

# Discrimination upon Recruitment

The Influence of Ethnic Characteristics on Recruiters' Decisions in  
Personnel Selection – A Study on the Applicability of Research  
Material

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## **Abstract**

The present study consists of paper-and-pencil surveys (i.e., questionnaires), handed out to students at the Erasmus University Rotterdam (EUR) in the Netherlands and to working people from Belgium and the Netherlands, with the purpose of testing and developing research materials for a series of studies on discrimination in recruitment (Deraus, Nguyen & Ryan, May 2006). Four aspects that are potentially related to discrimination in recruitment practices, are pilot tested, namely equivalence of resumes, ethnicity of first and last names, ethnicity of affiliations, and whether jobs are considered either front office jobs or back office jobs. The results of the studies show that the presented resumes are generally perceived as equivalent by both groups of respondents, regarding most aspects (i.e., type of education, level of education and amount of work experience), except for “kind of work experience” and “hobbies”. Generally, affiliations and last/first names are appropriate for further research. However, some affiliations and last/first names are not, since the respondents’ attributions are not in line with the ethnicity assumed by the researchers. Finally, the results show that the presented jobs are difficult to divide into the front office and back office categories. Indeed, it turns out that most jobs are not suitable for such labelling, except for “public relations specialist”, “technical writer”, “occupational therapist” and “clinical laboratory technologist”. This is mainly due to the contribution from the group of working people.

## **Discrimination upon Recruitment**

According to the facts on migrant labour presented by the International Labour Organization (ILO, 2004), more than 175 million migrant workers, permanent immigrants, refugees and their dependents live outside their country of origin by the year 2004. Of this total, approximately 86 million are active migrant and immigrant workers on the labour market. Most of those people decided to leave their home country in search for employment, without expectations of getting their “dream job”, but simply “any” job.

In spite of all the effort (e.g., anti-discrimination laws, governmental support etc.) in Western Europe, immigrants and minority workers are frequently victims of high unemployment rates, often as much as three times higher than those of national workers. Difficulties in access to employment of ethnic minorities are frequently explained by discriminatory practices in recruitment, rather than immigrant’s low qualifications (ILO, 2004).

It is important to notice that within research on employment discrimination, different terminology is used interchangeably. The concept of an immigrant is frequently expressed using different words, such as “foreign worker”, “guest worker”, “foreign employee” or “immigrant worker” (de Beijl, 2000). According to the International Labour Organization (ILO, 2000; in de Beijl, 2000), “migrant workers” are people who migrate in order to be employed in some other country, while the term “ethnic minority” refers to people of foreign origin that are born or naturalized in the country of interest. Moreover, “discrimination” can, by definition, be either an intentional or unintentional act, which adversely affects a person’s opportunities because of race, colour, religion, gender, handicap, marital status, age or national origin. More specifically, researchers use the terms “direct” and “indirect” discrimination. Finally, the usage of “ethnic minority” is often replaced by more specific terminology, such as “western immigrants”, “non-western immigrants” and “other immigrant groups”. On the other hand, the indigenous people from the country of interest, or where discrimination takes place, are named “ethnic majority” (see Appendix A for a glossary). In this thesis, we will mainly use the terms “ethnic minority” and “non-western immigrants” to refer to foreign workers. Furthermore, the terms “ethnic majority”, “natives” and “nationals” will refer to native Dutch persons.

In the Netherlands employment rates of non-western foreigners are lower than employment rates of western foreigners and Dutch persons (CWI, 2003). There are differences

in employment rates between the different non-western ethnic groups. The employment rate of Surinamese people is almost as high as the employment rate of Dutch people. In contrast, the employment rate of Moroccans is less than two thirds of that of Dutch people (SCP/WODC/CBS, 2005). Another striking fact is that when controlling for age and education level, the chance of being unemployed, is higher for the ethnic minority groups than for the majority groups (Dagevos, 2001; in BGDA, 2005). According to Dagevos (2001), the differences are not only limited to the distinction in ethnic minority and ethnic majority, since male immigrants are more often unemployed than female immigrants. Moroccan males seem to have the lowest chances of accessing the Dutch labour market.

Inspired by previous research and the situation in the Netherlands, Derous (the Netherlands) wants to make further investigations of the position of diverse ethnic groups in the labour market. This is done in close collaboration with researchers of the Michigan State University (USA).

The aim of this master thesis is to pilot test some of the materials for an upcoming study of Derous et al. (2006) on employment discrimination of ethnic groups. It should be noticed that the present study only reports on part of the data that are pilot tested for the main studies by comparing students and non-students. Also, only Dutch and Belgian data – no American data – are reported upon in this master thesis.

In sum, in this study, characteristics of resumes (i.e., affiliations, work experiences, educational aspects, etc.) and applicants (i.e., names) – to be used in upcoming main studies – will be tested on their equivalence. For this purpose, perceptions of two samples, namely students and non-students, are compared.

### *Content of Thesis*

First, previous research on employment discrimination with emphasis on discrimination upon recruitment is reported. The present situation of ethnic minority groups in the Netherlands is discussed. Next, the aim and relevance of the present study is explained. The role of stereotyping in recruitment practices is presented as a crucial part of the theoretical framework. Third, the methodology and results of the study are described. Finally, conclusions are drawn and suggestions concerning potential inclusion of materials are given.

## **1. Discrimination upon Recruitment: Research Findings**

Several researchers have found the existence of discriminatory practices in recruitment based on the attitudes towards various ethnic backgrounds of applicants. De Beijl (2000) reported upon several audit studies conducted in Europe. These studies showed that after initial contact, which was based on sent resumes, phone calls and interviews, a job applicant of foreign origin was rejected more often to participate in further selection for the job, and was regarded as a less suitable candidate than the national applicant. The amount of discrimination was uniform across occupations and industries.

In an American field study by Bertrand and Mullainathan (2003), artificial resumes of fictitious applicants were sent out to recruiters. Their study showed that applicants with a prototypical “white-sounding” name were invited for an interview twice as often as applicants with a prototypical “Black-sounding” name. This study stands as a confirmatory example for the existence of discriminatory practices in recruitment in the United States.

According to the most recent report on discrimination and integration of ethnic minority groups in the Netherlands (CBS/SCP/WODC, 2005), the unemployment rates of non-western immigrants (16%) is three times as high as that of the ethnic majority groups (5%). It is important to stress that the Annual Report on Integration (2005) is concerned with the position of ethnic minority groups in Dutch society, including the four largest ethnic groups (i.e., Turks, Moroccans, Surinamese and Antilleans) that migrated to the Netherlands before 1990 and the five largest “new refugee groups” that migrated from 1990 on (i.e., former Yugoslavians, Iraqis, Afghans, Iranians and Somalis). In this report, the term “integration” is used to refer to the degree to which members of ethnic minorities become part of the host society.

The report agrees with another recent study on integration accomplished by the Dutch Ministry of Social Affairs and Employment (Ministerie van Sociale Zaken en Werkgelegenheid, 2005). Both studies state that ethnic minorities are being increasingly “left behind” on the labour market. Frequently, low level of education, poor language skills and a lack of social support are used as reasons for their weak position on the Dutch labour market, causing high unemployment rates.

However, even when these factors are taken into account (Veenman, 1991; in Knippers, 1994) some ethnic minority groups encounter more difficulties in hiring procedures than equally qualified natives, and this difference can only be contributed to discrimination.

Ethnic minorities are often victims of strong, negative and generally unfavourable representation in public opinion, mostly due to high crime rates, low educational levels, poor language skills, lack of work experience and negative publicity in the media. All the above named factors add to the overall negative image of minority applicants in the Dutch labour market (Annual Report on Integration, 2005). This is important for understanding the relevance of this thesis as well as the position of minority applicants in the Netherlands, since the consequences of such weak position are visible when investigating the employment chances of immigrants.

## **2. Relevance of the Main and Pilot Studies**

### *Relevance of Main Study for Practice*

Biased decision-making may be a serious problem for many modern organizations. The social relevance of the main study is high, since all applicants should be offered equal opportunity in recruitment and selection, without being judged according to their ethnic origin. To the best of our knowledge, research on discrimination upon recruitment is still limited, especially when compared to the amount of studies on test bias. Some previous studies (de Beijl, 2000; Bertrand et al., 2003; Bovenkerk et al., 1994; Dagevos, 2001, LBR, 2004; Veenman, 1995), however, did show effects of discrimination, but have not controlled for many potentially disturbing variables (e.g., kind of work experience, level of education, amount of work experience, hobbies, affiliations, type of jobs). Those variables should be investigated, for example, in controlled laboratory settings.

### *Relevance of Pilot Studies for Upcoming Main Studies*

Employment discrimination of ethnic minority groups is a consequence of many of the above-mentioned factors (i.e., educational level, gender, etc.). In the main studies, it will be tested whether recruiters are prone to reject applicants with ethnic-sounding names and those who present themselves with affiliations that are associated with a certain ethnicity. Hence, resumes should be equal on all other resume/applicant characteristics in order not to distort the

conclusions of the main study (Derous et al., 2006). It is important to standardize the resumes as much as possible, to make correct inferences about respondents' attributions and discriminatory behaviour. The goal of the pilot studies, then, is to test the equivalence and relevance of the materials for the upcoming main studies.

### *Limitations of Present Thesis*

Please note that the research in this study is limited to testing and developing certain materials for the main study. The questionnaires in this study were derived from the pilot study previously conducted in advance of series of studies in the United States and the Netherlands (see Derous, Nguyen & Ryan, 2006). The original pilot study materials were designed for usage in both the United States and the Netherlands, hence the ethnic groups chosen for that purpose (i.e., Black/African, Hispanic/Latino, Asian, and Arabic) had to be applicable in both countries. In this thesis the results concerning Arabic ethnicities will receive most attention. According to the Dutch Ministry of Foreign Affairs and Employment (2005), ethnic minorities of Arabic origin are more often victims of discrimination in access to employment (e.g., weak position of Moroccan and Turkish applicants in the labour market) (van Hooft, 2004). This fact is also emphasized in another study on the situation of ethnic minorities on the Dutch labour market (RADAR, 2004).

### **3. Recruitment Practices**

Employers are discriminating, directly or indirectly, on irrelevant, ethnic information when assessing ethnic minorities (Bovenkerk, Ramsodh, & Gras, 1994; Veenman, 1995). Therefore, it is important to investigate stereotyping and other biased judgemental processes when recruiters deal with ethnic information (i.e., ethnic first and last names, affiliations and other factors such as level of education, hobbies, job types). Within the next section we will clarify the process of stereotyping in relation to discrimination upon recruitment.



#### **4. Stereotyping in Recruitment Practices**

The issue of stereotype activation is relevant for the present study/thesis, since the materials presented to the respondents in this study are deliberately manipulated to activate stereotypes with regard to the above mentioned ethnically loaded information (Khan, 2002). In particular two aspects examined in this study (i.e., ethnic names and affiliations) may evoke stereotypes, since names/affiliations chosen by the researchers, are “prototypical” for the ethnic group of interest (e.g., Caucasian, Black/African, Asian, Hispanic/Latino or Arabic), and therefore may be automatically associated with characteristics of these ethnic groups. Other types of information in the resumes (i.e., type of education, level of education, kind of work experience, amount of work experience and hobbies) and certain types of jobs (i.e., front office jobs vs. back office jobs) may also evoke stereotypical thinking (but this will be investigated/controlled for).

##### *Social Stereotypes*

Hilton and von Hippel (1996) define stereotypes as beliefs about the characteristics, attributes, and behaviours of members of certain groups. Stereotypes can also be defined as “pictures in our heads” (Lippmann, 1922), or “exaggerated beliefs, associated with a category” (Allport, 1954). Stereotypes are cognitive structures that contain our knowledge, beliefs and expectations about a social group or a category, especially when rapid judgements are made about others (Hamilton & Sherman, 1994).

Social stereotypes may be activated, especially when limited information is available about a person. Recruiters, for example, can only rely on limited information about applicants when screening job application forms and Curriculum Vitae. Therefore recruiters may be prone to the use of stereotypes during early recruitment.

Association of resume items (i.e., names, affiliations), with other categories, such as “highly educated”, “appropriate work experience”, “sufficient work experience”, “sophisticated hobby”, “Caucasian name”, “interesting affiliation”, “aggressive interests” etc., make part of a process of stereotyping. The attributes that are associated with general social categories are called “social stereotypes” (Brewer & Crano, 1994). This concept of stereotypes as a part of social and political issues was introduced by Walter Lippman (1922). He defined the concept of stereotypes as “pictures in our head”, which we broadly apply in various social

groups. Social categorization allows distinction between members of one's own group and members of out-groups (Tajfel, 1982), (e.g., in this study: neutral/non-ethnic affiliations vs. ethnic affiliations; Caucasian names vs. ethnic-sounding names). According to Tajfel, one expects certain behaviour based on previously formed stereotypes, such as cognitive generalizations about the qualities and characteristics of members of a particular group or social category (e.g., such statements as: "Hispanics are the ones that perform salsa", while any other ethnic group might possibly be a member of a Salsa Club). The fact that stereotypes are widely adopted and shared as social beliefs makes it into an accepted phenomenon (Tajfel, 1982).

### *Stereotype Activation and Application*

People are classifiers. Categorization helps people to understand the world around them, and organize the information in a way that is the easiest for them. People tend to use stereotypes as a mean to classify, understand, and predict others' behaviour (Brewer & Crano, 1994) in order to simplify incoming information. Categorizing behaviour in terms of personality traits is a well-known phenomenon among people (Lippman, 1922). One has an impression about how an individual will behave in certain situations and contexts. This type of categorization is a universally accepted attempt to make sense of people.

Stereotypes are shared among groups, rather than being individualistic opinions. Stereotypes tend to be exaggerated far from accurate (i.e., rather negative) and resistant to change unless one is motivated to disconfirm them, or has some personal goals, which facilitate stereotype revision. Unfortunately, the perceiver rarely notices faulty perception. The usage of stereotypes is often reinforced by confirmatory biases of those stereotypes. Therefore, one tends to interpret ambiguous information about others, according to group expectations, resulting in prejudice.

The availability of social categories and its stereotypes may mislead people to make rapid judgements about individuals who are members of that particular category (Hamilton & Sherman, 1996), such as rapid and perhaps automatic attributions of ethnic affiliations to characteristics of ethnic groups. Also attributions of ethnic names can be the result of associations and stereotyping. The consequence of such an availability of a category is that people will base their judgements according to the available schemes (e.g., "martial arts are

mostly performed by Asians”), and logically ignore other disconfirming information (e.g., “it’s possible for Caucasians to perform martial arts”). Brewer and her colleagues (1994) also demonstrated that a subtype of stereotypes, such as racial subtype, is associated with “visual images” of physical features, traits and behaviours, matching that subtype. In other words, stereotypes can also be compared to people’s availability of schemas and its cognitive accessibility.

One might wonder if stereotypes are always activated, and if not, when and how people activate stereotypes? One can state that stereotypes are mainly applied when cognitive load is high and has to be reduced. This “labour saving” device helps people to make rapid judgements about others. (Kunda & Spencer, 2003). Research also shows that stereotypes may especially be activated when information is somewhat vague or (Gilbert & Hixon, 1991). Furthermore, people may avoid applying an activated stereotype because they are motivated to avoid prejudice. People often have ethical values that prevent them from being prejudiced. However, ethical values do not necessarily cancel out the presence of negative feelings and beliefs about certain groups or categories. Therefore the latter may still influence reactions towards members of the out-group in alternative ways (Kunda & Spencer, 2003). According to Devine (1989), even people who are motivated not to be prejudiced may be unsuccessful to avoid that prejudice. Put differently, individuals who avoid application of activated stereotypes are at risk that the unwanted stereotypes will nevertheless influence their impressions. Moreover, the risk of application of stereotypes increases when people are cognitively overloaded, therefore incapable of effortful inhibition of stereotype application (Kunda et al., 2003), such as, for example, attributing the “obvious” ethnicity to an affiliation, even though this affiliation could just as well be associated with any other ethnicity.

