Technology, which is a device that increases the ratio of output to the input, works for the language also as it does for any human production. The first technology applied to language was writing invented around 3500 BCE in Mesopotamia (modern Iraq). It made possible to enormously increase the reach of the language -i.e. the content in the language- in space and time. It also provided relative stability to language, which reduced variation. These added characteristics of the written language were necessary for trade, which was the cultural context for the emergence of writing. The idea of the language changed from being a tool of cooperative communication to that of record keeping to eliminate mistrust. From this, the ideology emerged that the written word is more trustworthy than the spoken.

The next major technology is the invention of woodblock printing in China developed to print language on paper around 650 CE. Its improvement into movable metal types around 1440 CE in Germany made copying of printed texts possible at a low cost and in less time, which in turn made their reach increase exponentially in space, physical and social. This ushered in the era of print capitalism (Anderson 1991), one aspect of which was production and dissemination of language materials as commodities of the market. The printed texts became the private property of printing establishments or individual authors. The content and the particular form of the language in which it is coded came to be owned by the producers of it while the abstract language remained the public domain. When the written language through print lent itself to be controlled by the institutions of the society such as school, media, courts, it was possible to shape the language according to their ideologies such as purism, precision (as in law or science).

When the audio recording and replay technology was improved to use electrical and magnetic devices in the early decades of the 20th century, the added characteristics of the written and printed language could be transferred to the spoken language. This did not bring about any new ideology to the language except that the ideologies such as purism and precision were difficult to carry out in the spoken language, as it was not controlled by societal institutions through their system of rewarding the adherents of their language ideology.

The latest in technology that bears on language is the digital technology, which equally applies to the spoken and the written language. While the earlier technologies moved from their use for non-linguistic content such as pictures and music to language, the digital technology moved from numbers to language. While writing and printing technologies represent the language unit, viz. the letters, directly, the digital technology converts language units, viz. letters and phones, into digits for processing. Digital technology gives enormous scope for editing while composing. The implication of this is that the characteristic of finality and permanence, which the earlier technologies gave to texts, turns out to be fragile in this technology. Digital technology is useful not only for composing new
language content, but also for copying and storing the old. It reduces drastically the time and cost for transmitting the materials globally. It takes away the control of language from social institutions and gives it back to individuals.

What this new technology is doing and can do to Tamil? The writing technology gave new documentation register and literary code to Tamil, as seen in the emergence of Sangam literature and contemporaneous Tamil Brahmi inscriptions of record. The printing technology stabilized the Tamil alphabet both in their graphic form (which was evolving over 2000 years) and number (the five grantha letters were added and three contextually dependent letters (caaarezutu) were dropped with the advent of this technology). The digital technology has brought, and is capable of bringing more, new effects on Tamil. Decontrolling of Tamil brings the written Tamil closer to the spoken Tamil with regard to the effects and gives legitimacy to this convergence. The societal institutions lose their commanding role in shaping Tamil. As anyone with a vocal cord could speak at will, any one with literacy skill and access to digital technology could write at will. Anyone can be a writer without vetting by a teacher or an editor. The spontaneous writing could be more effective on language than spontaneous speaking because the language as written at will by any and all individuals gets into the public domain accessible to any, unlike the language spoken.

It follows that there will be more language ideologies at play is shaping Tamil, which are subscribed to by the individuals; they will not be just the ones promoted, and penalized for non-compliance, by the elite in control of the societal institutions. Purism ideology is also prevalent among the individual practitioners of the new technology. Purism of Tamil includes elimination of loan words and acquired letters, avoidance of spoken forms in vocabulary and grammar and, to a lesser extent, reclaim of historically antedated grammatical constructions. This ideology is also enforced using the same digital technology on the writings of others with a different ideology in communally created content such as Wikipedia. Nevertheless, the multiplicity of ideologies in shaping Tamil cannot be excommunicated from this technology.

Any technology is not in itself and by itself an aid to modernize a language. It depends on its user, who decides what it is used for. The print technology helped not only the use of prose as a language of literature, but also helped recoding of the oral literature in the visual medium on paper. The books of folk literature printed exceeded numerically the books of modern fiction and poetry (Blackburn 2005) when print technology came into being in Tamil Nadu. So is the religious literature compared to the secular literature. The digital technology used for astrological predictions is in demand as it is for weather predictions. While technology cannot be appropriated for what is valued as modern, its potential for this task should not be wasted away.

