

## Language Profile

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# Jedek: A newly discovered Aslian variety of Malaysia

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**Abstract:** Jedek is a previously unrecognized variety of the Northern Aslian subgroup of the Aslian branch of the Austroasiatic language family. It is spoken by about 280 individuals in the resettlement area of Sungai Rual, near Jeli in Kelantan state, Peninsular Malaysia. The community originally consisted of several bands of foragers along the middle reaches of the Pergau river. Jedek's distinct status first became known during a linguistic survey carried out in the DOBES project *Tongues of the Semang* (2005–2011). This article describes the process leading up to its discovery and provides an overview of its typological characteristics.

**Keywords:** Aslian, Austroasiatic, grammar sketch, Jedek, undiscovered languages

## 1 Background

Much of the world's linguistic diversity remains undocumented and uninvestigated by science. For the majority of the world's languages there is only scant information available, and only a small proportion has been subject to in-depth grammatical and lexical description. Typically, however, languages and dialects have some degree of scientific or administrative recognition, even those which have not been targeted by systematic studies. But, as was shown by the widely publicized 2008 discovery of Koro in northeastern India (Anderson & Murmu 2010), there are languages which may have passed entirely unnoticed. For example, as in the case of Koro, their speakers may not recognize themselves as ethnically or linguistically distinct from some other community of speakers,

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and in the absence of systematic study their distinctiveness goes unreported. In other cases, recognized dialect varieties may upon closer examination turn out to be more distinct than previously assumed and warrant more independent characterization and classification. The re-classification of Zialo, a Mande language of Guinea, is a case in point (Babaev 2010); the status of the North Germanic variety Övdalian as distinct from Swedish is another (Dahl 2008).

The Aslian group of languages, a typologically distinct branch of the Austroasiatic language family spoken in the Malay Peninsula, is no stranger to classificatory mysteries and inconsistencies. Most of these minority languages are spoken by 14 ethnolinguistic groups officially recognized in Malaysian administrative practice. But linguistic work on Aslian has tended to operate with finer distinctions. For example, an early lexicostatistical analysis and genealogical classification of Aslian by Geoffrey Benjamin included 20 varieties, sampled not only according to administrative practice but also on the basis of older sources as well as previously unreported names obtained from consultants (Benjamin 1976). All of the additional varieties included were, in a sense, concealed by the official classification.

Setting out from Benjamin's 1976 study, the *Tongues of the Semang* project – a language documentation program supported by the Volkswagen Foundation's DOBES scheme (2005–2011) – carried out targeted surveying of Aslian-speaking forager groups (known ethnographically as the Semang) in the Malaysian states of Perak and Kelantan and the southern Thai provinces of Trang and Satun. The survey, the bulk of which was carried out in March to May 2006, involved the in-situ collection of 200-item Swadesh lists and basic sociolinguistic and grammatical information from a total of 28 settlements or camps, with the purpose of providing a refined and up-to-date overview of language varieties and their endangerment status. 24 of these were located in Malaysia and inhabited by groups officially recognized as Lanoh, Kensiw, Kintaq, Jahai, Menriq, and Batek. The four locations in Thailand were inhabited by groups known linguistically and ethnographically as Ten'en or Maniq (cf. Bishop & Peterson 2003; Wnuk 2016). All of these ethnolinguistic groups speak varieties of the Northern Aslian subbranch of Aslian, except Lanoh, which is Central Aslian.

The lexical data emanating from the survey have been comprehensively explored with computational phylogenetic and phylogeographic techniques in a series of subsequent works (Dunn et al. 2011; Burenhult et al. 2011; Dunn et al. 2013; Yager 2013). These analyses refine and largely support Benjamin's 1976 sampling and classification of the relevant sectors of the Aslian family tree, showing for example that the official label Lanoh harbors several distinct language varieties. They also highlight the complex patterns of contact typical

of the highly mobile and socially flexible Aslian-speaking foragers (cf. Benjamin 1985: 234–235; see further in Section 2).

