Fictive Motion Down Under: The Locative-Allative Case Alternation in Some Australian Indigenous Languages

Patrick McConvell and Jane Simpson

Abstract This paper describes the predication of location of participants in Indigenous languages of northern Central Australia. Two main strategies are discussed: the use of double case-marking, and the co-opting of particular local cases to express scope of predication as well as location. The coopting case in question involves the Allative Nominal Construction (AN). This is the use of an allative case instead of a locative case in the meaning of 'static location' in a secondary predication where the subject of that predication has the same reference as an object or oblique in the main predication.

1 Predicating Location of Events and Participants

Location with respect to a place can be predicated of the event itself (*In Helsinki people work on machine translation*), or of a participant in the event (*I found food in the cupboard*), i.e. the spatial position of a particular participant or entity relative to other entities, in the clause. Some languages are able to distinguish these two types of predication within a clause, differentiating the location of the subject from that of the object.

In English, the distinction between predication over a whole event and over a participant can be expressed by word order, information structure (including prosody), and by using knowledge of the world. In (1a) and (1b), the *Food* (semantic role Theme) is in the *kitchen*, and *John* (semantic role Agent) is most likely to be in the *kitchen* (unless he is looking in through a window, or the referent of *kitchen* is a kitchen in an image that John is looking at). In (1c) the whole event takes place in the kitchen. In (2a) and (2b) the *Food* (semantic role Theme) is in the *cupboard*, and *John* (semantic role Agent) is probably not in the cupboard. (2c) gives rise to the strange interpretation that John and the food are in the cupboard.

- (1) a. John found the food (*in the kitchen*).
b. The food was found (*in the kitchen*) (by John).
c. (*In the kitchen*) the food was found (by John).

P. McConvell (✉) · J. Simpson
School of Language Studies, Australian National University, Canberra, Australia

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- (2) a. John found the food *in the cupboard*.
 b. The food was found *in the cupboard* (by John).
 c. ? *In the cupboard* the food was found (by John).

Both locations can be expressed in a single clause, as in (3a) and (3b), where the whole event takes place in the kitchen, and the food is in the cupboard. (3c) where the location of the Theme, food, is put initially, and the location of the whole event is put finally, is hard to construe in isolation (unless there is a kitchen inside the cupboard).

- (3) a. **In the kitchen**, she found the food *in the cupboard*.
 b. **In the kitchen**, the food was found *in the cupboard*.
 c. ?? *In the cupboard*, she found the food **in the kitchen**.

When the location predicate follows the verb, the order 'Theme-location Event-location' is normal. Prosody distinguishes the embedded PP within a PP structure from the appositional sequence of two PPs. Prosody also marks the reverse order, with a type of appositional reading, zooming in from a larger location to a smaller location within that larger location.

- (4) a. She found it *in the cupboard* **in the kitchen**.
 b. She found it **in the kitchen** *in the cupboard*. [Specifying larger → smaller]

Thus, word order is helpful in English for determining what the location is predicated of: location predicated of the whole event may appear initially or finally, while the unmarked position for location predicated of the Theme is after the verb.¹

PP	NP	V	PP	PP
Event			Theme	Event
[but these two PPs can be reversed]				

The Agent may be at one location (that predicated of the event), but not the other (that predicated of the Theme). If the location of the Agent is to be highlighted in English, this is done by incorporating the location into the NP expressing the Agent (5a), or by using a motion preposition *from* metaphorically (5b), a form of 'fictive motion' whereby the gaze is construed as something which goes from the subject to the object of perception (Gruber 1967). This last method allows the location of the subject (perceiver), object (of perception) and the event to be expressed separately (5c).

¹Location of the object can appear initially in some contexts, such as the following in which the object's location is part of the location introduced in the previous clause. The 'wall' is a part of the house and acts as a link between the action of the first clause, and the action of the second clause which introduces new information, the object:

He went into the house, and **on the wall** saw a portrait of the Princess of Wales and the Queen. (David Lloyd-George (Member for Carnarvon Boroughs), Hansard, House of Commons. Deb 18 February 1901 vol 89 cc369-434.)

- (5) a. The man *on the bridge* saw me.
 b. From the bridge the captain saw whales in the current.
 c. **In the Pacific Ocean**, the captain saw a sail on the horizon *from the bridge*.

The presence of more than one location in one clause presents a problem for the hypothesis of the uniqueness of semantic roles. Attempts to preserve this hypothesis have resulted in suggestions such as positing two semantic roles, inner locatives and outer locatives (Cook 1989), and considering the use of the 'from' preposition in (5b, 5c) as expressing a separate semantic role of source. A traditional syntactic solution has been to say that the location predicated of the Theme is inside the VP, and the location predicated of the event is either at a higher level in the VP or is a daughter of IP or CP.

These syntactic solutions do not apply in the many Australian languages, in which word order is used for information structure purposes, rather than for expressing grammatical functions, or for the difference between adjuncts and arguments (Hale 1992; Simpson 2007). Other means are therefore needed for construing what a locational expression is predicated of. For grammatical relations, case-marking and verb or auxiliary cross-reference are used extensively, but case-marking is usually not as elaborated as in the Finnic languages: the languages are generally Ergative-Absolutive in case-marking, and there are commonly just three distinct case-forms for expressing location: 'Locative' (static location), 'Allative' (motion towards) and 'Ablative' (motion from). Within a clause, nominals with the same case-marking are usually construed as part of the same grammatical function (so-called 'discontinuous constituents').

This raises the question of whether the location of the Theme can be expressed independently of that of the Agent in one clause. Barry Blake² notes that a periphrastic relative clause construction is used to do this in Kalkatungu, a language of western Queensland:³

A locative phrase refers to a whole predication ('outer locatives') or to actants in Si [intransitive subject, JS & PM] or P [object, JS & PM] function ('inner locatives'). Where the location of an actant in the A function is to be expressed, a participial phrase qualifying the ergative must be used, the locative referring to the Si of the embedded phrase.

