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Connor Brown, Maïa Ponsonnet

► To cite this version:

Connor Brown, Maïa Ponsonnet. Event plurality and the verbal suffix - (a)bad in Australian Kriol. Journal of Pidgin and Creole Languages, 2023, 10.1075/jpcl.00126.bro . hal-04363516

HAL Id: hal-04363516

<https://hal.science/hal-04363516>

Submitted on 25 Dec 2023

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Event plurality and the verbal suffix *-(a)bad* in Australian Kriol

Brown, Connor & Maïa Ponsonnet. 2023. Event plurality and the verbal suffix *-(a)bad* in Australian Kriol. *Journal of Pidgin and Creole Languages*. <https://doi.org/10.1075/jpcl.00126.bro>

Abstract: The verbal suffix *-(a)bad* is a frequent form in Australian Kriol and is well attested across all described varieties of the language. Despite the prevalence of this suffix, its precise semantics have so far gone undescribed in the literature. In this article, we present a semantic analysis of this suffix, drawing on data from a variety of Kriol spoken in the north-east Kimberley region of Western Australia. We argue that the diverse set of readings associated with *-(a)bad* can be best unified under an analysis of this form as a marker of verbal plurality (i.e. pluractionality). The suffix derives a set of plural events from a modified verb stem, which then interacts with aspect and argument structure to produce a wide range of readings, particularly readings of temporal, participant, and spatial plurality.

Keywords: Kriol, pluractionality, semantics, aspect, creoles

1. Introduction

This paper presents a semantic analysis of the Kriol verbal suffix *-(a)bad* (originating from Eng. ‘about’) drawing on data from a so far undescribed variety spoken in and around Kununurra, a regional centre of the north-east of the Kimberley region, Western Australia. Kriol is an English-lexified creole language spoken across much of mainland northern Australia and is the first language of approximately 20,000 Aboriginal people, making it the most widely spoken Aboriginal language in Australia (Schultze-Berndt et al. 2013). The verbal suffix *-(a)bad* has been included in various descriptions of Kriol and geographically contiguous contact varieties (e.g. Sandefur 1979; Hudson 1985; Disbray 2008; Schultze-Berndt et al. 2013; Dixon 2017), however the semantics of this form have not been investigated in detail.

Drawing on novel data, we present evidence that the verbal suffix *-(a)bad* has pluralizing properties, indicating the plurality of the denoted event, and therefore we consider it as a grammaticalized marker of verbal plurality, or, pluractionality (Cusic 1981; Newman 2012). We argue that *-(a)bad* introduces a semantically underspecified plural set of events, whose distribution is specified through the interaction of this suffix with argument structure, aspect and context. The semantically vague nature of *-(a)bad* then allows for a wide range of readings, all of which align with typological characterisations of pluractionality (Wood 2007; Mattiola 2020). These readings include the distribution of a plural event over time, space and/or participants, and several evaluative uses. The analysis presented here supports and elaborates on prior treatments of the suffix, which have described the form as a marker of imperfective viewpoint aspect (e.g. Sandefur 1979: 119), and presents further evidence for observations which link the suffix to plurality (Hudson 1985: 40; Schultze-Berndt et al. 2013).

This article is structured as follows. Section 2 presents the Kriol language and the data used in this study. Section 3 discusses previous characterizations of *-(a)bad* in Kriol and several related contact varieties; and section 4 provides some theoretical background on the concept of verbal plurality. Following this, in section 5 we review the semantic range of *-(a)bad* and propose a pluractional analysis for its semantics. In section 6 we broaden our scope to discuss the relation of *-(a)bad* to another verbal suffix, and how the semantic profile of *-(a)bad* patterns with pluractional forms cross-linguistically.

2. Language background and methods

The analysis presented in this paper draws from a corpus of Kununurra Kriol,¹ a Kriol variety spoken in the north-east Kimberley region of Western

¹ This is a label applied by linguists, as speakers do not use a consistent label for their Kriol variety.

Australia, in and around the town of Kununurra. Although Kununurra Kriol is mostly comparable with other Kriol varieties, it does exhibit a range of lexical, phonological, and morphological differences. Kununurra Kriol likely emerged in the east Kimberley some time in the mid-20th century from a predecessor cattle station pidgin. Pidgin varieties were adopted as a lingua franca throughout much of northern Australia during the 19th and 20th centuries following the spread of the cattle station industry, which saw sustained contact between European colonists and various Aboriginal groups (Munro, 2000). The establishment of Kununurra as a regional centre in the 1950s saw the convergence of Aboriginal people from a diverse range of language backgrounds, which further fostered the emergence of a lingua franca in the region (Shaw, 1980). In contemporary times Kriol is the daily vernacular for most Aboriginal people in Kununurra, however this language has a relatively low prestige in the area in comparison to traditional Aboriginal languages and English.

The majority of Kununurra Kriol speakers are heritage-language speakers of the Jarrakan languages Miriwoong, Gajirrabeng, the Mirndi language Jaminjung and the Pama-Nyungan language Ngarinyman. All of these languages are highly endangered, and Kriol is now the language used for day to day communication amongst most Aboriginal people in Kununurra. Despite the advanced state of language shift to Kriol in this region, Miriwoong in particular remains a culturally salient language within the Kununurra Kriol speaking area, which lies within the traditional country of Miriwoong people. Although only a few fluent speakers of Miriwoong remain (Olawsky 2010; Budrikis 2021), many speakers of Kununurra Kriol are semi-speakers of Miriwoong and codemixing between Miriwoong and Kriol is common. Throughout this article, any Miriwoong codemixing in examples is italicised.

The data for the analysis presented here is taken from a corpus of approximately 24 hours of Kununurra Kriol, collected by the first author. The corpus represents the speech of 19 native speakers and features a mixture of elicited and naturalistic speech data. The naturalistic data includes both narratives

and conversations, while the elicited data involves responses to picture and video stimuli. Picture stimuli includes the *Frog Where are You?* story (Mayer 1969), and several storyboards made by the first author (see Bochnak & Matthewson 2020). Video stimuli includes short video clips from the Event Description Elicitation Database (Caudal et al. 2016) and the Staged Events series (Van Staden et al. 2001).² Tokens of *-(a)bad* used in both elicited and naturalistic contexts form the basis of the analysis, while grammaticality and acceptability judgements with *-(a)bad* were conducted with three speakers to capture semantic distinctions not apparent in the larger corpus.

3. The status of *-(a)bad* across northern Australia

The verbal suffix *-(a)bad* is a widespread feature of English-lexified contact varieties spoken across northern Australia. In addition to Kriol, where it is attested in all described varieties (Sandefur 1979; Hudson 1985; Schultze-Berndt et al. 2013; AUTHOR), it is also present in a number of contact varieties which are spoken on the southern fringes of the Kriol-speaking range. These include the mixed languages Gurindji Kriol (Meakins 2008), and Light Warlpiri (O'Shannessy 2005), as well as the contact varieties Wumparrarni English (Disbray 2008) and Alyawarr English (Dixon 2017). In all cases, only brief descriptions of this form have been provided. The suffix also exhibits some variation in form across this range.³ Most varieties appear to have at least two

² Throughout this paper, examples are tagged with references which specify the date of recording and participants. Each of these references also include initials which represent the context in which utterance was given, or in the context of elicitation, the stimuli to which the speaker responded to. These initials are as follows: NAR- narrative, SPO- spontaneous, SJT- semantic judgement task, STB- storyboard, EDE- event description elicitation stimuli, SES- staged events stimuli, FWY- *Frog Where are You?* Story, PS- picture stimuli, VS- video stimuli.

³ The forms *-abat*, *-bat*, *-nabat*, and *-labat* have been recorded in the literature. We retain the representation *-(a)bad* throughout this paper for the sake of consistency, and also to reflect the two forms which are attested in Kununurra Kriol, *-abad* and *-bad* (see section 3.2). We treat *-bad* and *-abad* as allomorphs of a single morpheme, rather than as two closely linked, but distinct suffixes. This is primarily motivated by the fact that both forms share all readings we describe

allomorphs, namely *-abad* and a reduced, but more frequent form, *-bad*. In early descriptions of Kriol varieties, *-(a)bad* was also suffixed across the paradigm of plural pronouns (Sandefur, 1979; Sharpe, 1975). Some of these forms are still in use (e.g. *olabad* ‘third person plural’, *melabad* ‘first person plural exclusive’) across various Kriol varieties (Schultze-Berndt et al., 2013). The occurrence of *-(a)bad* with these forms further links this suffix with subject plurality and hints at the fundamentally pluractional nature of the suffix, which we discuss in more detail below (see section 5.2).⁴

In this section, we review the treatment of *-(a)bad* in Kriol and related contact varieties before turning to some observations regarding *-(a)bad* in Kununurra Kriol which provides some morphosyntactic background to the form.