## **5. Research Question and Hypotheses**

As mentioned in the introduction part, this study derives from a series of main studies on discrimination, dealing with effects of ethnic names/affiliations on recruiters’ intentions to shortlist applicants (see Derous et al., 2006). The general research question of the main study was:

*Will applicants be discriminated in access to employment on grounds of their ethnic characteristics as showed in their resumes?*

Prior to those studies, a series of pilot studies were conducted in order to test the materials. The present study is similar in nature to these pilot studies. The aim is to test and develop certain materials for use in future research similar to the main study of Derous et al. (2006). This involves presenting the respondents (1) with a series of resumes, which they are asked to judge on equivalence; (2) a series of names and affiliations with or without ethnic connotation (hypothesized in advance by the researchers), which they have to attribute to one of the suggested ethnicities (i.e., neutral, Black/African, Asian, Hispanic/Latino or Arabic origin); and finally (3) a series of job titles, judging the amount of contact with clients involved. This results in the following general research questions (present thesis):

Research Question 1: *Will information in the resumes be regarded as ethnically equivalent?*

Research Question 2: *Will the attributed ethnicity of affiliations be in line with the assumed ethnicity?*

Research Question 3: *Will the attributed ethnicity of names be in line with the assumed ethnicity?*

Research Question 4: *Will the amount of contact with clients associated with job titles be in line with the assumed amount of client contact?*

Participants for the study were recruited among Industrial and Organizational Psychology students at the Erasmus University Rotterdam (called “students”) and from outside the university which mostly consisted of working people from the Netherlands and Belgium (called “non-students”). Both samples will be compared. Therefore, the following hypotheses are formulated:

Hypothesis 1a/b: *Resumes are equivalent (across all resumes/within pairs) on type of education, level of education, amount of work experience and hobbies, as perceived by both student and non-student respondents.*

Hypothesis 2: *The attributed ethnicity of affiliations is in line with the assumed ethnicity (neutral vs. Black/African, Asian, Hispanic/Latino and Arabic), both in students and non-students’ samples.*

Hypothesis 3: *The attributed ethnic origin of names (first and last names) is in line with the assumed ethnicity (Caucasian vs. Black/African, Asian, Hispanic/Latino and Arabic), both in students and non-students' samples.*

Hypothesis 4: *The perceived amount of face contact with clients is higher for front office jobs than for back office jobs, both in students and non-students' samples.*

## **Method**

### *Participants*

Participants for the study were recruited from Industrial and Organizational Psychology students of the Erasmus University Rotterdam ( $N = 50$  students), and from outside the university which mostly consisted of working people ( $N = 36$  non-students). The students' sample consists of 13 male and 37 female students with participant age ranging from 20 to 47 years ( $M = 23.84$ ,  $SD = 4.62$ ). The non-students' sample consists of 16 male and 20 female respondents with age ranging from 22 to 65 years ( $M = 36.44$ ,  $SD = 10.51$ ). Student participants were all Caucasian ( $n = 34$ ); except for 1 Asian and 2 Arabic students. All non-student respondents were of Caucasian origin.

### *Materials*

In the present study a two-version questionnaire has been used (see Derous, et al., 2006). The questionnaires included different sub-studies of interest. First, participants were asked to rate several aspects of resumes on equivalence using a 4-point Likert-scale (1 = *not at all equivalent*; 4 = *very equivalent*). Secondly, respondents were asked to indicate whether or not affiliations referred to certain types of ethnicity. If an affiliation did contain information about one's ethnicity, the respondents were asked to indicate the type of ethnicity inferred from that information (e.g., Black/African, Asian, Hispanic/Latino, Arabic origin). Third, participants were asked to judge the likelihood that names (first and last names) belonged to a certain ethnic/racial origin (e.g., Caucasian, Black/African, Asian, Hispanic/Latino and Arabic). A 5-point Likert-scale was used (1 = *very unlikely*; 5 = *very likely*). Finally, participants were asked to rate the amount of face contact for different jobs. The terms "front office" and "back office" were used to indicate the amount of face contact with the clients (i.e.,

“front office” indicates frequent face contact with clients; “back office” indicates low frequency or no face contact with clients). The amount of face contact was indicated on a 7-point Likert-scale (*1 = no face contact at all/low frequency of contact; 7 = a lot of contact/high frequency of contact*).

### *Procedure*

Participants from the students’ sample participated during lecture hours. The study questionnaires were to be completed in approximately 40 to 60 minutes. Non-student respondents were given the questionnaires and asked to fill them out at home.

The surveys used in the study consisted of two versions. Each of the versions consisted of three sections (i.e., section A, B, and C). Only section C was different in the two versions.

Section A (both versions) consisted of 4 resumes that were presented in a pair-wise way (2 resumes per page). Respondents were asked to judge the equivalence of resume pairs (6 pairs). Each of pairs represented similar (constant) information on 5 aspects (e.g., type of education, level of education, kind of work experience, amount of work experience, and hobbies). Additionally, respondents were asked to judge the overall equivalency per resume pair. In sum, the overall equivalencies per resume pair, as well as equivalency per resume aspect were rated.

In section B (both versions) respondents were asked to attribute ethnicity to 40 affiliations. Respondents were asked to indicate whether the particular affiliation belonged to an ethnic group (“no”/ “yes”). If a respondent judged an affiliation to have an ethnic connotation, the respondent was also asked to further indicate the corresponding ethnicity (e.g., African, Asian, Hispanic/Latino or Arabic).

In section C (version A), participants had to judge first names ( $n= 60$ ) and last names ( $n = 60$ ) on their “name origin” (i.e., Caucasian, Black/African, Asian, Hispanic/Latino or Arabic). First and last names were presented in random order. Five last names and 5 first names of each ethnicity were chosen to represent each ethnic origin.

In section C (version B) contained questions concerning “inferences from job titles”. Respondents were asked to judge the amount of face contact that is required for each job ( $n = 22$ ). The job titles consisted of 11 front office jobs (*assumed by researchers*), and 11 back office jobs (*assumed by researchers*).

At the end of the questionnaire, additional demographic information about the respondents was asked (i.e., ethnicity, age, gender and class standing).

### *Statistical Procedures*

Analyses were conducted using SPSS v.12.0.1. Sample descriptive statistics were calculated (see Tables, 1a, 1b, 2a, 2b, and 3a, 3b). Both the *overall* resume equivalence (across all resumes) and *pair-wise* resume equivalence (across pairs of resumes) were calculated. In addition, the equivalence of 5 resume aspects were correlated with overall resume equivalence for both samples (Hypotheses 1a/b). Non-parametric tests (chi-squares) were applied to infer ethnicity of affiliations and names (Hypotheses 2 and 3), Paired-sample T-tests were used to infer amount of client contact from job titles (Hypothesis 4).

## **Results**

### *Equivalence of Resume Aspects (over pairs)*

Both overall equivalence (across all resumes) and pair-wise equivalence (across pairs of resumes) were calculated. More specifically, equivalence of resume pairs ( $n = 6$ ) on each aspect (i.e., type of education, level of education, kind of work experience, amount of work experience, hobbies and mean all items) was calculated. In sum, equivalence of all the resume pairs, on all aspects was fulfilled. Then equivalence per resume aspect (overall) was examined.

Participants were asked to give the score on equivalence; the cut-off score equal or higher than 3, in order to indicate equivalency (cut-off  $\geq 3$ ), was decided by the researchers. Descriptive statistics (see Tables 1a, 1b) show the comparison across resumes (6 pairs), with cut-off score of 3.

Table 1a  
*Descriptive Statistics, Means and Standard Deviations  
on all Aspects over Resume Pairs for Students' Sample*

|                              | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>M</i> | <i>SD</i> |
|------------------------------|----------|----------------|----------------|----------|-----------|
| 1. Type of Education         | 50       | 1.67           | 4.00           | 3.83     | .45       |
| 2. Level of Education        | 50       | 2.33           | 4.00           | 3.89     | .32       |
| 3. Kind of work experience   | 50       | 1.17           | 3.83           | 2.55     | .55       |
| 4. Amount of work experience | 50       | 1.83           | 4.00           | 3.33     | .57       |
| 5. Hobbies                   | 50       | 1.00           | 3.50           | 2.24     | .60       |
| 6. Mean all items (overall)  | 48       | 1.67           | 4.00           | 2.96     | .49       |

Table 1b  
*Descriptive Statistics, Means and Standard Deviations on all Aspects  
Over Resume Pairs for Non-Students' Sample*

|                              | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>M</i> | <i>SD</i> |
|------------------------------|----------|----------------|----------------|----------|-----------|
| 1. Type of Education         | 36       | 3.83           | 4.00           | 4.00     | .28       |
| 2. Level of Education        | 36       | 3.00           | 4.00           | 3.94     | .21       |
| 3. Kind of work experience   | 36       | 2.00           | 3.67           | 2.67     | .40       |
| 4. Amount of work experience | 36       | 2.17           | 4.00           | 3.29     | .63       |
| 5. Hobbies                   | 36       | 1.17           | 3.50           | 2.28     | .64       |
| 6. Mean all items (overall)  | 36       | 2.17           | 4.00           | 3.00     | .50       |

In the students' sample, resumes are equivalent regarding type of education ( $M = 3.83$ ,  $SD = .45$ ), level of education ( $M = 3.89$ ,  $SD = .32$ ), and amount of work experience ( $M = 3.33$ ,  $SD = .57$ ). Resumes are neither equivalent nor non-equivalent on kind of work experience ( $M = 2.55$ ,  $SD = .55$ ), and somewhat non-equivalent regarding hobbies ( $M = 2.24$ ,  $SD = .60$ ). Across all resume aspects, resumes appeared equivalent ( $M = 2.96$ ,  $SD = .49$ ).

In the non-students' sample, resumes are equivalent regarding type of education ( $M = 4.00$ ,  $SD = .21$ ), level of education ( $M = 3.94$ ,  $SD = .21$ ), and amount of work experience ( $M = 3.29$ ,  $SD = .63$ ). Resumes are neither equivalent nor non-equivalent on kind of work experience ( $M = 2.67$ ,  $SD = .40$ ), and somewhat non-equivalent regarding hobbies ( $M = 2.28$ ,  $SD = .64$ ). Across all resume aspects, resumes appeared equivalent ( $M = 3.00$ ,  $SD = .50$ ).

In sum, in both samples, kind of work experience appeared neither equivalent nor non-equivalent, and hobbies somewhat non-equivalent. Hence, Hypothesis 1a namely that resumes are equivalent on type of education, level of education, amount of work experience, and



hobbies for both student and non-student respondents, was mainly supported (not for work experience and hobbies though).

*Equivalence per Resume Aspect (within pairs)*

Then, analyses of equivalence per resume aspect (across pairs) were conducted. More specifically, for each resume pair all resume aspects were taken together and the mean score was calculated. Results are presented in Tables 2a and 2b. Participants were asked to give the score on equivalence. Similarly to the “over pairs” analysis, a cut-off score of 3 was used (cut-off  $\geq 3$ ). Resume pair was judged to be equivalent if the mean score was higher than or equal to 3.

**Table 2a**  
*Descriptive Statistics, Means and Standard Deviations for Each of Resume Pairs Separately (e.g., pairs: 1-AB 2-AC, 3-AD, 4-BC, 5-BD and 6-CD) When Taking Together All Resume Aspects (e.g., aspect 1, 2, 3, 4, 5 and 6) for Students’ Sample*

|                        | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>M</i> | <i>SD</i> |
|------------------------|----------|----------------|----------------|----------|-----------|
| 1. Resume Pair AB      | 50       | 2.00           | 3.80           | 3.11     | .44       |
| 2. Resume Pair AC      | 50       | 2.40           | 4.00           | 3.14     | .39       |
| 3. Resume Pair AD      | 50       | 2.40           | 3.80           | 3.14     | .37       |
| 4. Resume Pair BC      | 50       | 1.60           | 4.00           | 3.14     | .43       |
| 5. Resume Pair BD      | 50       | 1.80           | 3.80           | 3.18     | .41       |
| 6. Resume Pair CD      | 50       | 2.40           | 4.00           | 3.28     | .36       |
| 7. Overall equivalency | 48       | 2.17           | 3.80           | 3.17     | .34       |

**Table 2b**  
*Descriptive Statistics, Means and Standard Deviations for Each of Resume Pairs Separately (e.g., pairs 1-AB 2-AC, 3-AD, 4-BC, 5-BD and 6-CD) When Taking Together All Resume Aspects (e.g., aspect 1, 2, 3, 4, 5 and 6) for Non - Students’ Sample*

|                        | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>M</i> | <i>SD</i> |
|------------------------|----------|----------------|----------------|----------|-----------|
| 1. Resume Pair AB      | 36       | 2.40           | 3.80           | 3.21     | .34       |
| 2. Resume Pair AC      | 36       | 2.40           | 4.00           | 3.20     | .39       |
| 3. Resume Pair AD      | 36       | 2.40           | 4.00           | 3.16     | .40       |
| 4. Resume Pair BC      | 36       | 2.60           | 3.80           | 3.18     | .40       |
| 5. Resume Pair BD      | 36       | 2.20           | 3.80           | 3.24     | .34       |
| 6. Resume Pair CD      | 36       | 2.80           | 4.00           | 3.40     | .29       |
| 7. Overall equivalency | 36       | 2.70           | 3.77           | 3.23     | .29       |

In the students' sample, overall resumes A and B are equivalent ( $M = 3.11, SD = .44$ ); resumes A and C are equivalent ( $M = 3.14, SD = .39$ ); resumes A and D are equivalent ( $M = 3.14, SD = .37$ ); resumes B and C are equivalent ( $M = 3.14, SD = .43$ ); resumes B and D are equivalent ( $M = 3.18, SD = .41$ ); resumes C and D are equivalent ( $M = 3.28, SD = .36$ ).

In the non-students' sample, overall resumes A and B are equivalent ( $M = 3.21, SD = .34$ ); resumes A and C are equivalent ( $M = 3.20, SD = .39$ ); resumes A and D are equivalent ( $M = 3.16, SD = .40$ ); resumes B and C are equivalent ( $M = 3.18, SD = .40$ ); resumes B and D are equivalent ( $M = 3.24, SD = .34$ ); resumes C and D are equivalent ( $M = 3.40, SD = .29$ ).

In sum, the resumes per resume aspect (within pairs) are generally equivalent, thus Hypothesis 1b, namely that resumes are equivalent (within pairs) on type of education, level of education, amount of work experience and hobbies, as perceived by both students and non-students' samples, is supported.

#### *Comparison of Overall Equivalence with Pair-wise Equivalence*

In the students' sample, overall mean ( $M = 3.17, SD = .34$ ) across all resume pairs is highly correlated with the overall estimated equivalence across pairs ( $M = 2.96, SD = .49$ ), ( $r = .79, p < .01$ ). In the non-students' sample, overall mean ( $M = 3.23, SD = .29$ ) across all resume pairs is highly correlated with the overall estimated equivalence across pairs ( $M = 3.00, SD = .50$ ), ( $r = .79, p < .01$ ). (see Tables 3a, 3b for descriptive statistics).

Table 3a  
*Descriptive Statistics, Means and Standard Deviations for Overall Impression (aspect 6), and Mean of All Items (aspects 1-5) for Students' Sample*

|                             | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>M</i> | <i>SD</i> |
|-----------------------------|----------|----------------|----------------|----------|-----------|
| Overall equivalency         | 50       | 2.17           | 3.8            | 3.17     | .34       |
| Mean score across all items | 48       | 1.67           | 4.00           | 2.96     | .49       |

Table 3b  
*Descriptive Statistics, Means and Standard Deviations for Overall Impression (aspect 6), and Mean of All Items (aspects 1-5) for Non-Students' Sample*

|                             | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>M</i> | <i>SD</i> |
|-----------------------------|----------|----------------|----------------|----------|-----------|
| Overall equivalency         | 36       | 2.70           | 3.77           | 3.23     | .29       |
| Mean score across all items | 36       | 2.17           | 4.00           | 3.00     | .50       |

*General Conclusion regarding Equivalence of Resume Aspects*

The resumes are generally equivalent, however the equivalency of “kind of work experience” and “hobbies” is not fully supported.

