Language Policy and Localization in Pakistan: Proposal for a Paradigmatic Shift

Tariq Rahman.

Abstract

This paper examines the present language policy of Pakistan and its consequences for the indigenous languages of the country. It then relates this to efforts at localization---creating computer software in the languages of the country---and argues that all such efforts have been power-oriented. This means that only those languages have been selected for localization which are used in the domains of power---government, bureaucracy, judiciary, military, commerce, media, education, research etc---thus further strengthening them vis a vis the marginalized languages of the people. It is therefore argued that the efforts at localization should be rights-based i.e. all language communities should be considered equal and their languages should be localized not because of their present use in the domains of power but because they too should be strengthened by being put to such use.

1. Introduction

Pakistan is a country with at least six major languages and 58 minor ones (see Annexure-A). The national language, Urdu, has over 11 millions mother-tongue speakers while those who use it as a second language could well be more than 105 million (Grimes 2000). Those who may be considered barely literate in Urdu---if the rate of literacy is really 43.92 % as claimed in the census of 1998---are nearly 66 million. That is rather a large number compared to nearly 26 million (17.29 %) who, having passed the ten-year school system (matriculation), can presumably read and understand a little English (Census 2001). And yet computer programs, including e-mail and the internet, function in English in Pakistan and not even in Urdu let alone the other languages. This means that most Pakistanis are either excluded from the digital world or function in it as handicapped aliens. Indeed, most matriculates from Urdu-and Sindhi-medium schools have such rudimentary knowledge of English that they cannot carry out any meaningful interaction, especially that which would increase their knowledge or analytical skills, with the computer. Perhaps only the 4.38 % graduates (Census 2001) (about 6.5 millions) could do so if they could afford to buy computers. However, the mushroom growth of small shops, or 'computer cafes' as they are called, has made PCs available to most boys --- girls generally avoid such places because they are used by sex-starved youths to visit pornographic sites --- with a little cash to spare. However, these 'cafes' are in the urban, not the rural, areas and for any prolonged and meaningful use of the computer one must possess a PC or have access to one in one's place of work or study. As only the rich can afford personal machines and very few people go to educational institutions which have computers, the number of Pakistanis actually benefiting from the computer can only be a small percentage of the whole population.

The question then is whether it is cost-effective to create computer programs in Pakistani languages. This operation, or localization as it is called, is costly and time consuming. Should time and money be spent upon it or not? And if so, which should be the language or languages of localization? Urdu, the national language and the urban second language? or Punjabi, the language of 44.15 % Pakistanis? Or Sindhi, the language of 14.10 % people but, in addition to that, a language used in the education system, media, administration and judiciary in Sindh? Or

Pashto, a very important language spoken by 15.42 % people and also used in Afghanistan? These are important questions which can only be answered in the light of our values. That is why those with different values will have different answers.

This paper is divided in three sections. First, there is a section on past language policies and their consequences. This is needed in order to understand the linguistic and educational practices one witnesses in Pakistan today. Section-2 is on efforts at localization in Pakistan till date. After these historical sections there is an introspective, analytical but largely normative section on future localization efforts in Pakistan (Section-3) It is with this section, informed as it is with my personal values, that I do not expect much agreement. It is being presented here as the starting point of a debate and not as the only correct solution.

2. Language Policies and Their Consequence

Let us start with the major languages spoken in Pakistan. According to the 1998 census these are:

Box 1

Language	Percentage of Speakers	Number of Speakers
Punjabi	44.15	66,225,000
Pashto	15.42	23,130,000
Sindhi	14.10	21,150,000
Siraiki	10.53	15,795,000
Urdu	7.57	11,355,000
Balochi	3.57	5,355,000
Others	4.66	6,990,000

Source: Census 2001: Table 2.7. The population is assumed to be 150 million in 2003 as it was 132,352,000 in 1998 and the growth rate is 2.69 %.

Urdu, the national language, is a second language for 105 million people according to the *Ethnologue* (Grimes 2000). It is also spoken as a mother tongue by over 48 million people in India as well as a diaspora settled in the Arab states (mainly the Gulf), Mauritius, Britain, North America and the rest of the world (estimated to be over 60 million in the *Ethnologue*). Moreover, as ordinary spoken Hindi and Urdu are varieties of the same language, this is one of the big languages of the world. The following table gives an idea of its size in numbers.

Box 2

	Mother Tongue Speakers	Second Language Speakers
Hindi	366,000,000	487,000,000
Urdu	60,290,000	104,000,000
Total	426,290,000	591,000,000

Grand Total: Mother tongue + second language speakers of Urdu-Hindi = 1,017,290,000.
Source: Grimes 2000.

While this makes spoken Urdu-Hindi one of the great languages of the world --- only Chinese with 1,113,000,000 speakers has more speakers (Skutnabb-Kangas 200: Table 1.4) --- the script and the style divides the two languages. If one counts only mother-tongue speakers the numbers

go down considerably. Urdu is the mother tongue of only 7.57 % people in Pakistan (Census 2001: Table 2.7). It had very few mother tongue speakers before 1947 when Urdu-speaking immigrants (Mohajirs) came and settled down in large numbers in Pakistani, especially Sindhi, cities. Although it was used by educated people in Punjab, the North West Frontier Province and Kashmir because of British policies (Rahman 1996: Chapter 3), it was not considered a threat for the indigenous languages of the area. It was because of the linguistic and educational policies of the Pakistani political decision-makers that there is opposition to Urdu. These policies will be discussed below:

Another policy, though this time one which has never been openly declared, is to support English. This policy and its consequences will also be discussed below:

2.1 The Policy about Urdu

According to the constitution of Pakistan Urdu is the national language of the country and 'arrangements shall be made for its being used for official and other purposes within fifteen years' from 1973 when the constitution was made (Article 251 of the *Constitution of the Islamic Republic of Pakistan*).

However, Urdu is indeed the most widely understood language and the major medium of interaction in the urban areas of the country. Even ethnic activists agree that it could be a useful link language between different ethnic groups. However, it has been resisted because it has been patronized, often in insensitive ways, by the ruling elite of the Centre.

The story of this patronization is given in detail in several books (see Rahman 1996) but it always fell short of what the more ardent supporters of Urdu demanded (for their position see Abdullah 1976). In the beginning, since a very powerful section of the bureaucracy spoke Urdu as a mother-tongue (being Mohajirs), there was an element of cultural hegemony about the privileging of Urdu. The Mohajir elite's position, stated or implied, was that they were more cultured than the speakers of the indigenous languages of Pakistan. Hence it was only natural that Urdu should be used in place of the 'lesser' languages. This position, with which we are familiar through the works of linguists who oppose the arrogance of monolingual English speakers (see the following authors for such arrogance in other contexts Skutnabb-Kangas 2000; Crystal 2000: 84-88; Nettle and Romaine 2000) created much resentment against Urdu and, indeed, may be said to have infused the element of personal reaction to or antagonism against the speakers of Urdu in the first twenty years of Pakistan's existence.