An ideology that digital technology is capable of implementing on Tamil is parity of written and spoken Tamil and reduction of distance between them. I shall not go into discussing here the rationale for this ideology and its importance for the survival of Tamil as a modern language with vitality (Annamalai 2011a). There are many areas to implement this ideology. I shall mention some of them, many of which relate to teaching Tamil to learners of different backgrounds as to their exposure to Tamil before, during and after learning.
Inclusion of spoken Tamil in Tamil pedagogy is on the increase. It is an important part in the Tamil teaching programs designed for non-native adults outside Tamil Nadu and Jaffna, especially in the Universities in the U.S., where the goal of Tamil learning is as much oral communication as it is philological and literary inquiry. This extends to children of Tamil ethnicity, who have lost their heritage language and want to revive it, as in Mauritius. Their interest is communicative within the community as well as cultural and political for reasons of identity. The traditional Tamil language curriculum in schools under the rubric of learning the mother tongue as a minority in countries like Singapore focuses on literacy skills and introduction to literature. This is being modified in Singapore to include speaking of Tamil within the curriculum in order to make Tamil more relevant for students in their lives (Seethalakshmi). Like these students, the second generation Tamils of post-colonial diaspora has limited listening comprehension in Tamil and they want to add spoken skill to their Tamil competence. Even in a curriculum that focuses on the reading skill, reading modern fiction and magazines will be hard without the knowledge of spoken Tamil, where conversations between characters, jokes etc are written in this variety.

The basic need when spoken Tamil becomes part of the Tamil curriculum is identification of standard spoken Tamil, which is spoken in inter-dialect communicative situations by the schooled. To identify it empirically, we need a searchable database of spoken Tamil. Such a database could be built relatively easily using digital technology from dialogues in movies and television shows. This database is a necessary, if not sufficient, tool to compile the grammatical, lexical, semantic and phonetic parameters of the standard spoken Tamil. The data needs to be processed to sift out dialect and formal features, which are mixed up in the standard speech as well as the mixing of English in it; the phonetic data needs to be brushed up to upgrade the non-standard pronunciation found commonly in the public programs used to build the database. It should be possible to write algorithms to do these jobs mechanically. Pedagogy requires not speech as it, but as standardized. I shall not go here into discussing what the standardized spoken Tamil is (Annamalai 2011b).

The standard spoken Tamil data needs to be transcribed in Tamil script. The publically available Google tool for speech recognition and instant transcription needs to be improved substantially for Tamil. When this is developed, it should be possible to go into making popular, inexpensive tools that instantly convert the utterance of a student into a written sentence, and conversely a written sentence of spoken Tamil into an utterance. This will help the student recognize speech visually and aurally, which facilitates the recall of the language in the learning situation.

Converting speech into writing assumes a standard spelling system of the standard spoken Tamil. This is yet to be developed by linguists to be used in the pedagogical context to begin with. A fundamental principle of any spelling system is that it is not an exact phonetic transcription of speech, but a convention of writing from which speaking could be deduced with straightforward rules of correspondence. The spelling system of every language has such rules. In the case of Tamil, an additional requirement is that the spelling system of the spoken Tamil also serves as the base for the student to migrate to the conventional spelling of the written Tamil with straightforward rules. No such spelling system exists now. The way the spoken Tamil written is notoriously inconsistent between authors and in the same author at different places. The spelling system used by on Tamil teacher is consistent but it is not the same across teachers, though each is relatable. The spelling
system for spoken Tamil needs to be standardized urgently. I have developed a system as the starting point to initiate this process (Annamalai 2009). If the standardized spelling necessitates some additional letters in the Tamil alphabet, we need to get cultural acceptance of it. Then they will need to be provided in Unicode.

The other need is to relate the spoken and written Tamil at the lexical level with regard to the spelling of words. This should be bidirectional from the spoken to the written and from the written to the spoken. This tool will reduce the distance between the two by facilitating migration between the two. There are now tables available to relate the written to the spoken with general rules of deletion and change. They need to be fine tuned to cover complex relations, variations and exceptions and then algorithms are to be written so that one can get the spoken form from the written on any device, handheld or desktop, just like checking the meaning of a word. The converse of relating the spoken with the written is more difficult primarily because of the fact that one form of the spoken will relate to two of the written. A solution to this problem has to be found such as using the absence of one of the two possible forms in a built-in dictionary to reject it.

There is no dictionary of standard spoken Tamil available now. It is possible to compile one using its standardized spelling for the head entries followed by the written word in conventional spelling with gloss in English for learners who are not proficient in Tamil. The converse of it would be to have parallel head entries first in conventional spelling followed by spoken spelling. It is possible to produce mechanically one version of the dictionary from the other and rearrange the entries alphabetically. An alternative to this has the additional advantage of using the spoken input when referring to a dictionary. In this, a spoken word keyed in in its spelling will first identify its written equivalent, which will lead to its meaning in the digital dictionary. It should also be possible to speak the word a student, who is not competent in writing Tamil, hears an unknown word when watching a video or touring Tamil Nadu and wants to know its meaning. A digital dictionary should be able to point out the meaning either directly from the spoken cue or through the written word coded in the dictionary by automatically linking the spoken word to the written form.

Technology is available to do the above things if the language ideology with regard to spoken Tamil mentioned above is a driving force. Using digital technology for the spoken Tamil is not just for doing research on it. It is also for teaching Tamil effectively and attractively. The hope is that it will attract more students to learn Tamil, who are now put off because of the perceived difficulty of learning separately the two varieties of Tamil. It is the desire of all of us to mitigate the difficulties of learning Tamil by the younger generation of Tamils and also the non-native speakers of Tamil.

References


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