²We thank Barry Blake for drawing our attention to this.

³Abbreviations used in this paper: 1, 2, 3: first, second, third person; 111: first person exclusive plural; 333: third person plural; A: transitive subject; ABL: ablative; ACC: accusative; Afs, Afv: Yolngu verb suffixes (Schebeck 1976); ALL: allative; AN: allative-marked nominal location; AS: allative subordination; CAT: catalyst; CPL: completive; DAT: dative; ERG: ergative; EU: euphony; FALL: far allative; FOC: focus; FUT: future; GER: gerund; GO: going (verb stem formative); HN: Kenneth Hale Warlpiri field-notes 1966; ILL: illative; IO: indirect object; IRR: irrealis; LOC: Locative; LS: Locative subordination; M: masculine; MANN: manner; NALL: near allative; NFIN: nonfinite (covers forms glossed by grammarians as infinitive, nominalisation and gerund); NOM: nominative; NM: non-masculine; NPST: nonpast; O: object; part: participle; PL: plural; PCON: past continuous; PER: perlativity; PRS: present; REFL: reflexive; S: subject/intransitive subject; SG: singular; TOP: topic; UNM: unmarked inflection; USIT: usitative.

- (3.46) *wakari ŋa-tu paa ŋapa ku-ŋka ini-pin-tu*
 fish I-ERG there saw water-LOC be:present-part-ERG
 'I saw a fish when I was at the water'.

(Blake 1979: 43–44)

Apart from such periphrastic constructions, we have discovered two main ways of distinguishing location of entities from location of events: using double case-marking, and co-opting another case-marker, primarily Allative case, to predicate location of grammatical objects. A third possibility, of having specialised markers for this function,⁴ is also found in some Australian languages, but is part of a larger switch reference system on participles. In this paper, we outline the first two strategies. In the last part of this paper we briefly consider how the grammaticalisation of Allative might have evolved historically in the part of Australia under examination. Control of a non-finite subordinate clause by an object can also be expressed by Allative marking in some languages but space does not permit discussion of this.

2 Types of Locational Case Marking in Central Australia

2.1 Terminology Used

Since the semantics of case do not line up with the form of case-marking, as with 'Allative' case being used in a 'Locative' meaning, we shall refer to a set of 'locational' meanings which include 'locative', which refers to the static location of an entity, and 'allative', which refers to movement to a goal entity; where necessary we refer to these as 'locative semantic function', 'allative semantic function' etc. On the other hand, there are local case affixes which we shall refer to by capitalised abbreviations, e.g. LOC for Locative case, ALL for Allative case. So in the situation referred to as AN, (the use of Allative case to express location of an object), 'locative semantic function' can be expressed by LOC or ALL case, depending on what the location is predicated of.

2.2 Local Cases in Australian Languages

In this paper, we focus on a region in central Australia with languages from the largest Australian language family, Pama-Nyungan (Bower and Koch 2004), and some neighbouring non-Pama-Nyungan languages. Pama-Nyungan languages have systems varying from three to about eight cases marked on nominals, generally as

⁴Endings which are specialized for predications of particular participants are described by Valenzuela (2005) for Shibipo, a Panoan language of South America.

suffixes. Apart from ergative/instrumental and dative/benefactive, the prime functions of these local case suffixes are semantic, expressing ideas that in many languages would be expressed by adpositions, but which are also grammaticalised in various ways in some languages. Most of the languages have nominal local case suffixes, usually LOC (Locative: *at, in* etc.), ALL (Allative: *to, towards*) and ABL (Ablative: *from*) with some additional ones in some languages. At least two of these suffixes can be relatively confidently reconstructed to proto-Pama-Nyungan: LOC **-ngka, *-la* (allomorphs determined by whether the stem is bimoraic or polymoraic, respectively); ABL **-ngu(ru)* (Alpher 2004); ALL is too variable across the family to be confidently reconstructed at this stage.

We turn now to the two means for predicating location of participants in a clause: double case-marking, and co-opting another case.

2.3 Double Case-Marking

Double case marking or *Suffixaufnahme* (Plank 1995) refers mainly to addition of a genitive marker following another case marker, but it is extended to include addition of the case of a controlling NP to other NPs with local case marking. In some Australian languages, this kind of double case-marking (Dench and Evans 1988; Simpson 1991) is used to specify more precisely what a location is predicated of. For example, if an Object has Dative or Accusative case, adding DAT or ACC case to a local-case-marked phrase indicates that the phrase expresses the spatial position of the object rather than the event. An example follows from Ngarluma, a Pama-Nyungan language spoken on the coast of Western Australia⁵ which, unusually, has a Nominative-Accusative case-marking system. (6) shows the ACC *-ku* on a locational modifier of an Accusative-marked Object (Kenneth Hale's fieldnotes; Hale 1960; Simpson 1981).

- (6) a. **Wanji-la-ku** nyinta marrparnta-nha?
 where-LOC-ACC you[NOM] find-PST
 'Where did you find (it)?'
- b. Ngayi marrparnta-nha **yanthan-ta-ku** **thurnu-ngka-ku**.
 I[NOM] find-PST swag-LOC-ACC under-LOC-ACC
 'I found (it) under the swag.'

The double-case-marked phrase here expresses the location of the object. This can be treated as a secondary predication with the understood subject of the secondary predication being 'it'. Similar examples are found in other Pilbara languages with Nominative-Accusative systems such as Panyjima (Dench and Evans 1988: 8; Austin 1995).

⁵Unlike most Pama-Nyungan languages, which are absolutive-ergative, Ngarluma is a nominative-accusative language. The accusative case marker is cognate with the dative marker in many other languages.

