

PREDICATIVE AUGMENTATION APPLICATIVES^[*]

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Abstract: Many languages show an interesting but hitherto virtually undiscussed phenomenon, namely augmentation of the predicate by means of an applicative marker. In most cases this involves reinterpretation of a locative applicative marker as an intensifier, and, ultimately, an iterative marker, but other types exist as well. Focussing on Indonesian applicatives, this paper attempts to account for these constructions through cognitive-functional principles. In doing so, it argues that applicatives are not mere morphological alternatives to analytic adpositional constructions. More specifically, it argues that applicative constructions show various high-transitivity traits in the semantic domain such as Actor dominance, Undergoer affectedness and volitionality, most likely as a result of the proto-typical Actor-Undergoer structure of the clause. It argues that, depending on the semantics of the applied verb, it is this high transitivity in combination with the Locative nature of the Undergoer that leads to interpretations of increased intensity and repetitiveness.

Keywords: applicative, locative, Indonesian, iterative, intensified, transitivity, predicate

1. Introduction¹

This paper investigates a cross-linguistically common, but compositionally unexpected type of applicative, in which it is not so much the increase or rearrangement of verb valence that is central to the construction, but rather augmentation of the predicate. By this is meant the addition of semantic content to the action expressed by the verb. These types of applicatives, dubbed *predicative augmentation applicatives* (henceforth PAAs) here, typically denote increased intensity or repetition of the action, although other predicate modifications such as habituality, progressiveness, and projection into the future also exist. They typically emerge from *locative* applicatives, and in many cases the applicative marker alters valence while at the same time augmenting the predicate, while in other cases it does not affect valence at all. Consider the following examples from Kamang:²

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² List of abbreviations: AGT=agent, APPL=applicative, AUX=auxiliary, AV=actor voice, CL=class, CNTCT=contactive, CONT=continuative, DEF=definite, DET=determiner, DIM=diminutive, ERG=ergative case, HUM=human, LOC=locative, OBJ=object, PAT=patient, PL=plural, POSS=possessive, PRS=present tense, PRTCPL=participle, REL=relativiser, S=singular, SBJ=subject, SPEC=specific.

Kamang (Timor-Alor-Pantar; Indonesia; Schapper 2014: 330–1)

- (1) **nal** **mooi=a** **wo-na-lai**
 1S banana=SPEC APPL-1S.PAT-be.glad
 ‘I enjoy bananas’
- (2) **na** **seb** **ga-tfa** **ifa**
 1S.AGT Seb 3.PAT-shoot dead
 ‘I shot Seb dead’
- (3) **na** **seb** **wo-ga-tfa** **ifa**
 1S.AGT Seb APPL-3.PAT-shoot dead
 ‘I shot Seb again so that he was dead’

In (1), the locative applicative *wo-* introduces a Stimulus argument *mooi* ‘banana’, thereby increasing the valence of the stative verb *lai* ‘be glad’. Sentence (2) and (3) are minimal pairs that differ only in the presence/absence of *wo-*; in (3) we find the same argument structure as in (2), but no additional argument is introduced, only a sense of repetition is added by the applicative. Thus while *wo-* may introduce an additional argument, one of its other functions is augmentation of the predicate. This is an interesting type of phenomenon; as most work on applicatives tends to focus on the behaviour of the respective clausal arguments, this is exactly what applicatives are typically associated with, but clearly, although they are commonly understood to affect argument realisation, they may also affect the semantics of the predicate as a whole.

Previous work on PAAs appears scarce. Peterson (2007: 49–50, 169–70) mentions the existence of PAAs but offers no explanation for them. He does point out their general neglect in the literature and suggests future investigation. Haspelmath & Müller-Bardey (2001: 9–10) suggest a nuclear type of applicative which they dub the *comprehensive applicative*, in which the affectedness of the Object stands central. While they also acknowledge that applied Objects are typically more affected as Undergoers than they would be in adpositional constructions, they do not explicitly link comprehensive applicatives to affectedness in general. Craig & Hale (1988) show similar phenomena for Rama, and, like Haspelmath & Müller-Bardey, point out that applicatives are not simply morphological alternatives to adpositional construction, and that they differ in event structure. Lastly, Marten (2003) argues that in various Bantu languages the main function of applicatives is not the licensing of arguments, but what he calls *concept strengthening*.³

The central question here is how an applicative can acquire such a function. In most descriptions of applicatives, PAAs are simply listed as another function of the same marker (e.g. Sneddon et al 2010: 99 for Indonesian, Kratochvíl 2014: 397–8 for Sawila, Hendle 1907: 42 for Pogoro, among many others), or, in some cases, homonymy is proposed (e.g. Shiohara 2012: 75 for Indonesian). In the case of polysemy, this would mean that the PAA, be it in the form of an intensifier or otherwise, and the applicative share a common source and are different functions of the same morpheme. In the case of homonymy, however, these

³ Marten’s *concept strengthening* corresponds almost exactly to my term PAA, the difference being that concept strengthening refers to a broader phenomenon whereas PAA refers to a specific construction type. Haspelmath & Müller-Bardey’s term *comprehensive applicative* does not fully correspond to PAA, because in their definition the affectedness of the Object stands central, whereas Predicate Augmentation also includes other semantic contributions of the applicative to the predicate.

would constitute two different morphemes with a different source that happen to be formally similar. Homonymy, as opposed to polysemy, is an unlikely explanation for PAAs, given their cross-linguistic frequency⁴ and their explicability as set out in this paper.

Thus, in this paper I argue that the emergence of PAAs is in fact explicable through cognitive-functional principles. More specifically, I argue that (i) applicative constructions are *not* simply a morphological alternative to an adpositional construction, in that applicative constructions have different predicative properties, and that (ii) predicate augmentation rests upon a number of these predicative properties and can be explained by them. From this also follows the fact that (iii) PAAs and applicatives are not homonymous but polysemous. Before doing so, however, it is perhaps worthwhile to provide a few notes on what type of framework/domain I adhere to, and to what extent I have gained from other works.