The main reason for opposition to Urdu was, however, not merely linguistic nor even cultural. It was because Urdu was the symbol of the central rule of the Punjabi ruling elite that it was opposed in the provinces. The use of Urdu as an ethnic symbol is given in detail in Rahman (1996) but a brief recapitulation of major language movements may be useful.

The most significant consequence of the policy that Urdu would be the national language of Pakistan was its opposition by the Bengali intelligentsia or what the Pakistani sociologist Hamza Alavi calls the 'salariat' ---people who draw salaries from the state (or other employers) and who aspire for jobs (Alavi 1987). One explanation is that the Bengali salariat would have been at a great disadvantage if Urdu, rather than Bengali, would have been used in the lower domains of power (administration, judiciary, education, media, military etc). However, as English was the language of the higher domains of power and Bengali was a 'provincial' language, the real issue was not linguistic. It was that the Bengali salariat was deprived of its just share in power at the Centre and even in East Bengal where the most powerful and lucrative jobs were controlled by the West Pakistani bureaucracy and the military. Moreover, the Bengalis were conscious that money from the Eastern wing, from the export of jute and other products, was predominantly financing the development of West Pakistan or the army which, in turn, was West Pakistani- (or,

rather, Punjabi-) dominated (HBWI: 1982: Vol 6: 810-811; Jahan 1972). The language, Bengali, was a symbol of a consolidated Bengali identity in opposition to the West Pakistani identity. This symbol was used to 'imagine', or construct, a unified Bengali community as communities, such as nations, were constructed through print language and other unifying devices in Europe (Anderson 1983).

In Sindh, Balochistan, the N.W.F.P and South Western Punjab the languages used as identity symbols were Sindhi, Balochi and Brahvi, Pashto and Siraiki. The mobilization of people, especially the intelligentsia, as a pressure group which became possible through these languages made them powerful ethnic symbols (Rahman 1996). However, Urdu was not resented or opposed much except in Sindh where there were language riots in January 1971 and July 1972 (Ahmed 1992). But even in Sindh the crucial issue was of power. The Mohajirs were dominant in the urban areas and the rising Sindhi salariat resented this. The most evocative symbol to mobilize the community was language and it was this which was used.

Apart from the riots, people's real conduct remains pragmatic. The Mohajirs, knowing that they can get by without learning Sindhi, do not learn it except in rural areas where it is necessary for them. The Sindhis, again because they know they cannot get by without learning Urdu, do learn it (Rahman 2002: Chapter 10).

In short, the privileging of Urdu by the state has created ethnic opposition to it. However, as people learn languages for pragmatic reasons (Rahman 2002: 36), they are giving less importance to their languages and are learning Urdu. This phenomenon, sometimes called 'voluntary shift', is not really 'voluntary' as the case of the native Hawaiians, narrated by Daniel Nettle and Suzanne Romaine, illustrates (Nettle and Romaine 2000: 94-97). What happens is that market conditions are such that one's language becomes deficit on what Bierre Bourdieu, the French Sociologist, would call cultural 'capital' (Bourdieu 1991: 230-231). Instead of being an asset it becomes a liability. It prevents one from rising in society. In short, it is ghettoizing. Then, people become ashamed of it as the Punjabis, otherwise a powerful majority in Pakistan, are observed to be by the present author and others (for a survey of the attitude of Punjabi students towards their language see Mansoor 1993: 49-54). Or, even if language movements and ethnic pride does not make them ashamed of their languages, they do not want to teach them to their children because that would be overburdening the children with far too many languages. For instance, Sahibzada Abdul Qayyum Khan (1864-1937) reported in 1932 that the Pashtuns wanted their children to be instructed in Urdu rather than Pashto (LAD-F 12 October 1932: 132). And even this year (2003), the MMA government has chosen Urdu, not Pashto, as the language of the domains of power, including education, in the N.W.F.P. In Baluchistan too the same phenomenon was noticed. Balochi, Brahvi and Pashto were introduced as the compulsory medium of instruction in government schools in 1990 (LAD-Bal 21 June and 15 April 1990). The language activists enthusiastically prepared instructional material but on 8 November 1992, these languages were made optional and parents switched back to Urdu (Rahman 1996: 169). Such decisions amount to endangering the survival of minor languages and they devalue even major ones but they are precisely the kind of policies which have created what is often called 'Urdu imperialism' in Pakistan.

In short, the state's use of Urdu as a symbol of national integration has had two consequences. First, it has made Urdu the obvious force to be resisted by ethnic groups. This resistance makes them strengthen their languages by corpus planning (writing books, dictionaries, grammars, orthographies etc) and acquisition planning (teaching languages, pressurizing the state to each them, using them in the media) (for these terms see Cooper 1989). But second, it has jeopardized additive multilingualism recommended by UNESCO (2003) and, of course, by many eminent linguists and educationists (Edwards 1994) as Urdu spreads through schooling, media and urbanization, pragmatic pressures make the other Pakistani languages retreat. In short, the

consequence of privileging Urdu strengthens ethnicity while, at the same time and paradoxically, threatens linguistic and cultural diversity in the country.

2.2 The Policy About English

English was supposed to continue as the official language of Pakistan till such time that the national language (s) replaced it. However, this date came and went by as many other dates before it and English is as firmly entrenched in the domains of power in Pakistan as it was in 1947. The major reason for this is that this is the stated but not the real policy of the ruling elite in Pakistan. The real policy can be understood with reference to the elite's patronage of English in the name of efficiency, modernization and so on.

To begin with the Civil Service of Pakistan (CSP) was an Anglicized body of men who had moulded themselves in the tradition of the British. The officer corps of the armed forces, as Stephen P. Cohen suggests, was also Anglicized. It was, in his words, the 'British generation' which dominated the army till 1971 (Cohen 1994: 162-163). This generation and its values have been described by many army officers and one of the best descriptions comes from Major General A. O. Mitha who says that there were both Westernized and indigenized officers in the army upto the 1960s but the latter gradually gained dominance (Mitha 2003: 261-264). It is understandable that members of this elite had a stake in the continuation of English because it differentiated them from the masses; gave them a competitive edge over those with Urdu-medium or traditional (*madrassa*) education; and, above all, was the kind of cultural capital which had snob value and constituted a class-identity marker. What is less comprehensible is why members of these two elites, who now come increasingly from the lower-middle and middle classes which have studied in Urdu-medium schools (or schools which are called English-medium but teach mostly in Urdu), should also want to preserve, and indeed strengthen, the hegemony of English---a language which has always been instrumental in suppressing their class?

