Chapter 17

Linguistic Relativity in Fiji: A Preliminary Study

Robin Taylor & Sera Yavalanavanua

Linguistic Relativity Theory (LRT) states that a person's perception of the world (their *Weltanschaung*) is influenced by their habitual language (Hill, 1988; Lee, 1996; Miller, 1968). Except for Kay and Kempton (1984), research on colour perception has not generally found strong experimental support for LRT (Brown & Lenneberg, 1954; Berlin & Kay, 1969; Heider & Oliver, 1972; Rosch, 1973). Fishman (1960) has argued that this lack of support is because only lower levels of linguistic processing have been tested, whereas LRT is most likely to operate at grammatical levels and above. There has been some investigation of this notion (Au, 1983; Berry, Poortinga, & Segall, 1992; Bloom, 1981; Carroll & Casagrande, 1958; Fishman, 1960; Liu, 1985; Matsumoto, 1994; Niyekawa-Howard, 1968), but results remain equivocal.

In particular, work with bilinguals has found that Chinese/English and Korean/English immigrant bilinguals gave different personality responses to the California Personality Inventory (Dinges & Hull, 1987; Hull, 1987), and that Hindi/English responses to facial expressions differed (Matsumoto & Assar, 1992). There is however a possible procedural flaw with these studies, because the same participants took part in each language condition and may have conformed to subtle experimenter effects. The present study therefore aims to examine LRT with bilinguals, but using a between-subjects design.

Fiji is an archipelago of mainly volcanic islands in the South Pacific. It has an indigenous culture that, like many other Pacific cultures, emphasises relationships and their relative importance in the context of an extended family. For instance, the eldest brother's opinion counts for more to his nephews and nieces than does the latters' actual biological father. This eldest brother (on the father's side) is known as "*tatalevu*," which literally translates into the term "big father." Given such traditional emphases on the authority of the family, and consistent with LRT, we expected that respondents to the Fijian (rather than English) version of a moral dilemma would give answers comparatively oriented to the well-being of the extended family, whereas respondents to the English (rather than Fijian) version of the same story would be comparatively sympathetic to the rights of the individual.

Method

Participants

Twenty-six male and 26 female Fijian office workers, all with at least secondary school education, recruited from the central Suva area, and bilingual in standard Fijian (referred to as "Bauan") and English. Bauan is used as the Lingua Franca between mutually unintelligible dialects (Schütz, 1972; Gergaghty, 1983). English is the official medium of instruction in all Fijian schools from Grade 3 onwards.

Materials

A fictitious story, "An Unwanted Child?", plus related questions, was prepared in English and back-translated into Fijian (copies in either language available from the first). In the story, Mere finds herself unexpectedly pregnant outside of marriage, and with no desire to marry the father, Sitiveni. On hearing the news, Mere's family is shocked, and Mere's brother reacts by slapping her. Mere's mother suggests that Mere should marry Sitiveni. Mere's father Anare calls the extended family together, and Anare's eldest brother, Pita, states that Mere should marry Sitiveni. The younger brothers Jime & Tomu suggest that they should find another bachelor who, for a family favour, might be persuaded to marry Mere. Mere's aunts, Anare's younger sisters Kara & Sina, argue back that Mere should be allowed to make up

her own mind. Pita's wife remarks that Mere should still be forced to marry Sitiveni. The final decision rests with Mere.

Procedure

Under conditions of informed consent and confidentiality, potential participants were asked if they would take part in a survey to ascertain the influence of language on the formation of opinion. The story and accompanying questionnaire were given out either in Fijian or in English, and participants read, responded, and returned them in their own time. The questionnaire reminded participants that there were no right or wrong answers. Complete forms were normally returned to us within a few days, and we kept sampling until we had reached the above quotas. Two groups (reading and responding in Fijian, and reading and responding in English) were matched for gender, i.e., there were four groups with 13 participants in each.

Results

To analyse the data, we used the chi-square (χ^2) statistic with Yates' correction. Where appropriate, we used Fisher's Exact Probability test. When there were more than two categories, these were collapsed into more "Western" and more "Fijian" responses, specified below. Test results are all presented in Table 1. There was no information to suggest a specific effect size for this study, so we used a conventional α (alpha) threshold of 0.05. None of the results contradicted our hypothesis. Only statistically significant or borderline significant findings are now outlined.

