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STUDENTS' PERCEPTIONS OF LECTURERS: A FURTHER INVESTIGATION INTO THE INFLUENCE OF RACE AND GENDER

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COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, cited and referenced.

Signature: …….. Date: ……..

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ABSTRACT

Since the end of the apartheid system in 1994, particular attention has been focused on transforming the education system in South Africa, specifically in terms of the demographic composition of both students and staff. However, progress towards historically white higher education institutions becoming more representative in terms of their academic staff has been slow. Two major contributing factors to the stagnant transformation found are the unfavourable working environment experienced by black and female academic staff, and also that the majority of academic positions, especially more senior positions, continue to be dominated by white and male individuals. Students' perceptions of black and female academic staff members might be one contributing factor to the negative working environment they experience. These perceptions are influenced by commonly held racial and gender stereotypes, which are explained and explored using Social Identity Theory and Stereotype Content Theory. The eight hypotheses proposed in this study were therefore based on the assumptions of these theories, as well as previous literature, and suggested that students perceive black and female academic staff as less competent and more warm than white and male academic staff; and also that students perceive lecturers of their same racial and gender group as more favourable than lecturers belonging to other groups. The purpose of this study was to evaluate these perceptions in terms of the lecturers' competence and warmth; and additionally evaluated the influence of lecturers' academic discipline on these perceptions. A total of 1,697 South African students were asked to rate the competence and warmth of two alleged white lecturers and two alleged black lecturers presented to them in photographs using a mixed factorial research design. Students perceived both the white and black lecturers, and both the male and female lecturers, to be highly similar in competence; however were found to perceive the black and the male lecturers as warmer. The results found in this study did not support the hypotheses that students rated white and male lecturers more competent, and female lecturers as higher in warmth. They did, however, provide support for the hypothesis that students perceive black lecturers as warmer than white lecturers. The study also found that the black female lecturer was rated the lowest in terms of competence; and that students' race and gender, as well as the academic discipline of the lecturers', did

not significantly influence students' perceptions. The results therefore suggest that students might not be as much of a contributing factor to creating a negative work climate for black and female lecturers as initially assumed, and that the young generation in South Africa may not be as influenced by racial and gender stereotypes as previous generations. The research makes an important theoretical contribution as it expands on limited research regarding the effects of the respondents' own racial and gender group when assessing racial and gender stereotypes; and provides important considerations for future research on racial and gender stereotypes in the context of South Africa.

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CHAPTER 1

Introduction

Apartheid was an extreme political system used to systematically order society on the grounds of race, and has left behind a strong sense of racial awareness in South Africa (Seekings, 2008). This rigid policy of racial segregation prevented the integration of members of different racial categories and strictly discriminated against all members of all racial groups other than white. The social and political landscape of South Africa has changed dramatically since the end of apartheid in 1994, and South Africa is now a country in which members of all racial groups share equal rights and resources (Finchilescu & Tredoux, 2010). The political transformation of South Africa has enabled previously inconceivable interactions between members of different racial groups to occur, affecting inter-group dynamics and relations. Race is therefore an important factor to consider in understanding the complex intergroup dynamics between South African people.

Despite the democratic movements of the post-apartheid government and the increased contact between members of different racial groups, South Africa remains an unequal country shaped by the experiences of apartheid, and the country's transformation to a more egalitarian society is far from over (Finchilescu & Tredoux, 2010; Seekings, 2008). This is because people continue to define and identify themselves and others in racial terms, which creates a strong sense of in-group and out-group dynamics, where members of the same group (in-group) are favoured over members of other groups (out-group) (Seekings, 2008; Tajfel & Turner, 1979). This concept is drawn from Social Identity Theory (SIT), which suggests that individuals classify themselves in their social environment in order to maintain or achieve a positive self-identity through comparing themselves with unfavourable out-groups (Tajfel & Turner, 1979).

Throughout history and the world, black[1] individuals have been oppressed and unfairly treated in comparison to other racial groups, with the biggest disparity being between black and white individuals (Bertrand & Mullainathan, 2004; Finchilescu & Tredoux, 2010; Hirsh & Lyons, 2010; Human, 1996; King et al., 2011; Pavalko, Mossakowski, & Hamilton, 2003; Soudien et al., 2008). This history of white superiority and black oppression, particularly in the context of South Africa, has informed unfavourable stereotypes towards black members of society. According to Human (1996), research in South Africa, for example, has shown that white individuals perceive black members of society as inherently less capable than white members of society (see also Bavishi, Madera, & Hebl, 2010; Soudien et al., 2008; Thaver, 2009). A majority of South Africans continues to partake in negative racial stereotyping, ultimately preventing and impeding intergroup reconciliation (Gibson & Claassen, 2010).

These negative racial stereotypes infiltrate into all spheres of life and are especially prevalent and detrimental in the workplace (Human, 1996). Seekings (2008) suggests that the workplace is one of the most important places of inter-racial interaction amongst people, and therefore plays a central role in the managing of diversity, transformation and equal employment opportunities. However, research on the topic suggests that transformation, defined in this study in terms of demographic composition and hierarchical structures, has been particularly slow in South African workplaces. Literature suggests that this is also the case in higher education institutions where stagnation in transformation and trends of discrimination and stereotyping of black individuals exist (Menges & Exum, 1983; Oloyede, 2009; Thaver, 2009). Oloyede asserts that the significant lack of progress in transformation and racial discrimination on university campuses in South Africa has led to a lack of social cohesion. This is present in perceptions of black academic staff, who continue to feel undermined and undervalued in the academic workplace (Bavishi et al., 2010; Human, 1996; Soudien et al., 2008). Reid (2010) adds that racially marginalised groups in academia fail to be

[1] In this dissertation, the term 'black' refers to black African individuals indigenous to South Africa.

recognised as intellectually competent and credible by both colleagues and students, making it increasingly difficult for them to be taken seriously in their jobs.

In addition to race, it has been shown that marginalisation and negative stereotyping of academic staff in higher education institutions is also based on the staff member's gender. Research has found that, stereotypically, female lecturers are perceived as inferior to and less competent than their male colleagues (Johnson-Bailey & Cervero, 1998; Reid, 2010). Literature therefore suggests that race and gender play a significant role in perceptions of academic staff in higher education institutions, and that negative racial and gender stereotypes inform both students' and colleagues' negative perceptions of black and female academic staff. Students' perceptions in particular, have been found to influence lecturer evaluations, which are often used to base decisions regarding promotion and tenure in higher education institutions (Arbuckle & Williams, 2003; Bavishi et al., 2010; Soudien, 2010). Investigating the possible biases present in students' perceptions of lecturers is therefore imperative in order to amend transformation issues in higher education institutions in South Africa. This study therefore aims to investigate whether students' perceptions of lecturers are informed by the lecturers' race and gender, and answer the following research question: Do students in South Africa form different perceptions of lecturers' based on the lecturers' and students' race and gender?

Following this introduction, this study will cover a review of the literature on the topic and present the derived hypotheses (Chapter 2), outline the research method (Chapter 3), present the results (Chapter 4), and finally, provide an in-depth discussion of these results (Chapter 5).

CHAPTER 2

Literature Review

This chapter outlines research findings about the working environment and transformation challenges faced by black and female academic staff members in South Africa. In order to understand the link between the working environment and students' perceptions of lecturers, the section then outlines two important stereotype theories and presents literature on racial and gender stereotypes. Thereafter, research examining the influence of lecturers' and students' race and gender as well as lecturers' academic faculty on students' evaluations of lecturers is outlined. Based on the literature provided, eight hypotheses have been derived.

Broad overview of the academic workplace in South Africa

While this study focuses on students' perceptions of lecturers, this section, which provides a broad overview of research focusing on working environment and staff structures in South African higher education institutions, has been included in order to better understand the lack of transformation within the academic workforce and thus to provide the context to the study. Despite the political changes in South Africa from a system actively promoting racial segregation towards a non-racialised democratic dispensation, transformation in the education system has been slow (Oloyede, 2009; Soudien et al., 2008; Thaver, 2009). The 'Reitz Four' incident in 2007, in which four white students at the University of the Free State immorally 'initiated' five black workers by putting them through a series of degrading ordeals in a protest against racial integration in the university residences, led to a national outcry regarding racism and transformation in education in South Africa (Soudien, 2010). This incident resulted in the South African Minister of Education establishing a Ministerial Committee to investigate the issues of transformation, social cohesion and discrimination in higher education institutions. In the resulting enquiry report it was evident that higher education institutions failed to understand what was meant by transformation and social cohesion,

and that racial discrimination persisted to exist in educational institutions (Soudien, 2010; Soudien et al., 2008).

Oloyede (2009) argues that South African organisations and institutions are under false pretence that racial transformation is achieved by simply diversifying their workforce. There seems to be a national misconception that transformation in higher education institutions has occurred due to the increase in numbers of black students and black staff members that were previously predominantly white in both respects (Oloyede, 2009). However, transformation and social cohesion are not automatic or guaranteed results of racial integration. This is because, as explained by Oloyede, structural diversity does not guarantee an interaction between the numerically diverse groups. Despite the increase in numbers of black individuals in these institutions, a meaningful inter-group interaction between staff members and students of different racial groups is still absent, which, Oloyede argues, forms the foundation for the transformation issues in higher education in South Africa. The Ministerial Committee's report states that transformation and social cohesion should form the basis for change if higher education institutions wish to grow and adapt (Oloyede, 2009; Soudien et al., 2008).

It appears that even though higher education institutions in South Africa have implemented quota systems and employment equity policies and plans; not enough attention has been focused on transforming these institutions into workplaces where academic staff experience positive work climates. Workplace climates can play a significant role in either exacerbating or minimizing inequality or discrimination (Hirsh & Lyons, 2010). What continues to lack is an environment of strong social cohesion where all members of staff feel equal and valued (Soudien et al., 2008). Thaver (2009) proposes that an unpleasant working environment is caused, to a large extent, by continued racism and conflict. Although overt or explicit displays of racism have declined since the abolishment of apartheid, research suggests that there is still a strong presence of subtle or covert racism in South Africa, particularly in the workplace

(Oloyede, 2009; Seekings, 2008; Soudien et al., 2008; Thaver, 2009). These subtle patterns of racism and discrimination seem to have replaced the previously more blatant racial prejudices, but have been reported to be even more detrimental than direct manifestations of discrimination (Hirsh & Lyons, 2010; Oloyede, 2009; Soudien et al., 2008; Thaver, 2009). Fiske (1996) and Hirsh and Lyons (2010) suggest that this is because indirect or subliminal forms of discrimination are more difficult to identify, and therefore more difficult to remedy.

The real life experiences of staff members, as depicted in the Ministerial Committee Report, indicate that this pervasive covert discrimination persists in higher education institutions in South Africa; particularly for black and female individuals (Soudien et al., 2008). Fellow academic staff members and students express the judgement that black and female academics have been awarded their positions on the basis of quota and affirmative action requirements and not on the basis of merit, and are therefore given preferential treatment (Bavishi et al., 2010). Subsequently, this creates an environment where black and female academic staff members feel as though they need to prove their academic worth and authority in order to avoid the perception of being under qualified or undeserving of their positions. This constant battle against the negative perceptions based on a staff member's race and/or gender can create an unpleasant working environment (Bavishi et al., 2010; Carson, 2001; Reid, 2010; Soudien et al., 2008; Thaver, 2009). In the Ministerial Committee Report, the Dean of Commerce at the University of Cape Town accordingly suggested that staff members at the university reportedly left their jobs for even lower salaries due to their dissatisfaction with the institutional working environment (Soudien et al., 2008). Therefore, in order to retain black and female academic staff, South African higher education institutions need to be more willing to comprehensively transform their institutional cultures if they wish to decrease the marginalisation of black and female individuals (Oloyede, 2009).

Soudien et al. (2008) state that an institutional culture dominated by white individuals and males engenders racism and discrimination plays a significant role in black and female staff academics' frustration and unfulfillment in their working environments. This is because, as discussed by Human (1996), the considerable cultural differences, to a large extent, serve to create and maintain cultural stereotypes, which can be highly detrimental, as these stereotypes deny the presence of in-group differences and out-group similarities. This classification of people into groups often leads to the assignment of power or inherent superiority or inferiority based on power relations (Human, 1996). Human further discusses that the allocation of negative stereotypes to the out-group, or in this case black academic staff members, engenders self-doubt with regards to performance, which may in turn lead to an avoidance of competition and an internalisation of inferiority. Moreover, she discusses that this poor self-image can then result in a tendency to avoid effort, where black academic staff members withdraw from positive work performance. Therefore, underperformance can be a result of the unfavourable institutional culture in higher education institutions. Consequently, this underperformance can ultimately lead to the reinforcement of the negative stereotype of black academic staff being unworthy and inferior to their white colleagues.

The Ministerial Committee Report explains that the marginalisation present in higher education institutions in South Africa has been naturalised and normalised through the epistemological and pedagogical practices and structures present (Soudien et al., 2008). These practices and structures reinforce white superiority and protect white academics from reflecting on their role in individually and collectively perpetuating discrimination and marginalisation in the workplace. The lack of responsibility allowed to be taken by the normality and rigidity of the institutional culture can create conflict between white and black academic staff members (Oloyede, 2009; Thaver, 2009). Institutional culture therefore plays an important role when considering the working environment of academic staff, as the culture isolates and excludes black and female individuals from feeling like an integral part of the institution (Soudien et al., 2008).

Reasons for the underrepresentation of black and female academic staff members

The lack of cultural integration of black and female academic staff into organisational norms and practices creates an underlying culture where discrimination is commonplace (Human, 1996). This is due to the institutional culture of higher education institutions in South Africa being informed by the apartheid ideologies, where white academic staff continue to form the majority of the academic staff structure, especially in senior positions (Oloyede, 2009; Soudien et al., 2008; Thaver, 2009). Therefore, in addition to facing an unfavourable working climate, black and female individuals are also underrepresented in higher education institutions in South Africa, and are located, to a large extent, in more junior positions (Bavishi et al., 2010; Carson, 2001; Fiske, Cuddy, Glick, & Xu, 2002; Johnson-Bailey & Cervero, 2008; Oloyede, 2009; Soudien et al., 2008; Thaver, 2009). The Ministerial Committee Report found that black staff members at higher education institutions experience high levels of pervasive and persistent covert discrimination particularly in the forms of staff promotion and student evaluations (Soudien et al., 2008). These two issues, and how they result in the underrepresentation of black and female individuals in the academic workforce, are outlined below.