The answer lies in the fact that the elite has invested in a parallel system of elitist schooling of which the defining feature is teaching all subjects, other than Urdu, through the medium of English. This has created new generations, and ever increasing pools, of young people who have a direct stake in preserving English. All the arguments which applied to a small Anglicized elite of the early generation of Pakistan now applies to young aspirants who stand ready to enter the ranks of this elite. And their parents, themselves not at ease in English, have invested far too much in their children's education to seriously consider decreasing the cultural capital of English.

Moreover, most people think in terms of present-day realties which they may be critical of at some level but which they take as permanent facts of life. This makes them regard all change as utopian or suspiciously radical activities. To think of abolishing English is one such disquieting thoughts because, at least for the last century and a half, the people of this part of the world have taken the ascendancy of English for granted. In recent years with more young people from the affluent classes appearing in the British O' and A' level examinations; with the world-wide coverage of the BBC and the CNN; with globalization and the talk about English being a world language; with stories of young people emigrating all over the world armed with English---with all these things English is a commodity in more demand than ever before.

As mentioned earlier, the British colonial government and its successor Pakistani government has rationed out English. Its stated policy was to support Urdu but that was only to create a subordinate bureaucracy at low cost (vernacular-medium education costs less than English-medium education). It was also to keep an anti-ethnic, centrist, ideological symbol potent and vibrant in the country.

The armed forces, better organized than any other section of society, created cadet colleges from the nineteen fifties onwards. These schools, run on the lines of the elitist British public schools,

were subsidized by the state. In the 1960s when students from ordinary colleges, who came by and large from vernacular-medium schools, protested against these bastions of privilege, the government appointed a commission to investigate into their grievances. The report of this commission agreed that such schools violated the constitutional assurance that 'all citizens are equal before law' (Paragraph 15 under Right No. Vl of the 1962 Constitution). However, the Commission was also convinced that these schools would produce suitable candidates for filling elitist positions in the military and the civilian sectors of the country's services (GOP 1966: 18). This meant that the concern for equality was merely a legal nicety. And this, indeed, was what happened. Today the public schools are as well-entrenched in the educational system of the country as ever before.

They have been given large campuses and grants for building schools which are far superior to government vernacular-medium schools. Although most of their budget comes from tuition fees, the state also gives them grants, gifts and aid. The following chart helps to illustrate how the state if self supports elitist English medium schooling.

Box 3

DIFFERENCES IN COSTS IN MAJOR TYPES OF EDUCATIONAL INSTITUTIONS (in Pakistani rupees)

Institution	Average cost per student per year	Payer (s)	Cost to the state
Madrassas	5,714 (includes board and lodging)	Philanthropists + religious organizations	Very little as subsidy on computers, books etc in some *madrassas*
Urdu-medium Schools	2264.5 (only tuition)	State	2264.5
Elitist English medium schools	96,000---for 'A' level & 36,000 for other levels (only tuition)	Parents	None reported except subsidized land in some cantonments.
Cadet colleges/public schools	90,061 (tuition and all facilities).	Parents + state (average of 6 cadet colleges + 1 public school	14,171 (average of 5 cadet colleges only)

Source: Data obtained from several institutions.

In short, by supporting English through a parallel system of elitist schooling, Pakistan's ruling elite acts as an ally of the forces of globalization at least as far as the hegemony of English, which globalization promotes, is concerned. The major effect of this policy is to weaken the local languages and lower their status even in their home country. This, in turns, militates against linguistic and cultural diversity; weakens the 'have-nots' even further and increases poverty by concentrating the best paid job in the hands of the international elite and the English-using elite of the peripheries.

English, after all, is the language of the greatest power in the world. It spread as the language of the colonies of Britain in African and Asian countries (Brutt-Griffler 2002). Then, when Britain withdrew from its ex-colonies, English spread because of American economic power, American control of world media and international commerce. This has been condemned as linguistic imperialism by Phillipson (1992: 38-65) and Tove Skutnabb-Kangas calls English a 'Killer language' (2000: 46).

Globalization will increase the power of English because it will open up more jobs for those who know it. These jobs will be controlled by multinationals which are dominated by the U.S.A. They are also controlled by the international bureaucracy---United Nations, World Bank, IMF, donor agencies etc---which has started operating increasingly in 'English'. This will increase the demand for English schooling which will increase the pressure on all the languages of the world---especially the neglected indigenous languages not taught in schools or used in good jobs.

2.3 The Policy About Indigenous Languages

According to the constitution 'Without prejudice to the National language, a Provincial Assembly may by law prescribe measures for the teaching, promotion and use of a provincial language in addition to the national language' (Article 251). However, the only provincial language which is used in education as well as in the lower administration and judiciary is Sindhi. Sindhi was used in Sindh ever since the British conquest and its use, as its supporters complain, is now less in the cities (especially Karachi) than it was in British days (Rahman 1996: Chapter 7). The only other language used by some schools upto class-5 and in the *madrassas* is Pashto. Except for these language, and in these restricted domains, Pakistan's indigenous languages are not used as media of instruction on for adult literacy in any part of Pakistan.

As movements for the preservation of minor (or weaker) languages in Europe tell us, if a child is told that his or her language is inferior, the message being conveyed is that he/she is inferior. In short, one is giving a negative image to a child by telling him or her that the 'cultural capital' they possess is not capital at all but a stigma and a handicap. This makes the child reject an aspect, and an essential one at that, of his or her legacy, history, culture and identity. What is created is 'culture shame' ---being ashamed of one's own true identity.

Incidentally, the poor and less powerful classes, gender and communities have always been ashamed of aspects of their identity. In South Asia, the caste system forced manual workers to live miserable lives. This was unjust enough but the worst form of injustice is perpetrated by the fact that the lower castes or classes (*ajlaf, kammis,* outcastes, Sudras etc) not only accept lower social status but look down upon people lower in the social scale and even upon themselves. That is why when people became literate and rose in affluence and power, they left their communities and even started using names of groups with higher social respect. Hence, 'the number of Shaikhs and the other categories' ---Syed, Mughal and Pathan---increased phenomenally, while the occupational "caste" groups registered a sharp decline' (Ahmad, R. 1981: 115).

Moreover, there are many literary works in Urdu and other languages---not to mention one's own observation---showing how embarrassed the poor are by their houses, their clothes, their food, their means of transportation and, of course, their languages. In short, the reality constructed by the rich and the poor alike conspires to degrade, embarrass and oppress the less powerful, the less affluent, the less gifted of the human race. This relates to language-shame---being embarrassed about one's language---and hence to possible language death.

