

Article

Linear Lengthening in Iwaidja: an event-quantifying intonation at the phonology to semantics/pragmatics interface

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Abstract: This paper investigates the meaning of a specific intonation contour found in the Northern Australian language Iwaidja called Linear Lengthening Intonation (LLI). Using an experimental field work approach, we analysed approximately 4,000 utterances. We demonstrate that the semantics of LLI is broadly event-quantificational as well as temporally scalar. LLI imposes aspectual selectional restrictions on the verbs it combines with (they must be durative, i.e. cannot describe 'punctual', atomic events), and requires the event description effected by said verbs to exceed a contextually-determined relative scalar meaning (e.g., a 'typical duration' à la (Tatevosov 2008)). Iwaidja differs from other Northern Australian languages with similar intonation patterns (see e.g. (Bishop 2002: 2002; Simard 2013)), in that it does not seem to have any argument NP-related incremental or event scalar meaning. This suggests that LLI is a decidedly grammatical, language-specific device; not a purely iconic kind of expression (even though it also possibly has an iconic dimension).

Keywords: Linear Lengthening Intonation – Iwaidja – Australian languages – scalarity – semantics pragmatics – discourse structure

1. Introduction

This paper will explore a remarkable intonational contour found in Iwaidja, a severely endangered Indigenous Australian language spoken in the Northwestern Arnhem Land, now mainly on Croker Island (cf. Figure 1). It will be based on data collected in the remote community of Minjilang (Croker Island, N.T.) using experimental elicitation methods as well as more traditional questionnaire-based investigations, over the course of several years (2013-2019). It elaborates on preliminary results presented in (Mailhammer & Caudal 2019), and will primarily be concerned with the semantics of said contours.

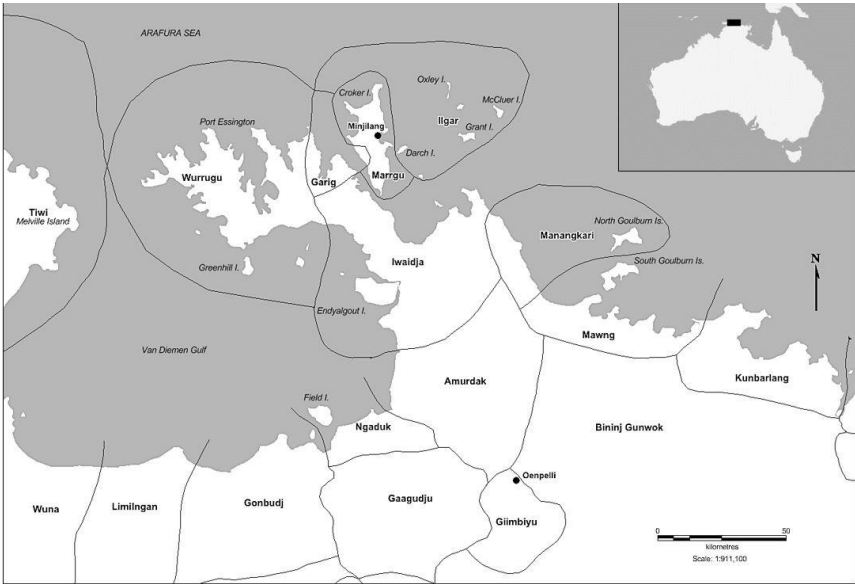


Figure 1. Croker Island and Indigenous languages and their historical locations in Northern Arnhem Land (Mailhammer & Harvey 2018)

1.1. Linear Lengthening Intonation at a glance: formal properties

Many descriptions of Australian Indigenous languages mention a specific intonation as part of the tune inventory, characterised by a plateau in F0 finishing on a mid to high tone, plus additional lengthening of the last syllable nucleus in the Intonation, (Bishop & Fletcher 2005: 338), followed by a drop on the next intonation unit. Example (1) illustrates this phenomenon in Iwaidja, the language under scrutiny in this paper, and figure 2 gives a graphic representation generated using Praat (Boersma & Weenink 2021).

- 1
- (1) *Barda r-aka-n* *lda jamin::* *bartuwa.* (Iwaidja)
Then 3sg.ANT-argue-ANT and 3sg.RECP. EndSequence
'Then they argued for a long while, and (finally) stopped [lit. 'that was it'].

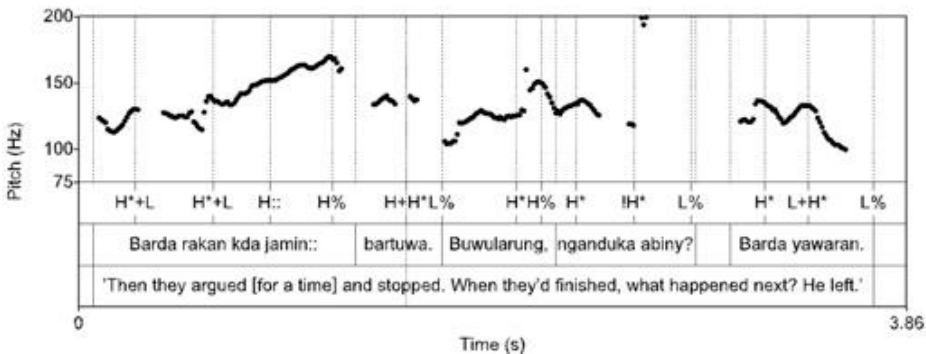


Figure 2. Linear Lengthening Intonation in Iwaidja, from (Mailhammer & Caudal 2019)

Following (Mailhammer & Caudal 2019), we will call it *Linear Lengthening Intonation* (LLI). LLIs are widely attested across Australian languages – cf. (Birch 1999) (Bishop 2002; Simard 2010; Simard 2013; Fletcher 2014). Their formal properties appear reasonably clear, recurrent across all the Australian languages in which it has been documented so far (Bishop 2002; Simard 2013: 67). Lengthening (noted in Figure 2 by the symbol H(:), lengthened high tone) and final high tone at the end of the intonation phrase (noted by H%, high boundary tone), are the two core criteria for identifying LLI in Iwaidja. Figure 2 demonstrates that at least in this language, Linear Lengthening Intonation does not need not show a plateau contour. Although the linear F0 progression can precede the last nucleus

by a substantial amount of time, Linear lengthening occurs on the last syllable of a word, which need not be the stressed vowel; see e.g. *jamin* in Figure 2, a contrastive pronoun used in reciprocal constructions. The following Intonation Phrase can show a falling contour (as in Figure 2); a follow up Intonation Phrase can also be altogether missing, or preceded by a pause of up to ten seconds. By and large, therefore, lengthening appears to demarcate the end of a prosodic unit, possibly an intonational phrase. Note that while we identified examples in our corpus showing not only lengthening of the verb-final vowel, but also of an argument NP, these are clearly marginal. This contrasts with particles-like words such as *kirrk* ‘all/completely’, which often appeared with LLI marking in our data – but this is hardly surprising, as such particles are sometimes difficult to distinguish from clitics, and are known in Iwaidjan languages to be elements of the extended verb template (Singer 2006: 73–74).

Bona fide LLI formally and semantically contrasts with other prosodic lengthening, notably conveying great distance, as shown in (1). Iwaidja distal deictic *baki*, ‘over there’, has a lexicalized, mandatory lengthening attached to it, (speakers rejected made-up examples without lengthening), approximating something like lexical tone (i.e., it contrasts with *baki* ‘tobacco’), (2). Such lengthening is not associated with temporal properties, and cannot be followed by the kind of drop found with LLI. (Bednall 2020b) observes additional formal prosodic differences between ‘true’ LLI, and (possibly) distance-related prosodic marking in Anindilyakwa – thus, it can occur on the first syllable of a word, unlike LLI, which is always word final. For want of enough data points relating to e.g., space-measuring lengthening in Iwaidja, we will leave this issue aside for future research, and focus instead on purely temporal-measuring, *bona fide* instances of LLI.