*Inferences from Affiliations*

Affiliations ( $n = 40$ ) were presented in a random order (i.e., neutral, Black/African, Asian, Hispanic/Latino and Arabic). A series of chi-square analyzes were conducted to investigate whether there were significant differences in attributed ethnicity across affiliations. Attributed ethnicities were compared with researcher’s assumed and hypothesized ethnicity of those affiliations. The researchers decided to exclude affiliations from further studies (i.e., main study) if the following conditions were met: (1) no significant differences are found between ethnic categories; (2) significant differences are in the wrong direction (contrary to what is hypothesized, e.g., when significantly more respondents consider a hypothesized Asiatic affiliation to be rather neutral); (3) significant differences are in the correct direction, but the sum of respondents in all other cells is equal; (4) significant differences are in the right direction, but the sum of respondents in all other cells is larger than one third of the total number of respondents in the hypothesized cell (see Derous et al., 2006) ; and finally and only for the purpose of this thesis (5) findings of students’ sample are different from non-students’ sample.

According to the above named criteria and the analyses of the chi-square tests, the following results were found (see Table 4, 5a, 5b).

Table 4  
*Results of Ethnic Origin of Affiliations for Both Samples*

| No. | Affiliation  | Key | Students | Non-students | Applicability |
|-----|--|-----|----------|--------------|---------------|
| 1.  | Active member of the Lansing Soup Kitchen  | n   | +        | +            | yes           |
| 2.  | Treasurer of the annual Asiatic Film Festival  | a   | +        | -            | no            |
| 3.  | Active member of the EUR Pquito Souls Poetry Society                                 | h   | -        | -            | no            |
| 4.  | Treasurer of the EUR Association of African Students                                 | b   | +        | +            | yes           |
| 5.  | Active member of the Black Percussionists in Rotterdam                               | b   | +        | +            | yes           |
| 6.  | Treasurer of the Culturas de las Razas Unidad de Latino Students                     | h   | +        | +            | yes           |
| 7.  | Active member of the Traditional Asian Cooking Club for Students                     | a   | -        | -            | no            |
| 8.  | Active member of the Rotterdam “Tango Y Salsa” Dance troupe                          | h   | -        | -            | no            |
| 9.  | Treasurer of the traditional Asian Cooking club for students                         | a   | -        | -            | no            |
| 10. | Treasurer of the EUR Student Alumni Organization                                     | n   | +        | +            | yes           |
| 11. | Treasurer of the EUR Arab Student Association  | ar  | +        | +            | yes           |
| 12. | Treasurer of the Alumni Organization for Asian students                              | a   | +        | +            | yes           |
| 13. | Active member of Rotterdam Islamic Youth Centre                                      | ar  | +        | +            | yes           |
| 14. | Active member of the Rotary service society of Rotterdam                             | n   | +        | +            | yes           |
| 15. | Active member of the African Arts Society  | b   | -        | -            | no            |
| 16. | Active member of the Hispanic Soccer Club “Ole”                                      | h   | +        | +            | yes           |
| 17. | Treasurer of the EUR Asian Students Association                                      | a   | +        | +            | yes           |
| 18. | Active member of the traditional Arab Cooking Club for EUR                           | ar  | -        | -            | no            |
| 19. | Treasurer of the Rotterdam division of the Hispanic Youth Organization               | h   | +        | +            | yes           |
| 20. | Active member of the EUR cooking Club  | n   | +        | +            | yes           |
| 21. | Treasurer of the EUR Cycling Club  | n   | +        | +            | yes           |
| 22. | Active member of the EUR Arab Student Association                                    | ar  | +        | +            | yes           |
| 23. | Treasurer of the annual Arab Film Club   | ar  | +        | -            | no            |
| 24. | Active member of the Association Black Alumni Students                               | b   | +        | +            | yes           |
| 25. | Treasurer of the Hispanic Soccer Club “Ole”  | h   | +        | +            | yes           |
| 26. | Treasurer of the EUR Association of Arab Alumni                                      | ar  | +        | +            | yes           |
| 27. | Active member of EUR Arab Students Association                                       | ar  | +        | +            | yes           |
| 28. | Treasurer of the Black Percussionists  | b   | +        | -            | no            |
| 29. | Treasurer of the EUR Cooking Club  | n   | +        | +            | yes           |
| 30. | Active member of the Culturas de las Razas Unidad de Hispanic/Latino students at EUR | h   | +        | +            | yes           |
| 31. | Treasurer of the Rotterdam Islamic Center  | ar  | +        | +            | yes           |
| 32. | Active member of the “Wushu” Martial Arts Club                                       | a   | -        | -            | no            |
| 33. | Active member of the EUR Collegial Chorus  | n   | +        | +            | yes           |
| 34. | Active member of the EUR Asian Students Association                                  | a   | +        | +            | yes           |
| 35. | Active member of the National Association of Black Basketball Players                | b   | +        | +            | yes           |
| 36. | Treasurer of the “Don Quijote”, the Hispanic literature reading club at EUR          | h   | -        | -            | no            |
| 37. | Treasurer of the Lansing Soup Kitchen  | n   | +        | +            | yes           |
| 38. | Treasurer of the Association of Black Alumni students at EUR                         | b   | +        | +            | yes           |
| 39. | Active member of the National Asian Student Organization                             | a   | +        | +            | yes           |
| 40. | Treasurer of the Rotterdam African Community   | b   | +        | +            | yes           |

*Note.* n = neutral; b = Black/African; h = Hispanic/Latino; a = Asian; ar = Arabic.

“Applicability”; Names that are “applicable” are suggested to be used in further study.

“+” Means that certain affiliation “passed” the pilot testing for inclusion in further study for the specific sample, while “-” indicates that certain affiliation did not “pass” the pilot testing for inclusion in further study (e.g., if an affiliation has one “-” and one “+”, this affiliation is suggested not to be included in further study).

Table 5a  
*Results of Ethnic Origins of Affiliations Containing Chi-Squares, and the Frequencies of Attributions per Ethnicity for Students' Sample*

| No.      | Key | Chi-Square                | <i>p</i> | n  | b  | a  | h  | ar |
|----------|-----|---------------------------|----------|----|----|----|----|----|
| Students |     |                           |          |    |    |    |    |    |
| 1        | n   | --                        | --       | 50 | 0  | 0  | 0  | 0  |
| 2        | a   | $\chi^2 (1, 50) = 8$      | .005     | 15 | 0  | 35 | 0  | 0  |
| 3        | h   | $\chi^2 (2, 48) = 18.5$   | .00      | 22 | 2  | 0  | 24 | 0  |
| 4        | b   | $\chi^2 (3, 49) = 109.78$ | .00      | 2  | 44 | 1  | 0  | 2  |
| 5        | b   | $\chi^2 (1, 49) = 31.04$  | .00      | 5  | 44 | 0  | 0  | 0  |
| 6        | h   | $\chi^2 (1, 50) = 35.28$  | .00      | 4  | 0  | 0  | 46 | 0  |
| 7        | a   | $\chi^2 (1, 48) = .75$    | .39      | 21 | 0  | 27 | 0  | 0  |
| 8        | h   | $\chi^2 (2, 50) = 29.08$  | .00      | 33 | 2  | 0  | 15 | 0  |
| 9        | a   | $\chi^2 (1, 50) = 1.28$   | .26      | 21 | 0  | 29 | 0  | 0  |
| 10       | n   | --                        | --       | 50 | 0  | 0  | 0  | 0  |
| 11       | ar  | $\chi^2 (1, 49) = 34.31$  | .00      | 4  | 0  | 0  | 0  | 45 |
| 12       | a   | $\chi^2 (2, 49) = 65.80$  | .00      | 5  | 0  | 43 | 0  | 1  |
| 13       | ar  | $\chi^2 (2, 49) = 70.57$  | .00      | 4  | 0  | 1  | 0  | 44 |
| 14       | n   | -                         | --       | 49 | 0  | 0  | 0  | 0  |
| 15       | b   | $\chi^2 (1, 50) = .00$    | 1.00     | 25 | 25 | 0  | 0  | 0  |
| 16       | h   | $\chi^2 (1, 50) = 25.92$  | .00      | 7  | 0  | 0  | 43 | 0  |
| 17       | a   | $\chi^2 (1, 50) = 32.00$  | .00      | 5  | 0  | 45 | 0  | 0  |
| 18       | ar  | $\chi^2 (1, 50) = .32$    | .57      | 23 | 0  | 0  | 0  | 27 |
| 19       | h   | $\chi^2 (1, 49) = 25.00$  | .00      | 7  | 0  | 0  | 42 | 0  |
| 20       | n   | --                        | --       | 50 | 0  | 0  | 0  | 0  |
| 21       | n   | --                        | --       | 50 | 0  | 0  | 0  | 0  |
| 22       | ar  | --                        | --       | 0  | 0  | 0  | 0  | 50 |
| 23       | ar  | $\chi^2 (1, 50) = 5.12$   | .024     | 17 | 0  | 0  | 0  | 33 |
| 24       | b   | --                        | --       | 0  | 50 | 0  | 0  | 0  |
| 25       | h   | $\chi^2 (1, 50) = 23.12$  | .00      | 8  | 0  | 0  | 42 | 0  |
| 26       | ar  | $\chi^2 (3, 49) = 85.78$  | .00      | 7  | 1  | 0  | 1  | 40 |
| 27       | ar  | $\chi^2 (2, 50) = 88.36$  | .00      | 0  | 1  | 0  | 1  | 48 |
| 28       | b   | $\chi^2 (2, 50) = 40.84$  | .00      | 12 | 37 | 0  | 0  | 1  |
| 29       | n   | --                        | --       | 50 | 0  | 0  | 0  | 0  |
| 30       | h   | $\chi^2 (2, 50) = 72.52$  | .00      | 4  | 0  | 1  | 45 | 0  |
| 31       | ar  | $\chi^2 (2, 48) = 43.88$  | .00      | 10 | 0  | 1  | 0  | 37 |
| 32       | a   | $\chi^2 (2, 50) = 40.84$  | .00      | 37 | 0  | 12 | 0  | 1  |
| 33       | c   | $\chi^2 (1, 50) = 46.08$  | .00      | 49 | 0  | 1  | 0  | 0  |
| 34       | a   | $\chi^2 (3, 50) = 119.76$ | .00      | 2  | 0  | 46 | 1  | 1  |
| 35       | b   | $\chi^2 (1, 50) = 46.08$  | .00      | 1  | 49 | 0  | 0  | 0  |
| 36       | h   | $\chi^2 (1, 50) = .32$    | .57      | 23 | 0  | 0  | 27 | 0  |
| 37       | n   | --                        | --       | 49 | 0  | 0  | 0  | 0  |
| 38       | b   | $\chi^2 (1, 50) = 28.88$  | .00      | 6  | 44 | 0  | 0  | 0  |
| 39       | a   | $\chi^2 (2, 50) = 88.36$  | .00      | 1  | 0  | 48 | 1  | 0  |
| 40       | b   | $\chi^2 (1, 50) = 23.12$  | .00      | 8  | 42 | 0  | 0  | 0  |

**Table 5b**  
*Results of Ethnic Origins of Affiliations containing Chi-Squares and the Frequencies of Attributions per Ethnicity for Non- Students' Sample*

| No.           | Key | Chi- Square             | <i>p</i> | n  | b  | a  | h  | ar |
|---------------|-----|-------------------------|----------|----|----|----|----|----|
| Non- Students |     |                         |          |    |    |    |    |    |
| 1             | n   | --                      | --       | 35 | 0  | 0  | 0  | 0  |
| 2             | a   | $\chi^2 (1,36) = .00$   | 1.00     | 18 | 18 | 0  | 0  | 0  |
| 3             | h   | $\chi^2 (1,36) = 15.50$ | .00      | 19 | 1  | 0  | 16 | 0  |
| 4             | b   | $\chi^2 (1,36) = 25.00$ | .00      | 3  | 33 | 0  | 0  | 0  |
| 5             | b   | $\chi^2 (1,36) = 9.00$  | .00      | 9  | 27 | 0  | 0  | 0  |
| 6             | h   | $\chi^2 (1,36) = 28.44$ | .00      | 2  | 0  | 0  | 34 | 0  |
| 7             | a   | $\chi^2 (1,36) = 11.11$ | .00      | 28 | 0  | 8  | 0  | 0  |
| 8             | h   | $\chi^2 (1,36) = 13.44$ | .00      | 29 | 0  | 0  | 7  | 0  |
| 9             | a   | $\chi^2 (1,36) = .44$   | .50      | 16 | 0  | 20 | 0  | 0  |
| 10            | n   | $\chi^2 (2,34) = 56.53$ | .00      | 32 | 1  | 1  | 0  | 0  |
| 11            | ar  | $\chi^2 (1,36) = 28.44$ | .00      | 2  | 0  | 0  | 0  | 34 |
| 12            | a   | $\chi^2 (1,36) = 25.00$ | .00      | 3  | 0  | 33 | 0  | 0  |
| 13            | ar  | $\chi^2 (1,35) = 15.11$ | .00      | 6  | 0  | 0  | 0  | 29 |
| 14            | n   | --                      | --       | 35 | 0  | 0  | 0  | 0  |
| 15            | b   | $\chi^2 (1,36) = .11$   | .74      | 19 | 17 | 0  | 0  | 0  |
| 16            | h   | $\chi^2 (1,36) = 11.11$ | .00      | 8  | 0  | 0  | 28 | 0  |
| 17            | a   | $\chi^2 (1,36) = 25.00$ | .00      | 3  | 0  | 33 | 0  | 0  |
| 18            | ar  | $\chi^2 (1,36) = .400$  | .05      | 24 | 0  | 0  | 0  | 12 |
| 19            | h   | $\chi^2 (1,36) = 28.44$ | .00      | 2  | 0  | 0  | 34 | 0  |
| 20            | n   | --                      | --       | 36 | 0  | 0  | 0  | 0  |
| 21            | n   | --                      | --       | 35 | 0  | 0  | 0  | 0  |
| 22            | ar  | $\chi^2 (1,36) = 32.11$ | .00      | 1  | 0  | 0  | 0  | 35 |
| 23            | ar  | $\chi^2 (1,36) = 1.00$  | .31      | 21 | 0  | 0  | 0  | 15 |
| 24            | b   | $\chi^2 (2,36) = 55.17$ | .00      | 2  | 33 | 0  | 1  | 0  |
| 25            | h   | $\chi^2 (1,36) = 11.11$ | .00      | 8  | 0  | 0  | 28 | 0  |
| 26            | ar  | $\chi^2 (1,35) = 24.03$ | .00      | 3  | 0  | 0  | 0  | 32 |
| 27            | ar  | $\chi^2 (1,36) = 25.00$ | .00      | 3  | 0  | 0  | 0  | 33 |
| 28            | b   | $\chi^2 (1,35) = 1.40$  | .24      | 14 | 21 | 0  | 0  | 0  |
| 29            | n   | --                      | --       | 36 | 0  | 0  | 0  | 0  |
| 30            | h   | $\chi^2 (1,36) = 21.78$ | .00      | 4  | 0  | 0  | 32 | 0  |
| 31            | ar  | $\chi^2 (1,32) = 15.13$ | .00      | 5  | 0  | 0  | 0  | 27 |
| 32            | a   | $\chi^2 (1,34) = 43.60$ | .00      | 30 | 1  | 4  | 0  | 0  |
| 33            | n   | --                      | --       | 36 | 0  | 0  | 0  | 0  |
| 34            | a   | $\chi^2 (2,36) = 55.17$ | .00      | 2  | 0  | 33 | 1  | 0  |
| 35            | b   | $\chi^2 (1,36) = 28.44$ | .00      | 2  | 34 | 0  | 0  | 0  |
| 36            | h   | $\chi^2 (1,36) = 2.78$  | .09      | 23 | 0  | 0  | 13 | 0  |
| 37            | n   | --                      | --       | 35 | 0  | 0  | 0  | 0  |
| 38            | b   | $\chi^2 (1,35) = 24.03$ | .00      | 3  | 32 | 0  | 0  | 0  |
| 39            | a   | $\chi^2 (2,36) = 55.17$ | .00      | 2  | 0  | 33 | 1  | 0  |
| 40            | b   | $\chi^2 (1,35) = 12.60$ | .00      | 7  | 28 | 0  | 0  | 0  |

*Note.* n = neutral; b = Black/African, A = Asian, h = Hispanic/Latino, ar = Arabic. Names that are “applicable” are suggested to be used in further study on discrimination. “+” means “to be included”, “-” means “to be excluded” from further study.