There are many factors that contribute to the underrepresentation of black individuals in academic staff structures. One of the major contributing factors stems partly from the poor quality primary and secondary education that many black individuals still receive in South Africa as a result of the precincts of apartheid (Finchilescu & Tredoux, 2010). The poor school-level education limits the opportunities for many black individuals to progress into higher education institutions, and consequently, from having the necessary qualifications to enter the academic workforce. Therefore, at an initial or entry-level, there are fewer black individuals than white individuals obtaining or pursuing careers in higher education institutions in South Africa.

Low turnover rates of white academic staff, especially in senior positions, sustains the underrepresentation of black academic staff members (Bavishi et al., 2010; Reid, 2010; Soudien et al., 2008; Tapia, Kvasny, & Trauth, 2004). This is because South African higher education institutions have a predominantly white workforce, focused particularly higher in the structural hierarchy, with relatively few black and female individuals occupying senior academic positions (Bavishi et al., 2010; Human, 1996; Sennett, Finchilescu, Gibson, & Strauss, 2003; Soudien et al., 2008). This is on the grounds that the saturated staff structure presents limited growth opportunities for those that are further down in the academic hierarchy, such as black and female individuals, which might discourage them from pursuing long-term academic careers. Subsequently, the limited available possibilities for career advancement and promotion in higher education institutions results in comparatively high turnover rates among black academic staff in South Africa (Soudien et al., 2008; Tapia et al., 2004). As discovered in the Ministerial Committee Report, institutions find it increasingly difficult to attract and retain black and female academic staff. Soudien et al. discuss that a number of South African universities claim that this is the case due to significantly higher salaries offered in business and government, which entice black academic staff to leave the field of academics and education. This hinders demographic transformation in the academic workforce and therefore aids in maintaining the presence of white senior academic staff.

Another contributing factor to the underrepresentation of both black and female academic staff could be negative student evaluations. Negative and discriminatory perceptions based on racial or gender stereotypes frequently inform students' evaluations of lecturers. Therefore, negative perceptions of black and female individuals often result in students' ratings them unfavourably in course evaluations (Arbuckle & Williams, 2003; Bavishi et al., 2010; Menges & Exum, 1983; Reid, 2010). Student evaluations can greatly affect the representation of black and female academic staff, as they are often linked to the tenure and promotion opportunities of academic staff and used as evidence on which to base advancement decisions (Buchert, Laws, Apperson, & Bregman, 2008). Decisions regarding advancements based on students' perceptions

have been found to unfairly and unjustifiably hinder career advancements for black and female academics; which contributes to the negative work climate perceptions for these members of staff (Arbuckle & Williams, 2003; Basow & Silberg, 1987; Bavishi et al., 2010; Reid, 2010). As student evaluation influence advancement in academic careers, it is important to determine if any biases exist in the evaluation of lecturers and understand the factors that contribute to these evaluations, such as race and gender (Basow & Silberg, 1987; Buchert et al., 2008). Better understanding these negative stereotypes upon which students base their evaluations can help to ensure that promotion criteria are fair and standardised for all academic staff and that bias effects are counteracted (Merritt, 2007). The following sections outline Social Identity Theory, which is a theoretical approach that could explain for what purposes and in which way students may evaluate lecturers of different racial and gender groups differently. Secondly, an overview of Stereotype Content Theory is provided so as to understand the type of stereotypes that might influence students' evaluations of lecturers.

Racial and gender stereotypes

It is likely that the unfavourable working environments experienced by black and female academics, and their underrepresentation in higher education institutions in South Africa, stem, at least partly, from universal stereotypes held in societies. In order to better understand this link, it is important to consider literature and theories explaining how stereotypes are formed and why stereotypes continue to persist. Human beings are dependent on stereotypes in order to classify, categorise and make sense of the world around them (Human, 1996). Human discusses that this reliance comes from an attempt to avoid inner conflict and insecurity by maintaining societal roles and power relations, and providing individuals with a framework upon which they can build their judging behaviours.

An approach often used to explain why stereotyping occurs is Social Identity Theory (SIT). This theory assumes that people perceive themselves and others in terms of

group categories. In general, the in-group to which a member belongs is favoured and perceived more positively than members belonging to other groups, or out-groups (Tajfel & Turner, 1979). This is because SIT assumes that people strive to gain a positive social identity in order to increase their self-esteem. This can be achieved through comparing themselves to other groups; when this comparison is favourable, or their own group is seen as better, this leads to a positive social identity, and therefore a higher self-esteem. As a result, people tend to evaluate members of the in-group more positively than members of the out-group, creating dissonance between groups or even discrimination towards the out-group (Tajfel & Turner, 1979). SIT therefore assumes that people perceive members belonging to their own group more positively, and ostracise individuals from groups that are different from their own. SIT is therefore useful when explaining racial and gender stereotypes, as when individuals perceive that the goals of the out-group differ or conflict with the goals of the in-group, they ascribe negative attributes and emotions towards the out-group (Fiske, Cuddy, & Glick, 2007).

Stereotype Content Theory (SCT) explains the content on which people base their stereotypes. Fiske, Cuddy, Glick and Xu (2002) argue that two fundamental, apparently universal, dimensions of out-group perceptions capture and predict stereotypical perceptions, emotional prejudices, and discriminatory tendencies are competence and warmth (see also Fiske, 2012). These dimensions result from interpersonal and intergroup interactions at an individual- and group-level, which situate the effects of race and gender on a comparative map (Fiske, 2012; Fiske et al., 2007; Fiske et al., 2002). Recent research and theory in social cognition, as stated by Fiske et al., has identified that the dimension of competence captures traits such as intelligence, skill, creativity, and efficiency (traits related to perceived ability and apparent success), and the warmth dimension captures characteristics such as friendliness, helpfulness, sincerity, trustworthiness, and morality (traits related to perceived intent and structural relationships). Therefore, stereotypes are formed on the functional idea that people want to know others' intent, and their capability to pursue it (Fiske et al., 2002). It has also been shown that positive stereotypes on one dimension are most often associated

to more unflattering or negative stereotypes on the other dimension, implying that positive perceptions on the competence dimension are linked to negative perceptions on the warmth dimension, and vice versa (Fiske et al., 2002). As a result, two common out-group stereotypes are formed; the out-group perceived as low on the competence dimension and high on the warmth dimension, and the out-group perceived as low on the warmth dimension and high on the competence dimension.

Given the apparent universality of the competence and warmth dimensions used to explain the content on which stereotypes are based, they can aid in understanding the perceived fit between group relationships, inter-personal dynamics, and power in the workplace (Fiske, 2012). Therefore, in order to assess these workplace dynamics within academic institutions and better understand students' perceptions of lecturers, common racial and gender stereotypes will be discussed next, in order to examine how stereotypes of black and female individuals are formed using the dimensions of competence and warmth.

Early scientific theories of race up until the 1940s held the belief that black people had physically smaller brains than white people. This began to form many racial stereotypes and racist beliefs regarding the competence and capabilities of black individuals (Soudien et al., 2008). Racial stereotypes were created as a means to justify the mistreatment, exclusion and oppression of minority groups that occurred throughout history. In a South African context, racial stereotypes therefore stem, to a large extent, from the history of black oppression and white superiority. Gibson and Claassen (2010) explain that racial segregation is a platform upon which these negative racial stereotypes have been formed, which has led to congruent universal stereotypes of black individuals being inherently inferior and incompetent compared to white individuals (Human, 1996). The longstanding historical perception of black inferiority is present across several dimensions, but is particularly concentrated on the dimensions of academic ability, intelligence and competence; where black individuals are perceived

as incompetent, illegitimate and underserving of their positions (Bavishi et al., 2010; Fiske, 2012; Harlow, 2003; Human, 1996; Reid, 2010; Sennett et al., 2003). Therefore, in terms of SCT, black individuals are stereotypically perceived as being lower on the competence dimension than white individuals, and hence are likely to be seen as higher on the warmth dimension (Fiske et al., 2007).

In terms of universally held gender stereotypes, research has found that certain traits or characteristics are perceived as more inherently masculine or feminine. Stereotypically, males are more commonly ascribed attributes such as rationality, competence, and authority, whereas females are ascribed characteristics such as warmth, sensitivity, and understanding (Arbuckle & Williams, 2003; Bachen, McLoughlin, & Garcia, 1999; Bennett, 1982; Kierstead, D'Agostino, & Dill, 1988; Reid, 2010). Culturally driven gender stereotypes therefore elicit certain attitudes and expectations about the emotional expressiveness of males and females. Therefore, due to socially constricted gender stereotypes, males are expected to be more authoritative and less emotional, while women are expected to express more emotion and less assertiveness (Arbuckle & Williams, 2003). Therefore, according to SCT, females are stereotypically perceived as higher on the warmth dimension than males; however, males are stereotypically perceived as higher on the competence dimension than females (Fiske, 2012).

Applied to the context of higher education institutions, these universally accepted racial and gender stereotypes infiltrate into group dynamics and therefore might play a significant role in how students perceive black and female academic staff members. This is because stereotypes provide a basis upon which students can form their perceptions, and could therefore influence students' perceptions of lecturers' competence and warmth, and consequentially, student evaluations of lecturers in higher education institutions. In the context of South Africa, Kinnear (2011) conducted a study in which she examined the effects of first impressions on students' evaluations of lecturers, looking particularly at the effects of gender and race. In this study, she presented eight photographs of hypothetical lecturers to 193 students at The University of Cape Town. She found that, generally, students rated white lecturers more favourably

than black lecturers on the ability (or competence) dimension, and rated black lecturers more favourably than white lecturers on the likeability (or warmth) dimension. This study therefore aims to replicate these results and further investigate the extent to which racial and gender stereotypes influence students' perceptions of black and female lecturers at higher education institutions in South Africa.

Impact of lecturers' race on students' perceptions of lecturers' competence and warmth

As previously discussed, stereotypes formed on racial grounds have a significant influence on the way black individuals are perceived in society. The historically informed racial stereotypes of black inferiority and incompetence are prevalent in various aspects of life. Within the more specific context of higher education institutions, these universally held negative perceptions of black individuals have also been found to be attributed to black academic staff members (Bavishi et al., 2010; Harlow, 2003; Hendrix, 1998; Kinnear, 2011; Oloyede, 2009; Reid, 2010; Soudien et al., 2008; Thaver, 2009). Bavishi and Reid found that, in the context of universities in the United States, black academic staff members face the stereotype of incompetence and inferiority from both their colleagues and students, and therefore face the challenge of having to prove their intellectual competence and credibility. Similar research conducted in the context of South Africa by Oloyede (2009), Thaver (2009) and Kinnear (2011) found similar racial stereotypes to exist within South African universities. These studies found that students' perceptions of lecturers are often driven by racial stereotypes rather than by objective information such as qualifications, and as a result, black academics tend to receive less favourable student evaluations.

With regards to SCT, racial groups are situated differently on the competence and warmth dimensions. As previously discussed, black individuals are stereotypically perceived as high on the warmth dimension but low on the competence dimension, and that white individuals are perceived to be high on the competence dimension but low on

the warmth dimension (Cuddy, Fiske & Gluck, 2008; Fiske 2012). Students have therefore been found to ascribe characteristics of competence to white academics, and ascribe characteristics of warmth to black academics. In light of SCT and existing South African research on students' perceptions of lecturers, it is therefore likely that students will perceive white lecturers as more competent and less warm, and black lecturers as more warm but less competent. This study therefore proposes the following two hypotheses:

Hypothesis 1: Students perceive white lecturers as more competent than black lecturers.

Hypothesis 2: Students perceive black lecturers as having more warmth than white lecturers.

Impact of lecturers' gender on students' perceptions of lecturers' competence and warmth

Gender stereotyping has been shown to be implicitly driven by social culture through attitudes about how males and females emotionally express themselves; where males are expected to be more masculine and express less emotion, and females are expected to be more feminine and maternal in their nature and express more emotion (Arbuckle & Williams, 2003). This was also found to be the case in higher education institutions, as Carson (2000) found that students display gender biases when evaluating male and female faculty members. Research has therefore found that students perceive and evaluate male lecturers as more intellectually competent than female lecturers, while female lecturers are perceived and evaluated as higher on expressive characteristics such as sensitivity and warmth (Arbuckle & Williams, 2003; Bachen et al., 1999; Basow & Silberg, 1987; Basow, 1995; Bennett, 1982; Reid, 2010). As shown in SCT, males are therefore rated high on the competence dimension but low on the warmth dimension, while females are rated high on the warmth dimension but low on the competence dimension (Cuddy et al., 2008; Fiske et al., 2002). Literature on the effects of lecturer gender on students' perceptions of lecturers and dimension

situation according to SCT, therefore suggest that students perceive male lecturers as more competent than female lecturers, and female lecturers as having more warmth than male lecturers. The following two hypotheses are thus proposed:

Hypothesis 3: Students perceive male lecturers as more competent than female lecturers.

Hypothesis 4: Students perceive female lecturers as having more warmth than male lecturers.

Evaluating the literature on the effects of lecturers' race and gender has shown the separate influences on students' perceptions or evaluations of lecturers; however, research has also explored the combined effects of lecturers' race and gender by focusing particularly on students' perceptions of black female academic staff members. Studies have found that women of colour face a double stigma for being both black and female, and therefore face particular challenges in negotiating stereotypes and burdens associated with both features (Bavishi et al., 2010; Reid, 2010). In the study conducted by Bavishi et al., black females were found to be rated the lowest by students on all three dimensions assessed, namely competence, interpersonal skills and legitimacy. Drawing on SCT, where black individuals and females are rated lower than white individuals and males on the competence dimension, black female individuals should be situated the lowest in terms of perceived competence compared to white male, white female and black male academics. The following hypothesis is therefore postulated:

Hypothesis 5: Students perceive black women as the least competent lecturers.

Impact of students' race and gender on students' perceptions of lecturers' competence and warmth

Reid (2010) suggests that one of the most influential factors on the effects of lecturers' race and gender in students evaluations is the race and gender of the student

themselves (see also Basow and Silberg, 1987). Limited research has been conducted on same-race preferences of students regarding higher education academics. Kinnear (2011) found that, in the context of South Africa, both white and black students tended to ascribe more competence to white lecturers, and greater warmth to black lecturers. Although Kinnear's results found same-race lecturer preference for white students' perceptions of white lecturers' competence and black students' perceptions of black lecturers' warmth, overall the results do not show that students have a clear preference for lecturers of their same racial group.