- (2) *Baki:::: !*
 There::::
 ‘Over there, a long way away’

1.2. Existing analyses and the semantics of Linear Lengthening Intonation

In sharp contrast to its formal properties, the semantics of LLI has so far proved elusive (Sharpe 1972; Simard 2013). Existing analyses typically ascribe LLI an iconic status regardless of the language in which it was identified. For instance, (Bishop 2002: 82) claims that it ‘dramatizes’ the ongoing nature of the action’ or ‘the extent of some referent’ – *qua* an ‘amount of a material substance’, or ‘extent of a geographical region’. But from a theoretical semantic point of view, what this ‘dramatization’ function is really about is not very clear; several theoretical concepts come to mind – scalarity in the sense of e.g. (Kennedy 2001), and/or some sort of expressive meaning, which could warrant for instance a multi-dimensional semantic approach à la (Potts 2005; Potts 2007; Gutzmann 2015). Identifying the correct theoretical and formal modelling for the semantics of LLI in Iwaidja will be of central importance to the present account.

It must be stressed that comparative facts alone are sufficient to suggest that the iconic view may not be warranted, at least not in the sense of an on-line, synchronically productive device. Thus in Anindilyakwa, LLI is most commonly borne by a special clitic =*wa*, possibly derived from adverbial *ngawa* (‘still’), cf. (2)-(3) (Bednall 2020a).

- (2) *nanga-luku-lukwa-marrkaju-wa* *d-adə-m-aləka-langwiyu...wa* (Anindilyakwa)
 3m/3f-RDP-tracks-follow-PAST 3f-f-INALP-foot-ABL.PRG...XTD
yīngə-ləkarrki-lyəmada
 3f-tracks-disappear-Ø
 ‘he kept following her tracks until they disappeared’ [‘Search’ z47-8]

Interestingly, *ngawa* itself can bear LLI as an isolated word:

- (3) *Engka* *na-rndarrka.* *Na-lawurrada* (Anindilyakwa)
 NEUT.other NEUT/NEUT-grab-Ø NEUT-return-Ø

1. Pro.(deixis.)TAM ₁	2. verb stem	3. (Reduplication)	4. TAM ₂
<i>nga-</i>	<i>ngarthuni</i>		-Ø
1sg.PR-	fall-		-PR
	'I fall'		

Iwaidja possesses two realis/indicative past tense paradigms. The first of these two tenses is an aspectually underspecified anterior tense (ANT), receiving imperfective readings with atelic utterances (except in inchoative, change-of-state contexts, of course), and perfective (or more rarely, perfect) readings with telic and other CoS utterances. The other is a general past imperfective viewpoint (IPFV), with clear pluractional properties as we will see (somewhat reminiscent of imperfective morphology in certain Slavic languages). Given this aspectual partial opposition between the two paradigms, it was highly desirable to control for viewpoint as a key condition of our experiments.

1.4. Our research question and road-map for the present paper

The goal we pursue in this paper, is to determine exact semantic import of Iwaidja, and determine what kind of theoretical/formal concepts should be used to account for its alleged ‘intensifying’ or ‘dramatizing’ functions.

The main contribution of the paper will be to demonstrate that the semantics of LLI is broadly event-quantificational as well as temporally scalar (in a sense different from event scalarity à la (Kennedy 2012), for its scalar dimension is unrelated to event boundaries and changes-of-state measurement, and rather involves a *contextually determined temporal duration scale* – and a related standard of comparison). We will propose a formal treatment of this typologically unusual category at the semantics/pragmatics interface, reflecting on what we believe to be a kind of semantic/pragmatic complexity on a par with that of e.g. tenses and temporal discourse connectives. We will specifically argue that it is at once a sentence-level marker, i.e., a VP-modifier constraining the aspectual type of VP-denoted event predicate, and a discourse connective-like item relating two distinct intonation units w.r.t. temporal ordering.

The paper is structured as follows. In section 2, we elaborate on the experimental fieldwork we conducted in order to study LLI-marked event descriptions, using a specially designed databank of video clips to elicit naturalistic event descriptions, combined with targeted, questionnaire-based elicitation, conducted on this typologically unusual, and theoretically challenging intonation in Iwaidja. As we will see, the methodology underlying our experiments rests on a classic two-component model of aspect à la (Smith 1991; Klein 1994), distinguishing between viewpoint aspect (essentially, functions denoted by inflectional verbal morphology, ranging over event predicates denoted by verbs) and event structure aspect (or so-called Aktionsart).

Section 3 discusses the results of our fieldwork; we will notably show that the behaviour of LLI in the data we collected, is consistent with the view that it denotes an event predicate modifier – i.e., something akin to an aspectuo-temporal adverbial. In addition to this, we will also demonstrate that LLIs also behave like discourse-level aspectuo-temporal markers: they often associate with overt discourse connectives (e.g. the *bartuwa* discourse connective (‘and then/that’s it’), reinforcing the inherent temporal ordering function of LLIs, and making explicit their interaction with discourse structural parameters. Indeed, LLIs constrain the establishment of discourse relations à la (Asher & Lascarides 2003); the rising pitch vs. low pitch intonation units involved in a LLI pattern such as fig. 1 must be related by *Narration*, *Result*, or exceptionally, *Elaboration*. These facts reflect, we will argue, on the typologically complex and fine-grained grammar of event descriptions (especially w.r.t. to event duration, closure and ordering) in Iwaidja, and in general, in Australian languages (Caudal 2022a).

2. Materials and Methods: experimental elicitation of LLI-marked utterances in the field

The data presented below were collected experimentally in the community of Minjilang (Croker Island, N.T., Australia, cf. figure 1), between 2013 and 2018, either by P. Caudal and R. Mailhammer, or by R. Mailhammer alone. They are outcomes of a long-term collaborative project dedicated to the study of the TAM system of Iwaidja, which

began with the creation of a dedicated experimental database, namely the Event Description Elicitation Database (EDED).

2.1. *The Event Description Elicitation Database (EDED): constitution and features*

The Event Description Elicitation Database, as the name suggests, was originally devised in order to elicit naturalistic event descriptions in under-documented languages, with complex tense-aspect systems, i.e., combining aspectually meaningful lexical verbs (i.e., endowed with Aktionsart meanings), and aspectually meaningful inflectional markers.

The EDED event type ontology can help elicit both simplex and complex event descriptions. Simplex event types comprise: (a) simple stative, positional stimuli (such as those expressed in English by the positional, stative meanings of sit (as in 'be sitting') or stand (as in 'be standing')); (b) simple activities; (c) simple telic events (both achievements and accomplishments). Complex stimuli include: (a) iterated simplex events, (b) sequences of one or several simplex events, (c) temporal embedding of a simplex, telic event into a complex or simplex event, and (d) even sequences of distinct iterated simplex (= complex) events.

In addition to Aktionsart features, EDED also targets the elicitation of aspectual viewpoint features in the sense of Smith (1991), in combination with all major Aktionsart classes, and including various aspectually coerced readings (de Swart 1998) such as e.g. (i) unfinished, imperfectively viewed accomplishment descriptions (e.g., "Rob was cutting the bread/the tree"), (ii) inchoative states and activities, and (iii) non-culminating/avertive readings ('X tried and failed to V/X nearly Ved').