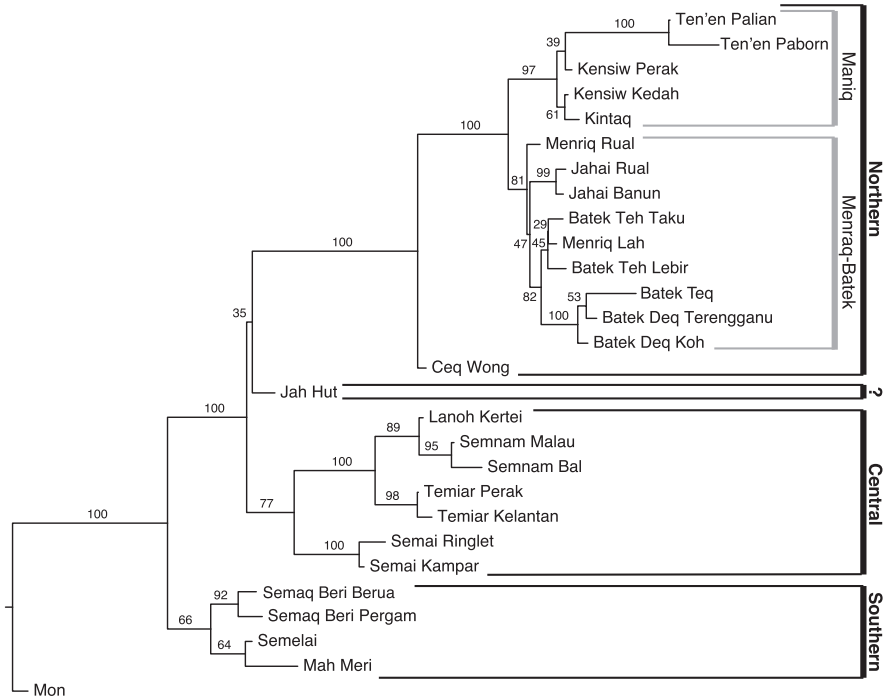
However, the survey data collected in the resettlement area of Sungai Rual, located on the Rual river near Jeli in northwest Kelantan, offered an immediate surprise. Sungai Rual is inhabited partly by people who refer to themselves as Jahai, and partly by people who, to outsiders, refer to themselves varyingly as Batek or Menriq. All three labels form part of Malaysian administrative practice, and all three ethnic groups have the bulk of their speaker populations in other locations – Jahai in the area of Lake Temenggor in Perak, Batek in southeastern Kelantan and adjacent parts of Terengganu and Pahang, and Menriq in the village of Kuala Lah in central Kelantan. But while the Jahai Swadesh list collected at Rual corresponded well with the list previously collected among the Jahai in Perak, the Batek/Menriq list from Rual diverged significantly from the lists obtained in the Batek and Menriq heartlands further south and south-east. The amount of shared cognates between the Rual variety and other Batek and Menriq varieties was between 65 and 78 percent, which is on a par with the rates observed between the recognized language varieties, e.g., between Jahai and Menriq (ca. 72%) and between Batek and Menriq (also ca. 72%). For comparison, the two Jahai lists had 89% shared cognates.<sup>1</sup> The Rual variety also did not show any clear signs of approaching cohabitant Jahai (ca. 68% shared cognates). The separate lexical status of the Rual list is also apparent in the later computational analyses of lexical divergence, where it is as distinct from the Jahai, Batek, and Menriq lists as these are from each other (see Figure 1). On the basis of these lexical patterns, the Rual variety together with varieties of Jahai, Batek, and Menriq are posited to form a subbranch within Northern Aslian, labeled Menraq-Batek (Dunn et al. 2011: 314).

In his ethnographic account of the Sungai Rual resettlement area, Gomes (2007: 76–77) explains that the inhabitants who called themselves either Menriq or Batek traced their origin to four different bands which prior to resettlement in the 1970s roamed the middle section of the Pergau valley. Gomes's study was not a linguistic one and thus the nature of the language variety spoken by these bands was, until the 2006 survey, unknown.<sup>2</sup> The unexpected lexical divergence

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1 No historical reconstruction is available for the Aslian branch of Austroasiatic. In the work cited here, cognates are forms which share the same place of articulation in both the consonant onset and coda of the final syllable, with certain systematic exceptions; for details, see Dunn et al. (2011: 300–301).

2 Gomes's 2007 book remains the most significant ethnographic account of the Rual inhabitants. Further anthropological work has been carried out by Kamal Solhaimi Fadzil, Diana Riboli, and Ivan Tacey.



**Figure 1:** Aslian family tree, rooted on the Austroasiatic outlier Mon (from Dunn et al. 2011). The tree is based on basic vocabulary and is a Maximum Clade Credibility tree. Numbers on the branches indicate percentage of the tree sample supporting each bifurcation, and branch length indicates rate of lexical divergence (for details, see Dunn et al. 2011). The tree broadly reproduces the earlier proposed clades of Aslian genealogy (Benjamin 1976) but the phylogenetic aspect also reveals that the clades show very unequal rates of lexical divergence. In particular, the Maniq and Menraq-Batek varieties of Northern Aslian (corresponding to the Semang foragers) are contained within a clade which is highly divergent externally, but which has low internal diversity, suggesting a rather recent diversification. This diversification is estimated to have started around 1,500 to 2,000 years ago (Dunn et al. 2013) and hypothesized to have been boosted by the contact dynamics of the forager groups (Burenhult et al. 2011). The Dunn et al. 2011 study provided an early indication of the lexical distinctiveness of Jedek, labeled “Menriq Rual” in this chart.

identified by the survey provided a first hint that the self-designated Menriq/Batek at Rual were in fact speaking an unknown Northern Aslian variety, obscured by existing ethnonyms and therefore overlooked by previous linguistic work. Our subsequent survey data collection focused on lexical domains and grammatical classes which had already been documented in the surrounding varieties. This was done with the help of one Rual consultant in February 2008

and included animal species vocabulary, kinship terms, pronouns, and demonstratives, as well as basic sentences.

