EFFECT OF CONTENT AND STANDARDNESS ON LANGUAGE ATTITUDE

THE EFFECT OF CONTENT AND STANDARDNESS ON LISTENERS’ AFFECTUAL PERCEPTION OF DIFFERENT ENGLISH ACCENTS: A LANGUAGE ATTITUDE STUDY AT MCMASTER UNIVERSITY

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Lay Abstract

Whenever we listen to other people speak we are not just taking in information and trying to understand what they are saying. People will tend to pass judgement on other speakers for a number of reasons, including what they are saying, and how they are saying it. Many studies have studied this phenomenon, known as language attitude by linguists, to see how different accents compare to each other for different speakers and listeners. Although this research has been done for many different accents, none have been done comparing standard and non-standard accents of Canadian English. This research project involved surveying a number of Canadian university students to find out which Canadian and British accents they liked and disliked, and in what ways. I found that Canadians tend to prefer Standard Academic British English over less-educated sounding Canadian accents. Since there was a difference in preference between Canadian English speakers and non-Canadian English speakers, it appears that familiarity might allow people to be more critical of the accents or dialects they are hearing. These findings are important because they can help us to find possible sources of unequal opportunity in society as influenced by how people speak.

Abstract

When people are listening to others they are not just interpreting the speech in order to understand and participate in a communicative act. While interpreting the linguistic information, listeners are attentive to extralinguistic information about the speaker about which they make assumptions based on the accent and content that they hear. Many researchers have studied language attitude to see how different accents compare to each other for different speakers and listeners. Although this research has been done for many different accents, none have been done comparing standard and non-standard accents of Canadian English, or that account for the native accent of the listener. A number of university students from South-Western Ontario were surveyed to elicit general language attitude scores on a series of 11 measures for 8 different voice clips differing in terms of standardness (Standard vs. Non-Standard), content (Academic vs. Colloquial), and accent (British vs. Canadian). A comparison of the mean scores on the accents revealed a general preference for British and standard accents, and a general dislike of Canadian and non-standard accents. A Principal Component Analysis identified a difference in response pattern between native Canadian English and non-native Canadian English speakers. When combined with general qualitative descriptions of the voice clips offered by participants it appears that language attitude is greatly influenced by perception of prestige and familiarity with the accent. Listeners prefer readily identifiable accents that are held in esteem by the greater speech community, while they dislike accents which are less clearly intelligible and lack prestige. Listeners were also more critical of accents with which they were more familiar. Such findings are important because they can help us to identify potential sources of unequal access to opportunity in society as influenced by how people speak.

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List of All Abbreviations and Symbols

AC - Academic

ANOVA - Analysis of Variance

Avg - Average

BR - British

CA - Canadian

CO - Colloquial

H0 - Null Hypothesis

H1 - Alternate Hypothesis

MANOVA - Multivariate Analysis of Variance

NO - Non-Standard

ST - Standard

SD - Standard Deviation

Var - Variance

Yijk - Average score of the Dependent Variable of the ith Subject at the jth level of Accent, and the kth level of Nativeness

α - Level of Accent

β - Level of Nativeness

ɛ - Statistical Error Term

μ - Population Cell Mean

π - Effect of ith Subject

χ - Chi, as in Chi-Squared Test

Declaration of Academic Achievement

I designed the research conducted in this thesis project with guidance and input from my supervisor, Dr. Magda Stroinska. This project represents original research that I conducted as follows. With the guidance and advice of Dr. Stroinska I conducted a review of the literature, proposed a hypothesis and experiment design, and prepared the ethics approval application for the empirical research component of my project. Upon being granted approval from the McMaster Research Ethics Board to proceed with my study, with guidance from Dr. Stroinska I performed recruiting, surveying, and qualitative and quantitative data gathering for all participants in my field research. I performed all analyses, with advice from my supervisor, as well as feedback from the Sociolinguistics Lab at McMaster. Assistance with statistics was graciously offered by Andrew Almas (PhD Candidate) of University of Toronto. I wrote the manuscript with the editorial support and supervision of Dr. Stroinska.

Chapter 1: Introduction

***1.1 Motivation***

Is a listener’s affectual perception of different accents of English influenced by the content context in which it is heard, and the standardness of the accent? In other words, can the way people create utterances with particular accents elicit different responses in people’s attitude toward those accents, just by changing the content, or by moving closer to or further from the standard form? Everyone has an accent of some sort, but some are closer to the forms considered to be standard than others. When a listener encounters a speaker who is using a non-standard accent, how does that influence their perception of that speaker as a person? Does this influence continue to hold sway when we hear standard vs. non-standard accents of different varieties of the language? Why is it important that we investigate affectual perception with regards to different accents?

A search of the literature brings numerous reports of how rapidly languages worldwide seem to be dying out. Although that may be true, those languages still in use continue to change in predictable and unpredictable ways; ways which in some cases should eventually help to replenish the linguistic stock to an extent. Such changes, be they phonetic or grammatical, generate variations of existing languages that carry with them characteristics instilled in them by their unique circumstances. Since humans are prone to categorizing anything different in order to better organize their perceptions of the world (again, even a cursory search of the literature will elicit a wide variety of articles on the categorization skills of the human mind at all stages of development), they do the same with linguistic variants. These variations, whether they are accents, sociolects, or even error-laden productions, will cause people interacting with them to develop particular attitudes. There is a growing literature exploring language attitude, but such a study has not yet taken place in Southern Ontario, and few examine the effects of linguistic familiarity. Much of the existing literature deals with perceptions of the different varieties of British and American English, and socioeconomic variation.

Unlike those prior studies, this project compares linguistic attitudes toward standard and non-standard accents among people differentiated by their supposed familiarity with standard Canadian English (specifically the Southern Ontario variety). Thanks to widespread literacy and increased global integration, standard forms of language have become a route to positive social interaction. However, in doing so, they may perpetuate a situation whereby particular varieties of the language are marginalized. My hope is that this project will help contribute to answering such questions as: What are the effects of non-standard forms on a population expected to be fluent in a standard dialect? How do non-standard forms proliferate? Under what circumstances can a non-standard form become the standard form? What are the factors which influence linguistic attitudes? Why do we develop particular attitudes toward different varieties? Given time and resource restraints, this project is intended to be little more than an exploratory first glance at local linguistic attitude among people with variable familiarity with the language, but should hopefully serve as a starting point for future studies.

A more personal motivation for this study is grounded in my role as a secondary school teacher in an urban center (Hamilton, ON). Working with youth who are undergoing the critical transition from childhood into adulthood, and consequently from their homes into society – via the workplace and post-secondary education – I witness firsthand the varieties of language being used. Currently working as a professional, but also as a customer service worker in sales (for Value Village), a student at McMaster, and as someone who naturally speaks a different sociolect than that expected of someone in academia, I therefore recognize the linguistic expectations of academia, prospective employers, and the general public. This sentiment has been noted repeatedly in the literature (Ryan, E.B., Giles, H., & Sebastian, R.J., 1982; Edwards, J., 1982). In my interactions with students, I realize that the current curriculum has made no specific provisions for preparing students for a linguistic environment that is more judgemental than they may believe (*Growing Success*, 2010). Even in Canada, employers have been found to discriminate when hiring merely by the assumption that an applicant might speak, and therefore think or work differently (Oreopoulos, 2011). Given the lack of awareness or attention regarding the value of language as a tool for recognition and success in society, I feel that it is my duty as an educator to inculcate in my students the understanding that how they speak will affect how they are perceived by others. In doing so, I hope that at least the awareness that people expect certain forms of language in certain situations may help some students to realize the power of language in their lives, thus motivating them to become more linguistically aware. This awareness can mean acquiring a standard form in order to improve access to opportunities in a standard language-preferring society, or the recognition that non-standard forms are just as viable tools for communication and as such should not be disparaged as much as they seem to be.

***1.2 Thesis Overview***

In order to explore this topic, I decided to conduct the following experiment done in conjunction with a review of the literature that provided some insight into the research already done in this area. The literature review will present an overview of topics such as the study of Canadian English, the study of accents and dialects, and the study of language attitude and perception. For the experiment, approximately one hundred subjects recruited from McMaster University divided into two different groups of subjects (Canadian English L1, Canadian English L2) would complete a three-part study.

Part A would ask for demographic information for sorting purposes (seeking such things as their L1, age, and level of education). Part B would require participants to listen to eight recordings of accent samples provided by two different English speakers capable of speaking both standard and non-standard varieties of English, who would read two texts differentiated by whether they would be considered academic or colloquial in terms of content/context. The accents are from English L1 speakers of different backgrounds (Canadian and British) and have been applied to different text samples in order to elicit a variety of phonetic features characteristic of those accents. As such, the eight samples (consisting of a few short sentences each) are: Canadian Standard Academic, Canadian Standard Colloquial, Canadian Non-Standard Academic, Canadian Non-Standard Colloquial, British Standard Academic, British Standard Colloquial, British Non-Standard Academic, and British Non-Standard Colloquial. For the purposes of this study, Canadian has been defined as those dialects of English which are spoken in Canada by Canadians, and British has been defined as those dialects of English which are spoken in the UK by the English (as opposed to Welsh, Scottish, or Irish). Academic has been defined as speech containing content which would be encountered in an academic text, while Colloquial has been defined as speech which might be considered to be “everyday” speech by listeners. Standard has been defined as framed by the discussion presented by Dollinger (2011) and based on the work of Chambers (1986, 1998). By their usage, in Canada, standard encompasses the grammar and core vocabulary used by educated, urban, middle-to-upper-middle class speakers of the socio-politically dominant tongue; in this case, English. For British, the label of standard has traditionally been applied to Received Pronunciation (RP), spoken by a small minority of British English speakers. In general, standard forms of languages tend to be described as having clearer pronunciation, a more preferable and academically-appropriate vocabulary, and tend to be valued as the form of language best suited for education, politics, and most media (Dollinger, 2011; Gluszek, 2010). In contrast, non-standard would be any English accent or dialect which differs from a standard form in terms of pronunciation, grammar, and vocabulary, such as Newfoundland English. The two speakers would each elicit four recording samples, in a modified matched-guise technique influenced by the seminal study by Lambert et al. (1960). For each of the samples, participants would be asked to evaluate the accents via a Likert scale on eleven selected measures regarding attitude toward the sample, as per the Speech Evaluation Instrument (Zahn & Hopper, 1985), with further influence taken from the Cargile & Giles (1997) study on language attitudes among American university students. In Part C, a final discussion question would be posed to the participants in which they would be asked to rank their preferences for the accents, and briefly explain why.

Upon completion of the study, general ratings per sample would be analysed to see if there were any significant effects of type of text (academic vs. colloquial), type of accent (Canadian vs. British), standardness (standard vs. non-standard), and the linguistic background of participants (Canadian English L1 vs. Canadian English L2) on the overall affectual perception of the participants toward the accents. An analysis will be done on the qualitative response data from Part C in order to compare listener preference with the language attitude scores collected from Part B. It is hoped that this data will then contribute to our understanding of the biases held by Southern Ontarians regarding different varieties of English. This is especially important in light of research suggesting that standardization is a sociolinguistic process that can cause tangible outcomes which affect speakers’ opportunities in society (Chambers, 2012; Gluszek, 2010; Chong & Tan, 2013).

Chapter 2: Literature Review

***2.1 Overview***

The ways in which we use language are many, and how language manifests across the globe is immeasurable due to the organic nature of its development and proliferation (Wolfram, 1978; Altintas, Can & Patton, 2007). This thesis is focused on the role of language attitude, using varieties of English either spoken by - or familiar to - Canadians, as a case study. Language attitude has been defined by Cargile & Giles (1997) as an “important communicative phenomenon”, that suggests that since language is a “powerful social force”, those receiving linguistic input, “may react to linguistic and paralinguistic variation in messages as though they indicate both personal and social characteristics of the speaker” (p. 195). This essentially implies that language users will pass judgement upon others based at least partially on how they are speaking, which is the impetus behind this current study.

A review of the literature presented in this chapter reveals that numerous studies illuminate the prevalence of certain language attitudes world-wide. It is a natural feature of human communicative interaction that people prefer certain linguistic varieties over others. Consequently, these preferences can be studied to elucidate biases held between different social groups, or even individuals, toward others, which in turn may contribute to differences of opportunity and experience. Although much research has gone into identifying these language attitudes and their potential causes, more needs to be done regarding how language attitude affects people. As such, this literature review looks at what work has been done in the field of language attitude and sociolinguistics, the sociology of language, and research into accents and dialects. In order to link this to the current study, this review will also look at current research into Canadian English, a topic which has only recently started to attract the attention of linguists.

***2.2 Accents, Dialects, and Standard vs. Non-Standard Forms***

Given the organic nature of language and the natural human drive to identify and classify – both actively and passively – differences, there exist the notions of accents and dialects. When one determines a mode of communication to be a specific natural language, they are often describing it in general terms linked to a very broad set of characteristics shared by its speakers; such as “the English speak English”, or “the Japanese speak Japanese”. Those languages generally have long histories and frequently ethnic connotations, and when one refers to them, one is often implicitly (although perhaps not purposefully) referring to the standard form of the language in question (Nycz, 2012; Wolfram, 1978). However, languages are increasingly being viewed as more general labels for entities which describe sets of various accents and dialects. Speakers develop these forms over generations which display traits somehow different (and gradually differing) from the standard language (Wolfram, 1978). Accents and dialects are terms which are very similar in meaning; both denoting varieties of a language which may be characteristic to a particular group of speakers. It is this connection to the characteristics of groups of speakers that makes the study of accents and dialects, or dialectology (or sociolectology when specifically looking at the differences attributable to social variation) so interesting and worthy of examination.

Considering English’s power and prestige in the world, having been spread by colonial and economic means since the 16th century, it should come as no surprise that there are many different accents and dialects employed in English language communication worldwide (Baugh & Cable, 1993; Crystal, 1997). Its importance and near-ubiquity has attracted much research into the many different forms that it has taken, as well as the interaction of these forms with others that claim the English identifier. Cargile and Giles have investigated, from a sociolinguistic perspective, the challenges faced by people who speak “accented” American English, which differs from “unaccented” forms in terms of pronunciation and vocabulary (Cargile & Giles, 1997; 1998). Despite speaking the same language and ostensibly having a strong command of it, the presence of an accent can lead to communication issues, and even to negative judgements of the speakers with regards to their intelligence and capabilities. A similar study done in Oman among students who claim to prefer British or American accents found that those students could not actually accurately identify the accents that they purported to prefer, but were instead passing judgement on the accents employed by the individual speakers to whom they were exposed (Buckingham, 2015). Also related to the study of English accents are the numerous studies into how to account for accent in education and other fields. Sikorski (2005) argues that it is not just foreign, but also proximal regional accents that need to be accommodated in education and human resources training, a point also found in Arslan and Hansen’s (1996) study into accent classification in American English. McConachy (2011) argues that even beyond accent, people need to account for meta-pragmatic content, such as cultural norms and politeness conditions when interacting with different accents and dialects. Outside of the US, various other studies have been carried out to account for the importance of accent and dialect to communication and related activities, including Bayard and Green’s (2005) survey of Englishes around the world, and Deuber and Leung’s (2013) study of newscasters’ accents in Trinidad. Such studies demonstrate the importance that accent and dialect hold in the minds of speakers in that they will make judgements based on those differences; this is the basis for language attitude studies, which will be discussed further below.

It is not just English accents and dialects that have attracted researchers’ attention. Over time, any language will see groups of users develop distinctive accents and eventually separate dialects (Labov, 2010; Wolfram, 1978). Gradually, separated by geographic spans and often in conjunction with extralinguistic contact, those accents and dialects may develop into their own languages, as is continuing to happen in places such as the South Pacific with the development of Tok Pisin (Smith, 2002). Since this process is currently only well-understood in long-term cases such as Latin’s replacement by the Romance languages, dialectology is being involved in studies of various world languages which are often embroiled in a conflict between standard and non-standard forms. Despite the trend identified by numerous sociolinguists as a general move toward more people adopting standard forms of language (Anderson, 1981; Chambers, 2012; Ivars, 2005; etc.), non-standard, or accented forms still exist and seem to be developing independently of the standard forms. Ivars (2005) has identified different developments affecting different dialects of Finland Swedish depending on level of exposure to standard Swedish, and Milroy (2002) has discussed various cases of dialect contact outcomes and processes for a number of language communities. Mirroring the view argued by Anderson (1981) that a certain level of linguistic competency, or command of a standard dialect, brings with it certain economic and social benefits, various states have implemented official standardization programs. Chong and Tan (2013) have investigated Singapore’s “Speak Mandarin” campaign and the impact of its discrimination against non-Mandarin Chinese speakers. They found that despite a widely-held appreciation for non-standard dialects, the socio-cultural programs in place have allowed standard Mandarin speakers better access to economic and social opportunities. This type of state-sponsored dialect discrimination and the complicated effects of it have been investigated in Cyprus among standard and non-standard Greek speakers (Sophocleous & Wilks, 2010; Yiakoumetti, 2007), and in France among standard and non-standard French speaking students (Blanchet, 1987). In general, it appears that people prefer to hear and speak non-standard accents and dialects for personal purposes and in private, but prefer standard usage for education, employment, and other more public matters.

***2.3 Canadian English***

Canadian English is considered to be an umbrella term for the varieties of English that are spoken by the majority of people in Canada. The term describes varieties of English that have combined elements of British and American Englishes with various uniquely Canadian developments in terms of phonology, vocabulary, and grammar, and has only really been studied separately from other varieties of North American English since the 1950s (Boberg, 2008). Although Canadian English is relatively young, with Canada only having been established in 1867 and with a sense of Canadian identity only beginning to be formed by the early 20th century (partly as a result of WWI), it has nonetheless started to develop a series of varieties which differ more or less from a generally-perceived standard form, each of which merits study (Howard-Hassman, 2010; Dollinger, 2008). Despite the ongoing development of Canadian English and the varieties which it entails, there is a relative paucity of research into it. However, current trends suggest that interest has been increasing since the 1990s due to the work of sociolinguists such as J.K. Chambers. Given that varieties of Canadian English are continuing to be recognized, and it has been found that they are gradually developing even in the face of increased emphasis on standardization, it is important to continue devoting attention and study to them.

Over the past couple of hundred years of British and American settlement, Canada has begun to develop various regional accents and dialects of English. Many Canadians can tell whether someone is from “down East”, or Newfoundland, or possibly from Southern Ontario (Boberg, 2008). However, beyond the most marked pronunciation and vocabulary differences, many Canadians would have a hard time identifying many of the accents and dialects which do exist in their country. This is at least partly due to the widespread use of more-or-less standard Canadian English from coast to coast (at least in the urban centers), which is as much a testament to Canada’s lack of social stratification as it is to a lack of awareness of its growing linguistic diversity (Chambers, 2012; Dollinger, 2011; Howard-Hassman, 1999). Standard Canadian English is a product of intermingling settlers from the British Isles and from the US dating back to the middle of the 18th century, and has been steadily refining itself in major urban centers in Central and Eastern Canada (Dollinger, 2011). Given the relatively late settlement of the Canadian West by settlers from Ontario, Standard Canadian spread with it, and has varied little in that area. According to some estimates, Standard Canadian English may be spoken by anywhere from 36% (Dollinger, 2011) to over 50% of the population (Boberg, 2008), which, however, as Dollinger is quick to point out, are still figures that far surpass standard usage in other English dialects. These varying figures have as much to do with Canada’s unique history (and therefore linguistic development) as they do with the lack of a standardized, scientific definition of Standard Canadian English.

Despite the proliferation of Standard Canadian English usage, there are numerous accents and dialects that have evolved in different regions, and which are being studied. Boberg (2008) has identified at least 6 major regions of phonetic differentiation which affect Standard Canadian, and from which a number of different accents and dialects may be derived, namely British Columbia, the Prairies, Ontario, Montreal, the Maritimes, and Newfoundland. These regions roughly correspond to the major waves of English-speaking settlement over Canadian history, with the Prairies representing the newest, and thus having the least variation, while Newfoundland possesses the most due to its much longer history of settlement. Remarkably, considering that Canada and the US share the world’s longest and possibly least-defended border, that border has managed to serve as a barrier preventing most sound changes happening in one country from affecting the other, and vice-versa. Burnett (2006) provides an example of this in her study describing linguistic resistance in New Brunswick to Americanisms which might otherwise come into Canadian English. Easson (1998) also noted this linguistic resistance occurring in the Golden Horseshoe of Southern Ontario, which is significant given the high volume of cross-border trade and traffic that occurs in that region. Another interesting fact is that the Golden Horseshoe represents a new hotbed of accent/dialect development distinct from Southwestern Ontario, the Ottawa Valley, and Northern Ontario, and it is not due to American influence (Roeder & Jarmasz, 2009; Easson, 1998). Looking again at Ontario, Roeder (2012) has identified that certain phonological processes, such as the Canadian Shift introduced by Clarke, Elms, and Youssef (1995), whereby the tongue lowers in front lax vowels, have been happening in different ways in Toronto and Thunder Bay, which is indicative of the occurrence of autochthonous linguistic variation, most likely tempered by distance.

Even beyond these variations of Standard Canadian English, which are likely motivated by proximity to the US and by dominant settlement patterns in major urban centers, there exist other influences on the language. Such factors are important to consider for various reasons. Ball and Bernhardt (2008) have identified numerous First Nations Englishes which have developed as a result of Native interaction with a largely English-speaking society. Influenced by phonological and cultural backgrounds different from standard-derived accents/dialects, such differences have been identified as important features to note for educators and speech pathologists. This is related to the motivation for the current study in that non-standard forms may necessitate different or modified interactions in many fields in which communication is a central facet. The notion that standardization appears to be sociolinguistically favoured in Canada (Chambers, 2012) seems to be at odds with the wealth of literature describing the various accents, dialects, and changes happening to Canadian English (Burnett, 2006; Easson, 1998; Roeder, 2012; Boberg, 2008). As such, it is crucial that we continue to commit research to the different Canadian dialects in order to contribute to our understanding of their linguistic development. In doing so, we can help to account for the different forms of language that people use and to see what the impact of non-standard dialecticization is on a country whose standard language is so widespread, especially when compared to places like the UK, where only about 2-3% of the population speaks the generally-recognized standard form (RP) (Dollinger, 2011).

***2.4 Language Attitude Studies***

Language attitude is the term used by sociolinguists to describe how people perceive different languages, accents, and dialects. Researchers generally ascertain language attitudes held by particular groups toward their own and other language varieties by means of surveys, and as such they are a popular and relatively easy method of conducting sociolinguistic studies. Much of what sociolinguists study regarding language attitude is overlapped by sociology of language, which focuses more on the social dimensions than the linguistic aspects. As a result, there is an abundance of literature detailing language attitudes from both fields dating back to the 1920s, including work by Fishman, Fischer, Labov, Lambert, Edwards, Giles, and Chambers. The findings from this field appeal to education specialists, policy-makers, and social scientists of all kinds because they offer insight into how peoples’ perception of different language forms might influence or drive social interactions. Regarding English, arguably the most important and influential world language in use in the 21st century, much work has been done by researchers such as Cargile, Giles, and others to illuminate interesting trends and to refine the collection of language attitude data (Crystal, 1997; Cargile & Giles, 1997, 1998). Such research as pioneered by Lambert in the 1960s and others leading up to the 2000s has also spurred interest in applying the study of language attitudes in English to other languages, which highlights its importance as a sociolinguistic tool. It is also a field which is increasingly of interest to the media because of how much more conceptually accessible it is to the public compared to other linguistic research, as exemplified by various recent news releases (Carruthers, 2016; Russell, 2016).

Before sociolinguistics became widely recognized as a distinct field of study, language attitude largely fell under the domain of sociology. In the early days of the study, sociologists would look at the linguistic attributes of a certain subsection of a population, and then compare their language to those of other groups. Then researchers would attempt to attribute societal differences to a failure to reconcile linguistic differences, such as with Reinecke (1938)’s study of Pidgin English in Hawaii. By the 1950s, researchers began to look at the specific linguistic markers in more detail, and began to comment more on language change and attitude toward it, distinct from the social markers concomitant with certain kinds of people speaking in certain ways. One of the major proponents of this exploratory linguistic approach was Fischer, who conducted studies like the 1958 one which attempted to account for social influences on linguistic change among children in New England. Eventually, focusing more on the linguistic than sociological aspect was Lambert, Hodgson, Gardner, & Fillenbaum (1960)’s seminal survey on language attitude towards English and French among French and English speaking participants in Montreal. Employing the matched-guise technique in order to lower the potential for response bias and surveying a significant number of participants, Lambert’s study found a general preference for English due to prestige and familiarity, although members of each group of speakers were more harshly critical of the language which they spoke. The methodology of this study has served as a template for much of language attitude research since then, and interestingly, most of these studies have found very similar outcomes. Arthur, Farrar, and Bradford (1974) found that English speakers preferred Mexican-American accents that sounded closest to standard American, and disliked thicker accents; Cargile and Giles (1998) found the same applied to Japanese-American accents later on. Baron (1975) identified a systemic dispreference for non-standard language usage that contributes to different access to opportunity for speakers of the same language who use different forms of that language, which was also noted by Anderson (1981). Since then, numerous other studies have found similar outcomes for other accents and dialects outside of the US, such as Bresnahan, Ohashi, Nebashi, Liu, & Shearman (2002), who identified a split in preference between prestige and familiarity of accent. Coupland & Bishop (2007) found this with respect to different British English accents, and Sophocleous & Wilks (2010) found this with respect to Standard Modern Greek versus Greek-Cypriot usage in schools in Cyprus. All of these studies point toward an apparent general trend in language attitude that familiarity allows speakers to feel more comfortable with associating or dissociating with a particular form, but what are the implications for those speakers?

In the 1960s, American sociolinguists argued that language attitude was such a powerful thing that negative stereotyping derived from dispreferred accents or dialects, and that this directly translated into fewer opportunities for speakers of those forms (Clubb, 1961). Clubb argued that African-American Vernacular English (AAVE), a non-standard form, was so dispreferred and unfamiliar/unintelligible to standard English speakers that they considered it to be a foreign language, and thus disqualified its speakers from socioeconomic opportunities afforded to the average (white) standard English speakers. Various other studies from up until the 1990s support this inherently discriminatory view, including those of Arthur et al. (1974), Edwards (1977)’s study into Irish regional accents, and Giles & Sassoon (1983)’s study into the effect of speakers’ socioeconomic background on judgement of different sociolects. However, research into different accents and languages since the 1990s have also revealed similar trends, which Giroux (2005) has identified in his social criticism of schooling and public life with symptoms of the discourse of language being a tool of power. He argues that in order to have an effective voice, people need to have access to and an ability to use the dominant language in order to advocate for themselves and navigate the complexities of a world run by those with power (Giroux, 2005; pp. 116, 131, 133). It is in such a framework that language attitude studies become powerful tools for identifying where linguistic power and prestige are, who holds it, and what characterizes it. By conducting language attitude studies, sociolinguists can help identify which accents or dialects are lacking in prestige and power, and can therefore highlight the differences between different speaker groups in the hopes that those in power may learn to accommodate for those differences. As seen in Singapore (Chong & Tan, 2013), France (Blanchet, 1987), and the US (Cargile & Giles, 1997; 1998), it is evident that less prestigious language forms tend to be under attack in the name of standardization. However, it has also been noted that recognition and legitimization of non-standard forms can bring with it positive outcomes for speakers in terms of socioeconomic opportunity, as indicated by Farr’s (2011) study on urban plurilingualism in Chicago, and Yiakoumetti’s (2007) argument in favour of bidialecticism as a positive force.

***2.5 Future Steps***

Despite the substantial extant literature investigating the subjects of language attitude and dialectology, very little has been done to link those fields with the study of Canadian English. Other than some research into phonological processes occurring in Canadian English (Boberg, 2008; Easson, 1998), not much has been done into the language attitudes toward different varieties of Canadian English, save for the work of Chambers (1998; 2012) and Dollinger (2011). Their work should be considered a foundation upon which to expand the scope and depth of research into Canadian English. Despite only representing a small fraction of the global population, Canada’s economic strength necessitates a more serious look at the linguistic opportunities which it offers its citizens, especially since English is the language of global trade (Crystal, 1997). More research needs to be done regarding the effect of non-standard varieties of Canadian English on such subjects as speakers’ socioeconomic mobility and access to employment, as well as the perception of non-Canadian English speakers toward non-standard Canadian English. Since participants in the current study, as well as others dealing with other languages, can recognize and pass value judgements on non-standard varieties of both the languages they speak, as well as other familiar languages or dialects, it is not a stretch to consider that cross-cultural interactions may be affected by language attitude. Such interactions should be analysed through the lens of language attitude.