According to the criteria of exclusion and the results of Chi-Square tests, 11 affiliations should be excluded from further studies, namely affiliations No. 2, 3, 7, 8, 9, 15, 18, 23, 28, 32, 36 (see Table 4). The remaining affiliations could be used in the future study on discrimination in recruitment.

Hypothesis 2, namely that the attributed ethnicity of affiliations is in line with the assumed ethnicity (neutral vs. Black/African, Asian, Hispanic/Latino and Arab), both in students and non-students' samples, was supported.

### *Name Origins*

In order to test if respondents were able to attribute first and last names to the assumed and hypothesized ethnicity, a series of first and last names were selected by the researchers. Sixty first names and 60 last names were selected from different sources, such as; publications (literature, papers, websites), suggestions from a Turkish Ph.D. student, and a list of Moroccan names of students from primary schools. Ethnic names were selected if they were categorized as being *typical* (i.e., most common) for certain ethnic groups (i.e., Caucasian, Black/African, Asian, Hispanic/Latino and Arabic). It was tested whether respondents' attributions of name origins were in line with the assumed and hypothesized ethnic origin of these names. Respondents were asked to judge the likelihood that the selected first and last names belong to a certain ethnic/racial origin, which they could indicate on a 4-point Likert-scale ( $1 = \textit{not likely at all}$ ;  $4 = \textit{very likely}$ ). A name was considered to be particular for certain origin if it had a mean that was equal or greater than 2.75 (cut-off  $\geq 2.75$ ). First and last names should be excluded from future studies if the following criteria were met: (1) no significant difference is found between ethnic categories; (2) significant differences are in the wrong direction (contrary to what is hypothesized - when significantly more respondents consider an Caucasian name to be of other origin); (3) significant differences are found and differences are in the right direction but the ethnic origin is considered to be not very likely for that name (see Derous et al., 2006); and finally –for the purpose of this thesis only- (4) findings of students' sample are different from non-students' sample

Table 6 shows whether the reported name origins (i.e., Caucasian, Black/African, Asian, Hispanic/Latino and Arabic) were consistent with the assumed and hypothesized ethnic

origins. The column named “*app*” (i.e., applicability), indicates whether the name can be selected for an upcoming study. “Yes” indicates that the name may *not* be excluded. The table also contains two sub-hypotheses, which are only formulated in order to clear up the table. Hypothesis 1 (see Table 6), states that the reported origin of the names (i.e., first and last names) is in line with the researchers’ assumed and hypothesized origin of the name (e.g., the key column indicates the assumed origin of the name). Hypothesis 2 (see Table 6), states that ethnic origin that is attributed significantly most to particular name is also considered to be very likely for that particular name (cut-off  $\geq 2.75$ ) on a 4-point Likert-scale. Additionally, a column with names (to be excluded) is presented in Table 6.

Table 6  
*Name Origins for Both Samples*

| No. | First Name | Key | Students     | Students             | Non- students | Non-students         | App | To be Excluded |
|-----|------------|-----|--------------|----------------------|---------------|----------------------|-----|----------------|
|     |            |     | Hypothesis 1 | Hypothesis 2 (means) | Hypothesis 1  | Hypothesis 2 (means) |     |                |
| 1   | Janneke    | c   | +            | 3.83                 | +             | 4                    | yes |                |
| 2   | Lin-Tao    | a   | +            | 3.89                 | +             | 3.95                 | yes |                |
| 3   | Mohammed   | ar  | +            | 3.86                 | +             | 4                    | yes |                |
| 4   | Naoki      | a   | +            | 3.48                 | --            | 3                    | no  | Naoki          |
| 5   | Agostina   | h   | +            | 3                    | +             | 3.47                 | yes |                |
| 6   | Kwasiba    | b   | +            | 3.48                 | +             | 3.47                 | yes |                |
| 7   | Fleur      | c   | +            | 3.72                 | +             | 3.78                 | yes |                |
| 8   | Naima      | ar  | +            | 3.33                 | +             | 3.36                 | yes |                |
| 9   | Femke      | c   | +            | 3.89                 | +             | 3.95                 | yes |                |
| 10  | Hassan     | ar  | +            | 3.75                 | +             | 3.78                 | yes |                |
| 11  | Evita      | h   | +            | 3.3                  | +             | 3.84                 | yes |                |
| 12  | Bao-Dat    | a   | --           | 3.21                 | --            | 3.36                 | no  | Bao-Dat        |
| 13  | Mustafa    | ar  | +            | 3.69                 | +             | 4                    | yes |                |
| 14  | Muchumba   | b   | +            | 3.4                  | --            | 3.71                 | no  | Muchumba       |
| 15  | Chikako    | a   | +            | 2.95                 | +             | 3.5                  | yes |                |
| 16  | Benita     | h   | +            | 3.11                 | +             | 3.56                 | yes |                |
| 17  | Malika     | ar  | --           | 3.8                  | --            | 3.29                 | no  | Malika         |
| 18  | Graciela   | h   | +            | 3.19                 | +             | 3.38                 | yes |                |
| 19  | Jaap       | c   | +            | 3.85                 | +             | 3.79                 | yes |                |
| 20  | Semra      | ar  | +            | 2.88                 | +             | 2.67                 | yes |                |
| 21  | Fadime     | ar  | +            | 3.41                 | +             | 3.22                 | yes |                |
| 22  | Sanne      | c   | +            | 3.69                 | +             | 3.84                 | yes |                |
| 23  | Akihiko    | a   | +            | 3.52                 | +             | 3.83                 | yes |                |



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|    |            |    |    |      |    |      |     |          |
|----|------------|----|----|------|----|------|-----|----------|
| 24 | Hayriye    | ar | -- | 2.56 | -- | 3.14 | no  | Hayriye  |
| 25 | Pieter-Jan | c  | +  | 3.93 | +  | 4    | yes |          |
| 26 | Li Wei     | a  | +  | 3.93 | +  | 4    | yes |          |
| 27 | Fatima     | ar | +  | 3.82 | +  | 3.94 | yes |          |
| 28 | Mandela    | b  | +  | 3.74 | +  | 3.71 | yes |          |
| 29 | Carlos     | h  | +  | 3.62 | +  | 3.72 | yes |          |
| 30 | Yeter      | ar | -- | 3    | -- | 3.17 | no  | Yeter    |
| 31 | Daan       | c  | +  | 3.96 | +  | 3.95 | yes |          |
| 32 | Estrella   | h  | +  | 3.48 | +  | 3.69 | yes |          |
| 33 | Gulsum     | ar | +  | 3.71 | +  | 3.54 | yes |          |
| 34 | Lan-Kim    | a  | +  | 3.68 | +  | 3.89 | yes |          |
| 35 | Layla      | ar | -- | 3.2  | -- | 3.38 | no  | Layla    |
| 36 | Kaatje     | c  | +  | 3.74 | +  | 4    | yes |          |
| 37 | Kofi       | b  | +  | 3.35 | +  | 3.53 | yes |          |
| 38 | Suleyman   | ar | +  | 3.35 | +  | 3.33 | yes |          |
| 39 | Dikiledi   | b  | +  | 2.68 | -- | 3    | no  | Dikiledi |
| 40 | Henk       | c  | +  | 3.9  | +  | 4    | yes |          |
| 41 | Musa       | ar | +  | 3.38 | -- | 3.4  | no  | Musa     |
| 42 | Simba      | b  | +  | 3.16 | +  | 3.35 | yes |          |
| 43 | Rashida    | ar | +  | 3.2  | +  | 3.47 | yes |          |
| 44 | Kwesi      | b  | +  | 3.04 | +  | 3.24 | yes |          |
| 45 | Cheng      | a  | +  | 3.83 | +  | 3.89 | yes |          |
| 46 | Mesut      | ar | +  | 3.05 | +  | 3.07 | yes |          |
| 47 | Pedro      | h  | +  | 3.6  | +  | 3.72 | yes |          |
| 48 | Douwe      | c  | +  | 3.67 | +  | 3.56 | yes |          |
| 49 | Julio      | h  | +  | 3.6  | +  | 3.67 | yes |          |
| 50 | Abdullah   | ar | +  | 3.88 | +  | 3.95 | yes |          |
| 51 | Mei-Li     | a  | +  | 3.79 | +  | 3.94 | yes |          |
| 52 | Ali        | ar | +  | 3.73 | +  | 3.71 | yes |          |
| 53 | Thabo      | b  | +  | 2.96 | -- | 2.33 | no  | Thabo    |
| 54 | Salvador   | h  | +  | 3.6  | +  | 3.78 | yes |          |
| 55 | Mahmud     | ar | +  | 3.54 | +  | 4    | yes |          |
| 56 | Mirembe    | b  | +  | 3.31 | +  | 3.58 | yes |          |
| 57 | Miguel     | h  | +  | 3.62 | +  | 3.71 | yes |          |
| 58 | Kasim      | ar | +  | 3.32 | +  | 3.47 | yes |          |
| 59 | Noriyuki   | a  | +  | 3.54 | +  | 3.75 | yes |          |
| 60 | Tiombe     | b  | +  | 3.82 | +  | 3.35 | yes |          |

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| No. | Last names  | Key | Hypothesis 1 | Hypothesis 2<br>(means) | Hypothesis 1 | Hypothesis 2<br>(means) | App | To be<br>Excluded |
|-----|-------------|-----|--------------|-------------------------|--------------|-------------------------|-----|-------------------|
| 61  | Obadele     | b   | +            | 3.04                    | +            | 3.42                    | yes |                   |
| 62  | Zhao        | a   | +            | 3.6                     | +            | 3.84                    | yes |                   |
| 63  | De Jong     | c   | +            | 3.9                     | +            | 4                       | yes |                   |
| 64  | De Vries    | c   | +            | 3.9                     | +            | 4                       | yes |                   |
| 65  | Yilmaz      | ar  | +            | 3.58                    | +            | 3.67                    | yes |                   |
| 66  | Mbeke       | b   | +            | 3.5                     | +            | 3.79                    | yes |                   |
| 67  | Nguyen      | a   | --           | 3.18                    | --           | 3.33                    | no  | Nguyen            |
| 68  | Alejandro   | h   | +            | 3                       | +            | 3.81                    | yes |                   |
| 69  | Jansen      | c   | +            | 3.89                    | +            | 3.89                    | yes |                   |
| 70  | Nunez       | h   | +            | 3.61                    | +            | 3.69                    | yes |                   |
| 71  | Wang        | a   | +            | 3.89                    | +            | 4                       | yes |                   |
| 72  | Bilen       | ar  | --           | 3.21                    | --           | 2.8                     | no  | Bilen             |
| 73  | Van de Berg | c   | +            | 3.5                     | +            | 4                       | yes |                   |
| 74  | Hernandez   | h   | +            | 3.76                    | +            | 4                       | yes |                   |
| 75  | T'Shaka     | b   | +            | 3.33                    | --           | 3.4                     | no  | T'Shaka           |
| 76  | Zorsu       | ar  | --           | 2.67                    | --           | 2.57                    | no  | Zorsu             |
| 77  | Bakker      | c   | +            | 3.9                     | +            | 3.79                    | yes |                   |
| 78  | Kambon      | b   | +            | 2.87                    | +            | 2.94                    | yes |                   |
| 79  | Ozbalaban   | ar  | +            | 3.23                    | --           | 3.2                     | no  | Ozbalaban         |
| 80  | Ozturk      | ar  | +            | 3.74                    | +            | 3.5                     | yes |                   |
| 81  | Turnay      | ar  | +            | 2.95                    | --           | 2.7                     | no  | Turnay            |
| 82  | Takahashi   | a   | +            | 3.59                    | +            | 3.79                    | yes |                   |
| 83  | Yazici      | ar  | +            | 3.16                    | --           | 3.08                    | no  | Yazici            |
| 84  | Lamumba     | b   | +            | 3.2                     | +            | 3.89                    | yes |                   |
| 85  | Duygun      | ar  | +            | 3.33                    | --           | 3.22                    | no  | Duygun            |
| 86  | Azdural     | ar  | +            | 3.21                    | +            | 3.43                    | yes |                   |
| 87  | Van Dijk    | c   | +            | 3.93                    | +            | 3.94                    | yes |                   |
| 88  | Marquez     | h   | +            | 3.76                    | +            | 4                       | yes |                   |
| 89  | Ibn Hassan  | ar  | +            | 3.72                    | +            | 3.84                    | yes |                   |
| 90  | Tutu        | b   | +            | 3.37                    | +            | 3.94                    | yes |                   |
| 91  | Tanaka      | a   | +            | 3.53                    | +            | 3.85                    | yes |                   |
| 92  | Juarez      | h   | +            | 3                       | +            | 3.76                    | yes |                   |
| 93  | Visser      | c   | +            | 3.89                    | +            | 3.95                    | yes |                   |
| 94  | Binaissa    | ar  | --           | 3.38                    | +            | 3.43                    | no  | Binaissa          |
| 95  | Benmoussa   | ar  | --           | 3.2                     | --           | 3.46                    | no  | Benmoussa         |
| 96  | Aguilera    | h   | +            | 3.59                    | +            | 3.76                    | yes |                   |
| 97  | Bululu      | b   | +            | 3.31                    | +            | 3.74                    | yes |                   |
| 98  | Abdallah    | ar  | +            | 3.85                    | +            | 3.84                    | yes |                   |
| 99  | Ortiz       | h   | --           | 3.07                    | --           | 3.58                    | no  | Ortiz             |
| 100 | Ozdemirel   | ar  | +            | 3.47                    | +            | 3.31                    | yes |                   |
| 101 | van 't Hek  | c   | +            | 3.89                    | +            | 4                       | yes |                   |

|     |          |    |    |      |    |      |     |         |
|-----|----------|----|----|------|----|------|-----|---------|
| 102 | Tran     | a  | +  | 3.06 | -- | 2.81 | no  | Tran    |
| 103 | Hurtado  | h  | +  | 3.14 | -- | 3.33 | no  | Hurtado |
| 104 | Tadlaoui | ar | +  | 3.17 | +  | 3.17 | yes |         |
| 105 | Tsjombe  | b  | +  | 3.08 | +  | 3.47 | yes |         |
| 106 | Shadid   | ar | +  | 3.35 | +  | 3.39 | yes |         |
| 107 | Qian     | a  | +  | 3.23 | +  | 3.5  | yes |         |
| 108 | Mourabi  | ar | +  | 3.33 | -- | 3.22 | no  | Mourabi |
| 109 | Hamoudi  | ar | +  | 3.5  | +  | 3.44 | yes |         |
| 110 | Smit     | c  | +  | 3.93 | +  | 3.95 | yes |         |
| 111 | Zapata   | h  | -- | 3.5  | +  | 3.78 | no  | Zapata  |
| 112 | Bayoumi  | ar | -- | 3.17 | -- | 2.78 | no  | Bayoumi |
| 113 | Meijer   | c  | +  | 3.86 | +  | 3.63 | yes |         |
| 114 | Chadid   | ar | +  | 3.13 | +  | 3.25 | yes |         |
| 115 | Wu       | a  | +  | 3.86 | +  | 3.89 | yes |         |
| 116 | Karenga  | b  | -- | 3.44 | +  | 3.29 | no  | Karenga |
| 117 | Martinez | h  | +  | 3.73 | +  | 3.88 | yes |         |
| 118 | Suzuki   | a  | +  | 3.85 | +  | 3.94 | yes |         |
| 119 | Watanbe  | a  | -- | 3.63 | +  | 3.87 | no  | Watanbe |
| 120 | Toure    | b  | -- | 2.56 | -- | 3.29 | no  | Toure   |

*Note.* Prior to the study a series of first and last names were selected. Most popular ethnic names of interest (i.e., Caucasian (c), Black/African (b), Asian, Hispanic/Latino (h) and Arabic (ar)) were chosen. Names that are “applicable” may be used in future studies on discrimination in recruitment. “+” means “to be included”, “-” means “to be excluded” from further studies.