Double case marking for predicating location of participants is also found in some Ergative-Absolutive languages. It is common in southern and western languages of the Ngumpin-Yapa language sub-group of Pama-Nyungan spoken in Western and Central Australia, such as Walmajarri (Hudson 1978: 35), and Ngardi (Cataldi 2011/2004). The most comprehensively described of these languages is Warlpiri, spoken in Central Australia (Hale 1982). (7) and (8) show location predicated of an event and expressed by the LOC case-suffix.

- (7) **Minapardu-rla wita-ngka** ka=lu nyina jajina wita-wita.
 nest-LOC small-LOC PRES=333S sit.NPST mulgara small-small
 'The baby mulgaras live in a little nest.' (Warlpiri Dictionary in prep.: *jajina* entry)
- (8) **Karnta-wana-wana kapu=ju=lu** pi-nyi **yinya-rla nguru-kari-rla**.
 woman-because FUT=IO=333S hit-NPST there-LOC place-other-LOC
 'Because of a woman they are going to give me a hiding over there in that other place.'
 (Swartz 1991: 116:G11)

Double-case-marking can be used to show location predicated of a participant rather than an event. Hale (1982) gives the following examples:

- (9) **Ngarrka-ngku ka yankirri luwa-rni ngapa-ngka-rlu**.
 man-ERG PRS emu shoot-NPST water-LOC-ERG
 'The man is shooting the emu at the waterhole.' (Hale 1982: 268, ex. 87a)
- (10) **Ngarrka-ngku ka=rla-jinta yankirri-ki luwa-rni ngapa-ngka-ku**.
 man-ERG PRS-DAT-DAT emu-DAT shoot-NPST water-LOC-DAT
 'The man is shooting at the emu at the waterhole.' (Hale 1982: 268, ex. 87b)

Of these Hale writes:

In (87a [our 9]) the man is necessarily at the water hole. If the locative case expression were unmarked, the sentence would not stipulate that the man is at the water hole; it would be neutral in this regard. In (87b [our 10]) the locative is marked dative in agreement with the dative object; while this stipulates that the emu is at the water hole, the man may or may not be. (Hale 1982: 268)

Absence of extra case-marking on the LOC is often used for location of objects without explicit case-marking (i.e. Absolutive case), like 'water' in the following example:

- (11) **Manu kala=lu=nyanu karnta-ngku=ju ngapa=ju ka-nyi**
 and USIT=333S=REFL woman-ERG=EU water=EU carry-NPST
kartaku-rla jalangujalangu-rlu=ju.
 bucket-LOC today-ERG=EU
 'And nowadays women carry water for themselves in buckets.' [Nyurruwiyi *kuja kalalu malikikirlirli*, Warlpiri school program written text collection]

While the use of double case-marking in principle allows two predications of different locations in a clause, in fact these are rare. On the other hand, there is no

absolute bar against two nominals with the same case ending, and different functions in the same clause: two nominals marked with the plain LOC can occur in the same clause when one of them marks an argument of the verb, rather than predicating location of some entity or event (12), but this is rare, since, as Hale notes, very few verbs select a LOC argument.

- (12) Ngarrka-patu ka=lu **karti-ngka** manyu-karri-mi **karru-ngka**.
 man-PL PRS=333S card-LOC play-stand-NPST creek-LOC
 'The men are playing cards in the creekbed.' (Hale 1982: 272, ex. 94)

2.4 Co-opting Another Case

Another way of expressing location of a participant is to co-opt another case-ending. In the central Australian region, the three cases that we have observed being co-opted are Allative (ALL), Dative (DAT) and Ablative (ABL). Of these, ABL is the most doubtful. Yanyuwa (arguably a Ngarna language; Breen 2004, 2011a) appears sometimes to use an ending glossed as ABL for predicating location of objects. Kirton and Charlie (1996: 113–115) give a few examples of three verbs that they treat as selecting ABL-marked arguments ('bury', 'leave' and 'put'). The ABL is also used for verbs of cooking (cooking crabs **fire-ABL** = 'cooking crabs in the fire'; p. 177), but the interaction with affixes expressing location and direction is very complex. We will not discuss it further, but turn to more commonly co-opted cases.

2.4.1 Allative Expressing Location

Gurindji (a neighbour of Warlpiri) and other north-eastern Ngumpin-Yapa languages do not have double case marking as in the south-western languages of the subgroup discussed in Sect. 2.3. In Gurindji, the ALL case suffix, otherwise used for motion towards a goal, is also found for location of the object. We call the use of allative to denote location the 'AN construction.' For instance in Gurindji,⁶ one can say (13) with formal ALL marking on the object instead of LOC case.⁷

- (13) Ngu-rna karrap nya-nya jurlak **karnti-kurra**.
 CAT-1S see see-PST bird tree-ALL
 'I saw a bird on a tree.'

The AN construction is used with the full range of transitive verbs, not just those of perception:

⁶Gurindji data is from Patrick McConvell's fieldwork.

⁷CAT is what is known as a 'catalyst' in Australian linguistics: an element in a small closed set which hosts pronominal enclitics of which one like Gurindji *ngu* has no other meaning or function; in Warlpiri similar elements do have meanings, and are generally called AUX(iliaries).

- (14) Ngaja-ngku **ngurra-ngkurra-warla** pa-rru.
 LEST-2O camp-ALL-FOC hit-FUT
 'He might beat you up at home.'

Use of ALL case is optional, but preferred: LOC case may alternatively be used. In the following example both are used even though the ALL and LOC marked nouns 'ear' and 'head' have the same referent—'your mind'.

- (15) **Langa-ngkurra** ngu-n **ngarlaka-la** karrwa-wu kilkilp yunpa-rnu-wu
 ear-ALL CAT-2S head-LOC keep-FUT click sing-GER-DAT
 'You must keep in your ear, in your head, the clicking of the boomerangs for singing.'

There is some evidence that the AN construction is preferred where the locational predication is only over the object and not the whole event (i.e. including the agent/subject) but this requires more investigation.

A similar use is found in Ngaliwurru and Jaminjung, non-Pama-Nyungan languages to the north-west of Gurindji.