Another major area requiring more research is the identification of dialects and accents. At this point, most (if not all) definitions of standard dialects are vague and unscientific, usually incorporating particular geographic, socioeconomic, and sometimes linguistic dimensions. Such definitions are even less precise for non-standard dialects and accents, which tend to rely upon speaker’s intuition to identify, or socioeconomic and vocabulary-based indicators. As such, more research should be done into how to more accurately identify the differences between various dialects and accents. This can be done by collecting numerous linguistic samples of speech to be combined (by means of a computer) into a holistic representation of whatever accent or dialect is intended to be the object of study. However, this carries with it risks in the form of representation bias, and the organic nature of language in that it is constantly evolving at different rates. Nevertheless, more research should be devoted to cataloguing accents and dialects as much as it is to languages, especially given the potential role of language attitude in shaping the experience of people whose language varies from that expected standard within whatever speech community which they are trying to communicate in.

Finally, more needs to be done to follow up on language attitude studies to investigate what the actual tangible effects of usage of different forms of language are on their speakers. Whereas many researchers argue that those who do not abandon their non-standard forms in favour of standard forms of language are doomed to stigmatization and a lack of socioeconomic opportunity, other promising research indicates that multiple forms of a language can productively coexist. This positive coexistence is predicated on official recognition of non-standard forms and a willingness on the behalf of both non-standard and standard speakers to preserve the non-standard forms as distinctive accents or dialects which are appropriate for use in certain spheres, while standard is appropriate elsewhere. Although there is plenty of evidence in the world which suggests that non-standard forms can and do eventually overtake standard forms (as in the case of Vulgar Latin), what are the processes involved? At what costs, and by what means does this, or should this happen? Can we influence language change, and why should we care about non-standard forms? These are all important questions that need to be answered, but that seem to be lacking attention in the literature.

Chapter 3: Methods and Observations

***3.1 Introduction***

Inspired by Cargile & Giles (1997) study on language attitude among American university students and J.K. Chambers’ extensive research into Canadian English and dialectology, this current study aims to elucidate the perceptions held by Southern Ontario university students toward different accents. In turn, this is an effort to critically examine the notion that Canadians, particularly those more likely to be liberal and urban, are supportive of multiculturalism and may claim to not discriminate against others. Howard-Hassmann (1999) argued for the acceptance of the identification of an “ethnic Canadian identity”, and the idea that this should guide policy-makers toward maintaining Canada’s official liberal policy of multiculturalism for its inclusivity and acceptance of difference. One should be sceptical, however, of mistaking ethnicity for nationality and embracing a national identity. Nevertheless, this analysis lends credence to the widely held view, at least among white, educated, Anglophone, Canadian youth, that modern Canada is a fair place for all Canadians. However, counter to that is the refutation of Taylor (2007) who claims that the Canadian experience varies if one does not fit the aforementioned nationalistic description. He argues that despite the fact that the vast majority of Canadians are, or descend from, immigrants, those who do not fit the white, educated, Anglophone mould are *othered* by themselves and society.

This is a major obstacle in the quest toward egalitarianism; a multidimensional problem that goes further, incorporating speech as well. Even if one fits the general description of Canadian, might the way one speaks contribute to this otherness? In this vast land there are a myriad of languages spoken besides the two official languages, English and French. According to Statistics Canada, the 2011 Census reported over 200 languages being used as mother tongues; 17.5% of people reported being at least bilingual; and as far as official languages being used as mother tongues, French contributed 22% while English contributed 58% of the population (*Statistics Canada*, 12/22/2015). That 58% of the population which claims English as their mother tongue could not specify which variety of English it was, but given the findings of research conducted by sociolinguists like Ball & Bernhardt (First Nations English dialects), Boberg (regional phonetic differences), Chambers (Canadian English dialectology), Easson (Golden Horseshoe English), and others, it stands to reason that “English” is a broad umbrella term even within Canada. As such, I would argue that given the varieties of English used by Canadians, it would be pertinent to explore whether the kind of English used by a speaker may advantage or disadvantage them just by virtue of their variety being different from a perceived “standard” form. In a nation tending towards greater inclusivity and social mobility, understanding the impact of accent or dialect is important for identifying next steps in furthering the liberal egalitarianism policy which Canadians tend to pride themselves in (Howard-Hassmann, 1999). Furthermore, this value ascribed to standardization of Canadian English seems to be sociolinguistically motivated, and is thus happening across society in general, according to a 2012 paper by Chambers. What does this mean for speakers of non-standard Canadian English, or for the existence of regional dialects?

For this study, approximately one hundred subjects recruited from McMaster University and divided into two different groups (Canadian English L1, Canadian English L2) completed a three-part study. The first part simply asked for demographic information for sorting purposes (seeking such things as what their L1 is, their age, level of education). The second part required participants to listen to eight recordings of accent samples provided by two different English speakers capable of speaking both standard and non-standard varieties of English. The two speakers read two different texts differentiated by whether they would be considered academic or colloquial in terms of content/context. The accents were selected from English L1 speakers of different backgrounds (Canadian and British). The accents recorded were applied to different text samples in order to elicit a variety of phonetic features characteristic of those accents. As such, the eight samples (each consisting of a few short sentences) are: Canadian Standard Academic, Canadian Standard Colloquial, Canadian Non-Standard Academic, Canadian Non-Standard Colloquial, British Standard Academic, British Standard Colloquial, British Non-Standard Academic, and British Non-Standard Colloquial. Each of the two speakers elicited four recording samples, in a modified matched-guise technique influenced by the seminal study of Lambert et al. (1960). For each of the eight samples, participants were asked to evaluate the accents via a Likert scale on eleven selected measures regarding attitude toward the sample, as per the Speech Evaluation Instrument (Zahn & Hopper, 1985), with further influence taken from the Cargile & Giles (1997) study on language attitudes among American university students. In the third part, a final discussion question was posed to the students in which they were asked to rank their preferences for the accents, and briefly explain why. Upon completion of the study, general ratings per sample were compared, both within and between groups to see if there were any significant effects of type of text (Academic vs. Colloquial), type of accent (Canadian vs. British), standardness (Standard vs. Non-Standard), and the linguistic background of participants (Canadian English L1 vs. Canadian English L2) on their overall affectual perception toward the accents. It was hoped that this data would then contribute to our understanding of the biases held by Southern Ontarians regarding different accents and varieties of English, and how those biases may in turn affect such speakers.

***3.2 Methods***

3.2.1 Voice Clips:

I developed eight scripts of four to five lines each, designed to take approximately 1.5 minutes to read through. The scripts used were designed to provide examples of speech with different accents, context, and standardness, using neutral subject matter that would allow participants to rate the speech, rather than the content. The 8 scripts were coded as: British Standard Academic (BR ST AC), British Standard Colloquial (BR ST CO), British Non-Standard Academic (BR NO AC), British Non-Standard Colloquial (BR NO CO), Canadian Standard Academic (CA ST AC), Canadian Standard Colloquial (CA ST CO), Canadian Non-Standard Academic (CA NO AC), and Canadian Non-Standard Colloquial (CA NO CO). Both sets of British and Canadian scripts used the same content, although presented in their respective accents or dialects. The Standard Academic scripts were excerpted from a paper written by me on the possible cognitive linkages between music and language. The Non-Standard Academic scripts were excerpted from another paper written by me on the sources of Roman religion and beliefs. The Standard Colloquial scripts were written by me and concern a man recounting his spotting of a squirrel on his way to work. The Non-Standard Colloquial scripts were written by me and concern a man recounting his interactions while trying to get medicine for his child. The full scripts can be found in Appendix B. For the purposes of this study, Canadian, British, Academic, Colloquial, Standard, and Non-Standard will be defined as above (1.2, p. 4).

The actual recordings were made using the Voice Recorder app on a Samsung Galaxy S3 phone, and the accents were from two English L1 speakers of different backgrounds. The accents recorded were applied to different text samples in order to elicit a variety of phonetic features characteristic of those accents. These accent differences were achieved through minor changes in pronunciation, grammar, and wording of the scripts. For the British clips, the researcher requested help from Dr. George Thomas of McMaster University, who graciously offered to volunteer his time and voice. The Canadian clips were offered by local artist David Shepherd, of Hamilton, who also graciously offered to volunteer his time and voice. Both volunteers were invited to read through the scripts as many times as necessary before the recording session. Using a quiet room, the volunteers each (separately) practiced their scripts, and suggested changes that they would make in order to make their speech sound more natural. As such, referring again to Appendix B, the written scripts may vary from my transcriptions which reflect the actual recordings of the volunteer speakers. Each script was read by each volunteer at least thrice, and the best quality recording was kept to be used for the study. These recordings were obtained during September, 2015.

The reason why two volunteer speakers were used rather than one or eight was in order to employ a modified matched-guise technique influenced by the study of Lambert et al. (1960). Each speaker contributed four voice clips, and their order was shuffled for the study in order to hide the fact that the voice clips were being contributed by the same person. Lambert et al. (1960) had found that using the same voice for multiple samples may lead to the participants recognizing the voice, and this would affect their ability to respond in the intended way to the different accents. That study also attempted to disguise the fact that they were asking about the accents being studied by asking instead about the people whose voices were being listened to. However, instead of using one person trained in many different accents, for this study two people were trained in order to minimize the chance of recognition. I also chose to directly ask participants to rate the accents they were hearing, which differed from Lambert et al. (1960), but which still seemed to produce the expected results. Through informal questions posed to participants upon completion of this current study, I found that this approach worked, as many people felt that they had detected as few as one to as many as four different voices.

3.2.2 Language Attitude Study

After receiving approval to proceed from the McMaster Research Ethics Board (MREB), up to one hundred participants from McMaster University were sought for this study, in order to increase the power of the model and to hopefully produce statistically significant results. The Language Attitude Study took the form of a survey which participants would fill in while listening to the eight voice clips described above. To see the exact layout of the survey as the participants would have filled out, please refer to Appendix A.

Part A requested demographic information from the participants, such as age, country of birth, first language (L1), variety of English spoken, and other languages spoken fluently (L2). The reasons for these questions will be elucidated in the Participants section below.

Part B consisted of eight pages of a survey to be completed while listening to the voice clips, asking participants to try to identify the accent to the best of their ability, and then to rank them from 1-9 (1 tending to be highly negative, 9 tending to be highly positive) on a series of eleven scales. The voice clips were each played twice, separated by 30 seconds to ensure that participants could hear the clip properly and could answer accordingly. As for the eleven scales, they were adapted from the Speech Evaluation Instrument designed by Zahn & Hopper (1985) for language attitude assessment, and influenced by the study of language attitudes among American university students conducted by Cargile & Giles (1997). The scales chosen roughly corresponded with dimensions of Superiority (Uneducated-Educated, Unintelligent-Intelligent, Unclear-Clear), Attractiveness (Unfriendly-Friendly, Unpleasant-Pleasant, Dishonest-Honest), and Dynamism (Unaggressive-Aggressive, Unsure-Confident, Lazy-Energetic), based on the Zahn & Hopper (1985) language attitude study. Two additional scales (Unfamiliar-Familiar, Unsafe-Safe) were adapted from the Cargile & Giles (1997) study in order to introduce a dimension of Familiarity or Otherness. Participants were asked to rate each of the voice clips on a 9-point Likert Scale, with the understanding that lower scores would correspond to more negative traits, and higher scores would correspond to more positive traits; as such, scores from 4-6 would tend to indicate more neutral ratings for those traits.

The only measure which perhaps broke from this scheme was for Unaggressive-Aggressive. This measure seems to hold different meaning between Americans (for whom the measure was originally proposed, as per Cargile & Giles (1997)) and Canadians. Whereas Cargile & Giles (1997) used Unaggressive-Aggressive in such a way that Unaggressive would be seen as passive and lacking force, while Aggressive would imply active and forceful, thus creating a negative-positive spectrum, Canadians tend to view the terms in a more or less opposite way. As such, for this study, Unaggressive would be the positive end of the spectrum, and Aggressive would be the negative end, carrying with it the connotations of antagonism and violence, rather than simply vigour, as in the US; unassertive-assertive may have been more appropriate. As far as the data, being one out of eleven measures for each voice clip, having the reverse traits would not have a particularly significant effect on the analysis, and in fact could serve as a check to see whether participants were really paying attention and responding to the survey truthfully rather than mechanically. Since the Unaggressive-Aggressive ranking was lower down the page, by that point, if a participant had merely been checking off the responses in some sort of pattern, then a non-characteristic response for this ranking could provide evidence that the participant was in fact attentive by that point. As will be discussed later, this belief seems to have held, in that the predicted scores for Aggression seem to have been obtained (that the participants were attentive, and rated Aggression significantly differently than the other measures).

Apart from the ranking of Aggression, the other measures should be self-explanatory as to what they were intending to seek in terms of responses. As explained above, these measures were selected from the Speech Evaluation Instrument (Zahn & Hopper, 1985) and the Cargile & Giles (1997) study as a means of obtaining general, if simplified, attitudes toward certain linguistic varieties from participants. The idea is that certain accents or varieties of speech (Canadian vs. British, Standard vs. Non-Standard, Academic vs. Colloquial) will have different average scores for the different measures, or generally across the dimensions into which the measures may be grouped (Superiority, Attractiveness, Dynamism, Otherness). On average, the more favourably rated accents with regards to certain measures should tend to have higher average scores.

Part C was an optional section, wherein participants could choose to state which accents they preferred the most and the least, and to explain why. This final section is intended to provide a simple qualitative measure of where the participants’ preferences lay, in contrast to the more concrete quantitative measures from Part B. Participants could explain as little or as much as they wanted, and could list as few or as many preferences as they wished as well.

As for the setup, participants listened to the voice clips and completed the study in a large group setting, with the researcher present. The researcher explained what was expected, disseminated and collected consent forms, information letters, and remained on hand during the study in order to answer any potential questions that may have arisen. Upon study completion, the participants submitted their completed surveys, and the researcher was available for questions afterwards. No participants opted to withdraw, so everyone who participated contributed data. Data collection for this study took place between February and May of 2016.

3.2.3 Participants

Participants sought for this study were McMaster University students currently living in Southern Ontario, all of whom currently attend, or have recently attended, McMaster University in Hamilton. In order to collect data from these participants, approval was sought and granted from the McMaster Research Ethics Board. All participants willingly volunteered to participate, as indicated by their signing of the consent form and their completion of the study. In order to facilitate data collection and account for the lack of available lab time and space, the ninety participants were surveyed in numerous groups of at least ten and up to thirty simultaneously. The larger groups of participants were surveyed as part of their course curricula for sociolinguistics classes run by Dr. Nikolai Penner and an interpersonal communication seminar run by Dr. Magda Stroinska, to whom I am grateful for the opportunity. Participants were presented with a Letter of Information and a brief oral introduction from me, and were given an opportunity to ask questions about the study both before and after completion. Participants surveyed as part of their course curricula were granted extra credit via the Linguistics SONA Participation pool. Other participants were not compensated, but willingly volunteered to participate anyway out of interest in the subject being studied.

Upon recruitment, the participants each completed the survey in approximately 30 minutes. From the completion of Part A of the Language Study (see Appendix A), the following demographic information about the participants was collected:

*How old are you?*

18-29 = **95.6%** 30-39 = **4.4%**

Figure 3.2 1: Age Range of Participants

*In what country were you born?*

|  |  |  |
| --- | --- | --- |
| **Canada** | 64 | 71.10% |
| **China** | 4 | 4.40% |
| **Philippines** | 3 | 3.30% |
| **Pakistan** | 3 | 3.30% |
| **Japan** | 2 | 2.20% |
| **Kazakhstan** | 1 | 1.10% |
| **Belarus** | 1 | 1.10% |
| **Qatar** | 1 | 1.10% |
| **Turkey** | 1 | 1.10% |
| **India** | 1 | 1.10% |
| **Mexico** | 1 | 1.10% |
| **South Africa** | 1 | 1.10% |
| **Saudi Arabia** | 1 | 1.10% |
| **France** | 1 | 1.10% |
| **Colombia** | 1 | 1.10% |
| **No Answer** | 1 | 1.10% |

Figure 3.2 2: Country of Birth of Participants

*What would you identify as your first language?*

|  |  |  |
| --- | --- | --- |
| **English** | 69 | 76.70% |
| **French** | 2 | 2.20% |
| **Other** | 19 | 21.10% |

Figure 3.2 3: First Language of Participants

*If your first language was English, which would you describe it as?*

|  |  |  |
| --- | --- | --- |
| **Canadian** | 72 | 80% |
| **British** | 2 | 2.20% |
| **American** | 1 | 1.10% |
| **Other** | 15 | 16.70% |

Figure 3.2 4: Variety of English Spoken by Participants

|  |  |  |
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| **French** | 16 | 30.80% |
| **Spanish** | 4 | 7.70% |
| **Arabic** | 4 | 7.70% |
| **Urdu** | 3 | 5.80% |
| **Japanese** | 3 | 5.80% |
| **Russian** | 2 | 3.90% |
| **Cantonese** | 2 | 3.90% |
| **Mandarin** | 2 | 3.90% |
| **Korean** | 2 | 3.90% |
| **Afrikaans** | 1 | 1.90% |
| **Dutch** | 1 | 1.90% |
| **Croatian** | 1 | 1.90% |
| **Turkish** | 1 | 1.90% |
| **Marathi** | 1 | 1.90% |
| **Hindi** | 1 | 1.90% |
| **Somali** | 1 | 1.90% |
| **Persian** | 1 | 1.90% |
| **Teochew** | 1 | 1.90% |
| **Greek** | 1 | 1.90% |
| **Vietnamese** | 1 | 1.90% |

*What languages, other than English, would you identify yourself as being fluent in?*

Figure 3.2 5: Other Languages in which Participants Claimed to be Fluent

3.2.4 Data Collection

I collected data from ninety participants by means of the Language Attitude Study (Appendix A), and I was present each time the study was run. Data used for this study was collected between February and May of 2016. All data used in this study has been taken from participant responses to the Language Attitude Study. All completed surveys have been safely secured by me and in order to protect privacy they are not uniquely identifiable to individual participants. The collected studies were randomized as to their order of data input, and were given a number from 1-90 for sorting purposes.

I compiled and collated the demographic data from Part A using means of *Microsoft Excel 2010*, and then converted it into graphs and frequency charts (as seen above). *Microsoft Excel 2010* was also used for inputting the data from Part B. I placed Likert scores for each rating for each accent into data frames in order to be statistically analysed (both descriptively and inferentially). At this stage, I divided survey data based on whether the participant indicated whether they were a native Canadian English speaker or not. For the purposes of this study, a native Canadian English speaker must have indicated in Part A of the Language Attitude Study that they were born in Canada, that English was their first language, and that they are fluent in English. Otherwise, the participant would be identified as a non-native Canadian English speaker. This distinction was not considered for the descriptive analysis because their responses closely matched the mean of the data set as a whole. However, since 33% of participants were identified as non-native Canadian English speakers, that identifier was taken into account for the inferential analysis in order to investigate whether there were any interesting differences in response patterns. I also compiled and collated the judgement responses from Part C in *Microsoft Excel 2010* for ease of entry and sorting. Since Part C required only descriptive analysis of qualitative judgement responses, the sample was kept combined, rather than divided based on nativeness of speakers.

Condensed forms of the data tables and *Microsoft* *Excel 2010* spreadsheets will be included in the Observations section below, while the original full versions are included in Appendix C.

Once the data was collected and input into *Microsoft Excel 2010*, the Likert scale response data from Part B was imported to *SPSS* with the assistance and guidance of Andrew Almas (PhD Candidate, University of Toronto). Using *SPSS*, the data underwent inferential statistical analysis to determine whether there were any significant effects of nativeness of the participant on attitude or preference toward each measure on each accent. In order to do this, the data was subjected to principal component analysis (PCA) in order to identify potential patterns in the variances between responses within the sample. The PCA retained components with an eigenvalue of >1, as per the standards of inferential statistics, which allowed for each data set to be analysed as 2-3 components allowing for the identification of significant sources of variance in the data between native and non-native speakers. An ANOVA was also run through *SPSS* comparing the means of the principal components with the nativeness variable, thus comparing nativeness of participant with perception of accent. χ2 tests were also run in order to analyse the effect of participant nativeness across each variable (evaluated trait) for each accent. Descriptive statistical analysis was conducted on the data by means of functions included within *Microsoft Office 2010*, such as calculating mean, variance, and standard deviation for the data frames.

***3.3 Hypotheses***

Based upon the literature, my general hypothesis was that the standardness and context of an accent/dialect affect the attitude that listeners have toward the speaker. In other words, a listener may detect a Canadian accent, but will judge that accent differently depending on what kind of Canadian accent (standard or non-standard) it is, or the general context in which that accent is spoken (academic or colloquial). As such, the eight different voice clips that participants would listen to should elicit different average responses, which could vary depending on whether the listener was themselves a native or non-native Canadian English speaker.

With this general hypothesis in mind, Figure 3.3.1 below presents my initial predictions for each voice clip, using a “**+**” to indicate a higher average score, “-“ to indicate a lower average score, and “**=**” to indicate a neutral average score for the dimensions of Superiority (SUP), Attractiveness (ATT), Dynamism (DYN), and Familiarity/Otherness (FAM):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dimension:  Accent: | SUP | ATT | DYN | FAM |
| BR ST AC | + | + | = | + |
| BR ST CO | + | + | = | = |
| BR NO AC | - | + | - | - |
| BR NO CO | - | - | - | - |
| CA ST AC | + | = | = | + |
| CA ST CO | + | = | = | + |
| CA NO AC | - | - | - | + |
| CA NO CO | - | - | - | + |

Figure 3.3 1: Predictions for Average Score per Each Dimension

As can be seen in the chart above, I believed that the Standard Academic accents would receive the highest average scores, while the Non-Standard Colloquial accents would receive the lowest average scores. The British accents should rate higher in terms of SUP and ATT while the Canadian accents should rate higher in terms of SUP and FAM. The Standard accents should rate higher in terms of SUP, ATT, and FAM while the Non-Standard accents should rate lower in terms of SUP, ATT, and DYN. The Academic accents should rate higher in terms of SUP, ATT, and FAM, while the Colloquial accents should rate lower in terms of SUP, ATT, and DYN. These average scores should be more-or-less reflected in the qualitative judgement responses from Part C of the Language Attitude Study. Nativeness of the participant could have an effect on perception, but it was unclear at that stage in which ways. I was inclined to think that non-native speakers would make similar judgements to the native speakers, although I was aware that this could not necessarily be the case due to differing linguistic experience.

In terms of experiment design and statistical analysis, the data for this study is being treated as a 2x2x3 between- and within-subjects factorial design. The experiment can be modelled as such:

*Y*ijk = μ + αj + βk + πi + ɛijk

*Y*ijk is the score of the dependent variable (average score) of the ith subject at the jth level of accent, and the kth level of nativeness. This is achieved by adding μ (representing the population cell mean corresponding to the level of i), αj (representing the level of accent), βk (representing the level of nativeness), πi (representing the effect of the ith subject), and ɛijk (representing the combined error term accounting for variance and interaction between subjects and levels).

From this model, a simplified form of the *H*0 (null hypothesis) and *H*1 (alternative hypothesis) can be applied to each analysis of the study:

*H*0: *Y*ijk = μ *H*1: *Y*ijk ≠ μ

Therefore, the null hypothesis (*H*0) is that the average score is not affected by differences in either/both accent or nativeness of the participant, and thus equals the population mean. The alternative hypothesis (*H*1) is that the average score will be affected in some significant way by differences in either/both accent or nativeness of the participant, and thus will not equal the population mean.

***3.4 Observations***

3.4.1 General Notes

These general observations were not recorded as part of the survey, but are included here for interest’s sake. Most of the 90 participants seemed to enjoy the study, and particularly found the CA NO CO voice clip to be either funny or annoying. Each time the study was run, it took approximately 30 minutes to complete, and no one exited the study once the survey had begun. It is interesting to note that the modified matched-guise technique seemed to work, as most people were not sure as to how many different voices were used for the recordings. In responding to Q&A sessions held upon survey completion, I informally asked the groups how many different voices they thought were used, and the responses varied from 1-8, with the majority claiming two (correct) or three different voices. In general, participants responded that they had not purposely been paying attention to the number of voices, because I had not specified that as part of the instructions, although they did seem to recognize that at least some of the voice clips were scripted (when in fact all of them were). Another general observation is that there was a distinct difference between preferred accent and which one participants found most amusing. While most participants seemed to prefer British and/or Standard accents the most and Canadian and/or Non-Standard accents the least, they seemed to find the Non-Standard Canadian accents the most amusing. Many participants commented that the CA NO CO accent was “funny”, but otherwise rated it comparatively lower than the other accents, perhaps due to it sounding unnatural.

3.4.2 Condensed Data Tables (Refer to Appendix C for full data charts)

*Part B Responses:*

General Identification of Accents:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *British/*  *RP* | *British/*  *Commonwealth* | *British* | *British/*  *Cockney* | *Canadian/*  *North American* | *Canadian/*  *North American* | *Canadian* | | *Canadian/*  *Blue Collar* |
| **90%** Correct | **86.7%**  Correct | **94.4%** Correct | **96.7%** Correct | **96.7%** Correct | **95.6%** Correct | **96.7%** Correct | **93.3%** Correct | |

Mean Scores of Accents on the Measures\*:

|  |  |  |  |
| --- | --- | --- | --- |
| Superiority | Attractiveness | Dynamism | Familiarity |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety |  | Average | Variance | SD |
| BRSTAC | 8.24 | 8.14 | 7.59 | 6.58 | 7.26 | 7.21 | 3.40 | 8.16 | 6.63 | 6.49 | 6.87 |  | 6.96 | 1.65 | 1.29 |
| BRSTCO | 7.30 | 7.40 | 6.96 | 7.14 | 7.30 | 7.07 | 3.03 | 6.98 | 6.23 | 6.15 | 6.81 |  | 6.58 | 1.41 | 1.19 |
| BRNOAC | 7.01 | 6.91 | 6.02 | 6.38 | 6.52 | 6.41 | 3.20 | 5.62 | 4.69 | 5.96 | 6.48 |  | 5.93 | 1.12 | 1.06 |
| BRNOCO | 5.27 | 5.50 | 5.01 | 7.00 | 6.53 | 6.63 | 4.41 | 6.72 | 6.71 | 5.27 | 6.43 |  | 5.95 | 0.70 | 0.84 |
| CASTAC | 7.87 | 7.67 | 8.36 | 6.70 | 6.59 | 6.81 | 3.24 | 7.29 | 5.56 | 7.07 | 6.99 |  | 6.74 | 1.72 | 1.31 |
| CASTCO | 6.98 | 6.80 | 8.17 | 6.30 | 6.23 | 6.74 | 2.80 | 5.88 | 4.43 | 7.17 | 6.86 |  | 6.21 | 1.94 | 1.39 |
| CANOAC | 4.20 | 4.56 | 5.64 | 6.27 | 5.20 | 5.46 | 3.23 | 3.91 | 3.04 | 6.11 | 6.06 |  | 4.88 | 1.22 | 1.11 |
| CANOCO | 4.40 | 4.48 | 5.59 | 6.57 | 5.67 | 6.41 | 3.27 | 5.19 | 4.44 | 6.00 | 6.23 |  | 5.30 | 0.98 | 0.99 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average | 6.41 | 6.43 | 6.67 | 6.62 | 6.41 | 6.59 | 3.32 | 6.22 | 5.22 | 6.28 | 6.59 |  | 6.07 |  |  |
| Variance | 2.15 | 1.74 | 1.43 | 0.09 | 0.45 | 0.25 | 0.20 | 1.58 | 1.45 | 0.33 | 0.10 |  | 0.45 |  |  |
| SD: | 1.47 | 1.32 | 1.20 | 0.30 | 0.67 | 0.50 | 0.45 | 1.26 | 1.21 | 0.58 | 0.32 |  | 0.67 |  |  |

\*Red values represent the highest score for a measure; Blue values represent the lowest score for a measure

*Part C Responses:*

Accent Preference:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Preferred Most* | |  | *Preferred Least* | |  |
| **BR ST AC** | 34 | 28.30% | **CA NO AC** | 36 | 32.70% |
| **BR ST CO** | 17 | 14.20% | **CA NO CO** | 28 | 25.50% |
| **BR NO AC** | 15 | 12.50% | **BR NO CO** | 20 | 18.20% |
| **CA ST AC** | 15 | 12.50% | **CA ST CO** | 8 | 7.20% |
| **CA ST CO** | 13 | 10.80% | **BR NO AC** | 5 | 4.50% |
| **BR NO CO** | 11 | 9.20% | **CA ST AC** | 5 | 4.50% |
| **CA NO AC** | 9 | 7.50% | **BR ST AC** | 5 | 4.50% |
| **CA NO CO** | 6 | 5% | **BR ST CO** | 3 | 2.70% |
|  |  |  |  |  |  |
| Total | 120 |  |  | 110 |  |
|  |  |  |  |  |  |
| **BR** | 64.20% | **ST** | 54.80% | **AC** | 60.80% |
| **CA** | 35.80% | **NO** | 45.20% | **CO** | 39.20% |

General Sentiment (Most Common Reasons for Ranking):

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | BRSTAC | BRSTCO | BRNOAC | BRNOCO | CASTAC | CASTCO | CANOAC | CANOCO |
| Most Preferred | Pleasant  Intelligent | Pleasant  Intelligent | Pleasant | Familiar  Interesting | Familiar  Clear | Familiar | Familiar | Familiar  Friendly |
| Least Preferred | Unfamiliar  Snobby | Unfamiliar | Unfamiliar  Unclear | Unfamiliar  Unintelligible | Boring | Unintelligent  Stereotypical | Lazy  Unintelligent | Lazy  Unintelligent |

Chapter 4: Discussion

***4.1 Data Analysis***

Participant responses to Part A of the Language Attitude Study were recorded into *Microsoft Excel 2010* as a series of figures which were then converted into percentages as a means of describing the sample’s demographic information. These graphs and charts have been reproduced above, in the Methods and Observations section under Participants. The most important information taken from Part A was the question regarding *What would you identify as your first language?*, and *If your first language was English, what variety would you describe it as?* The responses to these questions were used to divide the sample into two groups for analysis (as per their responses to Part B), Native Canadian English speakers and Non-Native Canadian English speakers. Through these responses, it was established that the sample was found to be comprised of 66.7% Native Canadian English speakers, and 33.3% Non-Native Canadian English speakers. Despite the lopsided figures, this still accounted for enough variance in the data to allow for analysis of the impact of linguistic nativeness of the participants on their attitude toward the accents, as will be described below.

