SOCIOPHONETIC VARIATION AMONG UNDERGRADUATE PASHTUN SPEAKERS OF ENGLISH: AN INVESTIGATION OF ENGLISH MONOPHTHONGS

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Candidate of **Master of Philosophy** at the National University of Modern Languages do hereby declare that the thesis **Sociophonetic Variation among Undergraduate Pashtun Speakers of English: An Investigation of English Monophthongs** submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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ABSTRACT

Title: Sociophonetic Variation among Undergraduate Pashtun Speakers of English: An Investigation of English Monophthongs

This research studies monophthongal variation in the L2 English of young Pashtun speakers who are undergraduate students of BS English programme, based on speech production data obtained from two institutes in Karak district (of northwestern Pakistan) in the perspective of sociophonetics. It aims to examine the extent of this variation in English monophthong sounds in the speech of Pashtun speakers and to understand how this variation is affected by the factors of socioeconomic status and gender. In other words, the features of speech or pronunciations of a Pashtun speaker constitute the dependent variable and his or her socioeconomic status and gender the independent variables. Data obtained in the form of audio recordings in which a participant reads three short tales in English from a text, collected from a total of forty four students with equal representation of gender, shows that there exists a strong degree of variation among these speakers of Pashto English. This variation is both phonological and phonetic in nature. The phonetic variation is analysed as a score of similarity and in the form of percentage of all the tokens uttered by a participants compared with the *Received Pronunciation* (i.e. British English). The findings indicate that whereas there does not occur any correlation between a participant's socioeconomic status and the features of his or her speech, the variation does seem to pattern along the factor of gender, with the female participants performing better than their male counterparts frequently and overall.

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CHAPTER 1

INTRODUCTION

Sociophonetics is one of the fields of sociolinguistics that aims to investigate the variation in language use with respect to a speaker's background. It is commonly thought that people speak their native languages with correct pronunciation, or rather the way native speakers pronounce words in their speech is held to be the correct pronunciation. However, speaking a second or foreign language may involve the use of oral cavity for the non-native language where non-native sounds need to be indigenized. Such situations may result in variation at multiple levels such as phonological, lexical, or syntactic. It is to be considered that such variation takes place in a particular social setup where people start executing the use of a foreign or second language, a phenomenon that may also be termed as sociophonetics. Sociophonetics has emerged as a central domain for the study of synchronic variation and language change. It allows researchers to combine the postulates of theoretical linguistics with analytical methods, encompassing phonetic and statistical, to a degree not found in most fields of the discipline.

English is a global lingua franca that has widely varying types (Galloway & Rose, 2015). The classification of English varieties and the factors of their variation are a subject of much linguistic inquiry (Kingsley & Kachru, 2006). The well-known ones among these varieties include the native ones of British English and American English and the non-native or transplanted ones like Indian English (Kachru, 1976), Singaporean English (Low & Brown, 2003), Chinese English (Yajun, 1995), South African English (Bekker, 2012), etc. The role of social factors in influencing the pronunciation of native as well as a foreign language is well-known in the field of linguistics since the pioneering sociolinguistic study of New York English by William Labov (1966), which also set the basis of the field of sociophonetics. Sociophonetics combines the methodological approaches of sociolingusitics with phonetics. The idea of stratification of language along social lines has been firmly established by Wardhaugh (2006). In this vein, Bhushan (2011) argues that all linguistic phenomena occur in a social context and must be treated by the researchers as such since socio-cultural factors, that encompass learner motivation

and exposure to target language afforded to individual learners, profoundly affect the process of language learning and hence the linguistic output generated by speakers, including the phonetic output. Language learners that are highly motivated for a new or foreign language and receive an adequate amount of exposure to or input in that language prove to be better learners and hence generate a higher quality of linguistic output.

The chief aim of sociophonetic studies is to concentrate on examining how the language users classify and grade the instantiations of linguistic output and equally of how human communication and the process of information sharing give structure to the linguistic systems they employ. This study investigates the features of English pronunciation, based on the primary data, of Pashtun speakers, who natively speak the Khatak Pashto variety and non-natively use a kind of transplanted or L2 English variety. It focuses on the influence of the socioeconomic status of the speaker and his or her gender on their pronunciation of English monophthongs; these sounds are compared with the features of British variety of English, better known in the literature as Received Pronunciation (Lewis, 2009). In other words, the researcher analyses the variation in the articulation of these sounds and attempts to relate the patterns in the given phonetic variation with the social class of a speaker and his or her gender based on how closely a given linguistic output matches the Received Pronunciation.

Pashto is an Eastern Iranian language (Morgenstierne, 1982), spoken at present by at least fifty million people in southern and eastern Afghanistan and northwestern Pakistan (David, 2014). It is popularly thought to consist of two dialects, which are described based on the pronunciation of ښ and ږ graphemes as “hard” vs. “soft”. MacKenzie (1959) classifies it into four major dialects: South-west, South-east, North-west, and North-east. A quick overview of Pashto phonology is provided by Elfenbein (1997), which is relevant for the present discussion. The most notable characteristic of Pashto phonological system is the wide variety of the fricative consonants in the language, though a characteristic which is not atypical for languages of the Iranian family, being found in Persian too. Pashto vowel system consists only of seven phonemes, transcribed in the system common for Iranian languages as close front vowel /i/, mid front vowel /e/, mid central vowel /ə/, mid open vowel /ɑ/ (alternatively also given by the authors /a/), open back vowel /ɑ̂/ (again alternatively /ā/), mid back rounded

vowel /o/, close back rounded vowel /u/, in which length is not contrastive (once more as in Persian), the feature lax correlating among the peripheral vowels with stress in the present-day dialects. This system makes up for an interesting comparison with a language like English which has a rich variety of vowel sounds.

Since at least the mid-20th century the Pashto-speaking cultural milieu has been gradually affected by the process of modernization, which originally emerged from the Western world and diffused across distant parts of the globe. The dissemination of Western -- in particular Anglo-sphere -- political, technological, and cultural influence has brought the Pashtuns in contact with English language, within their homeland in western Asia, especially through the spread of higher education for which the language of learning tends to be English. As a result of this, a distinct "Pashto-phone" variety of English has developed across parts of Pakistan and Afghanistan. This variety, whose defining characteristics derive obviously from the features transferred through the influence of the native language of the Pashtun speakers, is in no way uniform. The differences arise from factors that can be related to differential learning opportunities and individual motivation among others (such as the regional variation within Pashto itself). This study aims to identify such variation as found among Khatak tribesmen, who are mostly settled in Karak and its neighbouring districts in northwestern Pakistan. The current research concentrates on the variation in the pronunciation of monophthong vowel sounds of English, by speakers who are residents of Karak city or its environs, and seeks to foreground the factors of social class as well as gender in this variation.

1.1 Statement of the Problem

The variety of English used by native Pashtun speakers demonstrates a variation that vacillates between non-native and native English speakers-like features. The impressionistic observations of the present researcher made before the commencement of this research on individuals outside the Karak district have shown that this variation patterns to an extent along the factor of the social class of the given speaker though not necessarily his or her gender. The problem to be investigated in this research is the sociophonetic monophthongal variation among undergraduate Pashtun (Khatak) speakers of English living in Karak using the sociophonetic methodological approach.

The present research is an attempt to study the realization of the given sounds in a formal way, that is by using L2 speech production data of Pashtun speakers of English and using the methodology of sociophonetics, focusing on the factor of the socioeconomic status and gender in interpreting the said variation. In this study pronunciations of Pashtun speakers -- or how well the phonetic output of these pronunciations matches those of the native English speakers -- constitutes the dependent variable and the socioeconomic status or gender of a given speaker the independent variable against which the former are compared.

1.2 Research Questions

The current research aims to answer the following questions:

1. What is the extent(/count) of the monophthongal variation in the speech of Pashtun speakers of English?
2. How does the socioeconomic status of the speakers influence the pronunciation of these sounds among Pashtun speakers of English?
3. How far does the gender of the participants reflect any patterns of variation in their speech?

1.3 Theoretical Framework

Sociophonetics is a composite approach to the study of natural language phenomenon that aims to apply the theoretical underpinnings and principles of phonetics to the postulates and techniques of sociolinguistic research (Foulkes et al., 2010). It argues for the existence of socially structured variation in the use of language and assumes the practicability of modeling this variation using (socio)linguistic methods. The chief preoccupation of the present study is to describe a prospective correlation between patterns of variation in production data, based on monophthong sounds of English, obtained from Pashtun speakers and the socioeconomic status as well as the gender of these speakers.

A sociophonetic inquiry includes not only the regional or social aspects of language but also the individual ones, namely how “individual speakers use language”

(Meyerhoff, 2006, p.1) or "how language can reveal social relationships" (van Herk, 2012, p.3). This results in a mode of inquiry that is essentially "multi-layered" (Wardhaugh, 2006, p.11) and is equipped to deal with several factors and variables at the same time. Since language changes, all the time, and this change can freely pass from one speaker to another and then another and so on, a sociolinguist has to keep checks for both the structured and the free variation (van Herk, 2021). The variation under question is of both the intraspeaker and the interspeaker type (Meyerhoff, 2006).

This study makes use of the framework standard in sociophonetic research as described by Foulkes et al. (2010), namely obtaining a representative corpus and analyzing the pertinent linguistic features in it against the social background of individual speakers. Data is analysed, in this research, at three levels. The first level is purely phonetic in which the researcher analyses the production output obtained from each speaker and examines the variation in it. This variation is compared with the standard British English pronunciation, also known as Received Pronunciation. The next level of analysis focuses on obtaining phonological insights into the data, such as the categorical absence or presence of a certain contrast. Differences between the individual phonologies of English and Pashto constitute a major factor that affects the outcome observed at this level, that is via L1 interference from Pashto (admittedly these effects are also observed on the phonetic level). The third level consists of the socioeconomic status and the gender of a participant. At this level, the researcher juxtaposes the socioeconomic status of each participant and its potential influence in the divergence seen in the phonetic output, and at the same time the social factor of gender is explored in order to identify any influence of it in the way the variation is distributed. Hereby the researcher seeks to uncover and highlight the general pattern(s) of sociophonetic variation.

1.4 Significance of the Study

English spoken by the Pashtun speakers displays significant variation in its phonetics, but there exists hitherto little or no literature on this divergence. The present study derives its significance primarily from being the first inquiry, to this scholar's knowledge, in the sociophonetics of Pashto English. Studies of transplanted or L2 varieties of English have a long history, one that is also replete with interesting findings.

In bringing to fore data on a previously unknown transplanted variety, the present study also serves to bring to light the parallels in the development of such L2 varieties. Furthermore, there is to this researcher's knowledge no prior study of an L2 variety of transplanted English that focuses specifically on the monophthongal variation.

Sociolinguistics has on many occasions sought to demonstrate and as often has demonstrated that linguistic phenomenon is stratified along social lines such as class, age, gender, and (in multilingual and multiethnic societies) also ethnicity. So far as this researcher's familiarity goes, these studies have concentrated exclusively on social stratification in highly urbanized environments in which participants are living more or less as anonymous individuals. A greater part of the Pashtun cultural milieu, on the other hand, represents a complex picture where large urban centers do not exist, and even when they do almost the entire population identifies along *kabaili* 'tribal' lines, while most major towns tend to be divided in the form of *khel*s 'settlements' where extended families tied to each other by lineage from a common ancestor live together. Investigation of variation in such settings is important in its own right (refer to §**3.3** on site and population). The complexities surrounding these socio-cultural factors make the Pashtun cultural setting unique for carrying out sociolinguistic research in, even though these create challenges of their own in generalizing from the results. These issues are highlighted and also dealt with in chapter **3**.

1.5 Delimitation

Relevant to the present study are only the differences that exist at the level of phonology and thereby play into phonetics. Within these two levels this research concentrates on the production data of monophthong sounds occurring in monosyllabic words. The data used for this study has been obtained from young Pashtun speakers pursuing an undergraduate degree in Karak. Hence, in terms of geographic scope, this study includes only the Pashtun speakers living in Karak city and its environs.

In Pashtun society, one's social status seldom coincides with an individual's level of education or profession, though it might with one's income. The present research makes use of the factor of socioeconomic position of a participant's family as a determinant of the features of their speech. Alongside socioeconomic status, this research

also aims to analyse the role of a participant's gender in determining the variation. The socioeconomic status of a participant and their gender are the only independent variables this research attempts to understand.

In addition to the data related to the socioeconomic status and gender of the participants, the current study has also collected data on speaker demographics and the background of interaction with English. Whereas existing literature has demonstrated that individual motivation for the target language and exposure to it are independent factors that can affect the process of language learning (and hence influence the linguistic output), it is not an aim of this study to uncover the potential role these two factors could have played in influencing variation. In any case, interference from L1 remains a strong determinant of production data outcome and hence the analysis and findings of the research.

1.6 Chapter Breakdown

In chapter two, I undertake an overview of the existing literature and the literature relevant to the current research while pointing out the areas that need further study. This existing literature is divided into research in second language learning or acquisition, sociophonetics, and Pashto. Chapter three deals with the methodology of the research, raising some of the issues that the present inquiry faces and addressing them. This is followed by data analysis in chapter four, which can be divided into the level of phonology, phonetics, and the social factors (including the socioeconomic status and gender). Finally, chapter five lays out the findings of the research in view of the three research questions asked in §**1.2**, brings to the fore the implications that these results have, while also indicating directions for future research on the topic. There are two pieces of annexure -- see appendix -- which include (i) the questionnaire used to obtain the background information on parental income and gain further insights into the history of participant contact as well as their learning effort, and (ii) the reading passages used for the production data through which the target phonemes have been generated.

CHPATER 2

LITERATURE REVIEW

This chapter discusses the literature relevant to the subject under inquiry and consulted by this researcher. In this discussion, the given literature is divided into three parts: (i) Second language or L2 learning, (ii) Sociophonetics and L2, (iii) Pashto. These are in turn dealt with in the following sections.

2.1 Second Language or L2 Acquisition/Learning

Second language or L2 speech of learners has been known to be marked by non-native like and inaccurate features, which are in effect divergences from the grammatical rules of the language in question as employed by its native speakers, and some of which, e.g. phonological features, persist well into the advanced stages of learning and use. Early research in the field of second/foreign language or L2 learning emphasized the role of first/native language or L1 which was seen to have a negative role and to act as a barrier to the process of L2 learning (Lado 1957). Selinker (1969) initiated a turn away from this approach and highlighted the usefulness of identifying these deviations in uncovering features that occurred as problematic to a learner and thereby providing insights into the process of second language learning.

Subsequent researchers sought to emphasize the importance of communication and instead focused on isolating those errors which interrupted communication as problematic (Burt & Kiparsky 1974) or to foreground the intralingual errors which originated in the particular character of the target language (Dulay & Burt 1974). In time, it was also pointed out that certain alterations in L2 production were simply mistakes which owed to the learner's performance rather than his or her competence, hence further refining the concept of what constituted error (Gefen 1979). Nevertheless, the view that errors arise out of interference from L1 and that it causes hindrance in the process of learning carried on (Jordens 1977; Kellerman 1979). As a side note, although scholars have since long recognized a distinction between the process of (second) language learning and acquisition, for now the question of what constitutes learning and what

constitutes acquisition does not bear on the discussion. As shown by Krashen (1981) already -- in the framework of the Monitor Theory -- while the two processes may form a part of different sub-systems there is a considerable overlap between them and their functioning is for a greater part interconnected.

Making headway in this area, Touchie (1986) further set apart the role of transference from L1 into L2 from the source(s) of errors in L2. He identified factors as diverse as (i) simplification of forms, features, or structures, (ii) overgeneralization of patterns from one context to another, (iii) hypercorrection of features, (iv) faulty teaching, (v) avoidance of structures (in particular syntactic) which may be complex, (vi) inadequate learning, etc. Recognising these factors allows both the teachers and the learners to correct the errors and improve the learning process.

As for the process of L2 learning itself, the defining role of the means of learning available to (or employed by) the learner in determining the outcome, i.e. the influence of the learning method on the degree of proficiency attained by the learner, has long been recognized, such as by Larsen-Freeman and Long (1991), Ellis (1994), etc.: At its basic, these include the quantity of target language input, the quality of target language input, the motivation of learner, the opportunities available to the learner to use L2, the learner's primary skills. These means can vary in small to appreciable way depending on whether the learning is conducted in a naturalistic environment or a foreign one.

These points are echoed time and again in subsequent research across languages and fields, whether in the exact same or different forms and concepts, albeit with variable emphasis on one point or another and depending very often on a research's aims and/or scope. For instance, Moyer (2004, p.41) surveyed existing research on German second language acquisition, a field that emphasizes aspects of "simplification universals, developmental orders, teachability, and functional-grammatical bases" and found three factors that influence the learning process and a learner's competence: informal contact with the target language, formal instruction in that language, and affective orientations towards it (i.e. the learner's attitude towards it). The author argued for an approach to the study of language learning and language teaching that integrated the methodologies of cognitive, social, and psychological inquiries in order to understand better the process of

language learning, the outcomes of different strategies and to devise language education policy for it to be made more effective.

Similarly, in a multi-authored survey, Dixon et al. (2012, p.5) undertook a large-scale review of literature from the fields of "foreign language education, child language research, sociocultural studies, and psycholinguistics" with a view to setting forth recommendations, as a part of educational policies, on improving the process of L2 learning. The authors recognized four central factors that impacted and could help to make the process of L2 learning much more constructive: (i) an optimal learning environment in which the learner can immerse himself or herself in a setting fully conducive to the process of learning; (ii) learners of L2 that have a positive attitude, strong motivation, and robust communicative skills in L1 achieve success in learning L2; (iii) well-trained L2 teachers who maintain adequate L2 proficiency as well as good instructional skills to direct the learners in the process; (iv) on average learners can take 3-7 years to attain good L2 proficiency whose learning outcomes may vary depending on the age of the learner.