3.1. *-(a)bad* in contact varieties beyond Kununurra

The suffix *-(a)bad* in Kriol varieties has consistently been described as an aspectual marker with broadly imperfective semantics, albeit with some terminological variation. This contrasts with the analysis we present below, which illustrates a much broader set of functions for this suffix (see section 5). Sandefur (1979: 119) describes the suffix in Roper Kriol (south-eastern Top End) as a marker of continuous aspect, where it ‘denotes an action as being continuous or repetitious’, as in (1).

- (1) *olabat bin gug-um-bat yem*
 3PL PST cook-TR-CONT *yam*⁵
 ‘they were cooking yams’

below (see section 5). Furthermore, *-abad* and *-bad* cannot co-occur on the same verb stem, indicating that they are not distinct forms.

⁴ Thanks to an anonymous reviewer for pointing out this connection.

⁵ Abbreviations used in glosses follow the Leipzig glossing rules with the following exceptions: CONT- continuous aspect, DIM- diminutive, HAB- habitual, INTJ- interjection, ITER- iterative aspect, NF- non-future, PLUR- pluractional, S- subject, SEQ- sequential, O- object.

(Sandefur 1979: 199, our gloss)

Comparatively, in her description of Fitzroy Valley Kriol (south Kimberley), Hudson (1983, 1985) provides some additional detail on the semantics of *-(a)bad*. Hudson argues that *-(a)bad* is primarily a marker of iterative aspect, as in (2), but that it also has durative readings, comparable to those described by Sandefur. We have offered a second translation of this example following its original translation to make the iterative contribution of the suffix clear.

- (2) dis motika i bagarrap-bat
DEM car 3SG spoiled-ITER
‘This car is erratic. It goes for a while and then stops’ or ‘this car keeps breaking down’.

(Hudson 1985: 40, our gloss)

In addition to iterative and durative readings, Hudson notes that *-(a)bad* can denote a plural set of participants. This observation is also made by Schultze-Berndt et al (2013). The analysis we present below confirms and elaborates on these observations by uniting these various functions under the semantic category of pluractionality (see section 5).

In addition to Kriol varieties, *-(a)bad* is well attested in several closely related contact varieties spoken on the southern fringe of the Kriol-speaking area. Across these languages only short descriptive characterizations of *-(a)bad* are available in each case, but these suggest that the suffix has a comparable semantic value to the corresponding form in Kriol. In these descriptions, a strong relation between this suffix and transitively marked verbs is often noted. In the mixed language Gurindji Kriol, Meakins (2016) describes *-(a)bad* as a marker of continuative aspect restricted to transitive verbs derived from Kriol. A similar situation is observed in Wumparrarni English (Disbray 2008: 267) and Alyawarr English (Dixon 2017: 111), where *-(a)bad* marks iteration/on-going action with transitive verbs in both varieties. In the mixed language Light Warlpiri *-(a)bad* is

reported as rare (O'Shannessy 2005: 36). When the suffix does occur, its semantics are primarily iterative, and there are links between the suffix and a plurality of participants (AUTHOR).

In review, all descriptions of the suffix describe *-(a)bad* as an imperfective aspect marker, with the differences between these descriptions being largely terminological. Additionally, connections have been suggested between *-(a)bad* and a plurality of participants, but these links are not presented as a central feature of the form's semantics. Furthermore, the suffix has also been closely linked with two other elements of verbal morphology also present in several varieties: the progressive marker *-in* (Sandefur 1979: 121; Hudson 198: 39; Schultze-Berndt et al. 2013) and verbal reduplication, also marking continuity, duration etc. (Sandefur 1979: 120; Steffensen 1980; AUTHOR). In recent descriptions the forms *-in* and *-(a)bad* have been described as exhibiting a notable semantic overlap, and being differentiated primarily on morphological grounds, as *-in* occurs only with intransitive verbs, while *-(a)bad* primarily targets transitive verbs (e.g. Dixon, 2017; Schultze-Berndt et al., 2013). Furthermore, stylistic variation has also been noted in relation to the variable use of *-in* and *-(a)bad*, for example Dixon (2017) notes that for young speakers of Alyawarr English speakers, *-in* dominates in the English dominant school setting, while *-(a)bad* is more frequent in the non-English home setting. Given the close links made between *-in* and *-(a)bad* in contact varieties closely related to Kununurra Kriol, we discuss the relation between these forms in more detail below (see section 6.2).

3.2. *-(a)bad* in Kununurra Kriol

The suffix *-(a)bad* in Kununurra Kriol is frequent and productive. Like in other Kriol varieties, it has two allomorphs, *-abad* and the reduced form *-bad*. There are a number of morpho-phonological factors that appear to favour the realization of either form, but none of these are categorical. Although both

allomorphs of the suffix occur with consonant final verb stems, when the verb stem is vowel final, *-bad* is the preferred form. Conversely, when the verb stem is monosyllabic, *-abad* is the preferred form, unless the stem is vowel final. These constraints are illustrated below in (3) and (4) respectively:

- (3) ola kid bogiyi-bad na⁶
 PL kid swim-PLUR SEQ
 ‘now the kids are swimming’.

(20200818a_BG_190: PS)

- (4) i wail-abad la dem
 3SG.S be.angry-PLUR LOC 3PL.O
 ‘he is angry at them’.

(20200804c_GGN_076: SPO)

Furthermore, the two allomorphs of the suffix demonstrate preferences for different morphological contexts. The *-abad* allomorph most often occurs following bare verb stems or following the imperfective *-in*. Conversely, *-bad* predominantly occurs following the transitive suffix *-im* or manner suffixes such as *-ap* ‘up’, *-at* ‘out’, and *-araun* ‘around’. These correlations are illustrated in the examples below.⁷

- (5) tjop-in-abad dem lib
 chop-IPFV-PLUR 3PL.O leaf
 ‘[he] is chopping those leaves’.

(20200813c_GGN_SS_049: EDE)

⁶ Examples from Kununurra Kriol are written in the Kununurra Kriol orthography developed by Mirima Dawang Woorlab-gerring for Kriol varieties spoken in the north-east Kimberley region.

⁷ Note that the examples presented here lack an overt subject. Subject elision is a relatively common feature of Kununurra Kriol. Subject elision has been recently described and analysed in detail in the Barunga variety of Kriol (AUTHOR).

- (6) *madi* *mend-em-ap-bad* *kloths*
 maybe mend-TR-up-PLUR *clothes*
 ‘maybe [she] is mending clothes’.

(20200818a_BG_405: PS)

In addition to *-(a)bad*, Kununurra Kriol features a range of other forms which partially overlap with the function of the suffix. The most frequent of these is the imperfective aspect suffix *-in*. A degree of semantic overlap between *-(a)bad* and this suffix is especially evident, as they can both express duration of an on-going event and occur in the data with comparable frequencies. We return to the relationship between these two forms following our analysis of *-(a)bad*. We illustrate that despite their partial overlap, these forms are semantically distinct in Kununurra Kriol (see section 6.2).⁸ Verbal reduplication, which is frequent in eastern Kriol varieties and also closely linked with *-(a)bad* (e.g. AUTHOR) is not productive in the speech of Kriol speakers in Kununurra. In this variety verbal reduplication surfaces only infrequently, where it indicates temporal iteration but appears to have a strong stylistic value. It mostly occurs in the speech of older speakers and is often disqualified as ungrammatical in elicitation. In addition to these forms, Kununurra Kriol has a two preverbal habitual markers *yoojdoo* and *olei* which display some functional overlap with the habitual function of *-(a)bad* (see section 5.1). A final construction which displays some overlap with *-(a)bad* is vowel lengthening, where the final vowel of a verb can be lengthened to iconically indicate durativity. This lengthening occurs only in narrative contexts in the data and so presumably this also has a stylistic dimension to its usage. These forms are well documented in other varieties of Kriol (see Hudson, 1983; Sandefur, 1979). Beyond our discussion of *-in* below (see section 6.2) we do not consider these other markers in any further detail here.