Participant responses to Part B of the Language Attitude Study were recorded into *Microsoft Excel 2010* as data tables which were descriptively and inferentially analysed. Regarding the question of *What accent would you identify this as?*, responses were collected in a data table (Appendix C) and flagged as either Correct (identified as either British or Canadian/North American) or Incorrect (identified as something other than British or Canadian/North American). The most common responses were taken as characteristic of the sample for each accent. As far as correctness, the majority of participants were able to correctly identify each accent as either a form of British English, or some form of Canadian or North American English. Canadian or North American were taken as a single correct response as the standard forms of both have very similar features and are thus hard to distinguish for untrained listeners, and are often conflated in various literature for geographic accent groupings (Bayard & Green, 2005; Dollinger, 2011). The results of that summary can be found in the table below.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Accent | BR ST AC | BR ST CO | BR NO AC | BR NO CO | CA ST AC | CA ST CO | CA NO AC | CA NO CO |
| Correct Identification | 90% | 86.7% | 94.4% | 96.7% | 96.7% | 95.6% | 96.7% | 93.3% |
| Common Identification | British/  RP | British/  Commonwealth | British | British/  Cockney | Canadian/  American | Canadian/  American | Canadian | Canadian/  Blue Collar |

Figure 4.1 1: General Identification of Accents

It is interesting to note that the majority of participants correctly identified the British (BR) vs. Canadian (CA) accents, and the Standard (ST) vs. Non-Standard (NO) accents. While the majority of participants did not seem to notice much of an accent difference in Non-Standard Academic (NO AC) accents, they did however attribute the widest range and most specific accents to the Non-Standard Colloquial (NO CO) accents. In such cases, British Non-Standard Colloquial (BR NO CO) was often described as Cockney, Scottish, Australian, or some other distinctive but less familiar (to a standard Canadian) accent, while Canadian Non-Standard Colloquial (CA NO CO) was often described as Blue Collar, Newfoundland, or some other distinctive but less familiar (to a standard Canadian) accent. Only one participant correctly identified BR NO CO as being from East London, and one other participant correctly identified CA NO CO as being specifically from Hamilton. Despite some variety of responses, the consistent correct identification of the general accents and the generally close characterization of such lends support to this study’s use of the modified matched-guise technique for the voice clips, and demonstrates that there was enough difference in the voice clips for participants to (theoretically) fairly judge each clip as a different accent, and thus attribute unique average scores to them. This is important for the analysis of the Likert scale data that forms the bulk of the responses from Part B.

For each of the eight voice clips, participants rated them on a series of eleven measures (Education, Intelligence, Clarity, Friendliness, Pleasantness, Honesty, Aggressiveness, Confidence, Energy, Familiarity, Safety), using a 9-point Likert scale, as per the Speech Evaluation Instrument (Zahn & Hopper, 1985). Average scores for each voice clip on each measure were compared as to their means, standard deviation, and variance, to indicate general rankings. These comparisons were done without separating the sample into Native and Non-Native speaker groups, in order to get a general comparison across the entire sample. A complete chart for comparison can be found in Appendix C. The average score across the whole sample for all voice clips was (μ = 6.07). The scores across the whole sample roughly fit a normal distribution (σ = 1.15). The following chart highlights the voice clips which vary from the mean by at least >1σ on each rating, as well as for all ratings overall.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ranking  Measure | **Highest Scoring Voice Clips** | **% Difference from Average for Measure** | **Lowest Scoring Voice Clips** | **% Difference from Average for Measure** |
| **Education** | BR ST AC | +28.5% | CA NO AC  CA NO CO | -34.5%  -31.4% |
| **Intelligence** | BR ST AC | +26.6% | CA NO CO  CA NO AC | -30.3%  -29.1% |
| **Clarity** | CA ST AC  CA ST CO | +25.3%  +22.5% | BR NO CO | -24.9% |
| **Friendliness** | BR ST CO  BR NO CO | +7.9%  +5.7% | CA NO AC  CA ST CO | -5.3%  -4.9% |
| **Pleasantness** | BR ST CO  BR ST AC | +13.9%  +13.3% | CA NO AC  CA NO CO | -18.9%  -11.6% |
| **Honesty** | BR ST AC | +9.4% | CA NO AC | -17.2% |
| **Aggressiveness** | BR NO CO | +32.8% | CA ST CO | -15.7% |
| **Confidence** | BR ST AC | +31.2% | CA NO AC | -37.2% |
| **Energy** | BR NO CO  BR ST AC | +28.5%  +27.0% | CA NO AC  CA ST CO | -41.8%  -15.1% |
| **Familiarity** | CA ST CO  CA ST AC | +14.2%  +12.6% | BR NO CO | -16.1% |
| **Safety** | \*No significantly higher score\* |  | CA NO AC | -8.0% |
| **Overall** | BR ST AC | +14.7% | CA NO AC | -19.6% |

Figure 4.1 2: Comparison of Highest and Lowest Average Scores on Each Measure for Each Voice Clip.

When factoring in the variable distinguishing native Canadian English and non-native Canadian English speakers in the data (which was done by means of flagging the score entries in the data tables), some inferential statistics were conducted to test the effect of nativeness on average score for each variable on each accent. Using the software package *SPSS*, a Principal Component Analysis (PCA) was run on the data in order to determine the sources and strength of variance. In a PCA, the data is converted from potentially correlated variables into principal components, which are linearly uncorrelated variables which account for the variability in the data. As such, the PCA identified significant sources of variance among the measures being ranked for each voice clip, and significant variances are considered to be +/- 0.500. As per the standard in statistics, all potential new components with an eigenvalue of >1 were retained. The component matrices for each voice clip as printed out by *SPSS* can be found below.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | **Component Matrixa BR NO AC** | | | |  | Component | | | 1 | 2 | | Education | **.832** | .119 | | Intelligence | **.828** | .178 | | Clarity | **.796** | .258 | | Friendliness | **.759** | -.205 | | Pleasantness | **.801** | -.075 | | Honesty | **.813** | -.017 | | Aggressiveness | -.496 | **.717** | | Confidence | **.713** | .451 | | Energy | **.709** | .303 | | Familiarity | **.754** | -.043 | | Safety | **.720** | **-.514** | | Extraction Method: Principal Component Analysis. | | | | a. 2 components extracted. | | | | 2 Main Factors: Aggressiveness and Safety vs. Everything Else | | | |  | | |   **Component Matrixa BR ST AC** | | | |  | Component | | | 1 | 2 | | Education | **.768** | .283 | | Intelligence | **.808** | .139 | | Clarity | **.642** | .275 | | Friendliness | **.742** | -.228 | | Pleasantness | **.781** | -.239 | | Honesty | **.835** | -.193 | | Aggressiveness | -.370 | **.635** | | Confidence | **.720** | .157 | | Energy | **.546** | .355 | | Familiarity | **.532** | .323 | | Safety | **.759** | -.307 | | Extraction Method: Principal Component Analysis. | | | | a. 2 components extracted.  2 Main Factors: Aggressiveness vs. Everything Else | | | | |  |  |  | | --- | --- | --- | | **Component Matrixa BR ST CO** | | | |  | Component | | | 1 | 2 | | Education | **.826** | .046 | | Intelligence | **.838** | .020 | | Clarity | **.746** | .065 | | Friendliness | **.798** | -.244 | | Pleasantness | **.852** | -.191 | | Honesty | **.834** | -.128 | | Aggressiveness | **-.557** | **.610** | | Confidence | **.766** | .275 | | Energy | **.562** | **.669** | | Familiarity | **.688** | .118 | | Safety | **.787** | .040 | | Extraction Method: Principal Component Analysis. | | | | a. 2 components extracted. | | |   2 Main Factors: Aggressiveness and Energy vs. Everything Else |
|  | |  |  | | --- | --- | | **Component Matrixa** **BR NO CO** | | |  | Component | | | | 1 | 2 | 3 | | Education | **.686** | .004 | **-.641** | | Intelligence | **.766** | .106 | **-.529** | | Clarity | **.700** | -.146 | -.190 | | Friendliness | **.735** | -.368 | .446 | | Pleasantness | **.769** | -.292 | .342 | | Honesty | **.625** | .017 | .181 | | Aggressiveness | -.407 | **.524** | .128 | | Confidence | **.511** | **.711** | .136 | | Energy | **.562** | **.635** | .123 | | Familiarity | **.559** | .213 | .265 | | Safety | **.832** | -.146 | .048 | | Extraction Method: Principal Component Analysis. | | | | | a. 3 components extracted. | | | |   3 Main Factors: Education and Intelligence vs. Aggressiveness, Confidence, and Energy, vs. Everything Else |
| |  |  |  | | --- | --- | --- | | **Component Matrixa CA ST AC** | | | |  | Component | | | 1 | 2 | | Education | **.747** | **.514** | | Intelligence | **.779** | **.514** | | Clarity | **.699** | .233 | | Friendliness | **.731** | -.233 | | Pleasantness | **.848** | -.142 | | Honesty | **.802** | -.034 | | Aggressiveness | -.354 | **.526** | | Confidence | **.603** | -.283 | | Energy | **.514** | -.284 | | Familiarity | **.600** | -.100 | | Safety | **.813** | -.082 | | Extraction Method: Principal Component Analysis. | | | | a. 2 components extracted.  2 Main Factors: Aggressiveness, Education, and Intelligence vs. Everything Else | | | | |  |  |  | | --- | --- | --- | | **Component Matrixa CA ST AC** | | | |  | Component | | | 1 | 2 | | Education | **.755** | -.330 | | Intelligence | **.738** | -.291 | | Clarity | **.621** | -.190 | | Friendliness | **.817** | .301 | | Pleasantness | **.840** | .230 | | Honesty | **.795** | -.170 | | Aggressiveness | -.357 | **.635** | | Confidence | **.671** | .159 | | Energy | **.544** | **.631** | | Familiarity | **.744** | .109 | | Safety | **.801** | -.033 | | Extraction Method: Principal Component Analysis. | | | | a. 2 components extracted.  2 Main Factors: Aggressiveness and Energy vs. Everything Else | | | |
| |  |  | | --- | --- | | **Component Matrixa CA NO AC** | | |  | Component | | | | 1 | 2 | 3 | | Education | **.619** | .478 | -.479 | | Intelligence | **.552** | **.572** | -.481 | | Clarity | **.703** | -.034 | .084 | | Friendliness | **.765** | -.297 | .032 | | Pleasantness | **.846** | -.072 | .024 | | Honesty | **.811** | -.159 | -.154 | | Aggressiveness | -.194 | **.741** | .411 | | Confidence | **.685** | .308 | .356 | | Energy | **.735** | .264 | .281 | | Familiarity | **.554** | -.095 | ***.499*** | | Safety | **.688** | -.552 | -.094 | | Extraction Method: Principal Component Analysis. | | | | | a. 3 components extracted.  3 Main Factors: Familiarity vs. Aggressiveness and Intelligence vs. Everything Else | | | | |  | | |  | | | |  |  |  | | --- | --- | --- | | **Component Matrixa CA NO CO** | | | |  | Component | | | 1 | 2 | | Education | **.736** | .439 | | Intelligence | **.731** | **.511** | | Clarity | **.580** | .316 | | Friendliness | **.738** | -.364 | | Pleasantness | **.782** | -.191 | | Honesty | **.783** | -.391 | | Aggressiveness | -.459 | **.605** | | Confidence | **.598** | .332 | | Energy | **.586** | .414 | | Familiarity | **.614** | -.058 | | Safety | **.730** | -.389 | | Extraction Method: Principal Component Analysis. | | | | a. 2 components extracted. | | |   2 Main Factors: Aggressiveness and Intelligence vs. Everything Else |

Figure 4.1 3: PCA Component Matrix Printouts, grouping together significant sources of variance in the responses

As can be seen in the chart above, the main variance components tend to be for Aggressiveness and then everything else, which supports my prediction that respondents would tend to rank Aggressiveness significantly differently than the other measures due to its answer spectrum being expected to be the reverse of the norm. For BR NO CO, Aggressiveness, Confidence, and Energy were retained as a secondary component, while Intelligence and Education were retained as a tertiary component. For CA NO AC, Intelligence and Aggression were retained as a secondary component, while Education, Intelligence (again), and Familiarity were retained as a minimally-significant tertiary component. The retention of secondary and/or tertiary components and variances of +/- 0.500 are considered to be indicative of a significant effect of nativeness on pattern of responses. In these cases, nativeness plays an important role in predicting how strongly a participant may rank a voice clip on a particular measure. This will be explained in further detail in the Discussion section.

In order to identify any potential correlation between nativeness and the principal components, a MANOVA (multi-variate analysis of variance) was run. This essentially compared the perception of accent with the variable corresponding to the native or non-native status of the participant by means of a Bartlett factor weighting, which was done via *SPSS*. Only three out of eighteen between and within groups comparisons (one for each principal component identified by the PCA) yielded significant results, which indicate a statistically significant difference between how native and non-native Canadian English speakers ranked voice clips on particular measures. These significant results were: for Bartlett Factor 3 for BR NO CO (F = 4.144, p = 0.045\*), which has been identified as significantly lower scores for Intelligence and Education; Bartlett Factor 2 for CA ST AC (F = 5.817, p = 0.018\*), which has been identified as significantly higher scores for Intelligence and Education; and Bartlett Factor 2 for CA NO CO (F = 9.316, p = 0.003\*), which has been identified as significantly higher scores for Intelligence. Bartlett Factors 1 and 2 for CA NO AC were almost significant (F = 3.413, p = 0.068; F = 3.457, p = 0.066), identified as generally significantly higher scores from non-native speakers compared to native speakers, but failed to meet the threshold of p < 0.05. The complete chart detailing the MANOVA results can be found in Appendix C.

Finally, a series of Pearson’s chi-squared tests were run on the data to analyse the effect of nativeness on response across each measure for each accent, which required 88 tests to be done, again via *SPSS*. Out of the 88 tests, there were 19 with significant results, which have been input in the table below, and the remainder can be found in Appendix C. For the Pearson’s chi-squared tests, significant results indicate a strong correlation between Nativeness of the participant and the average score for a particular measure for the voice clip indicated. For example, a significant score for BR ST AC on Intelligence indicates that Native and Non-Native respondents tended to rank that voice clip significantly differently on that measure, after accounting for the variance identified in the PCA.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Edu. | Int. | Cla. | Fri. | Ple. | Hon. | Agg. | Con. | Ene. | Fam. | Saf. |
| BR ST AC | **X** | **\*.028** | **X** | **X** | **X** | **\*.017** | **X** | **X** | **X** | **\*.025** | **X** |
| BR ST CO | **X** | **\*.010** | **X** | **\*.008** | **\*.016** | **X** | **X** | **\*.000** | **X** | **X** | **X** |
| BR NO AC | **X** | **X** | **X** | **\*.034** | **X** | **X** | **X** | **X** | **X** | **\*.033** | **X** |
| BR NO CO | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **\*.043** | **\*.026** | **X** | **X** |
| CA ST AC | **X** | **X** | **X** | **X** | **X** | **\*.012** | **X** | **X** | **X** | **X** | **X** |
| CA ST CO | **X** | **X** | **X** | **X** | **X** | **\*.031** | **X** | **X** | **X** | **X** | **\*.026** |
| CA NO AC | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **\*.012** | **X** | **X** | **X** |
| CA NO CO | **\*.022** | **\*.033** | **X** | **\*.007** | **X** | **\*.047** | **X** | **X** | **X** | **X** | **X** |

Figure 4.1 4: Significant Results from Pearson’s Chi-Squared Tests: comparing Nativeness across each measure for each voice clip.

Across all voice clips, there was no significant difference in average ranking between native and non-native Canadian English speakers on the measures of Clarity and Aggressiveness. However, when accounting for nativeness, the following differences in average rankings can be seen:

|  |  |
| --- | --- |
| Education | Non-Native speakers tended to rate CA NO CO significantly higher than Native speakers |
| Intelligence | Non-Native speakers tended to rate BR ST significantly lower than Native speakers, but CA NO CO higher |
| Friendliness | Non-Native speakers tended to rate BR ST CO and BR NO AC significantly higher than Native speakers, but CA NO CO lower |
| Pleasantness | Non-Native speakers tended to rate BR ST CO significantly lower than Native speakers |
| Honesty | Non-Native speakers tended to rate BR ST AC and CA NO CO significantly lower than Native speakers, but CA ST AC and CA ST CO higher |
| Confidence | Non-Native speakers tended to rate BR ST CO, BR NO CO, and CA NO AC significantly lower than Native speakers |
| Energy | Non-Native speakers tended to rate BR NO CO significantly lower than Native speakers |
| Familiarity | Non-Native speakers tended to rate BR ST AC and BR NO AC significantly lower than Native speakers |
| Safety | Non-Native speakers tended to rate CA ST CO significantly higher than Native speakers |

Figure 4.1 5: Summary of Comparisons Based on Pearson’s Chi-Squared Tests

In general, it is evident that non-native speakers tended to be more critical of the British accents, and more forgiving in their rankings of Canadian accents. This seems to suggest that speakers more familiar with their own dialect or accent may feel more comfortable in critiquing similar speakers rather than accents with which they are less familiar, which mirrors similar findings done in other English-speaking countries (Deuber & Leung, 2013).

Participant responses to Part C of the Language Attitude Study were recorded into *Microsoft Excel 2010* as a series of lists of summarized responses to the question of which of the voice clips participants preferred the most and the least. The choices for preference and dislike were converted into percentages and the data arranged into bar graphs which show a general gradation of preference.

Figure 4.1 6: Frequency of Most Preferred Accents

Figure 4.1 7: Frequency of Least Preferred Accents

The voice clip preferred by the most respondents was BR ST AC, with 28.3% of respondents selecting it as their favourite. The voice clip preferred by the fewest respondents was CA NO CO, with only 5% of respondents selecting it as their favourite. The voice clip preferred the least by the most respondents was CA NO AC, with 32.7% of respondents selecting it as their least favourite. The voice clip preferred the least by the fewest respondents was BR ST CO, with only 2.7% of respondents selecting it as their least favourite. When clustering the accent preferences into dialect, standardness, and context, the preferences become even more pronounced, and appear to align with the general trends and inferences of the responses from Part B. When voice clip preferences are divided according to dialect, almost two-thirds preferred British (64.2%) to Canadian (35.8%). Dividing the voice clip preferences according to standardness, just over half preferred Standard (54.8%) to Non-Standard (45.2%). Finally, dividing the voice clip preferences according to context, again, almost two-thirds preferred Academic (60.8%) to Colloquial (39.2%). Given the results from Part B, these general preferences are not surprising, and also tend to reflect similar findings in the literature.

The descriptive responses given by participants when asked to briefly explain why they selected their most and least preferred voice clips were converted into singular adjectives as a means of quickly summarizing participants’ reasons. Positive responses were marked as either: Intelligent, Clear, Comforting, Pleasant, Familiar, Interesting, Polite, Confident, Friendly, Standard, Engaging, or Neutral. Negative responses were marked as either: Unpleasant, Unintelligent, Unintelligible, Unconfident, Snobby, Boring, Lazy, Slang, Strange, Choppy, Awkward, Stereotypical, Unfamiliar, Unclear, Annoying, Aggressive, Rude, or Dishonest. Respondents tended to be far more descriptive and open to criticizing the accents they preferred the least, while they tended to be more level and concise when explaining why they preferred an accent the most. Below is a chart summarizing the most common adjectives used to describe the accents, which I have taken to be summations of the general sentiment toward those accents.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | BRSTAC | BRSTCO | BRNOAC | BRNOCO | CASTAC | CASTCO | CANOAC | CANOCO |
| Most Preferred | Pleasant  Intelligent | Pleasant  Intelligent | Pleasant | Familiar  Interesting | Familiar  Clear | Familiar | Familiar | Familiar  Friendly |
| Least Preferred | Unfamiliar  Snobby | Unfamiliar | Unfamiliar  Unclear | Unfamiliar  Unintelligible | Boring | Unintelligent  Stereotypical | Lazy  Unintelligent | Lazy  Unintelligent |

Figure 4.1 8: Most Common Reasons for Ranking Preference of Accents

Looking at the chart above reveals some interesting response patterns regarding the accents and their groupings. It appears that when explaining why an accent was most preferred, the BR accents tended to be described as Pleasant, while the CA accents tended to be described as Familiar. Respondents associated the BR ST accents as Intelligent, while the NO CO accents came across as Interesting and Friendly, as well as Familiar. Concerning least preferred accents, the BR accents were described as Unfamiliar, while the CA accents were described as Unintelligent or Lazy. The BR NO accents could be difficult to understand (Unclear, Unintelligible), while BR ST AC could be Snobby, and CA ST AC could be Boring. As with the straight preference selections described above, these characterizations support my hypothesis, and also tend to reflect similar characterization patterns reported by language attitude studies concerning other languages (Arthur et al., 1974; Bayard & Green, 2005; Bresnahan et al., 2002; Buckingham, 2015; Cargile & Giles, 1997; Chong & Tan, 2013; etc.). It is interesting to note that a common descriptor for CA ST AC was Boring, and CA ST CO was Stereotypical, implying that despite a common positive descriptor for these accents being Familiar, there seems to be a potential saturation point whereby overfamiliarity may be seen as a factor influencing choice of accent preference. It was also interesting that BR NO CO was described by many respondents as Familiar, but this may be more indicative of its markedness. Respondents may have heard similar accents before, and recognized that it represented some form of non-standard British, but were not in fact fully familiar with it, as responses to the question of *What accent would you describe this as?* in Part B (for this particular accent) tended to be quite varied. Furthermore, it appears that participants were less harsh in ascribing negative qualities toward the less familiar BR accents, describing them as difficult to understand, whereas for the more familiar CA accents, they were described as Unintelligent and Lazy, suggesting an implied link between the two characterizations in participants’ minds. It again appears that familiarity allows for people to be more critical, which mirrors findings reported by Deuber & Leung’s (2013) study into English accent preference in Trinidad, Chong and Tan’s (2013) study into Mandarin accent preference, as well as in Buckingham’s (2015) study on language attitude toward different English accent usage in Oman.

***4.2 Discussion***

The results of this current study closely reflect results obtained by various related studies dealing with other accents and/or languages. However, this study concerns, at least among McMaster University students, Canadian English speakers’ attitudes toward Canadian English - as well as British - and it attempts to identify differences between native and non-native speakers, which has not yet been done in this way. Although studies have been done into the different varieties of Canadian English (Chambers, 1998 & 2012), the idea of a Standard Canadian English (Dollinger, 2011), and attitudes toward Canadian and other Englishes (Bayard & Green, 2005), no research to date investigated the language attitudes held by Canadian speakers toward their own varieties of English. Instead, the majority of the research into language attitude has taken place in the US (Cargile & Giles, 1998; Farr, 2011; Remlinger, Salmons & Von Schneidemesser, 2009), or in various parts of the British Commonwealth (Lambert et al., 1960; Giles & Sassoon, 1983). Furthermore, despite many studies having been done into language attitudes of native speakers toward non-native speakers (Arthur et al., 1974; Bresnahan et al., 2002; Cargile & Giles, 1998), none seem to have been done comparing the attitudes of native and non-native speakers toward standard and non-standard accents.

As has been noted above, other studies have reported a general preference for standard dialects/accents (Deuber & Leung, 2013; Buckingham, 2015; Arthur et al., 1974; various studies by Cargile & Giles). This trend in the literature was a major influence on the prediction chart presented in the Hypotheses section of the Methods and Observations chapter. Based on the comparisons of average scores across each measure for each voice clip, as well as the qualitative preferences from Part C, the results from this study are in line with those discussed in other studies. Other than for Clarity and Familiarity, which were led by the CA ST clips, the BR clips tended to rank the highest across all measures, with BR ST AC receiving the highest overall rating across the sample, among both native and non-native speakers. This trend is indicative of the general perception, at least in English-speaking countries, of Standard British English as a prestige dialect, to which even Canadian university students are still susceptible (Bresnahan et al., 2002; Bayard & Green, 2005). This general preference for standard British stems from its history as progenitor of the other Englishes, and a tradition of comparing the periphery (colonies) to the core (London) of the British Empire in terms of education, culture, and language, and has been perpetuated through the present (Crystal, 1997; Giroux, 2010). Accompanying the preference for standard British was a general dispreference for non-standard, more so against Canadian than for British. Again, this reflects work done investigating other accents and languages which seems to highlight a general human preference for prestige dialects, particularly standards, versus non-standards which hold less prestige, and bring with them numerous stereotypes as identified by various researchers (Anderson, 1981; Baron, 1975; Blanchet, 1987; Bresnahan et al., 2002; and many more). Thus in the area of preference for certain accents, the results from the current study contribute to the trends found in the literature, and are not really surprising. However, these results do provide evidence against the commonly-held belief that Canadians - especially younger Canadians – are less critical of people who are different from them. In fact, they do make similar general judgements of peoples’ accents or ways of speaking to what has been found elsewhere.

Regarding general preferences, what is interesting to note is the apparent pattern of participants being more strongly critical of accents of their own dialect than of another, as described above. While participants praised BR accents as being “pleasant”, “intelligent”, or “interesting”, the CA accents were most commonly praised as “familiar”, “clear”, and “friendly”. These positive descriptors are contrasted with disliked BR accents as being “unfamiliar”, “unclear”, or “snobby”, while dispreferred CA accents were described as “lazy”, “unintelligent”, and “boring”. This suggests a relationship between people’s familiarity with an accent and their willingness to criticize it to varying degrees, at least among Canadian university students. Similar findings have been reported in studies regarding other speakers elsewhere, so this may be indicative of a general language attitude trait, whereby language users tend to be more thoroughly critical of their own language due to familiarity (Deuber & Leung, 2013; Buckingham, 2015; Chong & Tan, 2013).