Beginning with Peal and Lambert's (1962) study on children in Montreal which showed that children practicing bilingualism performed better than those who were monolinguals, the importance of multilingualism came to be first recognized. Hamers and Blanc (1989) demonstrated that these benefits lay in cognitions and operated by augmenting individual creativity and reconfiguring the structuring of information. Bialystok (2009) studied the long-term development of cognitive and intellectual capabilities of mono- and bilingual subjects from a comparative perspective, reaffirming these findings.

Following this line of research into bilingualism/multilingualism, scholars also began to take increasing interest in the classroom environment of L2 learning and how L1 and L2 are and/or could both be accommodated in Foreign Language classrooms, sometimes with an aim of making the process of learning a foreign language or L2 easier and friendly (Millous 2003; Dickinson et al. 2008; Proctor et al. 2010; Burchinal et al. 2012). More recently, Kan et al. (2020) undertook an exploratory study on dual language learners who used Cantonese at home as L1 and English in school as L2 and observed

how the language-learning environments of their subjects were distributed across the settings of home and school, finding that the use of each language correlated with the reports obtained from the parents and the teachers of their subjects, which showed that the learners were for the most part able to keep the use of the two languages independent and apart for the relevant domain(s) of each.

Within the 21st century and in particular starting in its second decade, the process of language learning has taken an interesting turn, first by the reconceiving of the pedagogy of foreign language and then with internet and social media which, by multiplying the media for the production and consumption of language, have furnished ample possibilities for adjusting the means of learning and crucially altering the language learning settings in ways not possible before. Moeller and Catalano (2015) point out how the role of language teacher has been transfigured from an authority figure to one of a facilitator, which allows a learner to picture and appreciate the learning process differently. Similarly, the evolution and growth of public pedagogy and virtual interaction between the L2 learner and the teacher stimulates intercultural competence which goes hand in hand with the process of language learning and depending on its nature can make learning more or less effectual.

Research on L2 learning or acquisition has seen age as an important factor whose influence on the learning process, or lack of it, needs scrutiny. It has been argued, starting with Lenneberg (1967), that the process of language learning is subject to an ideal learner age period in which the development of the brain corresponds to optimum learning situation which facilitates quick and effective learning. This is known as the Critical Period Hypothesis. With time research by scholars led to support for this hypothesis, e.g. Coppieters (1987), Johnson and Newport (1989), claiming that young individuals were better at learning a second language if provided with adequate linguistic input. But with further research, others also sought to challenge this view arguing instead that older individuals learn L2 faster or that there is no significant effect of age with the same amount and quality of input (Krashen et al. 1979; Singleton & Ryan, 2004).

Avoiding getting entangled in the duality of conforming or opposing the Critical Period Hypothesis, scholars, e.g. Robertson (2002), have also pointed to the fact that

there exist factors more pivotal than age for the process of L2 learning such as personal motivation and the learning environment. Still others, e.g. Dabrowska et al. (2020), seek to go back to the methodologies researchers have been commonly employing and to refine the notion of 'grammar' by employing clearer conceptualizations, such as a distinction between the 'functional' and the 'decorative' grammar; the authors also try to bring to attention the fact that there exists notable variation among the native speakers themselves, a point that tended to be overlooked in earlier research. In a re-examination of secondary literature on how age interacts with the acquisition of second language grammar, Qureishi (2016) highlights the definitional issues that exist in the literature regarding how to specify the age groups of younger and older learners or who may be an early or a late learner. How might one handle moderators that can vary from one study to another such as context, i.e. foreign vs. non-foreign second language, or the testing conditions data were elicited in, e.g. timed vs. untimed tasks, or aural vs. written nature of stimuli? The author makes a case for the need to take these variables into account in studying the process of language learning and identifying the factors that impact it and subsequently refine one's models of language acquisition, learning, and teaching.

As this brief review shows, L2 acquisition or learning is a complex process, which is still being studied and debated. Nevertheless, there seems to exist a consensus in the field, widely held among the scholars, that the central aspect guiding the process is the means of learning, which includes input quantity, input quality, learner motivation, opportunity to use, and primary skills. This set of factors can assume particular form or degree depending on the learner's environment, which may be naturalistic or foreign. The situations that result hence ultimately shape the success of the learning process.

2.2 Sociophonetics and L2

Sociophonetics is a field of inquiry in linguistics that combines the approaches of sociolinguistics and phonetics. It shares its approach and subject with areas of linguistics such as the variationist studies, but is considered by some to be different from it in not emphasizing discrete variables and maintaining a primary interest in auditory perceptual analysis (Zimman, 2020), though others have seen instrumental techniques as essential to its analysis and also emphasized the importance of acoustic analysis to sociophonetic

inquiry (Baranowski, 2013). As an emerging field of inquiry in linguistics, sociophonetics is seen as not simply a cross of sociolinguistics and phonetics, but as allied to the fields of phonology, pscyholinguistics, and importantly computational linguistics, a field that explores the role of factors as diverse as communicative-interactional and socio-cultural in influencing phonetic phenomenon (Celata & Calamai, 2014), and is treated in view of its emerging methodology as being occupied with its own descriptive matter and theoretical issues (Kendall & Fridland, 2021).

Laying down the foundations of the field of sociophonetics, Ellis (1967) challenged the dominant view existing until the late 1960s in America that differences in the speech of upper and lower classes of American social strata were subtle and without consequence, based on data collected in primary and secondary research. She argued contrary to the standard understanding of that time that even content-free speech indicated one's social status. Giles and Sassoon (1983) investigated, in the context of formal relationships and associations functioning in Britain, how accent moderated belief similarity and social distance among speakers. They also considered the function of speaker perceptions of the salient features of another individual's accent on one's choice in establishing socioeconomic relations with the former. Labov (1997) studied -- as a part of what are now considered to be foundational studies in sociolinguistics/sociophonetics -- the pronunciation of the 'r' sound of New York English in the 'natural settings' of departmental stores. Based on his findings, Labov argued that the social status of speakers affected the pronunciation of this sound and the variation in it constituted a well-marked pattern of social stratification among the New Yorkers. Importantly, he also found that pronunciation was not always indicative of one's status since speakers could sometimes imitate the speech of the higher classes in order to have a more desirable interaction with others.

From here onwards, I discuss a series of studies on the subject of sociophonetic variation. This survey shows how most of the research in the field of sociophonetics affirms a clear patterning of phonetic and (in many cases also) phonological features along social lines, such as class, age, gender, ethnicity, region, etc.; although we shall see how some studies indicate that the role of social factors in this regard may be insignificant, but there exists overwhelming evidence in support of the fact that

sociophonetic variation is not only real but a prominent feature of human linguistic behavior. The condition of L2, i.e. second language, sociophonetics add interesting but potentially complex new dimensions to the subject, throwing in a mix of variables to the equation of variation; the most frequent research in this regard has been on the European languages, with English taking the lead, followed by Spanish and French. In the sociophonetics of L2, the factors associated with learning and use of language may be multiplied as we have to deal with more than one competence and occasionally even performance at the same time. This can result in a variation, whether controlled or automated, that might need to be studied -- for any given case -- in view of its historical and current circumstance, be it social, or cultural, or even political. Significantly, the research also finds, speakers, even as L2 learners, can maintain -- whether consciously or not -- a degree of meta-linguistic awareness about such variation.

Lee and Schallert (1997) examined how a learner's proficiency in L2 and reading ability of L1 both influenced the reading performance of L2 based on data obtained from Korean school students learning English. The authors tested two hypothesis in their study: (i) that L2 proficiency has a greater effect on L2 reading performance than L1 reading ability; (ii) that there exists a threshold level with regard to language proficiency whereby learners that have minimal proficiency in L2 will show insignificant relationship in their reading abilities in the two languages whereas learners with maximal proficiency will show a meaningful relationship between their reading abilities in L1 and L2. Based on their analyses of the data the authors found that both hypotheses were supported, but materialized in a particular fashion: Language learners first must attain a certain level of knowledge of L2 before their reading ability in L1 could positively impact their reading performance in L2.

Edwards (2008) discussed two areas of research related to acquisition of L2 phonology: (i) the effect that social factors have on L2 phonology and (ii) the variation that results in the production of L2 phonology; among social factors his discussion included the role of gender, extent of use of L1 and L2, social identity, and the variety of the target language; on variation he concentrated on interlocutor accommodation, listener attention to speech, and influence on speech production of linguistic and social factors. According to him, language users are not merely recipients who passively receive the

linguistic input they perceive but "active agents" (Edwards, 2008, p.251), who can acquire meta-lingusitic knowledge of the language they are learning and as a result whose output reflects the target features of acquisition they set out for themselves.

Baertsch (2011) studied the sociophonetics of interdental fricatives of American English in L2 of Arabic, Cantonese, French, Portuguese, and Vietnamese speakers. She elicited data using three different tasks, (i) reciting a poem, (ii) conversing with a fellow speaker of the same native language, (iii) conversing with a native English speaker. In her data she found that the subjects replaced the American English interdental fricatives with sounds of their L1 phonology that they associated with the former based on acoustic and/or phonemic similarity. But significantly, among these replacements, the linguistic output that they generated showed a variability based on the given task, such as when conversing with a fellow speaker who shared their language vs. when conversing with a native speaker of English, hence revealing a sociophonetic variation in their speech, based on factors like in-group vs. out-group identity (among others).

Kaiser (2011) explored the sociophonetics of (American) English of Hmong speakers in Minnesota with an aim of identifying whether it displayed any feature that might lead one to see it as a distinctively American English variety (e.g. Hmong American English) through production and perception experiments. The history of the Hmong community made it a suitable choice for such a research, since members of this ethnic group are comparatively late immigrants to the United States and form a tightly knit community. As a result one expects that their L2 English would show features peculiar to them or at least such patterns of variation non-existent in the English of the non-Hmong speakers, such as through transference from L1.

In the production study the researcher collected data to test whether three sound changes that had been ongoing as a dialectal phenomenon of American English in the larger region, which the locale was a part of, had also affected the speech of Hmong (and for the sake of a comparison) non-Hmong individuals; as non-Hmong individuals, the speech of European Americans provided the ideal contrast since they are the dominant ethnic group in the United States. The three changes were (i) fronting of the vowel /u/, (ii) merger of low back vowels, and (iii) the Northern Cities Shift. The results of this set

of data showed that while the fronting of /u/ was becoming an ever common feature of the speech of European Americans it remained marginal among Hmong English speakers. The other two sound changes were not found (yet) in any of the two groups.

In the perception study for which participants were recruited separately, the researcher used word lists to test the participants' ability as listeners to discriminate various facets of a speaker's social profile, for instance (but not limited to) ethnicity, by rating it on a scale. The results showed that participants primarily used cues identified with formant values or the feature of nasalization and based on certain phonetic features they were able to pinpoint a speaker's social profile, though these were not always the same features as the researcher expected them to take clues from. Although the study did not find support for the hypothesis that the native language of Hmong individuals influenced the Hmong variety of American English, but overall the results showed that Hmong Americans were able to make relatively secure judgments about a speaker's ethnicity using a complex set of phonetic patterns.

Lesho (2013) examined the historical development of the vowel system of Chabacano of Cavite, a creole formed out of Tagalog substrate and Spanish superstrate. She combined the methodological approaches of sociophonetics and historical phonology with those of second language acquisition and dialectology to develop a comprehensive account of how this creole arose and developed with time. Based on linguistic and non-linguistic data obtained in the form of word list and reading tasks on one hand and through interviews and informant accounts of dialectology on the other, she observed that substrate influences on Chabacano were apparent at both phonetic and phonological levels. For instance, Chabacano has a five-vowel system like Spanish, and unlike the three-vowel system of Old Tagalog, but some vocabulary items show the latter kind of system diverging from the Spanish original when they were expected to follow it (reflecting instead the three-vowel pattern). Furthermore, vowels bearing stress and vowels appearing in phrase-final position in Chabacano differed from the rest with respect to their quality and duration following the patterns of the Tagalog substrate. Finally, Lesho also found a prominent role being played by the sociohistorical factors in the development of this creole, based on the evidence of varietal split of the Chabacano creole, involving certain conservative features, which indicated to the researcher that

speakers of one variety were retaining earlier substrate features inherited from Old Tagalog through ideological motivation (while the other group was following an innovative trend for not adhering to such an extra-linguistic force).

Toefy (2014) studied the monophthongal vowel system in the English of non-white South African students in an attempt to understand how the post-apartheid educational reforms (which ended race-based school segregation) of South Africa affected the English spoken by these people, based on data obtained from a total of forty speakers, half of whom were males and the other half females. The participants were further divided on the basis of their social class into middle class and working class individuals. They were all born between the years 1983 and 1993, i.e. a period when South Africa was transitioning from the apartheid years. The data was anlaysed acoustically using Forced Alignment method and the automatic formant extraction method. A comparison of the speech of these forty individuals with that of the reports of scholars from apartheid years showed that only the speech of the middle class individuals was affected and the monophthongal system in use among them had gravitated towards the English of white South Africans, under the influence of white teachers and fellow students at middle class schools. The most prominent change was the lowering of the vowel in TRAP and fronting of the vowel in GOOSE and FOOT. On the other hand the speech of students with working class background had not been affected.

Yudytska (2016) carried out a detailed study of how the Chinese-American actor Jackie Chan's L2 speech evolved over time by comparing his English production in different time periods, in the year 1998 when he had yet to become a successful actor in Hollywood and the year 2007 a point by which he had starred in several Hollywood hits, in order to investigate how an individual's social identity influences the development of his or her L2 phonology over time. To control for such internal effect as the age of acquisition's being a factor that had affected Chan's L2 development, Yudytska also made use of comparative data from an interview that Chan had with a non-native speaker of English: if he had gained an advanced competence that allowed him to assume control over more than one performance register one would expect Chan to use somewhat subconsciously comparatively less non-standard forms or more depending on what his

intent is. This would reveal if he was as a user of L2 able to bypass automated processes of second language acquisition/learning.

Two features of English phonology in Chan's speech were studied, production of word-final singleton stops and word-final clusters with a stop as the final element; research has shown that Chinese speakers often omit the final stop consonant in both the instances or glottalise it with singleton stops in contrast to the native speakers of English who retain the stop in both the cases. Contrasting Chan's speech in the year 1998 as compared to 2007 revealed that whereas he retained the word-final cluster more frequently latterly he also deleted the word-final singleton stop consonant, even though overall his speech (i.e. the other features of his English) had converged more and more towards the standard (American) English.

While these result could be interpreted in more than one way, and will in any case need to account for several factors that would be worth exploring further, the author took them to indicate that Chan's deletion of the singleton stops was a choice in order to highlight his Chinese identity and the character of a foreign martial artist in the Hollywood cinema, for he had already gained widespread acclaim and was not in need of any acceptance from native English speakers. However, when he conversed with non-native speakers of English, i.e. during the interview (alluded to in the foregoing), Chan used more standard English features and retained the final stop. On one hand this indicates that a long-term contact with native English speakers, among peers with whom he had come to associate of long, had indeed earned him mastery over the English language and on the other that Chan was conscious of his social identity and how it would be reflected in his L2 speech.

Lu (2016) discussed the phenomenon of Chinglish, or Chinese English, that has developed in the colleges and universities of China and that has served to cultivate the communicative abilities of the young Chinese-speaking students. However, analysis of the data of this variety shows that it diverges greatly from the English of the native speakers. Following a qualitative methodology in which Lu examined production data and compared with it direct observations as well as data gathered in semi-structured interviews , the author concludes that the phenomenon of Chinglish results from several

linguistic and non-linguistic factors, among which the central ones include the interference of the first language, want of language context in the process of learning, dissimilar modes and patterns of thinking, and differences of culture.

Dalola and Bullock (2017) investigated the phenomenon of phrase-final vowel devoicing in French in L1 and L2 speech, based on data obtained through role-playing and word list tasks. They measured the frequency of vowel devoicing in individual L1 and L2 speakers along with the percentage of vowel these speakers devoiced. The authors found that the extent of vowel devoicing varied greatly: native speakers showed a much enhanced degree of devoicing and use in a pragmatic context, such as for formal effect, while the non-native speakers did not have this mastery and among them the degree of devoicing depended instead on task type.

In another study, Dalola and Bridwell (2020) investigated the next stage of the same process, known as phrase-final fricative epenthesis in which a final interval in the devoiced vowel is either subjected to consonantal constriction or to a misperception whereby it is re-analysed to contain a fricative component. The authors obtained data from both L1 and L2 speakers of French through a reading task which targeted 98 tokens of the sounds under scrutiny (e.g. /u/, /i/, etc.). These tokens were analysed through center of gravity measures drawn at 25%, 50%, and 75% points and then treated with mixed linear regression for statistical analysis. The results of this initial analysis showed that L1 speakers had lower center of gravity values as compared to L2 speakers in low phrase-final fricative epenthesis to vowel ratios at the given marks. These center of gravity values were subsequently divided into six types (based on the profiles they yielded, e.g. flat-low, rising, rising-falling, etc.) and treated with multinomial logistic regression. The results of this later analysis showed that whereas L1 speakers generally employed flat-low types of profile, L2 speakers on the other hand made use of the high articulatory energy types of profiles, e.g. rising, rising-falling. These results indicated that L1 and L2 speakers phonetically realize the process of phrase-final fricative epenthesis differently with L2 speakers resorting in most cases to the articulatory strategy of frication, hence also uncovering an additional cue in the conceptualization of L2 sociophonetics.

Kalev (2018) studied the relationship between L2 English speech production of native Swedish speakers and the role of cultural identification with the target language environment, using Social Network Strength Scale, focusing on the feature of rhoticity, and employing data collected from undergraduate exchange students. The author found that a positive perception of the target culture and identification with it was a significant factor facilitating the process of language learning and in particular speech production.

