

When the Pig is Bought in a Poke – The Influence of Transitivity and Constituent Adjacency on the Processing of Passivized Idiomatic Sentences

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Idioms like “*kick the bucket*” hold a special status in sentence processing. They are syntactically fixed in that they cannot undergo all syntactic transformations without losing the figurative meaning, as in **the bucket was kicked by him*”. Previous studies on the syntactic behavior of idioms typically examined the influence of factors like transparency and decompositionality. This study examined whether (a) the transitivity or (b) the adjacency of the idiomatic constituents influences whether passivized idioms keep the figurative meaning.

In two sentence-completion experiments, we compared the recognition of active and passive idiomatic and literal sentences. 52 literal and 52 idiomatic sentences that held the same verb in sentence-final position were paired, as in (1) and (2) or (3) and (4), respectively. Half of the sentences were transitive, see (1) and (2), the other half ditransitive, see (3) and (4). Participants heard all sentences in either active or passive voice without the sentence-final verb and saw three verbs on the screen. One verb completed the figurative meaning, one a semantically related meaning, and the third was unrelated. Participants decided as fast as possible, which of the three verbs best completed the sentence.

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| (1) <i>Sie hat nach den Bonbons gegriffen.</i>
Literal (L): She reached for the sweets. | (3) <i>Er hat ihr die Haare gewaschen.</i>
L: He washed her hair. |
| (2) <i>Sie hat nach den Sternen gegriffen.</i>
L: She reached for the stars.
Figurative (F): ‘She reached for the stars’. | (4) <i>Sie hat ihm den Kopf gewaschen.</i>
L: She washed his head.
F: ‘She gave him a piece of her mind’. |
| (5) <i>Nach den Sternen wurde von ihr gegriffen.</i> | (6) <i>Ihm wurde von ihr der Kopf gewaschen.</i> |
| (7) <i>Von ihr wurde nach den Sternen gegriffen.</i> | (8) <i>Der Kopf wurde ihm von ihr gewaschen.</i> |

In Experiment 1, all sentences were passivized in the canonical word order, see (5) and (6), where the idiomatic constituents are adjacent in (6), but not in (5). In Experiment 2, all sentences were passivized by changing the adjacency of the idiomatic constituents, as in (7) and (8), where the idiomatic constituents are adjacent in (7), but not in (8). Results of both experiments showed that, first, idiomatic sentences were processed faster and with fewer errors than literal sentences, and second, active sentences were processed faster and with fewer errors than passive sentences. Experiment 1 further showed faster processing of ditransitive than of transitive passivized sentences. However, Experiment 2 showed that this effect was due to the adjacency of the idiomatic constituents in the canonical passive of ditransitive sentences. Importantly, the effect of transitivity for passive sentences reversed.

These findings indicate that the adjacency of the idiomatic constituents strongly affects whether passivized idioms keep the figurative meaning, and overrides the effect of transitivity. We discuss how the factors transitivity and adjacency can be integrated in present models of idiom processing.