Perfective vs. imperfective viewpoint readings are elicited by means of the visual rendering in the clips of temporal ordering between events – namely strict succession for perfective viewpoint-inducing stimuli, vs. temporal overlap/partial ordering for imperfective viewpoint-inducing films. This corresponds to the now well-known discourse structural effects of aspectual classes of tenses: thus, within a SDRT-based discourse structural approach (Asher & Lascarides 2003) to context, temporal succession typically associates with the computation of *Narration*, *Occasion*, *Continuation* or *Result* rhetorical relations, whereas temporal overlap will typically lead to *Background* rhetorical relations (cf. e.g. (Molendijk 1983; Vet 1980; Lascarides 1992; Asher, Prévot & Vieu 2007; Caudal 2012).

The EDED database was created over a span of three years: in 2013-2014 by Patrick Caudal and Rob Mailhammer, with additional clips created in 2016 by Patrick Caudal with the assistance of James Bednall. It currently consists of 250+ short video clips, arranged in different experimental protocols.² Each of these protocols respectively comprises between 34 and 83 video clips, and targets the following phenomena:

- Protocol I: interactions between inflectional aspect/viewpoint and event structure
- Protocol II-IV: interactions between tense-aspect information and motion/posture (with sitting, standing, lying, squatting postures, plus itive vs. ventive events being represented in the films)
- Protocol V: event structure, tense-aspect marking, event reduplication/habituality
- Protocol VI: a combination of all the above

2.2. *Using EDED in the field*

In the field, we used the EDED database with eleven participants, mostly in Minjilang (with one isolated field trip taking place in the community of Waruwi on South Goulburn Island). Nine of these participants were native speakers of Iwaidja (5 male, 4 female ranging between 40 and 75 years old). Seven completed the experiment in Iwaidja only; two participants also completed it in English; two participants were proficient speakers of Iwaidja who acquired the language as in late childhood or adults (late bilinguals). They completed the experiment in English only. All participants were shown a series of 34 video clips (List V, 2014); some were shown earlier, longer series I, II, and III (see Appendix A). Our typical recording setup involved one to three informants, and at least two

linguists. Informants were shown each of the films sequentially on a computer screen, and were then prompted to describe what happened in Iwaidja, using one of three past contexts:

1. simple, non-iterated event description ('X did Y (once)') (prompt: 'what happened *nanguj* ['yesterday'] / *wularrud* ['a long time ago']?')
2. iterated past event description ('X did Y for a long time') (prompt: 'what did he/they keep doing till the sun went down *nanguj* ['yesterday']?')
3. past habit context ('X used to do Y') (prompt: 'what did he/they keep on doing all the time *wularrud* ['a long time ago']?')

Their answers were recorded using audio and videorecording equipment, with up to two video recorders (front/back view); see figure 2.



(a)



(b)

Figure 3. picture (a) shows a stimulus as seen by the informants, while picture (b) shows a typical set up (with from left to right: linguists Patrick Caudal and Bruce Birch, informant KM, linguist Rob Mailhammer, and informant AB; this photograph was taken on 11. July 2013 at Adjamarduku outstation, Croker Island).

This study and relevant protocols were approved by the Ethics Committee of Western Sydney University (H10237), Chief Investigator Robert Mailhammer.

3. Results

Due to the limited number of speakers (by laboratory standards)³ we managed to interview, we were unable to construe our fieldwork experiment into a quantitative research project. We collected, transcribed and collected around 4,000 utterances using EDED and complementary questionnaires bearing on a variety of TAM phenomena, only a fraction of which bear LLI marking; the resulting corpus is evidently too limited to warrant the application of efficient quantitative methods.

Although the empirical generalizations we will propose here are based on solid, iterated attestations of certain phenomena, or grammaticality judgments, it is impossible to measure quantitatively what could be coined 'semantic tendencies' of LLI marking, and in general rank parameters constraining the interpretation of LLI, in a manner comparable to e.g. (Caudal & Bednall, this volume). Such a task will have to be deferred until substantial further investigations can be conducted in the field.

3.1. The aspectual profile of LLI: event structure selectional restrictions, and distribution with imperfective contexts, posture serial verbs plus reduplication

During our fieldwork elicitation using the EDED database, it quickly appeared that non-durative, punctual telic events tended not to associate with LLI. This was further confirmed by attempts at eliciting acceptability judgements on made up Iwaidja punctual telic utterances bearing LLI marking. Several speakers (KM, CM, JC & RN) were adamant (6)-(7) were impossible; some even questioning the very point of producing such forms.

- (6) [Prompt: Would you be happy to say something like **riwukban arlirr::* ? Or *karlu?*
[not]]
JC: Arlarrarr
RM: Uh?? **riwukban::* (arlirr) Why would you want to say that?
3sg.m.A>3sg.ANT-give-ANT (stick)
'He gave (the stick)::' (TAIM141124JCRNKMededIw_PC, RM: 01:13:13-40)
- (7) But you can't say **riwukban::* *yawaran.* No sense'
3sg.3sg.m.A>3sg.ANT-give-ANT 3sg.DIST.ANT-go-ANT
(TAIM141124JCRNKMededIw, RM: 01:14:17-21)

In contrast, LLI can associate with 'durative' telic event descriptions (accomplishments, if you will), cf. (8)-(9) – note that while (8) does not clearly culminate, (9) clearly does; it even incorporates a maximal degree modifier (*kirrk* 'completely/all') which makes it clear that the maximal degree on the scale associated with the event was reached, and the entirety of the associated incremental theme (the clothing) was hung up. Similarly in (10), the overt quantifier *wardad* ('one') makes it clear that a single tree is affected, and *bartuwa* indicates that it was thoroughly and successfully cut. So LLI cannot be described as rejecting telicity, or systematically imposing a detelicizing interpretation with verbs; the non-culmination reading of (8) is contextually determined, but not necessarily prompted by LLI (though it undoubtedly helps in this example). But we will get back to non-culminating readings of LLI-marked verbs below.

- (8) *Iyi, nganduka abiny mana? R-ildalku-ny:*
Yes, PRO.INT 3sg.say/do.ANT maybe 3m.sg>3sg.ANT-cut-ANT
'Yeah, what might he have been doing ? He was cutting::'
(TAIM20130711aM-KM+AB, KM: 00:45:51.071 - 00:45:53.751)
- (9) *Ri-walkarti-ny:: buldirrk:i...ki r-arndala-ng::*
3m.sg>3sg.ANT-put.up-ANT clothing 3m.sg.>3sg.ANT-put.to.dry.ANT
kirrk. K-awalkart-iny yurrngud kirrk, bartuwa.
ALL 3sg.ANT-put.up-ANT high ALL finished.
'He hung all the clothing up:: he put it to dry (in the sun):: completely He hung it all up, finished'
(TAIM20130711aM-KM+AB, KM: 00:46:47.318-00:46:52.558)
- (10) *ildalkuny:: wardad ildalkuny:: bartuwa*
3m.sg>3sg.ANT-cut-ANT one 3m.sg>3sg.ANT-cut-ANT finished
'He cut it (long time). One he cut (long time) and that was it'
(TAIM141126ILededIw, IL:00:51:23.800- 00:51:27.525)

This suggests that LLI imposes aspectuo-temporal restrictions on the event predicate conveyed by the verbs. More specifically, it seems to select for durative event predicate, whether telic or atomic, and clearly rejects what can be characterized as atomic telic event predicates (cf. (Dowty 1986; Caudal 1999) – i.e. non-scalar punctual event predicates (achievement verbs, if you will)).⁴

It does not as a surprise, therefore, that LLI is repeatedly attested in our corpus in combination with markers which suggests a protracted, durative event description. In particular, LLI often pairs up with posture-verb based serial verb constructions (SVCs), cf. (11). As was shown in e.g. (Caudal & Mailhammer 2017), posture verbs SVCs in Iwaidja contribute an aspectual function whose semantics can be likened to pluractional/iterative/durative aspectual verb 'keep on V-ing' in English. In addition to durative 'keep on' SVCs, LLI can combine with reduplication, either morphological (12) or lexical (13). And LLI can also associate with imperfective morphology on the verb, cf. (13)-(15); and strikingly enough, its semantic effect is then often closer to a Slavic-style imperfective affix, rather than to an average e.g. Romance imperfective viewpoint tense, as it tends then to have pluractional effect, cf. e.g. (13), which spells out through full, lexical reduplication, the pluractional reading of the imperfective form *ka-ldalku-ngung*. (14) and (15) are also

remarkable examples, in that they show a pluractional, atelic reading of a verb, followed up by an expression lexicalizing a successful termination – illustrating a common tendency among Australian languages to treat culmination as a non-lexical issue (cf. (Caudal 2022a) for an extended discussion of this phenomenon).