Where this study provides more interesting inferences is from the comparison of Native and Non-Native speaker data. Although both sample sizes were relatively small, there is evidence that a closer look should be taken at the different language attitudes held by Native vs. Non-Native speakers of a language. The PCA results and the significant differences in responses summarized in the chart in Fig. 4.1.4 and 4.1.5 suggest that Non-Native speakers appeared to generally rank the CA accents higher (or less negatively) than the BR accents in all but Friendliness, although they still rated and/or preferred the voice clips mostly the same as Native speakers. This evidence of an effect of nativeness on response pattern merits further investigation. The current findings could suggest that because non-native speakers have a different or more varied linguistic experience, they are more accepting of variations and thus less critical of those differences which seemed to generate more negative responses out of the native speakers. It could also suggest a preference for the language used by the native speakers surrounding them as a means of fitting into a social group. Research into the effects of multilingualism and multiculturalism supports such possible implications (Diamond, 2010; Gluszek, 2010), but a larger sample size and greater emphasis on the difference between native and non-native speakers in the experiment design is necessary.

Since it has been demonstrated that Canadian university students do have distinctive preferences and general trends of evaluating different accents and varieties of English, what are the implications? Although it is clear that British and standard accents tend to be held in greater prestige, and there is a general dispreference for non-standard accents, this current study cannot predict how these preferences may affect the interactions between speakers for whom the difference in accent may (or may not) have an impact. However, research done on other accents and for other languages suggests that opportunities for success may vary depending on whether one speaks a standard or non-standard accent or dialect. In Singapore, the usage of standard Mandarin instead of other varieties or dialects has been officially supported by means of the state policy of the *Speak Mandarin Campaign*, which means that non-standard Chinese languages are officially considered to be detrimental to the economic interests of the state (Chong & Tan, 2013). Arthur et al. (1974)’s study into attitudes of English-speaking university students toward different varieties of Mexican-American (Chicano) English found that the students viewed such accents negatively, and even more so as the accent diverged from more standard-sounding varieties. Regarding other non-standard varieties of English, numerous studies have been done in the US and UK that highlight the relationship between non-standard usage and indicators of poverty and lack of opportunity (Clubb, 1961; Giles & Sasson, 1983; Gladney & Leverton, 1968, etc.). Although Canada is culturally and socially distinct from these other societies, it is nonetheless conceivable that similar experiences may befall non-standard speakers. People tend to be more likely to associate with those who speak a similar language to the one they speak, or with those whose language has more prestige, and this may influence hiring patterns whereby speakers of prestige dialects may have an advantage (Baron, 1975; Giles & Sassoon, 1983).

The above considerations aside, this current study may have benefitted from a larger sample size, as well as greater control over the exact demographic composition of the participants. Response bias may have been an issue in reporting native language, as it may have also influenced the ratings on each measure and voice clip. The absence of a tangible reward for completing the study may have contributed to further response bias, which may have affected the data output. Participants were not surveyed as to whether they had lived in the Golden Horseshoe region of Southern Ontario (from which it was assumed the sample of speakers was collected), and this again may have had a confounding effect on the data. However, comparable studies elsewhere seem to not have controlled for such variance either, and the similarity of response patterns for the accents in question to those tested for in other studies seems to suggest that any confound was minimal and insignificant.

***4.3 Future Directions***

In the process of analysing the data collected for the present study, numerous potential future directions have been realized. It must first be noted that in order to improve the power of this study, the sample size would need to be expanded. However, comparable studies have used both far more (Bresnahan et al., 2002) and far fewer participants (Arthur et al., 1974), and have found very similar results and/or patterns in the results. This study should also be replicated, and with stricter control over the many potential variables which arise from acquiring participants. Potential participant-centered items to control for would include: variation between listeners on account of neurovariational differences, gender of the participants, language proficiency in L1 English, level of multilingualism, and more tightly controlling the distinction between native and non-native Canadian English speakers. In order to improve upon this, a more comprehensive and widely-accepted standard for native Canadian English proficiency, and thus a widely-supported description of what exactly constitutes standard Canadian usage, would need to be developed. In discussions with phoneticians, such as Dr. Daniel Pape of McMaster University, it has been suggested that in order to lessen the potential confounds concomitant with the matched-guise (or modified matched guise) technique in trying to achieve a particular perceived accent, a set of artificial voice clips be produced by synthesizing the phonetic input of a wide range of speakers. This could theoretically produce a static snapshot of a hypothetically idealized version of any of the accents achieved by manipulating the accent sample pool in order to generate specific accents. However, this would be a challenging task, involving deciding which voice samples to retain for the accent construction, and how to manipulate the results in a fair way that would produce the most acceptable accent. Response bias is a possible issue in any longer study, and so a shorter survey might be preferable as a means of further reducing the potential confounds associated with attention. Participants should also be more carefully screened for their hearing ability and surveyed more generally on their perception of accents and voices before participating, in order to ensure that all participants are in fact hearing the voice clips in the same way. Finally, it might be helpful to conduct a longitudinal study investigating how the standardness of one’s accent may affect their social mobility. Such findings could be compared to similar studies in other places in order to conclusively show whether one’s accent (standardness) does have a tangible effect on one’s ability to be more socio-economically prosperous. What determines one’s socio-economic standing is complex, but language attitude studies may help to at least reveal whether there is a tangible linguistic component which could then be addressed separately from other factors.

Chapter 5: Conclusion

This project was intended to investigate how the standardness and context of speech might affect a listener’s language attitude toward a particular accent or dialect. Based on various previous language attitude studies, a similar study was developed and administered to native and non-native Canadian English speakers in order to elicit general perceptions of accents which vary in region, context, and standardness. Given that everyone is fluent in at least one variety of the language which they speak, but is also exposed to other varieties of the language which they will pass judgement upon, it is not unreasonable to expect that some accents will be more or less preferable to different listeners. With this expectation in mind, and focusing on perceptions of different varieties of English held by Canadians, I set out to explore the literature around accents, language attitude, and the situation of Canadian English. Having done so, I predicted that people would tend to prefer certain accents over others due to their perceived prestige, which would tend to characterize more standardized forms. It is clear that despite a commonly-held belief among Canadians that everyone has equal access to opportunity, and that Canadians tend not to discriminate against others as much as people elsewhere, the results of the literature review and the language attitude study have revealed that we do hold strong opinions either for or against different accents (Howard-Hassman, 1999; Dollinger, 2011). Interestingly, I have found that at least among the small subset of Canadians which I recruited from McMaster University, these opinions are stronger for native Canadian English speakers than for non-native speakers, and analysis of the quantitative and qualitative results suggests that familiarity plays a significant role in determining the values attributed to or against particular accents.

Language attitude studies are important sociolinguistic tools which can be used to explain why and how certain perceptions of languages and accents develop, and what the implications of those perceptions are. It is clear that English is a major prestige language held in high esteem around the world, and as such English speakers are granted numerous economic, social, political, and cultural benefits (Crystal, 1997). This also is perhaps a sign that English will continue to thrive into the future due to its utility and demand in the world, unlike the decreasing utility and lack of demand for other languages which seem to be dying out. Since language can be considered to be a tool of power and empowerment, the study of language attitude allows us to identify which varieties of a language have the best chances for success and recognition (Giroux, 2005; 2010). Considering that this kind of study had not yet been done in Southern Ontario, looking at the differences between sociolects and accounting somewhat for the dialect of the participants, the results of this study can help to fill that gap in the research. As an educator in Southern Ontario, I have experienced first-hand what challenges can arise for students who may appear to have different linguistic abilities. However, these students often actually just use different varieties of English which are not entirely compatible with a school system that values standardization, as per the dictum of the state, and a general trend toward valuing standard as opposed to non-standard Canadian English in the public sphere (Dollinger, 2011; Chambers, 2012). As such, it is important for us to recognize that what might appear to merely be a different accent or different sociolect could actually lead to a speaker having greater or lesser access to opportunities and success for reasons attributable to language attitude, which is often beyond their control.

As noted above in Chapter 4, this study should be replicated with more attention paid to participant-selection and voice clip acquisition. It would be interesting to investigate how significant the effect of speaker background (accounting for dominant sociolect, accent, speech community, etc.) might be on language attitude scores. Participants in different language attitude studies seem to hold similar general attitudes toward other accents or languages from similar perspectives; as in, they identify a prestige variety, rate it more highly, and identify the less prestigious variety with lower ratings. However, this current study found that the background of the participant seems to have an effect on response pattern, and so it would be helpful to investigate that effect further. As for voice clip acquisition and study design, it would be helpful to develop some method of obtaining the most representative samples of particular accents to use in order to ensure that we are getting the most accurate results for those accents being studied.

Ultimately, I would like to see more research done into the potential tangible or practical effects of speaking a particular language variety over another. Does the fact that someone speaks a particular sociolect directly correlate to their situation in society? We can make general predictions about who will tend to speak a certain variety in a certain area due to various demographic studies of accent and dialect, and can comment on the socioeconomic conditions that tend to be particular to that area. But what are the direct effects of the linguistic aspect? Such information could be used to improve education and the delivery of social services in an effort to level the playing field, so to speak. Although humans naturally categorize and seek out the differences in things, there is also ample evidence suggesting that recognition of the beliefs and values held as related to those differences leads to greater attention being paid toward such interactions. Discrimination is a learned trait that develops from misinformation and unfamiliarity, while acceptance can be developed from the introduction of the opposite (Giroux, 2005; McConachy, 2011).

Having completed this study, I am hoping that the findings can be used to contribute to a greater awareness of the fact that how you speak affects the perception of you in the eyes of others. Language is a powerful tool, but is one that can be, and is, wielded by anyone, whether speaking or listening. Increasing linguistic awareness, whereby people are more cognizant of the fact that certain forms of language are useful for certain situations but not necessarily others, may help people to adjust their speech habits in order to access more opportunity. Just as people realise that they must acquire extra languages in order to participate in realms where those other languages are more valuable, we should highlight the fact that these different realms may exist among accents and sociolects as well. Since that appears to be the case, rather than decrying non-standard forms as wrong, and thus charged with a number of negative descriptors that people tend to associate with wrongness – as many government publications in Canada and elsewhere tend to do – we should be accepting such forms as though they are different languages worth studying, but which have their own place alongside standard forms (*Growing Success*, 2011; Chong & Tan, 2013). As Giroux stated in his work of social commentary on education and success, “…language intersects with power in the way particular linguistic forms [words, sentences, accents] structure and legitimate the ideologies of specific groups” (Giroux, 2005, pg. 135). This suggests that the study of language attitude is uniquely positioned to identify such associations in order to locate and describe the flow of power and empowerment, and I hope that this project has contributed to that discourse in a meaningful way.

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**Appendix A: Language Attitude Study**

In this study, you will be required to answer a series of questions pertaining to a variety of voice clips that you will hear. For the first section, you will need to answer a couple of brief demographic questions. The second section will comprise of listening to a series of 8 voice clips, each of which you will then rank on a series of 11 measures; simply circle the value that you would ascribe based off of the scale presented. The third section will ask you to choose which voice clip you prefer the most and which one you prefer the least, and to briefly explain why. If you should decide during the course of this questionnaire that you no longer would like to participate, you may indicate that immediately below this paragraph. Thank you for completing this survey and contributing to my research!

**I wish to withdraw from this study and do not consent to have my data be used: \_\_\_\_\_\_\_\_\_**

Part A – Demographic Information

Please answer the following questions as accurately as possible.

1. How old are you?

18-29 30-39 40-49 50+

2. In what country were you born?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3a. What would you identify as your first language?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. If your first language was English, what variety would you describe it as? (ie. Canadian, British, etc.)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. What languages other than English, if any, would you identify yourself as being fluent in?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Part B

You will hear 8 brief voice clips. Please listen carefully, and score each of them on the 11 scales listed. Select the score for each measure that most accurately aligns with your first thoughts about the voice clip you hear, and please select a score for every measure.

**1**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

**2**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

**3**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

**4**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

**5**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

**6**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

**7**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

**8**. What accent would you describe this as?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1-9, please rank the voice clip you have just heard on the following measures:

Uneducated Educated

1 2 3 4 5 6 7 8 9

Unintelligent Intelligent

1 2 3 4 5 6 7 8 9

Unclear Clear

1 2 3 4 5 6 7 8 9

Unfriendly Friendly

1 2 3 4 5 6 7 8 9

Unpleasant Pleasant

1 2 3 4 5 6 7 8 9

Dishonest Honest

1 2 3 4 5 6 7 8 9

Unaggressive Aggressive

1 2 3 4 5 6 7 8 9

Unsure Confident

1 2 3 4 5 6 7 8 9

Lazy Energetic

1 2 3 4 5 6 7 8 9

Unfamiliar Familiar

1 2 3 4 5 6 7 8 9

Unsafe Safe

1 2 3 4 5 6 7 8 9

Part C

Using the bolded numbers at the top of each page in Part B, please indicate which of the voice clips you:

Preferred the most: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Preferred the least: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Briefly explain why:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Thank you very much for taking the time to complete this study!

**Appendix B: Language Attitude Study Voice Sample Scripts and Transcripts**

Academic – Standard (British)

Music and language are both intrinsic human abilities; skills developed for communicative and other purposes as our species has evolved. Although language’s evolution as a communicative tool has been previously established, debate continues over whether musicality has also evolved as a distinctive instinct, or whether it is a universally-acquired skill.

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Academic – Standard (Canadian)

Music and language are both intrinsic human abilities; skills developed for communicative and other purposes as our species has evolved. Although language’s evolution as a communicative tool has been previously established, debate continues over whether musicality has also evolved as a distinctive instinct, or whether it is a universally-acquired skill.

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Academic – Non-Standard (Canadian)

So the Romans were very religious peeps, eh? Like, they believed in a lotta gods ‘n stuff, made sacrifices, and a lotta their stories are almost the same as the Greeks. A lotta the proof for this is from their ruins, and things the Romans wrote in books we found in their libaries and houses and stuff. From the looks of things, like lookin’ at the fax, lotsa Romans were always goin’ to the temples to pray to the gods er whatever.

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Academic – Non-Standard (British)

So, the, the Romans, eh, had, eh, had religion too, but, uh, they mostly got it from the Greeks. Um, they believed in all kinds of stuff, like, uh, gods for this an’ gods for that, an’ they made sacrifices an’ they threw things in the river, and, uh, they were praying an’ hoping they got what they wished for. Um, we can find proof o’ this in their, in their ruins, uh, we find the coins they threw in an’ the books, er, the books they had in their libraries. They, er, they were really a superstitious bunch.

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Colloquial – Standard (British)

As I was leaving my house this past Tuesday, I noticed that there was a squirrel chattering away on the fence. The small silver-haired rodent must have been attempting to warn other nearby creatures of its presence, which just happened to catch my attention. After that brief reflection, I continued on my way to my car, almost having forgotten that it would not be long before I would be late for work at the bank.

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Colloquial – Standard (Canadian)

As I was leaving my house this past Tuesday, I noticed that there was a squirrel chattering away on the fence. The small silver-haired rodent must have been attempting to warn other nearby creatures of its presence, which just happened to catch my attention. After that brief reflection, I continued on my way to my car, almost having forgotten that it would not be long before I would be late for work at the bank.

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Colloquial – Non-Standard (Canadian)

So Jon gets in his car, ‘n goes t’the store yesterday, he says: “Y’got anything for a sore throat? My kid’s havin’ trouble swallowin’ reg’lar drugs, so my wife thinks he’s got a throat infection or something. She woulda come, but I says to her, I says, “Y’gotta stay home with the kid ‘n make sure she’s good.” Jen’s not too pleased, but dem’s the brakes, y’know.

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Colloquial – Non-Standard (British)

So, Jon gets in his car; he goes to the store, yesterday, he says: “Ya got anything for a sore throat? My kid’s havin’ trouble swallowin’ regular drugs, so, um, my wife says he’s got a throat infection, or something. She’d’ve come herself but, uh, I says to ‘er, I says, “Ya gotta stay home with the kid, um, an’ make sure he’s alright.” She’s not too pleased, but, uh, that’s the way the cookie crumbles, ya know?”

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Appendix C: Data Tables

|  |  |  |
| --- | --- | --- |
| *English Variety* | |  |
| **Canadian** | 72 | 80% |
| **British** | 2 | 2.20% |
| **American** | 1 | 1.10% |
| **Other** | 15 | 16.70% |

*Part A Data*

|  |  |  |
| --- | --- | --- |
| *Age Groups* | |  |
| **18-29** | 86 | 95.60% |
| **30-39** | 4 | 4.40% |
| **40-49** | 0 | 0 |
| **50+** | 0 | 0 |
| **Total:** | 90 |  |

|  |  |  |
| --- | --- | --- |
| *First Language* | |  |
| **English** | 69 | 76.70% |
| **French** | 2 | 2.20% |
| **Other** | 19 | 21.10% |

|  |  |  |
| --- | --- | --- |
| *Other Fluent Languages* | | |
| **Gujurati** | 1 | 1.90% |
| **Portuguese** | 1 | 1.90% |
| **French** | 16 | 30.80% |
| **Persian** | 1 | 1.90% |
| **Spanish** | 4 | 7.70% |
| **Arabic** | 4 | 7.70% |
| **Teochew** | 1 | 1.90% |
| **Afrikaans** | 1 | 1.90% |
| **Dutch** | 1 | 1.90% |
| **Russian** | 2 | 3.90% |
| **Cantonese** | 2 | 3.90% |
| **Croatian** | 1 | 1.90% |
| **Urdu** | 3 | 5.80% |
| **Mandarin** | 2 | 3.90% |
| **Turkish** | 1 | 1.90% |
| **Marathi** | 1 | 1.90% |
| **Hindi** | 1 | 1.90% |
| **Somali** | 1 | 1.90% |
| **Korean** | 2 | 3.90% |
| **Japanese** | 3 | 5.80% |
| **Hungarian** | 1 | 1.90% |
| **Greek** | 1 | 1.90% |
| **Vietnamese** | 1 | 1.90% |
| **Total:** | 52 |  |

|  |  |  |
| --- | --- | --- |
| *Country of Birth* | |  |
| **Canada** | 64 | 71.10% |
| **USA** | 1 | 1.10% |
| **Portugal** | 1 | 1.10% |
| **Iran** | 1 | 1.10% |
| **South Africa** | 1 | 1.10% |
| **Philippines** | 3 | 3.30% |
| **Kazakhstan** | 1 | 1.10% |
| **Belarus** | 1 | 1.10% |
| **Qatar** | 1 | 1.10% |
| **Pakistan** | 3 | 3.30% |
| **China** | 4 | 4.40% |
| **Turkey** | 1 | 1.10% |
| **India** | 1 | 1.10% |
| **Japan** | 2 | 2.20% |
| **Mexico** | 1 | 1.10% |
| **Saudi Arabia** | 1 | 1.10% |
| **France** | 1 | 1.10% |
| **Colombia** | 1 | 1.10% |
| **No Answer** | 1 | 1.10% |

*Part B Data*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Accent Identities* | |  |  |  |  |  |  |
| **1 BR ST AC** | **2 BR ST CO** | **3 BR NO AC** | **4 BR NO CO** | **5 CA ST AC** | **6 CA ST CO** | **7 CA NO AC** | **8 CA NO CO** |
| RP British | British | British | Cockney | North American | North American | Canadian | Canadian |
| RP British | Mancubrian | British | Cockney | Canadian | North American | Millenial Canadian | Blue Collar Canadian |
| British | British | British | British | Neutral | Neutral | Canadian | Canadian |
| RP British | British | British | Liverpool | New England | North American | Canadian | Southern Ontario |
| Posh British | British | Rambling | Cockney | University | Hamilton | Canadian | Hamilton |
| Australian | Scottish | British | British | Canadian | Canadian | Canadian | American |
| RP British | British | British | Cockney | Ontario | North American | American Fratboy | Maritime |
| RP British | Estuary | Estuary | Cockney | Canadian | Canadian | Albertan | Nova Scotian |
| British | British | British | Cockney | American | Canadian | Canadian | Canadian |
| RP British | British | British | Welsh | Canadian | Ontario | Maritime | Hamilton |
| British | British | British | British | American | Standard | Canadian | Canadian |
| Posh British | British | RP British | British | Canadian | Canadian | Canadian | American |
| British | British | British | British | Canadian | Canadian | Canadian | American |
| British | British | British | British | North American | Canadian | Albertan | Blue Collar Canadian |
| University British | RP British | British | British | Canadian | Canadian | Millenial Canadian | Millenial Canadian |
| British | South African | Australian | Scottish | Canadian | Canadian | North American | North American |
| Posh British | Posh British | RP British | Cockney | North American | North American | Canadian | Canadian |
| British | British | British | British | North American | Canadian | Canadian | American |
| Australian | British | British | British | American | American | Canadian | American |
| Posh British | British | London | Northern British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | British | American | American | Canadian | Canadian |
| British | British | British | British | American | American | American | Canadian |
| British | British | British | British | North American | Canadian | Canadian | Canadian |
| British | British | British | Scottish | American | Canadian | Southern American | Southern American |
| British | British | British | Scottish | American | Canadian | Canadian | Neutral |
| RP British | RP British | RP British | East London | Southern Ontario | American | North American | Blue Collar Canadian |
| British | Australian | British | Scottish | North American | North American | Canadian | North American |
| British | British | British | Australian | American | American | Maritime | Canadian |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | Australian | North American | North American | Canadian | Canadian |
| British | British | British | British | Canadian | North American | American | North American |
| British | British | British | British | Canadian | Canadian | Canadian | Newfie |
| British | British | British | British | Canadian | Canadian | Canadian | North American |
| British | South African | British | Northern British | Canadian | Canadian | American | Blue Collar Canadian |
| British | British | Unknown | Rural British | Standard | Canadian | Southern American | Northern Canadian |
| British | British | British | British | North American | North American | Canadian | North American |
| RP British | British | London | British | North American | Canadian | Canadian | Canadian |
| British | British | British | Irish | North American | North American | Canadian | American |
| American | British | British | British | British | American | American | American |
| British | British | British | British | American | Canadian | Canadian | Canadian |
| Professional European | Interested | Professional European | European | Masculine | Bland | Canadian | Canadian |
| British | Australian | American | British | American | North American | Canadian | Irish |
| British | Blank | British | British | Canadian | Canadian | Blank | Blank |
| Blank | Blank | Blank | Blank | Blank | Blank | Blank | Blank |
| Blank | Blank | British | Chinese | American | American | Canadian | Blank |
| British | British | Australian | Scottish | American | American | Canadian | American |
| British | Australian | British | Scottish | Canadian | Canadian | American | Southern American |
| British | British | British | Australian | North American | American | Canadian | Irish |
| British | British | British | British | American | American | Canadian | Canadian |
| London | London | London | Cockney | North American | Canadian | Canadian | Newfie |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| RP British | British | British | Scottish | Canadian | American | Canadian | Ottawa Valley |
| British | British | British | Australian | American | American | Canadian | Canadian |
| British | British | British | British | American | American | Canadian | Newfie |
| RP British | British | British | Cockney | Canadian | Canadian | Canadian | Canadian |
| Australian | British | British | British | Canadian | American | Canadian | American |
| British | British | British | British | Canadian | American | Canadian | Canadian |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| Posh British | British | British | British | North American | North American | Rural Canadian | Canadian |
| British | British | British | British | North American | North American | Canadian | American |
| British | British | British | British | North American | North American | Canadian | American |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | Cockney | Canadian | Canadian | Canadian | Canadian |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | Australian | Canadian | Canadian | Canadian | Canadian |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| RP British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | Australian | Canadian | American | American | Newfie |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | British | Canadian | Canadian | Northern Canadian | American |
| British | British | British | British | Canadian | Canadian | Canadian | American |
| British | British | British | British | Canadian | Canadian | Canadian | American |
| Blank | Blank | British | British | Blank | Blank | Canadian | Blank |
| British | British | British | Cockney | Canadian | American | American | Minnesotan |
| British | British | British | British | Canadian | American | Canadian | Australian |
| RP British | British | British | British | American | Canadian | Canadian | Canadian |
| RP British | British | London | Northern British | North American | North American | North American | Canadian |
| European | British | British | British | Canadian | Canadian | Millenial Canadian | Canadian |
| British | British | British | British | Canadian | Canadian | Canadian | Canadian |
| British | British | British | British | American | Southern Ontario | Southern Ontario | Southern Ontario |
| RP British | Other British | Cockney | Worse Cockney | Standard American | Canadian | Blue Collar Canadian | Newfie |
| British | Scottish | Australian | Irish | American | Canadian | Blue Collar American | Southern American |
| British | British | British | Cockney | Yankee | Canadian | Canadian | Canadian |
| RP British | Lazy British | Lazier British | Australian | Formal Canadian | Slow | High School Canadian | Minnesota |
| RP British | Southern British | Rural British | Cockney | American | Canadian | Canadian | Canadian |
| British | British | Middle Class British | Northern English | Standard American | Canadian | Rural Canadian | Blue Collar Urban American |
| British | British | British | Lower Class British | American | American | American | Rural American |
| British | British | British | British | American | American | Canadian | Canadian |
| RP British | British | British | Cockney | Standard Canadian | Canadian | Canadian | Southern Ontario |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *British/RP* | *British/Commonwealth* | *British* | *British/Cockney* | *Canadian/North American* | *Canadian/North American* | *Canadian* | *Canadian/Blue Collar* |
| 90% Correct | 86.7% Correct | 94.4% Correct | 96.7% Correct | 96.7% Correct | 95.6% Correct | 96.7% Correct | 93.3% Correct |