Kwek (2018) investigated the rhotic, i.e. /r/, variation in Singaporean English using speech data, elicited via reading and conversation, and in process shed light on the challenges of doing research -- in particular studying sociophonetic variation -- in diverse multilingual urban settings as well as the complexities that particular linguistic features assume in such a situation. The small and densely packed urban center of Singapore is multi-ethnic state with Chinese, Malay, Indian, and Eurasian populations representing the predominant groups but English as the working language. As a result, in any social interaction Singaporeans must daily make their way through a multitude of social contexts and environments, whose outcome is a speech marked by effort to conform to a perceived standard but paradoxically including the addition of ever diversified layers of pronunciation of these speakers.

In order to overcome the difficulties the said locale is beset with, the author argued for a more nuanced and multidimensional approach to studying linguistic patterns in multicultural settings. Singaporeans produce a variety of /r/s, owing both to the language-internal and language-external factors and affected further by factors of age, sex, and ethnicity, which were captured and analysed by the researcher using auditory and acoustic methods. To represent this variation in the articulation of /r/ which occurred at multiple levels, Kwek used the fixed-effects models together with the mixed-effects models. A prominent trend noted by the author in the data with its varied sources was the switch from a tap or trill articulation of /r/ to a labiodental one.

Kotsoni (2019) studied the state of the Catalan mid-vowel contrast -- retention vs. potential merger -- in bilingual speakers who maintained proficiency in both Catalan and Spanish with respect to the role of factors such as age, gender, native language, and dominant language. The variety of Catalan spoken in Barcelona possesses a two-way

contrast among mid-vowels of /e/-/ɛ/ and /o/-/ɔ/, in contrast to the Spanish /e/ and /o/ system. The researcher obtained production data through a reading passage in Catalan from seventy-two participants who were divided into two groups, one with dominant command of Catalan and another with dominant command of Spanish; this dominance was assessed through self-report using a standard questionnaire.

Data was analysed acoustically whereby F1 and F2 values of vowels were processed with a normalization procedure. The presence or near-neutralization of contrast was determined through the differences of F1 frequency between the mid-vowels. The results showed that Catalan-dominant speakers maintained a stronger contrast as compared to Spanish-dominant speakers; further, this contrast was more robust among mid-back vowels. Age acted as an interesting factor in that older Catalan-dominant speakers preserved the contrast more distinctly. However, in the speech of younger speakers, who were Spanish-dominant, the contrast featured less well than in that of their older age counterparts. Finally gender also proved to be an instrumental variable because the speech of female Catalan-dominant speakers showed a more prominent mid-vowel contrast than either their male counterparts or their female Spanish-dominant fellows. Curiously, native language did not seem to have any significant effect on the results. The author invoked various historical, social, and political factors to explain these results.

In a survey on acquisition of dialect-specific features Schoonmaker-Gates (2020) reviewed how L2 learner's perception of regional variation shapes the process of L2 acquisition and shows itself in the linguistic production of the L2 learner, by adopting a multi-faceted treatment involving phonology, phonetics, and sociolinguistics. Using such a broad methodology, the author attempted to overcome the limitations of approaches grounded solely in perception or in production, which cannot provide a comprehensive account of the process of L2 acquisition/learning. Considering a variety of literature on L2 Spanish acquisition, the L2 learner's perception of dialectal features, and the influence of these features on the speech of the learners, the author found a complex interaction of a variety of factors (including identity and the webwork of social relationships), and aspects (such as exposure, linguistic features, social circumstance, etc.) tied to language learning, as elements that intrinsically affect the process of L2 acquisition, whose role the author argued existing models had failed to fully appreciate. The author ends by making a

case for a revised model of L2 acquisition/learning that takes into account the nuances of individual, linguistic, and social factors and the role they play in the acceptance or rejection of regional variation.

Chappell and Kanwit (2022) studied the ability of second language learners to identify sociophonetic aspects of variation in L2. Drawing data from participants who were L2 learners of Spanish the authors explored whether they could connect the phonetic variation in the articulation of /s/ in Spanish, which can be realized as the alveolar fricative [s] or in a debuccalised form [h] to geographic or social facets of variation; the latter pronunciation, which is innovative, is tied to certain Spanish speaking regions. It was found that advanced L2 learners of Spanish linked the latter form with speakers who hailed from certain areas or had a particular history of staying abroad. To explain this adaptability in learner knowledge of L2, who had originally been taught different feature(s) in instructional input, Chappell and Kanwit proposed unifying the L2 Linguistic Perception Model and the exemplar-based models of phonology.

2.2.1 The Factor of Socioeconomic Status

Specifically on the topic of the variation grounded in socioeconomic factors, we have Kahn-Horwitz et al.'s (2006) study which demonstrated how a learner's socioeconomic status acted as a determinant in the process of L2 learning, which could positively influence the process, based on reading data obtained from fourth graders. They also found that the knowledge of the target language played a much stronger role rather than the native language of the learners, with the latter having a minimal overall effect on the activity. The results of this study agreed with those of Arikan (2011) which also showed a strong influence of social class on the foreign language learning process based on data obtained from prospective English language teachers. In addition to the social class the perception of the target culture, which had a direct bearing on the attitude of the learner towards target language, also affected the process of learning, with a positive perception facilitating faster learning whereas the lack of such a perception often being a factor in the poor performance of learners but often remaining unidentified.

2.2.2 The Factor of Gender

It is a curious and also an unfortunate fact that the factor of gender has not attracted as much attention in sociophonetic research as some of the others. One study that reports on it is by Oladipupo and Akinjobi (2015) who examined the variability in the use of r-liaison and the process of boundary consonant deletion using speech data obtained from young Nigerian speakers of English, with a view to confirming that such variation existed. However, based on data collected from a large number of speakers they found only a marginal correlation of r-liaison with a speaker's gender, and no significant correlation of either the process of r-liaison or boundary consonant deletion with a speaker's gender or indeed even their social status. This show us how not all studies on sociophonetic variation definitively find a patterning of linguistic features along social factors. In some social or cultural settings, no such variation in language use may arise and this is hence reported about as such.

2.3 Sociophonetic Methodology

The aforementioned studies broadly made use of the methodology summarized by Foulkes et al. (2010), that is making use of a representative corpus (or generating one if none existed), to analyse the linguistic features under question and to investigate how they pattern with respect to a speaker's social background. That said, any framework is flexible and tends to be devised along the aims applicable to a given research. In view of this, the present study has awarded particular consideration to the questionnaire being employed (i.e. annexure I) and the nature of the data source (see annexure II).

With regards to the results of these studies although a major proportion of the existing research shows significant sociophonetic variation, we must be mindful of the fact that we do have at least one study whose authors admit to not to finding any meaningful patterns of sociophonetic variation. Furthermore, we should not lose sight of the fact that our claims depend not only on what is considered significant but also the factors with reference to which the variation is being pursued and the features themselves which are being examined. Nevertheless, there is something that underlies all the foregoing studies and is borne out by them as an undisputed fact, that variation *exists*.

2.4 Research in Pashto

A considerable amount of scholarly work, including linguistic, has assembled on Pashto by this point, generally in the field of Iranology, that is work undertaken by scholars with the concerns of Iranian studies and the status of Pashto as a language of the Iranian family. In the following, I try to build an account of the history of research on Pashto, as often in the chronological order as possible, based on the literature available to me. The first specimens of Pashto were recorded by the Europeans probably in the mid-18th century when the earliest samples of the language made it to print (Hanway, 1753), whereas oldest extant native literature in the language may be dated to the 16th century, surviving though as excerpts in later works (Andreyev, 2010). Among the earliest material of noteworthy size collected in the western scholarly circles, we have the documentation in Klaproth's (1810: 76-100) *Ueber den ursprung der Aghuanen* and in Elphinstone's (1815) account of the Durrani kingdom of Kabul, in which he gives words, phrases, and short sentences in the language. A translation in the New Testament appeared soon afterwards, in the effort of the Serampore Missionaries (1818), which was the first major undertaking on the language in the western literary and/or academic circles, producing substantial literature on the language, albeit one whose quality was wanting.

Among early attempts to study the language in some detail, the first was made -- as in the case of most other oriental languages of the British Indian frontier -- by Leech (1839), who compiled essential grammatical notes of some value. He was followed immediately by Dorn (1840) who composed a very brief sketch of Pashto grammar. From here onwards, literature on Pashto began to steadily increase. A larger work, with much more material, was produced in the form of Dorn's (1847) chrestomathy, attesting to the importance of the Pashtun people to the Europeans and the aims of the Europeans in the region. As curiosity in the people and their origins furthered and material on the language continued to be gathered, Raverty (1854) made an effort to evaluate the language's relation to Avestan, Middle Persian, and Hebrew (the latter due to a popular, but incorrect, belief of the origins of Pashtuns among tribes of Israel). He continued to collect Pashto literature and to publish its editions in English (Raverty, 1860, 1862). The

question of the linguistic affiliation of Pashtuns was pursued again by Müller (1862) who put forth his thesis on an Iranian origin of the Pashto language, i.e. of the same descent as Persian, but belonging to an eastern sub-group as opposed to Persian's coming in the western sub-group.

Further on a grammar of Pashto was published by Vaughan (1864), which also contained a reasonably sized vocabulary. Three years later Bellew (1867a) composed a grammar, based on the spoken language, in a textbook format, containing exercises and conversational drills. In the same year he also published a dictionary of Pashto, in which he tagged foreign words he could recognize to have Indic or Persian provenance (Bellew, 1867b). The same year also saw the publication of Raverty's (1867) Pashto grammar, whose distinctive character was its being (at least to some extent) corpus-based. It contained in addition, like many other works of that period on the subject of grammar, historical and ethnographic observations. This would constitute one of the most important works on Pashto studies of its time. Another textbook was published some years after by Hughes (1872) which consisted of a significant amount of textual material, both in Pashto prose and poetry. During these years, the authors producing material on Pashto tended to be pre-occupied with creating textbook and/or language learning resource(s), even if there also existed side by side an independent interest in the literature of the Pashtuns and their and their language's history.

In 1873 came out Trumpp's (1873) monumental grammar of Pashto which was the most detailed examination of the language yet, containing substantial material and copious references, including on the neighbouring languages (albeit with misplaced emphasis sometimes on select languages towards Pashto's east). In this work, Trumpp also made the case that Pashto was related to the Indic family of languages, but among them it was somewhat of a remnant of their older stages and to a degree even independent of most of the modern Indic languages. He argued for an especial connection between it and the Sindhi language as well as the Middle Indic Prakrits, but at the same time also saw Pashto as marking a transition to the Iranian family. The complexity of Pashto morphology appeared to be a marvel to these scholars.

Learning material on Pashto was still in want and turned up, off and on, such as the multilingual conversation manual by Plunkett (1875), which included English, Hindustani, and Persian, alongside Pashto, or the manual by Raverty (1880), which contained sizeable practice materials in the form of exercises, dialogues, routine phrases, proverbs, common vocabulary, etc. Some years later Darmesteter (1887) published the report of his survey of the languages of (British) India and its neighbouring regions and as a part of the historical interests in these languages he adopted Trumpp's position on Pashto's being related to the Indic languages. However, in a subsequent work which involved a more detailed and careful inquiry of the language and its literature, Darmesteter (1890) changed his position in favour of Iranian affiliation.

From this period onwards work on Pashto started to take on a more scientific, i.e. linguistic, outlook as the discipline of linguistics was transitioning from its philological and/or comparative-historical linguistics origins and developing into the general linguistics, especially descriptive, stream. However, interest in Pashto would still be driven by historical inquiries, chiefly a curiosity of the position of Pashto among Iranian languages (as had been the case in some of the preceding years). As a pool of resources on Pashto amassed over the century, time was ripe for Geiger's (1893a, 1893b, 1898) scientific investigations and a deeper examination of the history of the language, which established the etymology of a sizeable Pashto vocabulary, including its relation with Avestan, Persian, etc., and also uncovered the historical development of its 'sound system'.

The aim to collate fresh material on the language persisted still, as seen for instance in Murray's (1899) dictionary, or that to undertake description of divergent dialects, as carried out by Lorimer (1902) on the speech of *Wazir*s. A substantial part of this documentary effort on Pashto owed to the efforts of military officers. A final change in the history of the research on Pashto to linguistic inquiry -- as in the modern sense -- was marked by Grierson's (1921) survey of Pashto, i.e. varieties spoken in the territory under the control of British Indian administration, as a part of the *Linguistic Survey of India* (Grierson 1903-1922). It provided a description, albeit brief, of the language, by surveying nearly a dozen varieties of its north-eastern and south-eastern dialects,

furnishing some lexica, in addition to giving a brief introduction to the people, their history, and an outline of the literature available on their language.

Throughout the early, in particular 19th century works, the name of the language vacillated between "Pashto" and "Afghani" or both the terms were used, just as the ethnonym turned up as "Pashtun" or "Afghan". Eventually, it started to be recognized and also widely accepted that 'Afghan' was not the native ethnonym of the people, but an exonym given to them or used for them by their Persian-speaking neighbours, while the local ethnonym was 'Pashtun' and the term for the language 'Pashto'. Historical linguistics and in particular etymological work on Pashto saw a significant advance in the efforts of Morgenstierne (1927), the most important Iranologist and also the foremost scholar of the Indo-Iranian frontier languages (Morgenstierne, 1929, 1938), who brought forth material on many less well-known and since then extinct local languages too (Morgenstierne, 1932). His studies affirmed the particularly close relation of Pashto with the languages scholars would classify as the Eastern sub-group of the Iranian family, which then mostly included the languages of the Pamir region, and also the historical proximity of these with the Old Iranian language Avestan in comparison with Old Persian.[1] As a result of these more detailed scrutinies of the language, Morgenstierne (1940) also firmly established (for the first time in the history of Pashto studies) the etymology of 'Pashto' *pašto* < **parsawa* and 'Pashtun' *paštūn* < **parswāna* based on the historical development of r+sibilant cluster in the history of Pashto, demonstrating how the root of both had the same origins as of *fārsī* < *pārsī(g)* 'Persian' < *parsa* < **parsu*.

From the post-war period we have yet again a grammar of Pashto by Penzl (1955) which described the south-western dialect, i.e. Kandahari, of the language. This variety of Pashto had been known to the scholars to be a prestige dialect but up until that point it had remained understudied, mostly for not falling in the territory of the British Indian administration. As the picture of dialects of Pashto and their diversity became clearer and fuller, their relative position vis-à-vis each other and their comparative position with respect to the historical language became even better recognized and eventually MacKenzie (1959) submitted the idea of a "standard Pashto", a topic or issue that would

[1] See Edelman and Dodykhudoeva (2009, p.773-786) on the "Pamir languages" and Skjaervo (2009, p.43-195) on "Old Iranian".

naturally concern scholars of a language as large and with as rich varieties as Pashto; however, such proposals did not lead to any native efforts for an ultimate standardization of the language or for a better understanding of how the "standard Pashto" would be defined. Another topic on Pashto that concerned linguists was stress, which owed to the conservatism of this feature in Pashto as compared to its sister Iranian languages, and to this feature Bečka (1969) devoted an entire work. Morgenstierne (1973) also addressed this question, with regard to its antiquity and/or the speculation whether Pashto stress retained relics of Indo-European accentuation.

The decades of 1980s and 1990s witnessed devastation across nearly half of the Pashtun homeland and some of its neighbouring areas, in course of proxy conflicts initiated by the forces of imperialism, as a result of which the Pashtun population suffered massively; existing social structures broke down and local populace was uprooted in large numbers. The ensuing situation, in which the central system collapsed and an array of militant groups -- often of unpredictable character -- took over, led to a renewed need in accessing the region and connecting with the local actors. Partly in conjunction with these events and for the said reason, a series of manuals for learning Pashto was produced by Tegey and Robson (1990, 1991, 1992, 1993). The authors also contributed a reference grammar of the language (Tegey & Robson, 1996). Another notable work produced during this time was the sociolinguistic survey encompassing Pashto, its duo Waneci, and the related Iranian language Ormuri (Hallberg, 1992). It gathered data mostly in the form of word lists and secondarily as short texts, covering many more Pashto speaking locales than any other preceding study (including Grierson's *Linguistic Survey of India*).

Of the later works on Pashto, there is the introductory treatment of its grammar by Robson and Tegey (2009), in a volume on the Iranian language family, which can serve as a quick referencing source on most aspects of Pashto grammar, including in addition to phonology, its complex morphology as well as syntax; a brief outline of its grammar was also supplied by Mackenzie (1987) and it is still useful for an overview of the structure of the language. Pashto stress is a topic laden with issues which still occupy the scholarship from time to time and for whose better understanding attempts continue to be made (Cheung, 2010). Historical linguistics of Pashto is an area where much remains to be

uncovered and one that scholars continue to explore in order to better understand the history of Pashto and its sister Iranian languages (Cheung, 2011).

Among the more recent contributions to the study of Pashto, David's (2014) *Descriptive Grammar of Pashto and its Dialects* is a stand out. In approaching the Pashto language area, encompassing territories inhabited by Pashtuns in both Pakistan and Afghanistan, it uses a five-way dialectal distinction; the author admits though that this does not fully capture the variation of the linguistic phenomena found in Pashto, probably not even the known ones. The author provides a detailed analysis of the material from these five dialects as well as a wealth of corpus examples in her investigation of the grammar. This work can be seen as relevant to the current study for it makes numerous observations on Pashto phonology.

Specifically on the topic of phonology, there is Josef Elfenbein's (1997) chapter which offers a very concise presentation of the most central features of the phonology of the language and one that is yet to be matched. The author approaches the topic by dividing the language into four dialects, apparently building on McKenzie (1959). However, Elfenbein agrees that this classification does not suffice and that any investigation of the Pashto language needs to appreciate both the regional as well as the tribal basis of the variation that are basic to the language. Because Elfenbein's study is only an introductory chapter he does not explore the details of the varieties that are identified by him, but generally provides the major glosses (which are in any case highly illustrative) these are identified by. Another work related to the phonology of Pashto is the undated O'Conner (n.d.). It provides a basic sketch of the system of an unspecified dialect and does not seem to add anything new to the topic, when compared in terms of usefulness of the information it contains with the previous one.