This paper is inspired by principles in various works within Cognitive and Functional Linguistics, but does essentially not adhere to any particular framework.⁵ Some readers will note that it is in a way reminiscent of Langacker's Cognitive Grammar. One reason for this is my use of drawings to represent event structure. These are based on Langacker's (cf. Langacker 2008) representations, but do not strictly follow any of his rules. Like Langacker's, these representations are a heuristic tool to visualise event structure and to aid the reader in understanding it (Langacker 2008: 10, *passim*). They are explained in Section 3.1. Another reason, which is in fact shared with various other frameworks, is that I consider language to be symbolic in the sense that a certain formal structure is but one end of a form-meaning pairing. In other words, a certain sentence structure, including the lexical information contained within its parts, represents a certain semantic event structure. Further, this paper heavily relies on Hopper & Thompson (1980), which is a landmark functionalist, framework-free paper (see Section 2).

Some readers will also note that there is some degree of overlap between this section of this paper and Arka et al (2009), so it is helpful to point out where this paper differs from theirs.

To begin with, Arka et al (2009) also argue for polysemy, but focus on accounting for this by means of a predictive grammatical model that is based on the information contained within the verbal stem, whereas this paper goes into more detail about the cognitive processes underlying grammaticalisation of an applicative into a PAA. For instance, Arka et al also argue for the locative basis of the emergence of PAAs but only mention this in passing, while this paper goes into much more detail about the semantics of event structure underlying this. Furthermore, Arka et al work in the theoretical framework of Lexical-Functional Grammar, while this is essentially a framework-free paper based on cognitive-functional principles. Lastly, Arka et al focus on accounting for one instance of polysemy by means of a predictive grammatical model, whereas this paper aims at kindling interest in PAAs as a linguistic phenomenon by presenting cross-linguistic data and attempting to account for these by means of a case study. This paper has benefited from Arka et al insofar as it supports polysemy, argues for similar underlying principles and offers some of the Indonesian data used in this paper.

This paper is organised as follows: in Section 2 I provide a number of theoretical preliminaries of applied predicate structure that support my account, in Section 3 I propose an account based on data from Indonesian, and Section 4 is devoted to a discussion.

⁴ The appendix lists a number of languages in which PAAs are found.

⁵ This does not mean, of course, that the paper is free of *theory*.

2. Locative applicatives and predicate structure

Most formal accounts (e.g. Marantz 1984, Baker 1988) see applicativisation as the incorporation of an adposition into the verb, and as such applicatives are usually construed as valence-increasing devices. It is therefore not surprising that the majority of work on applicatives so far has primarily focused on morphosyntactic argument properties such as relativisation, passivisation, word order and Object marking. Significantly less attention has been paid to the semantic and pragmatic effects of applicativisation, especially compared to a putative adpositional alternative, not to mention instances where the applicative does not increase valence (see Marten 2003: 1–5). In the remainder of this section, I discuss a number of semantic properties of locative applicatives that pave the way for PAAs, chief among which are (i) increased transitivity and (ii) a locative relation between Actor and Undergoer. These also serve as preliminaries for my account of Indonesian PAAs in Section 3.

Just as applicatives are typically construed as valence-increasing devices, so also is transitivity typically regarded as the licensing of an additional clausal argument. In most function-oriented approaches, however, transitivity is construed as both a formal and a semantic clausal property, and as scalar rather than absolute. Hopper & Thompson (1980), on which this section relies heavily, list a number of semantic traits of transitivity, only one of which is the addition of a clausal participant. The traits discussed below include a number of these, such as Object affectedness. These, then, may lead to interpretations of repetition and increased intensity of the action, as I argue is true for Indonesian in Section 3.

2.1 *The applied Object is typically affected or dominated over*

A typical property of transitive clauses is that the Object is somehow affected by the action (Hopper & Thompson 1980: 252–3, 287). This is also a recurring property of locative applicatives (as well as a strong argument against applicatives being a morphological alternative to adpositional constructions); the Object is typically interpreted as being more affected (Helmbrecht 2008: 137). Consider example (4) from Kinyarwanda:

Kinyarwanda (Bantu; Rwanda; Kimenyi 1980: 92)

- (4) **ábá-ana** **b-iicayé-ho** **ubu-riri**
 DEF.HUM.PL-child HUM.PL.SBJ-sit-APPL.LOC DEF.CL.14-table
 ‘The children are sitting on the table’

Here, the applied Object *ubiriri* ‘table’ could not be replaced by an entity like ‘mountain’, because the Object has to be dominated over (Haspelmath & Müller-Bardey 2001: 9–10).

Another telling example comes from Diyari. In sentence (5) the verb *wapa-* is intransitive and takes a Locative Oblique, whereas the applied form in (6) requires an Object. Thus, the joint action in (6) is reinterpreted as an action in which the Subject dominates over the Object.

Diyari (Pama-Nyungan; Australia; Austin 2005: 5)

- (5) **karna wapa-yi** **wilha-nhi**
 man go-PRS woman-LOC
 ‘The man is going with the woman’

- (6) **karna-li** **wilha** **wapa-lka-yi**
 man-ERG woman go-APPL-PRS
 ‘The man takes the woman’

Similarly, the Dutch locative applicative *be-* also implies affectedness of the applied Object:

- (7) **in** **het** **bed** **is** **ge-slap-en**
 in the bed is PRTCPL₁-sleep-PRTCPL₁
 ‘The bed has been slept in’ (normal situation)
- (8) **het** **bed** **is** **be-slap-en**
 the bed is APPL-sleep- PRTCPL
 ‘The bed has been slept in’ (bed is affected)

In (7), nothing more is implied than having slept in a bed, whereas in the applicative alternative in (8) uncleanliness or wear-and-tear is implied, perhaps as a consideration when buying second-hand.

A similar principle holds for English prepositional passives: *This house was lived in by Winston Churchill* is fine, whereas *??England was lived in by Winston Churchill* is not (Shibatani 1996: 164). It thus appears to be the case that there is a close connection between formal/distributional Object properties and semantics.

2.2 *The action is typically kinetic*

Another property that contributes to clause transitivity is that the action is transferred from one entity to another (Hopper & Thompson 1980: 252, 264, 268). Locative applicatives are typically kinetic too, in the sense of a property or effect being transferred from one entity to another. This is true for the previous examples from Diyari, Dutch and Kinyarwanda, but it becomes all the more clear in cases where a static verb becomes dynamic in applicative form, as in (9)–(10) from Shipibo. Here the applied form of *-kow-* ‘look’ denotes kinetic action, caring for someone, rather than ‘look at’.