- (16) Nindu-ngunyi=malang mung gani-ngayi-m buliki **ngarlu-bina**.
 horse-ABL=GIVEN look.at 3S:3O-see-PRS cow shade-ALL
 'The horse is looking at the cow, towards the shade.' = 'The horse is looking at the cow in the shade.' (Schultze-Berndt 2000: 59, ex. 2-33)

Schultze-Berndt describes this in terms of the 'prospect path' type of fictive motion of Talmy (1996). Again, the endpoint is not the object of perception, but the place where one sees it, where one's gaze ends. From her description it does appear that the AN construction in Ngaliwurru and Jaminjung is focused on verbs of perception.

In Warlpiri, location of an object is often done by the plain LOC, but the ALL case, otherwise used for motion towards a goal, can also be found for location of the object, whether for perception (17), or for verbs such as cooking (18) when the object (a lizard) is on the fire.

- (17) Kula=lpa=rna=ngku purda.nya-ngkarla **wurnturu-kurra=ju**.
 not=PST=1S=2O hear-IRR far-ALL=EU
 'I can't hear you when you're far away.' (Warlpiri Dictionary in prep.: langa entry: jng source)

- (18) **Warlu-kurra=ji** wita-kurra=yijala ka=rnalu purra wardapi-piya=yijala.
 fire-ALL=EU small-ALL=also PRS=111S cook.NPST sand.monitor-LIKE=also
 'We cook it on a small fire as we do with the sand monitor as well.' (HN:1681-2)

The ALL is most common as the way of expressing location of the object of perception verbs, and of the object of verbs like 'cooking' which could potentially be viewed as actions of putting something into, or onto, an endpoint. It is apparently more common in eastern varieties of Warlpiri (Mary Laughren, p.c. 11 March 2011). But what exactly conditions the choice between LOC and ALL in Warlpiri, or whether it just reflects dialect variation, remains to be investigated.

This AN construction is found among some of the eastern neighbours of Gurindji, and occurs in an area of Central Australia where, as Austin (1981) notes, suffixes homophonous with the ALL are used for switch reference (control by grammatical function other than the subject, most often the object).

2.4.2 Languages in Which the Ergative/Locative Morphological Distinction Has Collapsed

In several languages east of Warlpiri and Gurindji, the Ergative/Locative/Instrumental inflections have coalesced, leaving one suffix to carry out both functions. So, in a transitive clause, potentially the same suffix could be used for the agent/subject, the instrument, the location of the event and the location of participants. This makes the use of an alternative suffix for expressing location even more convenient. We discuss Wakaya, Warumungu and two Arandic languages in turn.

Wakaya (Ngarna, Possibly Pama-Nyungan) Wakaya is a language of the Barkly Tablelands (Breen 1974, 2004, 2011b).⁸ It had been classified as Pama-Nyungan, but Breen (2011a) proposes that it belongs to a separate family, Ngarna. Reportedly it is no longer spoken since the death in 1975 of Breen's teacher, Avon Willy (Clegg). In Wakaya the Ergative, Instrumental and Locative⁹ suffixes have collapsed.

- (19) a. **Wurinhathu-rl** kukumu kurrkum-rniy
 young.brother-ERG fish catch-PST
 'My young brother caught a fish.' (Breen 2011b: Chap. 6, ex. 58)
- b. **Wurinhathi-k** kuw-rniy
 young.sister.ERG cook.PST
 'My young sister cooked it.' (Breen 2011b: Chap. 6, ex. 59)
- (20) a. Yuwerr-rl=arn **yimiik-ang** **ngetha-rr-k** **bedi-rr-k**, ba
 sit-FUT=1S here.NM.LOC-? 1.GEN-NM-LOC country-NM-LOC and
 kurr-rl=arn **yimiik-ang** **ngetharrek** **bedii-k**.
 die-FUT=1S here.NM.LOC-? 1.GEN-NM-LOC country-LOC
 'I'm going to stay here in my country and I'm going to die here.' (Breen 2011b: Chap. 6, ex. 22)
- b. Yuwerr-rdiy yimb **ngetha-rl** **menkad-ij** **marraju-rl**.
 sit-PRS you 1.GEN-LOC skin-LOC kangaroo-LOC
 'You're sitting on my kangaroo skin.' (Eastern Wakaya, Breen 2011b: Chap. 7, ex. 38)

⁸Breen (1974) was substantially revised as Breen (2011b) with a change of orthography to b/d/k, but the data here is unaffected (Gavan Breen, p.c. 1 February 2012).

⁹The collapse is rendered more complex by having different forms for each gender: /-k/ with non-masculine nouns, /-rl/ with masculine nouns and /-ij/ with plural nouns and a few other nouns mostly ending with an apical consonant (Breen 2011b: Sect. 6.5.4).

So, in a transitive clause, the same suffix form could be used on two separate nominals, one denoting location of the event, and the other denoting agent/subject. Instead, in transitive clauses, two Allative suffixes, one denoting near distance (NALL) and one denoting far distance (FALL) are used. Breen (2011b: Chap. 6) writes:

The allative suffixes are used to mark the location of the object of a transitive verb. In many cases this is simply the goal of the motion of the object caused by the action of the transitive verb.

In (21) and (22), the subject agent and the object are in the same location and physically interacting but only the object ends up in the specific location, 'ground' and 'water'.

- (21) Kurrerniy bulu, ngindewerni **mingkird**
die.PST that, bury.PST ground.NALL
'He died (and they) buried (him) in the ground.' (Eastern Wakaya, Breen 2011b: word-list: *ngindew* entry)¹⁰

- (22) Yinkabu-rl wura ngurrungund-a **yukwa-rr-rd**.
kangaroo-ERG dog drown-GER water-NM-NALL
'The kangaroo drowned the dog in the water.' (Breen 2011b: Chap. 6, ex. 107)

The use of NALL or FALL to mark location of the object when spatially separated from the subject contrasts with the use of the LOC for events seen as wholes. In both examples, NALL and FALL could be construed as representing a goal (putting into the ground/water), rather than static location, as Breen notes. But perception verbs also use an Allative case for location of the object.

