Usage-based perspective on argument realisation: A corpus study of Indonesian BUY verbs in applicative construction with -*kan*

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This paper presents constructional and quantitative corpus analyses of the argument realisation of *beli* 'buy' in the base and applicative -*kan* across the active voice (AV) *meN-* and passive voice (PASS) *di-* constructions. It shows that the presumed standard Double Object construction for the AV applicative *membelikan* is significantly less frequent than the Monotransitive one, suggesting (i) the more semantic effect of the applicative in making the peripheral argument semantically central/core for the verb regardless of its syntactic realisation, and (ii) the role of argument omission in language use. We also discovered that the PASS *dibelikan* has distinct semantic properties not attested in the AV, highlighting the semantic sensitivity of voice and the need to view PASS as an independent construction. Finally, we discuss factors motivating the alternative argument realisations.

1. Introduction[1]

Argument realisation refers to how participant roles of an event evoked by verbs are morpho-syntactically expressed in the clause, including the potential grammatical relations these roles may bear (Levin & Rappaport Hovav 2005:3; Fillmore 2014:123–124; Perek 2015). Research into argument realisation via applicative verbal morphology is central to Indonesian linguistics. Previous works (see §2 for details) have addressed the alternative realisation of a certain participant role in the base (non-applicative) form compared to the applicative form of the verb. These works rely on constructed, decontextualised data from introspection with grammaticality judgement (but see Arka et al. 2009, which incorporates usage data from the web). Also, no quantitative evidence is provided to determine the conventionality of the postulated patterns of argument realisation of the verbs. Frequency is important in usage-based linguistics (Langacker 1988; Croft 2001: 28; Bybee & Hopper 2001; Diessel 2015; Perek 2015) that views linguistic units (e.g., argument realisations of verbs) as emerging from usage (e.g., the frequency with which a given verb appears with a given grammatical constructions).

We follow recent trends in linguistics to triangulate and test hypotheses (see Geeraert's 2010 idea on "empirical cycle") from different data types and methods (Gries 2013), particularly usage data combining quantitative and qualitative analyses. Adopting the

usage-based, constructional perspective on argument realisation (e.g., Boas 2003; 2008; Tao 2003; Faulhaber 2011; Perek 2015), this paper presents a corpus study of Indonesian BUY verb *beli* 'buy' in the base (*beli*) and applicative forms (with suffix *-kan*, hence *belikan*), in both active voice (AV) (**mem**beli, **mem**belikan) and passive voice (PASS) (**dibeli**, **dibelikan**) (see §4.1–§4.4). The BUY verb *beli* is chosen since classic, foundational works by Kaswanti Purwo (1995; 1997) considered this verb as one of the two prototypes for ditransitive verbs in interaction with the applicative suffix *-kan* (the other prototype is *beri* 'to give'. For a corpus study of *beri* in the AV base and applicative *-kan* forms, see Rajeg 2023). We aim at revisiting Kaswanti Purwo's proposals on the argument realisations, or the constructional profiles (§3.2), of BUY verbs, now using corpus data (see Table 1 in §3). The analysis covers the (frequency of the) grammatical constructions the verbs occur in, namely the encoding of the participant roles of the verbs into the grammatical function slot of the construction (§3.1) (Goldberg 2002:342–343; Fillmore 2014:126–127). In addition to quantitative analyses, we also discuss morpho-syntactic, semantic, and discourse-pragmatic motivations (§4) for the verbs' constructional profiles escaping the attention of the previous accounts (§2). Before concluding the paper (§6), we provide a general discussion (§5) in the light of the usage-based, Construction Grammar (UCxG) approach (§5.1) (Boas 2003; Goldberg 2005; Langacker 2008:244–249; Perek 2015) to account for the varied argument realisation of the Indonesian BUY verbs (§5.2).

2. Previous accounts on the applicativisation of Indonesian BUY-verbs

An applicative construction prototypically involves verbal morphological marking, allowing peripheral arguments or adjuncts to be coded as a core, non-subject argument in the AV (Peterson 2007). The Indonesian suffix *-kan* can mark an applicative construction when attached to semantically bivalent verbs, such as *beli* 'buy' (example (1)) (Kaswanti Purwo 1995; 1997; Shibatani 1996; Cole & Son 2004; Son & Cole 2008:125; Kroeger 2007; Shiohara 2012; Musgrave, Arka & Rajeg *to appear*; for the causative function of *-kan*, see Arka 1993; and for the study of another applicative suffix *-i*, see Arka et al. 2009).[2]

(1)   Kaswanti Purwo (1997:235, example (5a))
        *John   mem-beli   buku   itu   **untuk** Mary.*
        NAME   AV-buy   book   DEM   **for**   NAME
        'John bought the book for Mary.'

(2)   Kaswanti Purwo (1997:235, example (5b))
        *John   mem-beli-**kan**   Mary   buku   itu.*
        NAME   AV-buy-**KAN**.APPL   NAME   book   DEM
        'John bought Mary the book.'

Kaswanti Purwo (1997:235) proposes that when *-kan* is attached to *membeli* (1), the verb semantically becomes trivalent and syntactically appears in Double Object Construction (2): the promoted BENEFICIARY/RECIPIENT (BEN/REC)[3] role (i.e., *Mary* in (2)) fills the

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[2] Given that the suffix *-kan*, as much like the suffix *-i*, is polysemous in expressing the causative and applicative senses/functions (Musgrave, Arka & Rajeg *to appear*; Arka et al. 2009), *-kan* and *-i* will be glossed as KAN.CAUS and I.CAUS respectively in certain examples if our analyses consider them to express such function with the given roots.

[3] Following Kittilä and Zúñiga (2010:2, 9), we collapsed the BENEFICIARY and RECIPIENT.

term/core Primary Object[4] (PO) slot and the Goods role (i.e., *buku* 'book') fills the Secondary Object (SO) slot (Kaswanti Purwo 1997:241; Shibatani 1996:174; Shiohara 2012:62). Example (2) evokes the 'recipient-benefactive' reading (Kittilä 2005).

However, Kaswanti Purwo (1997:246; 1995:88–89) also mentions that deviation from the prescriptively standard Double Object Construction is "often produced in conversation by native speakers." Such deviant, non-standard pattern (see example (3) below) realises the Ben/Rec in an oblique phrase (e.g., with *untuk* 'for') and the Goods role in the Direct Object (DO) slot, despite the presence of *-kan* (Son & Cole 2008:126, illustrates this with *panggang* 'to bake'); this Monotransitive Oblique Construction is also referred to as the NP$_{\text{GOODS}}$ + PP$_{\text{BENEFICIARY}}$ pattern (Kaswanti Purwo 1995:89; Son & Cole 2008:126) (see §3.2 for how syntactic transitivity is defined and measured).

(3)   Kaswanti Purwo (1997:246, example (31b))
*John   mem-beli-**kan**   buku   itu   untuk   Mary.*
NAME   AV-buy-**KAN**.APPL   book   DEM   for   NAME
'John bought the book for Mary.'

In this paper, example (3) is labelled the Monotransitive Oblique Construction because syntactically only two of the three core semantic roles of *membelikan* (Buyer and Goods) are realised as terms/core syntactic arguments (i.e., Subject and DO) while the Ben/Rec is realised as an oblique (see Kroeger 2005:69–70 for the discussion on the mismatch between the number of core semantic roles of *donate* and their realisation in core syntactic arguments (i.e., Subject and Object)). The difference between examples (3) and (1) is that the presence of *-kan* with oblique Ben/Rec in (3) is prescriptively categorised as deviant and the oblique Ben/Rec syntax should be used with the unsuffixed verb as in (1).

Furthermore, Son and Cole (2008:125) point out the possibility of omitting the Ben/Rec of *-kan* verb; this went unnoticed in Kaswanti Purwo's (1995; 1997) works for *beli*. Example (4) shows the syntactically monotransitive use of *panggangkan* 'to bake (for someone)' where the Food role (*roti* 'bread') is the DO, with omitted Ben/Rec.

(4)   Son and Cole (2008:125, example (7a))
*Tika   mem-(p)anggang-**kan**   roti   itu.*
NAME   AV-bake-**KAN**.APPL   bread   DEM
'Tika bakes the bread for **someone**.'

Despite the absence of the Ben/Rec in (4), "the only interpretation possible is that the action was carried out for the benefit of some implicit individual" (Son & Cole 2008:125). This interpretation is not evoked by the base verb if there is no *untuk* 'for' phrase.

In sum, previous works postulate three possibilities of argument realisations for the applicative BUY-verbs with *-kan*: (i) Double Object Construction with the Ben/Rec as

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[4] This paper adopts Dryer's (1986:814) terminology in labelling the Object relation in the Active/Actor Voice (AV). If the AV verb appears in Double Object/Ditransitive Construction, the first object immediately after the verb is called Primary Object (PO) (a.k.a. the Indirect Object) while the second object is called the Secondary Object (SO) (a.k.a. the Direct Object). In the Monotransitive use of the AV verb, the only object is called the Direct Object (DO).

the PO (the default and grammatical[5] one) (example (2)), (ii) Monotransitive Oblique Construction (3) (deviant), and (iii) Monotransitive with unexpressed BEN/REC (4).

Next, passivisation is used as the test for the claim that the BEN/REC is the default PO for *belikan* in the Double Object Construction. Only the DO of the AV verb can be the passive subject (PASS.Subj) (Kaswanti Purwo 1997:240–241; Dryer 1986:811, footnote 6). Example (5) below is proposed by Kaswanti Purwo to be the passive form of the AV Double Object Construction in (2).

(5) Kaswanti Purwo (1997:241, example (18b))
*Mary   di-beli-**kan**   buku   itu   oleh   John.*
NAME   PASS-buy- **KAN**.APPL   book   DEM   by   NAME
'lit. Mary was bought the book by John.'

The GOODS/THEME-as-PASS.Subj[6] for the passive *dibelikan* is flagged ungrammatical (see (6)) by Kaswanti Purwo (1997:241, 246–247) when this pattern is assumed to be transformed from both (i) the AV Double Object Construction and (ii) Monotransitive Oblique Construction with -*kan* (i.e., where the BEN/REC is explicitly encoded as an oblique as in (3)) (cf. Son & Cole 2008:125, example (9b) with *dipanggangkan*). In other words, Kaswanti Purwo (1997:241) claims that the GOODS can only be felicitously passivised when *beli* does not bear -*kan* (i.e., the unsuffixed variant of *beli*).

