

A NOTE ON THE DURATION OF CHINESE QUESTIONS

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One of the most common ways of forming yes/no questions from statements in spoken Standard Chinese is by merely changing the sentence intonation, leaving all else intact. Questions formed in this way have the same meaning as questions formed with the final sentence particle *ma* or by repeating the verb with the negation *bu* between the repetitions. For instance, corresponding to the statement *Wāng Yī chōu xiāngyān* 'Wang Yi smokes cigarettes' there are three questions, all meaning 'Does Wang Yi smoke cigarettes?' (see e.g. Li and Thompson 1981:520 ff. for some differences in the use these types of questions):

- (1) Wāng Yī chōu xiāngyān?
- (2) Wāng Yī chōu xiāngyān ma?
- (3) Wāng Yī chōu bu chōu xiāngyān?

Questions of type (1) differ from the corresponding statements mainly by having higher pitch, particularly over the final phrase. In languages which can form yes/no questions with intonation only, it is often the case that in addition to the pitch differences, questions have shorter duration than the corresponding statement. This is true for instance in Polish (see data given in Petecka 1985) and Cairo Arabic (unpublished measurements by Kjell Norlin). In this note I present data that show this to be the case in Standard Chinese as well.

For this purpose, a material consisting of four sentences with different tonal patterns uttered in different contexts, including neutral statement and yes/no question was used. The four sentences were:

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| 1. | Wāng Yī chōu xiāngyān | 'Wang Yi smokes cigarettes.' |
| 2. | Sòng Yán mài niúròu | 'Song Yan sells beef.' |
| 3. | Shěn Lǐ mǎi yǔsǎn | 'Shen Li buys an umbrella.' |
| 4. | Wāng Lǐ chuān yǔjī | 'Wang Li wears a raincoat.' |

This material was recorded in Lund and Stockholm with four speakers of Standard Chinese. The first three speakers had grown up in Peking, and the

Table 1. Duration of statements (S) and questions (Q) in ms.

Sentence:	1		2		3		4	
	S	Q	S	Q	S	Q	S	Q
Speaker 1	890	910	830	720	910	850	970	890
	1190	950	1090	920	1190	950	1010	830
	990	780	910	830	970	900	1060	850
	mean:	1023	880	943	823	1023	900	1013
Speaker 2	1645	1080	1110	970	1210	1070	1540	1080
	1310	1380	1330	1140	1650	1050	1400	1140
	1190	1050	1030	990	1110	1050	1300	1050
	mean:	1383	1170	1157	1033	1323	1057	1413
Speaker 3	1090	910	1180	760	1150	890	990	790
	1130	870	1050	760	2000	830	1110	760
	1070	880	890	770	1320	800	970	810
	mean:	1097	887	1040	763	1490	840	1023
Speaker 4	1170	850	1190	890	1210	880	1320	930
	1230	930	1180	800	1060	840	1090	870
	1180	890	1250	930	1150	970	1300	990
	mean:	1193	890	1207	873	1140	897	1237

fourth, who was originally from Liaoning province in the Northeast, had come to Peking in his mid-teens.

Each speaker read the entire material three times. The duration of each sentence was measured from spectrograms, and the results are given in Table 1.

As seen in Table 1, for each combination of speaker and sentence, the average duration was longer for the statement than for the question, the average duration of a question being about 78% of that of the corresponding statement. As might be expected, a three-way analysis of variance (with the factors speaker, sentence and statement/question) showed that the duration difference between statements and questions was highly significant ($p < 0.0005$; $F(1,88) = 73.72$).

References

- Li, Charles and Sandra Thompson. 1981. *Mandarin Chinese. A functional reference grammar*. Berkeley: University of California Press.
- Petecka, Janina. 1985. 'A study of question intonation in Polish'. *Working Papers* (Dept. of Linguistics, Lund University) 28, 151-73.