- (23) Ying-rndiy=ath-ab wuriiki **yukwa-rr-rd**.
see-PRS=1S-REFL shadow water-NM-NALL
'I can see myself in the water.' (Breen 2011b: Chap. 6, ex. 111)

Subject and object can occur in the same location, regardless of whether NALL or FALL is used, as in (24) in which the same shooting event is expressed in a larger location (Alexandria station) with the NALL case, and then in a smaller location (Fish Hole) with the FALL case. Whether the criterion for selection of LOC is lack of physical separation between subject or object, or location of the whole event rather than of the object, needs further investigation.

- (24) Wukuthu wurdiki mard-j-anb-a wayibala-rd.
father mother together-LOC-GO-GER white.man-NALL
'My parents went to the white man.'
- Wirirdekurl **Alkijandar-rd** la-nth wirirdekurl **Yllawerri-rd**
all.around Alexandria-NALL hit.(with missile)-CPL all.around Alexandria-NALL
'(They) were shooting all round Alexandria',

¹⁰Breen does not provide morpheme breaks in his transcription.

kirrirr ngarru wirirdekurl la-nth yimi-rriy bedii-rriy
 woman:O man:O all.around hit.(with missile)-CPL here-FALL place-FALL
 Baringkarra
 Fish Hole
 'men and women, shooting them all around here—at Fish Hole'. (Breen 2011b:
 Chap. 12, text 7. Reprisal killing)

Warumungu (Isolate Pama-Nyungan) Warumungu is located between Warlpiri and Wakaya. As in Wakaya, Ergative, Instrumental and Locative have collapsed, due to complete vowel assimilation to the preceding vowel. In traditional Warumungu, this form is used for predicating location in intransitive clauses.

- (25) Karnanti nyi-nta warlukun-jju.
 mother sit-PRS fire-LOC/ERG
 'Mother sits by the fire.' (Simpson 2002: 101)

The ALL suffix *-kinal/-kunal/-kana* is used for endpoint of motion, and for location of the object, as in (26) (cooking) and (27) (perception).

- (26) Ngulya-kana ajjul kupu-nta kuyu maraji.
 hole-ALL 333S cook-PRS meat euro
 'They (more than two) cook euro in holes in the ground.' (Simpson 2002: 102)

- (27) Warra arni karirr.mu-nta watta-kana=ngini.
 not I know-PRS far-ALL=TOP
 'I can't recognise someone a long way off.' (Simpson field-notes, ref: RNT:T96.2)

But the Warumungu construction differs from the AN construction seen in Warlpiri, since it is not restricted to the location of the object, as in (28) where both the subject and the object are at the location.

- (28) Kartti-ngki ngurraji-kina kayin karta-nta.
 man-ERG camp-ALL boomerang trim-PRS
 'The man is trimming a boomerang at home.' (Simpson 2002: 102)

Indeed, in young people's Warumungu, the use of the ERG/LOC for predicating location has almost disappeared, and the ALL has taken its place as a general suffix denoting location.

Arandic Languages (Pama-Nyungan) Two closely related southern neighbours of Warumungu, the Arandic languages Alyawarr (Yallop 1977) and Kaytetye (Turpin 2000), also have a collapse of Locative, Ergative and Instrumental cases.¹¹ In Kaytetye this ending is common in sentences with stance verbs (29a). In Alyawarr, this ending is used for both intransitive and transitive clauses (29b).

¹¹In Kaytetye, the allomorphs *-le*, *-nge* are used for INST, ERG and LOC (due to neutralisation of an original difference in vowels in Arandic).

- (29) a. KAY Awerre **elyenge** anteyane.
 boy shade.LOC sitting
 'The boy is sitting in the shade.' (Turpin 2000: 78)
- b. ALY Amulya akngirra **plain-ila** atuna.
 lizard many[NOM] plain-LOC kill-PCON
 '(We) killed a lot of lizards on the plain.' (Yallop 1977: 77)

In Kaytetye, "to say where the object or receiver of the action is" (Turpin 2000: 78), either ALL (30a) or the Dative case suffix (30b) is used. But both Subject and Object can be co-located with an ALL suffix, as in (30c), or with a LOC suffix (30d), without an obvious meaning difference.

- (30) a. Artnwenge ngkeyenge atye arenhe amperewarle.
 child your I.ERG saw camp.ALL
 'I saw your child at the camp.' (Turpin 2000: 78)
- b. Twepe-twepe re rntwenke arwele alkenhewe.
 around s/he picks tree big.DAT
 'She picks (them) off a big bush.' (Turpin 2000: 50)
- c. Ahakeye (re) elyewarle kwenke.
 bush.plum s/he shade.ALL swallows
 'He eats bush plums in the shade.' (Turpin 2000: 50)
- d. **Elyenge=pe** atathe=pe pweyayne-ee.
 shade.LOC=FOC they=FOC cook.used.to-CONTINUE
 'They would cook (the meat) in the shade for a long time.' (Turpin 2000: 83)

While Alyawarr does have an ALL case ending, location of the object is expressed by a form which is otherwise used to denote Dative case as in (31a) (perception verb) and (31b) (leaving). This connection is probably due to the frequent overlap in function between DAT and ALL case-markers in many languages: DAT used for destinations and ALL used for purpose etc.¹²

- (31) a. Antimirna arrpmila arika, **atnkirrika**.
 sugarbag[NOM] again see.PST coolibah.DAT
 '(I) saw a sugarbag again, in a coolibah tree.' (Yallop 1977: 74)
- b. Aylinapa line-irnima **kwatjikantiya** iwulalpika.
 we (du nom 1).but line[NOM]=SOME water.DAT.still leave.PST
 'But we left the lines by the water.' (Yallop 1977: 75)

In Alyawarr DAT can be used as an alternative to LOC when the whole event takes place at a location.