Yanesha Shipibo (Panoan; Peru/Brazil; Duff-Tripp 1997: 100, cited in Valenzuela 2010)

- (9) **w-kow-een-aan chesha-tyoll**
 3S-look-CONT-OBJ child-DIM
 ‘S/he is looking at the small child’
- (10) **w-kow-amypy-een-aan chesha-tyoll**
 3S-look-APPL-CONT-OBJ child-DIM
 ‘S/he is caring for the small child’

It is also striking that in many cases of stative verbs the applicative denotes a transfer from Subject to Object. In this sense the applicative fulfils the role of causative (see Peterson 2007: 64–6; Austin 2005 on applicative/causative isomorphism). This is the case in (11) and (12) from Hualapai; *wàmiye* ‘be mad’ is a stative verb in (11), whereas it is transferred as a quality in (12) by means of a locative applicative.

Hualapai (Yuman–Cochimí; Arizona; Ichihashi-Nakayama 1996: 228–9)

- (11) **nya-ch wàmiye:-yu**
 1S-SBJ 1.be.mad-AUX
 ‘I am mad’
- (12) **bos nya nyi-háDa-ch wà-nyi-miye:-wo-k-wi**
 cat 1S REL-pet-SBJ be.mad-3/1-be.mad-APPL-3-AUX
 ‘My cat makes me mad’

2.3 The action is often more volitional

Another common property of transitivity is volitional action (Hopper & Thompson 1980: 252, 286–7). In many cases an applicative construction increases the volitionality of the action. Sentence (3) above, is a case in point; whereas (2) leaves open the question of volitionality and may have involved an accident, the most natural interpretation of (3) is as a volitional killing.

2.4 The Object is both a location and an Undergoer

I just described some of the Actor-Patient-like properties that result from applicativisation as a transitivity operation. There is another important notion, however; locative applied Objects, besides being Objects, are also the location at which the action takes place. As such, they are not just a Locative participant, but also an Object governed by an extended verb (Haspelmath & Müller-Bardey 2001: 9). The locative relation between Actor and Undergoer may have a different effect on the way the Undergoer is affected depending on the nature of the locative. For stative locatives (as opposed to, say, comitatives or ablatives) this often implies affectedness at the surface. An example is given in (13); the Javanese locative applicative *-i* renders *gentèng ómahku* ‘the roof of my house’ both a Location and an Undergoer.

Javanese (Austronesian; Indonesia; Hemmings 2013: 168)

- (13) **pelem nyeblòk-i gentèng ómah-ku**
 mango AV.fall-APPL roof house-1S.POSS
 ‘A mango fell on the roof of my house’

Other examples include the Dutch locative applicative *be-* (also see above):

- (14) **ik smeer verf op je**
 1SG smear paint on 2SG
 ‘I smear paint on you’ (perhaps as an accident)
- (15) **ik be-smeer je met verf**
 1SG APPL-smear 2SG with paint
 ‘I smear you with paint’ (deliberately)

In (14), nothing more is implied than smearing paint on someone, which might be an accident. Sentence (15), however, implies that someone deliberately manipulates the addressee at his/her surface by covering them in paint.

To summarise, applicative constructions differ from non-applied constructions not only in terms of argument-introducing but also in terms of event structure. Applicative constructions are construed as transitive events because they are structurally identical to transitive sentences, which results in interpretations of kinetic, volitional action that affects the Undergoer. Moreover, locative applicatives add an additional interpretation in which the Object is not just an Undergoer but also the location at which the action takes place. This typically results in interpretations in which not the Undergoer itself is manipulated, but rather is affected as a spatially defined entity by another action. In the Dutch example for instance, the Object is not manipulated, but it is affected by means of my applying paint to its surface.

In other words, it is both the increased transitivity and the locative nature of the applicative that contribute to an event structure that is different from a non-applied construction. In the next section, I show how this may lead to interpretations of intensified and iterative action in Indonesian. More specifically, I argue that the increased affectedness of the Undergoer naturally leads to interpretations of intensified action, and that intensified action may lead to interpretations of repetitiveness in the case of punctual actions.

3. Case study: Indonesian locative applicatives

Having established a number of predicative properties that set locative applicatives apart from locative adpositions, I now exemplify how these might lead to the emergence of PAAs in Indonesian.

Indonesian has two applicative suffixes: *-kan*, which usually introduce benefactives to form ditransitive constructions and introduces instruments to form monotransitive constructions, and *-i*, which typically introduces recipients/goals to form ditransitive constructions, and locations to form monotransitive constructions (Shiohara 2012: 60f.; Arka et al 2009). I focus on the latter here.

Examples (16)–(17) show *-i* promoting a Locative Oblique *sawahnya* ‘his rice field’ to Direct Object, demoting *padi* ‘rice’ to Oblique.

(Sneddon 1996: 91, glosses mine)

- | | | | | | |
|------|----------------------------------|------------------|------------------|--------------------|------------------|
| (16) | dia | menanam | padi | di | sawah=nya |
| | 3S | AV.plant | rice | at | ricefield=3S |
| | ‘He planted rice in his field’ | | | | |
| (17) | dia | menanam-i | sawah=nya | dengan padi | |
| | 3S | AV.plant-APPL | ricefield=3S | with rice | |
| | ‘He planted his field with rice’ | | | | |

Besides licensing arguments, *-i* may function as a PAA, denoting increased intensity of the action and/or repetition. It may introduce an argument, as in (18)–(19), or leave valence intact, as in (20)–(21).

