

the most retentive meanings, proposing lists of 15 and 20 items respectively: both are arguing for a limitation on the volume of data we require ‘by in effect using only the items that carry the most information (in the technical sense) about genetic relationship’ (Embleton 2000: 152–3). In all these cases the strategy is to identify the most extremely retentive meanings, and reject the rest.

Our approach is different: rather than dispensing with all the less conservative items, we drew up a contrasting sublist which scored conspicuously low on Lohr’s indices of retentiveness and reconstructability. This sublist consists of 23 DKB meanings which were reconstructable for only two proto-languages, and which had 8 or more visible replacements in the 31.3-millennium total sample: we opted for meanings reconstructable for two proto-languages rather than only one because a collection of complete cultural one-offs, which really would be at the extreme low end of the reconstructability spectrum, would offer far less potential for cross-cultural generalizability of our results. We call the two contrasting sublists, which are given in Table 4.2, the ‘hihi’ list (for high in reconstructability, or universality, and high in retentiveness, or resistance to change), and the ‘lolo’ list (low in reconstructability and low in retentiveness; in other words, less universal, and more changeable). The numbers in the two classes do not match because 6 meanings in the more stable, hihi class were cognate across the whole of Indo-European, and thus totally uninformative. In a few cases one of these six meanings is absent from an individual language in the DKB material because of some

Table 4.2 Hihi and lolo sublists; criteria for list assignment after Lohr (1999)

Sublist	
Hihi	Lolo
30 meanings, from DKB Reconstructable for at least 3 proto-languages; no more than 3 replacements	23 meanings, from DKB Reconstructable for only 2 proto-languages; at least 8 replacements
four, name, three, two, foot, give, long, salt, sun, other, sleep, to come, day, to eat, not, thin, five, mother, ear, I, new, night, one, to spit, star, to stand, thou, tongue, tooth, wind	grass, mouth, stone, heavy, year, bird, near, smooth, wing, man, neck, tail, to walk, back, to flow, left (hand), to pull, to push, river, rope, straight, to think, to throw

(3a) Andean hihi list, 30 items

one	two	three	four	five
I	thou (you sing.)	not	ear	tongue
tooth	foot	finger nail (claw)	heart	name
day	night	sun	star	shadow
wind	salt	green	new	come
eat	sleep	live (be alive)	give	sew

(3b) Andean lolo list, 30 items

year	left (-hand side)	face	mouth	lip
neck	(upper) back ,	skin (human)	breast	bird
	shoulder			
tail	wing	man	river	stone
		(male adult)		
bread	branch	grass	rope	red
straight	sick (be ill)	empty	heavy	far
				(away)
hot	walk	swim	think	push

Although these sublists are not identical to those considered earlier for Indo-European, they can be shown to be differentially affected by borrowing in the same way. Spanish borrowings can be identified relatively readily in all the Andean languages and varieties, and we find an average of 2.7% Spanish loans in the hihi sublist, but 6.7% in the lolo sublist, nearly three times as high. This difference is significant at the $p < 0.001$ level (paired t-test; $t = -4.1$, $df = 18$).

This operational difference between the more and less conservative sublists is encouraging, but it remains to be seen whether these can also be used as a basis for deciding between the alternative histories of Quechua and Aymaran. Recall that our use of graded similarity scores in some comparisons, following Heggarty's introduction of subsenses, means distance-based rather than character-based programs are clearly more appropriate. The graphs in Figure 6.15 were therefore generated using NeighbourNet.

For the networks in Figure 6.15, Spanish loans have been excluded by marking them, as usual, as unique states. It is very clear in both these graphs that the 14 Quechua dialects cluster together; so do the three Aymara varieties, plus Jaqaru and Kawki, which however constitute a separate branch within Aymaran. The most interesting aspect of these