(6) Kaswanti Purwo (1997, examples (18d) and (31d) respectively)
Buku   itu   di-beli-kan**   Mary   oleh John*
 book   DEM   PASS-buy-**KAN**.APPL   NAME   by   NAME
**'The book was bought (for) Mary by John.' (From the Double Object)

Buku   itu   di-beli-kan**   untuk Mary   (oleh   John)*
 book   DEM   PASS-buy-**KAN**.APPL   for   NAME   (by   NAME)
**'The book was bought for Mary (by John).' (From the Monotransitive Oblique)

However, Son and Cole (2008:126) argue that the THEME can be the PASS.Subj for the passive-applicative of a BUY-like verb such as *panggangkan* 'to bake.APPL', assuming that it is being transformed from the AV Monotransitive Oblique Construction (i.e., from the NP_GOODS + PP_BENEFICIARY pattern). Therefore, example (7) below is proposed to be the passive variant of the AV Monotransitive Oblique *memanggangkan roti*_THEME *untuk Eric*_BEN/REC 'AV.bake.APPL bread for Eric'.

(7) Son and Cole (2008:126, example (11a))
*Roti   itu   di-panggang-**kan**   untuk   Eric*
bread   DEM   PASS-bake-**KAN**.APPL   for   NAME
'The bread was baked **for Eric**.'

Based on the corpus findings, we show that the PASS.Subj for *dibelikan* (§4.4) does not have to be (previously) the PO or DO of the AV, which is a remnant of the transformational view. Instead, we argue for the constructional view that the passive is an independent, symbolic (form-meaning) unit of syntactic representation (i.e., a construction) (Goldberg 1995; 2006; Croft 2001:16ff.). §4.4 shows that as a symbolic

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[5] The term "grammatical" here is used in its prescriptive sense, referring to a sentence that "conforms to the syntactic rules of a given language" (Leivada & Westergaard 2020:2).

[6] This convention of representing the pairing between semantic component and syntactic elements follows the practice in Fillmore (2014:127). The different terminologies here for referring to a semantic structure as "component" and to a syntactic structure as "element" are adopted from Croft (2001:21).

unit, the PASS usage of *belikan* interacts with alternative argument realisation for the filler of the PASS.Subj to express a distinct sense of the verb.

In sum, previous studies proposed two possible patterns for the filler of the Subject of the PASS-applicative *dibelikan*: (i) BEN/REC-as-PASS.Subj (default, and presumably from the AV Double Object Construction) and (ii) GOODS/THEME-as-PASS.Subj (presumably from the AV Monotransitive Oblique Construction).

Next, Kaswanti Purwo (1995:79; 1997:236) also provides several other verbs assumed to follow the argument realisation patterns of *beli* when suffixed with *-kan*, but without providing any examples for the use of these verbs. These verbs are *membuat(kan)* 'to make', *memasak(kan)* 'to cook', *membawa(kan)* 'to bring, carry', and *menangkap(kan)* 'to catch'. A future iteration of this paper will explore the argument realisation patterns of these related verbs.

Lastly, it is important to acknowledge that Choi (2019) provides the first corpus-based exploration of the argument realisation pattern for 140 roots with *-kan* and *-i*, but only focusing on the AV form. Choi (2019:72) hints at future studies to consider the PASS form of the verbs and explore the verb senses, which this paper picks up. Moreover, a specific discussion on the BUY-verbs is not presented, making it difficult to verify the extent to which Kaswanti Purwo's hypothesis for this verb group is confirmed in usage.

2.1 Prediction

Based on the hypotheses that (i) *-kan* applicative turns BUY verbs into syntactically ditransitive verbs appearing in Double Object Construction (e.g., (2)), and that (ii) the oblique realisation of BENEFICIARY/RECIPIENT (BEN/REC) with the applicative (3) is deemed non-standard/deviant, we predicted the following from the corpus sample:

(a) For the AV form: The applicative *membelikan* (§4.3) will be biased (quantitatively speaking) towards the Double Object Construction rather than the Monotransitive Construction (including Monotransitive with oblique BEN/REC). The base form *membeli* (§4.1) will only appear in Monotransitive Construction with the GOODS role realised onto the Direct Object (DO) (as far as the example (1) is concerned).

(b) For the PASS form: The BEN/REC-as-PASS.Subj of *dibelikan* (§4.4) will be the dominant (if not the only) construction (5). Meanwhile, the GOODS-as-PASS.Subj of *dibelikan* will be unattested in usage at all because it is flagged ungrammatical in (6), hence, theoretically unlicensed by the grammar. However, the GOODS-as-PASS.Subj will predominantly appear in the base *dibeli* (§4.2), under the assumption that the GOODS role is the DO of the AV *membeli*.

An additional basis for these predictions is the corpora we consulted. They mainly come from written materials, especially news texts, that in theory require the use of standard language. Thus, the so-called standard usage pattern of the verb should be the norm. Nevertheless, theoretically, usage-based, Construction Grammar (UCxG) (§5) views (un)grammaticality as a matter of degree of conventionality. Moreover, the varying choices of the filler of the PASS.Subj will be discussed in terms of profiling (i.e., prominence/focusing in UCxG), semantic, and typological variation (§4.2 and §4.4).

3. Corpus data and methods

The main data source is twelve corpus files (see Table 1) from the *Indonesian Leipzig Corpora Collection* (Biemann et al. 2007; Goldhahn, Eckart & Quasthoff 2012). The size of these files amounts to 119,557,093 word-tokens.

Table 1. Corpus files and their sizes

Corpus File Names	Size (in word-tokens)
ind_news_2008_300K	5,841,467
ind_news_2009_300K	5,835,099
ind_news_2010_300K	5,840,876
ind_news_2011_300K	5,819,573
ind_news_2012_300K	5,845,795
ind_newscrawl_2011_1M	16,299,057
ind_newscrawl_2012_1M	16,822,496
ind_newscrawl_2015_300K	4,909,696
ind_newscrawl_2016_1M	15,702,910
ind_web_2011_300K	4,461,681
ind_web_2012_1M	15,820,113
ind-id_web_2013_1M	16,358,330

We retrieved 100 random sample sentences (in the form of concordances/keyword in context display) for each of *membeli* (N=20,342 tokens), *dibeli* (N=3,832), *membelikan* (N=347), and *dibelikan* (N=396). Sample retrieval and randomisation were done in R (R Core Team 2020) using the concord_leipzig() function of the corplingr R package (Rajeg 2021b). Data annotation was then performed manually in a spreadsheet software. From the total 400 sample sentences across the four verb forms, the verbs significantly appear more frequently in subordinate clauses (N=245; 63.5%) compared to main clauses (N=146; 36.5%) ($p_{\text{Binomial}} < 0.0001$).

3.1 Data annotation

The annotation captures the syntactic realisations of the participant roles of the verbs in the base and applicative forms. These include (i) the grammatical construction in which the verbs appear (e.g., Monotransitive [Oblique] Construction, Intransitive Construction, Double Object Construction) and (ii) the syntactic roles of the construction (e.g., PASS.Subj, AV.DObj, Oblique, etc.) filled with the overtly encoded semantic-participant roles, particularly GOODS and BEN/REC involved in the alternation due to the pre/absence of -*kan* in the AV and PASS (§2). The approach is inspired by the FrameNet (FN) project (Fillmore, Johnson & Petruck 2003; Fillmore 2014; Ruppenhofer et al. 2016), a practical implementation of Frame Semantics (FS) (Fillmore 1982; Petruck 1996) and its "sister theory" Construction Grammar (CxG) (Boas 2021:43; see also Goldberg 1995; Fillmore & Kay 1995; Croft 2001). Overall, FN captures syntactic and semantic combinatorial possibilities of words based on corpus attestations of how the words are used (Fillmore, Johnson & Petruck 2003).

The central tool in FN is the **semantic frame**. It is defined as "any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits; when one of the things in such a structure is introduced into a text, or into a conversation, all of the others are automatically made available" (Fillmore 1982:111). FS is an empirical semantic paradigm which "emphasizes the continuities between language and experience" (Petruck 1996:1).

In practice, we use the inventory of the semantic frame represented in the English FN repository. To identify the frame in the English FN repository, the English equivalence of *beli* '*buy*' was used as the search term. The FN repository provides, among others, the

list of semantic frames and their corresponding semantic roles (i.e., Frame Elements [FEs]), the Lexical Units (LUs) that evoke such frame, and the lexical entry that records syntactic realisation patterns of the FEs for each LU. An LU is the pairing of a word form with a sense (i.e., "the meaning aspect of the lexical unit" (Cruse 1986:49)). For example, for the word *hot*, its 'temperature' and 'taste of food' senses will represent two LUs (hence, two semantic frames) of *hot* (Fillmore, Johnson & Petruck 2003:236).

This paper distinguishes two levels of valence as in FN: syntactic and semantic. Fillmore's (2003:236–237) idea of the **syntactic valence** of a verb captures the grammatical functions (e.g., Subject, Object, Oblique) and phrase types into which the semantic-participant role of the verb is realised in a clause/sentence (Fillmore 2014:123–124; cf. Haspelmath & Müller-Bardey 2004:1131) (see also §3.2). In contrast, the **semantic valence** of the verb or any words, in general, is operationalised as "the kind of entities that can participate in frames of the type evoked by the word. We will call these roles *frame elements* (FEs)" (Fillmore, Johnson & Petruck 2003:237, italics in original; see also Fillmore 2003:458). Semantic valence is like Kroeger's (2005:70) concept of "semantic arguments", the number of core participant roles necessary to understand the meaning of a verb, regardless of how those roles are realised syntactically. Kroeger (2005:69–70) also differentiates between "valence" and "semantic arguments" whereby "valence" is defined in syntactic terms as "[t]he number of terms or direct arguments" of a verb; these "terms or direct arguments" are Subject, Direct Object (of the Monotransitive Construction), and the two objects (Primary and Secondary Objects) of the Double Object Construction (Goldberg 2006:40).

Characterising the valency of a verb in both syntactic and semantic terms is not uncommon as noted by Haspelmath and Müller-Bardey (2004:1131). Semantic characterisation highlights the conceptual motivation of the valency of the verb in terms of situation types and the participants involved. Meanwhile, syntactic characterisation highlights the realisation pattern of the participants into grammatical functions. For instance, *donate* semantically evokes three core FEs in the Giving frame (i.e., DONOR, RECIPIENT, and THEME).[7] Nevertheless, these FEs are not conventionally realised in the Double Object Construction where the RECIPIENT is the Primary Object, but in the Monotransitive Oblique Construction with the RECIPIENT is realised as an oblique (Kroeger 2005:69–70; see also Fillmore & Kay 1995:231–232, for similar example with the verb *contribute* where one of the three core semantic roles can be null-instantiated in the clause).