(Arka et al 2009: 88)

- (18) **ia melempar batu ke saya**
 3S AV.throw stone to 1S
 ‘S/he threw stones at me’
- (19) **ia melempar-i saya dengan batu**
 3S AV.throw-APPL 1S with stone
 ‘S/he pelted me with stones’

(Sneddon et al 2010: 98, glosses mine)

- (20) **dia mencium pacar=nya**
 3S AV.kiss girlfriend=3S
 ‘He kissed his girlfriend’
- (21) **dia mencium-i pacar=nya**
 3S AV.kiss-APPL girlfriend=3S
 ‘He kissed his girlfriend passionately/repeatedly/a number of times’

As a PAA, *-i* is often simply listed as a marker of intensity and/or repetition, without addressing the nature of this isomorphism (e.g. Sneddon 1996: 94–5; Sneddon et al 2010: 98–100).⁶ Arka et al. (2009: 92) is an exception, and acknowledges in a brief passage that the augmentative function of *-i* is most likely grounded in its locative function.

In the remainder of this section I argue in favour of this notion; more specifically, I argue that PAA *-i* and applicative *-i* are not homonymous but notionally related. I also show how this notional relatedness rests upon cognitive principles that shape the perception of events.

3.1 Indonesian *-i* and its different senses

It is very likely that *-i* started out as an applicative licensing a locative argument; it hosts a locative argument by default, and newly grammaticalised applicatives usually retain most of their original adpositional semantics (Helmbrecht 2008: 141), in simply hosting an additional argument – in other words, a high degree of compositionality. However, as the previous section showed, the difference in transitivity and predicate structure would rarely, if ever, render a locative applicative synonymous with an adpositional locative construction. Furthermore, the many functions of *-i* are difficult to summarise. This was already apparent in the PAA/applicative isomorphism, but it is equally true for its causative/applicative isomorphism, its ability to occur on nouns, and its unpredictable meaning in general, to the extent that it has been claimed to be ‘pre-categorical’, and only derives its meaning from the construction it occurs in (Verhaar 1984: 28). Here I claim that the PAA-function, as well as all applicative senses of *-i* can be explained by a general notion of ‘applying a predicate (action, property, relationship) to a locative Undergoer’.

I first discuss a number of different senses of *-i* and propose representations for their respective event structures. These are read as follows: human figures represent human participants, arrows represent transitive actions and causations, wavy lines represent intransitive

⁶ These sources imply polysemy, as PAA *-i* is listed in the same section as applicative *-i*. A connection between these is not discussed.

action, boxes represent States and Properties, rhombuses represent Undergoers and other Oblique participants, circles represent Locations. Obligatory elements such as arguments are in solid black lines, Oblique participants are in dark grey dotted lines.

I conclude the section with a proposal of how this leads to the emergence of PAAs.

3.2 Sense 1: performing an action onto a spatially defined patient

When *-i* is attached to a transitive verb, the construction is interpreted as performing an action onto a spatially defined patient. It is usually, though not always, valence-rearranging in promoting the original location to core, and demoting the original Object to Oblique. This construction comes close to the applicative construction as a morphological alternative to a locative adpositional construction, but puts emphasis on the affectedness of the location. Examples (22)–(23) exemplify this type of construction.

(Sneddon 1996: 91, glosses mine)

(22) **dia** **menanam** **padi** **di** **sawah=nya.**
 3S AV.plant rice at ricefield=3S
 ‘He planted rice in his field’

(23) **dia** **menanam-i** **sawah=nya** **dengan padi.**
 3S AV.plant-APPL ricefield=3S with rice
 ‘He planted his field with rice’

The event structure of (22), for example, can be represented as follows: a third person singular Actor performs a transitive action on an affected Undergoer ‘rice’, an action which takes place in an Oblique Location ‘his field’.

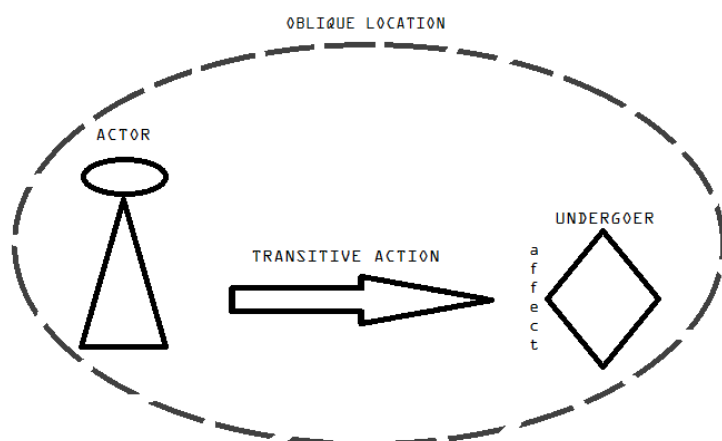


Figure (1): ‘he (Actor) planted (Action) rice (Undergoer) in his field (Location)’

Sentence (23), on the other hand, has a rather different focus, as shown in the following representation. Here the Location and Undergoer refer to the same entity ‘his field’. Accordingly, it is the field that is deemed affected by the action, not the Oblique ‘rice’.

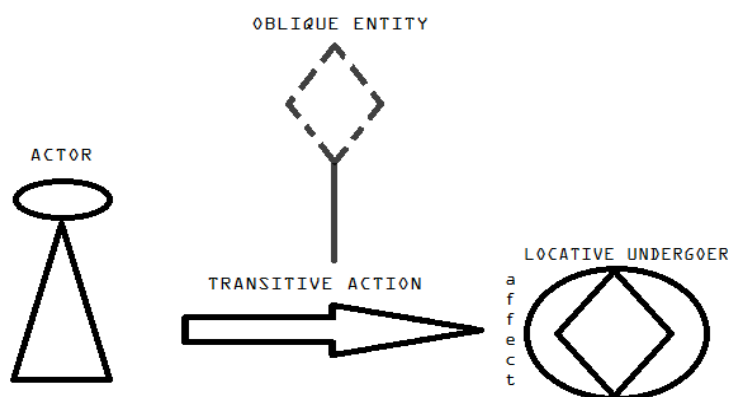


Figure (2): ‘he (Actor) planted (Action) his field (Undergoer) with rice (Oblique)’

It is important to stress the locational aspect of this construction; in being both a Locative participant and an Undergoer, the grammatical Object is interpreted as being affected at its surface, or within its spatial boundaries. Other examples of this type of construction include *cium* ‘kiss’ *cium-i* ‘cover in kisses’, *menulis* ‘write’ *menulis-i* ‘apply writing to, cover in writing’ and *memukul* ‘hit’ *memukul-i* ‘pelt’ (Steinhauer 2001: 266; Sneddon et al 2010: 95–6). These have the same structure: *menulis* ‘write’, for instance, is interpreted as taking as an Object the thing written, which is done on a surface represented by an Oblique phrase. *Menulis-i*, on the other hand, is interpreted as writing performed onto a surface that is affected by the writing, the thing written being represented by an Oblique phrase (see Simango 2012: 145 for a similar analysis in Chichewa).