Research has also found mixed results regarding same gender preferences. Kinnear (2011) found that both male and female students rated female lecturers as more competent and more likeable than male lecturers, showing no clear gender preferences amongst students in South Africa. However, some studies have found students expressing a preference for same-gender lecturers in terms of course selection and course satisfaction (Basow, 1995; Basow, 2000; Bennett, 1982). Following the inconsistency in research regarding both same-race and same-gender student preferences of lecturers, the assumptions of SIT are considered. These assumptions predict that students should perceive lecturers belonging to their same racial or gender group more favourably than lecturers of the other racial or gender groups. This study therefore aims to resolve the conflicting research and determine whether same-race and same-gender preferences exist amongst students in higher education institutions in South Africa. Based on SIT, the following hypotheses are therefore proposed:

Hypothesis 6: Students from different racial groups perceive lecturers from their own racial group as more competent and warm than lecturers of other racial groups.

Hypothesis 7: Students from different gender groups perceive lecturers from their own gender group as more competent and warm than lecturers of the other gender group.

Impact of academic discipline on students' perceptions of lecturers' competence

Academic disciplines in higher education institutions are often associated to the most predominant and established gender group in the discipline. Reid (2010) and Carson (2001) suggest that academic discipline, and the associated gender stereotype of the academic discipline, are a major influencing factor on the effect of lecturers' gender on students' perceptions of lecturers. Research has shown that females are more commonly associated with traditionally female, or non-science, disciplines, such as the Humanities; and males are more commonly associated with more traditionally masculine disciplines, such as Commerce, Science and Engineering (Bachen et al., 1999; Bavishi et al., 2010; Callister, 2006; Carson, 2001; Reid, 2010). Limited research exists on the effects of academic discipline on students' perceptions of lecturers in the context of South Africa. Based on international research findings, this study therefore aims to determine these effects and proposes the following hypothesis:

Hypothesis 8: Female lecturers are rated as more competent in the Humanities faculty, whereas male lecturers are rated as more competent in the Commerce faculty.

The eight proposed hypotheses are depicted in the conceptual framework below (Figure 1), which displays the expected relationships between the variables of interest.

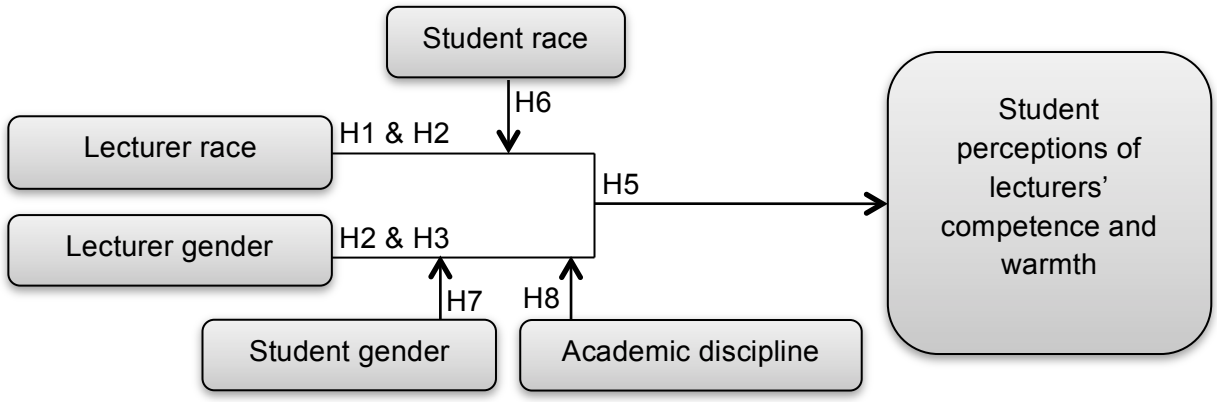

Figure 1. Conceptual framework including the eight proposed hypotheses (H1 to H8).

CHAPTER 3

Method

This chapter describes the study's research design, the sample, the measures and stimulus material used to assess students' perceptions of lecturers' competence and warmth, as well as the procedure followed in order to collect data to test the eight hypotheses proposed.

Research design

A mixed factorial design was used to investigate students' perceptions of lecturers based on the lecturers' race and gender. There were between subject factors and repeated measures factors. The between subject, or independent, factors were student race (with two levels: white and black) and gender (with two levels: male or female). The repeated measures, or dependent, factors were lecturers race (with two levels: white and black), lecturers gender (with two levels: male and female) and academic discipline (with two levels: Humanities and Engineering). The study was cross-sectional and made use of primary, quantitative data. The data was collected by means of the non-probability method of convenience sampling. Although this sampling technique limits the generalizability of the results obtained, it was used due to the resource, financial and time constraints.

Sampling and participants

All students currently registered at the University of Cape Town were invited to participate in the study via email. A total of 1858 students accessed the online questionnaire used for data collection purposes. Participants were removed from the sample if they indicated that they had taken the PSY2003S course at the University of Cape Town, as this course presents Kinnear's (2011) study that used a similar design and followed a similar purpose to this study. Participants who had previously completed

the course would therefore be aware of the purpose of the study, which could have influenced the way they answered the items in the questionnaire. The questionnaire included photographs of alleged lecturers, which the students were asked to rate. Participants' responses were also removed for each lecturer that a participant indicated previously knowing, as these responses may have been influenced by additional factors other than the lecturer's race and gender. Some participants who accessed the questionnaire online did not fill any of the items in; therefore these empty responses were also removed from the sample. The sample therefore consisted of a total of 1,697 participants, of which 677 (39.9%) were male and 1,019 (60%) were female. Participants' ages were split up into eight categories including 18, 19, 20, 21, 22, 23, 24 and 25 and above. Of the participants, 120 (7.1%) were 18 years old, 308 (18.1%) were 19 years old, 301 (17.7%) were 20 years old, 246 (14.5%) were 21 years old, 240 (14.1%) were 22 years old, 163 (9.6%) were 23 years old, 84 (4.9%) were 24 years old, and 234 (13.8%) were 25 years old or above. The racial composition of the sample included 534 black African participants (31.5%), 720 white participants (42.5%), 164 coloured participants (9.7%), 130 Indian participants (7.7%), 29 Asian participants (1.7%), 28 participants who answered 'Other' (1.6%), and when asked about their racial group membership, 91 participants answered 'Prefer not to answer' (5.4%). The sample consisted of students from all six university faculties and was distributed as follows: 405 participants from the Commerce Faculty (23.9%), 329 participants from the Engineering and Built Environment Faculty (19.4%), 211 participants from the Health Science Faculty (12.4%), 432 participants from the Humanities Faculty (25.5%), 49 participants from the Law Faculty (2.9%), and 268 participants from the Science Faculty (15.8%). Out of the 1697 participants, 413 were 1st year students (24.3%), 370 were 2nd year students (21.8%), 321 were 3rd year students (18.9%), 264 were 4th year students (15.6%), 142 were 5th year students (8.4%), 88 were 6th year students (5.2%), 41 were 7th year students (2.4%), and 57 were in their 8th year of study or above (3.4%).

Measures

An online self-report questionnaire was used in order to collect data. The researcher chose to use an online questionnaire for the ease of randomisation of the questions and stimulus material. The questionnaire consisted of five sections and a total of 112 items. Section one of the questionnaire asked each participant to fill in their demographic information including age, race (with the options of white, black African, coloured, Indian, Asian, other and prefer not to answer), gender (with the options of male and female), year of study, and faculty (with the options of Humanities, Commerce, Engineering & the Built Environment, Science, Law and Health Sciences).

Sections two, three, four and five of the questionnaire each contained one of four photographs of hypothetical lecturers (either a black male, a black female, a white male or a white female) followed by competence and warmth scales developed by the researcher. The photographs of the hypothetical lecturers that were used in this study were obtained from the website www.faceresearch.com. Permission from the owners of the website to use these photographs was granted. The researcher chose to use these photographs, as they are multiracial and standardised. The photographs are consistent in size, clarity and expression. The background of each photograph is the same colour and all subjects in the photographs wear the same white t-shirt. The four photographs that were used in the study are shown below.

Figure 2. Faces of the four hypothetical lecturers used in this study.

The competence and warmth scales developed by the researcher (see Appendix A) were adapted from Kinnear (2011) and Keogh's (2012) studies. Both studies were conducted in the context of a South African university, and their associated scales were found to be both valid and reliable. The researcher decided against using existing scales, as none of them fitted the nature and purpose of the study. The competence dimension in this study was measured by assessing the degree to which each student

associated 14 adjectives of competence to the photograph of the hypothetical lecturer provided (see Table 1). Similarly, warmth was measured by assessing the degree to which each student associated 14 adjectives of warmth to the photograph of the hypothetical lecturer provided (see Table 1). Both the competence and warmth scales were scored using a 6-point Likert scale ranging from one, “strongly disagree”, to six, “strongly agree”. A low score would therefore indicate a low rating, and a high score would indicate a high rating. At the end of the competence and warmth scales for each lecturer asking the participant if they knew the lecturer in question. This was in order to ensure that each participant was rating the lecturer based purely on the photograph, and not from preconceived perceptions or knowledge of the person.

Table 1. Competence and Warmth Scale adjectives.

Competence Adjectives	**Warmth Adjectives**
Competent	Likeable
Capable	Friendly
Intelligent	Strict
Skilled	Sociable
Qualified	Understanding
Experienced	Honest
Legitimate	Dependable
Reliable	Trustworthy
Reputable	Attractive
Knowledgeable	Caring
Respectable	Tolerant
Credible	Nice
Expert	Tolerant
Authoritative	Sympathetic

Procedure

The researcher obtained permission from the Faculty of Commerce Ethics in Research Committee and the Executive Director of Student Affairs in order to carry out the research. Once these permissions had been granted, an email containing a link to the questionnaire was sent out to all students currently registered at the University of Cape Town inviting them to voluntarily participate in the research study. Students were incentivised to participate by allowing each participant, on completion of the questionnaire, to enter into a lucky draw to win a R500 Woolworths gift voucher.

Once the student followed the link, a cover page was displayed containing information regarding the purpose of the study, its voluntary and confidential nature, the lucky draw and the researcher's details. There was a box for the participant to check at the end of the cover page declaring their informed consent to participate in the study. Once the box has been checked, participants were then directed to a question asking if they had completed the PSY2003S course at the University of Cape Town. Participants then proceeded to an instruction page on which they were required to check a box that they had read and understood the instructions in order to proceed to section one. Section one required each participant to fill in his or her demographic information.

On completion of section one, participants proceeded to section two. This section displayed one of the four photographs of a hypothetical lecturer, both the competency and warmth scales, and a question asking the participant if they knew the lecturer. Underneath the photograph, the participant was informed of the faculty to which the lecturer belonged, either Humanities or Engineering. Once the participant had completed answering all items in section two, he or she could proceed to section three of the questionnaire. Sections three, four and five followed the same structure as section two, but displayed different photographs of the hypothetical lecturers, followed by the randomised items. All participants were presented with photos of all four supposed lecturers, but the questionnaire was designed in such a way that the four

photographs appeared in a randomly assigned order. Each photograph was randomly assigned either a Humanities or an Engineering description. This prevented any bias that the order in which the photographs and the attached descriptions were presented might have caused. As sections two, three, four and five contained the same scale items; participants also received the competence and warmth scale items in a randomly assigned order for each lecturer face. This was in order to control for participants remembering ratings they had assigned previous lecturers to ensure that participants' ratings were based only on the photograph presented, and not on a comparative score across all four lecturer faces.

After completing all items participants were given the option to enter into the lucky draw. Students were directed to a new survey once clicking the 'Enter Competition' button, in which they entered an email address as their competition entry. Creating a survey separate to the original questionnaire ensured that participants' responses could not be linked to their email addresses, which guaranteed participant anonymity. The researcher kept the online questionnaire open for a period of two weeks, after which the link was deactivated and the data set was imported into SPSS for statistical analyses.

The purpose of the study was hidden from the participants in order to avoid students answering in a politically correct or socially desirable manner. To ethically account for this, the researcher contacted the participants that provided their email addresses to be entered into the competition in order for them to be debriefed. The researcher emailed these participants to thank them for their participation, inform them of the purpose of the study and why it was hidden, and disclosed an overview of the study's results.

Data analysis

The data was analysed using IBM SPSS Statistics, version 21. The internal reliability and item analysis of the measures was conducted in order to assess that the scales'

reliabilities were appropriate for use in this research. Factor analysis was conducted in order to evaluate the scales' validity by determining if the scales were unidimensional as intended. Paired sample t-tests and a mixed design ANOVA were used in order to test the hypotheses.

CHAPTER 4

Results

This chapter provides an analysis of the validity and reliability of the competence and warmth scales used for each hypothetical lecturer (black female, white male, white female and black male), as well as the descriptive statistics associated to each scale. The validity of the scales was tested using an Exploratory Factor Analysis (EFA) technique, as the researcher developed the scales and therefore no predetermined factor structure existed. Thereafter, a detailed analysis to test the eight hypotheses was run using the appropriate inferential statistical procedures. In this chapter the results relating to the aforementioned eight hypotheses will be outlined. Prior to this, the scales' reliability and validity and descriptive statistics are provided.

Scale validity

Since the same 28-item rating scale containing both competence and warmth items was administered to all participants four times (once for each lecturer face), the validity analyses for the competence and warmth scales were analysed separately for the black female, white male, white female and black male lecturers. Four separate EFA's were therefore conducted using a maximum-likelihood extraction method with oblique rotation (direct oblimin). This was to determine whether the items would load on the two assumed distinct factors of competence and warmth. The maximum-likelihood estimation is used to maximise the probability of obtaining parameters that yield a good fit of the observed data (Field, 2009). Therefore, in order to maximise the probability of extracting factors that were a good fit for data, the researcher chose to use maximum-likelihood parameter estimation. Oblique rotation allows for the underlying factors to be correlated. This factor correlation is necessary in this study, as the competence and warmth dimensions in Stereotype Content Theory (SCT) are closely related, where positive stereotypes on one of the dimensions are most often associated with more negative stereotypes on the other dimension (Fiske, 2011; Fiske et al., 2007; Fiske et al., 2002).