**Table 7a**  
*Results of Name Origins Containing Chi -Squares, and the Frequencies of Attributions per Ethnicity for Students’ Sample*

| No. | Key | First Names | Chi- Square           | <i>p</i> | c  | b  | a  | h  | ar | Missing |
|-----|-----|-------------|-----------------------|----------|----|----|----|----|----|---------|
|     |     |             | Students              |          |    |    |    |    |    | -       |
| 1   | c   | Janneke     | --                    | --       | 29 | 0  | 0  | 0  | 0  | -       |
| 2   | a   | Lin-Tao     | $\chi^2$ (1.29)=25.14 | .00      | 0  | 1  | 28 | 0  | 0  | -       |
| 3   | ar  | Mohammed    | --                    | --       | 0  | 0  | 0  | 0  | 29 | -       |
| 4   | a   | Naoki       | $\chi^2$ (1.29)=25.14 | 0.02     | 0  | 8  | 21 | 0  | 0  | -       |
| 5   | h   | Agostina    | $\chi^2$ (2.29)=36.69 | .00      | 3  | 1  | 0  | 25 | 0  | -       |
| 6   | b   | Kwasiba     | $\chi^2$ (2.29)=36.48 | .00      | 0  | 25 | 2  | 0  | 2  | -       |
| 7   | c   | Fleur       | --                    | --       | 29 | 0  | 0  | 0  | 0  | -       |
| 8   | ar  | Naima       | $\chi^2$ (3.29)=15.55 | .001     | 0  | 9  | 4  | 1  | 15 | -       |
| 9   | c   | Femke       | $\chi^2$ (2.29)=46.62 | .00      | 27 | 0  | 1  | 0  | 0  | 1       |
| 10  | ar  | Hassan      | $\chi^2$ (1.29)=25.14 | .00      | 0  | 1  | 0  | 0  | 28 | -       |
| 11  | h   | Evita       | $\chi^2$ (2.29)=28.41 | .00      | 5  | 1  | 0  | 23 | 0  | -       |
| 12  | a   | Bao-Dat     | $\chi^2$ (2.29)=9.17  | .01      | 0  | 13 | 14 | 0  | 2  | -       |
| 13  | ar  | Mustafa     | $\chi^2$ (1.29)=18.24 | .00      | 0  | 3  | 0  | 0  | 26 | -       |
| 14  | b   | Muchumba    | $\chi^2$ (2.29)=36.69 | .00      | 0  | 25 | 1  | 0  | 3  | -       |
| 15  | a   | Chikako     | $\chi^2$ (2.29)=21.88 | .00      | 0  | 11 | 12 | 6  | 0  | -       |
| 16  | h   | Benita      | $\chi^2$ (4.29)=36.34 | .00      | 2  | 7  | 1  | 18 | 0  | 1       |
| 17  | ar  | Malika      | $\chi^2$ (5.29)=20.45 | .001     | 1  | 13 | 2  | 6  | 5  | 2       |

|    |    |            |                        |      |    |    |    |    |    |   |
|----|----|------------|------------------------|------|----|----|----|----|----|---|
| 18 | h  | Graciela   | $\chi^2 (4.29)=50.83$  | .00  | 1  | 4  | 2  | 21 | 0  | 1 |
| 19 | c  | Jaap       | $\chi^2 (2.29)=46.62$  | .00  | 27 | 0  | 0  | 1  | 0  | 1 |
| 20 | ar | Semra      | $\chi^2 (5.29)=44.86$  | .00  | 1  | 8  | 1  | 1  | 17 | 1 |
| 21 | ar | Fadime     | $\chi^2 (1.29)=21.55$  | .00  | 0  | 0  | 0  | 2  | 27 | - |
| 22 | c  | Sanne      | --                     | --   | 29 | 0  | 0  | 0  | 0  | - |
| 23 | a  | Akihiko    | $\chi^2 (1.29)=15.221$ | .00  | 0  | 4  | 25 | 0  | 0  | - |
| 24 | ar | Hayriye    | $\chi^2 (2.29)=5.24$   | .073 | 0  | 5  | 15 | 0  | 9  | - |
| 25 | c  | Pieter-Jan | $\chi^2 (1.29)=25.14$  | .00  | 28 | 0  | 1  | 0  | 0  | - |
| 26 | a  | Li Wei     | --                     | --   | 0  | 0  | 29 | 0  | 0  | - |
| 27 | ar | Fatima     | $\chi^2 (1.29)=25.14$  | .00  | 0  | 0  | 1  | 0  | 28 | - |
| 28 | b  | Mandela    | $\chi^2 (3.18)=5.56$   | .00  | 1  | 27 | 0  | 1  | 0  | - |
| 29 | h  | Carlos     | $\chi^2 (2.29)=41.45$  | .00  | 2  | 0  | 1  | 26 | 0  | - |
| 30 | ar | Yeter      | $\chi^2 (3.29)=19.41$  | .00  | 17 | 0  | 5  | 1  | 6  | - |
| 31 | c  | Daan       | $\chi^2 (1.29)=25.14$  | .00  | 28 | 1  | 0  | 0  | 0  | - |
| 32 | h  | Estrella   | $\chi^2 (2.29)=28.41$  | .00  | 5  | 1  | 0  | 23 | 0  | - |
| 33 | ar | Gulsum     | $\chi^2 (4.29)=50.83$  | .00  | 4  | 2  | 1  | 1  | 21 | - |
| 34 | a  | Lan-Kim    | $\chi^2 (1.29)=25.14$  | .00  | 0  | 1  | 28 | 0  | 0  | - |
| 35 | ar | Layla      | $\chi^2 (4.29)=8.07$   | .09  | 8  | 5  | 1  | 5  | 10 | - |
| 36 | c  | Kaatje     | $\chi^2 (1.29)=21.55$  | .00  | 27 | 0  | 0  | 2  | 0  | - |
| 37 | b  | Kofi       | $\chi^2 (3.29)=46.45$  | .00  | 0  | 23 | 1  | 1  | 4  | - |
| 38 | ar | Suleyman   | $\chi^2 (3.29)=45.90$  | .00  | 2  | 3  | 0  | 1  | 23 | - |
| 39 | b  | Dikiledi   | $\chi^2 (2.29)=24.90$  | .00  | 0  | 22 | 0  | 1  | 6  | - |
| 40 | c  | Henk       | --                     | --   | 29 | 0  | 0  | 0  | 0  | - |
| 41 | ar | Musa       | $\chi^2 (3.29)=16.66$  | .001 | 0  | 7  | 1  | 5  | 16 | - |
| 42 | b  | Simba      | $\chi^2 (2.29)=36.69$  | .00  | 1  | 25 | 0  | 0  | 3  | - |
| 43 | ar | Rashida    | $\chi^2 (3.29)=3.21$   | .00  | 1  | 7  | 0  | 1  | 20 | - |
| 44 | b  | Kwesi      | $\chi^2 (2.29)=41.45$  | .00  | 0  | 26 | 2  | 1  | 0  | - |
| 45 | a  | Cheng      | --                     | --   | 0  | 0  | 29 | 0  | 0  | - |
| 46 | ar | Mesut      | $\chi^2 (3.29)=28.24$  | .00  | 0  | 7  | 1  | 2  | 19 | - |
| 47 | h  | Pedro      | $\chi^2 (3.29)=58.03$  | .00  | 2  | 1  | 0  | 25 | 0  | 1 |
| 48 | c  | Douwe      | $\chi^2 (2.29)=46.62$  | .00  | 27 | 1  | 0  | 1  | 0  | - |
| 49 | h  | Julio      | $\chi^2 (2.29)=36.69$  | .00  | 3  | 0  | 0  | 25 | 0  | 1 |
| 50 | ar | Abdullah   | $\chi^2 (3.29)=51.97$  | .00  | 0  | 3  | 1  | 1  | 24 | - |
| 51 | a  | Mei-Li     | --                     | --   | 0  | 0  | 29 | 0  | 0  | - |
| 52 | ar | Ali        | $\chi^2 (2.29)=41.45$  | .00  | 0  | 2  | 0  | 1  | 26 | - |
| 53 | b  | Thabo      | $\chi^2 (2.29)=28.41$  | .00  | 1  | 23 | 5  | 0  | 0  | - |
| 54 | h  | Salvador   | $\chi^2 (2.29)=36.69$  | .00  | 1  | 3  | 0  | 24 | 0  | - |
| 55 | ar | Mahmud     | $\chi^2 (2.29)=41.45$  | .00  | 0  | 2  | 0  | 1  | 26 | - |
| 56 | b  | Mirembe    | $\chi^2 (2.29)=41.45$  | .00  | 0  | 26 | 1  | 0  | 2  | - |
| 57 | h  | Miguel     | $\chi^2 (2.29)=41.45$  | .00  | 1  | 2  | 0  | 26 | 0  | - |
| 58 | ar | Kasim      | $\chi^2 (4.29)=57.03$  | .00  | 0  | 2  | 3  | 1  | 22 | 1 |
| 59 | a  | Noriyuki   | $\chi^2 (1.29)=25.14$  | .00  | 0  | 1  | 28 | 0  | 0  | - |
| 60 | b  | Tiombe     | $\chi^2 (2.29)=46.62$  | .00  | 0  | 27 | 1  | 1  | 0  | - |

| Last Names |    |             |                       |      |    |    |    |    |    |   |
|------------|----|-------------|-----------------------|------|----|----|----|----|----|---|
| 61         | b  | Obadele     | $\chi^2$ (1.29)=21.55 | .00  | 0  | 27 | 0  | 2  | 0  | - |
| 62         | a  | Zhao        | $\chi^2$ (2.29)=36.69 | .00  | 0  | 3  | 25 | 1  | 0  | - |
| 63         | c  | De Jong     | --                    | --   | 29 | 0  | 0  | 0  | 0  | - |
| 64         | c  | De Vries    | --                    | --   | 29 | 0  | 0  | 0  | 0  | - |
| 65         | ar | Yylmaz      | $\chi^2$ (2.29)=41.45 | .00  | 0  | 2  | 1  | 0  | 26 | - |
| 66         | b  | Mbeke       | $\chi^2$ (2.29)=41.45 | .00  | 0  | 26 | 0  | 1  | 2  | - |
| 67         | a  | Nguyen      | $\chi^2$ (2.29)=0.28  | .87  | 0  | 9  | 11 | 0  | 9  | - |
| 68         | h  | Alejandro   | $\chi^2$ (4.29)=50.48 | .00  | 1  | 3  | 1  | 21 | 3  | - |
| 69         | c  | Jansen      | $\chi^2$ (1.29)=25.14 | .00  | 28 | 0  | 1  | 0  | 0  | - |
| 70         | h  | Nunez       | $\chi^2$ (3.29)=21.90 | .00  | 0  | 4  | 2  | 18 | 5  | - |
| 71         | a  | Wang        | $\chi^2$ (1.29)=25.14 | .00  | 0  | 0  | 28 | 1  | 0  | - |
| 72         | ar | Bilen       | $\chi^2$ (3.29)=10.31 | .016 | 6  | 7  | 0  | 2  | 14 | - |
| 73         | c  | Van de Berg | --                    | --   | 29 | 0  | 0  | 0  | 0  | - |
| 74         | h  | Hernandez   | $\chi^2$ (2.29)=36.48 | .00  | 0  | 2  | 0  | 25 | 2  | - |
| 75         | b  | T'Shaka     | $\chi^2$ (2.29)=16.83 | .00  | 0  | 19 | 9  | 0  | 1  | - |
| 76         | ar | Zorsu       | $\chi^2$ (5.29)=40.72 | .00  | 1  | 17 | 1  | 3  | 6  | 1 |
| 77         | c  | Bakker      | --                    | --   | 29 | 0  | 0  | 0  | 0  | - |
| 78         | b  | Kambon      | $\chi^2$ (3.29)=46.45 | .00  | 0  | 23 | 4  | 1  | 0  | 1 |
| 79         | ar | Ozbalaban   | $\chi^2$ (2.29)=24.90 | .00  | 1  | 6  | 0  | 0  | 22 | - |
| 80         | ar | Ozturk      | $\chi^2$ (4.29)=64.28 | .00  | 1  | 3  | 1  | 1  | 23 | - |
| 81         | ar | Turnay      | $\chi^2$ (4.29)=39.10 | .00  | 1  | 5  | 2  | 2  | 19 | - |
| 82         | a  | Takahashi   | $\chi^2$ (2.29)=46.62 | .00  | 0  | 1  | 27 | 0  | 1  | - |
| 83         | ar | Yazici      | $\chi^2$ (3.29)=26.03 | .00  | 0  | 3  | 5  | 2  | 19 | - |
| 84         | b  | Lamumba     | $\chi^2$ (3.29)=58.03 | .00  | 0  | 25 | 1  | 1  | 2  | - |
| 85         | ar | Duygun      | $\chi^2$ (3.29)=31.83 | .00  | 0  | 1  | 6  | 2  | 20 | - |
| 86         | ar | Azdural     | $\chi^2$ (2.29)=32.34 | .00  | 0  | 4  | 0  | 1  | 24 | - |
| 87         | c  | Van Dijk    | --                    | --   | 29 | 0  | 0  | 0  | 0  | - |
| 88         | h  | Marquez     | $\chi^2$ (4.29)=79.45 | .00  | 1  | 1  | 1  | 25 | 1  | - |
| 89         | ar | Ibn Hassan  | --                    | --   | 0  | 0  | 0  | 0  | 29 | - |
| 90         | b  | Tutu        | $\chi^2$ (2.29)=46.62 | .00  | 0  | 27 | 1  | 1  | 0  | - |
| 91         | a  | Tanaka      | $\chi^2$ (2.29)=13.52 | .001 | 0  | 11 | 17 | 1  | 0  | - |
| 92         | h  | Juarez      | $\chi^2$ (3.29)=45.90 | .00  | 1  | 2  | 0  | 23 | 3  | - |
| 93         | c  | Visser      | $\chi^2$ (1.29)=25.14 | .00  | 28 | 1  | 0  | 0  | 0  | - |
| 94         | ar | Binaissa    | $\chi^2$ (4.29)=28.07 | .00  | 0  | 16 | 1  | 3  | 8  | 1 |
| 95         | ar | Benmoussa   | $\chi^2$ (3.29)=22.17 | .00  | 0  | 12 | 0  | 1  | 15 | 1 |
| 96         | h  | Aguilera    | $\chi^2$ (2.29)=46.62 | .00  | 1  | 0  | 0  | 27 | 0  | 1 |
| 97         | b  | Bululu      | $\chi^2$ (1.29)=18.24 | .00  | 0  | 26 | 0  | 0  | 3  | - |
| 98         | ar | Abdallah    | $\chi^2$ (1.29)=21.55 | .00  | 0  | 2  | 0  | 0  | 27 | - |
| 99         | h  | Ortiz       | $\chi^2$ (3.29)=19.41 | .00  | 2  | 1  | 0  | 15 | 11 | - |
| 100        | ar | Ozdemirel   | $\chi^2$ (2.29)=41.45 | .00  | 1  | 0  | 0  | 2  | 26 | - |
| 101        | c  | van 't Hek  | $\chi^2$ (1.29)=25.14 | .00  | 28 | 0  | 0  | 0  | 0  | 1 |
| 102        | a  | Tran        | $\chi^2$ (5.29)=37.41 | .00  | 2  | 3  | 17 | 3  | 3  | 1 |
| 103        | h  | Hurtado     | $\chi^2$ (3.29)=41.48 | .00  | 0  | 5  | 1  | 22 | 1  | - |
| 104        | ar | Tadlaoui    | $\chi^2$ (4.29)=13.59 | .01  | 1  | 7  | 7  | 2  | 12 | - |
| 105        | b  | Tsjombe     | $\chi^2$ (3.29)=64.66 | .00  | 1  | 26 | 0  | 1  | 1  | - |
| 106        | ar | Shadid      | $\chi^2$ (1.29)=18.24 | .00  | 0  | 3  | 0  | 0  | 26 | - |
| 107        | a  | Qian        | $\chi^2$ (3.29)=40.66 | .00  | 0  | 1  | 22 | 4  | 2  | - |