Existing literature that can in near future set down the basis for the study of the phenomenon of Pashto English covers the topic of English consonants whose acquisition Pashtun speakers find challenging (Rehman et al., 2012) and a comparative study of the consonant sounds of Pashto and English (Iqbal & Rahman, 2016). According to Iqbal and Rahman (2016), a major difference between the consonant systems of Pashto and English is the lack of labial, /f/ /v/, and dental fricatives, /θ/ /ð/, in the Pashto language. Rehman

et al. (2012) enumerate five English consonants which occur as "problematic" for Pashtun speakers. Within these, they identify dental fricatives as the most challenging sounds of all. Finally, reference may also be made to Habib and Saeed (2016) who carried out an acoustic investigation of the plosive sounds in Pashto. Among their findings is the existence of weak aspiration in the articulation of the voiceless stops and affricate, as seen in the positive Voice Onset Time of the fortis series in the spectrogram (a feature known to scholars already though).

The foregoing survey, in which the researcher hopes to have undertaken an exhaustive review of literature on Pashto, shows that there has been no study of the vowel sounds in L2 English of native Pashtun speaker, let alone systematic description of the phonology of Pashto English; hence, a sociophonetic investigation on any aspect of Pashto English is in order. Talking about the L2 varieties of English, it is notable that among the studies reviewed here none has focused specifically on the monophthong vowel sounds of L2 English and variation in their articulation among non-native speakers or L2 learners. In this vein, the present study hopes to be a stepping stone in the study of Pashto English and to augment our knowledge of the L2 varieties of English.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter deals with the methodology of the current research. The present is a survey research, which aimed to inquire into and describe an area that had not received any attention before, namely the monophthong vowel sounds in the L2 of native Pashtun speakers, the variation (if any) in the pronunciation of the English of young Pashtun speakers, and the potential role of the socioeconomic status of an individual speaker and his or her gender in influencing that variation. The design of the study was strictly exploratory, modulated to explore sociophonetic variation in the monophthong sounds, based on production data obtained in the form of audio recordings of standard reading passages, and compare in this data the patterning of the features of the given sounds by the factors of socioeconomic status and gender.

3.1 Research Method and Design

Labov (1997) has discussed a number of methodological difficulties that lie in undertaking sociolinguistic research. An important one among these, especially relevant to the present research, is that the means by which a researcher collects data can come to interfere with the data he or she seeks to collect. For instance, during an interview or while providing data in the form of recording for a research, a participant is likely to act and talk formally and/or less naturally than he or she normally would. As a result of such issues affecting the quality of data, Labov preferred non-participant observations as a means to data collection. However, such an approach was not possible for the present purpose, primarily due to the social constraints of gender that govern the behaviour of individuals, and which highly restricted what the current researcher could observe in a natural setting. Specifically for the aim of collecting linguistic data, this study instead made use of standard reading passages (see §**3.2**). It employed quantitative methods whereby information about the participant background, in particular that related to their socioeconomic status as well as their prior experience with using English, together with the L2 production data was collected in the form of quantifiable data.

3.1.1 Theoretical Framework

The thereotical framework of sociophonetic inquiry have been treated at large in chapter 1 as well as chapter 2, on which §**1.3** and §**2.3** (respectively) may be consulted.

3.1.2 Analysis Procedure

The methodology of this research can be divided into two parts: (i) linguistic field methods which involved finding participants who were native speakers of Pashto and obtaining data from them; (ii) analyzing the data to highlight the comparisons of the phonetic features under consideration as well as their correlation with the speakers' socioeconomic status and gender. The researcher started by enlisting the relevant participants. From these participants data was then obtained using the tools defined below (see §**3.2.1**). In performing data analysis the researcher made use of her training in articulatory and auditory phonetics. Data was analysed to uncover the similarities with and the divergences from British English in both phonetic and phonological terms. The researcher then examined the data to identify the role of the socioeconomic status of the speakers, rationalized in §**3.3**, and their gender on the given features of the respective participant's production data. In the following, whenever the researcher uses concepts like phoneme or allophone or phone, these are employed from the viewpoint of descriptivist grammar, phoneme as a contrasting sound unit, allophone as a variant of a particular sound, and phone as a sound unit defined by its properties rather than by its status in a phonological system or by any relation to a sound of a phonological system.

3.1.3 Inter-rater Reliability

In order to ensure inter-rater reliability, the researcher independently sought assistance of an expert of phonetics and phonology while the supervisor also verified the phonetic data provided by the participants. In this way, if the analysis performed by the researcher were to fall short at any point and potentially lead to erroneous findings, the said expert and the supervisor's analysis would serve as an important oversight. Admittedly, an agreement in the analysis of the three scholars does not fully secure its reliability, even if it might make it steadfast. But this circumstance is common in science and a fact of life of research, for the scientific method demands repeated testing to confirm or reject a hypothesis or indeed to improve upon it. Partly for the concern of the

established procedure of science, and relatedly the concern of inter-rater reliability, the researcher has also decided to make the data freely available to any subsequent researcher who might wish to replicate this study.

3.2 Data Collection

Data of two kinds were drawn from the participants, which were collected by the researcher herself. The means and rationale of research tools are given in §**3.2.1**.

3.2.1 Tools

Data were collected using a questionnaire and short passages. These are discussed in the following.

3.2.1.1 Questionnaire

The participants filled out a questionnaire, which consisted mostly of socio-demographic information, such as that related to the educational background of the participant, the profession(s) and combined income of the parents, and the length of period for which they had been using the English language (see annexure I).

3.2.1.2 Standardized Texts/Passages

Oral data was collected in the form of audio recordings by instructing the participants to narrate ‘The North Wind and the Sun’, ‘The Boy who cried Wolf’, and ‘The Tiger and the Mouse’ (see annexure II). These are short passages and consist of one hundred and thirteen, two hundred and sixteen, and two hundred and sixty four words respectively, which are commonly used to teach English pronunciation as well as to study both native and non-native English phonologies. These reading passages contain all the phonemes of the English language, but with varying frequency to the occurrence of each sound, which obviously has to do with the different frequencies of these sounds (and to a degree even serves to reflect these frequencies).

The researcher considered it probable that obtaining production data through semi-structured interviews would alter the speech of the participants due to interviewer bias and in such a case the output could have turned out to be different than the way the participants would ordinarily speak English. Another potential issue with data obtained

through semi-structured interviews would be the danger of certain target sounds not being captured or if they were registered they might have yielded such varying number of tokens across individual participants' data, which might not have been desirable for a quantitative approach and cross-speaker comparisons. Data obtained through reading passages, on the other hand, were based on a standard that yielded equal number of tokens for all the participants and hence allowed for ready comparisons. These were also more representative of the production targets the Pashtun speakers in question generally maintain due to the participants' making the recording at their convenience, including in the absence of interviewer, which strongly reduced the risk of interviewer bias in the task.

3.2.2 Selection of Sounds

Linguistic data, to be analysed for this research, was delimited to production data that yielded in the pronunciation of English monophthongs, which are described in British English -- the Received Pronunciation to be exact -- as close front tense vowel /i/, close front lax vowel /ɪ/, mid front vowel /ɛ/,[2] open front vowel /æ/, mid central vowel /ə/, mid central tense vowel /ɜ/, open central vowel /ʌ/, close back rounded lax vowel /ʊ/, close back rounded tense vowel /u/, mid back rounded vowel /o/,[3] open back rounded vowel /ɒ/, open back unrounded tense vowel /ɑ/.

The rationale for this selection derives primarily from the differences between the vowel system of English and Pashto (on which see §**4.1** below). Of this set of twelve sounds, it had been an observation of this researcher (which was formed well before the current study started), /ɛ/, /æ/, /ɜ/, /ʌ/, and /ɒ/ showed the most prominent variation in *Pashto English*, since most of these sounds are absent from Pashto phonology, whose vowels include close front vowel /i/, mid front vowel /e/, mid central vowel /ə/, mid open vowel /ɑ/ (alternatively also given as /a/), open back vowel /ɑ̂/ (alternatively given as /ā/), mid back rounded vowel /o/, close back rounded vowel /u/. Hence, the researcher aimed

[2] The mid front vowel of English is transcribed as /e/. Here and henceforth I render it instead as [ɛ] in order to distinguish it from Pashto (or Iranian) /e/, since this /e/ and the English mid front vowel have different qualities and the English one more closely approaches the IPA [ɛ]. Please note that this is only a matter of notation and does not affect the data analysis (refer to chapter **4**) in any way although it is connected to the explanation of the patterns found in the data/recordings (see §**4.2**).

[3] The mid back rounded vowel of English is transcribed as /ɔ/. Here and henceforth I render it instead as [o] since in terms of quality it approaches the Pashto (or Iranian) /o/ very closely. Again, as elucidated in the previous footnote, this is simply a matter of representation and has no bearing on the analysis.

to study if social stratification influenced the way in which these sounds occurred or patterened in the speech of the Pashtun speakers of English, i.e. variation which characterized these sounds.

The choice of monophthong sounds was also motivated by a pilot study (see §**3.5**), conducted by the researcher before collecting data for this research, for it too marked out the said five vowels as being given particularly to cross-speaker variability.

3.2.3 Note on Transcription

In this study the phonetic notation of the International Phonetic Alphabet (International Phonetic Association, 1999) has been employed to transcribe the data obtained in the form of recordings from the participants. For the purpose of phonemic transcription of any Pashto data, the transcription notation current in Iranian Studies has been used, e.g. as used in Windfuhr (2009). Other sources on which Pashto or English data have been based are also cited when these are employed (see, for instance, §**4.1**).

3.3 Site and Population

The data collected in this research is representative of Karak city of Khyber-Pakhtunkhwa province of Pakistan and its environs, an area which is also the hometown of the present researcher. Karak is a small but densely packed district, which is generally rural in terms of the social outlook of its occupants and from a topographic view mostly hilly, only a small percentage of it containing plains. The speech of this region is mostly characteristic of the Pashto speech of Khatak tribesmen. On the scale of social development, it ranks below a city like Peshawar, and is rather conservative.

Participants for this study were enlisted from (as mentioned) two of the institutes in Karak district where a BS English program is taught. All the participants were undergraduate students, but they constituted a random sample. The researcher made absolutely no attempt to pick out individuals for recruitment. Nothing could be said before the start of data collection about the socioeconomic status of the participants from whom data would be obtained. But the researcher intended to define it from the outset by the combined income of the parents, no matter the source of this income, but not by the profession of the parents, e.g. doctor, trader, businessman, landlord, etc. Although the

type of profession might be ordinarily considered to influence the concept of social class, but in this part of the world it is the income that adds more weight to the status and whose scale reflects it as if automatically. Furthermore, the researcher decided to treat income as a continuous variable rather a discrete one whose distributions were liable or amenable to being interpreted in the form of class divisions. The justification for it was that profession in a setting like Karak's is only infrequently reflective of a family's income and the advantage that no arbitrary criteria establishing the threshold of classes was needed.

As stated in chapter **1** the socio-cultural configuration of the Pashtun setting represents a singular case which added (in the process of devising research methodology) further complexities to the definition of social stratification: there are no large urban centers and especially no metropolis uniquely Pashtun while most of the population of the predominantly Pashtun towns of Khyber-Pakhtunkhwa is divided into quarters shared by sub-tribes or the septs of a tribe. Furthermore, one's social class seldom indicates their urbaneness or taste for refinements or a higher culture (as might be the case in Western contexts); for instance, many wealthy Pashtun families that have been engaged in business and trade for generations eschew modern education and Western learning whereby they have little or no contact with the English language, just as commonly as many a poor Pashtun family moves to towns in search of education and to improve their station in life but one which might not necessarily be granted to them through education and academic position. Add to it the factor of constant mobility that a lot of the Pashtun population in particular the young individuals are subject to, especially as students. The given situation introduces several more variables to the concept of social class or status, which it might otherwise not have been possible to satisfactorily check.[4]

This multiplicity of factors was, this researcher believes, at least partly addressed by the emphasis on the concept of socioeconomic status in this research. This, to re-iterate, the researcher decided to determine in a straightforward manner, based on the combined income of the parents of a participant. The greater the income of the parents,

[4] In part to address this complexity surrounding the issue of social class or status in the Pashtun society, the researcher found it worthwhile to obtain as much of the background information via questionnaire (see annexure I) from the participants as possible, including about their family members, even if this additional information was not incorporated into the final analysis.

the higher the socioeconomic status. While this was not without its drawback of oversimplification, it occurred as the only viable and pragmatic solution.

3.4 Sample

Non-probability purposive sampling technique was used whereby a total of fifty two participants were recruited from among undergraduate Pashtun students pursuing a degree in higher education in BS English: language, linguistics or literature from Khushal Khan University Karak and Post-graduate College Karak, twenty six participants from each institute.

3.2.1 Rationale for Non-probability Purposive Sampling Technique

Non-probability sampling refers to the fact that all the participants were students of English programme. In this way, a homogeneity of sample was ensured, in so far as the academic history of the participants was concerned in order to ensure that it did not become an undue advantage for some participants or a drawback for others (such as if the participants had come from dissimilar academic disciplines) and also because each participant would be expected to have a similar higher education pursuits and aspirations, i.e. to study English. Purposive sampling refers to the fact that half of the participants were males and the other half females. This was to secure a balanced representation of both the genders, including with equal representation of each of these groups from either of the institute. There was no alternative of choice because gender was one of the variables of this study. No attempt was made by the researcher to try to acquaint with these participants before requesting them to participate in the research. From among the said fifty two participants, data provided by forty four could be included in analysis.[5]

3.2.2 Representative Population

While the population of speakers of Pashto is estimated to be in excess of fifty million people, there are no census on the number of Pashtun speakers who communicate in or commonly employ English. Therefore, the number of the young Pashtun speakers of

[5] Of these eight participants, data provided by three contained incomplete recordings. In order to have equal representation of gender and also to balance the number of participants from the two institutes, the data of the other five recruits were excluded based on the chronological order -- that is these five were the recruits who came at the tail end of data suppliers. In this way, the number of participants of this research came together at forty four.

English is not possible to estimate. The focus of this research, that is its representative population, was only the young Pashtun speakers of English. It had been an opinion of this researcher, formed well before this research was begun, that Pashtun speakers of this age group were among the most active users of the English language. Any study on the English of Pashtun speakers would treat this group as ideally representative.

3.5 Pilot Study

A pilot study performed with six subjects, with equal representation of gender, and following the current method and design, i.e. using the given background questionnaire (annexure I) and the said reading passages (annexure II), indicated points of significant variation in monophthongal data as well as larger similarities in the English of young Pashtun speakers; for exploring variation, it was naturally the monophthongal data and the differences that we would be interested in (with similarities coming second in importance). Setting forth the variation in the pronunciation of the said vowel sounds was the central role that the pilot study played for the eventual undertaking of the dissertation reserach, in addition of course to allowing the researcher to optimize the design of the research. In sum, the researcher's choice of these sounds, i.e. English monophothongs, investigated in this research was motivated by the pilot study.

3.5.1 Rationale for the Pilot Study

A pilot study is intimately related to each of the four plus components of the research methodology. At a practical level: research design, data elicitation procedure, method of collection, etc. At theoretical level: scope of the research, data analysis, fitting the research (findings) with known literature. The present study was no exception and the pilot study helped to evaluate its methodology and theoretical matter.

3.5.2 Outcomes of the Pilot Study

Of the twelve phonemes investigated in this study, the pilot study revealed the mid front vowel /ɛ/, open front vowel /æ/, mid central tense vowel /ɜ/, open central vowel /ʌ/, mid back rounded vowel /o/, and open back rounded vowel /ɒ/ to be the sounds that present significant points of variation in Pashto English and which from a viewpoint of acquisition also occur as the sounds problematic for Pashtun speakers of English.

Surprisingly, the results of the pilot study also revealed that the socioeconomic status had only a marginal influence on this variation -- this was contrary to the researcher's prior expectations since elsewhere she had observed Pashtun speakers belonging to higher social class to maintain a higher level of competence in English. Likewise the factor of gender did not appear to influence the variation. However, since these results were drawn from a very small sample further inquiry was warranted and the outcome of this more detailed inquiry is presented in data analysis (see chapter **4** and **5** below). Finally, the pilot study showed the research tools and design to be adequate for the aims of the research and pointed towards WhatsApp as the preferred channel for data collection.

3.6 Research Ethics

Disclosure of the aims of the research was made, by the researcher, to the participants right at the beginning. The participants were also informed in advance that they would not gain material benefit by participating in this research.

Oral consent was obtained from each participant before requesting them to narrate it for recording. Any information given by the participants while filling in the questionnaire, including that related to their identities, was and has been kept strictly confidential to all intents and purposes. Hence, the data provided by each participant was assigned a code before its analysis was begun (as will also be noticed in the data presented and discussed in chapter **4**).

With respect to the data, it was ensured by the researcher that the reading passages did not contain any socially or culturally sensitive topic.

Due to the circumstances of the Covid-19 pandemic which required social distancing, standard operating procedures were followed. The participants were sought for meeting at their own ease and venue(s) were decided to take in their convenience and safety. For those participants who wished to record themselves distantly, the researcher allowed the option to do so and they sent the recordings to the researcher afterwards through WhatsApp.

CHAPTER 4

DATA ANALYSIS

This chapter presents the data and its analysis, which shall for the most part be quantitative in nature. Target words found in the production data of the participants, i.e. words containing the phonemes /i/, /ɪ/, /ɛ/, /æ/, /ə/, /ɜ/, /ʌ/, /ʊ/, /u/, /o/, /ɑ/, /ɒ/ of British English (or Received Pronunciation) and of monosyllabic structure,[6] were transcribed phonetically after auditory analysis by the reseacher.[7] Subsequently, the researcher identified patterns in the similarity as well as the divergence in the features of the given sounds. The divergence in the speech of the participants has been analysed on two levels, phonological and phonetic. Phonological differences are reflected in a lack of occurrence of -- or alternatively inability of a participant to maintain -- a distinction among any of all the twelve given English monophthongs, while phonetic differences are observed in the varying realizations of a given vowel across the Pashtun speakers in comparison to its quality, analysed in terms of position and height, in English.