Responses to Voice Clips

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *1* | BR ST AC |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 8 | 8 | 8 | 6 | 8 | 8 | 2 | 8 | 6 | 7 | 8 | 7 |
| 2 | 9 | 9 | 7 | 3 | 9 | 9 | 1 | 9 | 5 | 5 | 7 | 6.6363636 |
| 3 | 6 | 6 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 5 | 5 | 5.3636364 |
| 4 | 9 | 9 | 9 | 6 | 7 | 7 | 2 | 8 | 3 | 7 | 8 | 6.8181818 |
| 5 | 9 | 9 | 8 | 7 | 9 | 8 | 4 | 9 | 8 | 6 | 7 | 7.6363636 |
| 6 | 9 | 9 | 9 | 7 | 8 | 8 | 1 | 7 | 6 | 8 | 8 | 7.2727273 |
| 7 | 7 | 7 | 4 | 5 | 7 | 6 | 3 | 8 | 6 | 6 | 6 | 5.9090909 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 3 | 8 | 7 | 7 | 8 | 7.3636364 |
| 9 | 9 | 9 | 9 | 9 | 9 | 8 | 3 | 8 | 6 | 4 | 8 | 7.4545455 |
| 10 | 9 | 9 | 9 | 8 | 9 | 8 | 7 | 9 | 8 | 7 | 8 | 8.2727273 |
| 11 | 9 | 9 | 9 | 6 | 8 | 8 | 1 | 9 | 8 | 7 | 8 | 7.4545455 |
| 12 | 9 | 9 | 9 | 8 | 8 | 8 | 1 | 9 | 7 | 8 | 2 | 7.0909091 |
| 13 | 8 | 8 | 4 | 7 | 7 | 7 | 2 | 8 | 7 | 6 | 6 | 6.3636364 |
| 14 | 8 | 8 | 9 | 5 | 7 | 7 | 3 | 9 | 6 | 6 | 6 | 6.7272727 |
| 15 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 7 | 5 | 7 | 7.5454545 |
| 16 | 9 | 9 | 6 | 5 | 5 | 7 | 6 | 9 | 5 | 4 | 7 | 6.5454545 |
| 17 | 9 | 9 | 9 | 7 | 8 | 7 | 6 | 8 | 6 | 7 | 7 | 7.5454545 |
| 18 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 7 | 8 | 9 | 8.7272727 |
| 19 | 9 | 9 | 8 | 9 | 9 | 9 | 5 | 9 | 7 | 3 | 9 | 7.8181818 |
| 20 | 6 | 7 | 7 | 4 | 6 | 5 | 5 | 8 | 6 | 6 | 5 | 5.9090909 |
| 21 | 9 | 9 | 9 | 8 | 8 | 9 | 1 | 9 | 9 | 9 | 9 | 8.0909091 |
| 22 | 9 | 9 | 9 | 8 | 8 | 8 | 2 | 9 | 9 | 8 | 8 | 7.9090909 |
| 23 | 9 | 9 | 7 | 4 | 3 | 5 | 6 | 9 | 9 | 6 | 3 | 6.3636364 |
| 24 | 9 | 9 | 9 | 7 | 7 | 9 | 3 | 8 | 9 | 9 | 9 | 8 |
| 25 | 9 | 9 | 8 | 8 | 8 | 8 | 1 | 8 | 8 | 7 | 9 | 7.5454545 |
| 26 | 9 | 9 | 9 | 8 | 9 | 9 | 1 | 9 | 6 | 9 | 9 | 7.9090909 |
| 27 | 8 | 8 | 7 | 7 | 7 | 7 | 2 | 8 | 7 | 7 | 7 | 6.8181818 |
| 28 | 9 | 9 | 9 | 7 | 8 | 8 | 3 | 8 | 9 | 7 | 7 | 7.6363636 |
| 29 | 9 | 9 | 8 | 9 | 9 | 8 | 2 | 9 | 8 | 8 | 9 | 8 |
| 30 | 9 | 9 | 8 | 8 | 8 | 8 | 1 | 9 | 6 | 6 | 8 | 7.2727273 |
| 31 | 9 | 9 | 9 | 8 | 9 | 9 | 2 | 9 | 8 | 8 | 9 | 8.0909091 |
| 32 | 9 | 9 | 7 | 8 | 9 | 8 | 1 | 9 | 6 | 7 | 9 | 7.4545455 |
| 33 | 7 | 7 | 3 | 4 | 5 | 6 | 4 | 7 | 8 | 4 | 5 | 5.4545455 |
| 34 | 9 | 8 | 9 | 9 | 9 | 7 | 3 | 9 | 7 | 8 | 7 | 7.7272727 |
| 35 | 8 | 8 | 7 | 6 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 7.6363636 |
| 36 | 9 | 8 | 7 | 8 | 6 | 8 | 2 | 9 | 7 | 6 | 8 | 7.0909091 |
| 37 | 8 | 7 | 8 | 4 | 5 | 6 | 4 | 7 | 6 | 7 | 4 | 6 |
| 38 | 9 | 9 | 9 | 7 | 9 | 9 | 2 | 9 | 7 | 9 | 9 | 8 |
| 39 | 7 | 5 | 9 | 6 | 5 | 5 | 6 | 7 | 4 | 4 | 5 | 5.7272727 |
| 40 | 9 | 9 | 9 | 8 | 8 | 7 | 1 | 8 | 7 | 9 | 9 | 7.6363636 |
| 41 | 8 | 8 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 6.8181818 |
| 42 | 8 | 8 | 7 | 6 | 6 | 7 | 3 | 8 | 7 | 5 | 7 | 6.5454545 |
| 43 | 8 | 9 | 7 | 4 | 8 | 9 | 5 | 9 | 7 | 7 | 5 | 7.0909091 |
| 44 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 9 | 8.2727273 |
| 45 | 8 | 8 | 6 | 7 | 7 | 7 | 5 | 8 | 7 | 7 | 7 | 7 |
| 46 | 9 | 9 | 9 | 7 | 8 | 8 | 4 | 9 | 8 | 7 | 7 | 7.7272727 |
| 47 | 9 | 9 | 9 | 6 | 8 | 8 | 3 | 9 | 7 | 6 | 7 | 7.3636364 |
| 48 | 9 | 9 | 9 | 5 | 5 | 7 | 6 | 9 | 8 | 6 | 8 | 7.3636364 |
| 49 | 6 | 8 | 8 | 7 | 8 | 7 | 6 | 8 | 8 | 9 | 7 | 7.4545455 |
| 50 | 8 | 8 | 8 | 7 | 7 | 7 | 3 | 9 | 6 | 4 | 6 | 6.6363636 |
| 51 | 8 | 8 | 8 | 8 | 8 | 8 | 3 | 9 | 7 | 8 | 7 | 7.4545455 |
| 52 | 9 | 9 | 9 | 8 | 9 | 8 | 5 | 9 | 7 | 8 | 8 | 8.0909091 |
| 53 | 9 | 9 | 8 | 6 | 7 | 6 | 4 | 8 | 5 | 7 | 7 | 6.9090909 |
| 54 | 9 | 9 | 9 | 7 | 7 | 8 | 4 | 7 | 8 | 7 | 6 | 7.3636364 |
| 55 | 6 | 7 | 6 | 7 | 6 | 8 | 4 | 8 | 7 | 2 | 7 | 6.1818182 |
| 56 | 9 | 9 | 9 | 8 | 8 | 8 | 1 | 9 | 8 | 8 | 8 | 7.7272727 |
| 57 | 7 | 7 | 6 | 8 | 7 | 7 | 2 | 8 | 7 | 7 | 6 | 6.5454545 |
| 58 | 9 | 8 | 6 | 6 | 7 | 7 | 5 | 7 | 6 | 5 | 5 | 6.4545455 |
| 59 | 8 | 8 | 8 | 7 | 7 | 8 | 2 | 8 | 7 | 6 | 8 | 7 |
| 60 | 8 | 8 | 7 | 6 | 7 | 6 | 8 | 8 | 8 | 7 | 7 | 7.2727273 |
| 61 | 9 | 9 | 8 | 7 | 7 | 8 | 1 | 9 | 5 | 6 | 7 | 6.9090909 |
| 62 | 8 | 8 | 8 | 7 | 7 | 5 | 3 | 8 | 9 | 8 | 5 | 6.9090909 |
| 63 | 9 | 9 | 8 | 7 | 8 | 7 | 4 | 6 | 5 | 6 | 6 | 6.8181818 |
| 64 | 8 | 8 | 8 | 8 | 8 | 8 | 2 | 8 | 6 | 6 | 8 | 7.0909091 |
| 65 | 9 | 8 | 7 | 6 | 6 | 5 | 5 | 8 | 7 | 6 | 6 | 6.6363636 |
| 66 | 9 | 8 | 7 | 7 | 6 | 8 | 6 | 9 | 8 | 7 | 7 | 7.4545455 |
| 67 | 6 | 7 | 9 | 5 | 6 | 6 | 3 | 8 | 5 | 5 | 5 | 5.9090909 |
| 68 | 9 | 9 | 8 | 7 | 8 | 8 | 3 | 8 | 5 | 6 | 7 | 7.0909091 |
| 69 | 8 | 7 | 7 | 8 | 8 | 6 | 2 | 7 | 9 | 5 | 6 | 6.6363636 |
| 70 | 9 | 9 | 6 | 5 | 5 | 9 | 4 | 9 | 7 | 5 | 5 | 6.6363636 |
| 71 | 9 | 5 | 9 | 5 | 8 | 5 | 6 | 9 | 8 | 9 | 5 | 7.0909091 |
| 72 | 9 | 9 | 4 | 8 | 9 | 9 | 3 | 9 | 8 | 4 | 8 | 7.2727273 |
| 73 | 9 | 9 | 9 | 5 | 5 | 7 | 1 | 9 | 5 | 5 | 6 | 6.3636364 |
| 74 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 75 | 7 | 7 | 8 | 7 | 7 | 7 | 5 | 8 | 6 | 5 | 7 | 6.7272727 |
| 76 | 8 | 8 | 9 | 5 | 8 | 8 | 1 | 9 | 7 | 8 | 9 | 7.2727273 |
| 77 | 7 | 7 | 8 | 4 | 5 | 6 | 4 | 6 | 5 | 7 | 5 | 5.8181818 |
| 78 | 9 | 9 | 8 | 6 | 6 | 5 | 6 | 7 | 6 | 7 | 5 | 6.7272727 |
| 79 | 9 | 9 | 8 | 9 | 8 | 9 | 1 | 9 | 9 | 8 | 9 | 8 |
| 80 | 8 | 8 | 6 | 7 | 8 | 8 | 5 | 9 | 6 | 6 | 7 | 7.0909091 |
| 81 | 7 | 6 | 6 | 5 | 6 | 5 | 6 | 4 | 4 | 4 | 5 | 5.2727273 |
| 82 | 8 | 8 | 8 | 5 | 7 | 7 | 1 | 9 | 6 | 5 | 7 | 6.4545455 |
| 83 | 9 | 9 | 7 | 6 | 6 | 7 | 4 | 9 | 5 | 7 | 7 | 6.9090909 |
| 84 | 8 | 9 | 7 | 8 | 9 | 8 | 3 | 8 | 6 | 8 | 9 | 7.5454545 |
| 85 | 5 | 5 | 5 | 4 | 5 | 6 | 3 | 7 | 4 | 7 | 5 | 5.0909091 |
| 86 | 7 | 7 | 8 | 5 | 7 | 5 | 3 | 8 | 4 | 8 | 7 | 6.2727273 |
| 87 | 9 | 7 | 8 | 6 | 8 | 5 | 3 | 8 | 6 | 6 | 6 | 6.5454545 |
| 88 | 6 | 6 | 3 | 3 | 3 | 3 | 3 | 6 | 4 | 3 | 4 | 4 |
| 89 | 6 | 6 | 5 | 6 | 7 | 5 | 3 | 7 | 6 | 4 | 6 | 5.5454545 |
| 90 | 8 | 8 | 7 | 5 | 7 | 6 | 4 | 7 | 4 | 8 | 5 | 6.2727273 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 8.244444 | 8.144444 | 7.588889 | 6.577778 | 7.255556 | 7.211111 | 3.4 | 8.155556 | 6.633333 | 6.488889 | 6.866667 | 6.960606 |
| Variance | 1.095802 | 1.190247 | 2.242099 | 2.288395 | 1.92358 | 1.788765 | 3.484444 | 1.020247 | 2.01 | 2.449877 | 2.337778 | 0.693122 |
| SD | 1.046806 | 1.090984 | 1.497364 | 1.512744 | 1.386932 | 1.337447 | 1.866667 | 1.010073 | 1.417745 | 1.565208 | 1.528979 | 0.83254 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *2* | BR ST CO |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 8 | 8 | 7 | 6 | 7 | 7 | 2 | 7 | 6 | 7 | 7 | 6.5454545 |
| 2 | 8 | 8 | 6 | 7 | 8 | 5 | 1 | 7 | 5 | 5 | 7 | 6.0909091 |
| 3 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5.3636364 |
| 4 | 8 | 8 | 8 | 8 | 8 | 8 | 2 | 8 | 5 | 7 | 8 | 7.0909091 |
| 5 | 7 | 8 | 6 | 7 | 7 | 7 | 4 | 6 | 7 | 5 | 6 | 6.3636364 |
| 6 | 8 | 8 | 8 | 9 | 9 | 8 | 1 | 9 | 7 | 8 | 9 | 7.6363636 |
| 7 | 6 | 6 | 5 | 6 | 7 | 5 | 4 | 6 | 6 | 5 | 6 | 5.6363636 |
| 8 | 7 | 8 | 7 | 8 | 8 | 8 | 3 | 8 | 7 | 7 | 7 | 7.0909091 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 2 | 9 | 9 | 6 | 9 | 8.0909091 |
| 10 | 9 | 8 | 8 | 6 | 7 | 7 | 6 | 7 | 6 | 5 | 6 | 6.8181818 |
| 11 | 6 | 6 | 7 | 6 | 6 | 8 | 5 | 8 | 7 | 7 | 8 | 6.7272727 |
| 12 | 8 | 8 | 6 | 7 | 7 | 7 | 4 | 7 | 8 | 4 | 4 | 6.3636364 |
| 13 | 7 | 7 | 7 | 6 | 6 | 7 | 2 | 7 | 6 | 5 | 6 | 6 |
| 14 | 7 | 8 | 8 | 8 | 8 | 6 | 2 | 7 | 5 | 7 | 7 | 6.6363636 |
| 15 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 7 | 5 | 9 | 7.7272727 |
| 16 | 5 | 5 | 5 | 5 | 5 | 7 | 2 | 6 | 6 | 4 | 5 | 5 |
| 17 | 8 | 8 | 9 | 6 | 8 | 7 | 5 | 8 | 7 | 6 | 7 | 7.1818182 |
| 18 | 8 | 8 | 9 | 9 | 9 | 7 | 6 | 5 | 5 | 7 | 7 | 7.2727273 |
| 19 | 9 | 9 | 8 | 9 | 9 | 9 | 1 | 7 | 7 | 6 | 7 | 7.3636364 |
| 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 21 | 9 | 9 | 8 | 9 | 9 | 9 | 2 | 9 | 9 | 8 | 9 | 8.1818182 |
| 22 | 9 | 8 | 6 | 8 | 9 | 8 | 3 | 7 | 8 | 6 | 8 | 7.2727273 |
| 23 | 6 | 7 | 4 | 6 | 5 | 3 | 7 | 5 | 7 | 3 | 4 | 5.1818182 |
| 24 | 9 | 9 | 9 | 9 | 9 | 9 | 2 | 9 | 9 | 9 | 9 | 8.3636364 |
| 25 | 9 | 9 | 8 | 9 | 8 | 8 | 1 | 7 | 7 | 8 | 9 | 7.5454545 |
| 26 | 8 | 8 | 9 | 9 | 9 | 8 | 1 | 8 | 7 | 9 | 9 | 7.7272727 |
| 27 | 8 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 6 | 6 | 7 | 6.5454545 |
| 28 | 6 | 7 | 6 | 8 | 8 | 7 | 3 | 8 | 8 | 5 | 8 | 6.7272727 |
| 29 | 8 | 8 | 8 | 8 | 8 | 8 | 1 | 8 | 7 | 8 | 9 | 7.3636364 |
| 30 | 8 | 8 | 6 | 6 | 8 | 8 | 1 | 8 | 6 | 6 | 6 | 6.4545455 |
| 31 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 8 | 8 | 8 | 9 | 8 |
| 32 | 9 | 8 | 7 | 8 | 7 | 8 | 1 | 7 | 4 | 7 | 8 | 6.7272727 |
| 33 | 6 | 6 | 4 | 5 | 5 | 5 | 7 | 6 | 6 | 4 | 5 | 5.3636364 |
| 34 | 8 | 8 | 9 | 8 | 8 | 8 | 4 | 7 | 6 | 7 | 7 | 7.2727273 |
| 35 | 5 | 6 | 4 | 5 | 6 | 5 | 4 | 5 | 6 | 4 | 5 | 5 |
| 36 | 8 | 8 | 7 | 9 | 8 | 8 | 1 | 8 | 8 | 7 | 8 | 7.2727273 |
| 37 | 7 | 7 | 7 | 8 | 7 | 8 | 4 | 5 | 4 | 3 | 5 | 5.9090909 |
| 38 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 8 | 9 | 9 | 8.1818182 |
| 39 | 5 | 6 | 9 | 9 | 9 | 8 | 1 | 5 | 5 | 5 | 5 | 6.0909091 |
| 40 | 9 | 9 | 9 | 9 | 9 | 8 | 1 | 9 | 7 | 9 | 9 | 8 |
| 41 | 7 | 8 | 6 | 8 | 8 | 8 | 1 | 7 | 8 | 8 | 8 | 7 |
| 42 | 7 | 7 | 7 | 8 | 8 | 6 | 4 | 6 | 5 | 6 | 7 | 6.4545455 |
| 43 | 8 | 8 | 8 | 7 | 9 | 8 | 1 | 9 | 7 | 5 | 5 | 6.8181818 |
| 44 | 8 | 8 | 9 | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 9 | 8.0909091 |
| 45 | 7 | 6 | 6 | 7 | 7 | 6 | 5 | 7 | 8 | 7 | 6 | 6.5454545 |
| 46 | 6 | 6 | 7 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 8 | 6.5454545 |
| 47 | 8 | 8 | 8 | 7 | 7 | 6 | 4 | 7 | 6 | 6 | 6 | 6.6363636 |
| 48 | 8 | 8 | 8 | 6 | 6 | 6 | 3 | 8 | 7 | 6 | 8 | 6.7272727 |
| 49 | 5 | 7 | 8 | 6 | 7 | 6 | 5 | 6 | 7 | 8 | 6 | 6.4545455 |
| 50 | 8 | 8 | 7 | 7 | 6 | 7 | 2 | 5 | 6 | 5 | 7 | 6.1818182 |
| 51 | 7 | 8 | 9 | 8 | 8 | 8 | 1 | 8 | 4 | 7 | 7 | 6.8181818 |
| 52 | 8 | 8 | 8 | 7 | 8 | 8 | 4 | 8 | 6 | 7 | 7 | 7.1818182 |
| 53 | 7 | 7 | 8 | 7 | 7 | 7 | 3 | 4 | 5 | 7 | 7 | 6.2727273 |
| 54 | 8 | 7 | 7 | 4 | 4 | 5 | 3 | 5 | 4 | 7 | 5 | 5.3636364 |
| 55 | 6 | 7 | 4 | 6 | 6 | 4 | 3 | 5 | 4 | 5 | 6 | 5.0909091 |
| 56 | 9 | 9 | 8 | 8 | 8 | 9 | 1 | 8 | 7 | 8 | 9 | 7.6363636 |
| 57 | 8 | 8 | 7 | 7 | 7 | 8 | 2 | 7 | 8 | 6 | 7 | 6.8181818 |
| 58 | 7 | 7 | 7 | 7 | 6 | 7 | 3 | 8 | 6 | 7 | 6 | 6.4545455 |
| 59 | 8 | 8 | 8 | 7 | 8 | 7 | 1 | 9 | 7 | 6 | 6 | 6.8181818 |
| 60 | 8 | 8 | 7 | 8 | 7 | 8 | 6 | 7 | 7 | 6 | 7 | 7.1818182 |
| 61 | 6 | 6 | 6 | 6 | 6 | 7 | 8 | 7 | 6 | 7 | 8 | 6.6363636 |
| 62 | 6 | 5 | 7 | 6 | 6 | 5 | 3 | 6 | 7 | 7 | 5 | 5.7272727 |
| 63 | 7 | 7 | 8 | 8 | 9 | 6 | 3 | 6 | 6 | 6 | 7 | 6.6363636 |
| 64 | 8 | 8 | 7 | 6 | 8 | 7 | 7 | 8 | 7 | 5 | 8 | 7.1818182 |
| 65 | 8 | 8 | 7 | 6 | 5 | 7 | 5 | 7 | 6 | 6 | 5 | 6.3636364 |
| 66 | 7 | 8 | 7 | 8 | 8 | 7 | 2 | 7 | 6 | 7 | 7 | 6.7272727 |
| 67 | 6 | 6 | 9 | 7 | 7 | 6 | 3 | 7 | 6 | 5 | 5 | 6.0909091 |
| 68 | 8 | 9 | 8 | 7 | 8 | 8 | 3 | 8 | 5 | 6 | 8 | 7.0909091 |
| 69 | 6 | 7 | 6 | 7 | 7 | 6 | 4 | 6 | 7 | 5 | 5 | 6 |
| 70 | 9 | 9 | 6 | 8 | 8 | 8 | 1 | 9 | 7 | 5 | 9 | 7.1818182 |
| 71 | 7 | 7 | 9 | 7 | 7 | 6 | 3 | 7 | 6 | 8 | 7 | 6.7272727 |
| 72 | 8 | 9 | 6 | 7 | 9 | 8 | 3 | 7 | 5 | 4 | 8 | 6.7272727 |
| 73 | 8 | 8 | 7 | 7 | 7 | 9 | 1 | 9 | 5 | 5 | 5 | 6.4545455 |
| 74 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 75 | 6 | 6 | 7 | 6 | 6 | 7 | 4 | 8 | 7 | 6 | 7 | 6.3636364 |
| 76 | 7 | 8 | 9 | 6 | 8 | 7 | 1 | 7 | 6 | 6 | 9 | 6.7272727 |
| 77 | 6 | 6 | 4 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 6 | 6.1818182 |
| 78 | 9 | 9 | 8 | 7 | 8 | 7 | 5 | 8 | 7 | 8 | 5 | 7.3636364 |
| 79 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 9 | 8.2727273 |
| 80 | 8 | 8 | 6 | 8 | 8 | 8 | 5 | 9 | 9 | 6 | 8 | 7.5454545 |
| 81 | 6 | 6 | 4 | 6 | 5 | 4 | 5 | 4 | 5 | 5 | 6 | 5.0909091 |
| 82 | 7 | 8 | 6 | 4 | 6 | 7 | 1 | 5 | 4 | 4 | 6 | 5.2727273 |
| 83 | 7 | 6 | 3 | 8 | 8 | 7 | 2 | 5 | 4 | 6 | 7 | 5.7272727 |
| 84 | 7 | 7 | 6 | 9 | 7 | 7 | 3 | 8 | 4 | 5 | 3 | 6 |
| 85 | 5 | 5 | 4 | 7 | 7 | 6 | 3 | 6 | 2 | 6 | 6 | 5.1818182 |
| 86 | 7 | 7 | 7 | 5 | 7 | 5 | 4 | 6 | 5 | 5 | 5 | 5.7272727 |
| 87 | 7 | 6 | 8 | 8 | 7 | 8 | 2 | 5 | 6 | 7 | 7 | 6.4545455 |
| 88 | 3 | 3 | 3 | 4 | 4 | 5 | 3 | 6 | 5 | 3 | 3 | 3.8181818 |
| 89 | 6 | 6 | 4 | 7 | 6 | 7 | 4 | 5 | 3 | 4 | 6 | 5.2727273 |
| 90 | 7 | 7 | 5 | 8 | 8 | 8 | 2 | 6 | 4 | 7 | 8 | 6.3636364 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 7.3 | 7.4 | 6.9555556 | 7.1444444 | 7.3 | 7.0666667 | 3.0333333 | 6.9777778 | 6.2333333 | 6.1555556 | 6.8111111 | 6.579798 |
| Variance | 1.61 | 1.4844444 | 2.531358 | 1.7902469 | 1.6988889 | 1.7733333 | 3.2322222 | 1.8661728 | 2.0677778 | 2.1091358 | 2.3309877 | 0.8146148 |
| SD | 1.2688578 | 1.2183778 | 1.5910242 | 1.3380011 | 1.3034143 | 1.3316656 | 1.7978382 | 1.3660794 | 1.437977 | 1.4522864 | 1.5267572 | 0.9025602 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *3* | BR NO AC |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 7 | 6 | 6 | 8 | 7 | 7 | 2 | 3 | 3 | 7 | 7 | 5.7272727 |
| 2 | 7 | 7 | 5 | 5 | 8 | 5 | 1 | 3 | 5 | 7 | 8 | 5.5454545 |
| 3 | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5.2727273 |
| 4 | 7 | 7 | 7 | 6 | 7 | 7 | 2 | 5 | 6 | 6 | 5 | 5.9090909 |
| 5 | 8 | 9 | 8 | 8 | 8 | 8 | 1 | 7 | 4 | 7 | 8 | 6.9090909 |
| 6 | 9 | 9 | 8 | 7 | 8 | 9 | 1 | 8 | 6 | 8 | 8 | 7.3636364 |
| 7 | 6 | 6 | 5 | 5 | 6 | 6 | 4 | 3 | 4 | 6 | 7 | 5.2727273 |
| 8 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 4 | 6 | 6 | 6.1818182 |
| 9 | 8 | 8 | 9 | 8 | 8 | 8 | 1 | 9 | 8 | 8 | 9 | 7.6363636 |
| 10 | 8 | 8 | 6 | 5 | 5 | 6 | 2 | 3 | 2 | 3 | 5 | 4.8181818 |
| 11 | 4 | 5 | 7 | 3 | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 4.5454545 |
| 12 | 8 | 7 | 3 | 6 | 5 | 6 | 1 | 6 | 4 | 3 | 5 | 4.9090909 |
| 13 | 8 | 8 | 7 | 7 | 7 | 8 | 1 | 7 | 6 | 7 | 7 | 6.6363636 |
| 14 | 7 | 7 | 9 | 6 | 8 | 7 | 3 | 7 | 4 | 9 | 8 | 6.8181818 |
| 15 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 8 | 5 | 8 | 7.7272727 |
| 16 | 5 | 5 | 1 | 6 | 7 | 7 | 1 | 7 | 4 | 4 | 8 | 5 |
| 17 | 7 | 7 | 7 | 7 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 6.1818182 |
| 18 | 7 | 7 | 8 | 8 | 8 | 7 | 4 | 8 | 7 | 7 | 7 | 7.0909091 |
| 19 | 7 | 5 | 3 | 5 | 8 | 7 | 4 | 5 | 5 | 3 | 7 | 5.3636364 |
| 20 | 6 | 6 | 6 | 5 | 6 | 5 | 3 | 5 | 5 | 7 | 5 | 5.3636364 |
| 21 | 8 | 8 | 9 | 9 | 8 | 8 | 3 | 7 | 6 | 8 | 7 | 7.3636364 |
| 22 | 9 | 8 | 8 | 6 | 7 | 8 | 3 | 7 | 7 | 7 | 7 | 7 |
| 23 | 4 | 4 | 4 | 4 | 5 | 6 | 5 | 2 | 4 | 6 | 6 | 4.5454545 |
| 24 | 9 | 9 | 9 | 9 | 8 | 8 | 2 | 9 | 8 | 9 | 9 | 8.0909091 |
| 25 | 9 | 9 | 9 | 8 | 9 | 7 | 2 | 8 | 7 | 9 | 9 | 7.8181818 |
| 26 | 9 | 9 | 9 | 8 | 8 | 8 | 1 | 8 | 6 | 8 | 9 | 7.5454545 |
| 27 | 6 | 7 | 2 | 6 | 6 | 5 | 2 | 8 | 4 | 5 | 4 | 5 |
| 28 | 6 | 5 | 3 | 4 | 4 | 7 | 2 | 2 | 3 | 4 | 7 | 4.2727273 |
| 29 | 7 | 7 | 7 | 8 | 8 | 9 | 2 | 8 | 7 | 7 | 8 | 7.0909091 |
| 30 | 5 | 6 | 4 | 6 | 6 | 7 | 3 | 3 | 2 | 6 | 7 | 5 |
| 31 | 8 | 8 | 5 | 8 | 8 | 9 | 1 | 4 | 4 | 9 | 9 | 6.6363636 |
| 32 | 8 | 7 | 4 | 7 | 7 | 6 | 1 | 4 | 3 | 7 | 7 | 5.5454545 |
| 33 | 5 | 5 | 2 | 4 | 5 | 5 | 4 | 4 | 5 | 3 | 5 | 4.2727273 |
| 34 | 6 | 6 | 8 | 5 | 7 | 4 | 4 | 1 | 6 | 6 | 6 | 5.3636364 |
| 35 | 6 | 7 | 4 | 6 | 6 | 7 | 4 | 7 | 6 | 3 | 5 | 5.5454545 |
| 36 | 6 | 5 | 8 | 7 | 8 | 7 | 2 | 6 | 2 | 5 | 8 | 5.8181818 |
| 37 | 8 | 6 | 7 | 4 | 5 | 5 | 3 | 7 | 6 | 6 | 7 | 5.8181818 |
| 38 | 9 | 9 | 9 | 3 | 9 | 9 | 7 | 9 | 7 | 9 | 3 | 7.5454545 |
| 39 | 5 | 6 | 3 | 5 | 2 | 6 | 5 | 5 | 2 | 4 | 5 | 4.3636364 |
| 40 | 9 | 9 | 9 | 8 | 8 | 8 | 1 | 8 | 7 | 9 | 9 | 7.7272727 |
| 41 | 9 | 9 | 7 | 7 | 7 | 8 | 5 | 8 | 5 | 7 | 7 | 7.1818182 |
| 42 | 6 | 6 | 7 | 6 | 5 | 6 | 4 | 4 | 5 | 5 | 7 | 5.5454545 |
| 43 | 4 | 2 | 3 | 5 | 5 | 4 | 7 | 3 | 2 | 5 | 5 | 4.0909091 |
| 44 | 9 | 8 | 9 | 9 | 9 | 9 | 1 | 7 | 7 | 9 | 9 | 7.8181818 |
| 45 | 8 | 8 | 7 | 7 | 6 | 7 | 3 | 7 | 6 | 7 | 8 | 6.7272727 |
| 46 | 8 | 8 | 9 | 7 | 6 | 7 | 4 | 6 | 4 | 8 | 8 | 6.8181818 |
| 47 | 9 | 9 | 5 | 7 | 6 | 7 | 3 | 8 | 6 | 5 | 6 | 6.4545455 |
| 48 | 6 | 6 | 5 | 7 | 5 | 5 | 3 | 3 | 2 | 3 | 6 | 4.6363636 |
| 49 | 8 | 8 | 9 | 8 | 8 | 7 | 5 | 4 | 6 | 8 | 7 | 7.0909091 |
| 50 | 8 | 8 | 6 | 6 | 7 | 7 | 3 | 8 | 5 | 4 | 6 | 6.1818182 |
| 51 | 5 | 5 | 2 | 4 | 6 | 2 | 7 | 1 | 2 | 2 | 4 | 3.6363636 |
| 52 | 7 | 8 | 9 | 7 | 8 | 7 | 4 | 4 | 5 | 7 | 7 | 6.6363636 |
| 53 | 9 | 9 | 8 | 7 | 7 | 8 | 3 | 8 | 5 | 7 | 7 | 7.0909091 |
| 54 | 8 | 8 | 8 | 7 | 6 | 6 | 5 | 8 | 8 | 6 | 6 | 6.9090909 |
| 55 | 3 | 6 | 5 | 3 | 5 | 3 | 4 | 3 | 2 | 3 | 4 | 3.7272727 |
| 56 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 7 | 7 | 8 | 9 | 7.8181818 |
| 57 | 7 | 7 | 6 | 5 | 5 | 6 | 2 | 4 | 3 | 5 | 5 | 5 |
| 58 | 4 | 4 | 3 | 5 | 5 | 4 | 4 | 2 | 4 | 4 | 4 | 3.9090909 |
| 59 | 7 | 8 | 8 | 8 | 7 | 7 | 2 | 7 | 5 | 6 | 7 | 6.5454545 |
| 60 | 8 | 7 | 8 | 6 | 7 | 7 | 6 | 8 | 7 | 7 | 7 | 7.0909091 |
| 61 | 7 | 8 | 8 | 7 | 7 | 8 | 3 | 5 | 5 | 7 | 7 | 6.5454545 |
| 62 | 6 | 6 | 3 | 4 | 5 | 5 | 2 | 5 | 1 | 6 | 5 | 4.3636364 |
| 63 | 8 | 8 | 6 | 5 | 8 | 6 | 5 | 6 | 5 | 5 | 5 | 6.0909091 |
