HALF AND PLUS IS MINUS

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In his comprehensive treatment of Tibeto-Burman numerals, Matisoff (1997: 28, 53) refers to the phrase **phera:ng** in Kaike as possibly related to certain Kamarupan forms for '10' (e.g. Kechama **chiro**, Mao **chüro**, Sema **chüghi**)[1]. The morpheme, he notes, is used in its vigesimal system of round numbers to express minus-ten (-10) from the next higher multiple of 20. For example:

60	**sum tha:l**	50	*phera:ng* **sum tha:l**
80	**li tha:l**	70	*phera:ng* **li tha:l**
100	**nga: tha:l**	90	*phera:ng* **nga: tha:l**

This Kaike **phera:ng**, I argue, in fact contains two independent morphemes, neither of which has anything to do with '10'. The latter morpheme, **ra:ng**, may be roughly glossed as 'and/with', depending on context. It is still used in multiples of 10 in certain closely related languages, and is equivalent to 'plus (+)'. For instance:

	Sherpa	*Tshangla*
10	**she**	**say**
20	**khye thor**	**khay thur**
30	**khye thor** *dang* **she**	**khay thur** *dang* **say**
40	**khye nyiktsing**	**khay nikching**
50	**khye nyiktsing** *dang* **she**	**khay phedang sam**[2]

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[1] Forms in these latter languages are considered by him to consist of a palatal prefix or pre-syllable plus the liquid-initial root for 'ten'.

[2] This Tshangla dialect recorded by Hofrenning (1959) has almost the same formation for high odd multiples of 10 as that of Kaike (except word order):

60	**khay sam**	50	**khay** *phedang* **sam**
80	**khay fee**	70	**khay** *phedang* **fee**
100	**khay nga**	90	**khay** *phedang* **nga**

The first morpheme, **phe**, means 'half' and is undoubtedly related to forms denoting 'half' in various languages, namely, Cuona **phe[55]**, Dzongkha **pɈhe**, and Tibetan **phjed**.

The whole phrase **phera:ng** expresses 'a half short of' the number immediately to its right. For instance, **phera:ng-sum** is 'a half short of three $(-1/2 + 3 = 2\ 1/2)$', and thus **phera:ng-sum tha:l** is $(-1/2 + 3) \times 20 = 50$. This kind of numeral formation is the same as that of Dzongkha as described by Mazaudon (1985).[3] Matisoff's suggestion that it is related to the morpheme '10' should thus be rejected.

As noted, the morpheme **ra:ng/dang** usually has an additive (+) sense in numerals it links. Analogically we would expect **phera:ng** to denote 'plus half' rather than 'minus half' as it does. The basic reason must lie in the computational conception of these speakers who take 'one (1)' as the lowest number (zero is uncountable!), so that fractions are always considered intrinsically minus or negative with reference to whole numbers. **Phe** 'half' is thus always minus, while **ra:ŋ** 'and/with' can still be considered as plus. Half and plus is minus.

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[3]   For example, Dzongkha **khe pɈhe-da-sum** '20 $(-1/2 + 3) = 50$' and so on. This Dzongkha **pɈhe-da** matches both wholly and morpheme-to-morpheme with Kaike **phe-ra:ng** and Tshangla **phe-dang**, etc. Matisoff does cite this Dzongkha formation in his same work (p. 57), and it is unfortunate that the connection among these forms was missed.

REFERENCES

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