4.1 Vowel Systems of Pashto and British English

In order to understand the divergence between British English and the L2 English of Pashtun speakers, the first and a useful point of comparison is provided by the vowel systems of the two languages. These are adapted from Roach (2002) and Heston (1992) in Figure 1 below (English left and Pashto right). As can be seen in the two vowel quadrilateral diagrams, British English has twelve monophthongs whereas in comparison Pashto has seven vowels. Not only is Pashto short of the distinction of length, as found in

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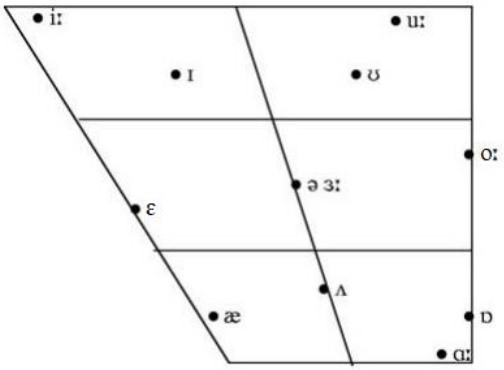
[6] Only monosyllabic words were included in the analysis, since the articulation of a vowel in such words was less likely to be influenced by suprasegmental phenomenon or being subject to hyper or hypo-articulation and hence less liable to wander away from the citation form of the participants.
Polysyllabic words were also expected to affect the math in the course of quantification, since they would in most cases have to be counted more than once.

[7] In so far as the method of analysis is concerned, the researcher is of the view that auditory analysis is relevant to and appropriate for the present purpose. First and foremost, the current study is a pioneering one on Pashto English, on which there exists no prior work, especially descriptive. As a first step in the study of Pashto English we want to understand its sound system and the variation in it with respect to the said factors. Secondly, it is well known that in terms of their physical properties speech sounds vary with each articulation, potentially infinitely. It is not an aim of this research to delve into the physical properties of each of these variants from such parameters as intensity, amplitude, or frequency, etc.

the English peripheral vowels /i/ and /u/, or even of the central vowel /ɜ/ or the back rounded vowel /o/, it is also different from that of English in lacking the mid front vowel /ɛ/, open front vowel /æ/, or open back rounded vowel /ɒ/.[8]



	Front	Central	Back
High	i		u
Mid	e	ə	o
Low	a		ā

Figure 1: Vowel systems of British English and Pashto[9]

These vowels, excluding the distinction of length, constitute the essentials of the phonological differences between the vowel systems of British English and Pashto English and also points from which significant phonetic variation ensues.

4.2 Phonological and Phonetic Variation in the Output

In this section, I lay out the outcomes of the production data, which I give in the form of a tabular tally of the number of tokens of each vowel that provide the 'native-like' match for the given vowel of British English. These tallies are given below in Tables 1-4 respectively, in which the top row shows the total number of tokens that contained a vowel under question: the data as given in the these tables has been divided on the bases of the gender of a participant and the institute the participant was studying at. As these tables suggest, the vowels /ɪ/, /i/, /ə/, /ʊ/, /u/, and /ɑ/ were most consistently articulated by the participants to the extent that all speakers had a minimum number of similar or "correct" tokens which would as a percentage be 91.43 for /ɪ/, 92.86 for /i/, 92.94 for /ə/, 80 for /ʊ/, 100 for /u/, and /ɑ/ for 83.33.

[8] The open central vowel /ʌ/ of British English seems, albeit infrequently, to accommodate in Pashto English via the influence of the low vowel /a/ of Pashto as given in Figure 1.

[9] The mid front vowel of English is given in Roach (2002) as /e/, although I replace that with 'ɛ'. As stated in fn. 2, in comparison to Pashto /e/ this mid front vowel of English corresponds more to the IPA [ɛ] in quality. And as stated in fn. 3, I replace /ɔ/ with /o/ owing to its proximity with the Pashto /o/.

On the other hand, the vowels /ɛ/, /æ/, and /ɒ/ were found the most problematic by the speakers of Pashto English and on several instances one or more of these are completely absent from the langue of speakers, including among all four sets, that is speakers of either gender or from either institute; within these three, /æ/ appears to be the hardest to come by. For instance, the vowel /æ/ is completely absent from the speech of four male participants of institute X and three female participants of institute X and in comparison at institute Y six male participants lack it as well as three female participants. Similarly, three male participants and two female participants lack the vowel /ɛ/ at institute X and one male participant and two female participants do not have it at institute Y. As for the vowel /ɒ/, three male participants and two female participants lack it at institute X and three male participants and three female participants lack it at institute Y. Interestingly, it is sometimes the same individual from whose speech all three of the vowel sounds are absent, namely the male participants A6 A10 and the female participant B7 of institute X and the female participants D7 D11 of institute Y.

Another English phoneme found hard to articulate by the speakers of Pashto is the low central vowel /ʌ/. Although on average a majority of speakers were able to articulate it distinctly in more than half of its instances, it was still somewhat demanding for many speakers. It yields figures for the similar tokens whose variance across the participants is intriguing, in terms of percentage being as low as 26.08 and as high as 100. The range of this variance, it must be pointed out, is not without comparison, cf. indeed the range of vowel /æ/ (as a percentage) is 0 to 100. It will also have been noticed that Pashto phonology makes use of a quality of /a/ (alternatively /ɑ/), as distinct from both the schwa /ə/ and /ā/ (alternatively /â/), and whose space on the vowel quadrilateral could overlap with English /ʌ/. But from the range in the number of similar tokens for each participant we find for /ʌ/ in our Pashto English data, it would appear that phonologically /ʌ/ has a different status in English as compared to Pashto /a/. Another vowel with a peculiar distribution in the present data is /o/. The percentage of similar or correct tokens, among the participants, is 18.75 on the lowest end and 50 on the highest. This variance in /o/ is not just peculiar but would also occur to us as unexpected, because Pashto phonology does maintain the vowel /o/ as a distinct phoneme. Hence, one wonders why could the participants not do better than 50 percent when it came to /o/.

Table 1. Tally of the output of the male participants from institute X

Speaker/Vowel	/i/	/ɪ/	/ɛ/	/æ/	/ə/	/ɜ/	/ʌ/	/ʊ/	/u/	/o/	/ɑ/	/ɒ/
	35	56	37	36	85	4	23	25	22	16	6	48
A1	32	52	16	0	79	3	15	24	22	3	5	7
A2	32	56	31	31	80	4	14	25	22	3	5	35
A3	32	55	5	1	79	3	14	20	22	3	6	5
A4	32	56	3	0	79	3	6	21	22	3	6	0
A5	32	56	17	3	79	4	14	24	22	3	5	9
A6	32	52	0	0	80	3	7	20	22	3	6	0
A7	32	56	34	34	80	4	14	25	22	3	5	33
A8	32	56	0	3	79	3	6	20	22	8	6	11
A9	32	56	3	5	80	3	8	24	22	3	5	9
A10	32	56	0	0	79	3	17	21	22	3	6	0
A11	32	56	7	4	79	3	8	25	22	3	6	5

Table 2. Tally of the output of the female participants from institute X

Speaker/Vowel	/i/	/ɪ/	/ɛ/	/æ/	/ə/	/ɜ/	/ʌ/	/ʊ/	/u/	/o/	/ɑ/	/ɒ/
	35	56	37	36	85	4	23	25	22	16	6	48
B1	32	56	31	32	80	3	19	21	22	3	6	32
B2	32	56	33	31	79	3	14	21	22	7	6	36
B3	32	56	31	30	79	4	21	21	22	3	6	36
B4	32	56	5	0	80	3	6	25	22	8	6	0
B5	32	56	29	31	79	4	23	25	22	8	6	35
B6	32	52	33	33	79	3	23	25	22	3	6	40
B7	32	56	0	0	79	3	6	21	22	8	6	0
B8	32	56	31	29	79	4	17	21	22	3	6	33
B9	32	52	0	0	79	2	18	20	22	3	6	5
B10	32	56	31	31	80	3	9	25	22	3	6	33
B11	32	56	34	29	79	4	23	25	22	7	6	40

Table 3. Tally of the output of the male participants from institute Y

Speaker/Vowel	/i/	/ɪ/	/ɛ/	/æ/	/ə/	/ɜ/	/ʌ/	/ʊ/	/u/	/o/	/ɑ/	/ɒ/
	35	56	37	36	85	4	23	25	22	16	6	48
C1	32	56	29	9	80	3	21	21	22	3	6	33
C2	32	52	19	0	79	3	15	21	22	3	5	9
C3	32	52	13	7	79	3	6	21	22	7	5	0
C4	32	56	6	0	80	3	14	20	22	3	5	3
C5	32	52	0	0	79	3	13	25	22	3	6	7
C6	32	56	37	13	79	4	23	20	22	3	5	33
C7	32	56	2	0	79	3	8	25	22	3	5	0
C8	32	56	37	19	79	3	14	25	22	3	5	37
C9	32	56	4	0	80	3	8	25	22	7	5	7
C10	32	56	33	26	80	4	23	25	22	3	5	41
C11	32	56	7	0	79	3	6	21	22	3	6	0

Table 4. Tally of the output of the female participants from institute Y

Speaker/Vowel	/i/	/ɪ/	/ɛ/	/æ/	/ə/	/ɜ/	/ʌ/	/ʊ/	/u/	/o/	/ɑ/	/ɒ/
	35	56	37	36	85	4	23	25	22	16	6	48
D1	32	56	31	29	79	3	14	20	22	7	6	31
D2	32	56	21	31	80	3	8	21	22	3	6	33
D3	32	56	34	36	79	3	19	25	22	3	6	37
D4	32	56	18	17	79	4	23	25	22	8	6	40
D5	32	56	6	0	79	3	6	25	22	3	6	0
D6	32	56	28	34	79	4	23	21	22	3	6	39
D7	32	56	0	0	80	3	6	21	22	8	6	0
D8	32	56	31	32	79	4	16	25	22	7	6	35
D9	32	56	7	9	79	4	14	21	22	3	6	11
D10	32	56	24	29	79	3	23	21	22	7	6	40
D11	32	56	0	0	80	4	8	20	22	3	6	0

While most of the results on the similarity or divergence with regard to English vowels as articulated in the L2 of Pashtun speakers is what we would expect from a viewpoint of L1 interference by a comparison of Pashto phonology with that of English, especially the scores concerning the vowels /ɪ/, /ə/, /u/, /ɑ/ and /ɛ/, /æ/, /ɒ/, the gaps we find in Tables 1-4 in the tokens of some of the vowels, including when it comes to these same seven vowels, do not always indicate a systematic absence of phonological contrast and nor do these accurately reflect the phonological contrasts of the L1 of the participants, i.e. Pashto, as I explain below.

In the present data, among the said problematic vowels /ɛ/, /æ/, /ɒ/, and /ʌ/, the vowel /ɛ/ tended to be neutralized to and/or replaced by Pashto /e/, occurring in Pashto English as the variants [e] and [ĕ], for some speakers in all the instances, though among many only in certain instances, just as we see in the Table 1-4 tallies. Likewise the vowel /æ/ too turned up as [e] and [ĕ], but importantly also as a diphthong [əe]. Hence, depending on individual cases not only were the vowels /ɛ/ and /æ/ systematically absent from the speech of certain participants (a few in fact) of Pashto English, but in several cases these were not contrasted either, being realized as [e] and [ĕ]. On the other hand, it is important to be watchful of the fact that even when /ɛ/ and /æ/ were absent, a participant could still distinguish /æ/ as [əe]. Instances of [əe] are in fact found across nearly all the participants, even those who could ordinarily keep a grip on /ɛ/ and /æ/. At the same time, we must also be mindful of the fact that even those speakers who could in general distinguish /ɛ/ and /æ/ were on occasions liable to muddle the distinction between these and to sometimes introduce [ĕ], [əe], and less frequently [e] as their substitutes. A similar state of affairs existed with /ɒ/, which for a few speakers did not exist as a phoneme separate from /ɑ/ and for some speakers could only in certain cases not be distinguished from instances of [ɑ]. The distribution of /ʌ/ was also found to be along such a pattern, with many of its instances being indistinguishable from /ə/ and sometimes also aligning with the native Pashto phoneme /a/ (alternatively /ɑ/).

Perhaps the most startling aspect of the data as given in these tables are the similarities of the tallies of the vowels /i/, /ɪ/, /ə/, /ɜ/, /ʊ/. Some of these are in fact an artifact of the orthography. For instance all speakers, that is regardless of gender or institute or even the level of their competence in English as judged and analysed using

the recordings, consistently have 32 out of 35 exact matches for the vowel /i/. The three instances in which not a single participant was able to turn up an [i] consisted of the word ‘the’, which in English has variant pronunciations of [ðə] and [ði], but of which the speakers of Pashto English only observed the former form. For /ɪ/, in which we frequently find the tally of 52, the four errors all centered on the word ‘wind’ whose ‘i’ was pronounced as [ɑɪ]. For /ə/ five of the six errors uniformly comprised articulating the ‘a’ of the subordinating ‘that’ as [ĕ], [e], or sometimes [ɛ]. The error in one of the four tokens of /ɜ/ involved ‘her’ which most of the participants uttered as the schwa [ə]. The prominent pattern of four errors of /ʊ/ all had to do with the word ‘wolf’ in which influenced by the ‘o’ of the spelling the participants attempted to enunciate [o] or [ŏ]. A related error in the tokens of this vowel was pronouncing the double ‘o’ of ‘foot’ as the [u] or [ŏ], i.e. again under the influence of the spelling.

Another artifact of the orthography is noted among the instances of /o/, though it is not entirely clear from the tables. This needs some detail to account for. The words under this category were ‘north’, ‘warm’, ‘more’, ‘thought’, ‘all’, ‘short’, ‘long’, and ‘saw’. Of these the participants were generally only able to get ‘more’ right. The rest appeared to vacillate between British and American English pronunciations, whereas the aim of the present study was to compare the L2 English of Pashtun speakers with the former. However, the on and off appearance of /o/ in this set owed to the influence of ‘o’ in the spelling of words such as ‘north’, ‘short’, and ‘long’; in its alternatives the participants returned [ɒ] and those that lacked the /ɒ/ repaired using an [ɑ]; overall one expected to find a much higher percentage of native-like match in this set, a prediction that could not sustain due to the influence of American English.

It is also important to comment on the outputs obtained for the vowel /ʌ/. Because there exists at least a partial distinction between this vowel and the schwa, as found in English, in Pashto too, i.e. Pashto /a/ (alternatively /ɑ/) vs. /ə/ as mentioned in the preceding, it would not seem surprising that all the participants were able to distinguish the two. But what calls for an explanation is why was this contrast not observed consistently. In the present data of Pashto English this contrast appeared to be supported for the most part by the spelling conventions of English, for the vowel /ʌ/ is in general represented by symbols other than ‘a’ and ‘e’, usually through ‘u’. Secondly, some of the

instances of this low central vowel in Pashto English as given in the data might not be genuine cases of /ʌ/, but more probably a phonetic effect of the lowering of what might have phonologically been an /ə/ of Pashto English occurring in ultimate syllables, especially among clusters e.g. ‘once’, ‘lump’, ‘jump’, ‘rushed’. This lowering might also owe to the interference from the native Pashto pronunciation.

In sum, there exists a significant degree of phonetic variation between the monophthongs of British English and Pashto English. This variation is most pronounced among the vowels /ɛ/, /æ/, /ʌ/, and /ɒ/. On a phonological level, the distinction between the vowels /ɛ/ and /æ/ is limited in Pashto English while that of /ɑ/ vs. /ɒ/ and /ʌ/ vs. /ə/ not robust.

4.3 Critical Discussion

It is an aim of sociophonetic research to uncover variation in language use along social factors, socioeconomic status and gender in our case. In the following, the data is more critically analysed and a critical discussion of it is presented.

4.3.1 Percentage Score of Phonetic Similarity

We now turn to the representation of the data analysed, in §**4.2** as tallies of tokens with the similar vowel quality, in quantitative terms. Based on the number of tokens that matched the phonetic quality of a given vowel, each participant was given a percentage score: this score was obtained by first drawing the percentage of the correct tokens of each of the twelve vowels and then deriving an average of the percentages of these twelve vowels. The output of the participant scores obtained by this procedure, which for being percentages [the reader would be able to see] has to be treated as normalized, is given in Table 5 below.[10]

[10] It is important to point out here that this score would have been different if the percentage score were derived by doing the summation of the tokens of all the twelve vowels first. Following that route we would have derived scores with an overall smaller range. This might have affected the individual diagrammatic representation of the score of each participant but when the scores of all the forty four participants are juxtaposed at once (as in the bar chart in figure 2) any resulting bias of individual differences would be offset.
Another objection that might arise against the present method of obtaining the score is that its results become to a certain degree extrapolated when we generalize the comparison of the percentage of a vowel such as /ɜ/ that has four tokens in all (or /ɑ/ that occurs six times) with /ə/ that has 85 tokens (or /ɪ/ that occurs 56 times) towards the larger population they are claimed to represent. However, this type of

As Table 5 shows the highest percentage score for phonetic similarity at institute X is 89.31 (B5) and by a female participant while the percentage score is 56.88 (A6) and which comes from a male participant; the lowest score registered among the female participants at this institute is 59.55 (B9) and the highest among the male participants 83.63 (B3). At institute Y the top slot for the percentage score is at 86.94 (D8) and again by a female participant while the lowest is 58.47 (C7) and by a male participant; the highest score of a male participant at this institute is 86.20 (C10) and the lowest for a female participant 59.82 (D11). Hence, while the overall highest percentage score among the forty four participants comes from B5 of institute X, the lowest too comes from this institute from A6.