- (11) *aringan* *birdandiny::* *yawaran*
 3sg.IPFV-stand-IPFV 3sg.ANT-RED.sing-ANT 3sg.DIST.ANT-go-ANT
 ‘He sang for a long while [lit. ‘was standing singing::’] then he stopped [lit. ‘left’]
 (TAIM141124)CRNKMEdedIw_PC.eaf, RM:00:06.20-22)
- (12) *aringan* *birdadbirdandiny::*
 3sg.IPFV-stand-IPFV 3sg.ANT-RED.sing-ANT
 ‘He sang for a long while [lit. ‘was standing singing::’] (TAIM20130717aW-
 WM+MM-tasc, MM: 00:56:11.380 - 00:56:12.860)
- (13) *ka-ldalku-ngung::* *ka-wudba-ng* *ka-ldalkuny* (Iwaidja)
 3sg.IPFV-cut-IPFV:: 3sg.ANT-put.down/leave-ANT 3sg.ANT-RED.cut-ANT
ka-ldalku-ny *ka-ldalku-ny*
 3sg.ANT-RED.cut-ANT 3sg.ANT-RED.cut-ANT
 ‘she was cutting and put it down and cut, cut, cut, cut... and then finished’
 (TAIM141126ILededIw, IL: 00:11:16.000-01:11:20.796)
- (14) *rildalkungung* *artbung::* *bartuwa*
 3m.sg>3sg.IPFV-cut-IPFV again:: finished
 ‘He kept on cutting it again and again... then he finished’.
 (TAIM141126ILededIw, IL 00:10:45.571 - 00:10:48.849)
- (15) *rimuniny::* *barda* *wurlawu*
 3m.sg>3sg.ANT-pound-ANT then ready
 ‘He kept pounding it [the food] and after a time it was ready.’ (TAIM20130721aM-
 IL+ISL, IL 00:58:13)
- Equally unsurprisingly, LLI can freely combine with all types of reduplicated lexically telic verbs, as they describe durative, pluractional events. Examples (16)-(20) were elicited in an explicitly iterative context (‘what did he do till sunset?’). Given such a context, both with and without an overt iterative expression (SVC, duration adverbial or expression) LLI is always warranted. Although both SVCs and reduplication are commonly associated to LLI in such contexts, their presence is optional, and only reinforces the markedness of the duration expressed.
- (16) *ri-ldalku-ny::* *ri-ldalku-ngung* *artbung::* *bartuwa*
 3m.sg>3sg.ANT-cut-ANT:: 3s.sg>3sg.IPFV-cut-IPFV again:: finished
 ‘he cut and cut and cut, he kept cutting and then was finished’
 (TAIM141126ILededIw-PC, IL: 00:10:42.469-00:10:48.849)
- (17) *nanguj* *aringan::* *k-ardbirru-ny::*
 yesterday 3sg.IPFV.stand-IPFV 3sg.ANT-throw-ANT
 ‘Yesterday, he kept on throwing (the stone)’
 (TAIM141124)CRNKMEdedIw_PC, JC: 00:46:14.982-00:46:20.000)
- (18) *aring* *r-arnaka-ng* *jurra::*
 3sg.ANT-stand-ANT 3m.sg>3sg.ANT-stab-ANT *paper (bag)*
ya-wurryi-ngan *manyij*
 3sg.DIST.IPFV-go.into.water-IPFV sun
 ‘He kept on stabbing the paper (bag) as the sun was setting’
 (TAIM141124)CRNKMEdedIw_PC, JC: 00:28:40-42)
- (19) *ri-majbunku-ng::* *k-artbiru-ny* *[wardyad]*
 3sg.m>3sg.IPFV-lift.hold.up-IPFV:: 3sg.ANT-throw-ANT [stone]
 [context: slow motion of throwing a stone]

- ‘He was lifting up/holding up [the stone] (then) he threw (it)’
 (TAIM141124JCRNKMededIw_PC, RM: 00:45:03-04)
- (20) *nanguj* *aringan* *ri-majbungkungku-ng::*
 yesterday 3sg.IPFV.stand.IPFV 3sg.IPFV-lift-RED-IPFV
 ‘yesterday, he kept on lifting [that stone]’
 (TAIM141124JCRNKMededIw_PC, JC: 00:51:30.058-32.000)

Both ANT and IPFV inflectional marking appear in our data (the latter with a durative, single-event reading (19) or a durative, pluractional reading, as in (16), (18) and (20) – where the presence of reduplication morphology enhances the pluractional reading). Sequence (21) gives two formally different utterances describing the same iterated event, with speaker RM reformulating in the imperfective, a previous utterance in the anterior – these two descriptions are therefore truth-conditionally equivalent; this demonstrates the pluractional, durative dimension of the semantics of the Iwaidja imperfective.

- (21) JC: *nanguj* *aringan::* *kardbirruny::*
 yesterday 3sg.IPFV-stand-IPFV 3sg.ANT-throw-ANT::
ya-wurryildi-ny *manyij*
 3DIST.ANT-go.down-ANT sun
 ‘Yesterday he kept on throwing [the stone] until the sun went down’
 RM: *kardbirrukung*
 3sg.IPFV-throw.RED-IPFV
 (TAIM141124JCRNKMededIw_PC 00:46:14-27)

It is also worth observing the reformulation of (18) given in (22), where another speaker immediately describes the same event, but using a different form; the two utterances are given as nearly truth-conditionally equivalent. Starting from the LLI structure in (18), speaker RM paraphrases it in (19) as a markedly emphatic combination of (i) morphological reduplication (*rananarkang*), (ii) lexical reduplication (*ranarkang jurra* x 2), (iii) plus temporal ordering (*kayrrik* ‘an then’) and event-bounding (*burruli* ‘good/done’) expressions – the latter conveying the temporal and discursive function of the low tone, second intonation unit ‘closing off’ the phonologically complex LLI structure in (18). It is likely that this overtly emphatic reformulation originates in the already substantially emphatic nature of (18) (due to the combination of LLI with a SVC construction).

- (22) *rananarkang* *jurra* *ranarkang* *jurra*
 3m.sg>3sg.ANT-RED.stab-ANT paper 3m.sg>3sg.ANT-stab-ANT paper
ranarkang *jurra* *kayirrk* *kuburruburr* [??] *burruli*
 3m.sg>3sg.ANT-stab-ANT paper and.then next.morning good [done]
 (TAIM141124JCRNKMededIw_PC, RM: 00:30:48-00:31:00)

It seems in fact that combinations of LL with reduplication, posture SVCs and imperfective *qua* pluractionality, bears the hallmark of marked durativity in general: it emphasizes further their duration. In other words, we believe that the so-called ‘dramatizing’ function described in earlier works can be captured by likening LLI to a marked duration modifier, i.e., something akin to ‘for a long time’ (possibly, ‘for a really long time’), with ‘long’ constituting a subjective evaluation. We will spell out in the discussion below, the theoretical and formal consequences of such a descriptive move.