|     |    |          |                       |      |    |    |    |    |    |   |
|-----|----|----------|-----------------------|------|----|----|----|----|----|---|
| 108 | ar | Mourabi  | $\chi^2 (3.29)=35.97$ | .00  | 0  | 5  | 0  | 2  | 21 | 1 |
| 109 | ar | Hamoudi  | $\chi^2 (1.29)=12.45$ | .00  | 0  | 5  | 0  | 0  | 24 | - |
| 110 | c  | Smit     | --                    | --   | 29 | 0  | 0  | 0  | 0  | - |
| 111 | h  | Zapata   | $\chi^2 (1.29)=2.79$  | .10  | 0  | 19 | 0  | 10 | 0  | - |
| 112 | ar | Bayoumi  | $\chi^2 (3.29)=11.14$ | .011 | 0  | 11 | 5  | 1  | 12 | - |
| 113 | c  | Meijer   | $\chi^2 (1.29)=25.14$ | .00  | 28 | 0  | 0  | 1  | 0  | - |
| 114 | ar | Chadid   | $\chi^2 (2.29)=32.34$ | .00  | 0  | 4  | 1  | 0  | 24 | - |
| 115 | a  | Wu       | --                    | --   | 0  | 0  | 29 | 0  | 0  | - |
| 116 | b  | Karenga  | $\chi^2 (3.29)=23.28$ | .00  | 1  | 16 | 0  | 11 | 1  | - |
| 117 | h  | Martinez | $\chi^2 (1.29)=18.24$ | .00  | 3  | 0  | 0  | 26 | 0  | - |
| 118 | a  | Suzuki   | $\chi^2 (2.29)=41.45$ | .00  | 0  | 1  | 26 | 2  | 0  | - |
| 119 | a  | Watanbe  | $\chi^2 (2.29)=29.90$ | .00  | 0  | 19 | 8  | 1  | 0  | 1 |
| 120 | b  | Toure    | $\chi^2 (4.29)=9.10$  | .06  | 3  | 9  | 1  | 7  | 9  | - |

Table 7b

*Results of Name Origins Containing Chi-Squares, and the Frequencies of Attributions per Ethnicity for Non- Students' Sample*

| No. | Key | First Names | Chi-Square            | <i>p</i> | c  | b  | a  | h  | ar | Missing |
|-----|-----|-------------|-----------------------|----------|----|----|----|----|----|---------|
| 1   | c   | Janneke     | --                    | --       | 19 | 0  | 0  | 0  | 0  | -       |
| 2   | a   | Lin-Tao     | --                    | --       | 0  | 0  | 19 | 0  | 0  | -       |
| 3   | ar  | Mohammed    | --                    | --       | 0  | 0  | 0  | 0  | 19 | -       |
| 4   | a   | Naoki       | $\chi^2 (2.19)=8.0$   | .02      | 0  | 7  | 11 | 0  | 0  | 1       |
| 5   | h   | Agostina    | $\chi^2 (2.19)=18.11$ | .00      | 3  | 1  | 0  | 15 | 0  | -       |
| 6   | b   | Kwasiba     | --                    | --       | 0  | 19 | 0  | 0  | 0  | -       |
| 7   | c   | Fleur       | $\chi^2 (1.19)=15.21$ | .00      | 18 | 1  | 0  | 0  | 0  | -       |
| 8   | ar  | Naima       | $\chi^2 (1.19)=0.47$  | .49      | 0  | 18 | 0  | 0  | 11 | -       |
| 9   | c   | Femke       | --                    | --       | 19 | 0  | 0  | 0  | 0  | -       |
| 10  | ar  | Hassan      | $\chi^2 (1.19)=15.21$ | .00      | 0  | 0  | 1  | 0  | 16 | -       |
| 11  | h   | Evita       | $\chi^2 (1.19)=11.84$ | .00      | 2  | 0  | 0  | 17 | 0  | -       |
| 12  | a   | Bao-Dat     | $\chi^2 (2.19)=8.0$   | .02      | 0  | 7  | 11 | 0  | 0  | 1       |
| 13  | ar  | Mustafa     | --                    | --       | 0  | 0  | 0  | 0  | 19 | -       |
| 14  | b   | Muchumba    | $\chi^2 (2.19)=26.95$ | .00      | 0  | 17 | 1  | 0  | 1  | -       |
| 15  | a   | Chikako     | --                    | --       | 0  | 0  | 19 | 0  | 0  | -       |
| 16  | h   | Benita      | $\chi^2 (1.19)=8.90$  | .00      | 3  | 0  | 0  | 16 | 0  | -       |
| 17  | ar  | Malika      | $\chi^2 (4.19)=12.32$ | .02      | 2  | 8  | 0  | 1  | 7  | 1       |
| 18  | h   | Graciela    | $\chi^2 (2.19)=11.79$ | .00      | 5  | 1  | 0  | 13 | 0  | -       |
| 19  | c   | Jaap        | --                    | --       | 19 | 0  | 0  | 0  | 0  | -       |
| 20  | ar  | Semra       | $\chi^2 (3.19)=9.42$  | .02      | 0  | 7  | 0  | 1  | 9  | 2       |
| 21  | ar  | Fadime      | --                    | --       | 0  | 1  | 0  | 0  | 18 | -       |
| 22  | c   | Sanne       | --                    | --       | 19 | 0  | 0  | 0  | 0  | -       |
| 23  | a   | Akihiko     | $\chi^2 (1.19)=15.21$ | .00      | 0  | 1  | 18 | 0  | 0  | -       |
| 24  | ar  | Hayriye     | $\chi^2 (2.19)=0.42$  | .81      | 0  | 5  | 7  | 0  | 7  | -       |
| 25  | c   | Pieter-Jan  | --                    | --       | 19 | 0  | 0  | 0  | 0  | -       |
| 26  | a   | Li Wei      | --                    | --       | 0  | 0  | 19 | 0  | 0  | -       |
| 27  | ar  | Fatima      | $\chi^2 (1.19)=15.21$ | .00      | 0  | 0  | 0  | 1  | 18 | -       |
| 28  | b   | Mandela     | $\chi^2 (2.19)=26.95$ | .00      | 0  | 17 | 0  | 1  | 1  | -       |

|            |    |             |                      |     |    |    |    |    |    |   |
|------------|----|-------------|----------------------|-----|----|----|----|----|----|---|
| 29         | h  | Carlos      | $\chi^2(1.19)=15.21$ | .00 | 1  | 0  | 0  | 18 | 0  | - |
| 30         | ar | Yeter       | $\chi^2(5.19)=14.79$ | .01 | 8  | 1  | 2  | 1  | 6  | 1 |
| 31         | c  | Daan        | --                   | --  | 19 | 0  | 0  | 0  | 0  | - |
| 32         | h  | Estrella    | $\chi^2(2.19)=22.21$ | .00 | 2  | 0  | 0  | 16 | 0  | 1 |
| 33         | ar | Gulsum      | $\chi^2(3.19)=20.37$ | .00 | 4  | 0  | 1  | 0  | 13 | 1 |
| 34         | a  | Lan-Kim     | $\chi^2(1.19)=15.21$ | .00 | 0  | 0  | 18 | 0  | 0  | 1 |
| 35         | ar | Layla       | $\chi^2(3.19)=6.47$  | .09 | 2  | 1  | 0  | 7  | 8  | - |
| 36         | c  | Kaatje      | --                   | --  | 19 | 0  | 0  | 0  | 0  | - |
| 37         | b  | Kofi        | $\chi^2(2.19)=26.95$ | .00 | 1  | 17 | 0  | 0  | 1  | - |
| 38         | ar | Suleyman    | $\chi^2(3.19)=29.63$ | .00 | 2  | 1  | 0  | 1  | 15 | - |
| 39         | b  | Dikiledi    | $\chi^2(4.19)=22.32$ | .00 | 2  | 12 | 2  | 2  | 1  | - |
| 40         | c  | Henk        | --                   | --  | 19 | 0  | 0  | 0  | 0  | - |
| 41         | ar | Musa        | $\chi^2(4.19)=15.47$ | .00 | 0  | 5  | 1  | 2  | 10 | 1 |
| 42         | b  | Simba       | $\chi^2(2.19)=26.95$ | .00 | 0  | 17 | 1  | 0  | 1  | - |
| 43         | ar | Rashida     | --                   | --  | 0  | 0  | 0  | 0  | 19 | - |
| 44         | b  | Kwesi       | $\chi^2(2.19)=26.95$ | .00 | 0  | 17 | 1  | 1  | 0  | 1 |
| 45         | a  | Cheng       | --                   | --  | 0  | 0  | 19 | 0  | 0  | - |
| 46         | ar | Mesut       | $\chi^2(3.19)=29.63$ | .00 | 1  | 2  | 0  | 0  | 15 | 1 |
| 47         | h  | Pedro       | $\chi^2(1.19)=15.21$ | .00 | 1  | 0  | 0  | 18 | 0  | - |
| 48         | c  | Douwe       | $\chi^2(1.19)=15.21$ | .00 | 18 | 1  | 0  | 0  | 0  | - |
| 49         | h  | Julio       | $\chi^2(1.19)=15.21$ | .00 | 1  | 0  | 0  | 18 | 0  | - |
| 50         | ar | Abdullah    | --                   | --  | 0  | 0  | 0  | 0  | 19 | - |
| 51         | a  | Mei-Li      | $\chi^2(1.19)=15.21$ | .00 | 0  | 1  | 18 | 0  | 0  | - |
| 52         | ar | Ali         | $\chi^2(2.19)=26.95$ | .00 | 1  | 1  | 0  | 0  | 17 | - |
| 53         | b  | Thabo       | $\chi^2(5.19)=24.26$ | .00 | 2  | 11 | 3  | 1  | 1  | 1 |
| 54         | h  | Salvador    | $\chi^2(1.19)=15.21$ | .00 | 1  | 0  | 0  | 18 | 0  | - |
| 55         | ar | Mahmud      | --                   | --  | 0  | 0  | 0  | 0  | 19 | - |
| 56         | b  | Mirembe     | --                   | --  | 0  | 19 | 0  | 0  | 0  | - |
| 57         | h  | Miguel      | $\chi^2(1.19)=11.84$ | .00 | 2  | 0  | 0  | 17 | 0  | - |
| 58         | ar | Kasim       | $\chi^2(1.19)=11.84$ | .00 | 0  | 2  | 0  | 0  | 17 | - |
| 59         | a  | Noriyuki    | $\chi^2(2.19)=22.21$ | .00 | 0  | 2  | 16 | 0  | 1  | - |
| 60         | b  | Tiombe      | $\chi^2(2.19)=26.95$ | .00 | 0  | 17 | 0  | 0  | 1  | 1 |
| Last names |    |             |                      |     |    |    |    |    |    |   |
| 61         | b  | Obadele     | --                   | --  | 0  | 19 | 0  | 0  | 0  | - |
| 62         | a  | Zhao        | --                   | --  | 0  | 0  | 19 | 0  | 0  | - |
| 63         | c  | De Jong     | --                   | --  | 19 | 0  | 0  | 0  | 0  | - |
| 64         | c  | De Vries    | --                   | --  | 19 | 0  | 0  | 0  | 0  | - |
| 65         | ar | Yylmaz      | $\chi^2(3.19)=29.63$ | .00 | 1  | 0  | 2  | 1  | 15 | - |
| 66         | b  | Mbeke       | --                   | --  | 0  | 19 | 0  | 0  | 0  | - |
| 67         | a  | Nguyen      | $\chi^2(3.19)=9.42$  | .02 | 1  | 10 | 5  | 0  | 3  | - |
| 68         | h  | Alejandro   | $\chi^2(3.19)=35.53$ | .00 | 1  | 0  | 1  | 16 | 1  | - |
| 69         | c  | Jansen      | --                   | --  | 19 | 0  | 0  | 0  | 0  | - |
| 70         | h  | Nunez       | $\chi^2(2.19)=22.21$ | .00 | 1  | 2  | 0  | 16 | 0  | - |
| 71         | a  | Wang        | --                   | --  | 0  | 0  | 16 | 0  | 0  | - |
| 72         | ar | Bilen       | $\chi^2(4.19)=20.21$ | .00 | 11 | 1  | 0  | 1  | 5  | 1 |
| 73         | c  | Van de Berg | --                   | --  | 19 | 0  | 0  | 0  | 0  | - |
| 74         | h  | Hernandez   | $\chi^2(1.19)=15.21$ | .00 | 1  | 0  | 0  | 18 | 0  | - |