In order to check if the data was suitable for EFA, the Kaiser-Meyer-Olkin (KMO) measure for sampling adequacy and Barlett's test for sphericity were conducted for each lecturer face. A KMO measure assesses if a factor analysis will yield distinct and reliable factors, where Bartlett's test evaluates the equality of variances (Field, 2009). According to Burns and Burns (2008), the KMO should be greater than .50 and Barlett's test should be significant in order for the data to be suitable for factor analysis. As seen in Table 2 below, all four KMO measures and Bartlett's tests for each of the four lecturer faces produced criteria that supported the application of factor analysis. The four KMO measures all verified the sampling adequacy for the analysis as superb, and all four Barlett's tests of sphericity indicated that the correlations between the items were sufficiently large for a factor analysis to be appropriate (Field, 2009).

Table 2. Round one Kaiser-Meyer-Olkin measure for sampling adequacy and Bartlett's Test of sphericity results for the 28-item competence and warmth scales related to all four of the lecturer faces.

	Kaiser-Meyer-Olkin measure	Bartlett's Test of Sphericity	
Black Female	.97	χ^2_{378} = 22,610.49	p < .001
White Male	.98	χ^2_{378} = 22,488.69	p < .001
White Female	.98	χ^2_{378} = 22,588.10	p < .001
Black Male	.98	χ^2_{378} = 23,096.32	p < .001

Note. KMO measure is shown as a correlation coefficient; Bartlett's test of sphericity shows the Chi-squared test statistic and the associated significance level.

After confirming that factor analysis was appropriate, round one of the factor analyses was conducted for each of the four lecturer faces for the 28-item competence and warmth scales. In order to determine the scale's dimensionality, Kaiser's criterion was applied. Kaiser (1960, as cited in Field, 2009) recommended that factors with eigenvalues greater than 1 should be retained. According to Burns and Burns (2008), eigenvalues indicate the importance of a factor and are related to the proportion of

variance the factor explains in all items together. Factors with eigenvalues of one or above are considered to explain a substantial amount of variation (Field, 2009). As seen in Table 3 below, two factors emerged with eigenvalues greater than one for the black female, white male and white female lecturers, while three factors emerged with eigenvalues greater than one for the black male lecturer. For a full table of eigenvalues and explained variances for the unrotated factor solutions factors, see Table 1 in Appendix B.

Table 3. Round one eigenvalues and explained variances for all four of the lecturer faces (Extraction method: maximum likelihood with direct oblimin rotation; only factors with initial eigenvalues greater than 1 are displayed).

	Factor 1		Factor 2		Factor 3	
	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance
Black Female	12.36	44.13%	3.54	12.64%	-	-
White Male	12.34	44.08%	3.76	13.43%	-	-
White Female	11.96	42.71%	4.26	15.21%	-	-
Black Male	12.42	44.37%	3.71	13.26%	.68	2.44%

The pattern matrices containing the factor loadings for each competence and warmth item in round one are displayed in Table 4 below. According to Burns and Burns (2008), factor loadings greater than .30 are considered significant. Therefore, only factor loadings with absolute values greater than .30 have been included in Table 4. These factor loadings are discussed in detail for each lecturer face following Table 4.

Table 4. Round one pattern matrix showing the factor ladings for the 28-item competence and warmth scales for all four of the lecturer faces (only significant loadings of >.30 are displayed).

	Black Female		White Male		White Female		Black Male		
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2	Factor 3
Competent	.744		.772		.720		.730		
Capable	.788		.767		.788		.812		
Intelligent	.722		.771		.741		.875		
Skilled	.796		.820		.785		.843		
Qualified	.759		.825		.797		.901		
Experienced	.621		.725		.798		.684		
Legitimate	.663		.722		.718		.741		
Reliable	.626		.635		.668		.571		
Reputable	.684		.655		.677		.667		
Knowledgeable	.779		.791		.797		.866		
Respectable	.632		.677		.691		.662		
Credible	.730		.761		.770		.771		
Expert	.708		.765		.761		.751		
Authoritative	.694	.375	.715	-.302	.651				.645
Likeable		-.736		.782		.774		-.752	
Friendly		-.827		.801		.865		-.803	
Strict	-.629	-.458	-.627	.374	-.580	.339			.658
Sociable		-.670		.700		.774		-.750	
Understanding		-.732		.709		.710		-.716	
Honest	.554		.560		.673		.560		
Dependable	.570		.552		.561		.479	-.327	
Trustworthy	.515	-.354	.570	.302	.593	.301	.511	-.329	
Attractive	.319	-.350		.482		.595		-.471	
Caring		-.776		.760		.780		-.797	
Tolerant		-.642		.711		.686		-.599	
Nice		-.761		.778		.807		-.726	
Warm		-.831		.819		.813		-.837	
Sympathetic		-.832		.783		.802		-.796	

Note. Items conceptualised as indicating competence are shown in blue and those indicating warmth in red.

Black Female

As seen in Table 4, one competence item 'authoritative' loaded significantly on both factor 1 (.69) and factor 2 (.38). The item was assumed to load more significantly on the first factor, though, as the difference between the factor loadings was greater than .30 (Swoboda, Schramm-Klein, Morschett, Rudolph & Schnedlitz, 2008). Of the 14 warmth items, nine were shown to load significantly on the second factor. The items 'strict', 'trustworthy' and 'attractive' loaded both on factor 1 (-.63; .51; .32) and factor 2 (-.46; -.35; -.35), however the difference in factor loadings between the factors was not bigger than .30. These items were therefore deleted from the scale, as they could not be attributed to one particular factor and were this considered to be cross-loading items. The warmth items 'honest' and 'dependable' loaded significantly on the first factor together with the competence items. The factors were moderately correlated (r = -.37).

White Male

All 14 competence items loaded significantly on factor 1, with factor loadings greater than .30. However, one competence item, 'authoritative', again loaded both on factor 1 (.72) and factor 2 (-.30). The difference between the factor loadings was bigger than .30, and the item was therefore assumed to load more significantly on the first factor. Of the 14 warmth items, ten were shown to load significantly on the second factor with factor loadings greater than .30. The items 'strict' and 'trustworthy' loaded both on factor 1 (-.63; .57) and factor 2 (.37; .30), however these items were removed from the scale, as the difference between the factor ladings did not exceed .30. The warmth items 'honest' and 'dependable' loaded significantly on the first factor, together with the competence items. The factors were moderately correlated (r = .37).

White Female

The factor analysis showed that all 14 competence items loaded significantly on the first factor, as the factor loadings were all greater than .30. Of the 14 warmth items, ten were

loaded significantly on the second factor. However, the items ‘strict’ and ‘trustworthy’ loaded both on factor 1 (-.58; .59) and factor 2 (.34; .30), and the difference between factor loadings was smaller than .30. These items were therefore removed from the scale. The warmth items ‘honest’ and ‘dependable’ loaded significantly on the first factor, together with the competence items. The two factors were moderately correlated (r = .33).

Black Male

As shown in Table 4, the factor analysis revealed that items for the black male lecturer loaded on three factors. Of the 14 competence items, 13 loaded significantly on the first factor. The remaining competence item ‘authoritative’, however, loaded significantly on the third factor. Of the 14 warmth items, ten loaded significantly on the second factor. The items ‘trustworthy’ and ‘dependable’ loaded both on factor 1 (.51; .48) and factor 2 (-.33; -.32), however the difference in factor loadings between the items when considering the absolute values was not greater than .30. The items were therefore removed from the scale. The warmth item ‘honest’ loaded significantly on the first factor, together with the competence items, whereas the warmth item ‘strict’ loaded significantly on the third factor. Factor 1 and factor 2 were moderately correlated (r = -.48), factor 2 and factor 3 were not correlated (r = .02), and factor 1 and 3 were moderately correlated (r = .39).

These results have been summarised in Table 5 below. The problematic items were ‘strict’, ‘trustworthy’, ‘attractive’, ‘dependable’ and ‘authoritative’, as these items had cross-loaded. They were therefore removed from all four scales. The warmth item ‘honest’ was allocated to the competence scale. This was done so that all four lecturer faces were compared on the same scale, which ensures that the results found when testing the hypotheses cannot be attributed to differences in scale items across the four scales.

Table 5. Competence and warmth scale items that either had to be removed or loaded on an unexpected factor.

	Removed due to cross-loadings	Warmth items loading on competence factor	Items loading on a third factor
Black Female	Strict	Honest	
	Trustworthy	Dependable	
	Attractive		
White Male	Strict	Honest	
	Trustworthy	Dependable	
White Female	Strict	Honest	
	Trustworthy	Dependable	
Black Male	Dependable	Honest	Strict
	Trustworthy		Authoritative

A second round of factor analysis (round two) was therefore conducted on the competence and warmth scales without the five problematic warmth items. Before this was conducted, the data was evaluated against the KMO and Bartlett's test criteria in order to confirm whether factor analysis was appropriate, as seen in Table 6. As the table shows, all four KMO measures and Bartlett's tests for sphericity produced criteria that supported the application of factor analysis.

Table 6. Round two Kaiser-Meyer-Olkin measure for sampling adequacy and Bartlett's Test of sphericity results for the 28-item competence and warmth scales related to all four of the lecturer faces.

	Kaiser-Meyer-Olkin measure	Bartlett's Test of Sphericity	
Black Female	.97	χ^2_{253} = 19,030.16	p < .001
White Male	.97	χ^2_{253} = 19,110.02	p < .001
White Female	.98	χ^2_{253} = 19,219.51	p < .001
Black Male	.97	χ^2_{253} = 19,676.12	p < .001

Note. KMO measure is shown as a correlation coefficient, and Bartlett's test of sphericity shows the Chi-squared test statistic and the associated significance level.

Upon confirming the suitability of the data for factor analysis, factor analyses were rerun using maximum likelihood estimation with direct oblimin rotation. Again, Kaiser's eigenvalue criterion was applied to the results, and found that two factors emerged with eigenvalues greater than one for the black female, white male, white female and black male lecturer (as seen in Table 7 below). A full table of eigenvalues and explained variances for all factors is provided in Table 2 in Appendix B.

Table 7. Round two eigenvalues and explained variances for all four of the lecturer faces (Extraction method: maximum likelihood with direct oblimin rotation; only factors with initial eigenvalues greater than 1 are displayed).

	Factor 1		Factor 2	
	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance
Black Female	10.89	47.34%	2.86	12.43%
White Male	10.85	47.19%	3.16	13.73%
White Female	10.49	45.60%	3.64	15.82%
Black Male	11.01	47.85%	3.18	13.83%

The pattern matrices, as seen in Table 8 below, indicate the factor loadings found for the final factor analysis for the competence and warmth rating scales for the four lecturers.

Table 8. Round two pattern matrix showing the factor ladings for the 28-item competence and warmth scales for all four of the lecturer faces (only significant loadings of >.30 are displayed).

	Black Female		White Male		White Female		Black Male	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Competent	.784		.803		.739		.793	
Capable	.843		.803		.821		.822	
Intelligent	.777		.820		.773		.849	
Skilled	.854		.871		.814		.828	
Qualified	.829		.882		.831		.859	
Experienced	.638		.761		.828		.733	
Legitimate	.696		.756		.736		.732	
Reliable	.622		.640		.671		.635	
Reputable	.719		.675		.694		.724	
Knowledgeable	.834		.836		.831		.835	
Respectable	.641		.697		.703		.709	
Credible	.777		.796		.794		.787	
Expert	.748		.806		.790		.803	
Honest	.547		.566		.681		.621	
Likeable		-.751		.787		.781		.762
Friendly		-.863		.820		.881		.861
Sociable		-.697		.710		.791		.728
Understanding		-.757		.714		.715		.740
Caring		-.810		.776		.790		.818
Tolerant		-.656		.724		.687		.653
Nice		-.784		.789		.821		.769
Warm		-.877		.845		.831		.854
Sympathetic		-.885		.808		.820		.832

Note. Items conceptualised as indicating competence are shown in blue and those indicating warmth in red.

As shown in Table 8, after removing the problematic items, the factor analyses revealed that the 13 competence items and the one warmth item ‘honest’ loaded significantly on the first factor, and the remaining ten warmth items loaded significantly on the first factor for all four lecturer faces. The competence and warmth scales are therefore uniform for all four lecturers, and the factor structures reveal that the items cluster on the same two

distinct factors for all four lecturers. This suggests that the first factor represents competence and the second factor represents warmth. The factors were moderately correlated for all four of the lecturer faces (black female: r = -.55; white male: r = .51; white female: r = .44; black male: r = .51).

The above results show that the pattern of the factor loadings is the same for all four faces, and that the validity of the scales was sufficient, with high loadings of each item on the relevant factor after problematic items had been removed. Therefore 14 items remained for competence (competent, capable, intelligent, skilled, qualified, experienced, legitimate, reliable, reputable, knowledgeable, respectable, credible, expert and honest), and nine items remained for warmth (likeable, friendly, sociable, understanding, caring, tolerant, nice, warm and sympathetic). All analyses that follow were based on this 14-item competence scale and nine item warmth scale.

Scale reliability

The reliability of the final scales was determined using the Cronbach alpha technique. Separate reliability analyses were conducted for the competence and warmth scales for each of the four lecturers. The alpha coefficients and the corrected item-total correlations for each of the eight scales can be seen in Table 9 below. All scales produced high reliability statistics, which indicates that the scales produce stable and consistent results. Corrected item-total correlations for each item within the competence and warmth scales for all four lecturers can be seen in Table 3 in Appendix B.

Table 9. Reliability statistics for the competence and warmth scales for the black female, white male, white female, and black male lecturers.

				Corrected Item-total correlation	
		α	N	Minimum	Maximum
Black Female	Competence	.946	14	.618	.788
	Warmth	.939	10	.672	.816
White Male	Competence	.954	14	.644	.809
	Warmth	.933	10	.679	.783
White Female	Competence	.953	14	.668	.800
	Warmth	.939	10	.706	.822
Black Male	Competence	.955	14	.679	.794
	Warmth	.937	10	.677	.811

Note. α = Cronbach's alpha; N = number of participants.