Example (21)-(22) and (23) illustrate particularly emphatic uses of LLI, in that they combine LLI with a posture SVC, and/or morphological or lexical reduplication. This extreme information redundancy ascribes (21) a four-fold, extremely emphatic durative-iterative reading.

- (23) *Aringan* *r-ahardalkbikbiny::*
 3sg.IPFV-stand-IPFV 3m.sg>3sg.ANT-RED-jump-ANT

‘He stood there jumping (repeatedly)’
Arahardalkbikbiny *aringan::*
 3m.sg>3sg.ANT-RED-jump-ANT 3sg.IPFV-stand-IPFV
 ‘He stood there jumping (repeatedly)’
Bartuwa. *Ri-wularrung*
 EndSequence 3m.sg>3sg.ANT-finish-ANT
 ‘That was it. It finished.’
 (TAIM20130711aM-KM+AB.eaf, KM: 00:55:58.000 – 00:56:03.305)

3.2. LLI and aspectually coerced readings of atomic telic verbs

Interestingly, it turned out that several speakers who had rejected some combinations of LLI with atomic telic verbs, also accepted them with special, marked readings; these uses seem to correspond to cases of aspectual coercion.

First and foremost, we should mention avertive uses (Kuteva 1998; Kuteva et al. 2019) of LLI – where avertive designates a grammatical category covering a wide range of non-culminating meanings. Although the realis past anterior tense (ANT) is used in (24), the result normally associated with the relevant verb is not achieved. (24) closely parallels (25), which has no LLI marking, but bears a modal inflection specifying the ‘thwarted’ intention underlying the past realis verb ‘(indeed, the FUT inflection often has volitional or hortative meanings in Iwaidja). We take such examples to be ‘non-culminating’ in a broad sense: although the target terminus point is reached, the teleologically predicted or desired result state does not come to hold; hence, an incomplete culmination (see (Caudal 2022b) for an extensive discussion of avertivity and non-culminating telic utterances in the context of Australian languages). (26) further illustrates avertivity in connection with LLI, this time with a ‘keep on’ construction (*waran* (V) ‘he went on (V)’), followed by *karlu* (NEG): the intended goal of the iterative volitional construction with ‘go’ is thwarted, and the LLI marking contributes to this avertive reading.⁵ Note that (13) is also an instance of avertive reading, albeit of a different kind, aspectually speaking; the event predicate’s terminus is not reached in the latter example.

- (24) *R-urlukba-n::* *w-ardajb-ung*
 3m.sg>3sg.ANT-step.on-ANT:: 3sg.ANT-couldn’t.break it-ANT
 ‘He repeatedly tried (= tried hard) to break it with his foot but failed.’
- (25) *R-urlukba-an,* *bana-rnukbun.*
 3m.sg>3sg.ANT-step.on-ANT 3sg.FUT-break-FUT
 ‘He stepped on it trying to break it.’
 (TAIM20130711aM-KM+AB, KM: 00:51:54.348 - 00:51:55.468)
- (26) *W-ara-n::* *karlu* *marukurnaj* *ri-widari-ny.*
 3sg.ANT-go.on-ANT NEG PRO.INDEF 3m.sg>3sg.ANT-prevent-ANT
 ‘He went on for a while but nothing. Something prevented him from finishing.’
 (TAIM20130721aM-IL+ISL, ISL: 00:49:34)

After avertive uses, one could mention a range of uses whereby LLI operates at an event’s macro-structural level, i.e. at the articulation between sub-events (see (Caudal 2005) for a discussion). Thus, (27) seems to illustrate a situation where LLI bears on the preparatory stage presupposed by the ‘come’ verb – it indicates that said preparatory stage was protracted.

- (27) *bingkung* *kani::* *bartuwa*
 3sg.ANT.came-ANT here-LLI EndSequence.
 ‘he came here slowly and then he was there’ (Am_20160609_CMDC_IwAmlD, CM:3:04)

(28)-(29) illustrate a coerced reading, whereby a markedly long interval separates the event’s culmination/terminus, from its normally expected result state. It introduces a

temporal hiatus between an event's inner stage, and its result stage. This 'hiatus' effect is, to the best of our knowledge, a completely new type of aspectual coercion that has not been documented so far.

- (28) *ri-wu-ng* :: Ø- *k-artbuni-ny*
 3sg.m>3sg.ANT-hit,kill-ANT 3sg.ANT-fall-ANT
 'he hit/killed 3sg. After a while, 3sg. fell'
 (Am_20160608_CMDC_LLI, CM: 1:01)
- (29) *ri-wunbu-ng*:: *k-artbuni-ny*
 3sg.m>3sg.ANT-hit.RED-ANT 3sg.ANT-fall-ANT
 'he hit 3sg several times [at least twice] and then he fell'
 (Am_20160608_CMDC_LLI, CM:1:00)

3.3. Combination with degree verbs and impact on nominal quantification

Although we repeatedly tried to elicit LLI marking on scalar verbs, to convey some kind of maximal degree, or marked degree reading, or degree modulation in relation to some incremental theme argument or subject argument, we have systematically failed to find empirical support for the idea that LLI could interact with other measurable dimensions in the semantics of Iwaidja verbs; it seems thoroughly restricted to temporal duration.

Speakers rejected all our attempts at construing such readings, notably in combination with particle *kirrk* 'completely'. This suggests that if LLI associates with some sort of scalar meaning, it is unrelated to an event's degree scale, and cannot interact with incrementality, or argument distributivity.

Rather, it seems to only relate some utterance to a contextually determined standard of duration – probably on the basis of world-knowledge and specific inferences made in a given context. This does not mean that such readings are impossible for LLI in other languages; but claims made concerning the interaction of LLI with nominal semantics in other languages do not seem to have sound empirical foundations in Iwaidja.

4. Theoretical discussion and formal analysis of our results

Let us now turn to the theoretical assessment, and formal modelling of our results. Three salient generalizations uncovered during our field experiments need to be accounted for :

1. LLI expresses subjectively marked durativity
 2. LLI does not seem to relate its evaluative dimension to an event's development *per se*, nor through an event's degree scale, nor through incrementality nor the internal structure of the denotation of some argument
 3. LLI normally rejects atomic telic utterances, but when combined with one, it can give rise to various coerced readings. In addition to this, it can (but need not) have non-culminating/non-resultative interpretative effects
- We will try to address these three different properties within a theoretical and formal model of LLI in the remainder of this paper.

4.2. A temporal scalar meaning

It is quite obvious from the above generalizations, that the semantics of LLI is similar to that of an event description modifier – i.e., some sort of aspectuo-temporal adverbial. As was proposed in (Mailhammer & Caudal 2019), we will ascribe a tentative type $\langle\langle e,t \rangle, \langle e,t \rangle\rangle$ to its denotation. To be more specific, LLI seems (i) to be restricted to durative events, i.e. to events with a durative run-trace and (b) to convey a relative temporal comparison (in the sense of (Kennedy 2001)), roughly saying that the event at stake has a duration exceeding that normally associated with the relevant event predicate – i.e. what we might want to call a temporal duration standard of comparison.