⁸ Note that while *-in* is productive in Kununurra Kriol, this is not necessarily the case across all varieties. In some varieties *-in* may in fact be largely lexicalized (Schultze-Berndt et al., 2013). This in turn may affect the division of semantic functions between these forms and their degree of overlap across different varieties.

With these observations in mind, in Section 4, we turn to a review of pluractionality as an introduction to the analysis of the semantics of *-(a)bad* in Kununurra Kriol which we present in Section 5.

4. Background on verbal plurality

Verbal plurality, or pluractionality, is broadly characterised as a derivational modification to a verb which indicates a plurality of events (Lasnik 1995; Newman 2012). Typological studies have demonstrated that this plurality typically distributes over some licenser, which is either the verb itself or its arguments, to produce readings of temporal, spatial or participant event distribution (Cusic 1981; Wood 2007). Pluractional markers with such functions are found in typologically diverse languages including Jaminjung (Schultze-Berndt 2012) and Cuzco Quechua (Faller 2012). These event-distribution readings are considered to be the ‘core’ readings of pluractional markers cross-linguistically (Mattiola 2019).

Pluractional markers tend to be multi-functional, and so often express a number of semantic extensions in addition to their core pluralizing functions. The most common extensions can be grouped into three types: degree extensions, non-prototypical plurality extensions, and reciprocal extensions (Mattiola 2019: 31). Degree extensions relate to the way in which the modified event is performed, and includes both diminution (i.e. decrease in extent, occurrence of situation, or lack of completion) and intensification/emphasis (i.e. increase in extent, intensity or occurrence of situation) (Cusic 1981; Mattiola 2020). These degree categories subsume incassative and intensive functions respectively, which we describe for *-(a)bad* below (see section 5.4). Non-prototypical plurality extensions encompass those functions which do not require a strictly pluralized situation, but rather one which is temporally extended, and so can potentially be plural. These functions include progressive or durative readings, as well as more gnomic/attitudinal readings. Reciprocal extensions designate readings in which two or more participants act upon one another. Figure 1 summarises the cross-linguistic

conceptual space of pluractionality, including the core functions of the category and its common extensions, following the typological studies in Cusic (1981), Wood (2007) and Mattioli (2019, 2020). The functions which fall within the dashed square designate ‘core’ pluractional functions, while those falling outside of it designate extensions.

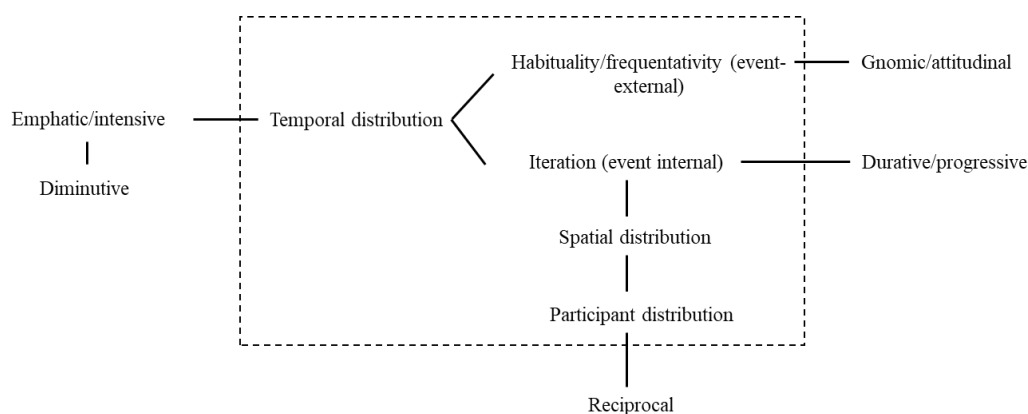


Figure 1. The conceptual space of pluractionality, following Mattioli (2019, 2020).

Pluractional markers exhibit cross-linguistic variation over a number of parameters, here we outline some of this variation that is relevant to our analysis of Kriol *-(a)bad* in the subsequent sections. Across the languages which feature markers of verbal plurality, there is variation in how the plural event can be distributed. While pluractional markers in some languages demonstrate a wide set of readings, pluractional markers in other languages are stricter in this sense, such as allowing only temporal distribution (e.g. West Greenlandic (van Geenhoven 2005)), or preferring participant distribution (e.g. Hausa (Součková 2011)). A further site of variation across pluractional markers concerns the cardinality requirements for the events they modify (i.e. the event number). While some languages allow for any cardinality that is higher than 1, pluractional-marked verbs in many languages resist low cardinalities and are often incompatible with cardinalities which are specified (Součková 2011; Cabredo Hofherr & Laca 2012).

In languages where plural verbs can distribute over their arguments (i.e. participant distribution), this distribution has been observed to typically occur on what is labelled an ‘ergative’ basis, meaning that the absolutive argument of the verb is targeted as the licenser of the event plurality (Corbett 2000: 253). Although this appears to be a strong cross-linguistic tendency, there are languages where pluractional verbs display no such preference (e.g. Hausa (Součková 2011)). Participant distribution of pluractional verbs can also vary in respect to how many events each participant must engage in. In some languages pluractional markers are felicitous with situations where each participant engages in the event only once (e.g. Chechen (Yu 2003)), while in others, each participant must engage in the event several times (e.g. Skwxwú7mesh (Bar-el 2008)).

Where pluractional markers exhibit temporal distribution readings, a distinction between event-internal and event-external readings is often encountered. Event-internal pluractionality refers to instances where the plural events are confined to a single occasion and are conceived of as belonging to a singular event (Tovena & Kihm 2008). This type of pluractionality typically occurs with atomic predicates such as semelfactives and is often labelled ‘iterative’. Event-external pluractionality concerns plural events which can potentially be distributed over distinct occasions, although they can also be confined to a single occasion (Cusic 1981: 79; Bertinetto & Lenci 2012; Henderson 2012). This type of pluractionality is often labelled as ‘habitual’ or ‘frequentative’. Although there are some languages that appear to have grammaticalized this pluractional distinction to various degrees (e.g. Kaqchikel (Henderson 2012) and Jaminjung (Schultze-Berndt 2012)), this distinction remains murky in the literature, particularly in relation to pluractional-marked semelfactives (Tovena & Kihm 2008; Součková 2011: 51).

Now that we have provided some background on the notion of pluractionality, we turn to a consideration of the Kriol data, and describe the various readings which occur with *-(a)bad*.

5. The function of *-(a)bad* in Kununurra Kriol

The semantic range of *-(a)bad* closely mirrors that of pluractional markers cross-linguistically. In addition to the distribution of plural events over time, space, and participants, Kriol *-(a)bad* also exhibits two evaluative functions, which we label the *incassative* and *intensive* functions. Furthermore, *-(a)bad* also frequently takes a durative reading, which we treat as an extension of the pluralising function of the suffix. We describe each of these readings of *-(a)bad* in detail below. Our description of each of these readings of *-(a)bad* will illustrate that while the suffix consistently derives a plural event set, this plurality is semantically under-specified, and the various readings of the form are determined primarily through its interaction with elements of argument structure, aspect, and context.

5.1. Temporal plurality

The most frequent reading of *-(a)bad* in the Kununurra Kriol data relates to temporal plurality, wherein a plural set of events distributes over some temporal span. In these cases, the distribution of the plural event is not licensed by any event argument, but rather by the verb itself. The particular nature of this temporal span remains underspecified, and so the suffix can signal both event-internal and event-external temporal plurality. Event-internal (iterative and durative) temporal plurality readings are equally frequent, and together constitute a majority of the temporal plurality readings in the data. Event-external readings are infrequent and represent approximately 15% of the 300 tokens of *-(a)bad* in the data which exhibit the temporal plurality readings discussed here.⁹ We discuss each of these readings in turn below.

⁹ The corpus used in this study is not representative of Kununurra Kriol speech in general. The corpus favours present progressive contexts and so the rarity of event-external temporal plurality readings may be an artifact of this.

Event-internal readings of *-(a)bad*, which we label ‘iterative’, are predominantly found with atomic situation types as in (7) and (9). This is unsurprising, as atomic events are naturally bounded and therefore easily iterate over a temporal span. In (7) below the speakers are describing a video of a man blinking repeatedly while (9) is a response to the *Frog Where are You?* story, where the dog is attempting to knock a beehive down from a tree, and so repeatedly jumps at it. In (8) we provide an example of the verb *blinggim* ‘blink’ without modification by *-(a)bad* in contrast to (7), to exemplify the semantic contribution of the suffix.

