and nuanced information on the state of transgender experiences in the labor market. In deciding (for the sake of simplicity or otherwise) not to consider other personal identities such as ethnicity and social class, one may run the risk of contributing to a suite of studies that have has ast its primary focus the experiences of white, middle-class transgender job applicants, resulting in a one-dimensional and less representative literature.

4.2.4 Limitations

This paper has investigated a number of factors at the legal, industry/role and population level, presented in Figure 2, that one might take into account when researching hiring discrimination against transgender job applicants. However, as mentioned, this list is not exhaustive; there are a potentially huge number of factors that could affect the hiring process and could be taken into account when designing a study; this paper has presented only a few major factors. In addition, this paper acts only as an introduction to designing a study on transgender hiring discrimination – a first step for novitiates to the study of hiring discrimination and/or measuring discrimination specifically against transgender job applicants. Although they are shown here on a simple choice framework, one must also be cognizant that the factors and tests presented may involve varying degrees of difficulty to

execute successfully; ultimately, the choice of test and factors focused upon must be

followed, by necessity, by a deep dive into the literature and previous similar studies.

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