- (32) Artula arrpiyla ayliyla **apmirika**.
 man.ERG carve.PRS boomerang[NOM] camp.DAT
 'The man is making a boomerang in the camp.' (Yallop 1977: 74)

¹²For example, Aet Lees (p.c. October 2011) notes a historical parallel in Finnic languages, where the Livonian Dative case corresponds to the Allative (or sometimes Adessive) case in most of the other Finnic languages.

It is not clear why DAT is chosen over LOC in (32) in Alyawarr, or why ALL and LOC are used in (30c, 30d) in Kaytetye. We may be dealing with a degree of pure optionality here, as is sometimes the case in the choice between ALL and LOC in languages where AN occurs.

2.4.3 Languages to the North

To the north-east of Gurindji, and to the north of Warumungu and Wakaya are non-Pama-Nyungan languages, Wambaya (Nordlinger 1998), Jingulu (Pensalfini 2003), and Wardaman (Merlan 1994). These all lack constructions such as the AN construction or double case-marking to predicate location of participants specifically. Another non-Pama-Nyungan language in the area, Jaminjung, does have the AN construction, as noted above, perhaps borrowed from Pama-Nyungan neighbours. Thus the AN construction appears to be an areal phenomenon, restricted to some Ngumpin-Yapa languages, their neighbours to the east, and one neighbouring non-Pama-Nyungan group to the north-west. But there is an exception.

The Yolngu group of languages are Pama-Nyungan languages which are geographically separated from other Pama-Nyungan languages by blocks of non-Pama-Nyungan languages. The AN pattern is also found in the Yolngu languages. An alternation between ALL and LOC occurs, described by Schebeck (1976: 365) as follows:

[...] a LOC. appears in a transitive sentence only if the agent and the object 'are in, at, on' a place [...] However, when only the object 'is in, at, on' the place, the LOC. of the underlying intransitive sentence must be transformed into the DIR. ([=ALL]; when only the agent 'is in, at, on' the place, the underlying LOC. must be transformed into the EX. [=ABL])

Thus in (33) agent and object are co-located, and the location is expressed with LOC. In (34) only the object, the bird, is in the tree, and the location is expressed with ALL.

- (33) Yül=ngu-thu taykka-nha puu-ya-n palà-nga.
man-ERG woman-ACC hit-Afs.-Afv. house-LOC
'Man hit woman in house.' (Schebeck 1976: ex. 14)¹³

- (34) Yül=ngu-thu warakkàn-nha nhā-ngal tharppa-li.
man-ERG bird-ACC see-Afv tree-ALL
'Man saw bird on tree.' (Schebeck 1976: ex. 88)

Morphy (1983: 100), writing of the Djapu dialect of Yolngu characterises the difference in use as follows:

¹³The orthography used by Schebeck and Morphy has been modified here: *ng* is a velar nasal, *nha* a lamino-dental nasal and *th* is a lamino-dental oral stop. Schebeck inserts the character = in *yül=ngu* to indicate a hypothetical morpheme analysis.

Locational function is clause-wide in scope: a location function case marker (LOC or zero) may only be used if all the participants enumerated in the clause are in the same place. Therefore a sentence like:

- [149] *ngarra nhä-ma darramu-n wänga-ngur*
 1.NOM see-UNM man-ACC camp-LOC
 'I saw the man in the camp'

can only mean that he was there and I was there too.

If the subject is in one place and the object is in another, the local NP is always marked from the perspective of the subject. Thus [150] would be appropriate if the man was in the shade and I was outside looking in:

- [150] *ngarra nhä-ma darramu-n ngurrnggitj-lil*
 1.NOM see-UNM man-ACC shade-ALL
 'I saw the man in the shade'

Returning to our initial remarks about event versus participant domain predication, this pattern in Yolngu can be interpreted as a pragmatic inference drawn from the fact that LOC is an event (clausal) domain marker and ALL a participant (grammatical object) domain marker. Since all examples of the AN construction we have found involve perception verbs, it is not clear if this is a necessary condition for its occurrence; neither Schebeck nor Morphy state that this is the case.

The non-Pama-Nyungan southern neighbours of the Yolngu do not appear to use ALL to predicate location of an object, in part because many have quite limited case endings, or because the load is split between a LOC prefix and a LOC suffix as in Bininj Gun-wok (Evans 2003). Interestingly, some of the languages do occasionally use ALL for the actual case of the object, the thing affected by the action. Heath (1978) describes a 'pseudo-Accusative' construction for Ngandi in which the object of perception or hitting or sending is expressed with an ALL case-ending.

- (35) *ŋ-ñära-ŋ-gič* ŋanu- ŋ-ni.
 MSG-father-my-ALL I saw him
 'I saw my father.' (Heath 1978: 46)

Heath observes that the ALL is used "because the concept of seeing can be thought of as an action directed toward the perceived entity" (p. 46), that is, fictive motion where the object itself is the endpoint of the path. A similar use of the ALL/DAT affix on direct objects is found in Nunggubuyu (Heath 1984: 204), but the situation is more complicated because the path metaphor is made more explicit by having the Agent in Ablative case.

3 History and Explanations of the Constructions

In sum, two strategies are used to differentiate the location of the theme from the location of the agent in clauses where both are present. The first is the use of double case-marking, found in both Nominative-Accusative languages and Ergative-Absolutive Pama-Nyungan languages. The second is the co-opting of another case

to express location of the object in some Ergative-Absolutive Pama-Nyungan languages.