| 64 | 6 | 4 | 2 | 6 | 6 | 7 | 1 | 2 | 5 | 8 | 8 | 5 |
| 65 | 9 | 8 | 8 | 7 | 7 | 7 | 4 | 8 | 7 | 6 | 7 | 7.0909091 |
| 66 | 5 | 7 | 7 | 7 | 6 | 6 | 3 | 3 | 5 | 6 | 7 | 5.6363636 |
| 67 | 9 | 9 | 9 | 8 | 8 | 7 | 4 | 9 | 5 | 6 | 6 | 7.2727273 |
| 68 | 8 | 8 | 6 | 7 | 7 | 8 | 4 | 7 | 3 | 5 | 7 | 6.3636364 |
| 69 | 8 | 7 | 6 | 4 | 4 | 5 | 2 | 4 | 2 | 5 | 6 | 4.8181818 |
| 70 | 8 | 8 | 4 | 6 | 6 | 5 | 2 | 4 | 4 | 5 | 7 | 5.3636364 |
| 71 | 8 | 7 | 9 | 7 | 8 | 6 | 1 | 6 | 5 | 8 | 7 | 6.5454545 |
| 72 | 7 | 7 | 2 | 6 | 6 | 7 | 2 | 5 | 2 | 4 | 5 | 4.8181818 |
| 73 | 5 | 5 | 5 | 6 | 6 | 5 | 4 | 5 | 5 | 5 | 5 | 5.0909091 |
| 74 | 5 | 5 | 2 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 4.3636364 |
| 75 | 7 | 6 | 8 | 6 | 6 | 5 | 4 | 5 | 4 | 6 | 5 | 5.6363636 |
| 76 | 8 | 8 | 7 | 8 | 7 | 5 | 1 | 8 | 4 | 6 | 9 | 6.4545455 |
| 77 | 7 | 8 | 8 | 9 | 9 | 9 | 4 | 9 | 8 | 8 | 7 | 7.8181818 |
| 78 | 9 | 9 | 8 | 6 | 8 | 5 | 3 | 7 | 3 | 8 | 5 | 6.4545455 |
| 79 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 9 | 8.2727273 |
| 80 | 9 | 9 | 5 | 6 | 6 | 6 | 7 | 9 | 3 | 4 | 5 | 6.2727273 |
| 81 | 7 | 7 | 7 | 7 | 7 | 8 | 4 | 5 | 4 | 7 | 7 | 6.3636364 |
| 82 | 2 | 2 | 2 | 5 | 1 | 5 | 7 | 7 | 5 | 4 | 4 | 4 |
| 83 | 6 | 5 | 2 | 8 | 7 | 7 | 4 | 5 | 5 | 3 | 8 | 5.4545455 |
| 84 | 7 | 7 | 8 | 6 | 8 | 6 | 1 | 4 | 4 | 9 | 5 | 5.9090909 |
| 85 | 7 | 6 | 3 | 7 | 6 | 6 | 4 | 3 | 2 | 4 | 5 | 4.8181818 |
| 86 | 6 | 6 | 5 | 7 | 5 | 5 | 5 | 4 | 3 | 4 | 5 | 5 |
| 87 | 8 | 7 | 5 | 5 | 5 | 6 | 5 | 6 | 4 | 5 | 5 | 5.5454545 |
| 88 | 5 | 5 | 1 | 6 | 6 | 1 | 4 | 2 | 2 | 6 | 6 | 4 |
| 89 | 6 | 6 | 2 | 5 | 5 | 5 | 2 | 2 | 3 | 3 | 8 | 4.2727273 |
| 90 | 5 | 4 | 3 | 7 | 6 | 4 | 6 | 2 | 2 | 4 | 4 | 4.2727273 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 7.0111111 | 6.9111111 | 6.0222222 | 6.3777778 | 6.5222222 | 6.4111111 | 3.2 | 5.6222222 | 4.6888889 | 5.9555556 | 6.4777778 | 5.9272727 |
| Variance | 2.544321 | 2.5920988 | 5.9328395 | 2.2128395 | 2.6050617 | 2.5532099 | 2.8488889 | 4.9461728 | 3.2365432 | 3.3091358 | 2.2939506 | 1.4237282 |
| SD | 1.5950928 | 1.6099996 | 2.4357421 | 1.4875616 | 1.6140204 | 1.5978767 | 1.6878652 | 2.2239993 | 1.7990395 | 1.819103 | 1.5145794 | 1.1932008 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *4* | BR NO CO |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 7 | 7 | 6 | 8 | 7 | 7 | 2 | 7 | 7 | 6 | 7 | 6.4545455 |
| 2 | 4 | 4 | 2 | 5 | 5 | 5 | 5 | 5 | 7 | 3 | 5 | 4.5454545 |
| 3 | 4 | 4 | 5 | 6 | 6 | 6 | 5 | 7 | 5 | 5 | 5 | 5.2727273 |
| 4 | 1 | 2 | 4 | 7 | 7 | 8 | 6 | 8 | 7 | 8 | 5 | 5.7272727 |
| 5 | 2 | 4 | 5 | 7 | 6 | 5 | 6 | 7 | 6 | 5 | 6 | 5.3636364 |
| 6 | 8 | 8 | 6 | 8 | 8 | 5 | 1 | 8 | 6 | 8 | 8 | 6.7272727 |
| 7 | 4 | 5 | 4 | 5 | 6 | 5 | 3 | 7 | 6 | 4 | 6 | 5 |
| 8 | 4 | 5 | 5 | 8 | 8 | 8 | 6 | 8 | 9 | 5 | 7 | 6.6363636 |
| 9 | 2 | 2 | 4 | 8 | 7 | 4 | 7 | 3 | 3 | 2 | 7 | 4.4545455 |
| 10 | 7 | 7 | 4 | 8 | 8 | 7 | 6 | 7 | 6 | 3 | 7 | 6.3636364 |
| 11 | 4 | 2 | 7 | 9 | 8 | 4 | 1 | 4 | 8 | 5 | 8 | 5.4545455 |
| 12 | 6 | 5 | 4 | 5 | 6 | 6 | 3 | 8 | 8 | 5 | 6 | 5.6363636 |
| 13 | 5 | 6 | 5 | 5 | 5 | 6 | 7 | 6 | 5 | 5 | 4 | 5.3636364 |
| 14 | 6 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 8 | 6 | 6 | 6.4545455 |
| 15 | 4 | 7 | 6 | 7 | 9 | 9 | 4 | 6 | 8 | 3 | 8 | 6.4545455 |
| 16 | 5 | 5 | 4 | 5 | 4 | 7 | 6 | 5 | 4 | 4 | 5 | 4.9090909 |
| 17 | 6 | 6 | 4 | 7 | 6 | 5 | 6 | 8 | 8 | 6 | 6 | 6.1818182 |
| 18 | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 3 | 7 | 6.1818182 |
| 19 | 5 | 5 | 4 | 5 | 3 | 7 | 3 | 9 | 9 | 3 | 7 | 5.4545455 |
| 20 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 7 | 7 | 5 | 5 | 5.1818182 |
| 21 | 6 | 6 | 7 | 6 | 6 | 7 | 7 | 6 | 4 | 4 | 7 | 6 |
| 22 | 6 | 6 | 5 | 8 | 8 | 7 | 5 | 4 | 5 | 7 | 7 | 6.1818182 |
| 23 | 4 | 6 | 5 | 8 | 8 | 6 | 4 | 8 | 8 | 8 | 7 | 6.5454545 |
| 24 | 8 | 8 | 6 | 7 | 5 | 6 | 6 | 8 | 9 | 9 | 8 | 7.2727273 |
| 25 | 7 | 7 | 7 | 8 | 7 | 8 | 2 | 9 | 9 | 7 | 8 | 7.1818182 |
| 26 | 8 | 7 | 9 | 9 | 9 | 9 | 1 | 8 | 6 | 8 | 9 | 7.5454545 |
| 27 | 3 | 3 | 3 | 7 | 6 | 8 | 7 | 6 | 7 | 7 | 5 | 5.6363636 |
| 28 | 5 | 5 | 7 | 8 | 8 | 9 | 5 | 7 | 7 | 3 | 6 | 6.3636364 |
| 29 | 6 | 6 | 5 | 8 | 7 | 9 | 2 | 8 | 8 | 4 | 8 | 6.4545455 |
| 30 | 5 | 5 | 3 | 7 | 6 | 8 | 3 | 9 | 7 | 4 | 6 | 5.7272727 |
| 31 | 7 | 6 | 7 | 8 | 8 | 9 | 7 | 9 | 9 | 8 | 7 | 7.7272727 |
| 32 | 8 | 8 | 6 | 8 | 9 | 7 | 1 | 8 | 8 | 8 | 8 | 7.1818182 |
| 33 | 6 | 5 | 4 | 6 | 5 | 7 | 3 | 5 | 5 | 3 | 5 | 4.9090909 |
| 34 | 7 | 7 | 8 | 9 | 8 | 9 | 6 | 8 | 8 | 7 | 7 | 7.6363636 |
| 35 | 7 | 8 | 5 | 5 | 6 | 7 | 7 | 7 | 8 | 7 | 6 | 6.6363636 |
| 36 | 6 | 7 | 7 | 9 | 9 | 9 | 1 | 8 | 8 | 4 | 9 | 7 |
| 37 | 5 | 4 | 8 | 8 | 5 | 1 | 3 | 5 | 5 | 4 | 8 | 5.0909091 |
| 38 | 7 | 7 | 3 | 9 | 9 | 9 | 7 | 9 | 9 | 3 | 9 | 7.3636364 |
| 39 | 5 | 5 | 4 | 3 | 3 | 5 | 4 | 6 | 8 | 2 | 5 | 4.5454545 |
| 40 | 6 | 6 | 6 | 9 | 8 | 8 | 3 | 6 | 8 | 8 | 8 | 6.9090909 |
| 41 | 7 | 7 | 5 | 7 | 5 | 8 | 6 | 8 | 8 | 4 | 6 | 6.4545455 |
| 42 | 7 | 7 | 5 | 5 | 5 | 6 | 5 | 7 | 7 | 6 | 6 | 6 |
| 43 | 7 | 6 | 4 | 7 | 5 | 7 | 3 | 4 | 3 | 5 | 5 | 5.0909091 |
| 44 | 7 | 7 | 7 | 9 | 9 | 9 | 1 | 9 | 7 | 9 | 9 | 7.5454545 |
| 45 | 6 | 5 | 5 | 8 | 8 | 6 | 5 | 7 | 7 | 7 | 7 | 6.4545455 |
| 46 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 7 | 8 | 5 | 7 | 7 |
| 47 | 7 | 6 | 4 | 4 | 3 | 4 | 7 | 6 | 7 | 4 | 4 | 5.0909091 |
| 48 | 6 | 7 | 6 | 6 | 7 | 6 | 4 | 4 | 4 | 4 | 8 | 5.6363636 |
| 49 | 5 | 7 | 8 | 9 | 9 | 6 | 6 | 8 | 8 | 9 | 8 | 7.5454545 |
| 50 | 4 | 4 | 3 | 8 | 5 | 8 | 2 | 7 | 7 | 3 | 8 | 5.3636364 |
| 51 | 3 | 3 | 3 | 3 | 4 | 3 | 7 | 7 | 7 | 3 | 5 | 4.3636364 |
| 52 | 8 | 8 | 7 | 8 | 8 | 8 | 1 | 8 | 7 | 7 | 8 | 7.0909091 |
| 53 | 7 | 7 | 5 | 9 | 9 | 8 | 3 | 7 | 8 | 5 | 7 | 6.8181818 |
| 54 | 6 | 5 | 5 | 6 | 6 | 6 | 4 | 5 | 4 | 4 | 5 | 5.0909091 |
| 55 | 4 | 4 | 3 | 6 | 6 | 6 | 4 | 3 | 2 | 2 | 4 | 4 |
| 56 | 8 | 8 | 7 | 8 | 8 | 8 | 2 | 9 | 9 | 7 | 9 | 7.5454545 |
| 57 | 6 | 6 | 8 | 7 | 6 | 8 | 2 | 6 | 7 | 6 | 5 | 6.0909091 |
| 58 | 3 | 4 | 3 | 6 | 5 | 7 | 3 | 4 | 3 | 4 | 4 | 4.1818182 |
| 59 | 5 | 6 | 7 | 5 | 5 | 5 | 3 | 8 | 7 | 5 | 6 | 5.6363636 |
| 60 | 6 | 7 | 6 | 8 | 8 | 8 | 5 | 7 | 6 | 6 | 6 | 6.6363636 |
| 61 | 5 | 5 | 6 | 8 | 8 | 7 | 2 | 6 | 8 | 8 | 8 | 6.4545455 |
| 62 | 5 | 5 | 7 | 4 | 4 | 5 | 6 | 8 | 6 | 4 | 5 | 5.3636364 |
| 63 | 4 | 4 | 3 | 7 | 6 | 5 | 6 | 7 | 8 | 4 | 5 | 5.3636364 |
| 64 | 8 | 7 | 7 | 9 | 9 | 8 | 4 | 6 | 8 | 5 | 7 | 7.0909091 |
| 65 | 4 | 4 | 4 | 7 | 6 | 5 | 5 | 6 | 8 | 5 | 6 | 5.4545455 |
| 66 | 6 | 7 | 7 | 9 | 8 | 7 | 4 | 6 | 8 | 7 | 7 | 6.9090909 |
| 67 | 5 | 5 | 6 | 8 | 8 | 8 | 3 | 5 | 5 | 6 | 7 | 6 |
| 68 | 6 | 7 | 6 | 9 | 9 | 9 | 4 | 8 | 8 | 6 | 8 | 7.2727273 |
| 69 | 4 | 4 | 2 | 4 | 3 | 6 | 6 | 6 | 7 | 5 | 5 | 4.7272727 |
| 70 | 6 | 6 | 3 | 8 | 6 | 8 | 5 | 4 | 7 | 5 | 7 | 5.9090909 |
| 71 | 3 | 5 | 3 | 6 | 3 | 7 | 6 | 7 | 8 | 5 | 5 | 5.2727273 |
| 72 | 5 | 6 | 3 | 8 | 8 | 6 | 4 | 7 | 7 | 3 | 6 | 5.7272727 |
| 73 | 6 | 6 | 3 | 6 | 6 | 9 | 5 | 8 | 7 | 7 | 7 | 6.3636364 |
| 74 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 75 | 4 | 4 | 4 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 5.3636364 |
| 76 | 6 | 7 | 4 | 7 | 5 | 7 | 1 | 8 | 7 | 3 | 9 | 5.8181818 |
| 77 | 4 | 7 | 8 | 8 | 8 | 7 | 7 | 9 | 9 | 9 | 8 | 7.6363636 |
| 78 | 4 | 4 | 4 | 8 | 8 | 8 | 6 | 9 | 8 | 6 | 7 | 6.5454545 |
| 79 | 6 | 6 | 6 | 9 | 9 | 9 | 1 | 6 | 8 | 4 | 8 | 6.5454545 |
| 80 | 4 | 5 | 5 | 9 | 8 | 7 | 1 | 5 | 5 | 7 | 7 | 5.7272727 |
| 81 | 4 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 4 | 7 | 6.0909091 |
| 82 | 1 | 1 | 1 | 6 | 1 | 5 | 4 | 6 | 4 | 4 | 5 | 3.4545455 |
| 83 | 6 | 6 | 4 | 7 | 8 | 6 | 5 | 6 | 6 | 5 | 6 | 5.9090909 |
| 84 | 3 | 4 | 3 | 8 | 9 | 9 | 6 | 8 | 6 | 7 | 5 | 6.1818182 |
| 85 | 4 | 5 | 4 | 7 | 7 | 7 | 4 | 6 | 4 | 5 | 5 | 5.2727273 |
| 86 | 3 | 3 | 4 | 6 | 5 | 5 | 6 | 5 | 5 | 5 | 4 | 4.6363636 |
| 87 | 4 | 4 | 3 | 5 | 4 | 6 | 6 | 7 | 7 | 4 | 5 | 5 |
| 88 | 5 | 5 | 4 | 7 | 5 | 3 | 6 | 7 | 5 | 6 | 5 | 5.2727273 |
| 89 | 5 | 5 | 3 | 7 | 7 | 3 | 4 | 5 | 5 | 4 | 5 | 4.8181818 |
| 90 | 3 | 3 | 3 | 7 | 6 | 4 | 6 | 8 | 7 | 6 | 5 | 5.2727273 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 5.2666667 | 5.5 | 5.0111111 | 7 | 6.5333333 | 6.6333333 | 4.4111111 | 6.7222222 | 6.7111111 | 5.2666667 | 6.4333333 | 5.9535354 |
| Variance | 2.6177778 | 2.3166667 | 2.8554321 | 2.2222222 | 3.16 | 2.81 | 3.5976543 | 2.2006173 | 2.5832099 | 3.1511111 | 1.9122222 | 0.9008713 |
| SD | 1.6179548 | 1.52206 | 1.6898024 | 1.490712 | 1.7776389 | 1.6763055 | 1.8967484 | 1.4834478 | 1.6072367 | 1.7751369 | 1.3828312 | 0.9491424 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *5* | CA ST AC |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 8 | 8 | 9 | 7 | 7 | 8 | 2 | 8 | 6 | 8 | 8 | 7.1818182 |
| 2 | 9 | 9 | 9 | 7 | 9 | 9 | 1 | 9 | 5 | 9 | 9 | 7.7272727 |
| 3 | 6 | 6 | 7 | 6 | 6 | 6 | 5 | 7 | 6 | 7 | 5 | 6.0909091 |
| 4 | 9 | 9 | 9 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5.8181818 |
| 5 | 9 | 9 | 9 | 8 | 8 | 8 | 2 | 7 | 4 | 9 | 9 | 7.4545455 |
| 6 | 9 | 9 | 9 | 7 | 7 | 7 | 2 | 1 | 4 | 8 | 5 | 6.1818182 |
| 7 | 6 | 6 | 7 | 5 | 4 | 6 | 4 | 4 | 5 | 5 | 6 | 5.2727273 |
| 8 | 7 | 7 | 9 | 8 | 8 | 8 | 3 | 8 | 6 | 8 | 8 | 7.2727273 |
| 9 | 9 | 9 | 8 | 8 | 8 | 9 | 2 | 8 | 7 | 8 | 8 | 7.6363636 |
| 10 | 9 | 9 | 9 | 6 | 6 | 8 | 7 | 9 | 5 | 7 | 7 | 7.4545455 |
| 11 | 9 | 7 | 9 | 5 | 7 | 8 | 1 | 9 | 7 | 9 | 8 | 7.1818182 |
| 12 | 8 | 8 | 9 | 6 | 7 | 7 | 1 | 8 | 4 | 6 | 6 | 6.3636364 |
| 13 | 8 | 8 | 8 | 6 | 5 | 7 | 2 | 7 | 6 | 4 | 6 | 6.0909091 |
| 14 | 8 | 7 | 8 | 7 | 7 | 7 | 1 | 8 | 5 | 6 | 8 | 6.5454545 |
| 15 | 9 | 9 | 9 | 9 | 9 | 9 | 3 | 9 | 7 | 9 | 9 | 8.2727273 |
| 16 | 9 | 9 | 8 | 7 | 7 | 8 | 2 | 8 | 3 | 5 | 8 | 6.7272727 |
| 17 | 8 | 8 | 9 | 7 | 7 | 6 | 6 | 8 | 7 | 9 | 8 | 7.5454545 |
| 18 | 9 | 9 | 9 | 7 | 8 | 9 | 1 | 9 | 9 | 6 | 8 | 7.6363636 |
| 19 | 8 | 8 | 9 | 9 | 8 | 9 | 5 | 6 | 7 | 9 | 9 | 7.9090909 |
| 20 | 5 | 5 | 7 | 5 | 5 | 5 | 3 | 6 | 5 | 7 | 5 | 5.2727273 |
| 21 | 9 | 9 | 9 | 7 | 8 | 9 | 3 | 9 | 7 | 8 | 8 | 7.8181818 |
| 22 | 8 | 8 | 9 | 8 | 7 | 7 | 3 | 9 | 6 | 9 | 8 | 7.4545455 |
| 23 | 8 | 5 | 6 | 5 | 5 | 5 | 3 | 6 | 4 | 4 | 7 | 5.2727273 |
| 24 | 9 | 9 | 9 | 8 | 9 | 9 | 2 | 7 | 7 | 8 | 8 | 7.7272727 |
| 25 | 9 | 9 | 9 | 7 | 9 | 7 | 1 | 9 | 6 | 9 | 7 | 7.4545455 |
| 26 | 8 | 9 | 9 | 7 | 7 | 9 | 1 | 9 | 5 | 9 | 9 | 7.4545455 |
| 27 | 8 | 8 | 8 | 8 | 8 | 7 | 2 | 5 | 2 | 7 | 6 | 6.2727273 |
| 28 | 8 | 8 | 7 | 5 | 6 | 6 | 7 | 2 | 4 | 7 | 7 | 6.0909091 |
| 29 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 6 | 8 | 9 | 7.9090909 |
| 30 | 8 | 8 | 9 | 6 | 7 | 8 | 2 | 9 | 6 | 9 | 8 | 7.2727273 |
| 31 | 9 | 9 | 9 | 9 | 8 | 9 | 1 | 8 | 6 | 9 | 9 | 7.8181818 |
| 32 | 9 | 8 | 9 | 6 | 6 | 6 | 1 | 9 | 7 | 5 | 6 | 6.5454545 |
| 33 | 7 | 7 | 8 | 6 | 6 | 6 | 2 | 7 | 7 | 8 | 7 | 6.4545455 |
| 34 | 8 | 8 | 9 | 8 | 8 | 7 | 3 | 9 | 6 | 9 | 6 | 7.3636364 |
| 35 | 9 | 9 | 9 | 7 | 7 | 8 | 5 | 7 | 9 | 7 | 8 | 7.7272727 |
| 36 | 8 | 6 | 7 | 7 | 5 | 8 | 3 | 7 | 3 | 6 | 9 | 6.2727273 |
| 37 | 7 | 6 | 8 | 5 | 6 | 1 | 1 | 7 | 5 | 6 | 5 | 5.1818182 |
| 38 | 9 | 9 | 9 | 9 | 8 | 9 | 2 | 8 | 7 | 9 | 9 | 8 |
| 39 | 8 | 6 | 9 | 8 | 6 | 7 | 1 | 8 | 5 | 5 | 6 | 6.2727273 |
| 40 | 8 | 8 | 9 | 7 | 8 | 8 | 1 | 9 | 7 | 9 | 9 | 7.5454545 |
| 41 | 7 | 7 | 9 | 8 | 2 | 2 | 5 | 5 | 5 | 6 | 3 | 5.3636364 |
| 42 | 6 | 6 | 7 | 7 | 6 | 6 | 4 | 8 | 6 | 7 | 6 | 6.2727273 |
| 43 | 9 | 8 | 8 | 7 | 4 | 5 | 3 | 6 | 7 | 8 | 5 | 6.3636364 |
| 44 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 7 | 7 | 9 | 7.9090909 |
| 45 | 8 | 7 | 8 | 8 | 7 | 7 | 3 | 8 | 8 | 8 | 8 | 7.2727273 |
| 46 | 8 | 8 | 9 | 8 | 7 | 6 | 5 | 7 | 7 | 8 | 8 | 7.3636364 |
| 47 | 9 | 8 | 9 | 7 | 8 | 7 | 7 | 7 | 5 | 8 | 5 | 7.2727273 |
| 48 | 9 | 9 | 9 | 8 | 8 | 9 | 2 | 8 | 4 | 7 | 9 | 7.4545455 |
| 49 | 5 | 6 | 8 | 8 | 6 | 7 | 5 | 8 | 6 | 4 | 5 | 6.1818182 |
| 50 | 7 | 7 | 7 | 7 | 5 | 5 | 5 | 4 | 5 | 8 | 5 | 5.9090909 |
| 51 | 8 | 8 | 8 | 6 | 6 | 5 | 7 | 8 | 3 | 9 | 7 | 6.8181818 |
| 52 | 7 | 6 | 9 | 7 | 7 | 8 | 3 | 8 | 4 | 7 | 5 | 6.4545455 |
| 53 | 8 | 8 | 8 | 7 | 7 | 7 | 4 | 7 | 4 | 6 | 5 | 6.4545455 |
| 54 | 9 | 8 | 8 | 6 | 6 | 7 | 6 | 6 | 5 | 7 | 9 | 7 |
| 55 | 8 | 8 | 7 | 4 | 5 | 7 | 5 | 7 | 3 | 4 | 6 | 5.8181818 |
| 56 | 9 | 9 | 8 | 8 | 8 | 8 | 2 | 9 | 6 | 9 | 9 | 7.7272727 |
| 57 | 7 | 8 | 9 | 5 | 5 | 7 | 3 | 8 | 4 | 8 | 7 | 6.4545455 |
| 58 | 8 | 8 | 8 | 5 | 6 | 6 | 5 | 6 | 5 | 7 | 5 | 6.2727273 |
| 59 | 8 | 8 | 9 | 3 | 5 | 7 | 3 | 9 | 4 | 5 | 8 | 6.2727273 |
| 60 | 8 | 8 | 9 | 8 | 7 | 7 | 6 | 8 | 7 | 8 | 7 | 7.5454545 |
| 61 | 8 | 8 | 8 | 7 | 6 | 7 | 3 | 8 | 4 | 5 | 7 | 6.4545455 |
| 62 | 8 | 8 | 9 | 6 | 5 | 4 | 2 | 8 | 6 | 2 | 6 | 5.8181818 |
| 63 | 9 | 9 | 9 | 8 | 7 | 7 | 3 | 6 | 5 | 6 | 8 | 7 |
| 64 | 9 | 9 | 9 | 6 | 8 | 8 | 8 | 9 | 6 | 9 | 9 | 8.1818182 |
| 65 | 9 | 7 | 8 | 8 | 7 | 7 | 5 | 8 | 8 | 8 | 7 | 7.4545455 |
| 66 | 8 | 8 | 9 | 7 | 6 | 7 | 4 | 7 | 5 | 7 | 7 | 6.8181818 |
| 67 | 7 | 7 | 9 | 6 | 5 | 5 | 4 | 8 | 5 | 5 | 5 | 6 |
| 68 | 9 | 9 | 8 | 8 | 7 | 7 | 3 | 8 | 7 | 6 | 8 | 7.2727273 |
| 69 | 7 | 7 | 8 | 7 | 7 | 6 | 3 | 8 | 7 | 5 | 6 | 6.4545455 |
| 70 | 9 | 9 | 9 | 7 | 7 | 8 | 2 | 9 | 5 | 5 | 8 | 7.0909091 |
| 71 | 6 | 6 | 6 | 5 | 3 | 5 | 1 | 3 | 3 | 6 | 5 | 4.4545455 |
| 72 | 9 | 9 | 9 | 8 | 7 | 8 | 5 | 8 | 6 | 9 | 9 | 7.9090909 |
| 73 | 7 | 8 | 6 | 7 | 7 | 8 | 1 | 7 | 5 | 7 | 7 | 6.3636364 |
| 74 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 75 | 7 | 7 | 8 | 6 | 6 | 5 | 3 | 6 | 5 | 5 | 6 | 5.8181818 |
| 76 | 7 | 7 | 9 | 8 | 8 | 7 | 1 | 8 | 5 | 7 | 9 | 6.9090909 |
| 77 | 7 | 7 | 8 | 4 | 5 | 5 | 6 | 6 | 4 | 4 | 4 | 5.4545455 |
| 78 | 8 | 9 | 9 | 7 | 7 | 5 | 2 | 7 | 5 | 9 | 7 | 6.8181818 |
| 79 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 9 | 8.2727273 |
| 80 | 8 | 8 | 9 | 7 | 8 | 8 | 7 | 6 | 7 | 7 | 8 | 7.5454545 |
| 81 | 7 | 6 | 8 | 5 | 6 | 6 | 6 | 5 | 5 | 7 | 5 | 6 |
| 82 | 7 | 7 | 9 | 9 | 9 | 8 | 1 | 7 | 7 | 9 | 9 | 7.4545455 |
| 83 | 7 | 7 | 9 | 6 | 8 | 5 | 4 | 8 | 6 | 8 | 7 | 6.8181818 |
| 84 | 8 | 7 | 9 | 6 | 4 | 5 | 2 | 9 | 5 | 9 | 7 | 6.4545455 |
| 85 | 6 | 5 | 6 | 3 | 4 | 5 | 6 | 6 | 5 | 3 | 5 | 4.9090909 |
| 86 | 7 | 6 | 8 | 4 | 4 | 5 | 3 | 8 | 6 | 8 | 5 | 5.8181818 |
| 87 | 7 | 7 | 9 | 6 | 7 | 5 | 4 | 8 | 5 | 7 | 5 | 6.3636364 |
| 88 | 4 | 4 | 7 | 5 | 5 | 5 | 3 | 6 | 4 | 7 | 5 | 5 |
| 89 | 6 | 6 | 8 | 5 | 5 | 5 | 5 | 6 | 5 | 8 | 7 | 6 |
| 90 | 8 | 8 | 9 | 7 | 7 | 7 | 2 | 6 | 7 | 8 | 7 | 6.9090909 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 7.8666667 | 7.6666667 | 8.3555556 | 6.7 | 6.5888889 | 6.8111111 | 3.2444444 | 7.2888889 | 5.5555556 | 7.0666667 | 6.9888889 | 6.7393939 |
| Variance | 1.2711111 | 1.4888889 | 0.8291358 | 2.0766667 | 2.2420988 | 2.5309877 | 3.451358 | 2.6054321 | 1.9802469 | 2.7955556 | 2.3665432 | 0.7702847 |
| SD | 1.1274356 | 1.2202003 | 0.9105689 | 1.4410644 | 1.4973639 | 1.5909078 | 1.8577831 | 1.6141351 | 1.4072125 | 1.6719915 | 1.5383573 | 0.8776586 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *6* | CA ST CO |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 7 | 7 | 8 | 7 | 7 | 7 | 2 | 7 | 5 | 8 | 8 | 6.6363636 |
| 2 | 7 | 7 | 8 | 6 | 9 | 5 | 1 | 5 | 5 | 9 | 7 | 6.2727273 |
| 3 | 5 | 5 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5.2727273 |
| 4 | 6 | 6 | 8 | 5 | 6 | 6 | 2 | 4 | 2 | 3 | 5 | 4.8181818 |
| 5 | 7 | 7 | 9 | 7 | 7 | 6 | 6 | 6 | 4 | 9 | 7 | 6.8181818 |
| 6 | 8 | 8 | 8 | 8 | 8 | 8 | 1 | 7 | 3 | 8 | 9 | 6.9090909 |
| 7 | 5 | 5 | 6 | 5 | 3 | 5 | 4 | 4 | 4 | 2 | 6 | 4.4545455 |
| 8 | 7 | 7 | 9 | 8 | 7 | 8 | 3 | 8 | 7 | 8 | 8 | 7.2727273 |
| 9 | 8 | 9 | 9 | 7 | 9 | 9 | 2 | 8 | 7 | 9 | 9 | 7.8181818 |
| 10 | 8 | 9 | 9 | 6 | 5 | 7 | 4 | 6 | 3 | 5 | 7 | 6.2727273 |
| 11 | 7 | 5 | 9 | 6 | 6 | 8 | 3 | 6 | 6 | 9 | 8 | 6.6363636 |
| 12 | 7 | 7 | 9 | 9 | 8 | 8 | 1 | 8 | 8 | 9 | 9 | 7.5454545 |
| 13 | 3 | 3 | 9 | 2 | 2 | 6 | 2 | 7 | 3 | 5 | 6 | 4.3636364 |
| 14 | 8 | 8 | 9 | 7 | 7 | 7 | 2 | 6 | 5 | 9 | 7 | 6.8181818 |
| 15 | 9 | 8 | 9 | 9 | 9 | 9 | 1 | 6 | 7 | 8 | 9 | 7.6363636 |
| 16 | 6 | 7 | 4 | 1 | 2 | 9 | 1 | 5 | 1 | 5 | 5 | 4.1818182 |
| 17 | 6 | 6 | 7 | 4 | 4 | 5 | 3 | 5 | 2 | 5 | 6 | 4.8181818 |
| 18 | 8 | 8 | 9 | 9 | 9 | 8 | 7 | 8 | 4 | 8 | 7 | 7.7272727 |
| 19 | 9 | 9 | 9 | 9 | 9 | 8 | 1 | 8 | 5 | 9 | 9 | 7.7272727 |
| 20 | 5 | 5 | 7 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.1818182 |
| 21 | 7 | 7 | 9 | 9 | 8 | 9 | 3 | 8 | 6 | 9 | 9 | 7.6363636 |
| 22 | 8 | 8 | 9 | 7 | 8 | 8 | 2 | 7 | 7 | 9 | 8 | 7.3636364 |
| 23 | 6 | 3 | 7 | 7 | 6 | 7 | 2 | 3 | 6 | 7 | 5 | 5.3636364 |
| 24 | 8 | 8 | 9 | 7 | 8 | 9 | 2 | 8 | 4 | 7 | 7 | 7 |
| 25 | 9 | 9 | 9 | 9 | 8 | 9 | 2 | 6 | 6 | 9 | 8 | 7.6363636 |
| 26 | 7 | 7 | 8 | 7 | 5 | 8 | 2 | 8 | 5 | 8 | 8 | 6.6363636 |
| 27 | 6 | 5 | 8 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 6 | 5.2727273 |
| 28 | 7 | 6 | 8 | 5 | 3 | 6 | 3 | 6 | 1 | 8 | 6 | 5.3636364 |
| 29 | 8 | 8 | 9 | 8 | 8 | 9 | 2 | 8 | 6 | 8 | 9 | 7.5454545 |
| 30 | 6 | 6 | 9 | 6 | 7 | 6 | 2 | 6 | 2 | 6 | 6 | 5.6363636 |
| 31 | 9 | 9 | 9 | 8 | 7 | 9 | 1 | 7 | 1 | 9 | 9 | 7.0909091 |
