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# TOK PLES IN TEXTING & SOCIAL NETWORKING: PNG 2010

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**ABSTRACT**

This paper presents the results of a four-month study of the impact that new technologies, such as the Internet, mobile phones and SMS technology have had on the indigenous languages of Papua New Guinea. The study, conducted by UPNG linguistics students, documented some recent changes in the researchers' own languages. The study aimed to explain language change within the theoretical framework of dialectical linguistics (presented in the previous paper), and to compile a baseline lexicon of neologisms in these languages.

The resulting publication by the University Bookshop was presented to the conference (book contents and cover pages are presented in the Appendix).

**Key words**: SMS, texting, jargon, language change, acronyms, Internet, new technologies, mobile /cell phones, Tok Pisin, Tok Ples, dialectical linguistics

## INTRODUCTION

Papua New Guinea's 841 listed indigenous languages, of which Papuan make up about 78% and Melanesian – roughly 20% (SIL http://www.ethnologue.com/show_country.asp?name=PG ) are bubbling away in the melting pot of our 'Flat World' reality, 'spiced up' with some Philippines, Chinese and Indian flavors. Most ingredients of this rich linguistic 'soup' are melting, and some have dissolved in others without a trace; a few, however, have coalesced into solid structures. Powerful socio-economic and political forces are centrifuging the diverse cultures into a composite national identity, held together by three lingua francas – English, Motu and Tok Pisin (the 'baby' of the union between English and the indigenous languages, with an admixture of other European 'transplants,' such as German and Portuguese).

In contrast to our previous study[1] which had looked at the impact of mobile phones on UPNG students' use of English and Tok Pisin, this project attempted to describe linguistic changes occurring in the Tok Ples languages of Papua New Guinea under the influence of new technologies. These developments were viewed as part of language change sweeping across all continents in our new, flat, 'online' world.

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[1] Temple et al.: 2009

**Theoretical framework of our analysis (past and present)**

The theoretical framework of our analysis rests on the basic principles of dialectics and dialectical linguistics, outlined below:

- The whole is more than the sum of its parts. Language is more than the sum of its 'units and rules.'

- Language is the social tool for constructing and communicating complex meanings.

- The mechanism of the language tool consists of conventional word-meanings and rules for putting them together to form complex/ composite meanings (phrases and sentences, the 'flesh' of thoughts).

- Word-meanings are the smallest units of language – they retain all of its psychological (meaning), physical (sound structures), social (communication), and historical (existing in time) properties.

- A word is a union of thought and sound. The 'qualitative distinction between sensation and thought is the presence in the latter of a generalised reflection of reality, which is also the essence of word meaning: and consequently that meaning is an act of thought in the full sense of the term' (Vygotsky: 1934).

- A word without meaning is an empty sound; meaning, therefore, is a criterion of 'word,' its indispensable component (Ibid.).

- The fusion of thought and sound in word meaning is the product of the historical development of human consciousness (individual, as well as collective).

- Word-meanings are fluid – they grow, change, and develop. In the historical evolution of language, the very structure of meaning and its psychological nature also change:

- 'From primitive generalisations, verbal thought rises to the most abstract concepts. It is not merely the content of a word that changes, but the way in which reality is generalised and reflected in a word' (Ibid.) [we see this, for example, in the grammaticalization process].

- Three principles of all human understanding (and all generalization): association of ideas by resemblance, contiguity in space & time, and cause/ effect (Hume: 1748).

- Every word-meaning is a generalization in the collective mind of the speech community; the meaning of every sentence is a generalization in a speaker's individual mind.

- In order to form a concept (generalization), we must be able not only to connect, but also to abstract, to single out its characteristic elements, and to view them separately from the 'totality of the concrete experience in which they are embedded' (Vygotsky: 1934).