Table 5. Percentage score of each participant[11]

Male/ X	Score	Female/ X	Score	Male/ Y	Score	Female/ Y	Score
A1	64.44	B1	82.10	C1	77.23	D1	81.07
A2	82.61	B2	83.88	C2	64.67	D2	75.81
A3	62.09	B3	84.77	C3	62.00	D3	85.81
A4	58.12	B4	62.51	C4	60.87	D4	84.46
A5	68.13	B5	89.31	C5	70.17	D5	60.03
A6	56.88	B6	86.26	C6	80.94	D6	86.54
A7	83.63	B7	59.95	C7	58.47	D7	60.05
A8	57.64	B8	82.84	C8	79.35	D8	86.94
A9	68.18	B9	59.55	C9	62.22	D9	67.90
A10	61.43	B10	79.75	C10	86.20	D10	84.75
A11	62.88	B11	80.88	C11	59.02	D11	59.82

A bar chart representation of the percentage score of the participants is given in Figure 2, starting with the participants studying at institute X; the male and female gender are distinguished by the blue and the red colour respectively. There is a notable variation

extrapolation is not problematic, since it is built-in to the mathematical procedures of averages and percentages and is an intrinsic part of the inductive approach, which most linguistic inquiries are.
It is also relevant to add here that in real language too these vowels would vary in both token and type frequency, of which the present data is as a matter of fact a sample.

[11] X and Y (in this table) are the references to the same institutes in district Karak.

in the score of the participants as indicated by the height of the bars, but the results across the two institutes do not seem very different. A notable difference, however, is found with respect to the two colours of the bars, with the red bars more frequently rising high above and the blue ones mostly remaining low. In other words, the two institutes do not seem to be as strong an influencing factor for the score of the participants, but the gender appears to be playing a role (as will also be seen in §**4.3.3**).

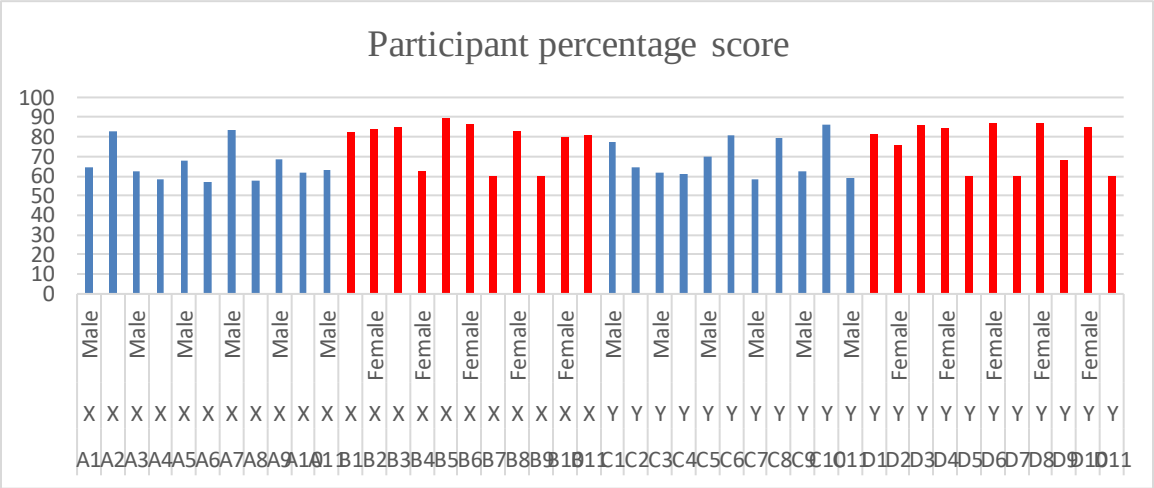


Figure 2: Bar chart representation of percentage score

4.3.2 Socioeconomic Status and Variation

A comparison of the stated income of the parents with the percentage score of each participant is given in Table 6. It will be remembered that by our definition the socioeconomic class of a participant is (as argued in §**4.3.1**) reflected by the combined income of the parents. In this table, the participants have only been divided into their institutes (X and Y); the reader can still distinguish the gender based on the codes of A and C (male) and B and D (female). This income is treated here as a continuous variable rather than a discrete one (which would require creating an arbitrary division of classes).

The most striking aspect of the data given in Table 6 is the range in the parental income of the participants:[12] A participant is liable to have as low an income as 15000

[12] Whereas the participants listed the profession of their parent(s) together with the income, the researcher cannot independently verify whether the information given by a participant regarding occupation and income is true; the possibility of a participant's giving incorrect number on income cannot be ruled out since there is a tendency for the people in the locale under focus to understate their earnings (if we leave out the likelihood of a participant's not knowing the right income).

(B8, a female participant) and another as high as 140000 (A9, a male participant). Both of these participants are recruits of institute X. At institute Y, the highest income of a participant's parents is 126000 (D2, a female participant) and the lowest 17000 (C7, a male participant). Overall we find incomes in all the ranges at both the institutes, though those given by the participants at institute X seem to be higher.

Table 6. Percentage score of each participant and income of parents

Participants of X	Income	Score	Participants of Y	Income	Score
A1	Rs. 26000	64.44	C1	Rs. 30000	77.23
A2	Rs. 40000	82.61	C2	Rs. 20000	64.67
A3	Rs. 25000	62.09	C3	Rs. 30000	62.00
A4	Rs. 80000	58.12	C4	Rs. 30000	60.87
A5	Rs. 55000	68.13	C5	Rs. 25000	70.17
A6	Rs. 30000	56.88	C6	Rs. 28000	80.94
A7	Rs. 50000	83.63	C7	Rs. 17000	58.47
A8	Rs. 50000	57.64	C8	Rs. 32500	79.35
A9	Rs. 140000	68.18	C9	Rs. 55000	62.22
A10	Rs. 30000	61.43	C10	Rs. 40000	86.20
A11	Rs. 60000	62.88	C11	Rs. 30000	59.02
B1	Rs. 22000	82.10	D1	Rs. 45000	81.07
B2	Rs. 65000	83.88	D2	Rs. 126000	75.81
B3	Rs. 80000	84.77	D3	Rs. 100000	85.81
B4	Rs. 76000	62.51	D4	Rs. 55000	84.46
B5	Rs. 76000	89.31	D5	Rs. 30000	60.03
B6	Rs. 50000	86.26	D6	Rs. 37000	86.54
B7	Rs. 27500	59.95	D7	Rs. 50000	60.05
B8	Rs. 15000	82.84	D8	Rs. 25000	86.94
B9	Rs. 35000	59.55	D9	Rs. 30000	67.90
B10	Rs. 70000	79.75	D10	Rs. 20000	84.75
B11	Rs. 30000	80.88	D11	Rs. 30000	59.82

The relationship between the percentage score and the income of the participants is represented in Figures 3 and 4 below: this data has been divided into two sets, classified along the two institutes the participants studied at -- institute X data given in Figure 3 and institute Y data in Figure 4. The gender of the participants in these figures is distinguished by the blue dots, representing males, and the red dots, standing for females.

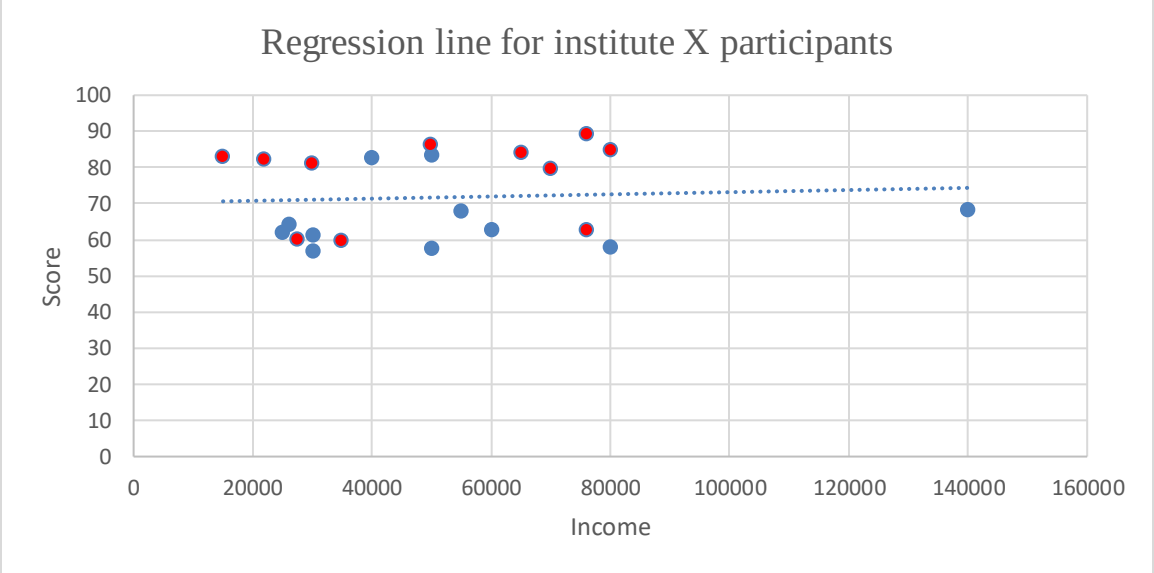


Figure 3: Scatterplot of income and percentage score of institute X participants

As seen in the plot of institute X participants, to posit a proportionate or even a positive relationship between the income and percentage score is tenuous. Although the regression line does show a slight upward incline as the income increases and a lot of the higher scores are concentrated in the roughly 50-80000 income range, the line does not ever cross one of the points and lower incomes do register some of the higher scores whereas higher incomes also correspond with some of the lower scores. The said 50-80000 income range, for instance, records 6 participants with a close to 80 and above score, and also 5 participants with a less than 70 score. Another range that needs a comment on is of 20-40000. This accommodates nine participants of whom three score above 80 and six below 65. Indeed, we find a conflict on a comparison of the leftmost and the rightmost dots on the plot, the former yielding an above 80 score below an income of 20000 while the latter lying below 70 despite a whopping 140000 income value.

Another interesting aspect of the plot is the distribution of the blue and the red dots, that is the male and female score respectively. Most of the former fall below a score of 70 while most the latter are close to or above 80. This factor of gender in the variation is even more clearly contrasted below (in Figure 5 in §**4.3.3**). It will also be noted that income-wise there do not exist serious disparities: the 20-40000 range contains nine participants of whom four are female and two male; the 40-60000 range has six participants with five male and one female; the 60-80000 range has seven participants, two of whom are male and five female.

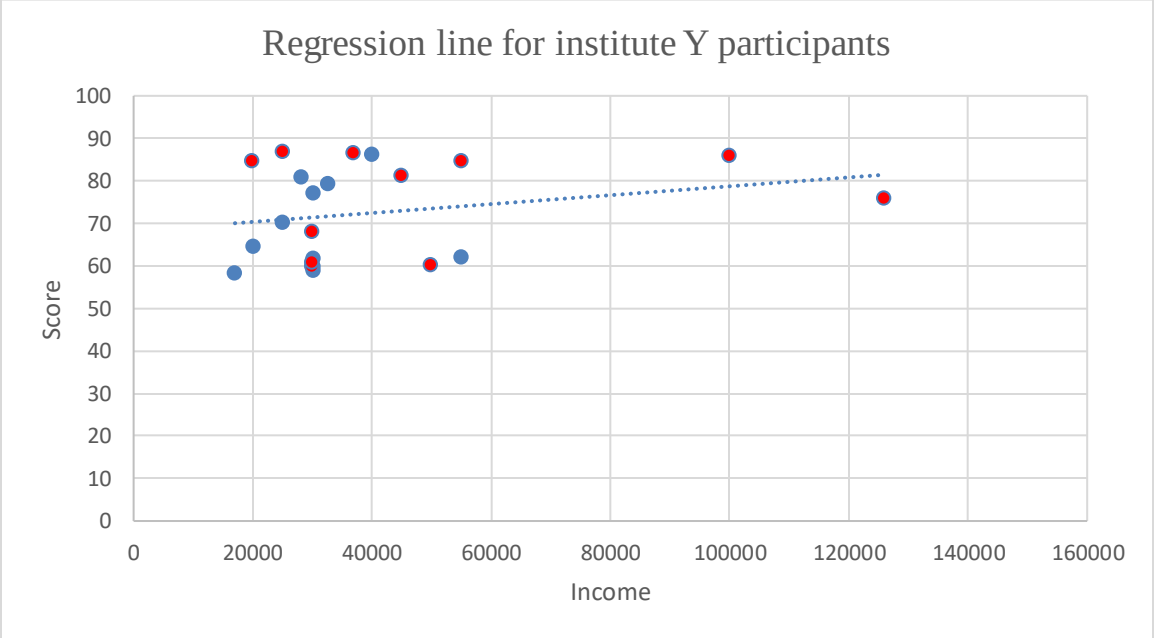


Figure 4: Scatterplot of income and percentage score of institute Y participants

The plot of institute Y participants presents a very interesting contrast with the foregoing. Here, the given income values are in general smaller and all but two cases lie within the 60000 income region; hence, the range of income of the participants is rather restricted at institute Y. We have most participants in the 20-40000 range, fifteen in all and of whom six are female while nine are male. In the 40-60000 range, there are five participants, two male and three female. This indicates a much greater parity between the family incomes -- in other words the socioeconomic status -- of the male and female participants of institute Y.

In spite of much narrower income range of the institute Y participants, we do find a notable variation in the scores of the participants and we also find larger varability in the scores being registered. For example, right at the 20000 income value we have a score below 70 and another above 80. Similarly, with 25000 income we have a score at 70 and another of 86.94, which is also the highest overall score a participant of this institute achieved. With a subsequent increase in income to 30000, we find the score to drop, with several participants showing rather low values in this range: we have as many as 5 participants stuck at and around the score of 60 with this income. A further increase to income towards 40000 brings a dramatic increase in the score, taking it to above 80, but as the income rises still further the score starts to drop again.

In general, the regression line shows a steeper incline for institute Y participants as compared to the institute X ones. But as we can see, the outcomes are somewhat mixed, with most incomes corresponding to higher and lower scores at the same time. Hence, it is hard to claim that we have a proportionate or a positive relationship between the income of parents and the participants' scores. As for gender, the contrast of the score in the distribution of the red dots and the blue dots occurs as less conspicuous at institute Y, even if the red dots (that is female gender) routinely occupy the top scores in any income range.

Furthermore, the case for the socioeconomic status' positively influencing the performance of a participant is partly undermined by the income distributions seen in the two scatterplots in which we clearly see how institute X participants generally declare higher incomes as compared to institute Y participants and yet the scores across the two institutes are relatively alike.

4.3.3 Gender and Variation

Finally, in order to compare the factor of gender, which was our second major variable laid out in the objectives, and how it affects the variation we look at the overall performance of the male and female participants as summarized in the bar graphs in Figure 5. As these bar graphs show, based on the average the female participants score higher than their male counterparts across both the institutes, though the male participants of institute Y manage to cover some of the gap by producing a better score and the

female participants at the same institute have a slightly smaller average than their female counterparts at institute X. The average percentage score of the male participants at institute X stands at 66 while that of the females is 77.43, with a difference of nearly 11 and a half points. This is considerable. At institute Y the average percentage score of the male participants is 69.19 and that of the female participants 75.74, which means that the difference falls down to 6 and a half points. This demonstrates that unlike the factor of the socioeconomic status (which does not seem to be a decisive factor in the variation) when it comes to gender we clearly see some variation playing out, for the female participants typically score better than the male participants. These differences between the performances based on gender need to be accounted for: What facets of learning or use lead to a better performance of the female Pashtun speakers compared to their male counterparts? The aim of this study has from the outset been the exploration of these factors or variables rather than explaining them, although explanation does not fall outside the scope of sociophonetic research.

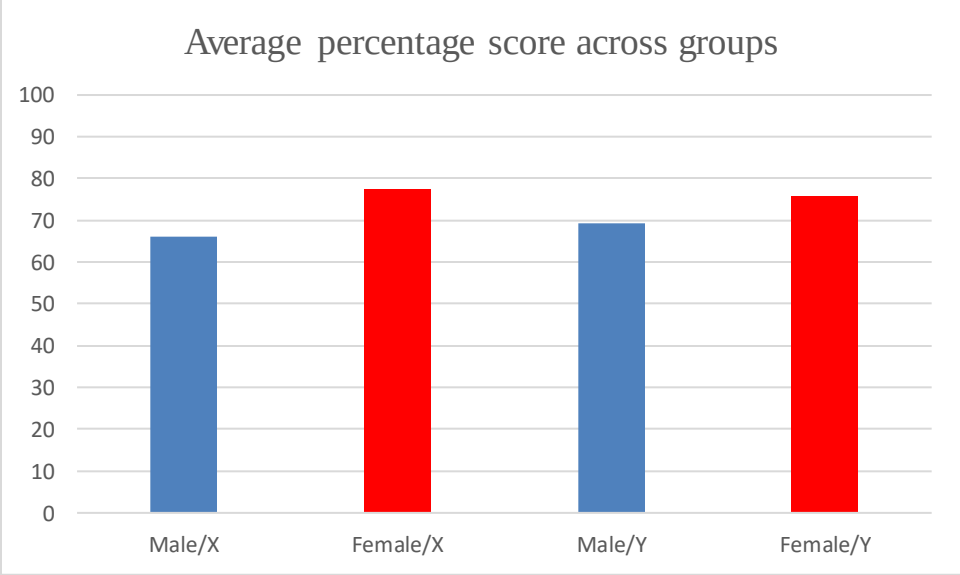


Figure 5: Bar chart representation of the average percentage score across groups

Lastly, it must be re-iterated that since groups with either gender are observed to score higher or lower in a comparison across institutes, it is hard to say that any of the institutes itself is as defining a factor in the scores of the participants or in strongly influencing the output obtained. The fact that the incomes documented for institute X participants are somewhat higher and the same institute also has a somewhat higher score

of both the male and female participants, i.e. 77.71, as compared to 72.46 of institute Y participants with a difference of 5.25 points, might hint at a correlation between higher overall score and higher income but as the individual cases, discussed in §**4.4**, show there does not appear to exist a direct relationship between the two factors, such as one we could have terms as positive variability. If such a difference of income and participant scores across the two institutes were to be substantiated, it would from the perspective of the methodology of sociophonetic research have to be brought to light in the shape of the investment into the resources each institute made and crucially the differences in fee or the cost of education at either institute. Again this did not come under the scope of this research, even though this possibility also does not seem obvious to the researcher from her familiarity with the capital and facilities of both of the educational institutes or acquaintance with the participants.