The idea that event predicates are associated with ‘typical duration’ is not novel, and has been elaborated upon, and even formalized, in past works, including e.g. (Wyngaerd 2001; Tatevosov 2008; Gyarmathy 2015), a.o. (Tatevosov 2008) proposed to straightforwardly formalize this notion of typical duration (TD) as in (30). Note that we are assuming TD to be contextually evaluated w.r.t. the speaker’s current beliefs and knowledge base; it is therefore a subjective, and contextual standard of comparison – not an intersubjective, immutable standard. Tatevosov’s definition being extensional, this might prove a problematic – but we will leave the issue of a better definition of TD aside for want of time to address it.⁶

$$(30) \text{TD}(P) = \text{mean}\{n \mid \exists e[P(e) \wedge |\tau(e)| = n]\}$$

We will assume that LLI is associated with a durative zero morph in Iwaidja (morpho-phonologically realized by particle / clitic =*wa* in Anindilyakwa), effectively an empty clitic attaching to the final syllable of the VP, and (i) causing the linear lengthening of said syllable and (ii) denoting a second order predicate over ‘long duration event’ predicate *Lgdur*.

We are formalizing below the semantics of *Lgdur* within (Asher 2011)’s *Type Composition Logic* (TCL); as it makes it possible to state in a straightforward way aspectuo-temporal constraints on event types; TCL being endowed with a sortal hierarchy, we will define NON_ATOMIC as the super type encompassing all event types except atomic telic events. π is a semantic stack argument ascribed to all predicative types in TCL; all type restrictions borne by a given function are stored in π , and must be met as the relevant semantic derivation progresses. And when they are met, during e.g., the existential closure of some argument, the relevant restriction is pulled from the stack – or else, if they cannot be met during the relevant functional application, a type mismatch arises. $\pi^* \text{ARG}_1^P:\text{NON_ATOMIC}$ indicates that P ’s first argument (its event variable e) must be a non-atomic event type; so that when P is bound and the tense operator binds e , then if P is an atomic event predicate, then a type mismatch will arise. (Unless coercion bridging functions can apply, and save the semantic derivation day – see below).

To put it in a nutshell, (28) indicates (a) that the predicate at stake must be durative (i.e., it must have a non-atomic run-trace) and (b) that the duration of P -events in the context must exceed the typical duration associated with P .

$$(31) \llbracket Lgdur \rrbracket = \lambda P.Lgdur(P) \leftrightarrow \forall e.[P(e)(\pi^* \text{ARG}_1^P:\text{NON_ATOMIC}) \wedge \tau(e) \geq \text{TD}(P) \wedge \tau(e) < n]$$

Through (31), we are proposing a clearly productive, compositional semantic contribution for LLI, which sets this phenomenon apart from other prosodic markers studied so far w.r.t. their interpretative effects – see e.g. (Portes & Beyssade 2015), which argue against compositional analyses of other prosodic markers in French.

4.2. Accounting for ‘marked’ readings with atomic telic verbs

As we have seen above, the contribution of *Lgdur*(P) is essentially that whatever event e predicate P describe in the current context, must be a non-atomic telic event variable, and that the duration of $\tau(e)$, the run-trace of e , must exceeds that of some ‘mean’ P -event e'). But what if our LLI marker happens bears on an atomic telic verb?

Then two situations can hold: either (i) a ‘bridging function’ can intervene between *Lgdur* and P , so that an otherwise unwarranted functional application can be salvaged, or (ii) no such bridging function is defined, and the relevant combination is ill-formed.

Following a strategy developed in (Caudal 2020), we will define such ‘bridging functions’ as lexically conventionalized meaning extensions attached to lexical verbs, or to verb classes at best. (Asher 2011) introduced bridging functions to account for what is generally analyzed as cases of aspectual coercion à la (de Swart 1998). Let us consider (27) again (here repeated as (32)).

- (32) *bingkung kani:: bartuwa*
 3sg.ANT.came-ANT here-LLI EndSequence.
 'he came here slowly and then he was there' (Am_20160609_CMDC_IwAmlid, CM: 3:04)

Come normally conveys an atomic event description, cf. (33):

- (33) $\llbracket \text{come} \rrbracket = \lambda e \lambda e' \lambda x. \text{come}'(e, x, \pi^* \text{ARG}_{1^{\text{come}}: \text{ATOMIC}})$

As the application of *Lgdur* to the denotation of *come'* yields a type mismatch ($\text{NON_ATOMIC} \neq \text{ATOMIC}$), only a bridging function can overcome this incompatibility. Fortunately, there exists one, as shown by the 'protracted preparatory stage reading' attached to (27/32). We are modelling in (34) a general 'preparatory stage' coercion bridging function \mathcal{F}_1 ; the result of its application to *come*, is the existential binding of the coming event (which becomes a secondary event referent – it is not the main at issue element of the utterance), and the introduction of a non-atomic, unbound preparatory event λ -variable e' , which will replace the atomic e (existentially bound in \mathcal{F}_1 , so π 's initial selectional restriction in (33), namely $\pi^* \text{ARG}_{1^{\text{come}}: \text{ATOMIC}}$, is satisfied) as the main contribution of the coerced reading – and is a durative, non-atomic event type, so that it satisfies *Lgdur*'s own selectional restriction in (31) (i.e. $\pi^* \text{ARG}_{1^P: \text{NON_ATOMIC}}$).

- (34) $\mathcal{F}_1 = \lambda Q \lambda e' \lambda x \lambda \pi. \exists e [Q(e: \text{ATOMIC}, x, \pi) \wedge \varphi_e (\text{NON_ATOMIC}, \text{type}(Q), \text{type}(x)) (e', x, \pi') \wedge \text{theme}(x_1, e_1) \wedge \tau(e') <^\circ \tau(e)]$

Note that in (34), $\varphi_e (\text{NON_ATOMIC}, \text{type}(Q), \text{type}(x))$ indicates that φ_e is an underspecified, contextually determined (preparatory stage) event predicate of NON_ATOMIC (i.e. durative) type, whose sortal type (i.e. lexical event type) can be inferred on the basis of the type of predicate Q and the type of argument x . The semantic nature of the underspecified preparatory stage function φ_e can be contextually determined using a TCL Glue Logic rule (36), following the general format defined in (35). In the absence of satisfying types in the logical form of an utterance, (36) cannot apply, and φ_e remains undefined; we will argue that this results in a degraded acceptability for the coerced reading.

- (35) $(e \sqsubseteq E \wedge a \sqsubseteq A) > \epsilon (e, a) = P(e, a)$ (with e event type, a object referent type)

- (36) $(e \sqsubseteq \text{COME} \wedge a \sqsubseteq \text{ANIMATE}) > \epsilon (e, a) = \text{directed_motion}(e, a)$

Similar bridging functions can be formulated for all the other coerced interpretations identified in §3.2; however, for want of time to formulate them in an appropriate manner, we will leave their formulation to subsequent investigations.

4.3. On the temporal ordering, discourse-structural effect of LLI

In addition to its sentence-level, compositional semantic contributions, it appears that LLI is frequently endowed with a discourse structural function. In particular, it predominantly appears in sequence-of-event contexts, and can certainly mark event ordering (although this is not necessarily the case). This is quite obvious in its very frequent association with an 'event bounding' expression on its right – qua a post lengthening 'closing off' expression, cf. e.g., *bartuwa* 'that's it/finished'.

This might seem paradoxical given the durative, and frequently imperfective aspectual semantics of LLI-marked verbs. But as we have seen above, the Iwaidja past imperfective tense often appears to have a pluractional semantics in such contexts (cf. e.g. (16)), rather than a *bona fide* imperfective viewpoint content in the style of e.g. Romance past imperfectives. And at the end of the day, imperfectivity does not warrant event overlap; it can be associated with sequences-of-events – as is shown by the existence of e.g.

