Immediate integration of real-world knowledge and

classifier cues during Mandarin sentence processing

An eye tracking experiment investigated how listeners integrate semantic cues derived from contextual knowledge outside the sentence with semantic cues signaled by a morphosyntactic element within the sentence. Native Mandarin Chinese speakers heard sentences that begin with a specific location (e.g., a closet), followed by the simultaneous presentation of a 2x2 slide and a spoken classifier-noun phrase (e.g., *tiáo*, the classifier for long, flat objects and the noun 'scarf'). Participants' eyes were recorded as they searched for the target (e.g., scarf) among a classifier competitor that shared class membership (e.g., snake), a location competitor (e.g., hat, which uses the classifier for headwear, *dǐng*), and a distractor (e.g., watermelon, which uses the classifier for small spherical objects, *kē*). Context was manipulated such that half of the trials matched (e.g., closet-scarf) while the other half mismatched (e.g., closet-snake). In the context match trials, participants did not look to the classifier or location competitor at levels above chance. In the context mismatch trials, however, participants looked first to the classifier competitor at a rate well above chance (e.g., upon hearing closet and the classifier for long, flat objects, participants looked first to the scarf and later recovered to look to the snake). These results indicate that comprehenders use the cue to grammatical class as soon as they hear the classifier; they rule out other-class objects whose semantic properties might misleadingly be associated with that classifier, all while continuing to apply broader contextual information to rule out event-implausible objects.