- (7) i *nyimej-a*, i-m *nyimej*,
 3SG.S close.eyes-TOP 3SG.S-NF close.eyes
 i-m blingg-im-bad im ai
 3SG.S-NF blink-TR-PLUR 3SG.POSS eye
 ‘he is blinking, he is blinking his eyes’.

(20200817a_GGN_JP_ 509: EDE)

- (8) i bin blingg-im ij ai
 3SG.S PST blink-TR 3SG.POSS eye
 ‘he blinked his eyes’.

(20211008d_GGN_AA_042: SJT)

- (9) i-m jump-in-abad la det tri det dog
 3SG.S-NF jump-IPFV-PLUR LOC DET tree DET dog
 ‘the dog is repeatedly jumping at the tree’.

(20200907d_RP_BaG_ 190: FWY)

In addition to the atomic situations described above, iterative readings can also emerge with accomplishment situation types in contexts where they are composed of a series of cumulative atomic events leading to a telic point. The use of *-(a)bad* in such contexts has a de-telicizing effect. This is illustrated below in

(10),¹⁰ where the speaker is describing a video of a man who is peeling a potato by making several short peeling actions.

(10) i pil-im-bad det padeida
 3SG.S peel-TR-PLUR DET potato
 ‘he is peeling the potato’.

(20200804a_SS_GGN_124: EDE)

In all instances where *-(a)bad* takes an iterative reading, it marks a plural set of atomic events which are repeated multiple times in a short succession on a single occasion, but which are separated from each other within this temporal span, as they are inherently bounded. Therefore, for an iterative reading to be felicitous, *-(a)bad* must modify an event that can be interpreted as atomic (i.e. be punctual and bounded).

In addition to iterativity, *-(a)bad* also exhibits durative readings, wherein a singular event is prolonged over a temporal span. Like the iterative readings described above, these cases are of the event-internal type, as the event modified by *-(a)bad* occurs on a single occasion. Unlike the iterative cases, and indeed, the other readings of *-(a)bad* we describe below, the durative reading of this suffix does not necessarily involve the distribution of an atomic plural event set. Rather, the durative reading occurs with singular, durative (i.e. non-atomic) events and therefore represents a case of a pragmatic extension. This extension is cross-linguistically widespread for pluractional markers, where the temporal plurality function (which quantifies over bounded temporal intervals) is extended to durative situations which can be viewed as a sequence of temporally contiguous temporal intervals. Such a reading is illustrated in (11) below, in which the

¹⁰ The situation aspect classes we refer to throughout this article are heuristic, given that there has been no investigation into the status and organisation of situation aspect classes within Kriol varieties. We acknowledge that situation aspect classes in Kriol may not reflect those of languages like English, as is the case for situation aspect in many languages (e.g. Bar-el, 2015; Bednall, 2021; Crane & Persohn, 2019).

speaker is describing a still image from the Frog Story book in which a dog is staring out of the window, with its head stuck in a glass jar.

- (11) det lil dog deye too i-m
 DET DIM dog DEM too 3SG.S-NF
 piyipin-im-bad, bad i-m gad-am
 peer-TR-PLUR but 3SG.S-NF have-TR
 det bodel la=m, kabarr-am-ap im feis
 DET bottle LOC=3SG.O cover-TR-up 3SG.POSS face
 ‘the little dog is there as well, it is staring [out of the window], but there is a
 jar on it, covering its face’.

(20200818b_RB_BaG_ 072: FWY)

The presence of *-(a)bad* here does not derive a plural set of staring events, as it is clear that the speaker is describing only a single staring event which is prolonged over an unbounded temporal span (given the presence of the singular subject *i*). Another example of a durative reading of *-(a)bad* is presented in (X) below, where the speaker is telling a story about a husband and wife, using pictures as a prompt.

- (12) wan waif-wan iya i-m dringg-im-bad wada
 INDF wife-ATT DEM 3SG.S-NF drink-TR-PLUR water
 ‘a wife, here she is drinking water’.

(20200818c_RB_BaG_ 021: PS)

The durative reading of *-(a)bad*, like the other cases of temporal distribution we describe here, is frequent in the data, but is restricted to durative situation types, namely activities and accomplishments. Furthermore, this reading is also restricted primarily to transitively marked verb stems. Therefore, we consider the durative use of *-(a)bad* to represent a cross-linguistically common pragmatic extension of the pluralizing semantics of this form. Although *-(a)bad* has often been described as a durative-type aspectual marker for other varieties (see section 3), we do not consider this reading to be a primary function of the

suffix, but rather one which is derived from the sense of temporal extension inherent in pluralised situations (see section 6.2 for further discussion).

In addition to the iterative and duratives cases discussed above, *-(a)bad* also occurs in contexts which are labelled as event-external (Bertinetto & Lenci 2012). In these contexts, the plural event set signalled by *-(a)bad* is distributed over distinct times and cannot be conceived of as plural parts of a singular event, in contrast to the cases described above. We label these cases ‘habitual’. Unlike the iterative and durative readings of *-(a)bad*, its habitual readings display no preference for particular situation types. Rather, habitual readings of *-(a)bad* are supported primarily by discourse context, or by the presence of habitual auxiliaries or adverbials. Consider two habitual readings of *-(a)bad* given below. In (13) the speaker is discussing things she would regularly do as a child, while (14) is a comment from a speaker during a personal narrative. The example in (15) comes from a semantic judgement task, in which the speaker supplied a Kriol sentence to fit the provided context, which is provided in the example.

- (13) jidan-abad deye la ola kandrīman
 be.sitting-PLUR DEM LOC PL countryman
 tog-in deye la riba
 talk-IPFV DEM LOC river
 ‘[we] would sit there with our family, telling stories by the river’.
- (20200903d SS 035: NAR)

- (14) ai yoojdoo kaab-am-bad, bad ai boget na
 1SG.S HAB.PST carve-TR-PLUR but 1SG.S forget SEQ
 ‘I used to carve [boab nuts] but I have forgotten how to’.
- (20200903a AD 176: NAR)

- (15) Context: Every day after work Jimij goes home and eats soup, he has done this since anyone can remember.
- ebritaim i garra iyid-im-bad sopsop

every.time 3SG.S OBLG eat-TR-PLUR soup

‘every time [he goes home] he will eat soup’

(20230720a_IN_ 014: SJT)

In the examples above the plural event set derived by *-(a)bad* is distributed over a discontinuous set of times, conveying that the event occurred or occurs with some regularity¹¹. In (13) and (15) the event-external reading is supported by the wider context. In (13) the speaker is discussing the things she would do regularly as a child while in (15) the speaker is discussing a general habit of somebody else. The habitual reading of (15) is further reinforced by the presence of the optional adverbial *ebritaim*, which indicates that the events of event soup should be distributed over each situation of returning home after work. In (14) this reading is supported by the presence of the past habitual auxiliary *yoojdoo* which imposes an event-external reading of the event plurality.

5.2. Participant plurality

In addition to the frequent readings of temporal plurality described above, *-(a)bad* also often signals participant plurality, where the plural set of events derived by the suffix distribute over a plural set of participants. These instances of participant plurality target the absolutive argument of the modified verb in each instance,¹² aligning with the same tendency noted for pluractional markers cross-linguistically (Corbett 2000: 253). These plural arguments must be able to be individuated (i.e. countable) so that an assignment between each plural event and participant can be made. Consider the intransitive verbs *klaimab* ‘climb’ and *boldan* ‘fall’ modified by *-(a)bad* below, where the plural events of climbing and falling distributes over the plural set of subjects respectively. In this example, the

¹¹ Because of the general semantics of *-(a)bad* examples such as (13) can felicitously express more than one kind of plurality. While (13) is used here to exemplify the habitual reading of *-(a)bad*, it is also compatible with a plural participant reading.

¹² While other researchers describe this tendency as an ‘ergative’ pattern, we use the term ‘absolutive’, to avoid any conflation with morpho-syntactic alignment.

speaker is constructing a story from visual prompts and is describing a scene in which two boys are playing near a hill.

- (16) de bin traina klaim-in-ap-bad na
 3PL.S PST try climb-IPFV-up-PLUR SEQ
 bad ol dem rok bin bol- bolindan-bad
 but PL DEM rock PST fall fall.IPFV-PLUR
 ‘then they were attempting to climb [the hill] but those rocks were falling’.