- Speakers use the words, each with its own socially assigned meaning, to create sentences (thoughts), just as artists use tiles of different colors to create mosaics. How the tiles are put together determines the overall image ('meaning' of the mosaic):
  Tiles acquire their meaning in the context of the other tiles in the mosaic (i.e., brown tiles may be the feathers of the birds, the arrows, or the table!); their true meaning is their *use* in the mosaic. Words acquire their true meaning in the nexus of the proposition (i.e., "What's your beef?")

- The whole is more than the sum of its parts; meaning of the mosaic is more than the sum of its tiles; the meaning of the proposition is, likewise, more than the sum of its words – it also depends on how they have been put together ('Paul eats fish' vs. 'Fish eats Paul'). Sentences (thoughts) are mosaics of composite meaning.

- Just as breathing is both inhalation and exhalation, thinking is both synthesis and analysis of ideas.

- To make a mosaic image, we must not only connect our tiles together into a meaningful pattern, but also describe, add enough detail to it. Similarly, when making a sentence, we must not only put words together into a basic meaningful structure (S/V/C), but also to add detail (description) to the major sentence constituents (Subject, Verb, and Compliment).

- We spin our verbal 'webs of significance' by putting word-meanings together into the nexus of the proposition (synthesis) and describing parts of the nexus by associating them with other ideas, based on some Resemblance, Contiguity, or Cause/ Effect relationship (analysis).

- In live communication, words and their meanings are relatively independent of each other (as in this exchange: You dog! – I love you, too!). Word meanings in use are so fluid, because ideas exist only in our minds. We all perceive the world's mosaics with our own eyes and ears, and we 'make sense' of them only in our own heads. Each mind's eye views the world from its own perspective; its clarity of vision depends on many factors, such as the level of one's cognitive development, experience, emotional /physical state, the context and circumstances of the exchange, etc.

- Speakers use the common social 'currency of thought exchange' (words of their language) to create the 'mosaic images' of their own ideas.

- Generalization is the matrix of universal grammar of verbal thought; it casts, constantly reshaping, the diverse forms and structures of all of the world's languages.

We use Language to communicate our ideas about the world we live in. Our world and our ideas about it are in constant flux, development and change, and so is the 'flesh' of our thoughts – language. New words enter the language, when novel concepts crystallize in our collective consciousness – when 'several

memories of the same thing produce finally … a single experience' (Aristotle: 300 B.C.).  It is in that sense that 'every word is already a generalisation' in the collective mind of the speech community.

## THE NATURE & SCOPE OF THE STUDY

This study of how new technologies have affected the Tok Ples languages of Papua New Guinea is a follow-up on the previous study of student texting lingo on the campuses of UPNG (Temple et al.: 2009). Instead of looking at linguistic change in English and Tok Pisin, the languages of the multiethnic university community, it focused on the developments in the Tok Ples languages of the researchers' wantok groups. It was conducted by eight final year Linguistics students in the Linguistics & Modern Languages Strand, UPNG,[2] with Olga Temple as supervisor.

## ISSUE

Significant changes in language use have been observed in Port Moresby since early 2007, when the use of mobile phones became ubiquitous in PNG. Morphological /lexical innovation and semantic shift have occurred in all the languages spoken on the university campus and beyond.

## HYPOTHESIS

UPNG students and their wantoks have created a "texting" lingo to meet their new communication needs which include (1) naming new concepts; (2) inventing a more economical way of communicating; (3) inventing an easier and faster way of communicating typed messages; (4) ensuring targeted messaging in code, incomprehensible to 'outsiders.'

## AIMS & OBJECTIVES

The study aimed to document and explain changes in researchers' own languages: Foe (Lin Berry),  Hiri Motu (Bobby Jack), Iduna (Charlotte Laudiwana), Loniu, a.k.a. Ndrokou (Nadia Lawes), Yil (Emmanuel Maipe),  Iatmul (Deborah Salle), Boiken (Filomina Sion), and Weri (Xavier Winnia). Olga Temple, with the help of native speakers, collected data on Dobu, Keapara, Kuanua, Mussau, Solos, & Taulil, bringing the number of the languages in this study up to fourteen.