3.3 Sense 2: including a patient who is affected by the action

When *-i* is attached to an intransitive dynamic verb, the construction is interpreted as including a Locative Patient who is affected by the action. This is much like the first sense, except the locative Object is affected by an intransitive action and the applicative is valence-increasing in promoting a Locative Oblique to Object. An example is given in (24)–(25).

(Arka et al 2009: 88)

(24) **ia duduk di kursi itu**
 3S sit LOC chair that
 ‘S/he sat on the chair’

(25) **ia menduduk-i kursi itu**
 3S AV.sit-APPL chair that
 ‘S/he sat on the chair’, read as: ‘S/he “be-sat” the chair/occupied its surface’

The event structure of (24) can be represented as follows. A third person singular Actor is interpreted as performing an Intransitive Action ‘sit’ in an Oblique Location ‘chair’. The chair is not interpreted as affected, it is only the location at which the action takes place.

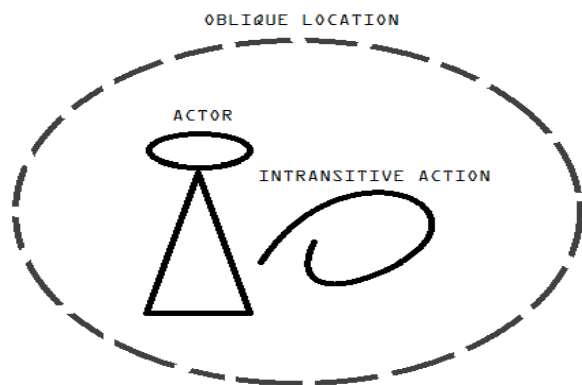


Figure (3): ‘she (Actor) sits (Action) on the chair (Location)’

Sentence (25) can be represented in the same way as in Figure (2) above, except no Oblique is present:

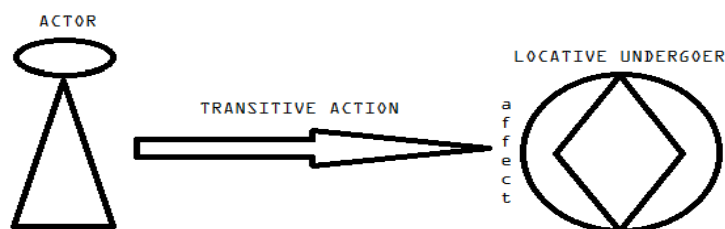


Figure (4): ‘she (Actor) “be-sat”/occupied (Action) the chair (Undergoer)’

Other examples include *naik* ‘rise, ascend, take as means of transport’ *menaik-i* ‘mount, climb’, *tidur* ‘sleep’ *menidur-i* ‘sleep on, occupy a surface sleeping’ (Steinhauer 2001: 265).

3.4 Sense 3: establishing a property in a patient

Applicative *-i* can be attached to an intransitive static verb. If the Object of the applied verb would normally be the Subject in a non-applied (i.e. adpositional) construction, the Subject of the applied construction is interpreted as establishing a property (the semantic content of the static verb) in the applied Object. An example of an intransitive sentence is given in (26).

(Dionisius Sundoro, p.c.)

- (26) **handuk itu basah**
 towel DET be.wet
 ‘The towel is wet’

The event structure of non-applied (26) can be represented as follows: a certain Subject ENTITY ‘towel’ is interpreted as having a certain property, either inherently or acquired.

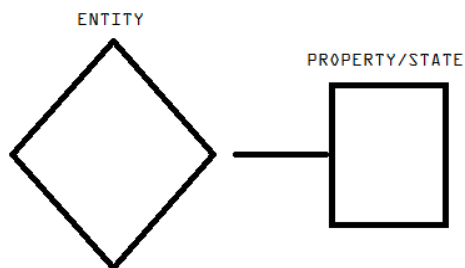


Figure (5): ‘the towel (Entity) is wet (Property/State)’

In applied form, however, there is a new Subject which is interpreted as establishing this property in what was the Subject, as shown in (27).

(Dionisius Sundoro, p.c.)

- (27) **saya membasah-i handuk itu**
 1S AV.be.wet-APPL towel DET
 ‘I moisten the towel/apply water to the towel’

The event structure of (27) can be represented as follows: an Undergoer ‘towel’ is interpreted as acquiring a State ‘wet’ through a first person singular Actor. This State is then interpreted as a transitive action performed onto an Undergoer.

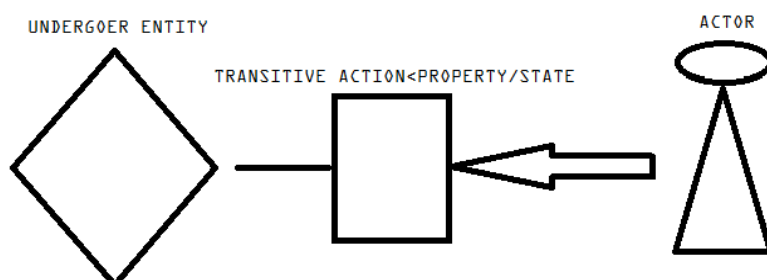


Figure (6): ‘I (Actor) moisten (transitive action) the towel (Undergoer)’⁷

Two other examples are given in (28) and (29). Other examples include, *panas* ‘be warm’ *memanas-i* ‘heat’, *dekat* ‘close’ *mendekat-i* ‘approach’ (Sneddon et al 2010: 91).