So far, most examples found have been ALL or DAT, cases otherwise associated with Goals, although the source case ABL is occasionally found. Examples with verbs used in this way are primarily perception verbs and finding, which can be plausibly construed as fictive motion (metaphor of gaze as motion), and verbs of leaving or forgetting, cooking or burying, which can be construed as kinds of putting into a place (and so also as motion). However, some languages appear not to have such semantic restrictions on type of verb affected by AN, and to have grammaticalised the distinction as two cases expressing static location.

The distribution of the types surveyed is given in Table 1.

3.1 *Origins of the AN Construction*

One of the striking things about AN is that it is found in Pama-Nyungan languages in three discontinuous groups: (a) in the west of the Ngumpin-Yapa subgroup in the Victoria River District and Tanami Desert (b) in Warumungu and Wakaya in the Barkly Tablelands; and (c) in the Yolngu group far to the north, with as far as we know, no occurrence in between. This could suggest inheritance of this pattern from fairly deep within the Pama-Nyungan family. However the feature is also absent in the western Ngumpin-Yapa languages and is not present in any Non-Pama-Nyungan languages apart from Jaminjung, which may have adopted it by diffusion from Ngumpin-Yapa. This suggests that this is perhaps an areal feature, whose origin may be in Tablelands-Gulf Pama-Nyungan, perhaps Ngarna.¹⁴ The areal spread of the feature must have developed at a time when Yolngu was still in touch with this area: this scenario avoids the unlikely hypothesis of independent invention in two areas. This construction is absent in other western and central Pama-Nyungan languages but there are other constructions which may have played a role in its development, such as the use of DAT in Alyawarr described in Sect. 2.4.2.

Apart from AN's distribution we need to look at how it may have evolved. As noted, this is a rare type of grammaticalisation of a semantic category meaning 'motion towards'. One conjecture could be that initially this began in contexts which combined motion and transitive objecthood. Perhaps the bridging context is verbs of putting. Many of the languages use an ALL case-marker on the locative goal of

¹⁴McConvell and Laughren (2004) suggest that a number of elements diffused from Warluwarric (Breen's Ngarna) into Ngumpin-Yapa before these two groups became separated and it is possible that similarly some features like those under discussion in this paper only entered the eastern languages of Ngumpin-Yapa. However another possibility is that AN was present in proto- Ngumpin-Yapa but was lost in the West. An alternative, but less likely hypothesis is that Ngumpin-Yapa and Warluwarric/Ngarna jointly form (part of) a higher level grouping within Pama-Nyungan. There is some lexical evidence that Yolngu could be added to such a putative linguo-genetic grouping. This could account for the sharing of the AN feature.

Table 1 Distribution of types

Patterns	Allative (AN)	Notes
A. Ngumpin-Yapa		
1 Gurindji	yes	Upper Victoria River AN optional? where S & O not co-located
2 Jaru, Walmajarri ^a	no	These languages are on the extreme west of the Ngumpin-Yapa family
3 Warlpiri	yes, alternative exists	some complications
B. Other Pama-Nyungan to the east of Gurindji (with LOC/ERG neutralised)		
4 Warumungu	yes	AN applies whether or not S & O co-located
5 Kaytetye	yes: Dative and Allative used	AN can apply whether or not S & O co-located, but LOC is also possible for co-location
6 Alyawarr	yes: Dative used instead of Allative	Dative can apply whether or not S & O co-located, but Locative is also possible for co-location of S & O
B.i Possibly Pama-Nyungan		
7 Wakaya	yes	S & O co-location for AN not confirmed
C. Yolngu (Pama-Nyungan, to the north)		
8 Yolngu	yes	AN where S & O not co-located
D. Non-Pama-Nyungan		
9 Jaminjung	yes (verbs of perception only?)	North-west of Victoria River Downs
10 Wambaya, Jingulu, Wardaman	no	
11 Ngandi	no	Allative on some objects
12 Nunggubuyu	no	Allative on some objects, Ablative on some subjects

^aJaru data comes from Tsunoda (1981) and Walmajarri from Hudson (1978)

verbs of 'putting'. For Alyawarr, Yallop (1977: 80) has some interesting examples where he interpolates an "and put":

I got it (and put it) into a pannikin
 We dug yams (and put them) into a piece of bark
 We were cutting bush bananas (and putting them) into a baby carrier

In some languages perception verbs seem to be another prototypical locus of AN, and, in the history of the construction, may have been associated with a kind of 'fictive motion' where perception is conceptualised as a kind of path from subject to object location.

A second feature which is found in a number of languages with AN, either categorically or as a tendency, is the requirement that the subject and object be in different locations to trigger a change to AN marking. Alternatively LOC can be seen as marking scope of location as being over the whole clause/event, while ALL functions to mark restricted scope of the location to the object NP. This may well have been important in the semantic matrix leading to the grammaticalisation, even though it is less clear-cut or even absent in some contemporary languages. The action by the agent on the patient may be conceptualised as motion-like since they are in two locations.

Finally, a fuller account needs to relate the appearance in the same languages of AN, (Allative case on nominals for location of objects) with Allative subordination (AS), the use on nominalised verbs of a complementiser suffix homophonous with the Allative case suffix to express control by an object, or non-subject switch reference (Austin 1981; Hale 1982; Simpson 1991). This in turn needs to be related to the use of other cases, especially Locative, as a complementiser suffix indicating control by other grammatical functions (what we call Locative subordination, LS).

3.2 *Parallels with Finnish*

The AN phenomenon has parallels with a phenomenon in Finnish involving directional locatives (e.g. Fong 2003) and 'fictive motion' (Huumo 2006, 2007, 2010) where the metaphorical motion this time is the separation or coming together of the locations of the subject and object. In some cases the Allative case (or the corresponding 'interior' case Illative) is used for the static location of objects, as in Ngandi and Nunggubuyu, but not the directional path, as with the AN construction in Australia. For instance, consider the (i) interpretation of (36) in Finnish (Fong 2003: 227): in this case Illative is used.