Descriptive statistics

Both the competence and the warmth scales have been shown to have high validity and reliability; therefore it was appropriate to summarise the 14 competence items into an overall competence score, and the nine warmth items into an overall warmth score. These composite scores were used to produce the following descriptive statistics for the competence and warmth scales for each of the four lecturer faces.

Table 10. Descriptive statistics for the competence and warmth scales for the black female, white male, white female, and black male lecturers.

		N	Mean	SD	Minimum	Maximum
Black Female	Competence	1160	4.19	.74	1	6
	Warmth	1160	4.04	.87	1	6
White Male	Competence	1136	4.26	.78	1	6
	Warmth	1160	4.04	.87	1	6
White Female	Competence	1147	4.37	.77	1	6
	Warmth	1147	3.20	.93	1	6
Black Male	Competence	1147	4.37	.77	1	6
	Warmth	1153	3.73	.90	1	6

Note. N = number of participants; SD = standard deviation.

As Table 10 shows, the mean competence scores for all four of the lecturer faces were higher than the scales' midpoints of 3.5, which suggest that, on average, students rated the black female, white male, white female and black male lecturer relatively high in terms of competence. With regards to warmth, students rated the black female lecturer and the white male lecturer higher than the scale midpoint of 3.5. Students rated the black male lecturer only slightly higher than 3.5, and rated the white female lecturer as slightly lower than 3.5. This indicates that, on average, students rated lecturers' warmth relatively high, expect for the white female lecturer's warmth, which they rated relatively low.

Analyses of the hypotheses

In order to test hypotheses one, two, three, four, six, seven and eight, paired-sample t-tests were run, where the paired sample was the composite competence rating and composite warmth rating for a particular lecturer. Paired-sample t-tests are most commonly used to compare pre-test and post-test results, or scores on the same variable measured twice. This is not the only appropriate use for the paired sample t-

test though. Pallant (2007) explains that paired sample t-tests may be used to compare scores on different variables, such as two different questions answered by the same participant, if the variables are rated on the same response scale; such is the case in this study where both competence and warmth scores ranged from one to six. According to Field (2009), the assumption of normality for paired sample t-tests is assumed when analysing a large sample. The assumptions of normality are met and data are measured at the interval level. Paired sample t-tests were therefore the appropriate analysis techniques to use in order to analyse seven of the eight hypotheses (see Table 11). In order to test hypothesis five, a one-way repeated measures analysis of variance (ANOVA) was used.

Table 11. Statistical tests used to test each of the eight proposed hypotheses.

Hypothesis		Statistical Test
H1:	Students perceive white lecturers as more competent than black lecturers.	Paired sample t-test
H2:	Students perceive black lecturers as having more warmth than white lecturers.	Paired sample t-test
H3:	Students perceive male lecturers as more competent than female lecturers.	Paired sample t-test
H4:	Students perceive female lecturers as having more warmth than male lecturers.	Paired sample t-test
H5:	Students perceive black female lecturers as the least competent.	One-way repeated measures ANOVA
H6:	Students from different racial groups perceive lecturers from their own racial groups as more competent and warm.	Paired sample t-tests
H7:	Students from different gender groups perceive lecturers from their own gender group as more competent and warm.	Paired sample t-tests
H8:	Male lecturers are rated as more competent than female lecturers in the Engineering faculty, whereas female lecturers are rated more competent than male lecturers in the Humanities faculty.	Paired sample t-tests

Hypothesis 1: Students perceive white lecturers as more competent than black lecturers.

To analyse this hypothesis, two new variables were created, which expressed for each participant his or her average competence score for white lecturers (average of each participants' white male lecturer and white female lecturer competence ratings) and black lecturers (average of each participant's black male lecturer and black female lecturer competence ratings). These two scores were compared using a paired sample t-test to assess, if, on average, participants perceived white lecturers as more competent than black lecturers. The results found that, on average, participants rated white lecturers (M = 4.30, SD = .76) as slightly more competent than black lecturers (M = 4.28, SD = .67). The paired-samples t-test was statistically significant ($t_{1189} = 2.09$, $p < .05$), however, due to the large sample size it is important to consider the effect size of this difference, as this will give an indication of the strength of the effect found. This was calculated using Cohen's d and found to be very small (.06) according to Cohen's (1988, as cited in King, Rosopa & Minium, 2011) conventions, where .20 is considered a small effect size, .50 is considered a medium effect size, and .80 is considered a large effect size. Therefore, even though the difference was significant, the actual difference between the two means is virtually zero (.02), which is reflected in the small effect size. This indicates that while the hypothesis is statistically supported, students saw both groups of lecturers as highly similar in competence.

Hypothesis 2: Students perceive black lecturers as having more warmth than white lecturers.

Similarly, to analyse this hypothesis, two new variables were created, which expressed for each participant his or her average warmth score for white lecturers (average of each participant's white male lecturer and white female lecturer warmth ratings) and black lecturers (average of each participant's black male lecturer and black female lecturer warmth ratings). These two scores were compared using a paired sample t-test to assess, if, on average, participants perceived black lecturers as having more warmth

than white lecturers. It was found that, on average, participants rated black lecturers (*M* = 3.90, *SD* = .74) higher than white lecturers (*M* = 3.64, *SD* = .74) in terms of warmth. The t-test showed a significant difference between participants' mean scores of black lecturer warmth and white lecturer warmth (t_{1189} = 15.85, p < .001). This result, together with the mean score for black lecturers' warmth being higher than the mean score for white lecturer' warmth, indicates that students perceive black lecturers higher than white lecturers on the warmth dimension. This difference was found to have a medium effect size (*d* = .46), which provides overall support for the practical relevance of the result.

Hypothesis 3: Students perceive male lecturers as more competent than female lecturers.

Again, in order to analyse this hypothesis, two new variables were created, which expressed for each participant his or her average competence score for male lecturers (average of each participant's white male lecturer and black male lecturer competence ratings) and female lecturers (average of each participant's black female lecturer and white female lecturer competence ratings). These two scores were compared using a paired sample t-test to assess, if, on average, participants perceived male lecturers as more competent than female lecturers. The results showed that, on average, students rated male lecturers (*M* = 4.30, *SD* = .72) as more competent than female lecturers (*M* = 4.28, *SD* = .67). The paired-samples t-test was significant (t_{1189} = 2.09, p < .05), however the real mean difference between the two scores was virtually zero (.02), which was reflected in the very small effect size (*d* = .06). Therefore, even though the hypothesis is statistically supported, the small effect size indicates that this result has little practical relevance.

Hypothesis 4: Students perceive female lecturers as having more warmth than male lecturers.

To analyse this hypothesis, two new variables were created, which expressed for each participant his or her average warmth score for male lecturers (average of each participant's white male lecturer and black male lecturer warmth ratings) and female lecturers (average of each participant's black female lecturer and white female lecturer warmth ratings). These two scores were compared using a paired sample t-test to assess, if, on average, participants perceived female lecturers as having more warmth than male lecturers. The average warmth scores for male and female lecturers were compared. It was found that, on average, participants unexpectedly rated male lecturers (M = 3.90, SD = .74) as having more warmth than female lecturers (M = 3.64, SD = .74). The paired sample t-test showed a significant difference between the mean warmth scores for male and female lecturers (t_{1189} = -15.85, $p < .001$), with a medium effect size (d = 0.46). However, even though this result is statistically supported, it does not support the hypothesis, as students perceived male instead of female lecturers as having more warmth.

Hypothesis 5: Students perceive black female lecturers as the least competent.

In order to analyse this hypothesis, four new variables were created, which expressed for each participant his or her average competence score for the black female lecturer, the white male lecturer, the white female lecturer and the black male lecturer. These four scores were compared using a one-way repeated-measures ANOVA, with the four competence ratings as the repeated measures factors. Before the ANOVA could be conducted, the assumptions of normality and sphericity were checked. According to Rutherford (2011), ANOVA is robust against violations of the normality assumption. The assumption of sphericity was not assessed using Mauchly's test due to the large sample size, as even small departures from sphericity would be considered to be significant in these cases (Field, 2009). Instead, the Greenhouse-Geisser correction was used to estimate sphericity. The Greenhouse-Geisser multivariate test was reported as ε = .64,

which is closer to the lower limit of .33 than to the upper limit of 1; thus there is a substantial deviation from sphericity and the Greenhouse-Geisser correction was applied to the test statistic (Field, 2009). Since the assumption of normality was satisfied and the assumption of sphericity was corrected for, the data was suitable for ANOVA.

Table 12. Descriptive statistics for lecturer competence for the black female, white male, white female and black male lecturers.

	Mean	SD	Minimum	Maximum
Black Female	4.19	.75	4.15	4.24
White Male	4.27	.77	4.22	4.32
White Female	4.38	.78	4.34	4.43
Black Male	4.38	.78	4.34	4.43

Note. SD = standard deviation; Number of participants = 1024 for each lecturer face; Minimum and maximum refer to the estimated marginal means.

The means and standard deviations for each lecturer face are presented in Table 12 above. According to these values, on average, participants rated the white female and black male lecturers' competence the highest, and black female lecturer's competence the lowest. The results of the ANOVA showed that student perceptions of lecturers' competence were significantly affected by the race and gender of the lecturer, as a significant difference was found between the four lecturers' average competence ratings when applying the Greenhouse-Geisser correction ($F_{1.91,\ 1953.97} = 42.10$, $p < .001$). However, this does not show which lecturers differed significantly from which. The pairwise comparisons table presented below (Table 13) indicates which lecturer competence ratings differ significantly from each other. The table shows that there is a significant difference between all four of the lecturers' competence ratings, where $p < .01$, except between the white female lecturer and the black male lecturer, as their mean difference was zero. These results therefore provide support for the hypothesis that students perceive black female lecturers as the least competent.

Table 13. Pairwise comparisons for black female, white male, white female and black male lecturers' competence ratings.

		Mean Difference	P-value
Black Female	White Male	-.076*	.004
	White Female	-.192*	.000
	Black Male	-.192*	.000
White Male	White Female	-.115*	.000
	Black Male	-.115*	.000
White Female	Black Male	.000	.

Note. Missing values due to white female and black male lecturers having the same mean score.

Hypothesis 6: Students from different racial groups perceive lecturers from their own racial groups as more competent and warm than lecturers of other racial groups.

To analyse this hypothesis, the researcher selected only those participants that disclosed their racial category as being either black or white. This was because the lecturer faces were either black or white, and the researcher's intention was to assess lecturers and students of the same racial group. In order to compare these groups, the average competence variables created for black competence and white competence, and the average warmth variables created for black warmth and white warmth were used. These scores were compared separately for black and white students using four paired sample t-tests. This was to assess, if, on average, participants perceived lecturers of their own racial category as more competent and warm than lecturers of the opposite racial category. The descriptive statistics for the four paired sample t-tests are shown in Table 14 below.

Table 14. Descriptive statistics for white and black students' ratings of black and white lecturers' competence and warmth.

	White Students			Black Students		
	N	Mean	SD	N	Mean	SD
Black Competence	525	4.23	.65	354	4.39	.65
White Competence	525	4.28	.68	354	4.40	.74
Black Warmth	512	3.81	.74	363	4.09	.68
White Warmth	512	3.61	.71	363	3.75	.76

Note. N = number of participants; SD = standard deviation.

The results showed that, on average, white students rated white lecturers as slightly more competent than black lecturers, while black students rated both lack and white lecturers the same. The paired sample t-test for the black students' ratings of the lecturers' competence was not significant (t_{353} = -.40, p = .69), whereas the paired sample t-test for the white students' ratings of the lecturers' competence was significant (t_{524} = -2.59, p < .05). However, due to the large sample size it is important to consider the effect size of this significant difference. This was calculated to be (*d* = .11), which is considered a small effect size (King et al., 2011). Therefore, even though the difference was significant, the actual difference between the two means for white students' ratings of lecturers' competence is virtually zero (.05), which is reflected in the small effect size. Black and white students thus saw both groups of lecturers as highly similar in competence.

The results also showed that, on average, both white and black students rated black lecturers as having more warmth than white lecturers. The paired sample t-test for the black students' ratings of the lecturers' warmth was significant (t_{362} = 11.07, p < .001) with a medium effect size (*d* = .58); and the paired sample t-test for the white students' ratings of the lecturers' warmth was also significant (t_{511} = 8.18, p < .001) with a small effect size (*d* = .36). This indicates that both black and white students rated the warmth

of black and white lecturers significantly differently. However, this does not support the hypothesis, as both black and white students saw black lecturers as warmer, instead of white students rating white lecturers as warmer.

Hypothesis 7: Students from different gender groups perceive lecturers from their own gender group as more competent and warm than lecturers of the other gender group.

To analyse this hypothesis, the average competence variables created for male competence and female competence, and the average warmth variables created for male warmth and female warmth were used. These scores were compared separately for both male and female students using four paired sample t-tests. This was to assess, if, on average, participants perceived lecturers of their own gender as more competent and warm than lecturers of the opposite gender. The descriptive statistics for the four paired sample t-tests are shown in Table 15 below.

Table 15. Descriptive statistics for male and female students' ratings of male and female lecturers' competence and warmth.

	Male Students			Female Students		
	N	Mean	SD	N	Mean	SD
Male Competence	446	4.22	.76	744	4.35	.68
Female Competence	446	4.17	.71	744	4.34	.64
Male Warmth	449	3.87	.80	741	3.91	.70
Female Warmth	449	3.65	.79	741	3.63	.71

Note. N = number of participants; SD = standard deviation.

The results therefore found that, on average, male students rated male lecturers as slightly more competent than female lecturers, while female students rated both male and female lecturers the same. The paired sample t-test for the male students' ratings of the lecturers' competence was significant ($t_{445} = 2.78$, $p < .01$), whereas the paired

sample t-test for the female students' ratings of the lecturers' competence was not significant (t_{743} = .53, p = .60). Due to the large sample size it is important to consider the effect size of the significant difference for male students, which was found to be small (*d* = .13). Therefore, even though the difference was significant, the actual difference between the two means for male students' ratings of lecturers' competence is virtually zero (.05), which is reflected in the small effect size. This indicates that both male and female students saw both male and female lecturers as highly similar in competence.