‘narrative’ uses of various kinds of imperfective tenses, and in general by ‘temporal shifts’ one can apply to imperfective events as well. See e.g. (Caudal 2022c) for a detailed discussion of such issues in the light of a formal theory of discourse structure.

Following the latter reference, we will propose to ascribe to the semantics of LLI, the ability to convey constraints on possible rhetorical relations attaching whatever expression will appear on the right-hand side of the LLI tune, in its ‘drop’ component. LLI should in a sense be viewed as coming in two brands: a single intonation-unit-based prosodic marker without any drop component nor event-bounding/temporal ordering function, and double intonation-unit based prosodic marker, with an event bounding. In the latter prosodic construction, the first position corresponds to the discourse referent attached to the LLI-marked VP, and the second to the ‘event bounding’ expression attached to the tune-dropping intonation unit (cf. e.g., *bartuwa* in (1)); temporally speaking, the contribution of the second elements of such structure can be likened to a temporal discourse clitic of the ‘now/then’ type, familiar from several works dedicated to Australian languages – see e.g. (Ritz, Dench & Caudal 2012; Ritz & Schultze-Berndt 2015; Browne 2020).

Although we will not propose here a detailed formal implementation of the discourse structural function of the event-bounding, event-ordering type of LLIs, we will put forth some analytical, formal suggestions. If we assume a SDRT-style approach of discourse structure à la (Asher & Lascarides 2003), with the additional technical twist that temporal-ordering expressions can convey constraints on discourse relations (as proposed in (Caudal 2022c), and that discourse relations can be incorporated in a compositional semantics, then we can formulate the two following very coarse-grained, tentative definitions for the discourse structural semantics of the two intonational components of LLI constructions (high contour + plateau intonation unit in (37), with a durative function meaning, vs. dropping tune intonation unit, with an event ordering function meaning in (38)).

(37) $\text{DurativeLLI} = \exists \beta (\beta : [\dots V \dots] \wedge \text{Lgdur}(V) \wedge ?(\alpha, \beta) \wedge \alpha = ?)$

(38) $\text{BoundingLLI} = \exists \beta (\text{Sequence_of_Event_Rel}(\alpha, \beta) \wedge \alpha : [\dots V \dots] \wedge \text{Lgdur}(V) \wedge \alpha = ?)$

(37) merely incorporates into an undefined discourse structural function denotation, the *Lgdur* non-atomic event, durative scalar function already identified above, and applying to the head verbal predicate *V* in the DRS dominated by β . Indeed, $?(\alpha, \beta, \gamma)$ indicates that the durative LLI-marked discourse referent β can attach to the discourse context at segment α , via whatever discourse relation type will be compatible with its semantic profile (we are leaving this as an open question for future investigations).

(38) stipulates that the meaning of the ‘dropping tune’ LL construction, is to introduce a novel discourse referent β , by attaching it to some segment α previously introduced by the *DurativeLLI* function (37) (cf. condition $\alpha : [\dots V \dots] \wedge \text{Lgdur}(V)$). It connects β to α via a sequence-of-event inducing discourse relation type *Sequence_of_Event_Rel*. Discourse relations being binary illocutionary functions between speech act referents, within our TCL-type sortal semantics, they are part of the sortal hierarchy, and *Sequence_of_Event_Rel* corresponds to the supertype subsuming the *Narration*, *Occasion*, *Result* and *Continuation* rhetorical functions.

5. Conclusions

The main contribution of the paper was to demonstrate that the meaning of LLI is broadly event-quantificational as well as temporally scalar (in a sense different from event scalarity à la (Kennedy 2012)). We have seen that its scalar dimension is unrelated to event boundaries and changes-of-state measurement (notably *qua* incrementality, or so-called event scalarity), and rather involves a *contextually determined temporal duration scale* – and a related standard of comparison). We have proposed a formal treatment of this typologically unusual category at the semantics/pragmatics interface, reflecting on what we believe to be a kind of semantic/pragmatic complexity on a par with that of e.g., tenses and temporal discourse connectives. We have specifically argued that it is at once a sentence-

level marker, i.e., a VP-modifier constraining the aspectual type of VP-denoted event predicate, and a discourse connective-like item relating two distinct intonation units w.r.t. temporal ordering. Indeed, like aspectual modifiers, LLI imposes aspectual restrictions on the event predicate conveyed by the verb – it selects for durative atelic or telic event predicates (it either rejects or coerces (de Swart 1998) atomic telic event predicates), and it often co-distributes with reduplication (full or partial), imperfective inflectional morphology and associated posture serial verb constructions (Enfield 2002), all of which have clear pluractional/iterative/durative effects in Iwaidja.

But LLIs also behave like discourse-level aspectuo-temporal markers: they often associate with overt discourse connectives (e.g., the *bartuwa* discourse connective ('and then/that's it'), reinforcing the inherent temporal ordering function of LLIs, and making explicit their interaction with discourse structural parameters. Indeed, LLIs constrain the establishment of discourse relations à la (Asher & Lascarides 2003); the rising pitch vs. low pitch intonation units involved in a LLI pattern such as fig. 1 must be related by *Narration*, *Result*, or exceptionally, *Elaboration*. These facts reflect, we argue, on the typologically complex and fine-grained grammar of event descriptions (especially w.r.t. to event duration, closure and ordering) in Iwaidja, and in general, in Australian languages.

6. Patents

Supplementary Materials: The EDED database is available upon request from the authors.

Author Contributions: Conception of field work experiments and questionnaires: Patrick Caudal and Robert Mailhammer; data collection in the field: Robert Mailhammer, Patrick Caudal (with some assistance from Bruce Birch); writing—original draft preparation, Patrick Caudal; writing—review and editing, Robert Mailhammer; supervision, Robert Mailhammer and Patrick Caudal; project administration, Patrick Caudal and Robert Mailhammer; funding acquisition, Robert Mailhammer and Patrick Caudal. All authors have read and agreed to the published version of the manuscript.