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[2] Lin Berry, Bobby Jack, Charlotte Laudiwana,  Nadia Lawes,  Emmanuel Maipe,  Deborah Salle,  Filomina Sion and  Xavier Winnia, all of whom are speakers of different indigenous languages of Papua New Guinea

Study objectives included (1) publishing a baseline lexicon of neologisms in the fourteen languages, and (2) validating theoretical conjectures regarding language change[3] that guided us in our analysis.

Researchers worked with their own wantok communities to collect new words and phrases that people use to communicate through the new media of SMS and social networking sites (i.e., FB and YouTube), and to refer to new concepts in their everyday lives (new technologies, behaviors, etc.).

## METHODS OF DATA COLLECTION

In all, we examined the impact of mobile phone technology on the use of fourteen indigenous languages of Papua New Guinea amongst wantok communities, residing mostly in and around Port Moresby. Methods of data collection included:

- Observation of language use in the student community and amongst wantok groups;
- Harvesting data from popular social networking sites, such as FB and YouTube;
- Cross-Sectional Survey ('convenience sampling'): anonymous pre-tested questionnaires, designed to document Tok Ples texting lingo used amongst the UPNG student community and the various wantok groups. These were distributed to a representative sample of cell phone users in both UPNG campuses (Waigani and Taurama), as well as amongst the wider wantok communities (i.e., the researchers' villages).

The questionnaire was translated into Tok Pisin and all the respective languages, to facilitate the respondents' comprehension. It also included a selected list of common computer terms to be translated into each Tok Ples examined.

## FINDINGS

Our findings, based on questionnaire returns, include lists of words and phrases in fourteen indigenous languages of Papua New Guinea: Foe, Hiri Motu, Iduna, Loniu (a.k.a. Ndrokou), Yil, Iatmul, Boiken, Weri, Dobu, Keapara (Aroma dialect), Kuanua, Mussau, Solos, and Taulil. We also collected lists of selected computer terms, translated into the respective languages by the respondents to the questionnaire.

## DISCUSSION & GENERAL CONCLUSIONS

Our data on just fourteen of the hundreds of indigenous languages of Papua New Guinea provides a glimpse of the dynamic processes of linguistic change at work, reflective of the wider socio-economic, cultural and demographic changes in the bubbles of Port Moresby 'melting pot.'

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[3] Dialectical linguistics views generalization as the Rational Language Mechanism, driving much of linguistic change.

Mobile phones technology has clearly been embraced by all strata of the PNG society; in cities, as well as in the villages, most people use cell phones to communicate with family, friends and wantoks. In the two years since our 2009 study, Telikom has significantly expanded their wireless communication services, such as x'cess wireless phones and x'cess Internet modems. Together with Digicel, they are drivers of much of the ongoing social and cultural transformation of PNG society.

Our 2009 investigation focused mainly on English and Tok Pisin texting jargon, engendered by SMS. This cheap and effective technology provided a totally new, exclusive way of instant silent communication, particularly appreciated by the young and tech-savvy student community.

In our 2009 analysis of SMS lingo, we viewed it in the context of the universal principles of human cognition, arguing that UPNG student "texting" lingo was shaped by the students' generalizing minds and modified by the incentives and constraints of the SMS medium (Temple, et al.: 2009). The same universal principles of human understanding underlie, in our view, the diverse grammars of all human languages, including English, Tok Pisin, Boikin, Dobu, Foe, Hiri Motu, Iduna, Iatmul, Keapara, Kuanua, Loniu, Solos, Taulil, Weri and Yil that we examined in this study. Our findings, however, suggest that the Internet, mobile phones and, in particular, SMS technology have impacted Tok Ples languages differently from the way they did English and Tok Pisin. This is evident in that