The year 2000 saw three excellent books on language death. David Crystal's, *Language Death*; Daniel Nettle and Suzanne Romaine's *Vanishing Voices* and Tove Skutnabb-Kangas's, *Linguistic Genocide in Education or Worldwide Diversity and Human Rights.* These books have made linguists conscious that, with the standardization created by the modern state and the corporate sector, the smaller languages of the world are dying. Either the speakers die or, which is more often the case, they voluntarily shift to a powerful language which helps them survive but as members of another human group rather than their own. The question is whether these threatened languages can be saved from extinction? This question has been answered, with reference to some cases by Joshua A. Fishman. However, Fishman concludes that they can only be saved 'by following careful strategies that focus on priorities and on strong linkages to them, and only if the

true complexity of local human identity, linguistic competence and global interdependence are fully recognised' (Fishman 2001: 481).

In Pakistan, as brought out earlier, the linguistic hierarchy is as follows: English, Urdu and local language. In the N.W.F.P and Sindh, however, Pashto and Sindhi are seen as identity markers and are spoken informally. In Punjab, unfortunately, there is widespread culture-shame about Punjabi. Parents, teachers and the peer group combine to embarrass students about this language. In all of the elitist English-medium schools the author visited there were policies forbidding students from speaking it. If anyone spoke Punjabi he or she was called '*Paendu'* (rustic, village yokel) and made fun of. Many educated parents speak Urdu rather than Punjabi with their children.

Pakistan T.V plays use the term 'Urdu-medium' for lack of sophistication. The children of elitist English-medium schools are indifferent to Urdu and claim to be completely bored by its literature. They are proud to claim lack of competence in the subject even when they get 'A' grades in the O' and A' level examinations. They read only English books and not Urdu ones nor those in other languages. Indeed, the other languages are so low in prestige that education in them does not count as education at all.

These attitudes, being the opposite of the ones Fishman prescribes, are having a squeezing effect on Pakistani languages. Urdu is safe because of the huge pool of people very proficient in it and especially because it is used in lower level jobs, the media, education, courts, commerce and other domains in Pakistan. Punjabi is a huge language and will survive despite culture shame and neglect. It is used in the Indian Punjab in many domains of power and, what is even more significant, it is the language of songs, jokes, intimacy and informality in both Pakistan and India. This makes it the language of private pleasure and if so many people use it in this manner, it is not in real danger.

Sindhi, and Pashto are both big languages and their speakers are proud of them. Sindhi is also used in the domains of power and is the major language of education in rural Sindh. Pashto is not a major language of education nor is it used in the domains of power in Pakistan. However, its speakers see it as an identity marker and it is used in some domains of power in Afghanistan. It too will survive though Pakistani city Pashto is now much adulterated with Urdu words. Educated Pashtuns often code-switch between Pashto and Urdu or English. Thus, the language is under some pressure.

Balochi and Brahvi are small languages under much pressure from Urdu. However, there is awareness among educated Balochs that their languages must be preserved. As they are not used in the domains of power they will survive as informal languages in the private domain. However, the city varieties of these languages will become much Urdufied.

It is the over fifty small languages of Pakistan (Annexure A), mostly in Northern Pakistan, which are under tremendous pressure. The Karakorum Highway which has linked these areas to the plains has put much pressure on these languages. The author visited Gilgit and Hunza in August 2002 and met local language activists among others. They all agree that their languages should be preserved but they are so appreciative of the advantages of the road that they accept the threat to their languages with equanimity. Urdu and English words have already entrenched themselves in Shina and Burushaski and, as people emigrate to the cities, they are shifting to Urdu. Even in the city of Karachi the Gujrati language is being abandoned, at least in the written form, as young people seek to be literate in Urdu and English---the languages used in the domains of power.

In short, the smaller languages of Pakistan are under threat and any policy which can help them cope with the dangers of internal linguistic pressure and globalization should be welcome.

3. Localization in Urdu

Localization, or technical localization, is merely the translation of programmes originally written in English into other languages. In Pakistan, for instance, programmes have been developed in order to use Urdu in place of English in Windows. The history of the creation of Urdu software is inspiring because it was initially seen as an exercise in misplaced nationalistic zeal---Urdu being the national language.

Urdu letters do not follow each other without changing shape. They adopt several shapes depending whether they are in the word-initial, medial or terminal positions. Moreover they do not begin at the same height. Their height (*Kursi*) varies according to the word they are used in. Thus the computer had to be fed, as in logoraphic systems, with ligatures giving different combinations of betters. Such a programme, not being alphabetical, occupied much space. The first such system was developed by Ahmed Mirza Jameel, proprietor of the Elite Publishers (Karachi).

He saw the Chinese characters being typeset in Singapore in 1979 and got the idea of using this kind of system for Urdu. He spoke to the sales manager of the firm in Singapore and the firm agreed to create a specimen of Urdu which was exhibited in July 1980 in Birmingham. The work of selecting the corpus was accomplished by Matlub ul Hasan Sayyid while their ligatures were determined by Ahmed Mirza Jameel. In six months he created 16,000 ligatures which could create 250,000 words of Urdu.

This was called Nuri Nastaliq and was exhibited in Urdu Science College in August 1980. It was adopted by the Jang Group of newspapers which started publishing their newspapers in it. It was also enthusiastically welcomed by Dr Ishtiaq Hussian Qureshi, Chairman of the Muqtadra, in 1980 (Jameel 2002: 8).

Later a number of softwares---*Shahkar, Surkhab, Nastaliq, Nizami* were created. The last mentioned was created by the Pakistan Data Management Services (PDMS) Karachi, established in Karachi in 1978, and it was installed by the National Language Authority (Maqtadra Qaumi Zaban)---an institution specifically meant for promoting the use of Urdu in Pakistan---in 1995. The PDMS has also created *Mahir* software which works with the latest version of Windows and processes both Urdu and Sindhi (Hisam 2002).

The second wave of development came in 1998 when FAST, a private university excelling in computer studies in Lahore, organized the National Urdu Computer Seminar on 12 September 1998 in which it was resolved that the Urdu code plate would be standardized (Muqtadra 2002a: 87). The representatives of the Muqtadra were Aqeel Abbas Jafri and Dr. Atash Durrani who later standardized the code plate for Urdu. Dr. Sarmad Hussain, a prominent computational linguist from FAST, carried out linguistic research which fed into the resolution of technical issues. Dr. Mohammad Afzal, also present at the meeting, later developed a programme which was supported by Dr. Atta ur Rahman, Minister of Science and Technology, in General Pervez Musharraf's government from 1999-2002.

Among other things Dr Afzal and his associates contributed towards the standardization of Urdu computerization (see his account Afzal 2002). Dr. Sarmad and his students' research on Urdu---see Muqtadra 2002a and 2003---has provided insights into the processing and use of Urdu for computerization. A number of other people, such as Tahir Mufti, have also contributed in this development (see Muqtadra 2002). Computer-assisted translation from English to Urdu has been made possible by Tafseer Ahmed (Ahmed 2002).