(Steinhauer 2001: 265)

- (28) **menghidup-i kuliah**
 AV.live-APPL lecture
 ‘enliven the lecture’

- (29) **menghidup-i keluarga**
 AV.live-APPL family
 ‘sustain a family’

⁷ Note that the placement of the Actor and the Undergoer in the picture are reversed here, because the predicate in an intransitive sentence (see Example 22) applies to the argument that becomes the Undergoer in an applicativised sentence. This is of course not strictly necessary for the event structure.

In these examples the same event structure applies. Sentence (28) and (29), for instance, while more abstract, also involve establishing a property in some entity, in this case providing life. It is important to note that these constructions are interpreted as done on purpose (Dionisius Sundoro, p.c.); an action like *membasahi* ‘moisten’ cannot be used in case of spilling water. This ties in well with the locative-applicative sense in which spatially defined entities are manipulated by a dominant Actor.

It is also worth stressing that, although the action may cause a change of state, the action is not interpreted as a total manipulation of the Undergoer itself. Rather, it involves affecting the Undergoer by establishing a property in it. The establishment of this property (e.g. wetness, liveliness) is not performed by manipulating the Undergoer itself, but by another action performed within the spatial boundaries of the Undergoer. *Memanas-i* ‘to heat’ (<*panas* ‘be hot’), for example, is interpreted as applying heat to an Undergoer. This can be done by means of a lighter or burner, but it would not involve moving the Undergoer to a heat source such as a stove. In other words, the Undergoer itself is neither moved nor manipulated, but it is affected by the action of applying heat. Similarly, in *mendekat-i* ‘approach’ (<*dekat* ‘close’) the Actor is not interpreted as bringing the Undergoer closer, but rather as ‘applying closeness’ by approaching the Undergoer him/herself (see Tjokronegoro 1968: 18). Here again the Undergoer undergoes a change of state by means of another action. In a similar fashion, *menghidup-i* (<*hidup* ‘live, life’) involves providing liveliness to something, it would definitely not involve reanimating someone (Dionisius Sundoro, p.c.).

3.5 Sense 4: manifesting a relation towards a patient

When *-i* is attached to an intransitive stative verb of which the Subject would also be the Subject in an adpositional construction (cf. Sense 3), this Subject is interpreted as manifesting a relation (the stative predicate) toward the Object. This is different from Sense 3 in that no Property or State is transferred between participants, but rather one participant affects another by means of an established relation. Examples are given in (30)–(31).

(Steinhauer 2001: 263)

(30) **Markus** **marah** **pada** **Mari**
 markus be.angry at/on mari
 'Markus is angry with Mari' (Mari need not know this)

(31) **Markus** **memarah-i** **Mari**
 markus AV.be.angry-APPL mari
 'Markus is angry with /manifests his anger toward Mari' (Mari knows/is affected)

The event structure of (30) can be represented as follows: an Experiencer ‘Markus’ can be linked to a certain State ‘angry’, the cause of which is an Oblique Stimulus ‘Mari’.

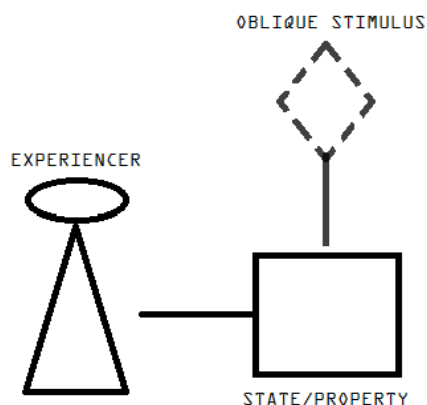


Figure (7): 'Markus (Experiencer) is angry (Property/State) with Mari (Oblique Stimulus)

Sentence (31), on the other hand, is represented as follows: the former Experiencer Markus is now an Actor, by virtue of turning a State 'angry' into a transitive action. Note that this does not mean that this property is transferred to the Undergoer as in Sense 3, but is best interpreted as the application of a relation to another entity, thereby affecting this entity.

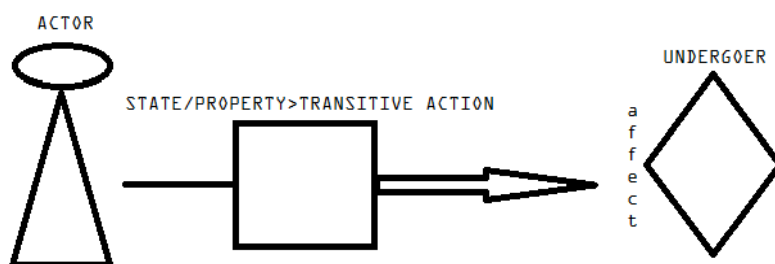


Figure (8): 'Markus (Actor) manifests his anger [toward] (transitive action) Mari (Undergoer)'

Other examples include *akrab* 'intimate' *mengakrab-i* 'seek rapprochement, make advances,' *cinta* 'like, love' *mencinta-i* 'express/manifest love for' (Steinhauer 2001: 263).

3.6 From locative applicative to PAA

These four senses have in common the following: they all apply a predicate to a spatially defined entity in a transitive event, thereby affecting this entity.⁸ This predicate is either an action, a relation, or a property, depending on the predicate as it is established in a non-applied construction.

For Sense 1, this means applying an already transitive action to another Undergoer. For instance, the predicate in a non-applied construction is 'PLANT RICE', an action, by which the Locative Undergoer in an applied construction is affected:

⁸ 'Spatial' is best construed as a broad, basic meaning; many examples show spatial metaphor in more abstract relations (e.g. Lakoff 1987).

Non-applied predicate:

PLANT RICE [IN FIELD]

Predicate type:

→ ACTION: 'PLANTING RICE'

Applied construction:

→ AFFECT FIELD BY APPLYING ACTION 'PLANTING RICE'

For Sense 2, this means applying an intransitive action to an introduced Undergoer. For instance, the predicate in a non-applied construction is 'SIT', by which the Locative Undergoer in an applied construction is affected:

Non-applied predicate:

SIT [ON CHAIR]

Predicate type:

→ ACTION: 'SIT'

Applied construction:

→ AFFECT CHAIR BY APPLYING ACTION 'SIT'

For Sense 3 and 4, things are slightly more difficult; in Sense 3, the applied Object is the Subject in a non-applied construction and acquires a property from the Subject in an applied construction, whereas in Sense 4 both constructions have the same Subject, the difference being that in an applied construction the Subject manifests its own properties as a relation with the Object. However, the difference between typical Sense 3-predicates and Sense 4-predicates is essentially predictable: Sense 4-predicates are usually inherently relational while Sense 3-predicates are not; words like *jauh (dari)* 'far (from)' *akrab (dengan)* 'be intimate (with)' and *cinta (pada)* 'love' usually denote relations between two entities, whereas words like *kotor* 'be dirty', *panas* 'be warm' and *hidup* 'be alive' are static properties of only one entity. Furthermore, Sense 4-predicates usually occur with a preposition and a complement (as in English *in love with you*), and when they do not, they are typically in an elliptic construction.