|     |    |            |                       |     |    |    |    |    |    |   |
|-----|----|------------|-----------------------|-----|----|----|----|----|----|---|
| 75  | b  | T'Shaka    | $\chi^2$ (2.19)=7.05  | .02 | 0  | 10 | 8  | 0  | 1  | - |
| 76  | ar | Zorsu      | $\chi^2$ (4.19)=12.32 | .02 | 1  | 8  | 1  | 2  | 7  | - |
| 77  | c  | Bakker     | --                    | --  | 19 | 0  | 0  | 0  | 0  | - |
| 78  | b  | Kambon     | $\chi^2$ (3.19)=35.53 | .00 | 1  | 16 | 1  | 0  | 1  | - |
| 79  | ar | Ozbalaban  | $\chi^2$ (5.19)=19.84 | .00 | 2  | 4  | 1  | 1  | 10 | 1 |
| 80  | ar | Ozturk     | $\chi^2$ (2.19)=14.00 | .00 | 3  | 0  | 2  | 0  | 14 | - |
| 81  | ar | Turnay     | $\chi^2$ (4.19)=15.47 | .00 | 5  | 1  | 2  | 1  | 10 | - |
| 82  | a  | Takahashi  | --                    | --  | 0  | 0  | 19 | 0  | 0  | - |
| 83  | ar | Yazici     | $\chi^2$ (3.19)=14.86 | .00 | 2  | 2  | 3  | 0  | 12 | - |
| 84  | b  | Lamumba    | --                    | --  | 0  | 19 | 0  | 0  | 0  | - |
| 85  | ar | Duygun     | $\chi^2$ (4.19)=13.37 | .01 | 1  | 1  | 6  | 2  | 9  | - |
| 86  | ar | Azdural    | $\chi^2$ (3.19)=24.16 | .00 | 1  | 0  | 2  | 2  | 14 | - |
| 87  | c  | Van Dijk   | --                    | --  | 19 | 0  | 0  | 0  | 0  | - |
| 88  | h  | Marquez    | $\chi^2$ (1.19)=15.21 | .00 | 1  | 0  | 0  | 18 | 0  | - |
| 89  | ar | Ibn Hassan | --                    | --  | 0  | 0  | 0  | 0  | 19 | - |
| 90  | b  | Tutu       | $\chi^2$ (2.19)=26.95 | .00 | 1  | 17 | 1  | 0  | 0  | - |
| 91  | a  | Tanaka     | $\chi^2$ (1.19)=2.58  | .11 | 0  | 6  | 13 | 0  | 0  | - |
| 92  | h  | Juarez     | $\chi^2$ (1.19)=11.84 | .00 | 2  | 0  | 0  | 17 | 0  | - |
| 93  | c  | Visser     | --                    | --  | 19 | 0  | 0  | 0  | 0  | - |
| 94  | ar | Binaissa   | $\chi^2$ (1.19)=4.26  | .04 | 0  | 5  | 0  | 0  | 15 | - |
| 95  | ar | Benmoussa  | $\chi^2$ (2.19)=11.79 | .00 | 0  | 5  | 1  | 0  | 13 | - |
| 96  | h  | Aguilera   | $\chi^2$ (1.19)=11.84 | .00 | 2  | 0  | 0  | 17 | 0  | - |
| 97  | b  | Bululu     | --                    | --  | 0  | 19 | 0  | 0  | 0  | - |
| 98  | ar | Abdallah   | --                    | --  | 0  | 0  | 0  | 0  | 19 | - |
| 99  | h  | Ortiz      | $\chi^2$ (3.19)=17.00 | .00 | 1  | 0  | 1  | 12 | 5  | - |
| 100 | ar | Ozdemirel  | $\chi^2$ (3.19)=19.11 | .00 | 2  | 0  | 3  | 2  | 13 | - |
| 101 | c  | van 't Hek | --                    | --  | 19 | 0  | 0  | 0  | 0  | - |
| 102 | a  | Tran       | $\chi^2$ (3.19)=11.53 | .01 | 2  | 0  | 11 | 2  | 4  | - |
| 103 | h  | Hurtado    | $\chi^2$ (3.19)=15.74 | .00 | 1  | 0  | 4  | 12 | 2  | - |
| 104 | ar | Tadlaoui   | $\chi^2$ (3.19)=17.00 | .00 | 1  | 5  | 1  | 0  | 12 | - |
| 105 | b  | Tsjombe    | --                    | --  | 0  | 19 | 0  | 0  | 0  | - |
| 106 | ar | Shadid     | $\chi^2$ (1.19)=15.21 | .00 | 1  | 0  | 0  | 0  | 18 | - |
| 107 | a  | Qian       | $\chi^2$ (2.19)=22.21 | .00 | 1  | 0  | 16 | 0  | 2  | - |
| 108 | ar | Mourabi    | $\chi^2$ (1.19)=0.05  | .82 | 0  | 10 | 0  | 0  | 9  | - |
| 109 | ar | Hamoudi    | $\chi^2$ (3.19)=35.53 | .00 | 1  | 1  | 1  | 0  | 16 | - |
| 110 | c  | Smit       | --                    | --  | 19 | 0  | 0  | 0  | 0  | - |
| 111 | h  | Zapata     | $\chi^2$ (2.19)=10.84 | .00 | 2  | 4  | 0  | 13 | 0  | - |
| 112 | ar | Bayoumi    | $\chi^2$ (2.19)=6.74  | .03 | 0  | 9  | 1  | 0  | 9  | - |
| 113 | c  | Meijer     | --                    | --  | 19 | 0  | 0  | 0  | 0  | - |
| 114 | ar | Chadid     | $\chi^2$ (3.19)=35.53 | .00 | 1  | 0  | 0  | 1  | 16 | 1 |
| 115 | a  | Wu         | --                    | --  | 0  | 0  | 19 | 0  | 0  | - |
| 116 | b  | Karenga    | $\chi^2$ (2.19)=26.95 | .00 | 0  | 17 | 1  | 1  | 0  | - |
| 117 | h  | Martinez   | $\chi^2$ (2.19)=26.95 | .00 | 1  | 0  | 1  | 17 | 0  | - |
| 118 | a  | Suzuki     | $\chi^2$ (1.19)=15.21 | .00 | 0  | 0  | 18 | 1  | 0  | - |
| 119 | a  | Watanbe    | $\chi^2$ (2.19)=18.11 | .00 | 1  | 15 | 3  | 0  | 0  | - |
| 120 | b  | Toure      | $\chi^2$ (4.19)=5.48  | .24 | 5  | 7  | 1  | 3  | 3  | - |

Note. *c* = Caucasian; *b* = Black/African, *A* = Asian, *h* = Hispanic/Latino, *ar* = Arabic.  
Names that are “applicable” will be used in the main study.  
“+” means “to be included”, “-“ means “to be excluded” from further studies.



Table 8  
*Summary of the results per ethnic category*

| Origin          | First names | Gender | To be Included or excluded |
|-----------------|-------------|--------|----------------------------|
| African         | Kwasiba     | f      | +                          |
| "               | Muchumba    | f      | --                         |
| "               | Mirembe     | f      | +                          |
| "               | Tiombe      | f      | +                          |
| "               | Dikiledi    | f      | --                         |
| "               | Mandela     | m      | +                          |
| "               | Kofi        | m      | +                          |
| "               | Kwesi       | m      | +                          |
| "               | Simba       | m      | +                          |
| "               | Thabo       | m      | --                         |
| Asian           | Mei-Li      | f      | +                          |
| "               | Lin-Tao     | f      | +                          |
| "               | Naoki       | f      | --                         |
| "               | Chikako     | f      | +                          |
| "               | Lan-Kim     | f      | +                          |
| "               | Li Wei      | m      | +                          |
| "               | Cheng       | m      | +                          |
| "               | Akihiko     | m      | +                          |
| "               | Noriyuki    | m      | +                          |
| "               | Bao-Dat     | m      | --                         |
| Hispanic/Latino | Evita       | f      | +                          |
| "               | Agostina    | f      | +                          |
| "               | Benita      | f      | +                          |
| "               | Graciela    | f      | +                          |
| "               | Estrella    | f      | +                          |
| "               | Carlos      | m      | +                          |
| "               | Julio       | m      | +                          |
| "               | Miguel      | m      | +                          |
| "               | Salvador    | m      | +                          |
| "               | Pedro       | m      | +                          |
| Turkish         | Semra       | f      | +                          |
| "               | Fadime      | f      | +                          |
| "               | Hayriye     | f      | --                         |
| "               | Yeter       | f      | --                         |
| "               | Gulsum      | f      | +                          |
| "               | Suleyman    | m      | +                          |
| "               | Musa        | m      | --                         |
| "               | Mesut       | m      | +                          |

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|            |            |     |    |
|------------|------------|-----|----|
| "          | Mahmud     | m   | +  |
| "          | Kasim      | m   | +  |
| Moroccan   | Fatima     | f   | +  |
| "          | Layla      | f   | -- |
| "          | Rashida    | f   | +  |
| "          | Malika     | f   | -- |
| "          | Naima      | f   | +  |
| "          | Mohammed   | m   | +  |
| "          | Mustafa    | m   | +  |
| "          | Abdullah   | m   | +  |
| "          | Hassan     | m   | +  |
| "          | Ali        | m   | +  |
| Dutch      | Sanne      | f   | +  |
| "          | Janneke    | f   | +  |
| "          | Fleur      | f   | +  |
| "          | Femke      | f   | +  |
| "          | Kaatje     | f   | +  |
| "          | Pieter-Jan | m   | +  |
| "          | Daan       | m   | +  |
| "          | Jaap       | m   | +  |
| "          | Douwe      | m   | +  |
| "          | Henk       | m   | +  |
| Last names |            |     |    |
| African    | Toure      | f/m | -- |
| "          | Bululu     | f/m | +  |
| "          | Karenga    | f/m | -- |
| "          | Tsjombe    | f/m | +  |
| "          | Tutu       | f/m | +  |
| "          | T'Shaka    | f/m | -- |
| "          | Mbeke      | f/m | +  |
| "          | Lumumba    | f/m | +  |
| "          | Obadele    | f/m | +  |
| "          | Kambon     | f/m | +  |
| Asian      | Zhao       | f/m | +  |
| "          | Wang       | f/m | +  |
| "          | Takahashi  | f/m | +  |
| "          | Tanaka     | f/m | +  |
| "          | Tran       | f/m | -- |
| "          | Quian      | f/m | +  |
| "          | Wu         | f/m | +  |
| "          | Suzuki     | f/m | +  |
| "          | Watanabe   | f/m | -- |
| "          | Nguyen     | f/m | -- |

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|                 |             |     |    |
|-----------------|-------------|-----|----|
| Hispanic/Latino | Almodovar   | f/m | +  |
| "               | Hernandez   | f/m | +  |
| "               | Nunez       | f/m | +  |
| "               | Marquez     | f/m | +  |
| "               | Juarez      | f/m | +  |
| "               | Aguilera    | f/m | +  |
| "               | Hurtado     | f/m | -- |
| "               | Zapata      | f/m | -- |
| "               | Martinez    | f/m | +  |
| "               | Ortiz       | f/m | -- |
| Turkish         | Ozdemirel   | f/m | +  |
| "               | Yilmaz      | f/m | +  |
| "               | Bilen       | f/m | -- |
| "               | Zorsu       | f/m | -- |
| "               | Ozbalaban   | f/m | -- |
| "               | Ozturk      | f/m | +  |
| "               | Turnay      | f/m | -- |
| "               | Yazici      | f/m | -- |
| "               | Duygun      | f/m | -- |
| "               | Azdural     | f/m | +  |
| Moroccan        | Ibn Hassan  | f/m | +  |
| "               | Binaissa    | f/m | -- |
| "               | Benmoussa   | f/m | -- |
| "               | Abdallah    | f/m | +  |
| "               | Tadlaoui    | f/m | +  |
| "               | Shadid      | f/m | +  |
| "               | Mourabi     | f/m | -- |
| "               | Hamoudi     | f/m | +  |
| "               | Bayoumi     | f/m | -- |
| Dutch           | De Jong     | f/m | +  |
| "               | De Vries    | f/m | +  |
| "               | Jansen      | f/m | +  |
| "               | Van de Berg | f/m | +  |
| "               | Bakker      | f/m | +  |
| "               | Van Dijk    | f/m | +  |
| "               | Visser      | f/m | +  |
| "               | Van 't Hek  | f/m | +  |
| "               | Smit        | f/m | +  |
| "               | Meijer      | f/m | +  |

*Note.* “f” in the table, indicates female gender; “m” in the table, indicates male gender.  
“+” Indicates that the name (first or last name) may be included in further study;  
“—” Indicates that the name (first or last name), should be excluded from further study  
(i.e., the name was not significantly “typical” for a certain ethnic category).

The reported ethnic origins of most names were mostly in line with the assumed ethnicity of those names. The “to be included or excluded” column presents the final results of the testing procedure (see Table 8). According to the findings of this study for both samples (i.e., students, non-students), 29 (out of 120) names should be excluded (i.e., first names: Naoki, Bao-Dat, Muchumba, Malika, Hayriye, Yeter, Layla, Dikiledi, Musa, Thabo; last names: Nguyen, Bilen,, T’Shaka, Zorsu, Ozbalaban, Turnay, Yazici, Duygun, Binaissa, Benmoussa, Ortiz, Tran, Hurtado, Mourabi, Zapata, Bayoumi, Karenga, Watanbe and Toure). More specifically, 6 Black/African (3 first names and 3 last names), 5 Asian (2 first names and 3 last names), 3 Hispanic/Latino (only last names), 9 Turkish (3 first names and 6 last names), 6 Moroccan (Moroccan and Turkish are categorized as Arabic origin, therefore one can state that 15 Arabic names should be excluded in total; 2 first names and 4 last names). All the Caucasian names should remain included. Four out of the 29 names should be excluded due to attribution of non-students’ sample (i.e., Muchumba, Naoki, Ozbalaban and Tran).

Based on the findings from this study, female Arabic names seemed more confusing than male Arabic names, and Arabic surnames were the least “typical” (i.e., clearly recognizable as belonging to the assumed ethnicity).

Hypothesis 3, namely that the attributed ethnic origin of names (i.e., first and last names) is in line with the assumed ethnicity (i.e., Caucasian vs. Black/African, Asian, Hispanic/Latino and Arab), both in students and non-students’ samples, is supported.

### *Inferences from Job Titles*

In the students and non-students’ sample, 11 job title pairs were analyzed. Respondents were asked to report the amount of face contact with clients for jobs. The estimated amount of face contact (i.e., front office or back office jobs), reported by respondents was defined as “inference from a job title”. More specifically, respondents were asked to judge whether jobs were more likely to be front office or back office jobs. Several job titles ( $n = 22$ ) were shown. For example, a job as “occupational therapist” was hypothesized as a front office job, because it was assumed that a certain amount of face contact with external clients was required for that job-function. On the other hand, “clinical laboratory technologist” job was assumed to be a back office job, because it requires less or no contact with external clients, contrary to

hypothesized front office job. These assumptions were made on O\*net database findings (see Derous et al., 2006).

In order to investigate whether significantly more face contact was reported for the hypothesized front office job than for the hypothesized back office jobs, a *paired sample T-test* was conducted. Respondents indicated (on a 7-point Likert – scale) if they considered the job being front or back office job (*1 = little/low face contact; 7 = lots of/high in face contact*). The researchers considered a job as more *front office job* if the mean score is equal or higher than 4.25. A job was considered as back office job when the indicated mean score was less than 3.75. Job titles should be excluded from further study if: (1) there is no significant difference between paired job titles; (2) the significant difference between paired job titles are in the wrong direction; (3) the mean point differences are at least 1.0 scale point (cut-off  $\geq 1.0$ ) and – for the purpose of this thesis only- (4) findings of students sample and non-students’ sample are different.

Tables 9a and 9b show findings of the paired sample T-test analysis, for both students and non-students’ samples.

**Table 9a**  
*Reported Amount of Face Contact with Clients per Pair of Job Titles, Students’ sample*

| No. | Job title pairs                         |  | <i>M</i> | <i>M</i> | <i>M</i> | <i>t</i>                 |
|-----|---|--|----------|----------|----------|--------------------------|
|     | Front-office                            | Back-office  | (f-o)    | (b-o)    | (dif)    |                          |
| 1   | Auditor                                 | Accountant   | 3.33     | 3.90     | .57      | $t(21) = 1.04, p = .31$  |
| 2   | Postal office clerk                     | Postal office mail processor                       | 5.29     | 2.19     | 3.1      | $t(21) = 6.55, p < .00$  |
| 3   | Computer support specialist             | Computer programmer                                | 4.43     | 2.57     | 1.86     | $t(21) = 5.35, p = .00$  |
| 4   | Pharmacist (workplace: pharmacy)        | Pharmacist (workplace: industry)                   | 5.24     | 2.76     | 2.48     | $t(21) = 6.01, p = .00$  |
| 5   | Hotel/mote/resort desk clerk            | File clerk   | 6.62     | 2.38     | 4.24     | $t(21) = 14.94, p = .00$ |
| 6   | Automotive mechanic (workplace: garage) | Automotive service technician (workplace: factory) | 4.30     | 2.65     | 1.65     | $t(21) = 4.44, p = .00$  |
| 7   | Museum security guard                   | Gaming/Banking surveillance officer                | 5.29     | 5.05     | .24      | $t(21) = .65, p = .52$   |
| 8   | Electrician (home system)               | Electrician (company system)                       | 5.29     | 4.05     | 1.24     | $t(21) = 4.13, p = .001$ |
| 9   | Dental hygienist                        | Medical records & health information technicians   | 6.24     | 4.19     | 2.05     | $t(21) = 5.77, p = .00$  |
| 10  | Public relation specialist              | Technical writer                                   | 6.24     | 2.52     | 3.71     | $t(21) = 13.00, p = .00$ |
| 11  | Occupational therapists                 | Clinical laboratory technologists                  | 6.43     | 2.81     | 3.62     | $t(21) = 14.85, p = .00$ |

Table 9b

*Reported Amount of Face Contact with Clients per Pair of Job Titles, Non-Students' Sample*

| No. | Job title pairs                         |  | <i>M</i><br>(f-o) | <i>M</i><br>(b-o) | <i>M</i><br>(dif) | <i>t</i>                 |
|-----|---|--|-------------------|-------------------|-------------------|--------------------------|
|     | Front-office                            | Back-office  |                   |                   |                   |                          |
| 1   | Auditor                                 | Accountant   | 3.79              | 3.97              | .18               | $t(37) = .46, p = .64$   |
| 2   | Postal office clerk                     | Postal office mail processor                       | 2.79              | 5.39              | 2.61              | $t(37) = 6.66, p = .00$  |
| 3   | Computer support specialist             | Computer programmer                                | 2.34              | 4.45              | 2.11              | $t(37) = 7.61, p = .00$  |
| 4   | Pharmacist (workplace: pharmacy)        | Pharmacist (workplace: industry)                   | 5.79              | 3.05              | 2.74              | $t(37) = 9.72, p = .00$  |
| 5   | Hotel/mote/resort desk clerk            | File clerk   | 2.63              | 6.61              | 3.97              | $t(37) = 15.80, p = .00$ |
| 6   | Automotive mechanic (workplace: garage) | Automotive service technician (workplace: factory) | 2.69              | 4.31              | 1.61              | $t(37) = 5.44, p = .00$  |
| 7   | Museum security guard                   | Gaming/Banking surveillance officer                | 5.26              | 5.09              | .17               | $t(37) = .58, p = .57$   |
| 8   | Electrician (home system)               | Electrician (company system)                       | 5.24              | 3.81              | 1.43              | $t(37) = 5.31, p = .00$  |
| 9   | Dental hygienist                        | Medical records & health information technicians   | 4.11              | 6.14              | 2.03              | $t(37) = 8.22, p = .00$  |
| 10  | Public relation specialist              | Technical writer                                   | 6.39              | 2.34              | 4.05              | $t(37) = 19.01, p = .00$ |
| 11  | Occupational therapists                 | Clinical laboratory technologists                  | 6.29              | 2.76              | 3.53              | $t(37) = 16.34, p = .00$ |

Note. (f-o) means "front office", (b-o) means "back-office", (dif) means "mean difference" between (f-o) and (b-o).