The Muqtadra, headed by Professor Fateh Mohammad Malik, became very active in localization in Urdu. Dr. Atash Durrani became the in charge of this section and, according to him, exhibited the first code plate based on the American Standard Code International on 05 June 1999 at the

Pakistan Science Academy in Islamabad (see *Muqtadra* 2002: 87). At present this section is being supervised by Aqeel Abbas Jafri who has much expertise in using Urdu in the computer. Standards for e-mail and other procedures were established over the years and Urdu can now be processed conveniently. The new identity cards made by the Government of Pakistan are now made by computer programmes functioning in Urdu. In December 1999 a new keyboard, compatible with the Urdu programmes, was also developed.

According to Dr. Atash Durrani, he met Ahmed Abdullah in charge of Microsoft Dubai office, in software competition (ITCN Asia 2000 Exhibition) in March 2000 in Karachi (Also see Muqtadra 2002: 90-92). He persuaded Abdullah to include changes for Urdu in Unicode-4 (2003). The Unicode is basically for the Arabic script *naskh* which, according to Durrani, needs less positions than the *nastaliq* script in which Urdu is written. A completely new letter-based, user-friendly software is now being developed (Durrani. Int. 2003). Also, Atash Durani is translating and standardizing computer terms which are presently available in Arabic (Durrani. Int. 2003). Urdu websites are available (Jafri 2002), though the official website of Pakistan is in English. Softwares to process Sindhi are being used but there is little development in Punjabi, Pashto, Balochi and other languages. This, however, is now technically possible as these languages are all written in variants of the *naskh* and the *nastaliq* scripts. However, to create programmes in all languages of Pakistan a new policy of localization would be required. It is to this that we turn now.

4. The Desiderated Paradigmatic Shift in the policy for Localization

Pakistan should not rest content with localization in Urdu alone. We should go in for what Kenneth Keniston, Andrew W. Mellon Professor of Human Development at MIT and one who has written on localization and its relation to language and culture, calls ‘cultural localization’. In this ‘software written in one culture is adopted to the needs and outlooks of another’ (Keniston 1997: 1). This is important because some assumptions and values do always go in the creation of computer programmes. Erran Carmel, a writer on software development, argues that most of those who work on software development belong to the ‘hacker’ sub-culture. The ‘hackers’ are rebellious, anti-authoritarian, highly individualistic and talented people who detest tradition, hierarchy and family values. Accordingly, programmes they make reflect a high degree of individualism, irreverence, informality and egalitarianism. (Carmel 1996). These values are often resisted by other societies and Keniston has given many examples of this resistance from all over the world.

In Pakistan, although only one concern has been expressed---the easy availability of pornography on the internet---there are other issues also. The internet promotes a culture of pseudo-egalitarianism and informality which actually breaks established norms of politeness in Pakistani society. First, there is the implied atmosphere of irreverence for titles, spellings and naming patterns in the way e-mail addresses are made, chatting is conducted and messages are sent. For instance, although Pakistani norms of politeness insist on the use of titles or honorifics with the name, the internet promotes just the opposite as the norm. This is already being done from a position of power by a small highly westernized elite which promotes forms of address which are against Pakistani norms of politeness (Rahman 1999: Chapter 10). The internet also promotes the same values and, since it appears modern, it impresses its users to condemn traditional forms of behaviour.

The internet also promotes the use of contractions which, in a country where only a very tiny elite knows the standard British or American spellings, makes young people regard the standard as nothing but old fashioned legacies of the older generation. Then, because most programmes are American, the computer-literate young people tend to be excessively impressed by American values such as individualism, capitalism, market economy and the fragmentation of relationships.

This creates the kind of reaction which Benjamin Barber mentions in *Jihad versus Mc World* (1995). In Pakistan this reaction takes the form of Islamist revivalism---as that term is defined by Qasim Zaman (2002)---which make young people educated in secular institutions reject modernist values while aspiring to change the world through modern technology. This means that the Islamists emphasize the use of the computer though they reject and resist the values and discourses of the world which created it. Indeed, knowing what a power-giving device it is, they use it quite as much as the Americanized section of the society. Thus, quite literally at times, the reaction of those who are appalled and dismayed by the American fashions and values displayed by the affluent young, becomes the response of *jihad*.

In short, if true cultural localization takes place some of these objections can be met. However, one problem can never be overcome. It is that computers create the illusion of speed and power. They are like magic. They give the illusion of immense power and breathtaking speed at the tips of one's fingers. This creates a kind of 'hacker' culture among the digerati in Pakistan. They become impatient with all the processes of creating knowledge, beauty and relationships which traditional methods entailed. This visibly increases the gap between the older and the younger generation and increases the tendency to scoff at slow arts like writing letters. Whether it will decrease the capacity to read, write and create art---all slow processes—cannot be determined at this stage. But the fact remains that a fundamental change has occurred in the perception of knowledge in Pakistan.

Whereas traditionally knowledge was seen as part of civilized behaviour, it is now seen as information and skill. Whereas it was necessary for a learned, or even an ordinarily educated, man to know some history and literature---quoting or at least appreciating the masters of Urdu and Persian poetry was considered necessary fifty years ago---it is no longer necessary. Indeed, the digerati place a higher value on skills---computer skills, skills of persuasion, advocacy, 'selling' etc---than on facts, analysis, literary and artistic appreciation and so on.

It is not true to say that people were fond of reading books in the past and now they are not. What may be true is that the computer takes away the time of the intellectually curious in such a way that they read less books than they would have had it not been there. However, this assertion has not been tested in any manner and may be taken us the subjective opinion of the present author.

Whatever the problems associated with the computer, it is necessary to use it in Pakistan. So far the basis for its use is elitist power. It is proposed that the new basis should be peoples' power. This needs explanation.

Power is that which creates the possibility of obtaining tangible or intangible gratification (Rahman 1996: 8). Tangible gratifications are consumer and producer goods; intangible ones are prestige, popularity, the dissemination of ones' ideas, control over others etc. When computer programmes are in English they increase the power of the elite. They also save money which, again, strengthens the ruling elite as it invests this money in other power projects such as strengthening the armed forces, the bureaucracy and so on. It also strengthens the power of the elite of the Centre---America and the West are the 'Centre' in this case and Pakistan the periphery---which exports copyright computer programmes, disseminates its language and cultural values and control all matters to do with the computerization of a society. In short, the use of English in the computers is an elitist project in Pakistan.