| 32 | 9 | 7 | 9 | 7 | 7 | 7 | 1 | 8 | 3 | 9 | 9 | 6.9090909 |
| 33 | 6 | 7 | 7 | 6 | 6 | 6 | 4 | 6 | 4 | 7 | 7 | 6 |
| 34 | 7 | 8 | 8 | 6 | 6 | 7 | 3 | 6 | 4 | 5 | 7 | 6.0909091 |
| 35 | 9 | 8 | 9 | 9 | 9 | 9 | 5 | 8 | 9 | 9 | 9 | 8.4545455 |
| 36 | 8 | 6 | 9 | 6 | 6 | 7 | 4 | 8 | 4 | 7 | 7 | 6.5454545 |
| 37 | 7 | 7 | 8 | 9 | 9 | 8 | 2 | 5 | 3 | 7 | 7 | 6.5454545 |
| 38 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 7 | 9 | 9 | 8.0909091 |
| 39 | 6 | 5 | 9 | 9 | 8 | 9 | 1 | 5 | 5 | 5 | 5 | 6.0909091 |
| 40 | 9 | 9 | 9 | 9 | 8 | 8 | 1 | 7 | 7 | 9 | 9 | 7.7272727 |
| 41 | 5 | 5 | 9 | 5 | 5 | 5 | 1 | 3 | 3 | 5 | 5 | 4.6363636 |
| 42 | 7 | 8 | 9 | 6 | 6 | 7 | 5 | 8 | 6 | 7 | 6 | 6.8181818 |
| 43 | 8 | 7 | 9 | 6 | 4 | 4 | 2 | 3 | 7 | 8 | 6 | 5.8181818 |
| 44 | 7 | 7 | 9 | 7 | 7 | 9 | 1 | 4 | 1 | 9 | 9 | 6.3636364 |
| 45 | 8 | 7 | 8 | 7 | 6 | 8 | 2 | 8 | 6 | 7 | 8 | 6.8181818 |
| 46 | 9 | 9 | 9 | 7 | 7 | 8 | 3 | 7 | 6 | 9 | 7 | 7.3636364 |
| 47 | 8 | 8 | 8 | 3 | 4 | 5 | 4 | 1 | 1 | 5 | 2 | 4.4545455 |
| 48 | 8 | 7 | 8 | 6 | 5 | 5 | 4 | 7 | 3 | 6 | 5 | 5.8181818 |
| 49 | 5 | 7 | 9 | 7 | 7 | 6 | 5 | 6 | 6 | 8 | 5 | 6.4545455 |
| 50 | 6 | 7 | 9 | 7 | 8 | 7 | 2 | 5 | 4 | 9 | 8 | 6.5454545 |
| 51 | 7 | 7 | 7 | 7 | 7 | 8 | 3 | 5 | 3 | 8 | 6 | 6.1818182 |
| 52 | 7 | 8 | 9 | 8 | 8 | 7 | 3 | 6 | 6 | 8 | 7 | 7 |
| 53 | 8 | 8 | 8 | 4 | 4 | 6 | 4 | 4 | 4 | 8 | 7 | 5.9090909 |
| 54 | 6 | 6 | 7 | 8 | 6 | 7 | 5 | 5 | 7 | 7 | 6 | 6.3636364 |
| 55 | 5 | 4 | 7 | 2 | 3 | 6 | 5 | 4 | 3 | 5 | 7 | 4.6363636 |
| 56 | 8 | 8 | 8 | 9 | 9 | 9 | 1 | 6 | 4 | 9 | 8 | 7.1818182 |
| 57 | 7 | 7 | 9 | 3 | 3 | 7 | 2 | 4 | 2 | 7 | 6 | 5.1818182 |
| 58 | 9 | 8 | 9 | 7 | 8 | 9 | 3 | 7 | 4 | 5 | 6 | 6.8181818 |
| 59 | 8 | 8 | 9 | 3 | 4 | 7 | 3 | 8 | 3 | 6 | 7 | 6 |
| 60 | 8 | 7 | 8 | 7 | 6 | 7 | 5 | 6 | 5 | 8 | 7 | 6.7272727 |
| 61 | 6 | 6 | 8 | 3 | 4 | 5 | 4 | 5 | 2 | 5 | 6 | 4.9090909 |
| 62 | 5 | 5 | 6 | 3 | 3 | 5 | 2 | 5 | 1 | 5 | 5 | 4.0909091 |
| 63 | 6 | 6 | 8 | 5 | 5 | 5 | 3 | 4 | 4 | 6 | 7 | 5.3636364 |
| 64 | 7 | 6 | 8 | 9 | 8 | 7 | 1 | 6 | 2 | 8 | 8 | 6.3636364 |
| 65 | 8 | 8 | 7 | 8 | 7 | 6 | 2 | 6 | 7 | 6 | 7 | 6.5454545 |
| 66 | 7 | 7 | 9 | 8 | 7 | 7 | 2 | 7 | 5 | 7 | 8 | 6.7272727 |
| 67 | 5 | 6 | 8 | 4 | 4 | 6 | 2 | 7 | 4 | 6 | 5 | 5.1818182 |
| 68 | 7 | 7 | 7 | 4 | 5 | 5 | 4 | 6 | 5 | 6 | 7 | 5.7272727 |
| 69 | 7 | 6 | 9 | 5 | 6 | 5 | 3 | 6 | 2 | 7 | 6 | 5.6363636 |
| 70 | 7 | 7 | 9 | 4 | 5 | 5 | 2 | 3 | 5 | 5 | 7 | 5.3636364 |
| 71 | 6 | 6 | 9 | 7 | 7 | 5 | 3 | 5 | 3 | 7 | 5 | 5.7272727 |
| 72 | 8 | 6 | 9 | 3 | 3 | 7 | 1 | 4 | 2 | 9 | 9 | 5.5454545 |
| 73 | 8 | 8 | 9 | 7 | 7 | 7 | 1 | 5 | 5 | 5 | 5 | 6.0909091 |
| 74 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 75 | 7 | 7 | 8 | 4 | 4 | 4 | 2 | 5 | 3 | 5 | 4 | 4.8181818 |
| 76 | 7 | 8 | 9 | 6 | 8 | 7 | 1 | 7 | 5 | 9 | 9 | 6.9090909 |
| 77 | 7 | 7 | 7 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 5.3636364 |
| 78 | 7 | 7 | 9 | 8 | 8 | 8 | 4 | 6 | 6 | 9 | 8 | 7.2727273 |
| 79 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 9 | 8.2727273 |
| 80 | 6 | 4 | 7 | 4 | 4 | 3 | 3 | 5 | 5 | 7 | 4 | 4.7272727 |
| 81 | 6 | 6 | 6 | 6 | 6 | 5 | 4 | 4 | 3 | 7 | 6 | 5.3636364 |
| 82 | 7 | 7 | 9 | 8 | 7 | 8 | 1 | 6 | 5 | 9 | 8 | 6.8181818 |
| 83 | 8 | 7 | 9 | 6 | 7 | 7 | 4 | 5 | 5 | 9 | 8 | 6.8181818 |
| 84 | 8 | 7 | 9 | 7 | 6 | 7 | 3 | 4 | 4 | 9 | 6 | 6.3636364 |
| 85 | 5 | 5 | 4 | 6 | 5 | 5 | 3 | 3 | 4 | 7 | 6 | 4.8181818 |
| 86 | 6 | 5 | 7 | 5 | 5 | 5 | 3 | 7 | 5 | 7 | 5 | 5.4545455 |
| 87 | 6 | 6 | 9 | 7 | 7 | 6 | 3 | 8 | 5 | 8 | 7 | 6.5454545 |
| 88 | 5 | 5 | 9 | 6 | 7 | 5 | 6 | 5 | 5 | 9 | 7 | 6.2727273 |
| 89 | 6 | 6 | 7 | 5 | 5 | 5 | 5 | 6 | 5 | 7 | 7 | 5.8181818 |
| 90 | 5 | 6 | 6 | 7 | 7 | 7 | 3 | 5 | 5 | 8 | 8 | 6.0909091 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 6.9777778 | 6.8 | 8.1666667 | 6.3 | 6.2333333 | 6.7444444 | 2.8 | 5.8777778 | 4.4333333 | 7.1666667 | 6.8555556 | 6.2141414 |
| Variance | 1.6439506 | 1.8488889 | 1.3388889 | 3.6766667 | 3.3566667 | 2.301358 | 2.1155556 | 2.507284 | 3.29 | 2.8055556 | 2.2346914 | 1.0448689 |
| SD | 1.2821664 | 1.3597385 | 1.1571037 | 1.9174636 | 1.8321208 | 1.5170228 | 1.4544949 | 1.5834405 | 1.8138357 | 1.6749793 | 1.4948884 | 1.0221883 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *7* | CA NO AC |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 5 | 5 | 5 | 8 | 7 | 7 | 2 | 3 | 2 | 7 | 7 | 5.2727273 |
| 2 | 4 | 4 | 2 | 4 | 3 | 5 | 3 | 1 | 1 | 5 | 3 | 3.1818182 |
| 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 4.5454545 |
| 4 | 2 | 2 | 3 | 8 | 8 | 5 | 6 | 5 | 7 | 8 | 6 | 5.4545455 |
| 5 | 1 | 2 | 6 | 5 | 3 | 3 | 5 | 2 | 2 | 4 | 4 | 3.3636364 |
| 6 | 2 | 2 | 7 | 7 | 5 | 7 | 1 | 2 | 2 | 2 | 9 | 4.1818182 |
| 7 | 4 | 5 | 5 | 3 | 4 | 3 | 3 | 7 | 2 | 6 | 5 | 4.2727273 |
| 8 | 3 | 3 | 5 | 8 | 7 | 7 | 6 | 7 | 3 | 7 | 6 | 5.6363636 |
| 9 | 3 | 3 | 2 | 7 | 4 | 2 | 7 | 1 | 1 | 4 | 4 | 3.4545455 |
| 10 | 6 | 5 | 6 | 6 | 5 | 4 | 6 | 4 | 4 | 7 | 5 | 5.2727273 |
| 11 | 2 | 3 | 9 | 9 | 9 | 9 | 1 | 8 | 8 | 9 | 9 | 6.9090909 |
| 12 | 4 | 6 | 8 | 8 | 5 | 6 | 3 | 4 | 1 | 6 | 5 | 5.0909091 |
| 13 | 6 | 5 | 5 | 6 | 6 | 5 | 3 | 3 | 3 | 5 | 6 | 4.8181818 |
| 14 | 5 | 7 | 7 | 7 | 6 | 7 | 3 | 7 | 5 | 6 | 7 | 6.0909091 |
| 15 | 4 | 8 | 4 | 8 | 5 | 9 | 2 | 3 | 2 | 4 | 7 | 5.0909091 |
| 16 | 2 | 2 | 1 | 3 | 3 | 3 | 1 | 1 | 1 | 7 | 7 | 2.8181818 |
| 17 | 4 | 4 | 4 | 5 | 4 | 4 | 3 | 1 | 2 | 3 | 5 | 3.5454545 |
| 18 | 8 | 8 | 9 | 9 | 8 | 7 | 2 | 5 | 5 | 7 | 7 | 6.8181818 |
| 19 | 5 | 5 | 9 | 7 | 5 | 9 | 1 | 5 | 4 | 9 | 9 | 6.1818182 |
| 20 | 3 | 5 | 6 | 5 | 3 | 5 | 5 | 5 | 4 | 7 | 5 | 4.8181818 |
| 21 | 4 | 3 | 3 | 3 | 2 | 4 | 2 | 1 | 1 | 3 | 4 | 2.7272727 |
| 22 | 5 | 5 | 8 | 7 | 6 | 6 | 3 | 3 | 4 | 8 | 7 | 5.6363636 |
| 23 | 3 | 4 | 7 | 8 | 5 | 6 | 3 | 2 | 2 | 9 | 4 | 4.8181818 |
| 24 | 6 | 6 | 7 | 7 | 4 | 5 | 2 | 1 | 1 | 7 | 6 | 4.7272727 |
| 25 | 7 | 7 | 8 | 7 | 7 | 7 | 1 | 5 | 5 | 8 | 8 | 6.3636364 |
| 26 | 7 | 6 | 9 | 7 | 6 | 9 | 1 | 3 | 2 | 9 | 9 | 6.1818182 |
| 27 | 2 | 2 | 8 | 8 | 8 | 4 | 2 | 7 | 2 | 7 | 7 | 5.1818182 |
| 28 | 2 | 6 | 3 | 7 | 5 | 5 | 1 | 4 | 2 | 6 | 8 | 4.4545455 |
| 29 | 2 | 3 | 8 | 7 | 6 | 7 | 1 | 4 | 3 | 7 | 7 | 5 |
| 30 | 3 | 3 | 7 | 8 | 5 | 5 | 3 | 3 | 2 | 8 | 8 | 5 |
| 31 | 2 | 1 | 5 | 7 | 4 | 4 | 1 | 1 | 1 | 5 | 9 | 3.6363636 |
| 32 | 6 | 5 | 4 | 7 | 6 | 3 | 1 | 2 | 2 | 8 | 7 | 4.6363636 |
| 33 | 4 | 5 | 4 | 7 | 5 | 5 | 5 | 4 | 3 | 6 | 5 | 4.8181818 |
| 34 | 2 | 6 | 7 | 5 | 6 | 4 | 4 | 5 | 3 | 6 | 6 | 4.9090909 |
| 35 | 8 | 9 | 7 | 8 | 8 | 8 | 7 | 8 | 7 | 8 | 8 | 7.8181818 |
| 36 | 4 | 4 | 6 | 5 | 5 | 5 | 2 | 3 | 1 | 3 | 7 | 4.0909091 |
| 37 | 6 | 6 | 6 | 9 | 9 | 9 | 1 | 7 | 2 | 3 | 9 | 6.0909091 |
| 38 | 7 | 4 | 9 | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 9 | 7.6363636 |
| 39 | 9 | 9 | 9 | 7 | 7 | 8 | 2 | 6 | 5 | 5 | 5 | 6.5454545 |
| 40 | 7 | 7 | 9 | 9 | 9 | 9 | 1 | 5 | 6 | 9 | 9 | 7.2727273 |
| 41 | 6 | 5 | 8 | 7 | 5 | 7 | 4 | 3 | 3 | 9 | 5 | 5.6363636 |
| 42 | 6 | 6 | 6 | 8 | 7 | 7 | 4 | 5 | 5 | 6 | 8 | 6.1818182 |
| 43 | 1 | 2 | 2 | 7 | 4 | 5 | 3 | 2 | 1 | 5 | 5 | 3.3636364 |
| 44 | 5 | 5 | 9 | 6 | 6 | 8 | 1 | 4 | 4 | 1 | 7 | 5.0909091 |
| 45 | 8 | 8 | 8 | 8 | 8 | 7 | 3 | 8 | 8 | 8 | 8 | 7.4545455 |
| 46 | 8 | 8 | 9 | 9 | 8 | 8 | 4 | 8 | 8 | 9 | 9 | 8 |
| 47 | 4 | 9 | 4 | 3 | 3 | 2 | 7 | 6 | 1 | 4 | 2 | 4.0909091 |
| 48 | 3 | 4 | 4 | 6 | 6 | 4 | 4 | 2 | 2 | 6 | 5 | 4.1818182 |
| 49 | 5 | 4 | 8 | 4 | 3 | 4 | 7 | 6 | 4 | 7 | 3 | 5 |
| 50 | 3 | 4 | 7 | 7 | 6 | 5 | 2 | 5 | 1 | 7 | 7 | 4.9090909 |
| 51 | 2 | 2 | 2 | 3 | 3 | 2 | 5 | 1 | 1 | 1 | 4 | 2.3636364 |
| 52 | 6 | 6 | 9 | 7 | 7 | 7 | 5 | 7 | 4 | 8 | 7 | 6.6363636 |
| 53 | 3 | 3 | 6 | 5 | 7 | 5 | 3 | 5 | 7 | 7 | 7 | 5.2727273 |
| 54 | 5 | 5 | 7 | 7 | 5 | 5 | 3 | 3 | 2 | 7 | 5 | 4.9090909 |
| 55 | 2 | 2 | 4 | 4 | 3 | 2 | 2 | 3 | 2 | 5 | 4 | 3 |
| 56 | 3 | 3 | 4 | 6 | 6 | 6 | 1 | 3 | 3 | 6 | 8 | 4.4545455 |
| 57 | 3 | 3 | 4 | 4 | 3 | 3 | 1 | 2 | 2 | 7 | 4 | 3.2727273 |
| 58 | 3 | 2 | 2 | 6 | 4 | 4 | 2 | 1 | 1 | 5 | 5 | 3.1818182 |
| 59 | 3 | 5 | 5 | 8 | 5 | 7 | 2 | 4 | 3 | 4 | 6 | 4.7272727 |
| 60 | 6 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 5 | 7 | 6 | 6.2727273 |
| 61 | 1 | 1 | 5 | 5 | 4 | 5 | 3 | 3 | 3 | 5 | 5 | 3.6363636 |
| 62 | 3 | 3 | 3 | 6 | 5 | 5 | 2 | 4 | 1 | 5 | 5 | 3.8181818 |
| 63 | 7 | 7 | 4 | 6 | 5 | 5 | 5 | 2 | 4 | 6 | 5 | 5.0909091 |
| 64 | 5 | 6 | 3 | 4 | 3 | 5 | 4 | 1 | 1 | 6 | 5 | 3.9090909 |
| 65 | 6 | 3 | 6 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 4.6363636 |
| 66 | 3 | 4 | 4 | 5 | 4 | 4 | 5 | 6 | 3 | 6 | 5 | 4.4545455 |
| 67 | 4 | 6 | 9 | 5 | 6 | 5 | 1 | 3 | 3 | 6 | 5 | 4.8181818 |
| 68 | 3 | 4 | 5 | 7 | 5 | 5 | 4 | 3 | 2 | 6 | 7 | 4.6363636 |
| 69 | 4 | 1 | 2 | 6 | 5 | 5 | 2 | 1 | 1 | 4 | 5 | 3.2727273 |
| 70 | 6 | 6 | 4 | 5 | 5 | 5 | 2 | 3 | 2 | 5 | 5 | 4.3636364 |
| 71 | 6 | 6 | 6 | 7 | 5 | 7 | 5 | 6 | 3 | 7 | 7 | 5.9090909 |
| 72 | 4 | 3 | 9 | 7 | 5 | 5 | 2 | 4 | 4 | 8 | 7 | 5.2727273 |
| 73 | 4 | 6 | 3 | 4 | 6 | 5 | 3 | 3 | 5 | 4 | 5 | 4.3636364 |
| 74 | 2 | 5 | 2 | 5 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 4.1818182 |
| 75 | 6 | 5 | 5 | 6 | 7 | 5 | 6 | 4 | 3 | 5 | 7 | 5.3636364 |
| 76 | 2 | 2 | 4 | 5 | 2 | 1 | 1 | 2 | 1 | 7 | 9 | 3.2727273 |
| 77 | 6 | 6 | 5 | 5 | 5 | 6 | 6 | 5 | 2 | 4 | 5 | 5 |
| 78 | 3 | 3 | 7 | 8 | 8 | 5 | 3 | 7 | 2 | 7 | 6 | 5.3636364 |
| 79 | 8 | 8 | 6 | 7 | 4 | 5 | 3 | 2 | 3 | 4 | 5 | 5 |
| 80 | 2 | 2 | 9 | 8 | 4 | 4 | 8 | 1 | 1 | 9 | 5 | 4.8181818 |
| 81 | 4 | 5 | 6 | 5 | 5 | 7 | 4 | 6 | 3 | 6 | 6 | 5.1818182 |
| 82 | 2 | 2 | 5 | 2 | 1 | 1 | 5 | 4 | 1 | 5 | 1 | 2.6363636 |
| 83 | 2 | 4 | 6 | 4 | 1 | 6 | 4 | 3 | 4 | 8 | 4 | 4.1818182 |
| 84 | 1 | 2 | 7 | 7 | 3 | 9 | 1 | 2 | 1 | 8 | 9 | 4.5454545 |
| 85 | 4 | 5 | 3 | 7 | 7 | 8 | 2 | 7 | 6 | 9 | 6 | 5.8181818 |
| 86 | 3 | 4 | 4 | 6 | 5 | 5 | 4 | 3 | 2 | 5 | 5 | 4.1818182 |
| 87 | 4 | 4 | 5 | 6 | 4 | 4 | 5 | 3 | 2 | 4 | 5 | 4.1818182 |
| 88 | 4 | 4 | 3 | 6 | 5 | 7 | 4 | 6 | 3 | 7 | 5 | 4.9090909 |
| 89 | 6 | 6 | 7 | 6 | 6 | 5 | 3 | 3 | 3 | 7 | 7 | 5.3636364 |
| 90 | 5 | 6 | 5 | 7 | 4 | 4 | 3 | 2 | 3 | 6 | 6 | 4.6363636 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 4.2 | 4.5555556 | 5.6444444 | 6.2666667 | 5.2 | 5.4555556 | 3.2333333 | 3.9111111 | 3.0444444 | 6.1111111 | 6.0555556 | 4.879798 |
| Variance | 3.6933333 | 3.7802469 | 4.8069136 | 2.6177778 | 3.2711111 | 3.6258025 | 3.2677778 | 4.1920988 | 3.5980247 | 3.454321 | 2.9635802 | 1.410804 |
| SD | 1.9218047 | 1.9442857 | 2.1924675 | 1.6179548 | 1.8086213 | 1.904154 | 1.8076996 | 2.0474615 | 1.896846 | 1.8585804 | 1.7215052 | 1.1877727 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *8* | CA NO CO |  |  |  |  |  |  |  |  |  |  |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average |
| 1 | 5 | 5 | 4 | 8 | 6 | 8 | 2 | 6 | 5 | 8 | 8 | 5.9090909 |
| 2 | 4 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 5 | 2 | 5 | 3.9090909 |
| 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4.6363636 |
| 4 | 2 | 2 | 4 | 9 | 9 | 5 | 2 | 7 | 8 | 9 | 5 | 5.6363636 |
| 5 | 1 | 1 | 3 | 4 | 3 | 4 | 5 | 6 | 2 | 3 | 2 | 3.0909091 |
| 6 | 2 | 1 | 3 | 7 | 5 | 6 | 3 | 3 | 6 | 5 | 7 | 4.3636364 |
| 7 | 4 | 5 | 5 | 8 | 8 | 6 | 2 | 5 | 6 | 8 | 7 | 5.8181818 |
| 8 | 4 | 4 | 4 | 8 | 5 | 8 | 3 | 8 | 4 | 6 | 7 | 5.5454545 |
| 9 | 2 | 3 | 9 | 9 | 7 | 6 | 4 | 2 | 2 | 7 | 8 | 5.3636364 |
| 10 | 4 | 6 | 5 | 7 | 5 | 6 | 6 | 7 | 4 | 5 | 6 | 5.5454545 |
| 11 | 5 | 3 | 9 | 7 | 7 | 9 | 1 | 6 | 5 | 9 | 9 | 6.3636364 |
| 12 | 4 | 2 | 8 | 4 | 6 | 6 | 5 | 7 | 4 | 8 | 5 | 5.3636364 |
| 13 | 2 | 3 | 7 | 4 | 4 | 6 | 4 | 4 | 3 | 4 | 5 | 4.1818182 |
| 14 | 4 | 6 | 6 | 7 | 5 | 6 | 2 | 6 | 7 | 5 | 5 | 5.3636364 |
| 15 | 1 | 1 | 4 | 4 | 4 | 6 | 4 | 1 | 1 | 1 | 9 | 3.2727273 |
| 16 | 1 | 1 | 3 | 9 | 8 | 9 | 1 | 7 | 5 | 4 | 6 | 4.9090909 |
| 17 | 4 | 4 | 5 | 6 | 5 | 6 | 4 | 4 | 3 | 5 | 5 | 4.6363636 |
| 18 | 2 | 4 | 9 | 3 | 1 | 3 | 4 | 5 | 5 | 5 | 3 | 4 |
| 19 | 3 | 4 | 5 | 5 | 3 | 8 | 1 | 4 | 4 | 9 | 7 | 4.8181818 |
| 20 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.0909091 |
| 21 | 4 | 4 | 6 | 4 | 3 | 4 | 4 | 2 | 4 | 3 | 4 | 3.8181818 |
| 22 | 6 | 6 | 7 | 9 | 9 | 9 | 2 | 5 | 5 | 9 | 9 | 6.9090909 |
| 23 | 3 | 3 | 3 | 6 | 9 | 7 | 2 | 4 | 2 | 7 | 7 | 4.8181818 |
| 24 | 5 | 5 | 8 | 3 | 3 | 4 | 3 | 2 | 1 | 2 | 2 | 3.4545455 |
| 25 | 7 | 7 | 7 | 7 | 8 | 8 | 3 | 7 | 6 | 7 | 7 | 6.7272727 |
| 26 | 7 | 8 | 9 | 7 | 6 | 9 | 1 | 8 | 4 | 8 | 9 | 6.9090909 |
| 27 | 2 | 2 | 5 | 6 | 7 | 7 | 3 | 4 | 3 | 6 | 5 | 4.5454545 |
| 28 | 5 | 6 | 7 | 7 | 3 | 7 | 1 | 7 | 7 | 9 | 9 | 6.1818182 |
| 29 | 6 | 6 | 7 | 8 | 7 | 7 | 1 | 6 | 6 | 7 | 8 | 6.2727273 |
| 30 | 4 | 4 | 5 | 8 | 7 | 6 | 3 | 3 | 3 | 7 | 7 | 5.1818182 |
| 31 | 5 | 1 | 2 | 7 | 4 | 7 | 1 | 4 | 1 | 7 | 7 | 4.1818182 |
| 32 | 8 | 6 | 6 | 7 | 6 | 6 | 1 | 6 | 5 | 7 | 7 | 5.9090909 |
| 33 | 5 | 5 | 4 | 6 | 5 | 5 | 5 | 6 | 3 | 6 | 5 | 5 |
| 34 | 7 | 6 | 9 | 8 | 6 | 5 | 2 | 6 | 5 | 7 | 6 | 6.0909091 |
| 35 | 7 | 7 | 6 | 5 | 6 | 7 | 8 | 8 | 8 | 5 | 8 | 6.8181818 |
| 36 | 2 | 3 | 5 | 7 | 3 | 7 | 3 | 6 | 1 | 2 | 6 | 4.0909091 |
| 37 | 7 | 7 | 9 | 9 | 8 | 8 | 1 | 8 | 4 | 8 | 8 | 7 |
| 38 | 7 | 7 | 9 | 9 | 9 | 9 | 1 | 7 | 7 | 9 | 9 | 7.5454545 |
| 39 | 8 | 5 | 8 | 5 | 5 | 8 | 2 | 5 | 2 | 5 | 5 | 5.2727273 |
| 40 | 7 | 7 | 9 | 9 | 9 | 9 | 1 | 6 | 6 | 9 | 9 | 7.3636364 |
| 41 | 5 | 5 | 7 | 5 | 5 | 6 | 5 | 3 | 4 | 9 | 5 | 5.3636364 |
| 42 | 4 | 5 | 4 | 7 | 5 | 6 | 4 | 5 | 4 | 4 | 5 | 4.8181818 |
| 43 | 2 | 1 | 3 | 6 | 4 | 7 | 4 | 2 | 1 | 8 | 5 | 3.9090909 |
| 44 | 7 | 6 | 7 | 9 | 8 | 9 | 1 | 7 | 7 | 9 | 9 | 7.1818182 |
| 45 | 7 | 6 | 7 | 8 | 8 | 7 | 2 | 7 | 7 | 7 | 7 | 6.6363636 |
| 46 | 8 | 8 | 9 | 8 | 8 | 8 | 7 | 8 | 8 | 9 | 7 | 8 |
| 47 | 6 | 7 | 7 | 6 | 6 | 7 | 4 | 6 | 5 | 5 | 6 | 5.9090909 |
| 48 | 7 | 7 | 7 | 7 | 6 | 7 | 3 | 5 | 4 | 6 | 7 | 6 |
| 49 | 5 | 6 | 7 | 7 | 6 | 7 | 6 | 5 | 6 | 8 | 6 | 6.2727273 |
| 50 | 3 | 4 | 6 | 8 | 6 | 8 | 1 | 5 | 2 | 4 | 7 | 4.9090909 |
| 51 | 3 | 1 | 2 | 2 | 2 | 2 | 7 | 2 | 1 | 3 | 5 | 2.7272727 |
| 52 | 6 | 7 | 7 | 8 | 7 | 7 | 3 | 6 | 6 | 7 | 6 | 6.3636364 |
| 53 | 5 | 5 | 8 | 7 | 7 | 6 | 4 | 4 | 7 | 7 | 7 | 6.0909091 |
| 54 | 3 | 1 | 2 | 4 | 3 | 4 | 3 | 4 | 2 | 7 | 5 | 3.4545455 |
| 55 | 3 | 2 | 3 | 5 | 3 | 3 | 5 | 3 | 4 | 7 | 5 | 3.9090909 |
| 56 | 6 | 6 | 4 | 8 | 8 | 9 | 1 | 8 | 4 | 4 | 9 | 6.0909091 |
| 57 | 4 | 4 | 5 | 4 | 4 | 6 | 2 | 7 | 6 | 7 | 6 | 5 |
| 58 | 2 | 2 | 2 | 8 | 6 | 5 | 1 | 1 | 3 | 4 | 5 | 3.5454545 |
| 59 | 5 | 5 | 5 | 8 | 8 | 8 | 1 | 6 | 7 | 5 | 8 | 6 |
| 60 | 5 | 6 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 7 | 6.4545455 |
| 61 | 4 | 4 | 5 | 7 | 6 | 6 | 3 | 3 | 2 | 5 | 7 | 4.7272727 |
| 62 | 4 | 4 | 5 | 5 | 5 | 5 | 3 | 5 | 5 | 6 | 5 | 4.7272727 |
| 63 | 4 | 5 | 4 | 5 | 5 | 4 | 6 | 6 | 4 | 4 | 5 | 4.7272727 |
| 64 | 5 | 5 | 5 | 8 | 6 | 8 | 3 | 5 | 6 | 5 | 7 | 5.7272727 |
| 65 | 6 | 6 | 6 | 7 | 6 | 6 | 5 | 7 | 7 | 6 | 6 | 6.1818182 |
| 66 | 3 | 4 | 6 | 8 | 6 | 6 | 3 | 4 | 4 | 6 | 6 | 5.0909091 |
| 67 | 4 | 5 | 9 | 7 | 6 | 7 | 2 | 6 | 6 | 7 | 5 | 5.8181818 |
| 68 | 4 | 4 | 5 | 8 | 5 | 6 | 3 | 6 | 5 | 5 | 7 | 5.2727273 |
| 69 | 1 | 2 | 3 | 4 | 4 | 6 | 5 | 6 | 2 | 4 | 5 | 3.8181818 |
| 70 | 4 | 4 | 5 | 8 | 5 | 8 | 1 | 7 | 5 | 5 | 8 | 5.4545455 |
| 71 | 6 | 6 | 8 | 6 | 6 | 7 | 3 | 7 | 3 | 8 | 7 | 6.0909091 |
| 72 | 3 | 3 | 7 | 6 | 5 | 8 | 3 | 5 | 1 | 8 | 8 | 5.1818182 |
| 73 | 6 | 6 | 4 | 7 | 7 | 9 | 2 | 5 | 5 | 5 | 5 | 5.5454545 |
| 74 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 75 | 5 | 4 | 6 | 7 | 7 | 6 | 5 | 6 | 8 | 5 | 6 | 5.9090909 |
| 76 | 6 | 7 | 8 | 7 | 6 | 7 | 1 | 4 | 4 | 6 | 9 | 5.9090909 |
| 77 | 4 | 5 | 4 | 6 | 5 | 4 | 6 | 6 | 6 | 4 | 4 | 4.9090909 |
| 78 | 6 | 6 | 6 | 7 | 7 | 5 | 5 | 7 | 7 | 4 | 5 | 5.9090909 |
| 79 | 4 | 4 | 7 | 7 | 4 | 5 | 3 | 2 | 4 | 5 | 6 | 4.6363636 |
| 80 | 2 | 2 | 5 | 7 | 2 | 4 | 8 | 7 | 1 | 7 | 3 | 4.3636364 |
| 81 | 6 | 6 | 5 | 7 | 7 | 7 | 4 | 6 | 4 | 9 | 8 | 6.2727273 |
| 82 | 2 | 2 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 6 | 5 | 4.3636364 |
| 83 | 4 | 5 | 3 | 4 | 4 | 5 | 3 | 4 | 5 | 6 | 5 | 4.3636364 |
| 84 | 3 | 4 | 8 | 9 | 7 | 9 | 2 | 5 | 3 | 7 | 8 | 5.9090909 |
| 85 | 4 | 5 | 3 | 8 | 7 | 8 | 2 | 7 | 7 | 6 | 5 | 5.6363636 |
| 86 | 3 | 4 | 3 | 6 | 5 | 5 | 4 | 3 | 2 | 3 | 5 | 3.9090909 |
| 87 | 5 | 5 | 6 | 7 | 5 | 6 | 4 | 4 | 4 | 6 | 5 | 5.1818182 |
| 88 | 4 | 4 | 3 | 6 | 5 | 6 | 4 | 6 | 5 | 4 | 5 | 4.7272727 |
| 89 | 4 | 5 | 4 | 6 | 7 | 7 | 4 | 5 | 5 | 6 | 6 | 5.3636364 |
| 90 | 4 | 4 | 3 | 8 | 5 | 6 | 5 | 4 | 4 | 8 | 7 | 5.2727273 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grand Mean | 4.4 | 4.4777778 | 5.5888889 | 6.5666667 | 5.6666667 | 6.4111111 | 3.2666667 | 5.1888889 | 4.4444444 | 6 | 6.2333333 | 5.2949495 |
| Variance | 3.04 | 3.227284 | 3.9976543 | 2.6233333 | 3 | 2.464321 | 3.1288889 | 3.1087654 | 3.5580247 | 3.6888889 | 2.6011111 | 1.1234731 |
| SD | 1.7435596 | 1.7964643 | 1.9994135 | 1.6196707 | 1.7320508 | 1.5698156 | 1.7688666 | 1.7631691 | 1.8862727 | 1.920648 | 1.6127961 | 1.0599401 |