The verb *beli* 'buy' semantically evokes the `Commerce_buy` frame with two core FEs (i.e., BUYER and GOODS). This frame describes "a basic commercial transaction involving a BUYER and a SELLER exchanging MONEY for GOODS, taking the perspective of the BUYER".[8] The typical realisation pattern of these roles for English *buy* is "BUYER *buys* GOODS from SELLER for MONEY" (e.g., "Abby *bought* a car from Robin for $5,000"). The Indonesian example is shown in (8).

(8) *Anda*   **mem-beli**   *produk*   *dari*   *supplier*   *dengan*   *harga*   *Rp. 200 ribu*[9]
     2SG   AV-buy   product   from   supplier   with   price   IDR 200 thousand

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[7] Following the orthographical practice in FrameNet (FN), frame element/role is written in small capitals.

[8] https://framenet2.icsi.berkeley.edu/fnReports/data/frameIndex.xml?frame=Commerce_buy (accessed 23/08/2022)

[9] Retrieved from: https://goukm.id/daftar-supplier-produk-online-untuk-jualan/ (accessed 23/08/2022).

BUYER   GOODS   SELLER   RATE   MONEY
'...you *bought* product from a supplier for IDR 200K...'

Figure 1 below is a screenshot of the broader frame network for the `Commerce_buy` frame. The screenshot is generated via the FN's FrameGrapher feature in the FN webpage.
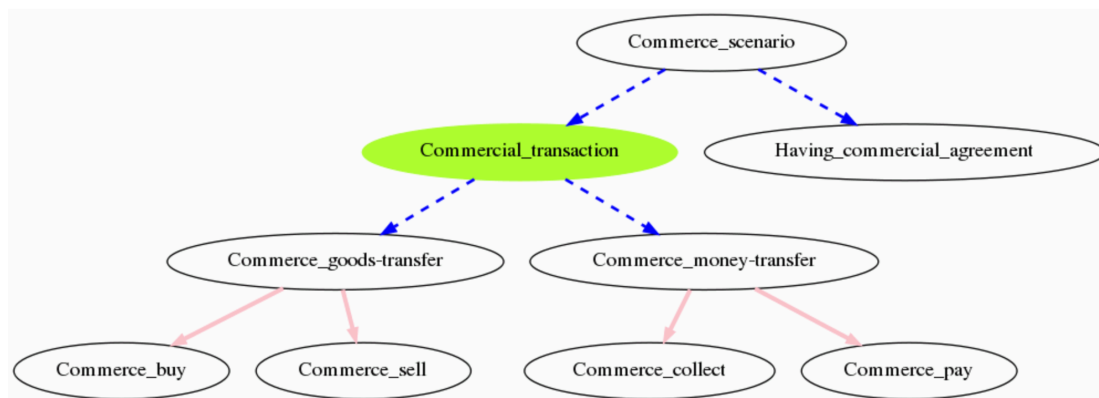

**Figure 1 Frame-to-Frame relations centred around the
`Commercial_transaction` frame**

The pink arrows indicate that the lower frames are perspectives of the higher frame. Therefore, the `Commerce_buy` frame (taking the perspective of the BUYER role) and the `Commerce_sell` frame (taking the perspective of the SELLER role) are two perspectivising frames for the `Commerce_good-transfer` frame; the `Commerce_sell` frame is evoked by the verb *sell* as in *Robin sold a car to Abby for $5,000*. The dashed blue arrows indicate that the lower frames are sub-frames (i.e., sub-events) of the higher frames. For instance, the `Commerce_goods-transfer` frame and the `Commerce_money-transfer` frame are sub-frames of the `Commerical_transaction` frame (highlighted in light green). We will use this frame-to-frame relation within the `Commercial_transaction` family to account for distinct argument realisation of the PASS *dibeli* (§4.2) and *dibelikan* (§4.4).

3.2 Measuring the constructional profiles

The "constructional profiles" of the verbs represent the proportion of the constructions in which the verbs occur (Janda & Solovyev 2009:368). The constructions include the syntactic valence (e.g., Monotransitive, Double Object, etc.) and the realisation of the semantic roles in the syntactic slots of the construction (e.g., BEN/REC-as-PASS.Subj or GOODS-as-PASS.Subj constructions; §4.4). The syntactic valence of the base *membeli* is counted as Monotransitive when the core GOODS role is overtly realised in the Object slot of the Monotransitive Construction. When the GOODS role of AV *membeli* is not overtly realised in the syntactic object slot (as in example (11) below) but is accessible from the context, *membeli* is counted to appear in the Intransitive Construction (Fillmore 1986:96). The same measure is defined for *membelikan*, which increases the semantic valence of the base *membeli* (i.e., making the BEN/REC a core FE). *Membelikan* is considered to appear in the Double Object Construction when the target non-BUYER roles, such as BEN/REC and GOODS, are overtly realised in the two object slots of the construction (as in examples (2) or (16)). As we shall see in §4.3, *membelikan* does not always syntactically realise the BEN/REC and GOODS roles in the Double Object Construction, but also in the Monotransitive Construction. In CxG, "the instantiation of a referent without any overt expression of that referent" (Croft 2001:276) is called "Null Instantiation" (NI).

The data and the R Markdown Notebook containing the R codes for the analyses are available at https://doi.org/10.6084/m9.figshare.23612631 (Rajeg & Arka 2023).

4. Results and discussion

4.1 Constructional profiles of the base *membeli*

As predicted, *membeli* 'buy' appears mainly in Monotransitive Construction (N=87; 87% of the total 100 tokens; see Figure 2) ($p_{Binomial} < 0.001$). In this construction, the GOODS role (e.g., *tiket pesawat* 'flight ticket' in (9) below) is realised into the Direct Object (DO). This could be viewed as the main constructional profile of *membeli*.
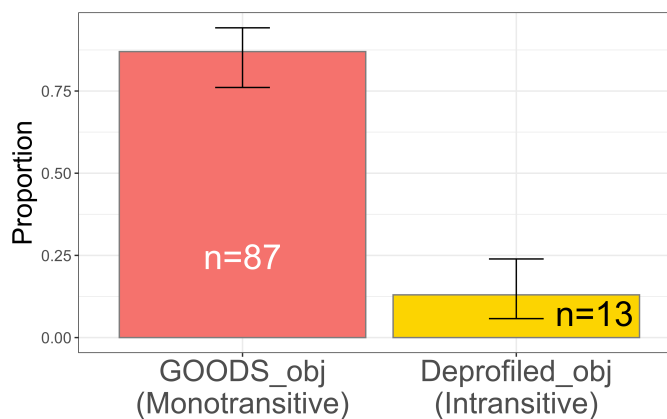

Figure 2 Constructional Profiles of *membeli*

(9)   Monotransitive Construction (ind_newscrawl_2012_1M:888396)

orang-orang	*jarang*	***mem-beli***	*tiket*	*pesawat*
person~PL	rarely	AV-buy	ticket	aeroplane
BUYER			GOODS	

untuk	*meng-hadir-i*	*pernikahan*
for	AV-be.present-I.APPL	wedding

'...people rarely *bought* flight tickets to attend wedding,...'

However, regarding the prediction in (a) (§2.1), Figure 2 also shows that *membeli* is an "ambitransitive" verb (Dixon 2010:77, 165, 332) because it can appear in the Monotransitive as well as the Intransitive Constructions (cf. Croft 2001:247). As we argue below, the intransitive use of *membeli* (11) reveals the importance of (i) discourse-pragmatic factor, and (ii) contextualised usage data in investigating argument realisation (cf. Perek 2015) and language in general (e.g., Chafe 1994:22). In sum, while *membeli* is semantically bivalent (i.e., having two core frame elements (FEs) or participant roles in the `Commerce_buy` frame), syntactically it can be used monotransitively and intransitively (i.e., exhibiting a syntactic absence of a given semantic role: "semantic valents with no syntactic expressions" (Fillmore 2014:127)).

Previous studies typically presented the monotransitive example for *membeli* together with the adjunct phrase headed by *untuk* 'for' that marks the BENEFICIARY/RECIPIENT (BEN/REC) participant (example (1) above). This is illustrative for the view that the core BEN/REC argument in the *-kan* form of *membeli* (§4.3) is supposedly a result of syntactic promotion from the adjunct. The explicit, adjunct-encoding of the BEN/REC is attested only once in the monotransitive tokens of *membeli* (example (10) below); this further demonstrates that the BEN/REC role is not profiled by *membeli* (i.e., not obligatorily expressed in core/term syntactic argument; see Goldberg 1995:44–45).

(10)   Monotransitive + Adjunct BEN/REC (ind_web_2012_1M:858440)

di-saran-kan	*untuk*	***mem-beli***	*pellets*
PASS-suggestion-KAN.CAUS	for	AV-buy	pellets
			GOODS

khusus	***untuk***	*guinea pig*
special	for	GP (guinea pig)
		BEN/REC

'...(it is) recommended to *buy* special pellets *for GP* (*guinea pig*)'

As shown in Figure 2 and example (11) below, *membeli* can be used intransitively (13% of the total 100 tokens), which escaped the attention of the previous works (e.g., Kaswanti Purwo 1995; 1997; cf. also Cole & Son 2004; Kroeger 2007; Son & Cole 2008). In this "surface-intransitive" (Fillmore 1986:96) usage of *membeli*, the GOODS is not explicitly realised. Following Goldberg (2005:31), the intransitive *membeli* represents the Deprofiled Object Construction: at the syntactic level, the GOODS role is not instantiated as the DO of *membeli* but is evoked at the (frame-)semantic level.

(11)   Intransitive/Deprofiled Object Construction (ind_news_2008_300K:112366)

hingga	*kini*	*sulit*	*men-dapat-kan*	*minyak tanah*	*di*	*wilayah=nya*
until	now	difficult	AV-get-KAN.APPL	kerosene	LOC	area=3SG.POSS
				GOODS		

sehingga	*ia*	*ter-paksa*	***mem-beli***	*ke*	*pangkalan*	*di*	*Jalan Pasar Baru*
so.that	3SG	PASS-force	AV-buy	to	station	LOC	NAME
	BUYER						

'...until now it is so difficult to get kerosene in her area that she is forced to *buy* to the station at Pasar Baru street'

Two of the thirteen occurrences of the intransitive *membeli* appear in main clauses in compound sentences, and the rest of them (eleven occurrences) is in subordinate clauses (six adverbial clauses, four complement clauses, and one relative clause). Even though *membeli* appears in subordinate clauses, the object does not always appear in the higher, matrix clause (see (12)) to evoke a control relation between the omitted argument of the subordinate clause and its co-reference in the matrix clause (cf. §4.3.1.2).