Localization in Urdu is a step for ward towards increasing the power base of the people. Initially, however, the investment will not appear to be cost-effective in terms of pecuniary calculations. At the moment the people who are spearheading the localization programmes in Urdu in Pakistan use English also. However, if the government actually starts using computers in Urdu-medium schools, it can really benefit a very large number of people. In these schools neither students nor teachers know enough Urdu to use the computer even if it is provided to them.

The next step should be localization in the other major languages of Pakistan. This will appear as a waste of money to begin with. After all, anyone who is literate can operate in Urdu in Pakistan though not in English. The rationale for this proposal is psychological and cultural more than pecuniary or practical. Culturally appropriate computer programmes in the indigenous languages of Pakistan will support and strengthen these languages. They will bring them more prestige and may, perhaps, encourage people to feel that they too can be used in modern domains.

The major Pakistani languages are too large to be endangered. However, they need to be given more prestige to take their rightful role in the domains of power. It may, therefore, be pertinent to repeat the six factors outlined by David Crystal for the endangered languages. These are:

1. An endangered language will progress if its speakers increase their prestige within the dominant community.
2. An endangered language will progress if its speakers increase their wealth relative to the dominant community.
3. An endangered language will progress if its speakers increase their legitimate power in the eyes of the dominant community.
4. An endangered language will progress if its speakers have a strong presence in the educational system.
5. An endangered language will progress if its speakers can write their language down.
6. An endangered language will progress if its speakers can make use of electronic technology (Crystal 2000: Chapter 5).

The last is especially relevant in the context of localization which we have been describing.

Although the candidates for localization, after Urdu, should be the major languages of Pakistan (Greater Punjabi [i.e. Siraiki, Hindko etc], Pashto, Sindhi, Balochi and Brahvi). However, it is the smaller languages, the ones which may be endangered, which will benefit much from localization. Besides making them more prestigious and enabling people to interact with them, one can think of practical situations in which e-mail, information CDs and web pages in minor languages in far flung areas may be useful.

Case-1: The Fishermen of Balochistan and Sindh

These fishermen living on the coastal lines of Pakistan often venture out when storms and tidal waves are expected. They also become prisoners of India when they stray in Indian waters. If computers are installed in the village schools, post offices and other public places they can be warned of a coming natural disaster. They can also be educated about straying into alien waters and, should they do so, what procedure they should adopt. In this case, the additional benefit can be that the school children, who read the e-mails in their own language and pass on the message to the fishermen, will develop a positive feeling for their language.

Case-2 Medical Help in Far flung areas

Supplementing the radio and T.V, the computer can also be used to give information about basic health issues in far-flung areas especially those which become snowbound during the winter. This information, in the local languages, should be on CDs and also on the web pages. As in Case-1, the computers should be located in prominent public places in villages and small towns.

Case-3 Advocacy Through the Computer

People can be made aware of women's rights, children's rights, AIDS, family planning in their local languages through the computer. The novelty of using their own language through this new technology, the computer, will tend to disseminate these new ideas and make them more pervasive than they are at present.

Case-4 Literacy for Children and Adults

Lessons in the local language as a bridge to the link language (which may be Urdu) may be given in attractive computer games which may be used for children in the morning and adults in the evening. This will make children acquainted with their own languages before moving on to other languages.

In short, Pakistan needs a localization policy but it should be a policy which empowers the common people rather than the elite or the multi-national corporations. Such a policy will also serve to raise the prestige of the indigenous languages of the country and save them from being further marginalized in this age of computerization and globalization.

5. Conclusion

Pakistan's language policy has so far been in the interest of the elite. It has strengthened the English-using elite's hold over the most powerful and lucrative jobs in the state and the private sector. The policy of favouring Urdu has made ethnic groups express ethnicity in terms of opposition or resistance to Urdu. The policy of localization should not follow these lines. It should empower the masses rather than the elite. Although localization has begun in Urdu and Sindhi it should now be extended to the other languages of Pakistan. This will not be immediately cost-effective in pecuniary terms but it will be psychologically supportive of the identity and languages of the common people who will be able to preserve the positive aspects of their culture while undergoing modernization.

Annexure-A MINOR LANGUAGES OF PAKISTAN

The number of language listed for Pakistan is 69. This chart however, lists only 58 as the major languages are given in the text. The mutually intelligible varieties of Grater Punjabi (Siraiki, Hindko, Potohari and Pahari) have not been included in this list.

Language	Other Names	Where Spoken	Speakers	Source
Aer		Jikrio Goth around Deh 333, Hyderabad	200 in 1998	Grimes 2000
Badeshi	Badakhshi (variety of Persian)	Bishigram, Chail Valley (Swat, Kohistan)	Not known, maybe 400	Grimes 2000 Zaman 2002
Bagri	Bagria, Bagris, Baorias, Bahgri	Sindh and Punjab (nomadic between India and Pakistan)	200,000 (in 1998)	Grimes 2000
Balti	Baltistani, Sbalti	Baltistan	27,000-300,000	SSNP-2: 8 & Grimes 2000
Bashgali	Eastern Kativiri	Gobar, Rumbur Valley (Chitral)	3700-5100	SSNP-5: 134
Bateri	Bateri Kohistani Baterawal, Baterawal Kohistani	Indus Kohistan Batera village (East of Indus North of Besham)	30,000 (in 1992)	Breton 1997: 200; Grimes 2000
Bhaya		Kapri Goth near Khipro Mirpur Khas (Lower Sindh)	700 (in 1998)	Grimes 2000
Burushaski	Mishaski, Biltum, Werchikwar Khajuna	Hunza, Nagar, Yasin valleys (Northern areas)	55,000-60,000 (in 1981)	SSNP-2: 37 Grimes 2000
Chilisso	Chiliss, Galos	Koli, Palas, Jalkot Indus Kohistan	2000-3000 (in 1992)	Breton 1997: 200 & Grimes 2000
Dameli	Gudoji, Damia, Damedi, Damel	Damel Valley (Southern Chitral)	2000-5000 (in 1992)	SSNP-5: 11
Dehwari	Deghwari	Kalat, Mastung (Central Balochistan)	10,000-13,000 (in 1998)	Breton 1997: 200 & Grimes 2000
Dhatki	Dhati	Tharparkar, Sanghar (Sindh)	200,000 plus (in 1987)	Grimes 2000
Dogri	Punjabi, Pahari	Azad Kashmir	1 million?	Breton 1997: 200
Domaaki	Domaski, Doma	Mominabad (Hunza & Nagar)	300 plus (in 2002)	SSNP 2: 79; Grimes 2000; personal observation
Gawar-Bati	Narsati, Nurisati, Gowari, Aranduiwar,	Southern Chitral, Arandu, Kunar river	1500	SSNP-5: 156 Breton 1997: 200