Average Scores

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Education | Intelligence | Clarity | Friendliness | Pleasantness | Honesty | Aggressiveness | Confidence | Energy | Familiarity | Safety | Average | Variance | SD |
| BR ST AC | 8.24 | 8.14 | 7.59 | 6.58 | 7.26 | 7.21 | 3.4 | 8.16 | 6.63 | 6.49 | 6.87 | 6.96 | 1.65 | 1.29 |
| BR ST CO | 7.3 | 7.4 | 6.96 | 7.14 | 7.3 | 7.07 | 3.03 | 6.98 | 6.23 | 6.15 | 6.81 | 6.58 | 1.41 | 1.19 |
| BR NO AC | 7.01 | 6.91 | 6.02 | 6.38 | 6.52 | 6.41 | 3.2 | 5.62 | 4.69 | 5.96 | 6.48 | 5.93 | 1.12 | 1.06 |
| BR NO CO | 5.27 | 5.5 | 5.01 | 7 | 6.53 | 6.63 | 4.41 | 6.72 | 6.71 | 5.27 | 6.43 | 5.95 | 0.7 | 0.84 |
| CA ST AC | 7.87 | 7.67 | 8.36 | 6.7 | 6.59 | 6.81 | 3.24 | 7.29 | 5.56 | 7.07 | 6.99 | 6.74 | 1.72 | 1.31 |
| CA ST CO | 6.98 | 6.8 | 8.17 | 6.3 | 6.23 | 6.74 | 2.8 | 5.88 | 4.43 | 7.17 | 6.86 | 6.21 | 1.94 | 1.39 |
| CA NO AC | 4.2 | 4.56 | 5.64 | 6.27 | 5.2 | 5.46 | 3.23 | 3.91 | 3.04 | 6.11 | 6.06 | 4.88 | 1.22 | 1.11 |
| CA NO CO | 4.4 | 4.48 | 5.59 | 6.57 | 5.67 | 6.41 | 3.27 | 5.19 | 4.44 | 6 | 6.23 | 5.3 | 0.98 | 0.99 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Avg.: | 6.40875 | 6.4325 | 6.6675 | 6.6175 | 6.4125 | 6.5925 | 3.3225 | 6.21875 | 5.21625 | 6.2775 | 6.59125 | 6.06875 | 1.3425 | 1.1475 |
| Var.: | 2.1476609 | 1.7417688 | 1.4302437 | 0.0884688 | 0.4521937 | 0.2536188 | 0.1975437 | 1.5760859 | 1.4511984 | 0.3383688 | 0.1009859 | 0.4454609 |  |  |
| SD: | 1.46549 | 1.3197609 | 1.195928 | 0.297437 | 0.6724535 | 0.5036057 | 0.4444589 | 1.2554226 | 1.204657 | 0.5816947 | 0.3177828 | 0.6674286 |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA Comparing means of principal components with nativeness variable (perception of accent and nativeness of participant)** | | | | | | |
|  | | Sum of Squares | df | Mean Square | F | Sig. |
| BART factor score 1 for BR ST AC | Between Groups | 1.367 | 1 | 1.367 | 1.373 | .244 |
| Within Groups | 87.633 | 88 | .996 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for BR ST AC | Between Groups | .055 | 1 | .055 | .054 | .816 |
| Within Groups | 88.945 | 88 | 1.011 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 1 for BR ST CO | Between Groups | 1.824 | 1 | 1.824 | 1.841 | .178 |
| Within Groups | 87.176 | 88 | .991 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for BR ST CO | Between Groups | .385 | 1 | .385 | .382 | .538 |
| Within Groups | 88.615 | 88 | 1.007 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 1 for BR NO AC | Between Groups | .254 | 1 | .254 | .252 | .617 |
| Within Groups | 88.746 | 88 | 1.008 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for BR NO AC | Between Groups | 1.217 | 1 | 1.217 | 1.220 | .272 |
| Within Groups | 87.783 | 88 | .998 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 1 for BR NO CO | Between Groups | 1.456 | 1 | 1.456 | 1.464 | .230 |
| Within Groups | 87.544 | 88 | .995 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for BR NO CO | Between Groups | .368 | 1 | .368 | .365 | .547 |
| Within Groups | 88.632 | 88 | 1.007 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 3 for BR NO CO | Between Groups | 4.003 | 1 | 4.003 | 4.144 | \*.045 |
| Within Groups | 84.997 | 88 | .966 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 1 for CA ST AC | Between Groups | .021 | 1 | .021 | .021 | .884 |
| Within Groups | 88.979 | 88 | 1.011 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for CA ST AC | Between Groups | 5.518 | 1 | 5.518 | 5.817 | \*.018 |
| Within Groups | 83.482 | 88 | .949 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 1 for CA ST CO | Between Groups | 1.538 | 1 | 1.538 | 1.548 | .217 |
| Within Groups | 87.462 | 88 | .994 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for CA ST CO | Between Groups | 2.707 | 1 | 2.707 | 2.761 | .100 |
| Within Groups | 86.293 | 88 | .981 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 1 for CA NO AC | Between Groups | 3.323 | 1 | 3.323 | 3.413 | .068 |
| Within Groups | 85.677 | 88 | .974 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for CA NO AC | Between Groups | 3.364 | 1 | 3.364 | 3.457 | .066 |
| Within Groups | 85.636 | 88 | .973 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 3 for CA NO AC | Between Groups | .655 | 1 | .655 | .653 | .421 |
| Within Groups | 88.345 | 88 | 1.004 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 1 for CA NO CO | Between Groups | .320 | 1 | .320 | .318 | .574 |
| Within Groups | 88.680 | 88 | 1.008 |  |  |
| Total | 89.000 | 89 |  |  |  |
| BART factor score 2 for CA NO CO | Between Groups | 8.520 | 1 | 8.520 | 9.316 | \*.003 |
| Within Groups | 80.480 | 88 | .915 |  |  |
| Total | 89.000 | 89 |  |  |  |
|  |  |  |  |  |  |  |

*Part C Data*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Preferred Most* | |  | *Preferred Least* | |  |
| **BR ST AC** | 34 | 28.30% | **CA NO AC** | 36 | 32.70% |
| **BR ST CO** | 17 | 14.20% | **CA NO CO** | 28 | 25.50% |
| **BR NO AC** | 15 | 12.50% | **BR NO CO** | 20 | 18.20% |
| **CA ST AC** | 15 | 12.50% | **CA ST CO** | 8 | 7.20% |
| **CA ST CO** | 13 | 10.80% | **BR NO AC** | 5 | 4.50% |
| **BR NO CO** | 11 | 9.20% | **CA ST AC** | 5 | 4.50% |
| **CA NO AC** | 9 | 7.50% | **BR ST AC** | 5 | 4.50% |
| **CA NO CO** | 6 | 5% | **BR ST CO** | 3 | 2.70% |
|  |  |  |  |  |  |
| Total | 120 |  |  | 110 |  |
|  |  |  |  |  |  |
| **BR** | 64.20% | **ST** | 54.80% | **AC** | 60.80% |
| **CA** | 35.80% | **NO** | 45.20% | **CO** | 39.20% |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Reasons Most* | |  |  |  |  |  |  |
| **BR ST AC** | **BR ST CO** | **BR NO AC** | **BR NO CO** | **CA ST AC** | **CA ST CO** | **CA NO AC** | **CA NO CO** |
| Intelligent | Clear | Confident | Interesting | Familiar | Familiar | Familiar | Friendly |
| Comforting | Pleasant | Pleasant | Familiar | Familiar | Familiar | Honest | Familiar |
| Pleasant | Confident | Confident | Polite | Clear | Intelligent | Familiar | Friendly |
| Pleasant | Pleasant | Intelligent | Interesting | Clear | Engaging | Familiar | Familiar |
| Intelligent | Polite | Neutral | Familiar | Familiar | Clear | Polite | Familiar |
| Familiar | Intelligent | Familiar | Familiar | Familiar | Familiar | Familiar | Familiar |
| Clear | Intelligent | Soothing | Pleasant | Standard | Familiar | Familiar |  |
| Familiar | Pleasant | Intelligent | Pleasant | Polite | Familiar | Clear |  |
| Interesting | Pleasant | Posh | Friendly | Intelligent | Familiar | Familiar |  |
| Pleasant | Intelligent | Pleasant | Interesting | Clear | Familiar | Familiar |  |
| Confident | Pleasant | Pleasant | Pleasant | Familiar | Familiar | Familiar |  |
| Clear | Familiar | Familiar | Familiar | Familiar | Familiar |  |  |
| Friendly | Intelligent | Pleasant |  | Familiar | Familiar |  |  |
| Polite | Calm | Familiar |  | Familiar | Trustworthy |  |  |
| Intelligent | Pleasant | Pleasant |  | Pleasant | Familiar |  |  |
| Familiar | Pleasant | Pleasant |  | Clear |  |  |  |
| Confident | Clear |  |  | Familiar |  |  |  |
| Educated | Familiar |  |  | Familiar |  |  |  |
| Engaging | Friendly |  |  | Clear |  |  |  |
| Pleasant | Intelligent |  |  |  |  |  |  |
| Intelligent | |  | | --- | |  | |  |  |  |  |  |  |
| Intelligent |  |  |  |  |  |  |  |
| Confident |  |  |  |  |  |  |  |
| Confident |  |  |  |  |  |  |  |
| Pleasant |  |  |  |  |  |  |  |
| Confident |  |  |  |  |  |  |  |
| Intelligent |  |  |  |  |  |  |  |
| Pleasant |  |  |  |  |  |  |  |
| Clear |  |  |  |  |  |  |  |
| Pleasant |  |  |  |  |  |  |  |
| Familiar |  |  |  |  |  |  |  |
| Pleasant |  |  |  |  |  |  |  |
| Familiar |  |  |  |  |  |  |  |
| Intelligent |  |  |  |  |  |  |  |
| Honest |  |  |  |  |  |  |  |
| Pleasant |  |  |  |  |  |  |  |
| Pleasant |  |  |  |  |  |  |  |
| Pleasant |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Pleasant | Pleasant | Pleasant | Familiar | Familiar | Familiar | Familiar | Familiar |
| Intelligent | Intelligent |  | Interesting | Clear |  |  | Friendly |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Reasons Least* | |  |  |  |  |  |  |
| **BR ST AC** | **BR ST CO** | **BR NO AC** | **BR NO CO** | **CA ST AC** | **CA ST CO** | **CA NO AC** | **CA NO CO** |
| Unpleasant | Unconfident | Unclear | Unintelligible | Unfamiliar | Unintelligent | Lazy | Slang |
| Snobby | Unfamiliar | Unclear | Unintelligible | Cold | Unintelligent | Unintelligible | Strange |
| Unfamiliar | Unfamiliar | Unfamiliar | Dishonest | Boring | Awkward | Unpleasant | Unintelligible |
| Unfamiliar |  | Unintelligible | Dishonest | Boring | Stereotypical | Unintelligent | Unpleasant |
| Snobby |  | Unintelligent | Aggressive | Stereotypical | Stereotypical | Dishonest | Lazy |
|  |  | Unintelligible | Unfamiliar | Boring | Boring | Exaggerated | Choppy |
|  |  | Unfamiliar | Unintelligible | |  | Fake | Lazy |
|  |  | Unfamiliar | Unfamiliar |  |  | Unintelligible | Improper |
|  |  |  | Unfamiliar |  |  | Annoying | Lazy |
|  |  |  | Unclear |  |  | Informal | Unpleasant |
|  |  |  | Unintelligible | |  | Annoying | Lazy |
|  |  |  | Unintelligible | |  | Uneducated | Lazy |
|  |  |  | Aggressive |  |  | Unintelligent | Annoying |
|  |  |  | Unfamiliar |  |  | Unsophisticated | Unintelligent |
|  |  |  | Unintelligible | |  | Uninterested | Unintelligent |
|  |  |  | Unfamiliar |  |  | Unintelligible | Uninterested |
|  |  |  | Unfamiliar |  |  | Uninterested | Unclear |
|  |  |  | Slang |  |  | Lazy | Lazy |
|  |  |  | Unintelligible | |  | Unfriendly | Unintelligent |
|  |  |  | Aggressive |  |  | Uneducated | Boring |
|  |  |  | Uneducated |  |  | Rude | Stereotypical |
|  |  |  | Unintelligible | |  | Lazy | Boring |
|  |  |  | Unfamiliar |  |  | Dishonest | Unintelligent |
|  |  |  |  |  |  | Lazy | Unintelligent |
|  |  |  |  |  |  | Stereotypical | Annoying |
|  |  |  |  |  |  | Unclear | Slang |
|  |  |  |  |  |  | Boring | Unfamiliar |
|  |  |  |  |  |  | Boring | Untrustworthy |
|  |  |  |  |  |  | Lazy | Boring |
|  |  |  |  |  |  | Unconfident | Unintelligent |
|  |  |  |  |  |  | Uneducated | Unsure |
|  |  |  |  |  |  | Slang | Unkind |
|  |  |  |  |  |  | Unintelligent | Unintelligent |
|  |  |  |  |  |  | Unpleasant |  |
|  |  |  |  |  |  | Dishonest |  |
|  |  |  |  |  |  | Lazy |  |
|  |  |  |  |  |  | Lazy |  |
|  |  |  |  |  |  | Unintelligent | |
|  |  |  |  |  |  | Lazy |  |
|  |  |  |  |  |  | Annoying |  |
|  |  |  |  |  |  | Unclear |  |
|  |  |  |  |  |  | Unfamiliar |  |
|  |  |  |  |  |  | Lazy |  |
|  |  |  |  |  |  |  |  |
| **Most Common Descriptors** |  |  |  |  |  |  |  |
| Unfamiliar | Unfamiliar | Unfamiliar | Unfamiliar | Boring | Unintelligent | Lazy | Lazy |
| Snobby |  | Unclear | Unintelligible | | Stereotypical | Unintelligent | Unintelligent |