(12)   Intransitive/Deprofiled Object Construction (ind_newscrawl_2012_1M:860454)

Ini	*karena*	*kemampuan*	*masyarakat*	*untuk*	***mem-beli***	*pun*	*ter-batas*
DEM	because	ability	society; people	for	AV-buy	EMPH	PASS-limit

'This is because society's ability *to buy* is also limited.'

The GOODS in (12) should have been understood from the previous discourse. Only three of the eleven subordinate clauses contain the antecedent of *membeli*'s omitted object in the matrix clause (as in (11)).[10] The remaining subordinate clauses do not have the objects of *membeli* in the matrix clause. They appear in the previous sentences and/or wider context. In any case, speakers do use *membeli* intransitively in subordinate clauses without the need to have an object antecedent in the matrix clause.

Intransitive uses of *membeli* in (11) and (12) are licensed by discourse-pragmatic and cognitive mechanisms of syntactic object omission: the argument has been cognitively active, topical or salient to the point that it is omissible (Chafe 1994:71–75; Croft 2001:235; Langacker 2008:59–60). In all the thirteen intransitive uses of *membeli*, the

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[10] See sub-section 2.2.4 in the online R Notebook of this paper for the example sentences of this point: https://gederajeg.github.io/applicative-buy/#the-intransitive-membeli-in-subordinate-clause-without-antecedent-in-the-matrix-clause

referent of the omitted GOODS is "an established discourse topic" (Lambrecht & Lemoine 2005:42), making it cognitively active and topical. The topicality of the omitted GOODS can be demonstrated by the presence of discourse antecedent (Goldberg 2001:511) (e.g., *minyak tanah* 'kerosene' in the preceding clause in (11)). The context in (11) reveals that the unexpressed GOODS role receives an anaphoric and definite interpretation (i.e., Definite Null Instantiation [DNI] in CxG) (Fillmore 1986; Bowden 1997:145–146; Croft 2001:276). The term "definite" in Definite Null Instantiation (DNI) means that the omitted/unexpressed frame element (e.g., the GOODS role in (11)) must be accessible "from something *given* in the context" (Fillmore 1986: 96, italics in original) and refer to a specific entity (Ruppenhofer & Michaelis 2014:62); in this case, the specific and given entity active in the discourse of (11) is *minyak tanah* 'kerosene', which is a null anaphora in the clause with *membeli* (null anaphora and pro-drop are instances of DNI mentioned in Croft 2001:276). From a Cognitive Linguistic perspective, recoverability of the intended interpretation of the omitted GOODS involves a psychological "POINTER mechanism" that "'points' to previous linguistic material" (Goldberg & Perek 2019:190). Psycholinguistic evidence demonstrates the semantic recoverability of omitted elements, suggesting pointer to memory traces of the antecedent (see Goldberg & Perek 2019:191–192 for the discussion and references).

The discourse-pragmatic mechanism of recoverability and topicality for omitting the GOODS may relate to another discourse-pragmatic factor of shared communicative motivation "to express our message economically" (Goldberg & Perek 2019:189). This means that when the intended interpretation for the omitted argument is recoverable from (linguistic or non-linguistic) contexts, "there is no need for it to be overtly specified" (Goldberg & Perek 2019:189). This view ties in and could also be motivated by the Gricean maxim of quantity: "say no more than necessary" (Goldberg 2005:31).

As noted by Goldberg (2001; 2005:30), different languages pose different possibilities for argument omission (cf. Croft 2001:251). Unlike Indonesian, English cannot omit an object argument despite being topical (Goldberg 2001:512). Indonesian is similar to other languages that allow definite and topical object-argument to be omitted, namely Japanese and Korean (Goldberg 2001:514), Hungarian (Goldberg 2001:516), Chinese (James Huang 1984), and French (Lambrecht & Lemoine 2005).

4.2 Constructional profiles of the base *dibeli*

The construction of interest for *dibeli* 'be bought' is the filler of its subject. As predicted in (b), the GOODS-as-PASS.Subj(ect) is the predominant construction ($p_{Binomial} < 0.001$).
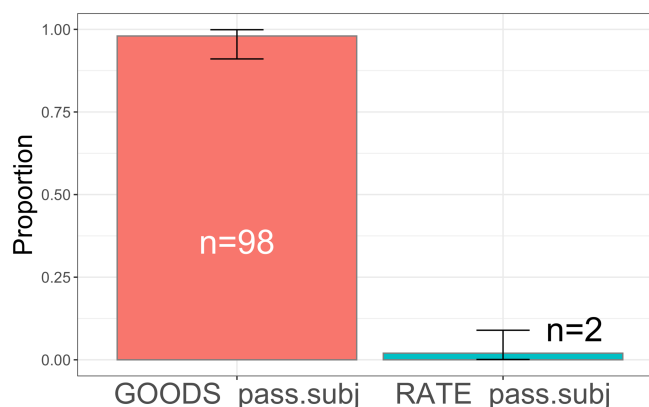

Figure 3 Constructional profiles of *dibeli*

The GOODS-as-PASS.Subj can occur in the main clause or in subordinate clause, such as relative clause where the modified noun is the subject of *dibeli* (13).

(13) GOODS-as-PASS.Subj in Relative Clause (ind_newscrawl_2016_1M:506155)
*kopi-kopi   yang   **di-beli**   dari   petani Asnikom telah   di-pasar-kan*
coffee~PL   REL   PASS-buy   from farmer NAME   PERF   PASS-market-KAN.CAUS
GOODS   SELLER
'...the coffee that *was bought* from Asnikom farmer has been marketed...'

In the remaining two tokens of *dibeli*, the RATE role of the `Commerce_buy` frame is also attested to fill the PASS.Subject slot. The RATE role in (14) is specified by *harga rata-rata per liter* 'average price per litre', the head noun in the subject relative clause.

(14) RATE-as-PASS.Subj (ind_newscrawl_2016_1M:761992)
*harga   rata-rata per liter yang **di-beli**   pedagang, men-capai Rp. 5,000*
price   average   per litre REL   PASS-buy   seller   AV-reach   IDR NUM
RATE   BUYER
'...the average price per litre that *was bought* (i.e., *was paid*) (by the) seller reaches IDR 5,000...'

Semantic motivation, such as metonymy and polysemy, could explain such an alternative argument realisation for *dibeli* in (14) (cf. Croft 2001:248).

In Cognitive Linguistics, metonymy is viewed as a conceptual mapping whereby "one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain" (Kövecses 2010:173). An example is the use of *Shakespeare* (Author, the vehicle) to refer to the work (the target) as in "I'm reading *Shakespeare*" (Kövecses 2010:172). The RATE (an inherent property of purchasable goods) in (14) could refer to the GOODS within the same, broader frame of `Commercial_transaction`[11] (see Kövecses 2010:181, for the characterisation of the conceptual metonymy DEFINING PROPERTY FOR CATEGORY, that could motivate the use of RATE-as-PASS.Subj with *dibeli*).

In terms of polysemy, *dibeli* in (14) expresses a different sense, namely 'to pay (a price/rate)' (rather than 'to buy [a price/rate]') (see also Fillmore 1977:64, who proposed that different argument realisation ["case role differences"] can lead to "sense differences"; and Croft 2001:72–73). In FrameNet, *pay* evokes the `Commerce_pay` frame[12] (part of the `Commercial_transaction` frame family; see Figure 1). In this frame, the RATE is a core FE (with BUYER, GOODS, MONEY, and SELLER), unlike in the `Commerce_buy`, in which the RATE is a non-core FE. As a core FE, the RATE is mainly realised as a core argument (e.g., "we can only *pay* the going rate").[13] In sum, even though the predominant pattern for *dibeli* is GOODS-as-PASS.Subj, the RATE-as-PASS.Subj is also attested with different semantic motivations and implications.

Typologically, the pattern in (14) provides further evidence for one feature of symmetrical voice construction, namely no default linking between semantic roles and

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[11] https://framenet2.icsi.berkeley.edu/fnReports/data/frameIndex.xml?frame=Commercial_transaction (accessed 27/12/2022)

[12] https://framenet2.icsi.berkeley.edu/fnReports/data/frameIndex.xml?frame=Commerce_pay (accessed 27/12/2022)

[13] See the FrameNet lexical entry page for the valence pattern of RATE with *pay* and from which the in-text example is taken: https://framenet2.icsi.berkeley.edu/fnReports/data/lu/lu3083.xml?mode=lexentry (accessed 12/01/2023).

the Subject/Pivot slot (cf. Foley 1998; 2008; Arka 2003:132; Riesberg 2014, Ch. 5). Under the Direct-Object (DO) only constraint for passivisation, only the DO is accessible for passivisation. However, the RATE-as-Obj is not attested in the AV sample (but as an adjunct as shown in example (8)). Therefore, the RATE-as-PASS.Subj should not be viewed as an alternation from the AV *membeli* RATE-as-Obj. Inspecting more samples is needed to falsify the claim that RATE-as-Obj is absent. After all, a symmetrical voice construction allows for a direct linking of a semantic role to the Subject/Pivot slot of a Passive construction (see also the discussion for the same phenomenon in §4.4 for *dibelikan*), and this is what we observe in (14).

The sample for PASS *dibeli* (and *dibelikan*; §4.4) also evinces the symmetricality of voice alternation in Indonesian. That is, the BUYER/AGENT, when encoded explicitly (in 34 cases of the 100 tokens), remains the core argument (e.g., explicitly encoded in bare noun phrase as *pedagang* 'seller' in (14) above) (64%; 22 of 34 cases) (Arka 2003:126; Riesberg 2014:81). The coreness of the BUYER in *dibeli* is attested both in the GOODS-as-PASS.Subj and the RATE-as-PASS.Subj constructions. The remaining 35% (N=12) of the 34 cases of explicit encoding of the BUYER are PP-adjunct marked with *oleh* 'by'. Therefore, one passive form like *dibeli* can be used (i) in the construction typical of the Undergoer Voice (UV) Construction where the non-Subj argument (BUYER/AGENT) remains core as in (14); and (ii) in the PASS Construction where the BUYER/AGENT appears as an oblique or suppressed (see (13) above) (cf. Riesberg 2014:15, 208; Musgrave, Arka & Rajeg *to appear*, example (3)).