Table 1
Comparisons across Languages (df = 1)

Question	Across languages	
	χ^2	Prob.[$]
What should Mere do?	8.87	.002
Right that Pita should decide?	0.21	.65
Mere's brother right to hit her	1.96	.09 [$]
Sex outside of marriage	4.80	.02 [$]
Mere's uncles right to decide	4.50	.02 [$]
Sympathy for individual/family	0	1 [$]
Family's right to decide	0.83	.36 [$]
Reasons for Elders' hearing opinions only	4.59	.02 [$]
Mere's aunts' empathy to Mere	2.14	.08

Note [$] Indicates that at least one of the expected frequencies fell below zero. Although

Monte Carlo simulations have indicated that this is not serious provided overall N > 8

we have nonetheless taken the precaution of using Fisher' Exact Probability test in the

comparisons indicated.

Regarding what Mere ought to do, participants responding in Fijian chose more answers appropriate to Fijian culture (14/20), such as marrying the father or finding someone else for her; while the participants

responding in English gave more Western-style answers (17/21), such as terminating the pregnancy or allowing Mere to chose for herself. Proportionately fewer participants responding in Fijian also thought it was wrong to slap Mere (15/20) compared to the participants responding in English (20/21), but this tendency did not reach statistical significance. In Fijian, participants reported more often that it was morally wrong to have sex outside of wedlock (19/20), compared to when responding in English (13/21). In English, participants more often suggested that the Uncles had no real right to decide (18/21), while the Fijian-responding group was more evenly split on the issue (10/20). In English, when asked why only older family members were heard at the family gathering, "culture" (16/17) was the predominant response, whereas participants responding in Fijian mentioned in addition that elders were "wiser" (7/16). In Bauan, participants may have detected less empathy for the expectant mother from the Aunts (14/17 vs. 20/21). On a number of post hoc tests however, female participants tended to be more sympathetic to Pita's plight.

Discussion

The latter suggests that the story had engendered some realism and impact for the participants (see also, Munro & Riney, this volume). When responding in Fijian, these participants tended to respond to a story with answers that were relatively consistent with cultural traditions about the extended family, whereas participants instructed to read and respond in English gave answers that were more individualistic. Despite the small sample size, most of the cross-language comparisons were significant, and every difference was in the expected direction.

We did not assess level of competency in each language, and one means of introducing controls on any practice effects might be to sample, in a regionally collaborative project, Fijians living outside of Fiji, in predominantly English-speaking countries like Australia or New Zealand. We could also sample from some of the more "standardised" moral dilemmas, as well as increase the range of narratives generally. The differences observed post hoc between male and female participants would support such modifications. Finally, we recognise the possibility that some demand characteristics may have been operating in our study (the procedure was not double blind), although these are generally less likely when one employs survey, rather than face-to-face assessments (Rossi, Wright, & Anderson, 1983).

In conclusion, we feel optimisitic that we have observed signs that language may influence thought. This would stand in support of the supposition by Fishman (1960), that LRT may be more apparent in higher levels of language processing. It would also be consistent with the seminal work by Whorf (1960), on the perception of time among the Hopi (Lee, 1996).

Summary

There is a lack of experimental support for Linguistic Relativity Theory (LRT), which has not been tested in a South Pacific context. Fifty-two bilingual male ($\underline{n}$ = 26) and female Fijians read, and answered survey questions on the family dilemma, "An Unwanted Child?" - one group functioning in English and the other in Fijian. The group reading and answering in Fijian tended to place more emphasis on the rights of the extended family, whereas the group reading and responding in English placed more emphasis on the rights of the individual. These preliminary findings are consistent with LRT theory, and form the basis for more extended study, including perhaps a wider range of dilemmas and linguistic abilities (e.g., Fijians living in Australia).

Acknowledgements

The Editor has suggested that one interpretation of our data would be consistent with Social Identity Theory (Tajfel, 1978), Social Categorisation Theory (Turner, 1985), and Inter-Cultural Theory (Krewer

& Jahoda, 1993):   Thinking in a language normally associated with collectivistic or individualistic repertoires may be sufficient, in itself, to invoke those repertoires.