For Sense 3, then, this means applying a property to an introduced Undergoer. For instance, the predicate in a non-applied construction is 'BE WET', a property, by which the Locative Undergoer in an applied construction is affected as the Actor applies this property:

Non-applied predicate:

BE WET

Predicate type:

→PROPERTY: 'WET'

Applied construction:

→ AFFECT TOWEL BY APPLYING PROPERTY 'WET'

For Sense 4, this means applying a relation to an existing Undergoer. For instance, the predicate in a non-applied construction is 'BE MAD AT X', a relation between two entities, by which the Locative Undergoer in an applied construction is affected as the Actor applies (or manifests) this property:

Non-applied predicate:

BE MAD AT X

Predicate type:

→ RELATION: 'Y=MAD AT X'

Applied construction:

→ AFFECT X BY APPLYING RELATION 'Y=MAD AT X'

The application of any type of predicate, be it an action, property or relation, can then be illustrated as follows:

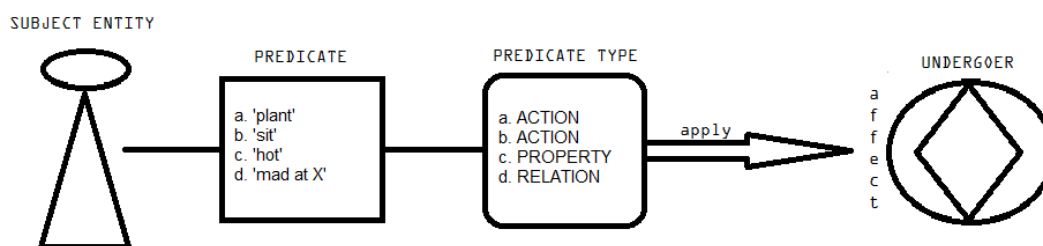


Figure (9): application of predicates to Locative Undergoers

We have now established the following: (i) applicatives are high in transitivity in that the Locative Undergoer is typically affected, usually by a dominating Actor, (ii) the Object is both an Undergoer and a Location, and is prototypically affected at its surface, not by being physically manipulated but by means of an action, transfer of a property or manifestation of a relationship. This is essentially dictated by the transitive event structure, and from here on, the step towards an interpretation of repetition and/or increased intensity is quite small, but dependent on the type of action.

Let us consider increased intensity: to plant something, for example, is inherently affecting another entity, such as the thing planted or the space planted in. To be angry with someone, however, does not necessarily affect this person. However, since the event structure of locative applicatives dictates a certain event structure in which the Object is affected, this implies that the anger is manifested in a certain way. Since anger is not necessarily overtly manifested, this manifestation itself is easily interpreted as added anger. With certain verbs, the only way to establish an Actor-Undergoer relationship in which the Undergoer is affected, is increasing the intensity of the action. The same is true for the examples in (28); for the verb *melihat* 'see', for instance, which is inherently non-affecting, in a sentence structure that dictates a more transitive relation, a natural interpretation is intensification of the action. In other words, to dominate an affected Undergoer by means of seeing is fast interpreted as to *scrutinise* or to *inspect*. Similarly, to *ask* someone something when the structure dictates domination over an affected Undergoer is naturally interpreted as *interrogating* someone. Reinterpretation of the applicative as a marker of intensified action is thus very much a by-product of the transitive sentence structure.

(Sneddon et al 2010: 99-100)

- (32) **memandang-i** 'stare at, observe' < **memandang** 'look at'
melihat-i 'scrutinise' < **melihat** 'see'
menanya-i 'interrogate' < **menanya** 'ask'

Many locative-applied verbs are also interpreted as iterative. The key to this, in my view, is punctuality; punctual events, to affect a Locative Undergoer in a transitive action, may require repeated action. The difference in translation between two authors in the example below illustrates this nicely; to affect a Locative Undergoer by kissing can be construed as manipulation at the surface (Steinhauer), but requires iterative action almost by definition (Sneddon and Steinhauer).

- (33) **cium** ‘kiss’
cium-i ‘cover in kisses’ (Steinhauer 2001: 266), ‘kiss repeatedly’ (ibid; Sneddon 1996: 205)

The same goes for other examples; in example (19) we saw the verb *menanam-i* ‘to plant-APPL’ < *menanam* ‘to plant’. To plant a single crop (the unapplied form) is a punctual action, whereas to affect a field by planting crops in it (the applied form) requires repetitive action, as only the planting of many crops affects a field. The inherent repetitiveness of these punctual applied verbs is also reflected in another difference in translation; Whereas Arka et al ascribe atelic aspect to the applied verb *memukul-i* ‘to hit-APPL’, Steinhauer emphasises the increased intensity of the action. Of course, increased affectedness of an Undergoer by means of punching is naturally interpreted as prolonged action, and a punctual verb like ‘punch’ becomes both iterative and atelic as a result.

(Arka et al 2009: 88)

- (34) **ia** **memukul** **saya**
 3S AV.hit 1S
 ‘S/he hit me’
- (35) **ia** **memukul-i** **saya**
 3S AV.hit-APPL 1S
 ‘S/he was hitting me’

(Steinhauer 2001: 266)

- (37) **memukuli-i** ‘to pelt with punches’

To summarise, the transitive structure of applicative constructions dictates an event structure in which a dominant Actor affects a (typically) Locative Undergoer. In cases where the event is not usually affecting an Undergoer, the action is reinterpreted as intensified. This intensification, in turn, may be reinterpreted as iterative action in the case of punctual events.