(20211117b_CK_004: STB)

Temporal iteration or durativity is unlikely to be contributed by *-(a)bad* in this case, as the durativity of this falling event is already expressed by the imperfective *-in*. Furthermore, the picture the speaker is building the narrative from depicts the rocks as falling simultaneously rather than iteratively. Therefore, it is likely that *-(a)bad* here only derives the plural set of events, and each of these events of falling is distributed over one of the plural subject arguments (the rocks). Distribution over a plural subject is also apparent in contexts where each subject only performs the action modified by *-(a)bad* once, as in (17) below. The example below presents a clear case of the functional flexibility of *-(a)bad* given that the same verb form is used with an iterative interpretation in (9) above.

- (17) Context: a group of people all jump at the same time, but only once each.
 ani wantaim detlat jump-in-abad
 only once 3PL jump-IPFV-PLUR
 ‘they were jumping just once’.

(20211012a_GGN_007: SJT)

Conversely, in cases where the verb is transitive, the event plurality distributes over the plural objects. The example below is a response to a constructed discourse context in which a boy is looking for bush food and stumbles upon a stand of trees laden with wild plums.

- (18) i bin bain-im-bad bigijmob la wanpleis
 3SG.S PST find-TR-PLUR many LOC one.place
 ‘he found many [wild plums] in a single place’.

(20211012a_GGN_052: SJT)

In this example *-(a)bad* derives a plural set of finding events, but a temporal distribution reading is unlikely (i.e. *he kept finding wild plums*), as it is contextually understood that the boy discovers all of these bush plums at the same time or within a relatively short period of time in a single place. Rather, this event plurality distributes over the plural set of objects, the wild plums. As a count argument, a clear assignment can be made between each bush plum and each event of finding, even if these finding events are simultaneous with one another.

The examples presented above illustrate that following cross-linguistic tendencies observed for pluractional markers, the participant plurality readings of *-(a)bad* in Kriol target the absolutive argument of the modified verb. It is notable that both examples we have provided here feature plural events which occur (near-)simultaneously. We have opted for such examples because, given the underspecified nature of the event plurality derived by *-(a)bad*, participant distribution readings are often ambiguous with other readings. In the data there are many cases where a plural event set distributes both over time and over a plural set of participants, such as in (19) below. In this discourse segment, a group of speakers are collaboratively retelling a traditional story about a brolga and a kangaroo. In this segment a speaker is describing a part of the story where the kangaroo creates two hills by piling many rocks on top of one another

- (19) wen det, wat, keinggooroo bin flai-bad
 when DET what kangaroo PST fling-PLUR
 dem rog gad is teil
 3PL.O rock COM 3SG.POSS tail
 i bin pail-im-ap det rog
 3SG.S PST pile-TR-up DET rock

meig-im	doo	big	hil	na
make-TR	two	big	hill	SEQ

‘when that, what, kangaroo flung/was flinging those rocks with his tail, he had then piled those rocks into two big hills’.

(20200910j_GGN_RN_ 078: NAR)

Here, the event of flinging is modified by *-(a)bad* and the plural objects (rocks) are count arguments and so each event of flinging can be assigned to each object argument, resulting in a participant-distribution reading. However, these bounded plural events of flinging are also understood to distribute over time (as it presumably takes time to create such large piles) and thus, an iterative reading is also possible here. Examples such as (19) illustrate that while various readings of *-(a)bad* can be distinguished from one another in particular contexts, there are many cases in which several readings are felicitous simultaneously, given the underspecified semantics of the suffix.

5.3. Spatial plurality

In addition to the cases of temporal and participant plurality described above, *-(a)bad* is also found in contexts where it marks a plurality which distributes primarily across space. A plurality distributed across space can rarely, if ever, be independent from the temporal or participant cases discussed above, given that any event occurring several times across space must also occur several times across participants, or be sustained/repeated over a temporal span. Indeed, within our data, there are very few cases where a spatially distributive reading of *-(a)bad* is clearly distinguishable from the temporal or participant readings discussed above. However, there are some contexts where it is clear that a spatially distributed reading of the suffix takes precedence, such as with verbs of motion. Cross-linguistically, verbs of motion marked by a pluractional often take a spatially distributed reading (Wood 2007: 67; Součková 2011: 148). In this

context, as in the ones we have considered above, the presence of *-(a)bad* signals that there is a plural set of motion events, which take place across distinct areas of space. Consider (20) below, where *-(a)bad* is used to describe a motion event that has a plurality of goal arguments.

(20) Context: a man is walking to all the different shops in town

i wog-in-abad ebriweye, i wog-in-abad
 3SG.S walk-IPFV-PLUR everywhere 3SG.S walk-IPFV-PLUR
 ebriweye deye la taun
 everywhere DEM LOC town
 ‘he is walking everywhere, he is walking everywhere in town’.

(20211123b_GGN_024: SJT)

Contrast this with a situation in which a motion event modified by *-(a)bad* has only a single goal argument, which results in infelicity.

(21) Context: a man is walking to one shop

?i wog-in-abad la jop
 3SG.S walk-IPFV-PLUR LOC shop
 intended meaning: he is walking to the shop
 speaker comment: ‘you can only say “*wogin*”’.

(20211123b_GGN_036: SJT)

The contrast in felicity between (20) and (21) illustrates that, at least with motion events such as *wog* ‘walk’, *-(a)bad* prefers a spatial interpretation of the plural walking events, which therefore requires a plurality of goal arguments. The plural set of goals provide a set of distinct spatial locations for each walking event derived by the suffix to take place within (i.e. the paths between each of the different goals). Furthermore, the infelicity of *-(a)bad* with a singular durative motion event illustrates that the reading of *-(a)bad* here cannot be exclusively temporal (i.e. durative) (as it can in other contexts). However, a temporal plurality reading of (21) is accepted in contexts where it describes a person who might walk to the same shop each day as part of a routine, resulting in a habitual

interpretation of *-(a)bad*. This also indicates that even though a temporally distributive reading is possible in the correct discourse context, it still requires a plural event set, and cannot describe a singular durative event.

As with the other plural readings derived by *-(a)bad*, the spatial reading presented above illustrates how particular readings of the suffix are enriched by various morphosyntactic and discourse factors. Verbs of motion with *-(a)bad* favour a spatial distribution reading, given that these events naturally take place over an area of space. The presence of *-(a)bad* derives several walking events and therefore requires a plurality of goal arguments to satisfy this plurality. Despite this preference for a spatially distributive reading, the data illustrates that verbs of motion do not consistently take this reading and can in fact signal temporal plurality with *-(a)bad*. Elicitation evidence indicates that in the correct discourse context, *-(a)bad* modifying a motion event is compatible with a single goal argument, where a habitual reading is preferred (while durative readings are unavailable). This once again suggests that the semantics of *-(a)bad* is rather underspecified and only consistently introduce an event plurality, the precise distribution of which is determined by interaction with various semantic and pragmatic factors.

5.4. *Evaluative functions*

In the preceding sections, we have described what constitutes the major function of *-(a)bad*, where the suffix modifies a situation to derive a plural event set which is then distributed over various licensors (with the exception of durative readings). In addition to this pluralizing function, we encounter a relatively smaller number of cases where *-(a)bad* has an evaluative function. Cross-linguistically, pluractional markers and other aspectual devices often mark evaluative or emphatic functions in addition to verbal plurality (Cusic 1981; Tovená 2015; Mattioli 2020). In these contexts, the pluralizing semantics of the suffix are pragmatically extended to indicate a speaker's evaluation of an event

which is not evidently plural in the senses we have outlined above. We identify two evaluative uses of *-(a)bad* in the data, which we label ‘incassative’ and ‘intensive’. We consider each of these readings in turn below.

The incassative function of *-(a)bad* (following the terminology of (Cusic 1981)), conveys the modified event as lacking a goal or endpoint, or occurring at random or without purpose. This function of *-(a)bad* is clearest in cases where its pluralizing semantics would otherwise be redundant, namely in the modification of a durative singular event that is already modified by the imperfective suffix *-in*. Markers in semantically redundant contexts such as these are often sites for pragmatic exploitation. Consider (22) below, where *-(a)bad* occurs in just such a ‘redundant’ context. In this example, the speaker is describing a situation illustrated in a storyboard, in which a girl wants to make a cup of tea, but she doesn’t know how.

