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Negated forms have been shown to cause a higher processing cost for language comprehension in the form of higher error rates and longer processing times. Studies that tested prefixal negation (e.g. *un*happy) found conflicting results as to whether these forms are processed as negated forms or as single lexical items without any processing cost (Hoosain, 1973; Sherman, 1976, 1973). The present study set out to challenge the findings on prefixal negation using an artificial language learning task. The experiment comprised a learning phase and a testing phase. In the learning phase, participants learned three artificial prefixes corresponding to two negation forms and one no-negation form: 1. *ka*: narrow negation (*kareft=unhappy*), 2. *va*: wide negation (*vareft=not happy*), 3. *sa*: empty prefix with no meaning (*sareft=happy*). Next, participants memorized 8 artificial adjectives that were later used in the testing phase. The testing phase comprised a verification task in which participants were tested on the combination of the artificial prefixes and words previously memorized. Longer response times were found for *ka* (corresponding to a negative prefix) and *va* (corresponding to '*not*'), compared to *sa* (empty prefix). Moreover, a lower accuracy rate was observed for the two negative prefixes compared to the empty prefix.