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Appendix A

LIST I	LIST II	LIST III	LIST IV	List V (19-11-2014)
1. Door open	1. Open closed door	1. Open closed door	1. Sad	1. Singing no posture
2. Baby sleeping	2. Baby sleeping	2. Baby sleeping	2. Hanging	2. Kissed
3. Closed door	3. Closed door	3. Closed door	3. Baby sleeping	3. Baby sleeping
4. Arguing1 fades in out	4. Arguing1 fades in out	4. Arguing1 fades in out	4. Closed door	4. Sang cooked
5. Started Turning wheel II	5. Started Turning wheel II	5. Started Turning wheel II	5. Extending arms	5. Extending arms
6. Sitting gave axe	6. Sitting gave axe	6. Sitting gave axe	6. Open closed door	6. Pierced
7. Started drinking	7. Started drinking	7. Started drinking	7. Black then white	7. Sit down sneezes stands up
8. Rob cutting Pat greeted	8. Rob cutting Pat greeted	8. Rob cutting Pat greeted	8. White then black	8. Crouch stand iterated
9. Cutting the tree down	9. Cutting the tree down	9. Cutting the tree down	9. Singing no posture	9. Threw stone
10. Started Running	10. Started Running	10. Started Running	10. Coughing	10. Lift crate frustrative
11. Hanging up washing	11. Hanging up washing	11. Hanging up washing	11. Spinning	11. Open fridge
12. Sleeping woke up	12. Sleeping woke up	12. Sleeping woke up	12. Drinking	12. Open fridge frustrative
14. Peeling potato	14. Peeling potato	14. Peeling potato	13. Blinking	13. Hanging up washing interruption
15. Thinking	15. Thinking	15. Thinking	14. Kissed	14. Was knocking ran by
16. Cut tree down	16. Cut tree down	16. Cut tree down	15. Squating grinding	15. Stood up jumped sat down
17. Argued1 fades in out	17. Argued1 fades in out	17. Argued1 fades in out	16. Sing whistle	16. Cut bread
18. Sleeping starts crying	18. Sleeping starts crying	18. Sleeping starts crying	17. Whistle sing	17. Push fridge frustrative succeed
19. Cutting wood gave	19. Cutting wood gave	19. Cutting wood gave	18. Squating ground scratched	18. Push fridge frustrative
20. Took bottle	20. Took bottle	20. Took bottle	19. Lying ground ate scratched	19. Broke Stick
21. Cut tree down saw	21. Cut tree down saw	21. Cut tree down saw	20. Scratched started singing	20. Rake sweep go
22. Cutting bread II	22. Cutting bread II	22. Cutting bread II	21. Squating scratched ground	21. Sneezing
23. Sad	23. Sad	23. Sad	22. Cooked sang	22. Switch on
24. Throwing stone imperf	24. Throwing stone imperf	24. Throwing stone imperf	23. Shook took out bread	23. Cut tree down saw
25. Peeled potato	25. Peeled potato	25. Peeled potato	24. Sang cooked	24. Cutting wood gave
26. Broke bottle	26. Broke bottle	26. Broke bottle	25. Draw scratch sing	25. Whistled sang whistled sang whistled
27. Sat Drank Put Down	27. Sat Drank Put Down	27. Sat Drank Put Down	26. Turned Wheel Looked out	26. Eat biscuit
28. Stood up left	28. Stood up left	28. Stood up left	27. Turning looking	27. Sneezing gave water
29. Extending arms	29. Extending arms	29. Extending arms	28. Slid grinding	28. Switch off light
30. Baby crying	30. Baby crying	30. Baby crying	29. Scratching sing whistle	29. Looking ate biscuit
31. Spinning	31. Spinning	31. Spinning	30. Started Running	31. walked sat down slept woke up
32. Jumping pointed	32. Jumping pointed	32. Jumping pointed	31. Running	32. Switch on and off
33. Running	33. Running	33. Running	32. Cutting branch	33. Squating ground scratched
34. Cut bread	34. Cut bread	34. Cut bread	33. Cut branch	34. Kept dropping stone
35. Hanging up washing interruption	35. Hanging up washing interruption	35. Hanging up washing interruption	34. Breaking stick imperfective	

36. Baby sleeping kissed	36. Baby sleeping kissed	36. Baby sleeping kissed	35. Broke Stick
37. Cutting tree down saw	37. Cutting tree down saw	37. Cutting tree down saw	36. Receiving
39. Started walking	39. Started walking	39. Started walking	37. Received
40. Breaking stick imperfective	40. Breaking stick imperfective	40. Breaking stick imperfective	38. Was piercing
41. Sleeping	41. Sleeping	41. Sleeping	39. Pierced
42. Shook took out bread	42. Shook took out bread	42. Shook took out bread	40. Throwing stone imperf
43. Coughing	43. Coughing	44. Jumped	41. Threw stone
44. Jumped	44. Jumped	46. Sat down fell asleep	42. Cutting bread II
46. Sat down fell asleep	46. Sat down fell asleep	48. Sit down sneezes stands up	43. Cut bread
47. Jumping CUT BEG	47. Jumping CUT BEG	49. Turning looking	44. Peeling potato
48. Sit down sneezes stands up<	48. Sit down sneezes stands up<	50. Walking sat	45. Peeled potato
49. Turning looking	49. Turning looking	51. Turning wheel	46. Cutting tree down saw
50. Walking sat	50. Walking sat	54. Threw stone	47. Cut tree down saw
51. Turning wheel	51. Turning wheel	55. Broke Stick	48. Sleeping woke up
52. Blinking	52. Blinking	56. Threw stone better	49. Lying grinding jumped
53. Sit down sneezes<	53. Sit down sneezes<	57. Turned Wheel Looked out	50. Cutting wood gave
54. Threw stone	54. Threw stone	58. Dug up	51. Sat Drank Put Down
55. Broke Stick	55. Broke Stick	61. Kissed	52. Sit down sneezes stands up
56. Threw stone better	56. Threw stone better	62. Hanging	53. Walking sat
57. Turned Wheel Looked out	57. Turned Wheel Looked out	66. Laughing	54. Lying eating jumped
58. Dug up	58. Dug up	67. Throw stick	55. Hanging up washing interruption
59. Cutting branch imperfective	59. Cutting branch imperfective	68. Cut branch	56. Sitting grinding gave
60. Drinking	60. Drinking	69. Was piercing	57. Stood up jumped sat down
61. Kissed	61. Kissed	70. Cooked sang	58. Was jumping ran by
62. Hanging	62. Hanging	71. Pierced	59. Stood up knocked sat down
64. Threw stone up	64. Threw stone up	72. Scratched started singing	60. Was knocking ran by
65. Sitting	65. Sitting	73. Sang cooked	
66. Laughing	66. Laughing	74. Sang scratched	
67. Throw stick	67. Throw stick	75. Received	
68. Cut branch	68. Cut branch	76. Receiving	
	69. Was piercing	77. Squating grinding gave	
	70. Cooked sang	78. Squating grinding	
	71. Pierced	79. Squating ground scratched	
	72. Scratched started singing	80. Squating scratched ground	
	73. Sang cooked	81. Sitting ate scratched ground	
	74. Sang scratched	83. Lying ground ate scratched	

Discard 1. Door open

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Notes

¹ We use Leipzig Glossing Rules with the following addition: ANT=anterior. We use the standard Australianist practical spelling: <rr> = /r/, <rd> = /ɾ/, <ld> = /l/, <rld> = /ɾl/, <rt> = /d/, <rn> = /ŋ/, <ny> = /ɲ/ (Iwaidja) <nj> = /ɲ/ (Anindilyakwa), <ng> = /ŋ/, <rl> = /l/, <y> = /j/, <h> = [u]. Voicing in stops is not contrastive. We generally use voiced symbols, except for /g/ which is spelt <k>, so that sequences /ng/ can be easily distinguished orthographically (<nk>) from the velar nasal /ŋ/, which is written <ng>.

² The various sets of EDED video clips, alongside with the relevant documentation, are accessible upon requests from the authors. To this day, EDED has been used by over 20 other researchers in the field, in order to elicit naturalistic event descriptions in a variety of languages.

³ Initials of the relevant informants are cited in the examples below, but their names cannot be disclosed here.

⁴ We are departing from claims earlier made in (Mailhammer & Caudal 2019), where it was argued that LLI did not tend to associate with accomplishment verbs. A more thorough corpus investigation has proven this generalization to be incorrect.

⁵ (Caudal 2022b) argues that from an areal typological point of view, reduplication and LLI are common markers for construing averative readings in numerous Australian languages.

⁶ Moreover, whether or not the difference between the event’s duration, and the standard of comparison determined by (TD) is emphatic, might well be a contextual matter. When the prosody is extremely marked, or when additional durative markers are used (reduplication, SVCs), then the resulting utterance seems to be significantly more durative than the relevant standard of comparison – hence a feeling of emphasis. However, we will not attempt to formalize further here this possible context sensitivity, as our data is not sufficient for us to ascertain whether non-emphatic readings of LLI are possible, and if so, in what context they appear.