In sum, the pattern in (14) accentuates the importance of a detailed account for verb sense (i.e., a semantic restriction) in argument realisation and voice alternation, as shown in usage-based and experimental studies (e.g., Hare, McRae & Elman 2003; Boas 2003:104; 2008, for English; and Aryawibawa & Ambridge 2018; Rajeg, Rajeg & Arka 2020; Rajeg, Rajeg & Arka 2022, for Indonesian). We will show that the passive-applicative *dibelikan* (§4.4) also exhibits varying semantic patterns with respect to its argument realisations.

4.3 Constructional profiles of the applicative *membelikan*

The theoretical prediction for *membelikan* (see (a)) would expect its default and predominant use in the Double Object Construction because semantically *membelikan* evokes three core semantic roles. It is motivated by the assumption that *-kan* (i) promotes the BENEFICIARY/RECIPIENT (BEN/REC) adjunct into the non-Subject core argument, namely the default Primary Object (PO), and (ii) makes the *-kan* verb syntactically appears in the Double Object Construction. However, this is not fully borne out in actual, contextualised usage data. Figure 4a demonstrates that *membelikan* is used significantly more often in the Monotransitive (Oblique) Construction (N=79) (example (15)) than in the Double Object/Ditransitive Construction (N=20) (16) or in the Intransitive Object Constructions (17) ($p_{\text{Exact Multinomial Test}} = 0$).[14]

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[14] The Exact Multinomial Test is computed using the `multinomial.test()` function from the EMT R package (see Gries 2021:175).
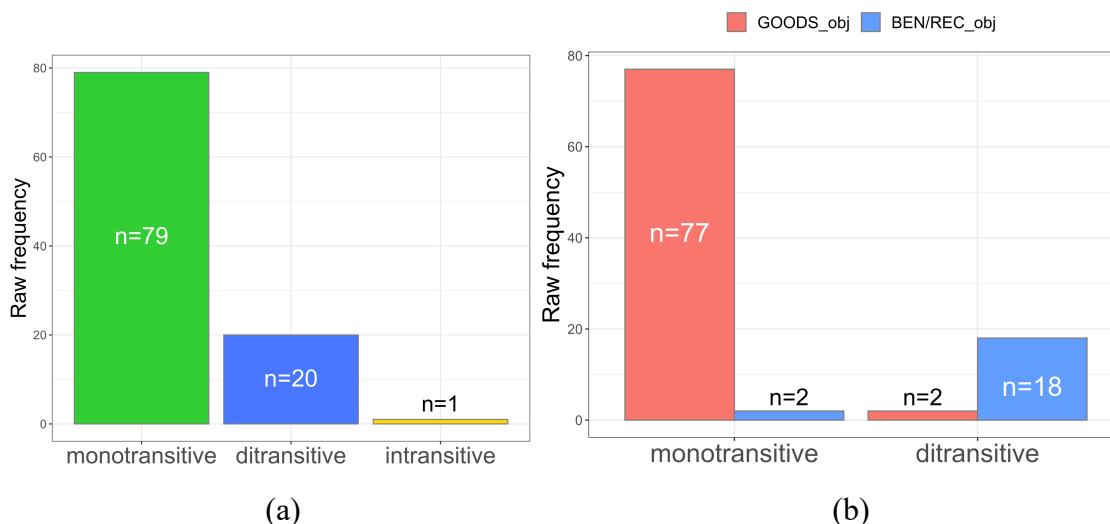
Figure 4 Constructional profiles (a) and the realisations (b) of the GOODS and BENEFICIARY/RECIPIENT roles of *membelikan* in the Direct Object and Primary Object slots of the Monotransitive and Ditransitive Constructions respectively

(15) Monotransitive (Oblique) Construction (ind-id_web_2013_1M:362400)

Jagad	*ingin*	**mem-beli-kan**	*mesin cuci*	*bagi*	*ibu=nya*
NAME	want	AV-buy-KAN.APPL	washing.machine	for	mother=3SG.POSS
BUYER			GOODS		BEN/REC

'Jagad wants to *buy*.APPL washing machine for his mother,...'

(16) Double Object Construction (ind_newscrawl_2011_1M:891138)

tersangka	*mem-(p)enuh-i*	*janji=nya*	*dengan*
suspect	AV-be.full-I.CAUS	promise=3SG.POSS	with
BUYER			

mem-beli-kan	*korban*	*pulsa*
AV-buy-KAN.APPL	victim	phone.credit
	BEN/REC	GOODS

'...the suspect fulfilled h(is/er) promise by *buying*.APPL *the victim phone credit*'

(17) Intransitive Construction (ind_news_2008_300K:1010)

AQSIQ	*minta*	*kepada*	*orang tua*	*untuk*	*melakukan*	*pemeriksaan*
NAME	ask.for	to(wards)	parents	for	do	inspection
			BUYER			

terhadap	*mainan*	*sebelum*	**mem-beli-kan**	*kepada*	*anak-anak=nya.*
towards	toy	before	AV-buy-KAN.APPL	to(wards)	child~PL=3PL.POSS
	GOODS				BEN/REC

'AQSIQ asks parents to do an inspection towards the toy before *buying*.APPL [the toy] for their children.'

As discussed in §4.1 for the intransitive *membeli*, the singleton for the intransitive *membelikan* in (17) is licensed by the discourse-pragmatic and cognitive mechanisms of the topicality and recoverability of the omitted GOODS (Bowden 1997:145–146). The intended, specific referent of the GOODS in (17) is *mainan* 'toy' and thus is a Definite Null Instantiation (DNI) in the clause with *membelikan*. The BEN/REC role (*anak-anak* 'children') is realised as an oblique headed by *kepada* 'to(wards)'.

In the Double Object (i.e., the Ditransitive) Construction (see the ditransitive right-panel of Figure 4b), the BEN/REC role is profiled as it is realised into the core PO. Kittilä and Zúñiga (2010:6) propose that "[b]eneficiaries usually have an animate referent"; we

found that the fillers for the BEN/REC role of *membelikan* in the Double Object Construction are all animate (45% [N=9] personal pronoun, 40% [N=8] common noun denoting human/animate entity, and 15% [N=3] proper name).

Next, Figure 4b above shows that in the Monotransitive Construction, it is the GOODS (rather than the BEN/REC) that are strongly profiled grammatically (i.e., realised more frequently into the Direct Object [DO] slot). The constructional profile of the applicative *membelikan* is thus like the base *membeli* in terms of their shared predominance in Monotransitive, GOODS-as-DObj. In addition to this predominant pattern, there are two occurrences of the BEN/REC-as-DObj (see example (18)). These are from one newspaper article.[15] As in (17), the discourse-pragmatic factor is at work in (18) for the omission of the GOODS and only profiling the BEN/REC in the DO slot.

(18) Monotransitive, BEN/REC-as-Object (ind_newscrawl_2011_1M:921130)

Diri=nya	*hanya*	***mem-beli-kan***	*pemakai.*
self=3SG.POSS	just	AV-buy-KAN.APPL	user
BUYER			BEN/REC

'She herself only *bought*.APPL (the drugs for/on behalf of the drugs) user.'

The unexpressed GOODS role in (18) is drugs; they are topical and have been specified in the previous paragraphs of the news before the sentence in (18). Obviously, in addition to the discourse factor, as in the intransitive use for the base *membeli*, the frame-semantic meaning of the verbal root *beli* necessarily evokes the GOODS, regardless of its specifics; this helps the understanding of the sentence in (18) and (17).

4.3.1   The realisation of the BENEFICIARY/RECIPIENT in Monotransitive *membelikan*

Closer inspection of the Monotransitive tokens of *membelikan* reveals different strategies in the realisation of the BEN/REC role. First, the discourse-pragmatic factors, namely givenness and topical/activated status of the BEN/REC, can play a role (already discussed in examples (17) and (18) above, and as shown also in example (19) below).

(19) ind_newscrawl_2011_1M:230626

Tikram	*yang*	*di-kenal*	*sebagai*	*preman*	*pasar,*	*emosi*	*karena*
NAME	REL	PASS-know	as	thug	market	emotion	because
BEN/REC							

korban	*tak*	*bisa*	***mem-beli-kan***	*miras.*
victim	NEG	be.able.to	AV-buy-KAN.APPL	liquor
BUYER				GOODS

'Tikram, who is known as a market thug, was emotional because the victim could not *buy*.APPL (Tikram) liquor.'

The sentential context of (19) allows the recoverability of the omitted BEN/REC (in the adverbial clause with *membelikan*) from the main clause subject, namely *Tikram*, the market thug. *Tikram* is topical and given in the discourse context of this sentence and thus possible to be omitted in the following clause (Bowden 1997:145–146). In addition to the givenness, other strategies are reported in a cross-linguistic, typological study of the encoding of three-participant events, particularly the realisation of the BEN/REC-like and the THEME-like roles (Margetts & Austin 2007). These strategies are presented in the following sub-sections.

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[15] https://issuu.com/harian-equator/docs/21052011 (accessed: 01/01/2023)

4.3.1.1   The oblique applicative strategy

The "oblique 'applicative' strategy" (Margetts & Austin 2007:416) means that the verb bears an applicative affix (e.g., *-kan*) and the BEN/REC role is also marked with an adposition. This is illustrated in (15) above (*membeli**kan** mesin cuci **bagi** ibunya* 'buy.*APPL* washing machine *for* his mother') whereby the BEN/REC *ibunya* 'his mother' is marked with the preposition *bagi* 'for' and the verb also bears the applicative *-kan*. Hence, the NP_{GOODS} + PP_{BENEFICIARY} pattern. Prescriptive grammarians would deem this oblique pattern as "grammatically deviant" (Kaswanti Purwo 1997:246) compared to the Double Object pattern. However, the double marking with the applicative and oblique is of typological interest. This pattern is attested not only in Indonesian and other Austronesian languages of Indonesia, such as Taba (Bowden 1997:236, 241) and Javanese (Vander Klok 2021), but also in other language families (see Margetts & Austin 2007:417–418). This paper shows that the syntax of the BEN/REC role for the Indonesian applicative is not mainly the Primary Object in the Double Object Construction (as proposed in, for instance, Shibatani 1996: 174), but can also be an oblique (Kaswanti Purwo 1997:246). Yet, the applicative *-kan* still makes the BEN/REC role semantically profiled (i.e., becoming a core FE of the `Commerce_buy` frame).