The results also showed that, on average, both male and female students unexpectedly rated male lecturers as having more warmth than female lecturers. The paired sample t-test for the male students' ratings of the lecturers' warmth was significant (t_{448} = 8.14, p < .001) with a small effect size (*d* = .38); and the paired sample t-test for the female students' ratings of the lecturers' warmth was also significant (t_{740} = 13.82, p < .001) with a medium effect size (*d* = .51). This indicates that both male and female students rated the warmth of male and female lecturers significantly differently. However, this does not support the hypothesis, as both male and female students saw male lecturers as warmer, instead of female students rating female lecturers as warmer.

Hypothesis 8: Male lecturers are rated as more competent than female lecturers in the Engineering faculty, whereas female lecturers are rated more competent than male lecturers in the Humanities faculty.

To analyse this hypothesis, four paired sample t-tests were run. The first paired sample t-test compared the black male and the black female described as Engineering lecturers. The second one compared the white male and the white female described as Engineering lecturers. The third and fourth paired sample t-tests used the same comparison, but compared lecturers described in the Humanities faculty. Lecturers of the same racial categories' competence ratings were compared separately for both the Engineering and Humanities faculties. This was because of the significant result found

in hypothesis five, that showed an interaction effect of race and gender on lecturers' competence ratings, where students rated black female lecturers as the least competent. Separately, black lecturer's competence and female lecturer's competence were not rated significantly differently by students, but when race and gender were combined in comparing the black female, white male, white female and black male lecturers to each other, significant differences in student ratings were found. This interaction could therefore have clouded the gender effects in this hypothesis, as race together with gender influences students' ratings of lecturer competence. Hence, by comparing male and female lecturers' competence separately in each racial group; the researcher is able to evaluate the effects of gender in the two university faculties while controlling for the effects of race. Thus, four separate paired sample t-tests were run to compare the black female Engineering lecturer to the black male Engineering lecturer, the white female Engineering lecturer to the white male Engineering lecturer, the black female Humanities lecturer to the black male Humanities lecturer, and the white female Humanities lecturer to the white male Humanities lecturer.

Table 16. Descriptive statistics for all four lecturers' competence ratings in the Engineering and Humanities faculties.

	Engineering Faculty			Humanities Faculty		
	N	Mean	SD	N	Mean	SD
Black Female	798	4.19	.75	794	4.18	.75
Black Male	798	4.37	.77	794	4.35	.79
White Male	797	4.31	.76	783	4.27	.75
White Female	797	4.39	.78	783	4.39	.76

Note. N = number of participants; SD = standard deviation.

Black Female and Black Male Competence Ratings: Engineering Faculty

As seen in Table 16, participants, on average, rated the black male lecturer as more competent than the black female lecturer in the Engineering faculty. The paired sample

t-test found a significant difference between students' ratings of black female lecturer's competence and black male lecturer's competence (t_{797} = -6.67, p < .001), with a small effect size (*d* = .24). These results indicate that students perceived the black male lecturer as more competent than the black female lecturer in the Engineering faculty.

White Female and White Male Competence Ratings: Engineering Faculty

On average, participants rated the white female lecturer as more competent than the white male lecturer in the Engineering faculty. The paired sample t-test was significant (t_{796} = 3.42, p < .001), indicating a significant difference between students' ratings of white female lecturer's competence and white male lecturer's competence. However, when considering the effect size of this difference (*d* = .12), it was found to be relatively small. Therefore, although the difference was statistically significant, the actual difference in student ratings was virtually zero (.08). Students therefore perceived white female lecturer competence and white male lecturer competence highly similarly in the Engineering faculty.

Black Female and Black Male Competence Ratings: Humanities Faculty

Participants rated the black male lecturer, on average, as more competent than the black female lecturer. The paired sample t-test showed a significant difference between students' ratings of black female lecturer's competence and black male lecturer's competence (t_{793} = -6.22, p < .001). However, the effect size for this difference was found to be relatively small (*d* = .18). Therefore, although the hypothesis is statistically supported, the results do not support the hypothesis, as students perceived the black male lecturer as more competent than the black female lecturer in the Humanities faculty.

White Female and White Male Competence Ratings: Humanities Faculty

On average, participants rated the white female lecturer more competent than the white male lecturer. The paired sample t-test was significant ($t_{782} = 4.91$, $p < .001$), indicating a significant difference between students' ratings of the white female lecturer's competence and the white male lecturer's competence. The effect size of this difference was calculated to be relatively small ($d = .18$). The results therefore indicate that students perceived the white female lecturer as more competent than the white male lecturer in the Humanities faculty.

The above four results suggest that the differences observed in students' ratings of lecturers' competence across the two faculties can not be ascribed to the association of each lecturer to the either the Engineering or the Humanities faculty. Rather, the results imply that these differences exist as a result of the gender and race of the lecturers. This is because, across both gender categories, students did not rate male lecturers more competent in the Engineering faculty, and did not rate female lecturers more competent in the Humanities faculty. Overall, the mean competence scores were virtually the same for each lecturer group across the two faculties. Therefore, the results did not provide support for the hypothesis, as students rated all four lecturers' competence highly similarly in both faculties.

CHAPTER 5

Discussion

The following chapter provides a summary and interpretation of the main results found, outlines the study's limitations, makes recommendations for future research, and provides concluding comments. The purpose of this research was to further investigate the effects of race and gender on students' perceptions of lecturers' competence and warmth in higher education institutions. Upon reviewing the relevant literature, eight hypotheses were derived and then tested. The results for each of the hypotheses will be discussed below.

Impact of lecturers' race on students' perceptions of lecturers' competence

Hypothesis one stated that students perceive white lecturers as more competent than black lecturers. Although a statistically significant difference in the expected direction was found, the actual ratings students' awarded to each group of lecturers were highly similar. Therefore, even though the results supported the hypothesis statistically as the difference between students' rating was significant and in the expected direction, the practical relevance of this result is doubtful as the actual difference between scores was negligible.

The statistical support found for the hypothesis is in line with prior research, which has found that in general students perceive white lecturers as more competent than black lecturers (Bavishi, Madera, & Hebl, 2010; Oloyede, 2009; Reid, 2010; Thaver, 2009; Kinnear 2011). Bavishi (2010) and Reid (2010) state that black academics receive less favourable student evaluations than white academics as these student perceptions are often driven by racial stereotypes, rather than by qualifications or objective information. Generally, black academia has to work harder than their white colleagues in order to establish credibility in the university workplace (Harlow, 2003; Hendrix, 1998; Reid, 2010). According to Cuddy et al. (2008) and Fiske (2011), black individuals are

stereotypically perceived as being lower on the competence dimension than white individuals. This result is consistent with the result found by Kinnear (2011), as she also found that students rated white lecturers more favourably than black lecturers on her ability dimension, which encompassed teaching ability, competence, and desire to be taught by the lecturer. The result found in this study therefore confirms the result found in Kinnear's study conducted at the same South African university but using a smaller and less representative sample.

However, when considering the small effect size of this difference, the results imply that the students perceive both white and black lecturers' competence fairly similarly. The limited practical relevance of the results obtained is therefore inconsistent with previous research. This discrepancy between results obtained in this study and prior studies is of particular interest as, in this case, students were provided with the lecturer's picture and their associated academic faculty only, and thus with very limited information, which, one would assume, would make it more likely for participants to draw on stereotypes to evaluate the person presented in the photograph. A particularly pronounced difference in the way students' rated the lecturer faces was thus expected, but this does not seem to have been the case. The results are also of particular interest when considering the context in which the study was conducted. With the history of apartheid in South Africa, it is surprising, though encouraging, to find that students do not differ significantly in their perceptions of white and black lecturers' competence. It may be that racial stereotypes have less effect on the younger generation than expected. This could be a sign that racial stereotyping in South Africa is changing in that the remnants of apartheid no longer take such a strong hold on young South Africans' perceptions of others.

Another reason for students rating black and white lecturers' faces equally in terms of competence could lie in the experimental manipulation used in this study. Rather than to provide their real opinion, students could have opted to answer in a politically correct or sociably desirable manner. While this is possible, it is unlikely. Firstly, students

answered anonymously and thus would have little motivation to hide their views. Secondly, each of the four lecturer photographs and their associated rating scales were presented on different pages. Participants were unable to return to a previous page, and the adjectives on which lecturers were rated were presented in a randomized order. In order to answer in a socially desirable manner, students would have had to remember how they scored the previous lecturer. This result could also be due to the fact that students from different racial groups rate lecturers from their own racial group more favourably than lecturers from the opposite racial group, drawn from the assumptions of Social Identity Theory (SIT). This assumption was tested in hypothesis six. As the results did not support this assumption it is not a possible explanation. Both black and white students perceived black and white lecturers as equally competent (for a full discussion of the results related to hypothesis six, see page 60). Therefore, the most likely explanation for the results seem to be the changing stereotypical perceptions amongst the younger generation in South Africa.

Impact of lecturers' race on students' perceptions of lecturers' warmth

Hypothesis two stated that students perceive black lecturers as having more warmth than white lecturers. This hypothesis was statistically supported by the results obtained in the study, as it was found that, on average, students perceived the black lecturers as warmer than the white lecturers. This result is in line with previous research, which has most commonly found that black individuals are perceived in society as being higher on the warmth dimension than white individuals (Cuddy et al., 2008; Fiske, et al., 2007; Fiske et al., 2002; Kinnear, 2011). This result also serves to confirm the result obtained by Kinnear (2011), who found that black lecturers were rated more favourably than white lecturers on the likeability dimension, which encompassed friendliness, strictness and attractiveness. This is built on the assumptions of Stereotype Content Theory (SCT). Research in its line found that individuals tend to attribute a stronger perception of warmth characteristics to black individuals than white individuals. Research on SCT is limited in the context of South Africa. It is thus interesting to have found that the

assumptions regarding the warmth dimension hold, providing evidence that stereotype content with regards to warmth and race is universally similar.

The results from hypothesis one and two suggest that, although lecturers' race does not influence students' perceptions in terms of lecturers' competence, it does play a significant role in terms of students' perceptions of lecturers' warmth. Racial stereotypes therefore inform students' perceptions of lecturers' warmth in higher education institutions in South Africa, but do not inform students' perceptions of lecturers' competence. The result of favourable perceptions ascribed to black lecturers' warmth could be explained by the staff demographics and hierarchical structures present in historically white higher education institutions in South Africa. Since white academic staff members continue to dominate and hold higher positions in South African universities, black academics continue to be outnumbered. This could lead to students' ascribing less warmth to white academic staff than to black academic staff, as dominance and authority are characteristics most commonly associated with the dimension of competence, which falls opposite to the warmth dimension characteristics of likeability, understanding and approachability (Fiske, 2012; Fiske et al., 2007).

This result might also be explained by only one picture being used for each lecturer, for example one black female, one white male, etc. It could thus be that characteristics other than race and gender in which the pictures differed could have played a role in students' perceptions of the lecturers' competence and warmth. This is possibly less relevant for competence as it cannot be as easily inferred from a photograph of a face, but judgements regarding warmth might be derived from facial characteristics. The results related to warmth could be due to the rating for the white female face being so low, as black individuals were seen as warmer than white individuals and males were seen as warmer than females. It is not clear from the results whether this rating is so low because there is something about the particular white female face presented that lets the person not appear warm, or whether it means that white female lecturers in

general or seen as not warm. It is thus uncertain in how far the warmth ratings reflect racial and gender differences, and therefore, these results should be interpreted carefully.

Impact of lecturers' gender on students' perceptions of lecturers' competence

The third hypothesis stated that students perceive male lecturers as more competent than female lecturers. The results found that students rated male lecturers higher in competence than female lecturers. Although the results in this study found students' perceptions of lecturers' competence to be statistically different between male and female lecturers, the actual difference between students' warmth ratings of lecturers was very close to zero, thus indicating that this result has limited practical relevance.

The hypothesis was therefore statistically supported, as the results found that, on average, students rated male lecturers' competence higher than female lecturers' competence. This is consistent with previous research that found significant differences between student perceptions of male and female lecturers' competence, where male lecturers were rated as more competent than female lecturers (Arbuckle & Williams, 2003; Carson, 2001; Cuddy et al., 2008; Fiske et al., 2002; Reid, 2010). However, the practical relevance of this result was contradictory to prior research, as no real difference was shown to exist in how students perceived the competence of both male and female lecturers. Although SCT and previous studies show that generally males are rated higher on the competence dimension than females; SCT has not previously been applied specifically to the context of South Africa. Therefore, the universally held stereotypes regarding females' competence may not be directly applicable to the South African population. It is likely that applying the assumptions of this theory to South African students would yield different results, as SCT has been tested primarily in North American and European contexts with historically, economically and culturally different societies to that of South Africa. These societal differences, as well as differences in the

demographic compositions of the populations, could therefore have contributed to the inconsistent result.

Another likely explanation for students not differing in their perceptions of male and female lecturers' competence could be that, due to the history of apartheid, stereotypes in South Africa are more racially focused than gender focused. South Africans are therefore more likely to differ in their perceptions of individuals based on their race, rather than their gender. The result could therefore imply that gender stereotypes related to competence are less prevalent than racial stereotypes in the context of South Africa.

Impact of lecturers' gender on students' perceptions of lecturers' warmth

Hypothesis four stated that students perceive female lecturers as having more warmth than male lecturers. This study found a significant difference between students' perceptions of male and female lecturers' warmth, with females rated lower in terms of warmth than males. Although this result was statistically significant, the direction of the result was opposite to what was expected. Previous literature on the topic has consistently found females being rated higher by students on expressive characteristics such as warmth than males, as socially constructed gender roles inform stereotypes and expectations of females being inherently more nurturing and sensitive (Arbuckle & Williams, 2003; Carson, 2001; Cuddy et al., 2008; Fiske et al., 2002; Reid, 2010). This result is inconsistent with prior research and SCT; as, according to SCT, males are generally situated lower on the warmth dimension than females, and therefore expected to be perceived as more authoritarian and cold.

The particularly low warmth score found for the white female lecturer could provide a possible explanation for this unexpected result. This is because the low overall warmth rating of the white female lecturer could have deflated the average rating of the two

female lecturers down below the average rating of the two male lecturers. Again, characteristics other than the race and gender of the white female face could have influenced students' perceptions of the lecturer's warmth. These factors make it unclear to determine whether students actually perceived the white female as not warm or whether the particular face used elicited the perception that she was not warm. It is therefore not clear whether the result obtained reflects the true perceptions of students, and caution should therefore be exercised when interpreting these results.