- (36) Metsästäjä ampu-i karhu-n metsä-än.
 hunter.NOM shoot-PST.3s bear-ACC forest-ILL
 (i) 'A/the hunter shot a/the bear in (lit. 'into') a/the forest.'
 (ii) 'A/the hunter shot a/the bear into a/the forest' (i.e. the bear was ejected/propelled into the forest).

Actual motion of the object into the location can be involved in the meaning of such examples (as in interpretation (ii) of (36)) but commonly there is no real motion. The common element seems to be that the object remains in the location in the ultimate phase of the event. ALL and ILL are commonly used for the location of objects with verbs of 'leaving' in Finnish, where the subject is separated from or moves away from the object entity (Huumo 2006: 48, 2007: 85).

Fong (2003) attributes this unusual usage in Finnish to the diphasic nature of the event structure involved, and the fact that Finnish directional cases can represent one phase—in this case the ultimate location—rather than inherently Path. She relates the phenomenon in Finnish, not to grammatical object control but to the semantics

of the verbs involved. This seems to be borne out by the occurrence of ALL and ILL for location in intransitives, e.g. (37).¹⁵

- (37) Karhu kuol-i metsä-än.
 bear.NOM die-PST.3s forest-ILL
 'A/the bear died in (lit. 'into') a/the forest.'

We have not found Australian parallels to (37). AN parallels to (36) exist in Australian languages, since the key point is that the ultimate location of the object is the ALL-marked NP, as in the Wakaya sentence (22) repeated here as (38) for convenience.

- (38) Yinkabu-rl wura ngurrungund-a yukwa-rr-rd.
 kangaroo-ERG dog drown-GER water-NM-NALL
 'The kangaroo drowned the dog in the water.' (Breen 2011b: Chap. 6, ex. 107)

As we have seen, in some Australian languages verbs of perception frequently take the AN construction. In Finnish (Huomo 2007) a case representing goal/end-point can rarely express the location of the object of perception parallel to English 'I can see [all the way] to the sea'. Underlying both the Finnish and Australian examples may be the metaphor of perception as involving a path where the perceiver and the object of perception are at either end.

Also in Finnish is the construction where the location of the object is marked with Ablative case (or Elative, the 'interior' equivalent). This is found with transitive verbs of buying and finding. The subject is understood as outside the location, and some property of the object fictively 'moves' to the subject's dominion of possession or consciousness (Huomo 2010). Thus 'finding' something (Ablative/Elative-marked location) contrasts with 'losing' something (Allative/Illative).¹⁶ This is not a kind of 'fictive motion' found in Australia; the restricted use of Ablative-case-marked objects of some verbs in Yanyuwa, and Ablative subjects in Nunggubuyu, seems to have a different semantic basis, and different grammatical properties.

4 Conclusions

We have shown two ways of differentiating the location of the object from the location of the subject in north-central Australian languages, through double case-marking and through co-opting cases that express Goal semantic roles, ALL and less commonly, DAT, the AN construction. This second way of marking secondary predication on object NPs is typologically rare as a grammaticalisation of local case-marking. In some of the languages in which this occurs it has the special function of singling out the object NP alone as being in the location, rather than the

¹⁵Huomo (2006: 61) also gives examples of intransitive process verbs taking allatives for the ultimate location of the subject entity.

¹⁶A similar contrast is found in Estonian (Aet Lees, p.c. October 2011).

whole event and all the participants.¹⁷ Thus in a certain sense the action or perception 'moves' from the agent to a patient literally, as they are in different spatial positions and it may be a form of this Path metaphor which is encoded in the AN construction. With verbs of seeing, a likely explanation seems to be Gruber's (1967) analogy between seeing and going; the speaker's gaze goes to the object, and thus to the place where the object is. With verbs such as leaving, burying, cooking, a likely explanation appears to be that the object is imagined as moving to the place where it is left/buried/cooked etc. Thus fictive motion may have different underlying metaphors.

An apparently similar phenomenon is found in 'directional locatives' in Finnish. While some of the verbs found in the Finnish examples are semantically similar ('leave', 'see'), the metaphors underlying these directional locatives seems different from those underlying AN in the Australian languages we have been discussing. There is no implication in the Finnish example (36) that the hunter (subject) is outside the forest (where the object 'bear' is) for instance, which would be the case in the most clear-cut cases of semantic differentiation between AN and Locative marking, e.g. in Yolngu. However, the common element between AN and the directional locative/fictive motion constructions may be that there is physical separation of the subject and the location of the object at some phase of the event.

It is possible that the original form of AN in the area formed by Wakaya and its relatives, and Yolngu at least did embody the use of an ALL form for secondary predication indicating locations of grammatical objects which are perceived as being in a separate location from the subject of the clause. If this results from a diphasic event structure, then this event structure is different from what it is generally thought to be for verbs like 'see'. A process which may have resulted in AN of this type is analogical extension of the pattern of verbs which do involve a kind of diphasic event structure—motion of the object as with 'put'—to other transitive verbs.

While clearly the Australian and Finnish phenomena differ in some parameters, they both reflect ways in which a locational case system can be adapted to a particular metaphorical or 'fictive' extension of notions of space and co-location in relation to syntactic arguments. It seems likely that when the AN phenomenon in Australia arose in certain Pama-Nyungan languages, it did express this kind of differentiation of co-location and separation of subject and object. These notions are closely linked to the distinction in predicate domain between event and participant, and at an even more grammatical level between clause and object noun phrase. As the grammaticalisation of this phenomenon expanded to expressing types of control, it also began to lose some of its original semantic character.

¹⁷Tomioka (2008) calls the predication of a locative to a whole clause 'the Davidsonian event interpretation', and claims that this is the only reading possible of Japanese locative adpositions, unlike in English for instance. In the relevant Australian cases LOC has the whole-event reading and ALL (in the locative sense) does not include the transitive subject (except in Warumungu). Whether the verb together with the object and excluding the subject agent can be interpreted as a 'sub-event' rather than a matter of syntactic scope is not clear.

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