- The average amount of data we collected in each of the thirteen Tok Ples languages we worked on is much shorter than the well over a thousand items in each list that we 'harvested' in 2009; respondents were often at a loss, when asked to write down the Tok Ples words they commonly use in texting, saying that they 'just use the ordinary words' which they would normally use when speaking (suggesting that they do not use any new texting lingo)
- Most of the words in the lists we obtained represent 'culture free' concepts of common everyday communication, sometimes (but not always) abbreviated – this is in sharp contrast to the thousands of acronyms and shorthand of Tok Pisin and English SMS lingo that we obtained in 2009
- All of the word lists contain a large proportion of Tok Pisin words and acronyms, suggesting a widespread Tok Pisin influence on the indigenous languages spoken in urban centers, such as Port Moresby.
- Words of English/Tok Pisin origin in the Tok Ples lists of computer terms show a marked influence of Tok Ples phonology (i.e., Foe 'bulete' for 'bullet'; 'borosa' for 'browse'; 'bolde' for 'bold', etc.).

What are the reasons for these differences? On the basis of our (admittedly, limited) data, we can make several generalizations with regard to observed changes in language use:

(1) There are relatively few new 'SMS' words in Tok Ples languages, because

- Residents of Port Moresby, since they typically have much wider cross-cultural communication needs, habitually use Tok Pisin when texting
- SMS is generally not very popular in wantok communities (particularly in the villages), due to low Tok Ples literacy levels, lack of language development, or a combination of both.
- Some tonal languages (like Weri, which has two phonemic tones) are difficult to transcribe due to lack of appropriate symbols on cell phone keypads; in order to avoid misunderstanding, speakers resort to using Tok Pisin SMS.
- Tok Pisin SMS adequately supplies all the communication needs of all Tok Ples speakers in terms of referencing new concepts which have no indigenous names.

(2) Internet use has not yet become commonplace in village communities, due to lack of infrastructural development, power supply and education; therefore rural dwellers' participation in social networking sites, such as FB and MySpace, is currently almost non-existent.

(3) Tok Ples SMS, and particularly the new technological/ computer terms are typically borrowed from Tok Pisin which, in turn, feeds on English words / jargon.

(4) The Tok Ples borrowings from Tok Pisin / English are heavily influenced by Tok Ples phonology.

(5) Tok Ples SMS samples collected exhibit the same morphological changes that have been observed in other texting lingos, i.e.,

- Words tend to be shortened through vowel deletion in easily recognizable words (i.e. 'npra' for Solos 'napora' (basket), 'vavi' for Iduna 'vavine' (girlfriend, wife), etc.
- People commonly use acronyms (such as 'CU' for 'see you,' IOU' for 'I owe you' or IOT for 'in order to,' etc.
- Human creativity often takes precedence over time and even cost constraints: fancy symbols, such as @ or 2x, for example, are expressions of individual flair.
- Code switching from Tok Ples to TokPisin and English is common, especially when communicating on less traditional subjects; for example, Solos 'N'meh ere' for Tok Pisin 'Km lo hia'/ English 'Cme h're', etc.

(6) Tok Ples phonology tends to affect the pronunciation of words of English/ Tok Pisin origin; for example, Foe 'kibode' for 'keyboard', 'kibede' for 'keypad', etc.

(7) In SMS/ Tok Ples words of English origin, people generally tend to represent the sounds of the words, not the English spelling, e.g. call →kol, feel → fil, etc.

(8) Our results indicate that new technologies, by providing new channels for wantok and cross-cultural communication, have accelerated the processes of linguistic change in the Tok Ples languages of PNG.

(9) Linguistic change in most of the Tok Ples languages examined exhibited

- A strong (and growing) influence of English and, particularly, Tok Pisin on all indigenous languages of Papua New Guinea; and
- The unfolding of Tok Ples SMS which shares common features with other SMS lingos, as a result of universal principles of human thought and similar incentive and constraints of the SMS communication medium.
- The observed strong influence of English on Tok Pisin and the overwhelming influence of Tok Pisin on Tok Ples communication in multicultural environments indicate long term Tok Ples vulnerability.