(22)	dijan	gardiya	gel,	i-m	thingg-in-abad
	DEM	non.Indigenous	girl	3SG.S-NF	think-IPFV-PLUR
	fo	det	au	meig-im	ti
	DAT	DET	how	make-TR	tea

‘this non-Indigenous girl, she keeps thinking/wondering about how to make tea’.

(20200910c_GGN_006: STB)

Here, the event of thinking modified by *-(a)bad* is already marked by the imperfective *-in* which conveys that the event is temporally extended, and so it is unlikely that *-(a)bad* is only marking durativity here. What is crucial is that this event of thinking is temporally prolonged precisely because the referent does not know how to make tea, and so we assume she cannot do much more than think about this activity. In this respect there is no clear endpoint or goal to this activity, and it is this evaluation which is marked by *-(a)bad*. We can hypothesise a metaphorical link between this incassative reading and plurality – as a desire to have something without knowing how to procure it would likely result in someone

repeatedly thinking about this presently unattainable desire. Another case in which an incassative sense with *-(a)bad* often surfaces is when it modifies the verb *silip* ‘sleep’, as in (23) below. In this example the speaker is describing a video which opens with a man sleeping on a chair in the middle of a garden during the day. Both the setting and time of day are atypical for sleeping and so this leads the speaker to evaluate the event as lacking any real purpose or goal. Rather than actually trying to sleep in order to rest, the man is perhaps simply dozing in the sun.

- (23) i silip-in-abad la tjeya, ngi?
 3SG.S sleep-IPFV-PLUR LOC chair TAG
 ‘He is dozing in the chair, right?’.

(20200804a_SS_GGN_128: EDE)

Another case in which this incassative function is clear is with the lexeme *wog-abad* ‘walk-PLUR’. While it has been argued that *wogabad* has lexicalized into a monomorphemic word in at least some Kriol varieties, this is not the case in Kununurra.¹³ Consider (20) above, where *-(a)bad* is separated from the verb stem by the imperfective suffix *-in*. Furthermore, in elicitation contexts speakers reject forms such as *wogabad-bad*, which are attested in other varieties. Taken together it seems likely that in Kununurra Kriol *wog-abad* is analysed as a combination of a verb stem and pluractional suffix, rather than a monomorphemic word meaning ‘walk’. In contrast with *woginabad* in (20), which describes a spatially distributed plural event of walking, in (24) *wogabad* denotes a spatially distributed situation of walking that also has a clear incassative reading, and so is not used to denote straightforward plurality.

¹³ *thinggabad* ‘thinking’ is another predicate which appears to be lexicalized like *wogabad*, in eastern Kriol varieties. In Kununurra Kriol *thinggabad* also displays little evidence of lexicalization and the presence of *-(a)bad* is meaningful. Evidence against a lexicalized treatment of *thinggabad* includes the rejection of the form **thinggabadbad* as ungrammatical, and that the verb *thingg* can occur as a bare stem, as well as combine with either *-in*, *-(a)bad* or both, producing the forms *thinggin*, *thinggabad*, and *thingginabad*.

(24) aa i gon wog-abad na
 INTJ 3SG.S go walk-PLUR SEQ

‘ah he is away wandering’.

speaker comments: we say this to tease someone when we can’t find them
 or don’t know where they are, like maybe that have gone off wandering,
 like someone who is crazy.

(20211123b_GGN_009: SPON)

The comments given by the speaker about this sentence illustrate that *wogabad* designates a walking event which is evaluated as lacking any particular purpose, in which a person aimlessly wanders and is far removed from places they might be expected to be, and in this respect the event can also be understood as random – another feature of incassative events. Indeed, this is further cemented by the alignment between the event *wogabad* and people who are ‘crazy’, as doing something with no clear purpose is understood to be irrational. Once again, the connection between this incassative evaluation and verbal plurality is clear as this event of wandering aimlessly would undoubtedly take place over a large area of space (and as a result also take place over a large temporal span). Although we have argued that it is unlikely that *wog-abad* is completely lexicalized in Kununurra Kriol, its distinctive semantic profile in comparison to forms such as *wog-in-abad* in (20) above and its lack of clear plurality marking may indicate the form is undergoing a process of lexicalization.

In addition to an incassative function, *-(a)bad* is also sporadically found marking singular and atomic situations, which we have heuristically labelled, an ‘intensive’ reading. These rare cases of *-(a)bad* do not convey any sense of durativity or obviously plurality, but rather appear to denote singular events which occur suddenly (and likely unexpectedly), or with force and effort. This is illustrated in (25) below. In this example, the speaker is describing an elicitation video in which a man runs past a woman, and bumps into her shoulder as he passes her.

(25) det natha man bin ran-in siyi,
 DET other man PST run-IPFV see
 i bin nog-im-bad is hed
 3SG.S PST knock-TR-PLUR 3SG.POSS head
 ‘that other man was running, see, and he knocked her near her head’.

(20200817a_GGN_JP_ 131: SES)

As in the incassative uses of *-(a)bad* described above, in the example this event of bumping is clearly singular, and is also instantaneous, and so cannot be perceived as plural or temporally extended. Despite this lack of plurality or durativity, *-(a)bad* is still found modifying the event. One possibility for this may be because the speaker evaluates this event as sudden and forceful, as it causes the woman in the video to stumble. The relationship between the intensive function of this suffix and plurality are not immediately clear. One potential link between what we label as the intensive evaluation and plurality is that they both relate to notions of increase, either an increase in the number of events in the case of pluractionality and increase in the force and effort undertaken by the agent of an event in the case of intensive action. The metaphorical links between the ‘intensive’ and other uses of *-(a)bad* we offer here are speculation at best, and further work is needed to better understand the uses of *-(a)bad* which we have labelled ‘intensive’. One avenue for such work would be to investigate how *-(a)bad* interacts with degree achievement predicates (e.g. ‘dry’ or ‘cool’ in English) and where any intensifying effects occur with such combinations.¹⁴

Although the suffix *-(a)bad* most often functions to derive a plural set of events from the verb it modifies, our discussion above also illustrates that this suffix can be used evaluatively, where it modifies events which are not always clearly plural. These evaluative functions represent situations in which the plural semantics of the suffix are metaphorically extended to mark events which occur repeatedly or for a long time and have no clear purpose or goal (incassatives), or

¹⁴ We thank an anonymous reviewer for this suggestion.

events which occur with what the speaker perceives as sudden force or effort (intensives).

6. Discussion

6.1. *The pluractional core of -(a)bad*

The preceding analysis has illustrated that *-(a)bad* has a heterogeneous constellation of functions. Crucially, the core function of *-(a)bad* is to derive a plural set of events. The suffix is largely incompatible with descriptions of singular events (although durative transitive verbs and some evaluative uses are an exception to this (see sections 5.1 and 5.4)). However, as we discussed above (see section 4), such ‘non-plural’ functions are common for pluractional markers cross-linguistically. Based on this and additional cross-linguistic evidence (see section 6), we argue that event pluralization is the only semantic contribution of *-(a)bad*, and that the various readings of the suffix can best be accounted for under this analysis. Indeed, the semantic range of *-(a)bad* described above easily fits within the cross-linguistic conceptual space of pluractionality, as we illustrate in Figure 2, where the red box indicates the functional range of *-(a)bad*. Recall here that the labels of intensive and diminutive in the figure stand for the intensive and incassative functions we documented for *-(a)bad* respectively. While the incassative function appears relatively common, the existence of the intensive function remains a tentative suggestion.