4. Conclusion

I have just provided an account of Indonesian locative applicatives based on event structure, and how this might give rise to the emergence of PAAs, which in the case of Indonesian express repetition and/or increased intensity. However, there are a few remaining questions.

One of these is why applicatives at some point fail to introduce additional arguments. To my knowledge this has not been addressed in the literature, although an explanation for ‘in-

transitive adpositions’ has been given by Hagège (2010: 55f.); with adpositions, the complement may be implied by the context in certain situations (e.g. the rather colloquial *Are you coming with?* but not **Are you cutting the meat with?*). For applicatives this is an unlikely explanation, since none of the examples given above hint at a Locative Undergoer being implied by context. Rather, it is most likely reinterpretation of the applicative affix as a marker of some kind of predicate augmentation, after which it is not necessarily associated with the introduction of additional participants any longer. It is also important to note that applied verbs tend to lexicalise (Helmbrecht 2008). As such, they become interpreted as holistic units, or lexemes, rather than analytic compositions of signs. This entails that they become obligatory, acquire an opaquer structure, and move towards a more abstract meaning (Lehmann 2002: 1, 15), all of which points toward a drift away from a composition of verb + adposition.

Another point is that iterative and other atelic actions are in fact lower in transitivity than telic actions. This is generally true, but this is usually mainly because punctual events generally “have a more marked effect on their patients than actions that are inherently on-going” and telic events “are more effectively transferred” (Hopper & Thompson 1980: 252), both of which point to a reduced effect of on-going actions. In the case of the iterative verbs I described, however, it is exactly the affectedness that is emphasised in most cases. Furthermore, I take it to be true that the overall degree of transitivity naturally leads to iterative interpretations, but that iterative action is not necessarily a high-transitivity factor itself. In other words, low-transitivity factors may be a by-product of a high-transitivity reading of events. This also seems to be the case in Javanese; the Javanese applicative *-i* (which has acquired similar functions to Indonesian *-i*) may also denote Object plurality. Since non-individuated (such as non-singular or indefinite) Objects usually point to lower transitivity (Hopper & Thompson 1980: 252), here too a high-transitivity factor may have led to a low-transitivity factor elsewhere.

Javanese (Austronesian; Indonesia; Hemmings 2013: 171)

- (37) **kucing mangan iwak**
 cat AV.eat fish
 ‘The cat eats the fish’
- (38) **kucing mangan-i iwak**
 cat AV.eat-APPL fish
 ‘The cat eats lots of fish’

Lastly, it should be borne in mind that although I consider the above explanation likely, it is not able to account for all languages by any means. If anything, the altered event structure may prove to be a recurring cause of predicate augmentation cross-linguistically, but the nature of PAAs differs too wildly between languages to be explained by a single set of principles. In the Appendix a list of languages with PAAs is provided to enable further research, but I would like to briefly illustrate the diversity among them.

In many Bantu languages, PAAs may indicate that the action is done in a special way, or denote habituality (Marten 2003). In many Alor-Pantar languages, applicatives may denote either increased or decreased intensity (e.g. Kratochvíl 2014: 402 for Sawila, Steinhauer 2014: 168 for Blagar), and in Warrwa an applicative may denote projection into the future (McGregor 1998).

There is at least one language, for which exactly the same principles seem to fit the data. In Changana, increased intensity of a punctual action and a Locative Undergoer may also lead to iterative interpretations. An example is provided in (39)-(41); in Changana, there is a verbal extension *-et* denoting action by contact (dubbed the ‘contactive’ by Langa 2007: 10), where it is implied that the Object is touched. Together with the applicative *-el* this then acquires an iterative meaning:

Changana (Niger-Congo; South-Africa; Langa 2007: 11)

- | | | | | |
|------|---|-------------------------|-------------|---------------|
| (39) | mamani | anyika | pawa | n’wana |
| | CL1.mother | CL1.PRS-give | CL5.bread | CL1.child |
| | ‘The mother gives the bread to the child’ | | | |
| (40) | mamani | anyik-et-a | pawa | n’wana |
| | CL1.mother | CL1.PRS-CNTCT-give | CL5.bread | CL1.child |
| | ‘The mother gives the bread to the child’ (implying physical contact) | | | |
| (41) | mamani | anyik-et-el-a | pawa | n’wana |
| | CL1.mother | CL1.PRS-CNTCT-APPL-give | CL5.bread | CL1.child |
| | ‘The mother gives the bread to the child, many times’ | | | |

More data are needed to fully account for the connection between applicatives and predicate augmentation in any language, but with this paper I hope to have kindled interest in this phenomenon.

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Appendix: A list of languages with PAAs

The following list contains a number of languages that have PAAs, together with an approximation of the type of PAA and a source. Not only is it by no means exhaustive, it is also heavily biased; finding PAAs is to some degree a matter of chance, and many languages listed below are among those I happen to be interested in.

Language	PAA type	Source
<i>Africa</i>		
Swahili	habitual, non-standard action	Marten 2003: 215–7
Bemba	intensifying	Marten 2003: 218
Luganda	intensifying, iterative	Ashton et al. 1954: 332
Pogoro	intensifying	Hendle 1907: 42
Zande	intensifying	Boyd 2010: 346
Ubangi	iterative	Boyd 2010: 346
Chichewa	intensifying	Anonymous 1969: 78–80
Changana	intensifying, iterative	Langa 2007: 4, 10–1

South America

Yanesha Shipibo intensifying, increased effect Duff–Tripp 1997: 99–100

Asia

Sawila	intensifying, attenuating	Kratochvíl 2014: 399–402
Kamang	intensifying, iterative	Schapper 2014: 330–1
Klon	intensifying	Baird 2008: 206f.
Blagar	attenuating	Steinhauer 2014: 168
Indonesian	intensifying, iterative	e.g. Sneddon et al 2010: 89f.
Javanese	intensifying, iterative	Hemmings 2013; <i>passim</i>
Totoli	iterative, habitual	Himmelman & Riesberg 2013: 402

Australia

Warrwa projection into the future McGregor 1998; *passim*⁹

⁹ According to McGregor (p.c.) other Nyulnyulan languages also have PAAs.