A Corpus-based Approach to the English Middle Construction
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The aim of this paper is to explain acceptability in the English middle construction in a unified way by examining cases in verbs of creation such as *write*, which have been considered not to be middle verbs, as in the following sentences;

(1) Odes to herself **write** easily when she's narcissistic mood. (Rosta 1995:127, my emphasis)

(2) A dense-crumb carrot cake **bakes** easily in a springform pan. (http://www.ehow.com/about_5282790_things-can-baked-springform-pan.html)

This paper claims that not only the verbal semantics but also the correlation of verbs with subject nominals play a crucial role in determining acceptability. Specifically, more frequently a given nominal occurs with a specific verbs in corpora, more acceptable middle sentences with these two words become. This explanation enables researchers to predict acceptability in more detailed fashion so that they will capture different acceptability in the middle construction with different elements.

First of all, it should be pointed out that previous literature has predicted that verbs of creation do not occur in the English middle construction. Taniguchi (2005) claims that Only verbs which represents Prototype-transitivity can be middle verbs with claiming that verbs of creation does not express the P-transitive relation; it, therefore, predicts that verbs of creation would not be middle verbs. Honda (2005) makes an attempt to explain acceptability of the middle construction from a viewpoint of ecological psychology. It claims that the middle construction represents *affordance* of a subject referent. Affordance is information about an entity obtained by actually acting on it; therefore, the entity should be assumed to exist before the action. Verbs of creation contradicts this claim because an effective object does not exist before acts designated by the verbs but is created as a result of the events. Therefore, this strongly excludes the verbs from the group of middle verbs.

As an alternative to these approaches, this paper hypothesizes that acceptability in the middle construction is determined, at least partially, by the **mutual predictability** between a main-verb event and a subject referent. Let us consider typical examples of the middle construction as a start point.

(3) The book reads easily.
(4) The knife cuts well.

The approach here explains acceptability in these examples in the following way. The word *book* frequently occurs with the verb *read* and vice versa because it is an object for reading. The word *knife* strongly predicts the verb *cut* and vice versa because it is a tool for cutting. This can be exemplified by the corpus-based study in *British National Corpus* (BNC) as in the following;

	Verb	Frequency	MI score
1	**write**	1634	3.10

2	read	1562	3.53
3	publish	900	3.94
4	**entitle**	132	3.35
5	compile	53	3.00

Table 1 collocation of *book* in BNC

	Verb	Frequency	MI score
1	**cut**	214	4.38
2	stabbed	58	4.35
3	twist	41	6.75
4	slash	38	3.44
5	slice	32	3.13

Table 2 collocation of *knife* in BNC

These tables clearly suggest that the frequency and the mutual predictability, represented by MI-score play an important role in acceptability in the middle construction.

This approach does not exclude verbs of creation because it does not assume that a subject referent should exist before action designated by a verb but predict, and be predicted by, the verb. As for (1), let us consider Table 1 again. *Write* is strongly predicted by the nominal *book* as well as *read*. The frequency facilitates use of the verb in the middle construction. As for (2). The same argument can be made with the following table;

	Verb	Frequency	MI score
1	eat	192	4.89
2	cut	116	3.38
3	**bake**	108	7.99
4	cover	99	3.13
5	wrap	45	3.71

Table 3 collocation of *cake* in BNC

This table shows that verb *bake* is one of the most frequent verbs with noun *cake*. Therefore, by examining the mutual connection between a nominal and a verb, acceptability of the middle sentence with them can be predicted to a large extent.

Lastly, the current paper discusses implications of these results for semantics. The statistical mutual predictability of a noun and a verb in corpora should stand on a semantic basis. First, it should be considered that a noun contains verbal information (e.g. a book is *for reading*) and a verb contains nominal information (e.g. cutting something is often done with a cutting tool such as a knife); otherwise, this predictability could not occur. This argument would be compatible with qualia structures and enrichment of nominal semantics should be required. Second, acceptability in language comes not from a rule-based learning system but from a usage-based statistical system, which accepts degrees of acceptability.

Reference

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