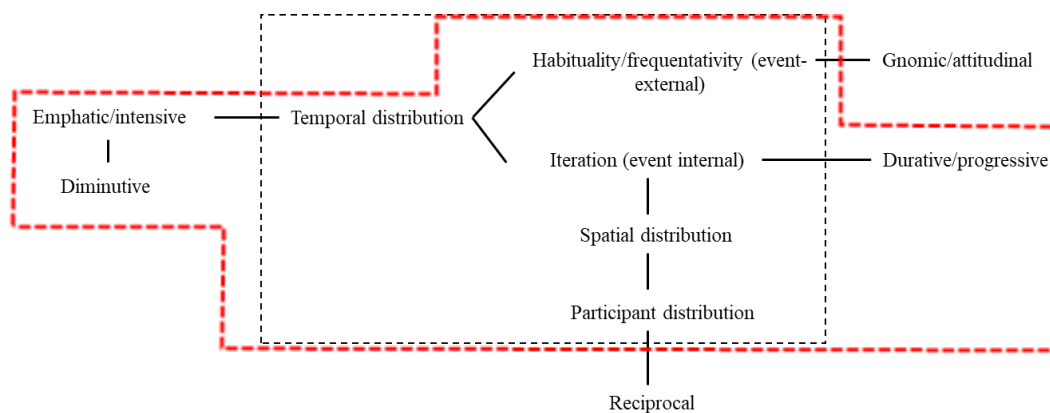


Figure 2. Functional range of *-(a)bad* in relation to the pluractional semantic space

As Figure 2 illustrates, Kriol *-(a)bad* covers all the ‘core’ functions associated with pluractional markers (indicated by those functions which fall within the black dotted box), along with a number of common extensions. Therefore, *-(a)bad* exhibits a semantic range which is typical of pluractional markers cross-linguistically (Cusic 1981; Wood 2007; Mattioli 2019). Like many of them (e.g. Skwxwú7mesh (Bar-el 2008)), it instantiates all three major pluralizing functions (temporal, spatial and participant plurality). Although events modified by *-(a)bad* can distribute over different parameters, which parameter is selected (time, space, or participants) is not conditioned by the suffix, but rather by its interaction with other features of a clause (such as telicity, atomicity, and nominal arguments), or indeed, context.

A number of additional functions emerge from this core pluralizing function, which represent pragmatic extensions. In the case of *-(a)bad*, these extensions are the durative, incassative, and potentially intensive functions. These extensions arise from various senses associated with event plurality: temporal extension in the case of durative readings, and excessive action in the case of the evaluative functions. Indeed, such extensions are cross-linguistically common for pluractional markers (Cusic 1981), especially durative extensions, which are

attested in a wide range of pluractional marked languages (e.g. Chechen (Wood 2007) and Akawaio (Mattiola 2019: 100)).

We can observe some correlations between different clausal elements and different readings of *-(a)bad*, particularly in regard to situation aspect. Our review found that in contexts where *-(a)bad* marks temporal plurality, atomic situation types took iterative readings, whereas durative situation types took durative readings. Our review also illustrated that in most contexts, the occurrence of *-(a)bad* with telic situations impose atelicity, with participant plurality readings being the only context in which telicity could be preserved. Despite these correlations, ultimately a plural event modified by *-(a)bad* can be distributed across any of the identified parameters, as long as felicity is maintained. Consider the examples **Erreur ! Source du renvoi introuvable.** and (17) above, where the same pluralized atomic event *jamp* (jump), can distribute over either time or participants, depending upon the context. Although in the data, forms such as *jamp-in-abad* typically take an iterative reading, in the correct discourse context a rather different reading of participant plurality is also acceptable.

Given the general nature of *-(a)bad* we have argued for throughout this paper, a remaining question concerns the cross-linguistic pluractional functions we have not documented for *-(a)bad*, namely the reciprocal and gnomic functions outlined above (see section 4). Here we briefly offer some suggestions to account for the absence of these functions, although these remain preliminary. In regard to the reciprocal function, Kununurra Kriol (and many other varieties) has a frequent invariant post-verbal form *mijelb* which co-lexifies both reciprocal and reflexive functions (Dickson & Durantin, 2019; AUTHOR). In the data, *mijelb* appears to be obligatory in reciprocal contexts, and while a verb modified by *-(a)bad* and the marker *mijelb* can occur together in a reciprocal clause, we have not encountered any instances of a reciprocal clause which lacks *mijelb*. The obligatory nature of this form in the expression of reciprocity might account for why *-(a)bad* does not exhibit a reciprocal function. The absence of a gnomic function with *-(a)bad* is perhaps less clear. Kununurra Kriol lacks a grammaticalized gnomic marker, and

gnomic meanings appear to be primarily expressed by unmarked declarative clauses which are either formally unmarked for tense, or less often, marked with the preverbal future marker *garra*. The lack of grammaticalized marking for gnomonic functions is cross-linguistically widespread (Carlson, 2012) and so perhaps the lack of a gnomonic function with *-(a)bad* reflects a broader cross-linguistic trend.

The relative flexibility of *-(a)bad* with various event and discourse types indicates that any perceived restriction of this suffix with particular situation types is unlikely to be inbuilt into the semantics of the form, but rather certain uses of the suffix may be dis-preferred as a matter of felicity, rather than grammaticality.

Based on the analysis we have provided above it is clear that Kriol *-(a)bad* has pluractional functions, and so far, we have said relatively little in relation to the durative uses of this suffix. However, in previous accounts of Kriol, the suffix *-(a)bad* has consistently been labelled as a marker of imperfective-type aspect, given the general predominance of this type of reading (see section 3). In the following section we consider this issue in more detail and conclude that despite the frequency of durative readings of *-(a)bad*, an imperfective analysis is ill-suited to the Kununurra data.

6.2. *Relation to imperfectivity and the morpheme -in*

Although previous descriptions of Kriol have treated *-(a)bad* as a marker of the imperfective aspect (e.g. Sandefur 1979), in this paper we have provided an alternative account of the form as semantically pluractional. Such an account unifies the heterogeneous set of functions associated with the form and aligns with cross-linguistic studies on the semantic space of pluractionality (Cusic 1981; Mattioli 2019). However, it is prudent to flag here that many of the functions of *-(a)bad* we have discussed (e.g. participant and spatial plurality, evaluative functions) have not previously been documented in any detail, if at all, in Kriol

varieties. In this section we consider why durative functions of *-(a)bad* have predominated previous descriptions of the form and argue why an analysis of this suffix as semantically imperfective is not supported by the data, at least as it appears in the Kununurra Kriol variety.

As we discussed in our analysis of *-(a)bad*, the durative readings of this suffix are reasonably common, despite the fact that we argue it is a derived function of the form. This contrasts with the other extended function of *-(a)bad*, namely its evaluative uses, which are infrequent. Indeed, the frequent durative uses of *-(a)bad* is in part a result of the distribution of another verbal form *-in*, which typically expresses the imperfective aspect. This form is restricted to verbs which lack transitive marking, as has been described in other Kriol varieties (Hudson 1985; Sandefur 1979). An illustrative example of *-in* is given below, where it is infixed within the intransitive stative verb *jidān* ‘be sitting’.

(26) doobala jidindan biyain la=m na
 3DU be.sitting.IPFV behind LOC=3SG.O SEQ
 ‘and now those two are sitting behind him’.

(20200817a_GGN_JP_ 347: STS)

The incompatibility of this suffix with transitively marked verbs opens a lacuna, where imperfective marking is no longer available with a number of verbs, especially those where transitive marking is obligatory.¹⁵ Instead, as we flagged earlier (see section 5.1) the ‘temporally extended’ sense present with most uses of pluractional *-(a)bad* likely extends to a durative (rather than plural) reading in these contexts.¹⁶ Therefore, we argue that in this respect, *-(a)bad* is recruited to fulfil an aspectual function in contexts where *-in* is morphologically blocked. Indeed, given that transitive marking is a relatively common feature of Kriol

¹⁵ In Kriol transitive verbs can be organised into classes according to whether they obligatorily take the transitive suffix *-im*, or whether the presence of this suffix is optional (Sandefur 1979: 114-115).

¹⁶ Perhaps the only context in which pluractional marked events are not temporally extended are those which denote a plural set of events which occur simultaneously across different participants.

verbs, there would therefore be many cases in which *-(a)bad* would be the only suffix available to express the durativity of a situation.¹⁷ Therefore, the numerical predominance of durative readings of *-(a)bad* at least partially results from morphological factors rather than the form being exclusively a marker of the imperfective aspect.

In addition, although an imperfective analysis of *-(a)bad* could unify all the temporal functions of the form (i.e. durative, iterative and habitual readings (see Deo 2009; Arregui et al. 2014)), it requires assumptions that cannot be generalized to account for all the facts of the data. Under an imperfective aspect analysis, the situations modified by *-(a)bad* must necessarily be durative and atelic, given that imperfectivity requires an unbounded temporal interval. However, in Kriol *-(a)bad* is compatible with events which are interpreted as atomic and bounded. Consider the example below, where *-(a)bad* marks a plural set of throwing events, which occur simultaneously.

(27) Context: three children picked up one rock each and they all threw the rocks at the same time.

dei	bin	tjag-im-bad	rog	seimtain
3PL.S	PST	throw-TR-PLUR	rock	same.time

‘they [the boys] threw the rocks at the same time’.