	Satr, Gowar-bati	along Pakistan-Afghanistan border	(in 1992)	& Grimes 2000
Ghera	Sindhi Ghera, Bara	Hyderabad Sindh	10,000 (in 1998)	Grimes 2000
Goaria		Cities of Sindh	25,000 (in 1998)	Grimes 2000
Gowro	Gabaro, Gabar Khel (different from Gawri)	Indus Kohistan (on the eastern bank, Mahrin village)	200 (in 1990)	Breton 1997: 200 & Grimes 2000
Gujari	Gujari, Gojri, Gogri Kashmir Gujuri, Gujuri Rajasthani	Swat, Dir, Northern areas, Azad Kashmir	300,000-700,000 plus (in 1992)	SSNP-3: 96 & Grimes 2000
Gujrati	Gujrati	Karachi, other parts of Sindh	100,000	Grimes 2000
Gurgula	Marwari, Ghera (Lexical similarity to Ghera)	Karachi, cities of Sindh	35,000 (in 1998)	Grimes 2000
Hazargi	Hazara, Hezareh, Hezare'i (similar to Persian)	Quetta	220,000 (in 1998)	Grimes 2000
Jadgali	Jatgali, Jatki, Jat	Southern Balochistan and Southwest Sindh	100,000 (in 1998)	Grimes 2000
Jandavra	Jhandoria	Southern Sindh from Hyderabad to Mirpur Khas	5000 (in 1998)	Grimes 2000
Kabutra	Nat, Natra	Umarkot, Kunri, Nara Dhoro (Sindh)	1,000 (in 1998)	Grimes 2000
Kachchi	Cutch, Kachi	Karachi	50,000 (in 1998)	Grimes 2000
Kalami	Bashgharik, Dir Kohistani, Bashkarik, Diri, Kohistana, Dirwali, Kalami Kohistani, Gouri, Kohistani, Bashkari, Gawri, Garwi	Kalam (Swat) Dir Kohistan	60,000-70,000 (in 1995)	Baart 1999: 4
Kalasha	Bashgali, Kalashwar, Urtsuniwar, Kalashamon, Kalash	Kalash Valleys (Chitral) southern	2900-5700 (in 1992)	SSNP-5: 11
Kalkoti	None reported	Dir Kohistan in Kalkot village	6000 (in 2002)	Breton 1997: 200; Zaman 2002
Kamviri	Skekhani, Kamdeshi, Lamertiviri, Kamik	Chitral (southern end of Bashgal Valley)	2000 (in 1992)	SSNP-5: 143; Grimes 2000

Kashmiri	Keshuri	Kashmir & diaspora	105,000 (in 1993)	Breton 1997: 200; Grimes: 2000
Kati	Bashgali, Kativiri, Nuristani	(Chitral) Gobar Linkah Valleys	3700-5100 (in 1992)	Grimes 2000
Khetrani	None reported	Northeast Balochistan	Few thousand (in 1987)	Grimes 2000
Khowar	Chitrali, Qashqari, Arniya, Patu, Kohwar, Kashkara	Chitral, Northern areas, Ushu in northern Swat	250,000 plus (in 1993)	SSNP-5: 11 Breton 1997: 200; Grimes 2000
Kohistani	Indus Kohistani, Kalami, Dir Kohistani, Kohiste, Khili, Maiyon, Maiya, Shuthun, Mair	Indus Kohistan West bank of river	220,000 (in 1993)	Grimes 2000
Koli Kachi	Kachi, Koli, Kachi Koli	(Lower Sindh) around Towns of Tando Allahyar & Tando Adam	170,000 (in 1998)	Grimes 2000
Koli Parkari	Parkari (Lexical similarity with Marwari Bhil and Tharadari)	Lower Thar Desert Nagar Parkar	30,000 (in 1980)	Grimes 2000
Kundal Shahi		Neelam Valley, Azad Kashmir	500 (in 2003)	Baart and Rehman 2003
Lasi	Lassi	Las Bela District (south east Balochistan)	15,000 (in 1998)	Grimes 2000
Loarki		Sindh---various places	25,000 (in 1998)	Grimes 2000
Marwari (southern)	Rajasthani, Meghwar, jaiselmer, Marawar	South Punjab north of Dadu Nawabshah	220,000 (in 1998)	Grimes 2000
Memoni	Similarities to Sindhi and Gujrati	Karachi	Unknown	Grimes 2000
Od	Odki	Scattered in Sindh & south Punjab	50,000 (in 1998)	Grimes 2000
Ormuri	Buraki, Bargista	Kaniguram (south Waziristan) some in Afghanistan	3000?	SSNP-4: 54 Grimes 2000
Pashai		Refugees from Afghanistan	5000?	Breton 1997: 200
Persian	Farsi, Madaglashti Persian in Chitral Dari, Tajik, Badakhshi	Balochistan, Shishikoh Valley in Chitral, Quetta, Peshawar, etc.	2000-3000 (in 1992)	SSNP-5: 11 Grimes 2000

Phalura	Dangarik, Ashreti, Tangiri, Palula, Biyori, Phalulo	7 villages near Drosh, Chitral possibly 1 village in Dir Kohistan	8600 (in 1990)	SSNP-5: 11
Sansi	None reported (Lexical similarity with Urdu)	North-western Sindh	10,000 (in 1998)	Grimes 2000
Shina	Sina, Shinaki	Giligit, Kohistan, Baltistan	500,000	SSNP-2: 93
Sindhi Bhil	Bhil	Badin, Matla, Thatta (Sindh)	50,000 (in 1998)	Grimes 2000
Sochi	Dialect of Sansi with 83% lexical similarity.	Sindh- various places	100,000	Grimes 2000
Torwali	Kohistani, Bahrain Kohistani	Bahrain (Swat)	60,000	Breton 1997: 200; Lunsford 2001
Ushojo (Ushuji)	Upper part of Bishigram Valley in Swat	Chail Vally, Swat District	1000 (in 2002)	Zaman 2002
Vaghri	Vaghri Koli	Sindh (many places)	10,000 (in 1998)	Grimes 2000
Wadiyara	Wadiyare Koli	Between Mirpurkhas and Matli	180,000	Grimes 2000
Wakhi	Kheek, Kheekwar, Wakhani, Wakhigi, Wakhan	Northern ends of Hunza & Chitral	9,000 plus (in 1992)	SSNP-2: 61
Wanetsi	Tarino, Chalgari	Harnai (East of Quetta)	95,000 (in 1998)	SSNP-4: 51 Breton 1997: 200 Grimes 2000
Yidgha	Yidghah, Luthuhwar	Upper Lutkoh Valley (Western Chitral)	5000-6000 (in 1991)	SSNP-5: 11 Grimes 2000

REFERENCES

Abdullah, Syed. 1976. *Pakistan Mein Urdu ka Mas ala* [Urdu: The problem of Urdu in Pakistan] Lahore: Maktaba Khayaban-e-Adab.