4.3.1.2   Co-referentiality of the BEN/REC with arguments in the higher clause

The second strategy is co-referentiality of the BEN/REC role with another argument in the multi-frame and multi-clausal (control) constructions (Bowden 1997; Peterson 2007:34–36, *inter alia*; Margetts & Austin 2007:400). The construction involved is subordination whereby *membelikan* appears in subordinate clause embedded in a main clause, the verbal predicate of which (e.g., *meminta* 'request' in (20) below) evokes the `Request` frame. This frame describes a situation where "a SPEAKER asks an ADDRESSEE for something, or to carry out some action."[16] The frame meshes well with the benefactive semantics in which the benefactive situation would exist for the SPEAKER when the ADDRESSEE has fulfilled the SPEAKER's request.

(20) ind-id_web_2013_1M:891084

75%	*anak-anak*	*meng-aku*	*pernah*	***me-minta***	*orang.tua*
NUM	child~PL	AV-1SG	ever	AV-ask.for	parents
	SPEAKER				ADDRESSEE
	BEN/REC				BUYER

mem-beli-kan	*produk*	*yang*	*di-iklan-kan*	*TV.*
AV-buy-KAN.APPL	product	REL	PASS-advertisement-KAN.CAUS	television
	GOODS			

'75% of children admitted (that they) ever asking (their) parents to *buy.*APPL (them/children) products advertised on TV.'

In (20), the BEN/REC of the buying action (as requested by the SPEAKER to the ADDRESSEE/BUYER) is co-referential to the SPEAKER/REQUESTER itself. In the CxG literature on argument realisation, example (20) reflects "co-instantiation": "a single constituent of a sentence can be seen as simultaneously satisfying valence requirements of more than one predicate" (Fillmore & Kay 1995:238). The single constituent here is *anak-anak* that instantiates the complement of the higher-clause predicators (i.e., *mengaku* and *meminta*) and that co-instantiates a complement (i.e., BEN/REC role) in the embedded clause with *membelikan*. The same interpretation is evoked when the main clause (evoking the `Request` frame) is in the passive construction (see (21) below).

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[16] https://framenet2.icsi.berkeley.edu/fnReports/data/frameIndex.xml?frame=Request (accessed 13/01/2023)

(21) ind_newscrawl_2011_1M:38938

Karena	*itu*	*dia*	*sering*	**di-minta-i**	*tolong*	*teman=nya*
because	DEM	3SG	often	PASS-ask.for-I.APPL	help	friend=3SG.POSS
		ADRESSEE				SPEAKER
		BUYER				BEN/REC

untuk	**mem-beli-kan**	*barang.*
for	AV-buy-KAN.APPL	goods
		GOODS

'Because of that, (s)he is often asked for a favour by h(is/er) friend to *buy*.APPL stuff.'

In the cases of (20) and (21), the discourse-pragmatic principle of the maxim of quantity could also be invoked since the potential BEN/REC has been active (in the `Request` frame clause). That situation then plausibly prevents the need to express the BEN/REC explicitly in the following clause with the applicative *membelikan* appearing in the same sentence. This is like the context of example (19) above.

4.3.1.3   The possessive strategy: BEN/REC is the possessor of the BUYER and the GOODS

As illustrated by Margetts and Austin (2007:426), in the possessive strategy, the three-participant verbs appear in Monotransitive Construction with the AGENT and THEME are core syntactic arguments while the BENEFICIARY/RECIPIENT (BEN/REC) encoded as the possessor of the THEME. This strategy is well-attested cross-linguistically (Margetts & Austin 2007:426–428). In the case of the applicative *membelikan*, we found that the BEN/REC predominantly appears as the possessor of the BUYER/AGENT (N=8) (see (22) and (26)) instead of the GOODS/THEME (N=1).

(22) BEN/REC as the possessor of the BUYER (ind_web_2012_1M:612567)

*Saat ia*ᵢ	*ulang tahun,*	*papa=nya*ᵢ	*bermaksud*	**mem-beli-kan**	*mobil*
when 3SG	birthday	father=3SG.POSS	intend.to	AV-buy-KAN.APPL	car
		BUYER BEN/REC			GOODS

'When (s)he had a birthday, h(is/er) dad intended to *buy*.APPL car'

The interesting semantics of the eight attestations for this possessive strategy is that the BUYER is always (one of) the parents of the BEN/REC possessor, so the two roles are related within the `Kinship` frame. The idea that parents would do something (e.g., buying something) for their children is a socially prototypical human experience. The possessive strategy between parents and children in the `Kinship` frame reinforces the benefactive semantics encoded by the applicative form of the verb, without necessarily using the verb in the Double Object Construction. Our data on *membelikan* also contributes a novel possibility for the possessor to be the dependent not only of the THEME (as in Margetts & Austin 2007: 426; and also Lichtenberk 2002), but also of the AGENT role, especially when the possessive relation is within the `Kinship` frame.

4.3.1.4   Relativisation strategy

In this strategy (cf. Bowden 1997:188), the verb *membelikan* appears in Monotransitive, GOODS-as-DObj Construction and the BEN/REC appears in the relative clause (RC) that modifies the GOODS.

(23) `Request` frame in the RC with BEN/REC (ind_news_2011_300K:138317)

Saya	*akan*	***mem-beli-kan***	*apa*	*yang*	*engkau*	***minta***
1SG	FUT	AV-buy-KAN.APPL	what	REL	2SG	OV.ask.for; request
BUYER			GOODS		BEN/REC	
ADDRESSEE					SPEAKER	

'I will *buy*.APPL the thing that you request'

(24) `Desiring` frame in the RC with BEN/REC (ind_newscrawl_2012_1M:421016)

Seperti	*sering*	*meng-ajak*	*ng-obrol,*	*agar*	*pikiran=nya*	*tidak*	*kosong,*
such.as	often	AV-invite	AV-chat	so.that	mind=3SG.POSS	NEG	empty

atau	***mem-beli-kan***	*mainan*	*yang*	***di-suka-i***	*korban.*
or	AV-buy-KAN.APPL	toy	REL	PASS-like-I.APPL	victim
		GOODS			BEN/REC
					EXPERIENCER

'For instance, frequently inviting (the victim) to chat so that h(is/er) mind is not empty, or *buying*.APPL toy that is liked (by the) victim.'

Interestingly, the RC predicates evoke the `Request` frame (example (23)) or the `Desiring` frame (24), and the BEN/REC corresponds to (or co-instantiated by) the EXPERIENCER or the SPEAKER roles of these two frames. These multi-clausal and multi-frame constructions have also been discussed in §4.3.1.2 above.

4.4 Constructional profiles of the applicative *dibelikan*

Based on the theoretical prediction in (b) above for the PASS-applicative *dibelikan*, the BENEFICIARY/RECIPIENT (BEN/REC) must be the filler of the PASS.Subj(ect) (example (25) below), but not the GOODS. This is based on the assumption that (i) the BEN/REC should be the default Primary Object (PO) of the AV-applicative *membelikan* in the Double Object Construction, and (ii) only the PO (i.e., BEN/REC) is accessible for passivisation (Kaswanti Purwo 1997:248; Son & Cole 2008:126).

(25) BEN/REC-as-PASS.Subj (ind-id_web_2013_1M:570594)

lebih.baik	*anak*	***di-beli-kan***	*pisang*	*dari.pada*	*snack*
be.better	child	PASS-buy-KAN.APPL	banana	rather.than	snack
	BEN/REC		GOODS		

'... (it would) be better if kid was *bought*.APPL banana than snack...'
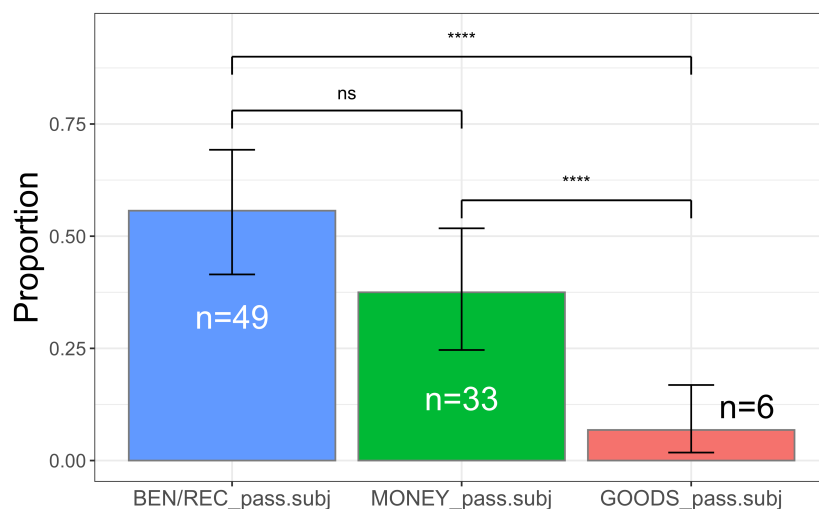

Figure 5 Constructional profiles of *dibelikan*

Figure 5 shows that the prediction in (b) is confirmed: the BEN/REC-as-PASS.Subj is significantly more frequent than the GOODS-as-PASS.Subj (26) ($p_{\text{Binomial}} < 0.0001$[17]).

(26) GOODS-as-PASS.Subj (ind_newscrawl_2012_1M:868450)

Kabar-nya	*rumah*	*tersebut*	***di-beli-kan***	*kekasih*	*Rossa*
news-DEM	house	DEM	PASS-buy-KAN.APPL	lover	NAME
	GOODS			BUYER	BEN/REC

'It is reported (lit. the news [is]) that the house was *bought*.APPL (by) Rossa's lover...'

However, Figure 5 also shows that the prescriptive remark that Indonesian BUY verb in applicative form cannot realise the GOODS as the PASS.Subj (Kaswanti Purwo 1997:246–247, example [31d]) should be re-cast in a probabilistic (rather than categorical, hard-rule) term. It is because this pattern is attested and, because of that, the grammar (of the language user) reasonably sanctions such a structure (Francis 2022:106). Future experimental studies could further determine the acceptability of (26) across speakers.

