

# Processing of case on modifiers of incorporated nouns by heritage speakers and attriters of Inuktitut

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Studies of heritage speakers have shown problems with case morphology in various languages (Larmouth, 1974; Schmidt, 1985; Polinsky, 2008; Montrul and Bowles, 2009;). However, noun incorporation was not much studied in heritage speakers. In a study by Sherkina-Lieber and Murasugi (2015), Inuktitut heritage speakers' grammaticality judgments on case markers in sentences with noun incorporation were worse than that of fluent speakers and attriters, though still different from chance for case on nouns and on adjectives modifying incorporated nouns.

In the present study, heritage speakers' and attriters' processing of case on modifiers in sentences with noun incorporation was tested in a picture-sentence matching task. This task is closer to real-life comprehension than a metalinguistic task such as grammaticality judgments. The central question of the study was whether heritage speakers and attriters use case marking as a clue for modifier attachment (subject vs. object).

Inuktitut heritage speakers (n=9), attriters (n=12), and fluent speakers (n=16) took part in a picture-sentence matching task, in which they heard a sentence, saw two pictures on the computer screen, and were asked to choose the picture that corresponded to the sentence.

The main contrast was subject vs. object modifier attachment. Adjectives modifying subjects had Absolutive case; adjectives modifying objects had an Accusative-like case, further referred to as MIK case, after its singular form (following Johns, 2001), even if the noun they modify is incorporated. Orthogonally to this, sentences with incorporated nouns (objects) were compared to antipassive sentences without incorporation. All had the Subject-Modifier-Object-Verb order, with the subjects in Absolutive case (phonologically null). In the sentences with incorporation, the object noun cannot have case, while in the sentences without incorporation, the object had the MIK case. Therefore, four conditions were tested (listed in (1) and (2)).

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| (1) (a) <i>Incorporating V, Subject modifier</i><br>Qimmiq aupaqtaq manniq-tuq-tuq<br>dog-ABS red-ABS egg-MIK eat-3s.part<br>'A red dog is eating an egg' | (b) <i>Incorporating V, Object modifier</i><br>Qimmiq aupaqtar-mik manniq-tuq-tuq<br>dog-ABS red-ABS egg-MIK eat-3s.part<br>'A dog is eating a red egg' |
| (2) (b) <i>Lexical V, Subject modifier</i><br>Qimmiq aupaqtaq mannir-mik niri-juq<br>dog-ABS red-ABS egg-MIK eat-3s.part<br>'A red dog is eating an egg'  | (b) <i>Lexical V, Object modifier</i><br>Qimmiq aupaqtar-mik mannir-mik niri-juq<br>dog-ABS red-ABS egg-MIK eat-3s.part<br>'A dog is eating a red egg'  |

Heritage speakers had fewer correct answers and longer reaction times than fluent speakers, but the attriters performed at the level of fluent speakers. The heritage group showed no difference between NI verbs and lexical verbs, as well as between subject and object modifiers, in either accuracy or reaction times. However, accuracy was better than chance only with lexical verbs.

Heritage speakers are not very skillful at using case markers as a clue for adjective attachment, especially in sentences with noun incorporation, even though previous studies suggest they have some knowledge of case properties. Attrition in adulthood, however, does not affect use of case markers as clues for modifier attachment.