In the students' sample, significant differences were found for 5 job pairs, namely for "postal office clerk" ( $M = 5.29, SD = 1.71$ ) and for "postal office mail processor" ( $M = 2.19, SD = 1.03$ ),  $t(21) = 6.55, p < .00$  for "hotel/motel/resort desk clerk" ( $M = 4.43, SD = .80$ ) and "file clerk" ( $M = 2.38, SD = 1.32$ ); for "automotive mechanic (garage)" ( $M = 4.30, SD = 1.45$ ) and for "automotive service technician (factory)" ( $M = 2.65, SD = 1.82$ ); for a "public relation specialist" ( $M = 6.24, SD = .77$ ) and for "technical writer" ( $M = 2.52, SD = 1.08$ ); for a "occupational therapists" ( $M = 6.43, SD = .81$ ) and for "clinical laboratory technologist" ( $M = 2.81, SD = .81$ ).

In the non-students' sample, significant differences were found in 2 job pairs, namely for "public relation specialist" ( $M = 6.39, SD = .72$ ), and for "technical writer" ( $M = 2.34, SD = 1.04$ ); for "occupational therapists" ( $M = 6.29, SD = .89$ ), and for "clinical laboratory technologists" ( $M = 2.76, SD = .97$ ).

In sum, the results show that more job titles should be excluded due to judgments of the participants of the non-students' sample. One of the criteria for excluding the job titles was criterion No.4, where it was determined that a job title should be excluded if findings of both samples were different and the determined means of 4.25 or greater for the front office job and smaller than 3.75 for the back office job. Since the findings in non-students and students'

samples were different, alternative jobs for future studies should be considered or different studies for students and non-students should be designed.

Hypothesis 4, namely that the perceived amount of face contact with clients is higher for front office jobs than for back office jobs, both in students and non-students' samples, is not supported.

### **Conclusion and Suggestions for Further Research**

Several hypotheses have been tested in the work presented above. Generally, the results of this study were similar for both students and non-students' samples.

Most visible differences in attributions of the two samples point towards the *inferences from job titles*. More job titles should be excluded due to judgments of the non-students' sample. As a result, only two job titles are considered applicable in further studies on discrimination (i.e., "public relation specialist"/"technical writer" and "occupational therapist"/"clinical laboratory technologist").

Furthermore, Arabic *names* were significantly more confusing regarding the ethnic origin than Black/African, Asian, Hispanic/Latino and Dutch names, in both samples. However, this was mainly due to, female Arabic names that were more confusing than male Arabic names, in both samples. For this reason it is suggested only to use male Arabic names in further studies.

Overall, resumes are equivalent on *type of education, level of education, amount of work experience and hobbies*, as perceived by both student and non-student respondents. More specifically, in the students' sample, all resumes appeared equivalent regarding type of education, level of education, and amount of work experience. Resumes were neither equivalent nor non-equivalent on kind of work experience, and somewhat non-equivalent regarding hobbies. However, across all resume aspects, resumes appeared equivalent. In the non-students' sample, resumes were equivalent regarding type of education, level of education, and also amount of work experience. However, like in the students' sample, resumes were neither equivalent nor non-equivalent on kind of work experience, and somewhat non-equivalent regarding hobbies. One post-hoc explanation is that hobbies differ according to kind of activity (individualistic vs. social). Some hobbies are performed in a more individualistic

way (e.g., writing, gardening, cooking, reading), while others seem to be more social in nature (e.g., dancing, chatting, traveling, going to concerts). This fact should be taken into account when setting up materials for further research. Alternatively hobbies may be held constant in all resumes; however ecological validity may be harmed since stimulus material may become less realistic. Hobbies are more complicated than they seem to be: they may be associated with some aspects (e.g., type of activity, amount of social contact, etc.), which may be difficult to control for. Therefore it is suggested to leave out hobbies from resumes in future studies unless one is able to hold the kind of hobbies constant and make them less ambiguous. It seems rather logical that subjects do not see equivalence between painting and chatting on the internet (Resume A), cooking and playing in volleyball team (Resume B), jogging and going to concerts (Resume C), and watching sports and theater (acting/directing) (Resume D). Hence, one might argue to leave out the hobbies, since people may perceive hobbies in many different ways, as being: “smart”, “little intellectual”, “little challenging”, “high class”, “snobbish”, “uninteresting” etc. Although the researchers made a distinction between “passive” and “active” hobbies on the forehand, hobbies seem so complex to label that it is suggested to leave them out of further studies. As to the non-equivalency for resume aspect “kind of work”, one might assume that the work experiences might have been perceived differently according to the reputation of the job place (e.g., McDonalds versus the Dinner House). McDonalds might have been perceived as a “lower status” company compared to the “Dinner House”. This finding suggests not using existing names of companies in any upcoming study, since people may have different associations with different places (e.g., low status vs. high status workplace). Contrary to hobbies, the “kind of work experience” appeared applicable in future studies, given that the suggested changes (usage of non-existing company names) would be made. In sum, adjustments in further research may be made considering these two resume aspects (e.g., hobbies and kind of work experience). Other facts regarding work, such as amount of work experience, front and back office type of work experience, have been included in all resumes in the study. Standardizing the amount of work experience in all resumes in this study makes it possible for respondents not to attribute the perceived differences to the amount of work experience. Also both front office and back office work experiences can be included in all resumes, so that the perceived difference cannot be attributed to the type of work experience in terms of amount of contact with external clients. In sum, Hypothesis 1, stating that resumes are



equivalent on type of education, level of education, amount of work experience and hobbies, as perceived by both students and non-students' samples, was supported. The average of all five resume aspects and overall equivalency are similar and strongly intercorrelated. This result showed that the resumes appeared to be generally equivalent, except for the discussed adjustments in hobbies and kind of work experience.

The results show that the attributed ethnicity of affiliations is in line with the assumed ethnicity (neutral vs. Black/African, Asian, Hispanic/Latino and Arabic), both in students and non-students' samples. Therefore, Hypothesis 2 was supported.

According to criteria of exclusion (see results section) and the results of chi-square tests for both students and non-students' samples combined, eleven affiliations should be excluded from further studies, namely; (1) treasurer of the annual Asiatic Film Festival, (2) active member of EUR Poquito Souls Poetry Society, (3) active member of the traditional Asian Cooking Club for students, (4) active member of the Rotterdam "Tango y Salsa" Dance troupe, (5) treasurer of the traditional Asian Cooking Club for students (6) active member of the African Arts Society, (7) active member of the traditional Arab Cooking Club for EUR students, (8) treasurer of the annual Arab Film Club, (9) treasurer of the Black Percussionists, (10) active member of the "Wushu" Martial Arts Club and (11) treasurer of the "Don Quijote", the Hispanic Literature Reading Club at EUR. The above named affiliations are mostly related to a certain ethnic group, but not exclusively open to that particular ethnic group. In other words, it may be very common for an Arabic person to join Asian Martial Arts Club for instance. On the other hand, the Black Alumni Student Organization may be more attractive for black people to join, than any other ethnicity, since the "race" of the potential applicant is more emphasized than in Martial Arts club. In sum, the nature of affiliations that should be excluded on the basis of our criteria may be different from the nature of affiliations that should remain included. Furthermore, activities such as cooking, sports, dance, interest in foreign films, art, music or foreign literature reading may be perceived as accessible for any ethnic group, who has interest in that particular activity. Additionally, associations about the race and kind of activity, that do or do not go together in a particular affiliation, may be crucial for deciding whether an affiliation is neutral or ethnic (exclusively accessible for particular ethnic group).

In sum, the affiliations that should be excluded were the above named (e.g., cooking, sports, dance, foreign films, art, music, literature reading), while the affiliations that should

remain included, were activities which were logically intended to be fulfilled by a member of that particular ethnic group.

In order to test whether respondents were able to attribute first and last names to the assumed ethnicity, a series of chi-squares analyses were conducted. Chi-squares were very significant: the reported ethnic origins of most names were in line with the assumed ethnicity of those names. Out of 120 selected first and last names, only 29 first and last names appeared to be difficult to attribute to the right ethnicity and therefore labelled as too ambiguous to be included in future studies. According to the findings of this study based on comparison of the two samples (i.e., students and non-students' samples), 10 first names and 19 last names were to be excluded (i.e., first names: Naoki, Bao-Dat, Muchumba, Malika, Hayriye, Yeter, Layla, Dikiledi, Musa, Thabo; last names: Nguyen, Bilen,, T'Shaka, Zorsu, Ozbalaban, Turnay, Yazici, Duygun, Binaissa, Benmoussa, Ortiz, Tran, Hurtado, Mourabi, Zapata, Bayoumi, Karenga, Watanbe and Toure). More specifically, 6 African (3 first names and 3 last names), 5 Asian (2 first names and 3 last names), 3 Hispanic/Latino (only last names), 9 Turkish (3 first names and 6 last names), 6 Moroccan (Moroccan and Turkish are categorized as Arabic origin, therefore one can state that 15 Arabic names should be excluded in total; 2 first names and 4 last names). All the Caucasian names should remain included.

As the results show, strikingly more Arabic *female* names have been wrongly attributed, compared to other ethnic names and male Arabic names. Based on these findings, one may conclude that Arabic names are generally more confusing regarding the ethnic origin than all other ethnic names. When we looked at the attributions of the students and non-students' samples, remarkably more names were seen as ambiguous to the non-students than to the students. This is a remarkable finding that may be sample-specific. Four names (i.e., Muchumba, Naoki, Ozbalaban and Tran) should be excluded due to attributions of the non-students' sample. Several explanations are possible. First, the non-students' sample consisted of people that were older than students and may represent another generation that might be less familiar with Arab names. Second, the research context was not identical to students and non-students' samples and therefore several uncontrolled factors could have influenced the results. Respondents from the non-students' sample filled-out the questionnaires at home at any possible time. This implies that in future studies, (a) context should be kept constant and/or (b) both the students and non-students should be considered as different samples.

### *Implications for Further Research and Practice*

As mentioned in the theoretical part, employment rates of non-western foreigners are lower than those of western foreigners. Even when controlling for educational level and age, the chance of being unemployed is higher for ethnic minorities compared to the majority group. Therefore, biased decision-making may form a serious problem in many modern organizations. The main studies test whether recruiters are prone to reject applicants with ethnic-sounding names and ethnic affiliations. Therefore materials for the future main studies had to be tested in order to assure that resumes are equal in all resume/applicant characteristics except names/affiliations.. The testing of the materials in this study showed that names/affiliations are perceived typical for a certain ethnicity and that resumes are equivalent in all other resume aspects (if some suggestions are taken into account).

The social relevance of the main study is high, since all applicants should be offered equal opportunities in recruitment and selection practices, therefore the results of the pilot testing in this thesis were important in order to be able to provide valid materials for further studies on discrimination. As mentioned above, the research in this study was limited to testing and developing materials for the main study, but necessary to make correct inferences about respondent's attributions and discriminatory behaviour in a controlled setting.

As to biased decision-making and stereotyping in recruitment practices, the following conclusions can be made. First, stereotypes are shared among groups, rather than being seen as individualistic opinions. In this study, the findings based on both samples were generally similar, with exception of the attributions of Arab female names of the non-students' sample, which may be due to some group differences. Ethnic schemes were activated (e.g., most respondents attribute the affiliation Martial Arts to the Asian category), holding back respondents any disconfirming information. This is in line with findings of Devine (1989): when White participants were primed with stereotypical words about African/Americans (e.g., "lazy", "blues", "negro", etc. flashing on screen in between neutral words), participants were only able to recall the stereotypical words. Also in this research, participants were probably concentrating on ethnic information, more than trying to disconfirm or rethink the presented information. Moreover, participants were confronted with some time pressure, when filling out the questionnaires, which is similar to recruiters' resume shifting tasks. The decisions might be

the result of rapid judgements and usage of the availability of existing schemes. “Cognitive overload”, whilst filling out the questionnaires, might also play a role. Participant might choose the easiest solution, namely by formulation of their opinions, attributions, and finally judgement on previous experiences, hence stereotypes. When participants are “forced” to form an impression, the possibility of attributing any given ethnic characteristic to a non-ethnic category might not be considered.

In sum, the present study provides reliable results on the equality of resumes (educational level and work experience), the perceived ethnicity of affiliations and first/last names, and of the perceived amount of face contact with external clients in several front and back office jobs that can be used in future studies. The four research questions (i.e., *Will information in the resumes be regarded as ethnically equivalent? Will the attributed ethnicity of resume affiliations be in line with the assumed ethnicity? Will the attributed ethnicity of names be in line with the assumed ethnicity? Will the amount of face contact with external clients be in line with the assumed amount of client contact?*), and the upon based hypotheses are mainly supported.

On the basis of these research findings valid materials for upcoming studies on discrimination upon recruitment can be developed.

## Appendix A

### Terminology and Definitions (as used in the Netherlands)

**Direct discrimination** – prejudice towards immigrants, as well as negative stereotypes, can result in direct discrimination. Employers might prefer native applicants, and see migrants as culturally different and unable to fit the team in a Dutch organization (Veenman, 1991; in Bovenkerk, Gras & Ramsoedh, 1994).

**Discrimination** – (with regard to employment) – An intentional or unintentional act which adversely affects employment opportunities because of race, colour, religion, sex, handicap, marital status, or national origin, or other factors such as age (under particular laws.) (ILO, 2004).

**Ethnic groups** – Human population whose members identify with each other, usually on the basis of a common genealogy or ancestry (Smith 1986). Ethnic groups are also usually united by common cultural, behavioural, linguistic, or religious practices.

**Ethnic majority** – native Dutch persons (nationals) (SCP/WODC/CBS, 2005).

**Ethnic minority** – non-western-immigrants (SCP/WODC/CBS, 2005).

**Indirect discrimination** – indirect discrimination consists of rules or practices which are not intrinsically discriminatory but which have detrimental consequences for immigrants. An example is the psychological tests, often used in selection procedures (Veenman, 1991; in Bovenkerk, Gras & Ramsoedh, 1994).

**Non-western-immigrants** – Ethnic minorities that come from Africa, Asia (excl. Indonesia, Japan and Oceania), Latin America and Turkey (SCP/WODC/CBS, 2005).

**Western-immigrants** – Ethnic minorities that come from Europe (excl. Turkey), North America, Indonesia (formal Netherlands India), Japan and Oceania (SCP/WODC/CBS, 2005).

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