(20211123a_GGN_029: STJ)

Despite the presence of *-(a)bad* in this example, both telicity and atomicity are preserved, as the simultaneous events of throwing have culminated prior to the speech time, which results in a perfective reading. In this context, *-(a)bad* only signals the presence of a plural set of throwing events, which are distributed over the plural set of agents. So, although *-(a)bad* may frequently appear in atelic and

¹⁷ Note that a similar situation applies to cases where *-in* is lexically blocked (as this suffix cannot combine with non-English derived verbs). In these cases, *-(a)bad* is also recruited to express durativity.

durative contexts, the suffix is not limited to such situations, and therefore an imperfective account of *-(a)bad* would be ill-suited to cases such as (27) above.¹⁸

In review, we argue that while durative readings of *-(a)bad* are frequent, this is not the main semantic function of the suffix. This analysis therefore builds upon earlier, cursory descriptions of this form, which often focused on its durative function (e.g. Sandefur 1979; Hudson 1983; Schultze-Berndt et al. 2013). We illustrated that the frequency of durative readings of *-(a)bad* might partially result from morphological processes, and that an imperfective style analysis which would centre these durative functions cannot account for the full breadth of the data. However, given that these durative readings are quite frequent, we postulate that this might represent a stage in a larger diachronic shift, whereby *-(a)bad* is generalising to mark any temporally extended situation, in addition to event plurality. Indeed, strong links between imperfective and pluractional semantic domains are present in a range of languages (Laca 2004; Jóhannsdóttir 2011; Schultze-Berndt 2012).

6.3. Comparison to other pluractional markers

Pluractional markers across the world's languages exhibit a wide range of semantic variation (see section 4), and so here we offer a brief comparison of *-(a)bad* against other pluractional markers to evaluate how closely (or not) Kriol might align to other grammaticalized instances of pluractionality cross-linguistically. Our review will focus on a few parameters of variation identified in the literature, and we will illustrate that in contrast to many other pluractional markers, *-(a)bad* exhibits few restrictions on the kinds of event pluralities it can

¹⁸ A further issue for the imperfective analysis of *-(a)bad* is the frequent co-occurrence of this suffix and *-in* on the same verb stem. In these cases (such as (**Erreur ! Source du renvoi introuvable.**) above), *-in* has a clear imperfective function, while the contribution of *-(a)bad* is clearly verbal plurality.

derive. Therefore, from a typological perspective *-(a)bad* could be considered a relatively generalised case of pluractional marker.

The most evident variation observed across pluractional markers concerns how the plural event set derived by a pluractional marker can be distributed (i.e. what licensors (the verb or its arguments) are available for a given pluractional marker). Our analysis of *-(a)bad* illustrated that pluractional marked verbs most often distribute across times (resulting in either iterative, habitual, or durative readings). Although less frequent, we illustrated that the suffix can also distribute over participants and space. These functions have been labelled the ‘core’ functions of pluractionality (Mattiola 2020), and there are many pluractional markers like *-(a)bad* which can variously express all three of these readings (e.g. Yu 2003; Bar-el 2008). In contrast, and less like Kriol *-(a)bad*, there are numerous languages which exhibit some semantic restriction in respect to which licensors can be selected for the pluralised event to distribute over. Most frequently it appears that if a pluractional marker exhibits some kind of restriction over event-distribution licensors, the marker will only allow for temporal distribution (i.e. iterativity or habituality), such as in Jaminjung (Schultze-Berndt 2012) and West Greenlandic (van Geenhoven 2004, 2005). There are exceptions to this generalization, as some pluractional markers exhibit different restrictions, such as Hausa, where pluractional marked verbs can take participant and spatial distribution readings, but a temporal iteration reading is blocked in most cases (Součková 2011). Furthermore, *-(a)bad* does not display a sensitivity to event-internal and event-external pluractionality identified in the literature. Although this distinction is grammaticalized in at least some languages (Henderson 2012), Kriol *-(a)bad* can variously express iterative and habitual readings, depending on factors such as atomicity and discourse context and therefore demonstrates no semantic restrictions in this respect.

Pluractional markers also exhibit cross-linguistic variation with respect to their cardinality requirements (i.e. the number of events they denote). Pluractional markers generally require a high event cardinality (i.e. more than several events)

and furthermore, these cardinalities must also remain vague (i.e. they are incompatible with numerical specification) (Cabredo Hofherr & Laca 2012). These restrictions can be observed in pluractional markers from a wide range of languages such as Hausa (Součková 2011), Skwxwú7mesh (Bar-el 2008) and Chechen (Yu 2003). Although these cardinality restrictions for pluractional markers appear widespread across languages there are at least certain classes of pluractional markers where these restrictions are not found (Sanchez-Mendes & Muller 2007; Faller 2012). In this respect Kriol *-(a)bad* seems rather divergent, as there are no apparent limitations on the cardinality denoted by *-(a)bad* beyond basic plurality (i.e. there must be more than one event). Although in most cases, the cardinality of the plural event set denoted by *-(a)bad* is vague and contextually understood as high, elicitation evidence indicates that neither a high nor vague cardinality is a requirement for this suffix. Consider (28) below, where the cardinality of the plural event is both specified and low.

(28) <i>thriyibala</i>	<i>olman</i>	<i>bin</i>	<i>wog-in-araun,</i>	<i>de-m</i>
three	old.man	PST	walk-IPFV-around	3PL.S-NF
<i>faind-im</i>	<i>wanij</i>	<i>tik</i>	<i>en dei bin</i>	<i>breig-im-abad</i>
find-TR	one.each	stick	and 3PL.S	PST break-TR-PLUR
<i>seimtain</i>	<i>wanbala</i>	<i>itj,</i>	<i>wanij</i>	<i>de-m</i>
same.time	one	each	one.each	3PL.S-NF
<i>breig-im-abad</i>				
<i>break-TR-PLUR</i>				
‘three old men were walking around, they found one stick each and then they broke the sticks at the same time’.				

(20211123a_GGN_045: SJT)

In (28) above, *-(a)bad* derives a plural set of breaking events. Given the numerical specification of the number of agents with the numeral *thriyibala* it is clear that the cardinality of this event set is only three - which is both low and specific. Although it seems that Kriol *-(a)bad* does not exhibit the cardinality restrictions observed for many other pluractional markers, it is notable that this is

only evident in elicitation data and not in naturalistic data, despite the fact that *-(a)bad* is frequent in Kriol speech. This suggests that although these cardinality restrictions are not semantically encoded in the suffix, they may instead be implicatures, meaning that speakers might generally avoid low and/or specified event cardinalities with *-(a)bad*. Further research is required to provide more insight on these observations.

7. Conclusion

In this paper we introduced the Kriol verbal suffix *-(a)bad* and argued that the semantics of the form closely mirror that of pluractional markers cross-linguistically. We described the various readings of the suffix, which included temporal iteration (event-internal and event-external), participant plurality and spatial distribution, in addition to several evaluative uses. We illustrated that this diverse set of readings could be unified by arguing that *-(a)bad* derives a plural set of events from the modified verb. This plural event set then interacts with nominal arguments, situation and viewpoint aspect, and discourse context to produce the various readings observed in the data. In comparison to pluractional markers cross-linguistically, we found that Kriol *-(a)bad* exhibits relatively few restrictions on the kind of event pluralities it can describe, and therefore represents what we might label a ‘generalised pluractional’.

In addition to pluractionality, we also described how *-(a)bad* is often used to express a durative reading in contexts where the imperfective marker *-in* is blocked. While pluractional markers cross-linguistically often have ‘durative’ or ‘continuous’ functions, we suggested that this might also represent a stage in a larger diachronic shift, wherein *-(a)bad* is generalising further to mark any temporally extended event in addition to plural events.

The analysis we have presented here represents the first detailed account of this suffix, which has been described using a number of different labels in various descriptions of Kriol. Although our analysis provides a unified account of the various readings of the suffix many more questions remain. One such question

which arises from this analysis is the matter of potential dialectal variation. The analysis we present here is based on data from Kununurra Kriol, spoken in the north-east Kimberley region of Western Australia. At this stage it is unclear if the full range of readings exhibited by *-(a)bad* in this variety are attested in other varieties. Furthermore, the interaction between *-(a)bad* and other verbal morphology may also be subject to cross-dialectal variation, considering the variable productivity of features such as verbal reduplication and the imperfective suffix *-in*. These issues represent an intriguing avenue for future research which will shed further light onto the behaviour of this suffix across the Kriol speaking region.

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