Overall, the results pertaining to the above four hypotheses have shown that students do not differ in their perceptions of lecturers' competence based on the lecturers' race and or gender, but they do differ in their perceptions of lecturers' warmth depending on the lecturers' race and gender. This study therefore does not fully confirm the assumptions of SCT, as white and male lecturers were not rated higher on the competence dimension compared to black and female lecturers; and female lecturers were not rated higher on the warmth dimension than male lecturers (Fiske et al., 2007; Fiske et al., 2002). Hence, this study only provides support for the assumption of SCT that situates black individuals high on the warmth dimension.

Impact of lecturers' race and gender together on students' perceptions of lecturers' competence

Derived from hypotheses one and three, the fifth hypothesis stated that students perceive black female lecturers as the least competent. The results provided support for this hypothesis, suggesting that, on average, students perceived the black female lecturer as being the least competent compared to the white male, white female and black male lecturers. This result was consistent with studies conducted by Bavishi et al. (2010), Reid (2010) and Harlow (2003), which found that black women face a double stigma as a result of being both black and female. Since research in the SCT line has found that black individuals and females fall lower on the competence dimension than white individuals and males, the combination of racial and gender discrimination might

result in black females being rated the lowest in terms of competence (Cuddy et al., 2008; Fiske et al., 2007; Fiske et al., 2002).

Although the results regarding students' perceptions of lecturers depending on either the lecturers' race or gender (hypothesis one and three) showed little practical relevance; the combination of race and gender together has been found to influence students' perceptions of lecturers more significantly. Therefore, when race and gender are combined, as in the instance of the black female face, the real difference between students' ratings of lecturers' competence becomes greater. This result indicates that students perceive black female lecturers as the least competent of the four lecturers, suggesting that black female academics in higher education institutions in South Africa may continue be burdened with the stereotypes and perceptions surrounding being both black and female (Harlow, 2003).

This result has important implications in higher education institutions, as student evaluations have been found to play a major role in the tenure and promotion opportunities available to academic staff members, particularly for black and female individuals (Arbuckle & Williams, 2003; Bavishi et al., 2010; Reid, 2010). If student evaluations are built on stereotypical perceptions surrounding the race and gender of the lecturer, rather than on actual ability or qualifications, certain staff members may not receive the recognition that they deserve. Consequentially, this lack of recognition, and the resulting hindrances to promotion opportunities, may be a contributing factor to the stagnant transformation in higher education institutions in South Africa. Black female lecturers may therefore remain in the staff lower ranks in South African universities due to unfavourable student evaluations. This in turn can further entrench negative perceptions of black female lecturers' competence, as students may perceive them as less competent due to their lack of presence in higher academic positions. This detrimental cycle is important to acknowledge when aiming to address transformation amongst academic staff in South African universities.

However, it needs to be noted that this result could be due to the fact that there was only one photograph depicting each lecturer face (i.e. one black female, one white male, one white female and one black male). It can thus not be ruled out that features about the black female lecturer's face, other than the race and gender, accounted for the lowest competence rating. One such feature is that of age, as the black female face might have been seen as slightly younger, for example, than the other three lecturer faces. This could have resulted in students rating the black female face lower in competence than the other lecturer faces, as a younger age may have suggested to students that the black female lecturer has a lack of teaching experience and a lower status or position in the university (Arbuckle & Williams, 2003).

Impact of students' race on students' perceptions of lecturers' competence and warmth

Hypothesis six stated that students from different racial groups perceive lecturers from their own racial groups as more competent and warm than lecturers of other racial groups. The results found in this study showed that both white students and black students rated the competence of black and white lecturers similarly; and that both black and white students rated the black lecturers higher in terms of warmth. Therefore, overall, students were not found to perceive lecturers of their same racial group as more favourable than lecturers of a different racial group, as black and white students showed no clear racial preference in terms of lecturers' competence, and white students were not shown to rate white lecturers more favourably on the warmth dimension. Although Kinnear (2011) did not make use of the competence and warmth dimensions based on SCT, her results found that students from different racial groups displayed no clear preferences for lecturers of their same racial group, as both black and white students rated white lecturers higher in terms of ability and black lecturers higher in terms of likeability. This study therefore found similar results to Kinnear, with the exception that

this study found both black and white students to be indifferent in terms of black and white lecturers' competence ratings.

These results are inconsistent with the assumptions of Social Identity Theory (SIT), however, which assume that people belonging to the same group perceive those people within their group more favourably than people in other groups (Tajfel & Turner, 1979). Based on this assumption and the fact that students were provided with only the lecturers' picture (and thus only with information regarding their race and gender) on which to base their perceptions, one would assume that it would be more likely for students to favour lecturers of their own race and gender. However, this has not been found to be the case. The results in terms of warmth can be explained using SCT, though. SCT asserts that black individuals are rated higher on the warmth dimension than white individuals (Fiske et al., 2007; Fiske et al., 2002). This could explain why both black and white students ascribed more warmth to the black lecturer, instead of white students showing a preference for white lecturers and rating them as warmer. Overall, it has been shown that students' race does not significantly influence the way in which students perceive lecturers of different races. This result is of particular interest given the history of South Africa, as it implies a sense of racial indifference in students' perceptions of lecturers, where younger generations may be less inclined to use race as a way to socially categorise themselves and others.

Impact of students' gender on students' perceptions of lecturers' competence and warmth

Hypothesis seven stated that students from different gender groups perceive lecturers from their own gender group as more competent and warm than lecturers of the other gender group. Looking first at students' perceptions of male and female lecturers' competence, male students were found to rate male lecturers as more competent than female lecturers, whereas female students were found to rate male and female lecturers' competence highly similarly. Thus, only male students were found to rate

lecturers of their own gender as more competent than lecturers of the opposite gender. With regards to students' perceptions of male and female lecturers' warmth, it was found that both male and female students rated male lecturers as warmer than female lecturers. Therefore female students showed a preference towards female lecturers' warmth, but male students showed no clear preference towards male lecturers in terms of warmth.

Previous literature has found mixed results concerning same-gender preferences amongst students' perceptions of lecturers. Some studies have found that students show a preference for same-gender lecturers, as well as evaluate them more favourably (Bachen et al., 1999; Bennett, 1982); however other studies have found that no clear gender preferences exist (Basow, 1995; Basow, 2000; Kinnear, 2011). Kinnear's research, also conducted in the context of South Africa, found that both male and female students rated female lecturers higher in terms of ability and likeability. Although this study found that male students rated male lecturers higher on both competence and warmth, it also showed that no clear gender preferences were evident for students, as female students rated male and female lecturers the same in terms of competence and rated male lecturers higher in terms of warmth.

The results are also contradictory to SIT, which assumes that people prefer members in their same group to members of other groups. Yet, in terms of SCT, the results are consistent with the assumptions of the theory regarding lecturers' competence, and inconsistent regarding lecturers' warmth. It is likely that both male and female students rated male lecturers as more competent than female lecturers based on the assumptions of SCT, where males are placed higher on the competence dimension than females. However, the result that both male and female students rated male lecturers as warmer than female lecturers goes against the SCT assumption that females are situated higher on the warmth dimension than males.

This counterintuitive and unexpected result could possibly stem from the notion discussed by Bennett (1982), where females are judged more strictly than males on the dimension of warmth. He discussed that the stereotypical view of women being inherently more warm than males often leads to high gender-role expectations. Therefore, when females fail to meet this expectation of warmth, they are judged much more harshly than if males fail to display characteristics of warmth. Because students were only given one photograph on which to rate each of the lecturers, it seems likely that if they perceived both female lecturer faces as not being as warm as they would expect, these female faces could have been judged more strictly against the warmth items than the male lecturers were. Another, more likely, explanation of the inconsistent results could again be found in the low rating for the white female lecturer face. This may have led to the unexpected result, as the comparatively low competence rating of the white female lecturer would have pulled the overall rating of female lecturers' warmth down, as this composite score was calculated using the warmth ratings of both the black female and white female lecturer. Using only one lecturer face per category could therefore have produced results that do not reflect students' real perceptions of female lecturers' warmth.

Impact of academic discipline on students' perceptions of lecturers' competence

The eighth hypothesis in the study stated that male lecturers are rated as more competent than female lecturers in the Engineering faculty, whereas female lecturers are rated as more competent in the Humanities faculty. The results in this study found that students rated the black male lecturer as more competent than the black female lecturer in either case, i.e. when they were described as Engineering faculty members and as Humanities faculty members. Equally so, students rated the white female Engineering and Humanities lecturer as more competent than the white male Engineering and Humanities lecturer. As the lecturers rated higher in competence were the black male and the white female in both faculties, and not both male lecturers in the Engineering faculty and both females in the Humanities faculty, the hypothesis was not supported by the results.

Results relating to both faculties are contradictory to prior research, as studies conducted by Basow (1995), Bavishi et al. (2010), Carson (2001) and Reid (2010) found that males are more commonly associated with more masculine disciplines, such as Engineering, whilst females are associated with more feminine disciplines, such as Humanities. In Basow's four-year examination of faculty evaluations, it was found that academic discipline significantly influenced overall student rating of female academics, where women teaching 'masculine' subject areas were evaluated significantly less favourably. Reid states that a faculty's member's gender and the gender-stereotype associated to the lecturer's academic discipline, greatly influences the favourability of student evaluations they receive; where women receive less favourable evaluations in traditionally male-dominated disciplines and more favourable evaluations in traditionally female-dominated disciplines.

There are a number of possible reasons for the discrepancy between the results found in this study and the results of previous research regarding black males receiving a higher overall rating by students in both faculties. The first possible reason is based on an idea proposed by Lott (1985), who found that male students gave higher ratings to male teachers than to identically qualified female teachers, suggesting that competent female academics are less likely to be evaluated by students as equally competent to male academics. Another possible reason could stem from possible perceptions of the black female face looking younger than the other lecturer faces. As previously mentioned, this could influence students' perceptions of the black female's competence, as a younger age may imply a lack of experience and authority. The results are also in line with SCT, which asserts that males are stereotypically perceived as higher on the competence dimension than females. This could have contributed to why students' perceived the black male lecturer as more competent than the black female lecturer in both the Engineering and Humanities faculties.

In terms of students rating the white female lecturer's competence rated higher in both the Engineering and Humanities faculties, the age of the lecturers' faces as presented in the photographs could serve as a likely explanation. The white female face presented to participants may have been seen as slightly older than the other three lecturers' faces, which could have resulted in students rating the white female face higher due to the associated perceptions of greater teaching experience and higher rank with older age amongst academics. Overall, the results found for each faculty have shown that students do not perceive male lecturers as more competent than female lecturers in the Engineering faculty, or that female lecturers are perceived as more competent than male lecturers in the Humanities faculty. This result implies that the faculty in which the lecturer teaches does not influence students' perceptions of lecturers' competence. Therefore, results found in other countries confirming the influence of academic discipline might not be applicable in the context of higher education institutions in South Africa.

Limitations and Recommendations for Future Research

This study was an extension of research conducted by Kinnear (2011), and although the researcher used a larger, more representative sample and standardised photographs of the lecturers' faces, this study still has important limitations that need to be considered.

South Africa has a unique racial and social climate, and therefore with conducting this study in the context of South Africa, the results obtained are therefore limited in their generalizability to other universities worldwide with different racial and social climates. Another factor that may limit the generalizability of the results in this study is the nonprobability sampling technique of convenience sampling. Using other, more generalizable sampling techniques was however beyond the control of the researcher due to time and financial constraints.

The use of online questionnaire as opposed to a paper-and-pencil questionnaire could have posed a limitation to the study, as participants were not able to make use of the researcher's assistance during completion. This may have meant that participants who potentially misunderstood the questionnaire were not able to ask the researcher any questions, which could suggest that some participants may have provided responses different to their real perceptions or omitted certain items due to confusion regarding either the instructions or the items themselves. This was considered to be a limitation, as the researcher received a number of emails from students asking questions pertaining to the questionnaire, which they may not have been able or receive an answer to before they completed all their responses. However, due to the large sample size, the potentially skewed or incorrect response sets would not have had a relevant influence on the overall means, standard deviations and statistical results in general.

Another limitation to consider in this study is the scales used to measure competence and warmth, as the researcher developed both scales using items from similar studies. Although the competence and warmth scales used in this study have been shown to be both valid and reliable, the scales were not used in previous research. The researcher could therefore have conducted a pilot study prior to the administration of the questionnaire in order to assess if these scales would be valid and reliable; but, again, due to the time constraints of the research at a Masters level, it was decided against it. This appeared legitimate as similar items, although different in combination, had been used in prior research in South Africa conducted by Kinnear (2011) and Keogh (2012).

Lastly, the photographs used in this study of the lecturers' faces should be considered as the study's biggest limitation. While the researcher paid careful attention to utilize photographs that were as similar in nature and as standardised as possible so that the only influencing differentiating factors were the race and gender of the lecturers presented; there is a possibility that other features could have influenced students' perceptions of the lecturers, such as lecturer age. Only one photograph was presented

for each category of lecturer race and gender. Presenting more pictures would have been beneficial, as presenting only one photograph for each category of lecturer did not control for other factors such as lecturers age. This was, however, considered impractical when weighing up the benefits against its costs, as the questionnaire was already of a considerable length, and increasing this length could have decreased the response rate.

To address the above limitations, future research could make use of lecturer faces that are more similar in age, and consider using more than one lecturer face per category. Future research could also make use of stimulus material other than photographs in order to better manipulate race and gender. Future research should also consider asking students to indicate in which ways they think the faces in the photographs differ by means of a control item in the questionnaire or in a pilot study, in order to see if race and gender are the most prominent differences observed by students.

Future research, particularly in South Africa, should also consider evaluating the difference between racial stereotyping amongst the younger generations and the older generations. This could potentially provide evidence for the idea that racial stereotypes no longer have such a negative effect on young generations' perceptions of others in South Africa. Another consideration for future research would be to replicate this study and evaluate students' perceptions of lecturers using the dimensions of competence and warmth, so as to provide more compelling evidence in order to confirm or disprove the existence of the assumptions of SCT in the context of South Africa. Research on stereotypes within South Africa should also consider evaluating the prevalence of racial and gender stereotypes to asses whether South Africans differ more significantly in their perceptions of individuals based on their race, rather than on their gender. When evaluating transformation in higher education institutions in South Africa, future research should also aim to identify factors that will improve the working climate

experienced by academic staff members in order to retain black and female individuals and increase transformation in higher education institutions.