4.4 Summary

Sociophonetic methodology is designed to capture variation in language use and isolate it along social factors, in this case the socioeconomic status of the paritcipants and their gender, in order to study how this variation patterns along the given factors, including examine the role such may factors play in causing or furthering the variation. As seen in the foregoing, participants showed a considerable degree of variation in English monophthongs, which was recorded via the phonetic similarity or differences in the tokens of the production data and transformed into a percentage score of the participant. Statistical analysis of this data shows that variation is observed consistently across both the institutes. Interestingly, this variation can be modelled with respect to the factor of gender where we see large differences in the percentage score, but not the socioeconomic status of the participants whose regression line does not yield any significant incline tilt.

CHAPTER 5

CONCLUSION

This chapter provides a summary of the analysis performed in this work, the findings it adds to the existing state of the research on the present topic, and also puts forward some suggestions for future inquiry. The present research attempted to study the monophthongal variation in the variety of English termed here as Pashto English, based on the L2 speech production data of Pashtun speakers of English, from a viewpoint of sociophonetics. It sought to understand how far this variation was affected by the factors of socioeconomic status and gender. Hence, the pronunciations of Pashtun speakers -- studied through the production data output -- constituted the dependent variable and the socioeconomic status and gender of a given speaker the independent variable.

5.1 Summary of the Analysis

Based on a comparison of the phonemic inventory of British English or Received Pronunciation which has a variety of vowel sounds, close front tense vowel /i/, close front lax vowel /ɪ/, mid front vowel /ɛ/, open front vowel /æ/, mid central vowel /ə/, mid central tense vowel /ɜ/, open central vowel /ʌ/, close back rounded lax vowel /ʊ/, close back rounded tense vowel /u/, mid back rounded vowel /o/, open back rounded vowel /ɑ/, open back unrounded tense vowel /ɒ/, with Pashto which has a very simple vowel system (like most Iranian languages), close front vowel /i/, mid front vowel /e/, mid central vowel /ə/, mid open vowel /a/ (alternatively /ɑ/), open back vowel /ā/ (alternatively /â/), mid back rounded vowel /o/, close back rounded vowel /u/, Pashtun speakers would be expected to encounter production challenges in maintaining those finer vocalic distinctions found in English, due to the phonological differences between the two systems. Existing literature on the L2 of non-native English users shows that while L2 learners do find such challenges and might acquire or develop a variety with structural differences, speakers with particular socioeconomic status can have the prospects to closely match the speech of the native speakers due to any extended contact that might be afforded to them due to this status.

Production data was obtained using three short texts of English, ‘The North Wind and the Sun’, ‘The boy who cried Wolf’, and ‘The Tiger and the Mouse’, which the participants recited while recording themselves. Data was drawn from forty four participants who were undergraduate students of English program hailing from two different institutes in Karak (district of Khyber-Pakhtunkhwa province) and who were evenly divided with respect to gender. Target words -- i.e. monosyllabic words containing one of the English monophthongs -- were isolated and after auditory analysis were phonetically transcribed. A tally for each of the twelve vowels of each participant was created, based on the tokens that provided an exact match for a British English vowel and from the percentages of the similar tokens of all the twelve vowels an average score for each participant was derived.

5.2 Findings of the Research

This research attempted to answer three questions on Pashto English, on each of which a critical discussion is presented in the following.

5.2.1 Critical Discussion on Research Question 1

Of the three questions that this research attempted to answer, the first was about the extent of monophthongal variation in the English of Pashtun speakers. This variation can be understood in terms of divergence, which was noted in the speech of the participants on two levels, phonological and phonetic. The nature of such variation, reflecting primarily the interference from the native language is already known of in the general linguistics literature and especially in the field sociophonetic research as the influence of L1 on features of the target language as reported on extensively in sociophonetics, for example in Baertsch (2011), Kaiser (2011), Yudytska (2016), Lu (2016), Kalev (2018), indeed most frequently in context of research on English as L2.

Phonological differences were reflected in a lack of the occurrence of a distinction between /ɛ/ and /æ/ or /ɒ/ and /ɑ/ among certain participants. For the former two vowels, the participants frequently resorted to [ĕ] or [e] though for /æ/ specifically also a diphthong [əe], while the /ɒ/ was often merged with [ɑ]. From a solely phonetic viewpoint, the participants could not always maintain an [ɛ], [æ], [ɒ], or [ʌ] when they had it; we can term these four sounds as English vowels which are the most problematic

for the L2 Pashtun speakers of English. This mix of forms was the most curious aspect of the variation and probably indicated that the participants were still in a stage of acquiring these sounds foreign to their native language Pashto and hence vacillating between Pashto-like and foreign features: Pashto English is therefore very much in a state of flux and not yet 'stable'. Another important aspect of the variation was the influence of the orthography. Participants frequently relied on the English spelling, whose want of consistency often led to divergent pronunciations. Specifically with regard to the vowel /o/ of English, the participants often seemed closer to the American pronunciation rather than the British standard.

In quantitative terms the extent of the monophthongal variation in the Pashto English data was found to be rather widespread, for instance at institute X a participant giving as low a percentage score as 56.88, with the rest of his or her articulations being divergences from the norm of British English, and another maintaining as high a consistency as 86.94 percent. Similarly, at institute Y, the lowest score registered was 58.47 and the highest 86.54. This also indicates -- and is relevant to the present purpose -- that the institute of a participant did not overtly affect his or her performance.

5.2.2 Critical Discussion on Research Question 2

The second question of the research was how far the factor of one's socioeconomic affected their speech. To this question the answer of the present research and its data is a negative: no visible connection or correlation was found between the income of the parents and the percentage of the tokens consistent with British English pronunciations. A participant who stated as low an income as 15000 at institute X was able to score 82.84 while one with an 140000 income secured a score of 68.18. Likewise, at institute Y, a participants giving 20000 income figure scored 84.75 while another with 126000 income got a score of 75.81. This finding contrasts with what we know from some of the available research in this area, such as by Kahn-Horwitz et al.'s (2006) and Arikan (2011), both of whom found evidence for the socioeconomic status positively affecting the process of learning of a foreign language and hence proficiency in that language.

5.2.3 Critical Discussion on Research Question 3

The third and the final question was of the factor of gender and its influence on the variation. With respect to this, a marked difference in the variation/score was observed, the female participants frequently obtaining higher score as compared to their male participants, such that the average percentage score of the male students of institute X was 66 and that of the females 77.43 while of the male students of institute Y 69.19 and of the female 75.74. As for the available literature on the subject, the findings of the present study do not have a parallel to offer a comparison with. The factor of gender seems unfortunately not to have drawn as much attention in sociophonetic research. Sometimes it may be explored but might not be given sufficient consideration when the findings are reported such as in Edwards (2008). On other occasions, it might be examined but no significant results obtain, for example in the study on L2 English in Nigeria by Oladipupo and Akinjobi (2015).

5.2.4 Summary of the Research Questions

In sum, the present research finds a strong degree of monophthongal variation in the L2 English of Pashtun speakers. This variation is not governed by one's socioeconomic status, but seems to be marked by gender with female speakers following the native English norm more closely as compared to their male counterparts.

5.3 Recommendations for Future Research

The reason for this variation between the male and the female participants is not clear and could be the topic of a future inquiry; such an inquiry should hope to uncover exciting answers about the circumstance in which Pashtun female L2 speakers of English outdo their male counterparts.

It must be pointed out here that the present study was restricted to the monophthongal variation in the English of Pashtun speakers and only the variation current in monosyllabic words. Although this delimitation served as a useful opening into Pashto English and a study of how it plays out sociolinguistically, we clearly need to go beyond English monophthongs and incorporate the diphthong and triphthong sounds too in our analysis of Pashto English. Indeed, the present study's findings hint at the

limitations of the given scope, such as in the realization of the English vowel /æ/ as a diphthongal [əe] in Pashto English. The position of this [əe] in the vocalic system of Pashto English can only be determined by a thorough analysis of all the vocalic sounds that occur in that variety of English. Similarly, it is important for us to go beyond the monosyllabic words, because they can not tell us much about the processes of phonetic reduction that less prominent segments (in particular the vowels) are liable to undergo, and anything about the suprasegmental phenomena, such as stress. In this context, future work must in fact cover the entire phonological system of Pashto English.

The present study also employed a particular and a rather restrictive definition of the concept of socioeconomic status. This was based simply on the combined income of the parent(s) of a participant. Is it possible that this definition could not capture one or more aspects of socioeconomic status in the Pashtun cultural milieu, such as the level of education, and which might have impacted the results of the present study?

Furthermore, there are also several additional factors that were not included in the current study but which have a strong bearing on such inquiries and need to be explored in future work on the topic of Pashto English. The primary among these is the history of contact with the target language, in the present case English. Linguistic research across the board has demonstrated that linguistic output in L2 depends on the linguistic input in that language. This should without doubt be the case with the base and substance of Pashto English too, and we wonder whether female Pashtun speakers have had a greater exposure to English than the male speakers. Another important factor, which must be included in future research, is the motivation for the target language. Is it possible that Pashtun female speakers' surpassing their male fellows in the command of English owes to their greater motivation for learning the language and hence reflects on their personal and/or social aspirations? This is only one of the several interesting questions regarding Pashto English which sociophonetic inquiries can hope to answer for us.

REFERENCES

Andreyev, S. (2010). Pashto literature: The classical period. In P. G. Kreyenbroek & U. Marzolph (Eds.), *Oral literature of Iranian languages* (pp. 89-113). London: I. B. Tauris & Co.

Arikan, A. (2011). Prospective English language teachers' perceptions of the target language and culture in relation to their socioeconomic status. *English Language Teaching*, *4*(3), 232-242. https://www.ccsenet.org/journal/index.php/elt/article/view/11898.

Baertsch, K. (2011). *A sociophonetic analysis of L2 substitution sounds of American English interdental fricatives*. Master dissertation. Southern Illinois University.

Baranowski, M. (2013). Sociophonetics. In R. Bayley, R. Cameron, & C. Lucas (Eds.), *The Oxford Handbook of Sociolinguistics* (pp. 342-374). Oxford: Oxford University Press.

Bečka, J. (1969). *A study in Pashto stress*. Prague: Oriental Institute in Academia.

Bekker, I. (2012). The story of South African English: A brief linguistic overview. *International Journal of Language, Translation and Intercultural Communication*, *1*, 139-150. https://ejournals.epublishing.ekt.gr/index.php/latic/article/view/2722.

Bellew, H. W. (1867a). *A grammar of the Pukkhto or Pukshto language: On a new and improved system, combining brevity with practical utility, and including exercises and dialogues, intended to facilitate the acquisition of the colloquial*. London: W. H. Allen & Co.

Bellew, H. W. (1867b). *A dictionary of the Pukkhto or Pukshto language in which the words are traced to their sources in the Indian and Persian languages*. London: Thacker & Co.

Bhushan, R. (2011). The sociology of language teaching and learning. *Theory and Practice in Language Studies*, *1*(3), 309-311. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=7e07ed0dfc1865ad635d3f59193d265476af2d22#page=117.

Bialystok, E. (2009). Bilingualism: The good, the bad, and the indifferent. *Bilingualism: Language and Cognition*, *12*(1), 3-11. https://doi.org/10.1017/S1366728908003477.

Burt, M. & Kiparsky, C. (1974). Global and local mistakes. In J. Schumann & N. Stenson (Eds.), *New frontiers in second language learning* (pp. 54-70). Rowley, Massachussetts: Newbury House Publishing, Inc.

Burchinal, M., Field, S., López, M. L., Howes, C., & Pianta, R. (2012). Instruction in Spanish in pre-kindergarten classrooms and child outcomes for English language learners. *Early Childhood Research Quarterly*, *27*(2), 188-197. https://doi.org/10.1016/j.ecresq.2011.11.003.

Celata, C. & Calamai, S. (2014). *Advances in Sociophonetics*. Amsterdam: John Benjamins.

Chappell, W. & Kanwit, M. (2022). Do learners connect sociophonetic variation with regional and social characteristics? The case of L2 perception of Spanish aspiration. *Studies in Second Language Acquisition*, *44*(1), 185-209. https://doi.org/10.1017/S0272263121000115.

Cheung, J. (2010). Selected Pashto problems I: The accent in Pashto. *Persica*, *23*, 109-121.

Cheung, J. (2011). Selected Pashto problems II. Historical phonology 1: On vocalism and etyma. *Iran and the Caucasus*, *15*(1/2), 169-205.

Coppieters, R. (1987). Competence differences between native and near-native speakers. *Language*, *63*(3), 544-573. https://doi.org/10.2307/415005.

Dabrowska, E., Becker, L., & Miorelli, L. (2020). Is adult second language acquisition defective? *Frontiers in Psychology*, *11*. https://doi:10.3389/fpsyg.2020.01839

Dalola, A. & Bullock, B. E. (2017). On sociophonetic competence. *Studies in Second Language Acquisition*, *39*(4), 769-799. https://doi.org/10.1017/S0272263116000309.

Dalola, A. & Bridwell, K. (2020). Redefining sociophonetic competence: Mapping COG differences in phrase-final fricative epithesis in L1 and L2 speakers of French. *Languages*, *5*(4), 59-76. https://doi.org/10.3390/languages5040059.

Darmesteter, J. (1887). *Rapport sur une mission philologique dans l'Hindoustan*. Paris: Alphonse Lemerre.

Darmesteter, J. (1890). *Chants populaires des Afghans*. Paris: Imprimerie Nationale.

David, A. B. (2014). *Descriptive grammars of Pashto and its dialects*. Berlin: De Gruyter Mouton.

Dickinson, D. K., Darrow, C. L., & Tinubu, T. A. (2008). Patterns of teacher-child conversations in head start classrooms: Implications for an empirically grounded approach to professional development. *Early Education and Development*, *19*(3), 396-429. https://doi.org/10.1080/10409280802065403.

Dixon, L. Q., Zhao, J. Shin, J., Wu, S., Su, J. Burgess-Brigham, R., Gezer, M. U., & Snow, C. (2012). What we know about second language acquisition: A synthesis from four perspectives. *Review of Educational Research*, *82*(1), 5-60. https://doi.org/10.3102/0034654311433587.

Dorn, B. (1840). Nachträge zur grammatik der Afghanischen sprache. *Bulletin Scientifique de l'Académie Impériale des Sciences de Saint Petersbourg*, *10*, 356-368.

Dorn, B. (1847). *A chrestomathy of the Pushtū or Afghan language; to which is subjoined a glossary of Afghan and English*. St. Petersburgh: Imperial Academy of Sciences of St. Petersburg.

Dulay, H. C., & Burt, M. K. (1974). Natural sequences in child second language acquisition. *Language Learning*, *24*(1), 37-53. https://doi.org/10.1111/j.1467-1770.1974.tb00234.x.

Edelman, D. I. & Dodykhudoeva, L. R. (2009). The Pamir languages. In G. Windfuhr (Ed.), *The Iranian Languages* (pp. 773-786). New York: Routledge.

Edwards, J. G. H. (2008). Social factors and variation in production in L2 phonology. In J. G. Hansen (Ed.), *Phonology and second language acquisition* (pp. 251-279). Amsterdam: John Benjamins.

Elfenbein, J. (1997). Pashto phonology. In A. S. Kaye (Ed.), *Phonologies of Asia and Africa* (Vol. 2, pp. 733-759). Winona Lake, Indiana: Eisenbrauns.

Ellis, D. S. (1967). Speech and social status in America. *Social Forces*, *45*(3), 431-437. https://doi.org/10.2307/2575202.

Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.

Elphinstone, M. (1815). *An account of the kingdom of Caubul, and its dependencies in Persia, Tartary, and India: comprising a view of the Afghaun nation, and a history of the Dooraunee monarchy*. London: Richard Bentley.

Foulkes, P., Scobbie, J. M., & Watts, D. (2010). Sociophonetics. In W. J. Hardcastle, J. Laver, & F. E. Gibobon, (Ed.), *Handbook of Phonetic Sciences* (pp. 703-756). West Sussex: Wiley-Blackwell.

Galloway, N., & Rose, H. (2015). *Introducing global Englishes*. Arbingdon: Routledge.

Gefen, R. (1979). The analysis of pupils' errors. *English Teachers' Journal*, 22, 16-24.

Geiger, W. (1893a). Afghanische studien. *Kuhns Zeitschrift, 33*, 246-258.

Geiger, W. (1893b). Etymologie und lautlehre des Afghānischen. *Abhandlungen der königlichen Bayerischen Akademie den Wissenschaften, Philosophisch-Historische Klasse*, *20*, 167-222.

Geiger, W. (1898). Die sprache der Afghānen, das Paṣtō. In W. Geiger & E. Kuhn (Eds.), *Grundriss der Iranischen Philologie* (Vol. 2, pp. 201-230). Strasbourg: Karl J. Trübner.

Giles, H., & Sassoon, C. (1983). The effect of speaker's accent, social class background and message style on British listeners' social judgements. *Language & Communication*, 3(3), 305-313. https://doi.org/10.1016/0271-5309(83)90006-X.

Grierson, G. A. (1921). Pashto. In *Linguistic Survey of India* (Vol. 10, pp. 5-122). Calcutta: Office of the Superintendent of Government of India Printing, India.