Afzal, Mohammad. 2002. 'Urdu Zabita Sufha Ki Mayar Bandi: Loh ba Loh Ahwal'. In *Muqtadra* 2002: 25-32.

Ahmad, Rafiuddin. 1981. *The Bengali Muslims 1871-1906: A Quest for Identity* Delhi: Oxford University Press. This ed. 1988.

Ahmed, Feroze. 1992. 'The Language Question in Sindh'. In Zaidi Akbar S. 1992. *Regional Imbalances and the National Question in Pakistan* Lahore: Vanguard Books.

Ahmed, Tafsir. 2002. 'Urdu Machini Mutarajam ke Mojid Tafsir Ahmed'. Interview by Aleem Ahmad. In Muqtadra 2002: 42-46.

Alavi, Hamza. 1987. 'Politics of Ethnicity in India and Pakistan', *Pakistan Progressive* 9: 1 (Summer).

Anderson, Benedict 1983. *Imagined Communities: Reflections on the Origin and Spread of Nationalism.* London: Verso (revised edition) 19991.

Baart, Joan and Rehman, Khwaja A. 2003. 'The Language of the Kandal Shahi Qureshis in Azad Kashmir', Unpublished manuscript [I am grateful to the authors for showing it to me].

Barber, Benjamin. 1995. *Jihad Versus Mc World* New York: Times Books.

Bourdieu, Pierre. 1991. *Language and Symbolic Power* Cambridge: Polity Press.

Brutt-Griffler, Janina. 2002. *World English: A Study of Its Development* Clevedon: Multilingual Matters Ltd.

Breton, Roland J. L. 1997. *Atlas of the Languages and Ethnic Communities of South Asia.* New Delhi & London: Sage Publications.

Carmel, Erran. 1996. 'American Hegemony in Packaged software trade and the "Culture of Software", *The Information Society* 12: 4.

Cohen, Stephen P. 1994. *The Pakistan Army* Karachi: Oxford University Press.

Cooper, Robert L. 1989. *Language Planning and Social Change.* Cambridge: Cambridge University Press.

Crystal, David. 2000. *Language Death* Cambridge: Cambridge University Press.

Durrani, Atash. 2003b. *Pakistani Urdu: Mazeed Mubahise* [Pakistani Urdu: More Debates] Islamabad: Muqtadra Qaumi Zaban.

Durrani, Atash. Int. 2003. 'Interview of Dr. Atash Durrani with Tariq Rahman [the writer]', 14 Nov 2003, Muqtadra, Islamabad.

Edwards, John. 1994. *Multilingualism* London: Routledge.

Fishman, Joshua A. 2001. *Can Threatened Languages Be Saved?* Clevedon: Multilingual Matters Ltd.

GOP. 1966. *Report of the Commission on Student's Problems and Welfare and Problems* Islamabad : Ministry of Education, Government of Pakistan

Grimes, Barbara F (ed). 2000. 'Pakistan'. In *Ethnologue: Languages of the World. 14th Edition* Dallas, Texas; Summer Institute of Linguistics. pp, 588-598.

Hall, Jacqueline. 2001. *Convivencia In Catalonia: Languages Living together* Barcelona: Fundcio Jaume Bofill.

HBWI. 1982. *History of Bangladesh War of Independence.* Dhaka: Government of Bangladesh, Ministry of Information.

Hisam, Arif. 2002. 'Urdu Mahir: EK Ta'aruf'. In Muqtadra 2002: 47-49.

Jafri, Aqeel Abbas. 2002. 'Urdu Web Sites Ki Dunya'. In Muqtadra 2002: 71-74.

Jahan, Rounaq. 1972. *Pakistan: Failure in National Integration.* New York and London: Columbia University Press.

Jameel, Ahmad Mirza. 2002. 'Nuri Nastaleeq ki Kahani Ahmad Mirza Jameel ki zubani', Interview by Khan, Raziuddin and Siddiqui, Wajih Ahmed. In Muqtadra 2002: 4-13. Originally published in *Science Digest* [Karachi] 1983.

Keniston, Kenneth. 1997. 'Software Localization: Notes on Technology and Culture'. Working paper 26, program in Science, Technology, and Society, MIT, Cambridge, Massachusetts.

---------. 1998. 'Politics, Culture and Software', *Economic and Political Weekly* [Mumbai] 17 January.

LAD-Bal. Legislative Assimbly Debates of Baluchistan (dates and other details follow in the text)

LAD-F: Legislative Assembly Debates of the North-West Frontier Province (dates and other details follow in the text).

Lunsford, Wayne A. 2001. 'An Overview of Linguistic Structures in Torwali: A Language of Northern Pakistan', unpublished M.A. Thesis, The University of Texas, Arlington.

Mansoor, Sabiha. 1993. *Punjabi, Urdu, English in Pakistan: A Sociolinguistic Study.* Lahore: Vanguard.

Mitha, A. O. 2003. *Unlikely Beginnings: A Soldier's Life* Karachi: Oxford University Press.

Muqtadra. 2002. *Akhbar-e-Urdu: Urdu Software Number* (Jan-Feb 2002) Islamabad: Muqtadra Qaumi Zaban.

Muqtadra. 2002a. *Akhbar-e-Urdu* (June).

Muqtadra. 2003. *Akhbar-e-Urdu* (June).

Nettle, Daniel and Romaine, Suzanne. 2000. *Vanishing Voices: the Extinction of the World's Languages* New York: Oxford University Press.

Phillipson, Robert. 1992. *Linguistic Imperialism* London: Oxford University Press.

Rahman, Tariq. 1996. *Language and Polities in Pakistan* Karachi: Oxford University Press.

-------- 1999. *Language, Education and Culture* Karachi: Oxford University Press.

--------. 2002 *Language, Ideology and Power, Language Learning Among the Muslims of Pakistan and North India* Karachi: Oxford University Press.

Skutnabb-Kangas; Tove, 2000. *Linguistic Genocide In Education or Worldwide Diversity and Human Rights* London: Lawrence Erlbaum.

SSNP. 1992. *Sociolinguistic Survey of Northern Pakistan* 5 vols. Islamabad: National Institute of Pakistan Studies and Summer Institute of Linguistics.

UNESCO. 2003. *Education in a Multilingual World* Paris: UNESCO.

Zaman, Muhammad. 2002. *Report on a Language Survey Trip to the Bishigram Valley* [http://www.geocities.com/kcs_kalam/ushoji.html].

Zaman, Qasim. 2002. *Custodians of Change* : *The Ulema in Contemporary Islam* New Jersey: Princeton University Press.