Justifiable criticism has been made that the data sets we collected exhibit a high degree of variation in terms of consistency and nature of the items they contain.  This may be attributed to the individuality of the researchers and randomness of their wantok respondents. Our findings suggest that Tok Ples languages are mostly used when making phone calls, as opposed to texting; this may be explained by the low levels of Tok Ples literacy in the rural communities and the rather limited scope of Tok Ples use in the multicultural setting of Port Moresby.

Another reason for the relatively 'stunted' growth of Tok Ples SMS may be that phone pad symbols are inadequate for use in tonal languages (i.e., Weri). Most of our respondents did not text, they make ordinary phone calls. Some of them were, in fact, rather perplexed, as to which words to write down - they said, they use the language in the 'ordinary' way.

To facilitate comparative study, future research may, perhaps, come up with a kind of 'Swadesh' SMS list (the list of computer terms we included was somewhat irrelevant to most Tok Ples speakers in 2010).


**SIGNIFICANCE**

This research provides some baseline data on the 'budding' Tok Ples texting lingo and observations with regard to the accelerating processes of general language change taking place in the indigenous languages of Papua New Guinea under the influence of globalization and new technologies. It is hoped that, by providing evidence of long term Tok Ples vulnerability, this study may stimulate appropriate government action in the field of language planning and education.

This study also corroborates our broader theoretical generalizations about the nature of human language, its 'Rational Mechanism' and language change / development in general.

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**APPENDIX I**
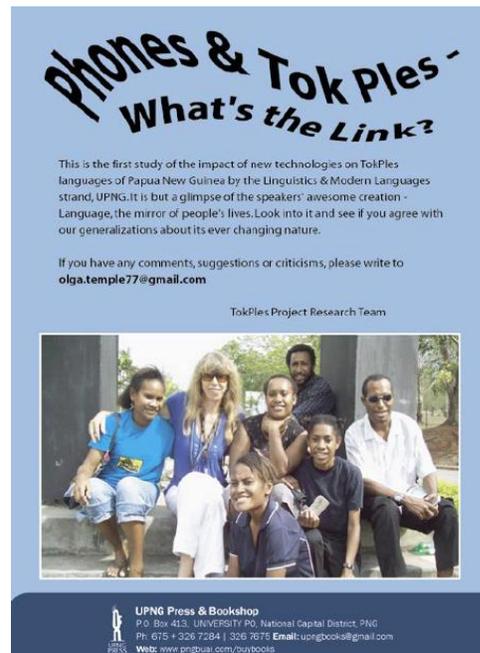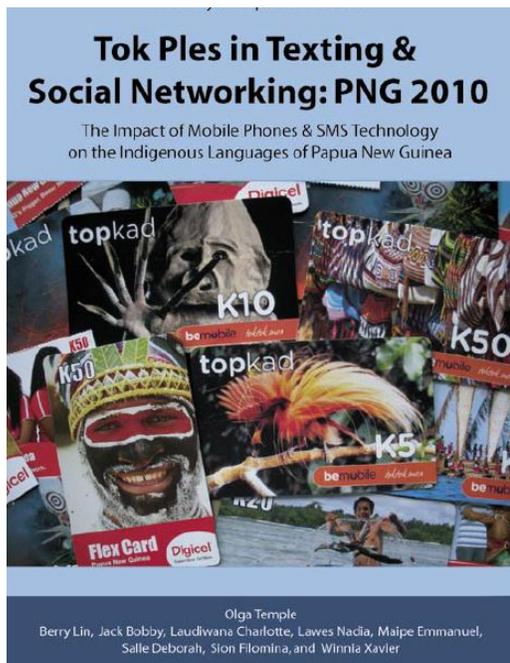


Front and back covers of
*Tok Ples in Texting & Social Networking: PNG 2010*

**APPENDIX II.** *Tok Ples in Texting & Social Networking: PNG 2010* **Contents page**:

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