The question of whether (26) is attested because it is presumably derived from the AV Monotransitive Oblique Construction (NP$_{\text{GOODS}}$ + PP$_{\text{BENEFICIARY}}$) is hard to pin down (Son & Cole 2008:126 proposed this analysis using *panggangkan* 'bake sth. for s.b.'). Under such an analysis, the BEN/REC in the applicative AV is to be (optionally) encoded in the PP oblique while the GOODS is the AV.DObj, which, by the rule-based account, allows to be passivised as in (26). Furthermore, in the PASS-applicative, the oblique BEN/REC is omissible (Son & Cole 2008:126). However, in (26), the BEN/REC (*Rossa*) is still encoded via the possessive strategy (i.e., the possessor of the BUYER [*kekasih* 'lover'])[18] (see §4.3.1.3), rather than the oblique applicative strategy (§4.3.1.1). Does this suggest that (26) is derived from the AV Monotransitive *without* the explicit, oblique BEN/REC as in (22)? In the full context, the preceding first-two sentences (before (26)) that open the first paragraph of the news, there are no instances of the AV-applicative *membelikan* with explicit oblique BEN/REC, but only the base AV *membeli* in GOODS-as-DObj construction (namely, *Rossa **membeli** rumah mewah* 'Rossa *bought* a luxurious house' and *Rossa **membeli** tiga rumah sekaligus* 'Rossa *bought* three houses simultaneously'). Following the "surface generalisation" principle in the UCxG (Goldberg 2013:15; Ungerer & Hartmann 2023:2), the question of which AV structure derives certain PASS structure evaporates since the principle eschews transformation and directly associates the surface form with meaning (cf. other evidence for PASS below).

Typologically, the GOODS-as-PASS.Subj for *dibelikan* in (26) is also not qualitatively unique but reflects typological variation (see Bresnan & Moshi 1990 for evidence from Bantu languages). In Bukusu, a Bantu language, either the THEME or the BEN/REC can be the PASS.Subj of the applicative verb (Peterson 2007:8–9). Similarly, Dryer (1986:833, example (66)) notes that in Kinyarwanda's passive construction of the three-participant event *give*, "ANY object can advance to Subject" (small capital in original). That is, either the THEME or the RECIPIENT of *give* can felicitously be the PASS.Subj. Dryer terms this behaviour as the "direct advancement of an object to Subject" (1986:833) since there is no intermediary process of advancing the AV Indirect Object to the Direct Object slot

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[17] The pairwise, binomial tests between the three realisation patterns in Figure 5 were performed using the `pairwise_binom_test()` function from the rstatix R package (Kassambara 2021). The function includes correcting the significance threshold for multiple testing using the Bonferroni method.

[18] Context: https://www.viva.co.id/showbiz/253551-rumah-mewah-rossa-dibelikan-kekasih (accessed: 12/01/2023).

first before becoming the PASS.Subj. Moreover, Donohue (1996) shows that, in the Austronesian world, Bajau behaves similarly to that of the Bantu language. Bajau is analysed as a symmetrical object language where both objects of the Double Object Construction can be the PASS.Subj (Donohue 1996),[19] hence similar to Indonesian as found in this study.

Given the typological findings, and adopting UCxG, the GOODS-as-PASS.Subj in (26) is considered an independent unit of syntactic representation that is not necessarily a transformed version of certain AV form (cf. Goldberg 2013:15). From the cognitive grammar and constructional perspectives, (26) can be accounted for in terms of "prominence" (Langacker 2008:66–73; Goldberg 2006:39–40) in profiling participants of a clause (cf. Vander Klok 2021). Prominence involves the idea of fore/backgrounding and allows speakers to (de)focus or fore/background certain participant via grammatical resources (Langacker 1987:235; 2008:70–73, 365; Goldberg 2006:40). In the case of (26), the GOODS is afforded the "primary focus" (Langacker 2008:70), not necessarily because it is derived from an AV under the Direct-Object only constraint (see below), but functionally because PASS Construction allows the non-Agentive participant (e.g., GOODS) to (i) occupy the construction's syntactically most privileged slot (i.e., PASS.Subj) (cf. Langacker 2008:368, 384) and (ii) receives "a high degree of discourse prominence" (Goldberg 2006:40).

Another key finding in Figure 5, with theoretical and typological implications, is the MONEY-as-PASS.Subj construction (27). Its frequency and the BEN/REC-as-PASS.Subj is not statistically different, suggesting their relatively equal status for *dibelikan*.

(27) MONEY-as-PASS.Subj (ind_news_2011_300K:224188)
    *Dana   tersebut, kata Andi, selanjutnya **di-beli-kan**   senjata api*
    funding DEM   word NAME subsequently PASS-buy-KAN.APPL weapon fire
    MONEY   GOODS
    'The funding, Andi said, then *was spent on* (by means of buying) firearms...'

This construction expresses a distinct sense of *dibelikan* that is no longer a benefactive-transfer sense within the `Commerce_buy` frame (i.e., 'buying GOODS on behalf of, or for the benefit of the BEN/REC'). Instead, *dibelikan* in (27) means 'to spend (MONEY by means of buying GOODS)', rather than to help the MONEY buy GOODS as in (25). This sense is motivated by the verb's alternative argument realisation for its subject type in PASS (i.e., its distinct collocational pattern) within a distinct semantic frame, namely `Using_resource`.[20] The frame describes a finite amount of RESOURCE accessible to an AGENT who will use all or a PORTION of it via certain MEANS to achieve a PURPOSE (these are all core FEs in the frame). In this frame, the MONEY role could be viewed as a kind of finite RESOURCE used to buy something (the GOODS, hence the PURPOSE).

Our frame-based analysis differs from Kaswanti Purwo's (1995:87) analysis of *-kan* in expressing two distinct meanings, the BENEFACTIVE *-kan* (see (26)) and the INSTRUMENTAL *-kan* (27); it is called the INSTRUMENTAL *-kan* by Kaswanti Purwo because the PASS.Subj is not filled with an animate BEN/REC role, but rather an entity that is viewed as an INSTRUMENT, namely money. Our analysis for (27) involves only one form of *-kan*; it is part of a morphologically complex verbal construction but evokes a

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[19] We sincerely thank the anonymous reviewer for pointing out this work.

[20] https://framenet2.icsi.berkeley.edu/fnReports/data/frameIndex.xml?frame=Using_resource (accessed 13/01/2023)

distinct sense given its alternative argument realisation for the PASS.Subj (cf. Langacker 2008:70).

The pattern in (27) poses a theoretical challenge for the Direct Object (DO)-only constraint (Kaswanti Purwo 1997:240) and transformational analysis of passivisation, assuming the *a priori* existence of certain AV structure *underlying* the PASS. Under the DO-only constraint, the MONEY role should never be accessible for passivisation. First, syntactically, the MONEY is not attested as the DO of the AV applicative in the sample (a study on a larger sample is needed to falsify this by-now hypothesis). Second, semantically, the MONEY is a peripheral role in the `Commerce_buy` frame, and thus, not obligatorily expressed/realised in the utterance as a core syntactic argument of the verb.

However, Kaswanti Purwo notes that the MONEY-as-PASS.Subj is possible with *belikan* but "is more likely to be used in the *di*-verb ('passive') than in the *men*-verb ('active')" (1995:87–88). While this study corroborates the attestation of MONEY-as-PASS.Subj in PASS *dibelikan*, the felicitousness of MONEY-as-PASS.Subj could be due to the more frequent (or perhaps only) exposure to this pattern in the PASS than the AV, pointing to the importance of conventionalisation in argument realisation and language at large (Boas 2003:113; Langacker 2008:218, 238, *inter alia*; Perek 2015:33).

In sum, theoretically, in relation to the GOODS-as-PASS.Subj in (26), certain AV structure (i) does not have to exist *a priori*, given the attested PASS (cf. Croft 2001:35, 41, 72–73), or (ii) could hypothetically be produced later in analogy to the more frequent PASS (if such AV structure would be deemed necessary by the speaker). Typologically, the fact that the choice/filler of PASS.Subj for a given verb should not necessarily be the filler of the DO in AV reflects one of the features of symmetrical voice construction in Indonesian. Any non-Actor role can be equally possibly selected as the most privileged syntactic position of the Subject in PASS without the demotion of the other Patient-like role[21] (Arka 2003; Riesberg 2014; Donohue 1996; Foley 1998).

5. General discussion

5.1 The basic tenets of usage-based, Construction Grammar (UCxG)

The attested constructional variation of *beli* in the applicative construction can be accounted for within three interrelated tenets of the usage-based, Construction Grammar (UCxG) (Langacker 1987; 1988; Goldberg 2006; Diessel 2015; 2017; Croft 2001; 2023:2), namely "maximalist", "non-reductive", and "bottom-up" (Langacker 1988:131).

The maximalist view indicates that grammar consists of a "massive, highly redundant inventory of conventional units" (Langacker 1988:131). These conventional linguistic units are symbolic form-meaning/function pairings (i.e., constructions) (Goldberg 2006; Croft 2001:18–19). Constructions range from fully schematic patterns to highly specific and completely idiosyncratic linguistic patterns, and "no special significance attaches to any distinctions one might draw along this scale" (Langacker 1988:131–132); this is also known as the lexicon-grammar continuum (Croft 2001:17, 25).

The non-reductive view is closely related to the maximalist one in that schematic patterns co-exist alongside "the individual knowledge of specific structures" that instantiate and

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[21] Note that voice symmetricality is typically discussed in terms of AV and Undergoer Voice alternations in which either Actor or non-Actor arguments can be equally selected as Subject without the demotion of any other arguments to oblique.

conform to those schematic patterns (Langacker 1988:132; Tomasello 2003:6; see also Albright 2002; Booij 2010, for evidence in morphology). The "specific structures" can represent the detailed collocational patterns and semantic preferences of a verb (cf. Boas 2008, for verbs in English Resultative Construction). This view contrasts with the "economy" and "reductionism" principles of Generative Grammar (GG) (Langacker 1987:40; 1988:127–128; Croft 2003:61; Dąbrowska 2006; Diessel 2015:306). These principles propose that "the shortest grammar is the best grammar" and "redundancy is therefore to be avoided" (Langacker 1988:128).

The bottom-up view represents the idea that linguistic knowledge/grammar emerges from the actual, occurring linguistic expressions (i.e., language use) via domain-general processes, such as schematisation and analogy (Langacker 1988; Tomasello 2003:327; Ambridge & Lieven 2011:3; Ungerer & Hartmann 2023:21, 23). This view also entails and is related to the previous two in that the bottom-ward, low-level and idiosyncratic linguistic patterns are not ignored in UCxG (Croft 2023; Goldberg 2013:17). This is because, as Langacker (1988:133) cautions, "we do not know, in any direct way, precisely what degree of schematization they (i.e., speakers) achieve, i.e. how abstract and general rules are that they manage to extract from specific structures" (see also Croft 2003:64 for a similar argument).

5.2 Accounting for the alternative argument realisations of *beli*(*kan*) in UCxG

The three interrelated tenets of the usage-based, Construction Grammar (UCxG) in §5.1 allow us to state generalisation at a more verb-specific level in the base and applicative form and in the AV and PASS, rather than being reduced solely to the highly abstract schema of [verb$_{transitive}$+*kan*] (see, e.g., Langacker 1988:133; Croft 2003:64). In other words, a large amount of verb-specific information is plausible to be stored as different lexical entries (Croft 2003; Boas 2008; Faulhaber 2011; Perek 2015). This reflects the maximalist, redundant, and bottom-up representation of linguistic knowledge in UCxG.