Practical Implications and Conclusions

Despite the limitations of the present research, this study highlights the importance of understanding the cause and effect of strained intergroup relations in South Africa, resulting from post-apartheid challenges of transformation and negative working environments experienced by black and female academic staff. The results in this study revealed that students' perceptions of lecturers' competence were not influenced by the race or gender of the lecturer, as students evaluated both black and white, and male and female lecturers equally in terms of their competence. The results also revealed that race has a significant influence on student perceptions of lecturers' warmth, but that gender does not; as students rated female and male lecturers' warmth equally, and black lecturers' warmth higher than white lecturers' warmth. These findings suggest that positive changes could be present amongst the young South African generation in terms of perceptions of others based on racial and gender stereotypes. The finding that students rated the black female lecturers as the least competent is of particular importance when considering transforming higher education institutions in South Africa, as black female academics may continue to face limited opportunities for career advancement due to their double stigma. The results also showed that students' race and gender, as well as lecturers' academic faculty, did not influence the way in which students perceived lecturers' competence and warmth. This result implies positive changes in terms of transformation and equality in the workplace of South African universities. Although much work needs to be done to increase the number of black and female individuals in the academic workforce in South Africa, particularly in more senior positions, it is encouraging to observe that positive changes may be taking place in terms of racial and gender stereotypes amongst the young generation of South Africa. These changes in perceptions could ultimately lead to more favourable working environments and student evaluations for black and female academic staff, which could result in increased transformation in South African higher education institutions.

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APPENDIX A

SECTION OF ORGANISATIONAL PSYCHOLOGY

Dear Participant,

Thank you for participating in this study, which is being conducted as part of my Master's dissertation at the University of Cape Town. This research has been approved by the Commerce Faculty Ethics in Research Committee and the Executive Director of Student Affairs. The aim of this research is to identify people's perceptions of others based on photographs that are presented. Please note that your participation in this research is voluntary and that you may choose to withdraw from participation at any point in time. Your responses will be anonymous and will therefore be treated with strict confidentiality. All responses to this questionnaire will not be used for any purposes outside the current research. **On completion of the questionnaire, you will have the option to enter into a lucky draw to win a R500 Woolworths gift voucher.**

Please answer the questionnaire that follows which consists of five sections. In the first section you are asked to fill in your demographic information, which will be used for statistical purposes only. The questionnaire should take you approximately 15 minutes to complete. If you have any questions, concerns or comments about the research, please feel free to contact myself or my supervisor, Ines Meyer (ines.meyer@uct.ac.za).

Thank you in advance for your participation.

Sincerely,

Tenille Wernars

wrnten001@myuct.ac.za

0827747061

☐ I have read and understood the above information and consent to participating in this study.

Next

Have you previously done the course PSY2003S (Social Psychology and Intergroup Relations) at the University of Cape Town?

Yes No

SECTION 1

Please indicate your age below:

(Drop down menu options: 18, 19, 20, 21, 22, 23, 24, 25 or more)

Please indicate your race below:

White Black African Coloured Indian Asian Other Prefer not to answer

Please indicate your gender below:

Male Female

Please indicate your year of study below:

(Drop down menu options: First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth or more)

Please indicate your faculty below:

(Drop down menu options: Commerce, Engineering and the Built Environment, Health Sciences, Humanities, Law, Science)

Next

INSTRUCTIONS

Once you have read through this instruction page you will be required to press the 'Next' button to begin answering the questionnaire. The screen that follows will display a photograph of a lecturer followed by a table in which to mark your responses, and a question at the bottom of the table.

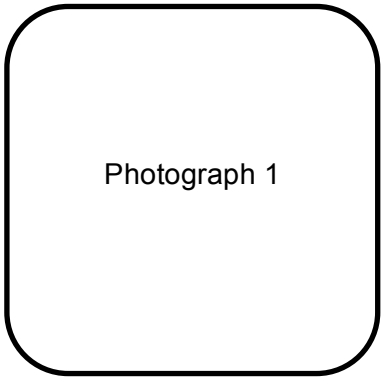
You are required to rate the lecturer displayed in the photograph by the adjectives listed in the tables. Simply mark the column that you feel most accurately describes the lecturer. The first column indicates the response 'strongly disagree', while the sixth/last column indicates the response 'strongly agree'. Therefore, if the adjective was 'happy', and you think that the lecturer in the picture is very happy, you would select the sixth/last column, 'strongly agree'.

Please complete all the items that follow.

☐ I have read and understood the above instructions and wish to proceed to the questionnaire.

Next

SECTION 2



This is a lecturer from the Engineering faculty.

The lecturer in this photograph is…

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Competent						
Capable						
Intelligent						
Skilled						
Qualified						
Experienced						
Legitimate						
Reliable						
Reputable						
Knowledgeable						
Respectable						
Credible						
Expert						

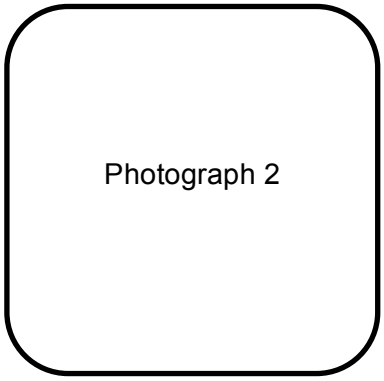
Authoritative						
Likeable						
Friendly						
Strict						
Sociable						
Understanding						
Honest						
Dependable						
Trustworthy						
Attractive						
Caring						
Tolerant						
Nice						
Warm						
Sympathetic						

Do you know the lecturer in the above photograph?

Yes No

Next

SECTION 3



This is a lecturer from the Humanities faculty.

The lecturer in this photograph is…

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Competent						
Capable						
Intelligent						
Skilled						
Qualified						
Experienced						
Legitimate						
Reliable						
Reputable						
Knowledgeable						
Respectable						
Credible						
Expert						

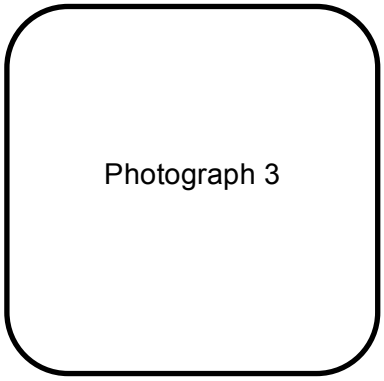
Authoritative						
Likeable						
Friendly						
Strict						
Sociable						
Understanding						
Honest						
Dependable						
Trustworthy						
Attractive						
Caring						
Tolerant						
Nice						
Warm						
Sympathetic						

Do you know the lecturer in the above photograph?

Yes No

Next

SECTION 4



This is a lecturer from the Engineering faculty.

The lecturer in this photograph is…

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Competent						
Capable						
Intelligent						
Skilled						
Qualified						
Experienced						
Legitimate						
Reliable						
Reputable						
Knowledgeable						
Respectable						
Credible						
Expert						

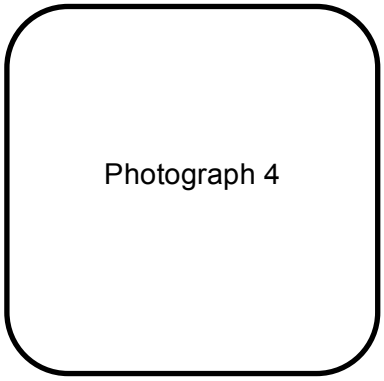
Authoritative						
Likeable						
Friendly						
Strict						
Sociable						
Understanding						
Honest						
Dependable						
Trustworthy						
Attractive						
Caring						
Tolerant						
Nice						
Warm						
Sympathetic						

Do you know the lecturer in the above photograph?

Yes No

Next

SECTION 5



This is a lecturer from the Humanities faculty.

The lecturer in this photograph is…

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Competent						
Capable						
Intelligent						
Skilled						
Qualified						
Experienced						
Legitimate						
Reliable						
Reputable						
Knowledgeable						
Respectable						
Credible						
Expert						

Authoritative						
Likeable						
Friendly						
Strict						
Sociable						
Understanding						
Honest						
Dependable						
Trustworthy						
Attractive						
Caring						
Tolerant						
Nice						
Warm						
Sympathetic						

Do you know the lecturer in the above photograph?

Yes No

Next

Thank you for participating in this study. Your time and effort is greatly appreciated!

If you have any questions, queries or concerns please don't hesitate to contact me on wrnten001@myuct.ac.za or 0827747061.

If you wish to enter into the lucky draw to win a R500 Woolworths gift voucher, please press 'Enter' below. Another window will appear for you to enter your email address into. Please make sure you press the 'Next' button on this window as well in order to capture your responses.

Enter

Competition Entry Window

Please enter your preferred email address below in order to enter the competition to win a R500 Woolworths gift voucher:

Thank you again for your time; your participation is greatly appreciated!

Next

APPENDIX B

Table 1. Round one eigenvalues and explained variances for the unrotated factor solution for all four of the lecturer faces (Extraction method: maximum likelihood with direct oblimin rotation).

Factor	Black Female		White Male		White Female		Black Male	
	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance
1	12.816	45.772	12.754	45.549	12.391	44.252	12.817	45.775
2	3.922	14.009	4.189	14.960	4.650	16.607	4.087	14.596
3	.918	3.280	.880	3.142	.900	3.215	1.161	4.148
4	.851	3.039	.824	2.944	.782	2.793	.818	2.920
5	.805	2.876	.682	2.437	.628	2.244	.668	2.385
6	.579	2.070	.626	2.236	.589	2.104	.576	2.057
7	.537	1.919	.557	1.988	.523	1.870	.510	1.822
8	.511	1.827	.534	1.906	.478	1.707	.498	1.780
9	.497	1.775	.528	1.885	.467	1.669	.474	1.691
10	.477	1.704	.463	1.655	.454	1.621	.457	1.632
11	.454	1.621	.431	1.539	.439	1.569	.435	1.554
12	.440	1.571	.416	1.487	.428	1.527	.433	1.545
13	.410	1.464	.403	1.438	.420	1.501	.402	1.435
14	.402	1.435	.398	1.422	.395	1.412	.398	1.421
15	.388	1.386	.385	1.375	.389	1.389	.372	1.328
16	.377	1.347	.373	1.331	.373	1.334	.362	1.292
17	.367	1.311	.355	1.268	.369	1.316	.358	1.277
18	.346	1.236	.348	1.241	.352	1.258	.334	1.194
19	.342	1.222	.325	1.162	.348	1.241	.328	1.172
20	.325	1.160	.322	1.148	.340	1.216	.322	1.149
21	.319	1.138	.309	1.103	.333	1.189	.312	1.115
22	.312	1.116	.304	1.086	.316	1.128	.301	1.077
23	.310	1.108	.289	1.032	.312	1.115	.292	1.042
24	.294	1.052	.287	1.025	.291	1.038	.281	1.003
25	.270	.966	.284	1.013	.286	1.021	.277	.991
26	.256	.914	.267	.953	.269	.960	.250	.893
27	.246	.878	.241	.860	.255	.910	.244	.871
28	.226	.806	.228	.815	.223	.796	.234	.836

Table 2. Round two eigenvalues and explained variances for the unrotated factor solution for all four of the lecturer faces (Extraction method: maximum likelihood with direct oblimin rotation).

Factor	Black Female		White Male		White Female		Black Male	
	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance	Eigenvalue	Explained Variance
1	11.312	49.184	11.244	48.885	10.890	47.346	11.390	49.520
2	3.202	13.921	3.534	15.364	3.990	17.349	3.544	15.409
3	.830	3.607	.705	3.064	.672	2.923	.704	3.061
4	.669	2.907	.648	2.818	.559	2.432	.558	2.424
5	.540	2.346	.538	2.340	.488	2.120	.515	2.241
6	.507	2.207	.529	2.301	.475	2.066	.496	2.155
7	.494	2.148	.474	2.062	.466	2.028	.467	2.031
8	.467	2.032	.443	1.927	.452	1.965	.435	1.891
9	.429	1.864	.428	1.859	.434	1.889	.430	1.868
10	.413	1.795	.405	1.762	.401	1.744	.402	1.747
11	.401	1.745	.390	1.696	.398	1.730	.380	1.652
12	.380	1.650	.365	1.585	.377	1.638	.364	1.584
13	.374	1.628	.360	1.567	.362	1.575	.359	1.563
14	.358	1.557	.349	1.519	.354	1.539	.346	1.504
15	.338	1.468	.332	1.443	.349	1.516	.334	1.454
16	.324	1.409	.320	1.393	.342	1.488	.322	1.401
17	.319	1.385	.307	1.335	.321	1.397	.315	1.370
18	.314	1.365	.301	1.311	.318	1.381	.304	1.322
19	.304	1.323	.291	1.266	.299	1.299	.292	1.272
20	.280	1.218	.284	1.234	.292	1.269	.288	1.253
21	.261	1.135	.269	1.169	.271	1.178	.265	1.152
22	.252	1.097	.250	1.088	.259	1.127	.252	1.094
23	.232	1.010	.233	1.012	.230	1.002	.237	1.032

Table 3. Corrected item-total correlations for all competence and warmth items for the black female, white male, white female, and black male lecturers.

	Black Female	White Male	White Female	Black Male
Competent	.748	.781	.748	.779
Capable	.788	.790	.783	.789
Intelligent	.743	.772	.745	.789
Skilled	.784	.809	.788	.781
Qualified	.756	.807	.780	.792
Experienced	.618	.703	.738	.697
Legitimate	.722	.766	.725	.749
Reliable	.701	.700	.720	.721
Reputable	.733	.736	.725	.755
Knowledgeable	.778	.800	.800	.794
Respectable	.696	.729	.746	.739
Credible	.778	.790	.782	.794
Expert	.709	.752	.762	.742
Honest	.643	.644	.668	.679
Likeable	.782	.782	.772	.781
Friendly	.816	.777	.822	.811
Sociable	.689	.679	.747	.680
Understanding	.771	.721	.738	.768
Caring	.794	.765	.791	.780
Tolerant	.672	.703	.706	.677
Nice	.784	.783	.792	.777
Warm	.810	.776	.778	.793
Sympathetic	.796	.763	.769	.776