References

Au, T. K. (1983). Chinese and English counterfactuals: The Sapir-Whorf hypothesis revisited. *Cognition, 15*, 155-187.

Berlin, B., & Kay, P. (1969). *Basic colour terms: Their universality and evolution*. Berkeley, CA: University of California Press.

Berry, J. W., Poortinga, Y. H., & Segall, M. H. (1992). *Cross-cultural psychology: research and applications*. New York: Cambridge University Press.

Bloom, A. H. (1981). *The linguistic shaping of thought: A study in the impact of language on thinking in China and the West*. Hillsdale, NJ: Erlbaum.

Brown, R., & Lenneberg, E. (1954). A study in language and cognition. *Journal of Abnormal and Social Psychology, 49*, 454-462.

Carroll, J. B., & Casagrande, J. B. (1958). The function of language classifications in behaviour. In E. Maccoby, T. Newcomb, & E. L. Hartley (Eds.), *Readings in social psychology* (3rd Ed., pp. 18-31). New York: Holt, Rinehart & Winston.

Dinges, N. G., & Hull, P. (1992). Personality, culture, and international studies. In D. Lieberman (Ed.), *Revealing the world: An interdisciplinary reader for international studies*. Dubuque, IA: Kendall-Hunt Inc.

Fishman, J. A. (1960). A systematization of the Whorfian hypothesis. Behavioural Science. *Behavioural Science, 5*, 323-339.

Geraghty, P. (1983). *The history of the Fijian languages*. Honolulu, HA: University of Hawaii Press.

Heider, E. R., & Oliver, D. (1972). The structure of the color space in naming and memory for two languages. *Cognitive Psychology, 3*, 337-354.

Hill, J. H. (1988). Language, culture, and world view. In F. J. Newmeyer (Ed.), *Linguistics: The Cambridge survey; IV Language: The socio-cultural context*. Cambridge: Cambridge University Press.

Hull, P. V. (1987). *Bilingualism: Two languages, two personalities*. Ann Arbor, MI: University of Michigan Press.

Kay, P., & Kempton, W. (1984). What is the Sapir-Whorf hypothesis? *American Anthropologist, 86*, 65-79.

Krewer, B., & Jahoda, G. (1993). Psychologie et culture: Vers une solution due "Babel"? *International Journal of Psychology, 28*, 367-375.

Lee, P. (1996). *The Whorf Theory Complex*. Amsterdam: John Benjamins Publishing Company.

Liu, L. G. (1985). Reasoning counterfactually in Chinese: Are there any obstacles? *Cognition, 21*, 239-270.

Matsumoto, D. (1994). *People: Psychology from a Cross-cultural perspective*. Pacific Grove, CA: Brooks/Cole.

Matsumoto, D., & Assar, M. (1992). The effects of language on judgements of universal facial expressions of emotion. *Journal of Nonverbal Behavior, 16*, 85-99.

Miller, R. L. (1968). *The Linguistic Relativity Principle and Humboltian Ethnolinguistics*. The Hague, NL: Mouton.

Niyekawa-Howard, A. M. (1968). *A study of second language learning: The influence of first language on perception, cognition, and second language learning: A test of the Whorfian hypothesis*. Washington, DC: U.S. Department of Health, Education and Welfare, Office of Education, Bureau of Research.

Rosch, E. (1973). On the internal structure of perceptual categories. In T. E. Moore (Ed.), *Cognitive development and the acquisition of language* (pp. 111-144). New York: Academic Press.

Schütz, A. J. (1972). *The languages of Fiji*. Oxford, UK: Clarendon Press.

Semin, G. R., & Rubini, M. (1990). Unfolding the concept of person by verbal abuse. *European Journal of Social Psychology, 20*, 463-474.

Tajfel, H. (1978). *Differentiation between social groups*. Cambridge, UK: Academic Press.

Turner, J. C. (1985). Social categorization and the self concept: A social cognitive theory of social behaviour. In E. J. Lawler (Ed.), *Advances in group processes Vol 2*. (pp. 77-122). Greenwich, CONN: JAI Press.

Whorf, B. L. (1956). *Language, thought, and reality*. Cambridge, MA: MIT Press.