Habib, A. & Saeed, A. (2016). Acoustic analysis of Pashto plosives. *Science International*, 24(4), 447-450. http://www.sci-int.com/pdf/3590642791%20a%20447-450%20ACOUSTICS%20PROPERTIES%20OF%20PASHTO%20PLOSIVES-1.pdf.

Hallberg, D. G. (1992). *Sociolinguistic survey of northern Pakistan: Pashto, Waneci, Ormuri* (Vol. 4). Islamabad: National Institute of Pakistan Studies; High Wycombe: Summer Institute of Linguistics.

Hamers, J. F. & Blanc, M. (1989). *Bilinguality and bilingualism.* Cambridge: Cambridge University Press.

Hanway, J. (1753). *An historical account of the British trade over the Caspian Sea: with a journal of travels from London through Russia into Persia: and back again through Russia, Germany and Holland*. London.

Heston, W. L. (1992). *A dictionary of basic Pashto, frequency lists I, project description and samples, and frequency list II*. Washington, DC: Office of International Education.

Hughes, T. P. (1872). *Kalīd-i-Afghānī, being selections of Pushto prose and poetry for the use of students*. Lahore: Panjab Educational Press.

International Phonetic Association, & International Phonetic Association Staff. (1999). *Handbook of the International Phonetic Association: A guide to the use of the International Phonetic Alphabet*. Cambridge: Cambridge University Press.

Iqbal, M., & Rahman, G. (2017). A comparative study of Pashto and English consonants. *Pashto*, 45(1), 11-27. https://www.researchgate.net/publication/312609250_A_Comparative_Study_of_Pashto_and_English_Consonants.

Johnson, J. & Newport, E. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of ESL. *Cognitive Psychology*, *21*(1), 60-99. https://doi.org/10.1016/0010-0285(89)90003-0.

Jordens, P. (1977). Rules, grammatical intuitions, and strategies in foreign language learning. *Interlanguage Studies Bulletin*, *2*(2), 5-76. https://www.jstor.org/stable/43135167.

Kachru, B. B. (1976). *Indian English: A sociolinguistic profile of a transplanted language*. https://files.eric.ed.gov/fulltext/ED132854.pdf.

Kahn-Horwitz, J., Shimron, J., & Sparks, R. L. (2006). Weak and strong novice readers of English as a foreign language: Effects of first language and socioeconomic status. *Annals of Dyslexia*, *56*(1), 161-185. https://link.springer.com/article/10.1007/s11881-006-0007-1.

Kaiser, E. A. (2011). *Sociophonetics of Hmong American English in Minnesota*. Doctoral dissertation. University of Minnesota.

Kalev, J. (2018). *A sociophonetic analysis of the role of cultural identification in L2 English speech production*. Bachelor dissertation. Stockholms Universitet.

Kan, P. F., Miller, A., Cheung, S., & Brickman, A. (2020). The distributed L1 and L2 language-learning environments of dual language learners across home and school settings. *Language, Speech, and Hearing Services in Schools*, *51*, 1007-1023. https://doi.org/10.1044/2020_LSHSS-19-00112.

Kellerman, E. (1979). Transfer and non-transfer: Where we are now. *Studies in Second Language Acquisition*, *2*(1), 37-57. https://doi.org/10.1017/S0272263100000942.

Kendall, T. & Fridland, V. (2021). *Sociophonetics*. Cambridge: Cambridge University Press.

Kingsley, B., & Kachru, B. (Eds.) (2006). *World Englishes: Critical concepts in linguistics.* London: Routledge.

Klaproth, J. von (1810). *Archiv für Asiatische litteratur, geschichte und sprachkunde*. St. Petersburg: Academischen Verlage.

Kotsoni, Z. (2019). *A sociophonetic analysis of the production of mid-vowel contrasts in Catalan spoken in Barcelona*. Doctoral dissertation. Universitat Autonoma de Barcelona.

Krashen, S. D., Long, M. A., & Scarcella, R. C. (1979). Age, rate, and eventual attainment in second language acquisition. *TESOL Quarterly*, *13*(4), 573-582. https://doi.org/10.2307/3586451.

Krashen, S. D. (1981). *Second language acquisition and second language learning*. Oxford: Pergamon Press Inc.

Kwek, G. S. C. (2018). *An analysis of /r/ variation in Singapore English*. Doctoral dissertation. University of Cambridge.

Labov, W. (1966). *The social stratification of English in New York City*. Cambridge: Cambridge University Press.

Labov, W. (1997). The social stratification of (r) in New York City department stores. In N. Coupland & A. Jaworski (Eds.), *Sociolinguistics* (pp. 168-178). London: Palgrave.

Lado, R. (1957). *Linguistics across cultures*. Ann Arbor: University of Michigan.

Larsen-Freeman, D. & Long, M. H. (1991). *An introduction to second language acquisition research*. London: Longman.

Lee, Jeong-Won & Schallert, D. Lemonnier (1997). The relative contribution of L2 language proficiency and L1 reading ability to L2 reading performance: A test of the threshold hypothesis in an EFL context. *TESOL Quarterly*, *31*(4), 713-739. https://doi.org/10.2307/3587757.

Leech, R. (1839). A grammar of the Pushtoo, or Afghánee language. *Journal of the Asiatic Society of Bengal*, *8*, 1-16.

Lenneberg, E. H. (1967). *Biological foundations of language*. New York: Wiley-Blackwell.

Lesho, M. (2013). *The sociophonetics and phonology of the Cavite Chabacano vowel system*. Doctoral dissertation. The Ohio State University.

Lorimer, J. G. (1902). *Grammar and vocabulary of Waziri Pashto*. Calcutta: Government of India Central Printing Office.

Low, E. L., & Brown, A. (2003). *An introduction to Singapore English*. Boston: McGraw Hill.

MacKenzie, D. N. (1959). A standard Pashto. *Bulletin of the School of Oriental and African Studies, University of London*, *22*(1/3), 231-235.

Mackenzie, D. N. (1987). Pashto. In B. Comrie (Ed.), *The world's major languages* (pp. 547-565). London: Oxford University Press.

Meyerhoff, M. (2006). *Introducing sociolinguistics*. New York: Routledge.

Millous, C. (2003). *Using L1 and L2 effectively in the foreign language classroom*. Master dissertation. School for International Training (Brattleboro, Vermont).

Moeller, A. J. and Catalano, T. (2015). Foreign language teaching and learning. In J. D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (2nd ed., pp. 327-322). Elsevier.

Morgenstierne, G. (1927). *Etymological vocabulary of Pashto*. Oslo: Instituttet for Sammenlignende Kulturforskning.

Morgenstierne, G. (1929). *Indo-Iranian frontier languages I*. Oslo: Instituttet for Sammenlignende Kulturforskning.

Morgenstierne, G. (1932). *Report on a linguisitc mission to North-West India*. Oslo: Instituttet for Sammenlignende Kulturforskning.

Morgenstierne, G. (1938). *Indo-Iranian frontier languages II*. Oslo: Instituttet for Sammenlignende Kulturforskning.

Morgenstierne, G. (1940). 'Pashto', 'Pathan', and the treatment of r + sibilant in Pashto. *Acta Orientalia, 18,* 138-144.

Morgenstierne, G. (1973). Traces of Indo-European accentuation in Pashto? *Norsk Tidsskrift for Sprogvidenskap*, *27*, 61-65.

Moyer, Alene (2004). Accounting for context and experience in German (L2) language acquisition: A critical review of the research. *Journal of Multilingual and Multicultural Development*, *25*(1), 41-61. https://doi.org/10.1080/01434630408666519.

Murray, J. W. (1899). *A dictionary of the Pathan tribes on the North West Frontier of India*. Calcutta: Office of the Superintendent, Government Printing, India.

Müller, F. (1862). Ueber die sprache der Avghânen (Paxto). *Sitsungsberichts der Wiener akademie der wissenschaften, Philosophisch-Historische Klasse, 42*, 3-17.

O'Conner, E. (n.d.). A phonetic description of Pashto. Retrieved from http://www.ellenwoconnor.com/static/pashto.pdf.

Oladipupo, R. O., & Akinjobi, A. A. (2015). Sociophonetic study of young Nigerian English speakers. *Ghana Journal of Linguistics*, *4*(2), 92-107. https://www.ajol.info/index.php/gjl/article/view/127972.

Peal, E. & Lambert, W. (1962). The relation of bilingualism to intelligence. *Psychological Monographs*, *76*(1), 1-23.

Penzl, H. (1955). *A grammar of Pashto: A descriptive study of the dialect of Kandahar, Afghanistan*. Washington, D.C: American Council of Learned Societies.

Plunkett, G. T. (1875). *The conversation manual, a collection of 670 useful phrases in English, Hindustani, Persian and Pashtū, with summaries of the grammars of these languages, and a vocabulary of nearly 1500 words*. London: Richardson & Co.

Proctor, C., August, D., & Carlo, M. (2010). Language maintenance versus language of instruction: Spanish reading development among Latino and Latina bilingual learners. *Journal of Social Issues*, *66*(1), 79-94. https://spssi.onlinelibrary.wiley.com/doi/10.1111/j.1540-4560.2009.01634.x.

Qureishi, M. A. (2016). A meta-analysis: Age and second language grammar acquisition. *System*, *60*, 147-160. http://dx.doi.org/10.1016/j.system.2016.06.001

Raverty, H. G. (1854). Some remarks on the origin of the Afghan people and dialect and on the connexion of the Pushto language with the Zend and Pahlavi and the Hebrew. *Journal of the Asiatic Society of Bengal*, *23*, 550-588.

Raverty, H. G. (1860). *The Gulshan-i Roh, being selections, prose and poetical, in the Pushto or Afghan language*. London: Williams and Norgate.

Raverty, H. G. (1862). *Selections from the poetry of Afghans, from the sixteenth to the nineteenth century: literally translated from the original Pushto, with notices and remarks on the mystic doctrine and poetry of the Ṣūfīs*. London: Williams and Norgate.

Raverty, H. G. (1867). *A grammar of the Pukhto, Pushto, or language of the Afghāns; in which the rules are illustrated by examples from the best writers, both poetical and prose: Together with translations from the articles of war, and remarks on the language, literature, and descent of the Afghān tribes*. London: Williams and Norgate.

Raverty, H. G. (1880). *The Pushto Manual. Comprising a concise grammar; exercises and dialogues; familiar phrases, proverbs, and vocabulary*. London: W. H. Allen & Co.

Rehman, G., Khan, A. Q., & Bukhari, N. H. (2012). English problematic consonants for Pashto speakers. *Academic Research International*, *2*(1), 695-704. http://www.savap.org.pk/journals/ARInt./Vol.2(1)/2012(2.1-68).pdf.

Roach, P. (2004). British English: Received pronunciation. *Journal of the International Phonetic Association*, *34*(2), 239-245.

Robertson, Paul (2002). The critical age hypothesis. A critique of research methodology. *The Asian EFL Journal*, *4*(1), Retrieved June 5 2002 from https://www.asian-efl-journal.com/main-editions-new/the-critical-age-hypothesis-a-critique-of-research-methodology/index.htm.

Robson, B. & Tegey, H. (2009). Pashto. In G. Windfuhr (Ed.), *The Iranian Languages* (pp. 721-772). New York: Routledge.

Schoonmaker-Gates, E. (2020). The acquisition of dialect-specific phonology, phonetics, and sociolinguistics in L2 Spanish: Untangling learner trends. *Critical Multilingualism Studies*, *8*(1), 80-103. https://cms.arizona.edu/index.php/multilingual/article/view/212.

Selinker, L. (1969). Interlanguage. *International Review of Applied Linguistics in Language Teaching*, *10*(3), 209-231.

Serampore Missionaries (1818). *The New Testament, translated from the Originals into the Pushtoo language*. Serampore: Serampore Mission Press.

Singleton, D. & Ryan, L. (2004). *Language acquisition: The age factor* (Vol. 9). Briston: Multilingual Matters.

Skjaervo, P. O. (2009). Old Iranian. In G. Windfuhr (Ed.), *The Iranian Languages* (pp. 43-195). New York: Routledge.

Tegey, H. & Robson, B. (1990). *Beginning Pashto*. Washington, D.C: Center for Applied Linguistics.

Tegey, H. & Robson, B. (1991). *Intermediate Pashto*. Washington, D.C: Center for Applied Linguistics.

Tegey, H. & Robson, B. (1992). *A Pashto reader*. Washington, D.C: Center for Applied Linguistics.

Tegey, H. & Robson, B. (1993). *Pashto conversation manual, Pushto khabaray*. Washington, D.C: Center for Applied Linguistics.

Tegey, H. & Robson, B. (1996). *A reference grammar of Pashto*. Washington, D.C: Center for Applied Linguistics.

Toefy, T. L. (2014). *Sociophonetics and class differentiation: A study of working- and middle-class English in Cape Town's coloured community*. Doctoral dissertation. University of Cape Town.

Touchie, H. Y. (1986). Second language learning errors: Their types, causes, and treatment. *The Japan Association for Language Teaching Journal*, *8*(1), 75-80. https://jalt-publications.org/jj/articles/1571-second-language-learning-errors-their-types-causes-and-treatment.

Trumpp, E. (1873). *The Paş̣tō or language of the Afghāns: Compared with the Īrānian and North-Indian idioms*. London: Messrs. Trübner & Co.

van Herk, G. (2012). *What is sociolinguistics?* (Vol. 6). Chichester: Wiley-Blackwell.

Vaughan, J. L. (1864). *A grammar and vocabulary of the Pooshtoo language (as spoken in the trans-Indus territories under British rule)*. Calcutta: Baptist Mission Press.

Wardhaugh, R. (2006). *An introduction to sociolinguistics*. Cornwall: Blackwell publishing.

Windfuhr, G. (Ed.). (2009). *The Iranian languages*. New York: Routledge.

Yajun, J. (1995). Chinglish and China English. *English Today*, *11*(1), 51-56. https://doi.org/10.1017/S0266078400008105.

Yudytska, J. (2016). The influence of aspects of social identity on the development of L2 phonology. *Lifespans & Styles: Undergraduate Working Papers on Intraspeaker Variation*, *2*(2), 27-35. https://doi.org/10.2218/ls.v2i2.2016.1611.

Zimman, Lal (2020). Sociophonetics. In James Stanlaw (Ed.), *The International Encyclopedia of Linguistic Anthropology* (pp. 1-5). Wiley-Blackwell.

ANNEXURE I

Questionnaire (to be filled in by the participant)

Faculty of Arts and Humanities
Department of English
National University of Modern Languages,
Islamabad

Please note that the information given in the following will be kept strictly confidential to all intents and purposes.

Name: _____
Gender: _____
Age: _____
Region of birth: _____
Tribe: _____

Educational Background:

Primary _____ City _____
Secondary _____ City _____
Matriculation _____ City _____
Intermediate _____ City _____
Higher Education _____ City _____

Family Background:

Father's profession _____
Father's average monthly income _____
Mother's profession _____
Mother's average monthly income _____
Number of siblings _____
Number of siblings with a Higher Education degree _____

Q 1. For how long have you been in use of English language?
_____

Q 2. What language(s) do you use at your home?
_____

Q 3. What language(s) do you use to communicate with members of your extended family?
_____

Q 4. What language(s) do you use to communicate in the setting of your neighbourhood?
_____

Q 5. What language(s) do you use to communicate with friends?
_____

Q 6. What language(s) do you use to communicate in the educational setting?
_____

Q 7. How would you rate your motivation to communicate in English language?
_____

ANNEXURE II

Reading Passages

The North Wind and the Sun

The North Wind and the Sun were disputing which was the stronger, when a traveler came along wrapped in a warm cloak. They agreed that the one who first succeeded in making the traveler take his cloak off should be considered stronger than the other. Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveler fold his cloak around him; and at last the North Wind gave up the attempt. Then the Sun shined out warmly, and immediately the traveler took off his cloak. And so the North Wind was obliged to confess that the Sun was the stronger of the two.

The Boy who cried Wolf

There was once a poor shepherd boy who used to watch his flocks in the fields next to a dark forest near the foot of a mountain. One hot afternoon, he thought up a good plan to get some company for himself and also have a little fun. Raising his fist in the air, he ran down to the village shouting "Wolf, Wolf." As soon as they heard him, the villagers all rushed from their homes, full of concern for his safety, and two of his cousins even stayed with him for a short while. This gave the boy so much pleasure that a few days later he tried exactly the same trick again, and once more he was successful. However, not long after, a wolf that had just escaped from the zoo was looking for a change from its usual diet of chicken and duck. So, overcoming its fear of being shot, it actually did come out from the forest and began to threaten the sheep. Racing down to the village, the boy of course cried out even louder than before. Unfortunately, as all the villagers were convinced that he was trying to fool them a third time, they told him, "Go away and don't bother us again." And so the wolf had a feast.

The Tiger and the Mouse

A tiger and a mouse were walking in a field when they saw a big lump of cheese lying on the ground. The mouse said: "Please, tiger, let me have it. You don't even like cheese. Be kind and find something else to eat." But the tiger put his paw on the cheese and said: "It's mine! And if you don't go I'll eat you too." The mouse was very sad and went away.

The tiger tried to swallow all of the cheese at once but it got stuck in his throat and whatever he tried to do he could not move it.

After a while, a dog came along and the tiger asked it for help. "There is nothing I can do." said the dog and continued on his way. Then, a frog hopped along and the tiger asked it for help. "There is nothing I can do." said the frog and hopped away.

Finally, the tiger went to where the mouse lived. She lay in her bed in a hole which she had dug in the ground. "Please help me," said the tiger. "The cheese is stuck in my throat and I cannot remove it." "You are a very bad animal," said the mouse. "You wouldn't let me have the cheese, but I'll help you nonetheless. Open your mouth and let me jump in. I'll nibble at the cheese until it is small enough to fall down your throat."

The tiger opened his mouth, the mouse jumped in and began nibbling at the cheese. The tiger thought: "I really am very hungry..."