For instance, the MONEY-as-PASS.Subj *dibelikan* (§4.4) (27) must be represented as an independent grammatical construction ("learned pairings of form and function"; see Goldberg 2013:15) in order to capture the speaker's knowledge of how *belikan* is used in this PASS construction to express 'to spend' sense (evoking a distinct semantic frame) (cf. Booij 2010). This is what Boas (2008:127) called a "mini-construction", which is the "conventionalized senses of verbs including syntactic, semantic, and pragmatic information". Mini-constructions principally correspond to Croft's (2003:58) "verb-specific construction". Usage frequency plays a role in the conventionalisation of this specific form-meaning pairing between [MONEY-as-PASS.Subj *dibelikan* GOODS-as-Obj] and 'to spend' (Perek 2015:212; Boas 2008:133). Such a postulation is also in line with another tenet in UCxG, namely the "surface generalisation", a "what you see is what you get" approach (Goldberg 2006:10). The surface generalisation principle asserts that a surface form is directly associated with semantics without any transformational component (Goldberg 2013:15; Michaelis & Ruppenhofer 2001:49). This can account for the 'pay' sense of *dibeli* when its subject is filled with RATE (14).

A highly abstract schema [verb$_{transitive}$+*kan*] conveying 'do something for the benefit of/on behalf of someone' cannot tell why this meaning is not evoked in the MONEY-as-PASS.Subj *dibelikan*. This PASS pattern (27) does not mean that the BUYER helps the MONEY.Subj buy the GOODS, unlike the BEN/REC-as-PASS.Subj *dibelikan* (25), which evokes the recipient-benefactive meaning. As such, postulating a mini-construction for *belikan* in PASS co-occurring with the MONEY subject would provide a more accurate prediction for its 'to spend' sense (Boas 2008). Stating a mini-construction (e.g., MONEY-

as-PASS.Subj *dibelikan* 'to spend') does not mean that it is completely detached from the more abstract schema it instantiates (e.g., [verb$_{transitive}$+*kan*]), with the latter to be discarded (cf. Boas 2008:137). In UCxG, the more specific instance of this schema can contain semantic and morpho-syntactic idiosyncrasies that are not necessarily inherited from the abstract schema (Booij 2010; Langacker 1987:28). Again, this represents the non-reductive view where the specific instantiation is still linked to and can co-exist with its more abstract schema (Langacker 1987:42).

The abstract schema [verb$_{transitive}$+*kan*] with recipient-benefactive meaning also does not predict that the monotransitive use of AV *membelikan* (i.e., GOODS-as-DObj) could be motivated by the coreferentiality of the BEN/REC role with different roles of different frames (i.e., `Request` and `Desiring` frames) combined with the `Commerce_buy` frame in subordinating construction. While this subordinating pattern is an attested typological phenomenon for the expression of three-participant events (§4.3.1.2), it has gone unnoticed in the previous studies of Indonesian applicative due to limited, constructed data. This pattern emerges in our study after inspecting empirical usage data, which is a methodological implication of the usage-based view in UCxG (Ungerer & Hartmann 2023:23). Future studies in Indonesian applicatives should further explore the co-instantiation of an argument in adjacent structures, coordination, or paratactic structures, and how these affect the syntactic transitivity of the verbs in the clause.

From the UCxG perspective, the psychological reality and theoretical status of general/abstract rules, which are the primary locus of modern linguistics, remain empirical and active issues (Croft 2003; Dąbrowska 2006). Proponents of usage-based linguistics (e.g., Langacker (1988), Tomasello (2003), Croft (2003)) have argued that low-level, verb-specific generalisation is the more realistic level speakers operate on:

> "The verb-specific and verb-class-specific constructions (...) are much closer to what a speaker actually hears and uses. Linguists cannot second-guess the sort of generalizations speakers make beyond these constructions. (Nor should we expect all speakers to form the same generalizations.) Only psycholinguistic experimentation might be able to establish the generalizations formed by individual speakers." (Croft 2003:64)

In recent years, psycholinguistic and corpus-based evidence has shown that speakers retain these low-level generalisation (cf. Tomasello 2003; Dąbrowska 2006; Dąbrowska 2009; Perek 2015; Rajeg 2021a:55–70; Rajeg, Rajeg & Arka 2022).

Next, the single lexical entry of *membeli* as semantically bivalent also cannot predict that, under certain discourse-pragmatic constraints, *membeli* can appear intransitively which null-instantiates the GOODS role. This is again identified after inspecting usage data (rather than a single constructed data). A similar phenomenon is also found in English. A corpus study by Perek (2015:72, Table 3.12) reports that 3.95% of 1,419 tokens of *buy* are used intransitively where only the BUYER is realised explicitly as in *I'd like to **buy** before my dad retires* (Perek 2015:72, Table 3.13). This finding contradicts Rice's (1988:207) proposal based on a single example that *buy* cannot omit its direct object since it takes "too broad range of possible objects". The intransitive use of *membeli* and *buy* is licensed by the Deprofiled Object Construction with the discourse-pragmatic constraint that the GOODS role needs to be topical for its omission (i.e., definite null-instantiation (DNI) Fillmore & Kay 1995:227; Croft 2001:276).

The fact that the intransitive use of *membeli* is less frequent than the monotransitive use still allows us to postulate a different mini-construction. It is because we need to account for (i) its attestation in the corpus and (ii) the constraint when and why *membeli* would

be used intransitively by speakers. Moreover, the low-frequency argument-realisation pattern of the verbs does not pose a problem for constructionists since they "aim to account for all aspects of grammar, including not only 'core' aspects of grammar but also low-frequency or unusual constructions that other theories might relegate to the 'periphery' or 'residue'" (Goldberg 2013:17). This statement (i) embodies all the three interrelated tenets of UCxG, and (ii) indicates that "subtle facts about semantics and use of particular constructions need to be accounted for" (Goldberg 2013:17). We have shown this for (i) the intransitive *membeli* (11) and *membelikan* (17), and (ii) the different semantic roles of the subject of *dibelikan* (27) and *dibeli* (14).

6. Conclusion

Taken together, the results of the corpus studies for the four verb forms based on *beli* show variation not only in the type of constructions but also in their frequencies. While the frequency of certain types appears to corroborate the proposed profile of such verb (§2.1) (e.g., the predominance of GOODS-as-DObj for *membeli*; §4.1), there are other types whose frequency does not truly reflect the hypothesised characterisation (e.g., the less frequent use of the applicative *membelikan* in the presumed default pattern of Double Object Construction [§4.3], or the attestation of Intransitive Construction for *membeli* [§4.1]). Such variation suggests that the verb is evidently compatible with a different range of constructions, some of which evoke distinct semantics (e.g., the 'to spend' sense of *dibelikan* in MONEY-as-PASS.Subj (27) compared to its 'benefactive-transfer' sense in the BEN/REC-as-PASS.Subj (25) or GOODS-as-PASS.Subj (26)).

We have explored typological implications (e.g., the symmetricality of voice construction in Indonesian) and potential factors that might explain alternative argument realisations. The factors range from discourse-pragmatic, frame-semantic and morpho-syntactic, which also bears on the typological findings of encoding of three-participant events (Margetts & Austin 2007). As such, our paper attempts to address Peterson's (2007:2) and Musgrave et al.'s (*to appear*) inquiries into the pragmatic aspect of applicative construction, which has been neglected since current accounts are mostly based on "individual sentences taken out of context" (Peterson 2007:2); this is mainly the case in the previous works on applicative in Indonesian (§2). The corpus-based analysis allows us to inspect the wider context of the use of the verbs.

The paper also indicates the importance of distinguishing semantic valence and syntactic valence of the verb (§3.1), and how they are realised in usage (Fillmore 2003; Haspelmath & Müller-Bardey 2004). In the case of -*kan* with the BUY verb, the suffix appears to function semantically rather than solely syntactically. It is because even though the verb is suffixed with -*kan*, the BEN/REC role is not always realised as a "core syntactic" argument, as predicted by the theory that applicative morpheme promotes a peripheral argument into a core syntactic role (hence increasing the syntactic valence of the verb to appear seemingly by default in Double Object Construction); we have shown that BEN/REC can also be marked with adposition (example (15)) (cf. Truong & McDonnell 2022:416–417). This is a mismatch between the syntactic and semantic structures of the applicative verb.

The idea of promotion can be viewed as increasing the semantic valence of *beli* (cf. Michaelis & Ruppenhofer 2001:43–45), that is, making the peripheral, non-core BEN/REC role become *semantically* central (i.e., core FE) to the frame-semantic meaning of *belikan*, regardless of how the role is realised in syntax (as an oblique in the Monotransitive Construction or a Primary Object in the Double Object Construction). Peterson (2007:49) noted that applicative construction can exhibit a purely semantic effect, an aspect that has

been neglected in the synchronic treatment of applicative. The monotransitive use of *belikan* can also be regarded as semantically motivated, given that the BEN/REC is conceptually evoked by (and semantically core for) the verb (cf. Son & Cole 2008:125) despite not being realised as one of the objects in the Double Object Construction.

In sum, we argue for the importance of corpus data to (i) refine hypotheses based on introspective data, (ii) capture the full range and motivating factors of alternative argument realisation of a verb, including generalisations and idiosyncrasies at the verb-specific level (§5.2), and (iii) highlight the probabilistic nature of argument realisations. Such variation, degree of conventionality, and idiosyncratic aspects of language need to be captured as part of a speaker's mastery of a language (Langacker 2008:241).

Abbreviations

List of abbreviations used in the body text and in the glossing of the examples.

1	first person	2	second person
3	third person	AV	actor voice
APPL	Applicative	BEN/REC	beneficiary/recipient
CAUS	Causative	CXG	Construction Grammar
DEM	demonstrative	DNI	definite null instantiation
DO	direct object	EMPH	emphatic marker
FE	frame element	FN	FrameNet
FS	Frame Semantics	GG	Generative Grammar
LOC	locative	INCL	inclusive
NAME	proper name	LU	lexical unit
NI	null instantiation	NEG	negator
NUM	number	NP	noun phrase
PERF	perfective	PASS	passive voice with *di-*
PO	primary object	PL	plural
PP	prepositional phrase	POSS	possessive
RC	relative clause	REL	relativizer
SO	secondary object	UV	undergoer voice
UCXG	usage-based, Construction Grammar		

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