In terms of lexicon, the Rual variety harbors terms not documented among its close neighbors. Interestingly, some of these point to similarities to the distant Maniq and Kensiw languages (also Northern Aslian but from a different subgroup). Most notably: the 1st person singular  $\text{ʔiŋ}$  is identical to Maniq  $\text{ʔiŋ}$  ‘1SG’ (cf. Jahai, Menriq, and Batek  $\text{yeʔ}$  ‘1SG’); the variety has retained the indigenous term  $\text{pip}$  ‘ashes, dust’ just like Kensiw (Kensiw  $\text{tip}$  ‘ashes, dust’; cf. Jahai, Menriq, and Batek  $\text{ʔabuʔ}$  or  $\text{habuʔ}$ , from Malay  $\text{abu}$  ‘ashes, dust’); and the term for ‘tiger’ (or rather ‘large felid’) is  $\text{ʔʔʔ}$ , the cognate of Maniq  $\text{taʔʔʔ}$  ‘tiger’ (cf. Wnuk 2016; cf. Jahai and Menriq  $\text{ʔap}$ , Batek  $\text{ʔayoʔ}$ ).<sup>3</sup> These features seem to suggest some degree of lexical conservatism on the part of the Rual variety, not shared by its closest neighbors and relatives, or possibly an historical situation of contact with a Maniq/Kensiw-type language.

While the lexical materials collected during the survey were too limited for comprehensive phonetic, phonological, and phonotactic analysis, one feature was particularly salient. In the Rual variety,  $/r/$  is realized as a uvular or velar fricative  $[\text{ʁ}]$  or  $[\text{ɣ}]$  in syllable-initial position, and as zero in syllable-final position. The back realizations are unattested in Jahai and Menriq, which display an apical trill  $[r]$  in all positions, but do occur in some Batek varieties as well as local dialects of Malay. The Rual variety also allows open final syllables, not allowed in Jahai, Menriq, or Batek. Speakers of surrounding language varieties frequently point out that the pronunciation of  $/r/$  is one of the features that set speakers of the Rual variety apart, along with the 1st person singular form  $\text{ʔiŋ}$ . However,  $/r/$  realization is sometimes notoriously varied and unstable within and across Aslian varieties and speakers (cf. Wnuk & Burenhult 2014: 968), so no conclusions could be drawn on the basis of this limited data.

Speakers of neighboring varieties acknowledge the linguistic distinctiveness of the Rual variety, as do the speakers themselves. However, like several other Aslian ethnolinguistic groups they do not have a dedicated endonym apart from the generic  $\text{mnraʔ}$  (‘human being’ or ‘indigenous person’), and when asked by outsiders for a name for themselves they typically respond with one of the officially recognized names Menriq or Batek. Speakers of surrounding varieties, the Jahai and Menriq in particular, frequently refer to speakers of the Rual variety as  $\text{Jdek}$ , a name of unknown origin. Upon further work with the group

<sup>3</sup> Although superficially similar, the Batek term  $\text{ʔayoʔ}$  cannot at this point be identified as a cognate of  $\text{ʔʔʔ}$ , see Footnote 1.

at Rual it was discovered that this name is also used spontaneously by the speakers themselves in addition to the labels previously recorded. Most consultants readily accept this name, and they do not consider it derogatory. The term was first recorded by Geoffrey Benjamin in Jeli in 1970 as *Jədək* (Benjamin, field notes). His Jahai consultant claimed it referred to an extinct Semang band that had once lived on the Jedok river, a tributary of the Thailand-Malaysia border river Golok. The headwaters of Jedok are also close to an area in which a relevant Semang band was observed in the 1930s (Rentse 1937; see further in Section 2 below).

Furthermore, the name bears a noteworthy resemblance to the ethnonym Tea-De, documented by Phaiboon (2006: 208) as referring to an enigmatic and little-known population of Northern Aslian speakers in the Waeng district of Narathiwat Province in southernmost Thailand, across the border some 20 kilometers from Rual. Phaiboon's 2006 wordlist indicates that Tea-De is part of the Maniq-Kensiw subgroup of Northern Aslian, but it is unclear if the Maniq-Kensiw-like features of the Rual lexicon are to be somehow linked to it. It is not unreasonable to assume that the two varieties were in regular contact in the past, but no such interaction can be documented at present.

Taken together, the results emerging from the survey suggested that the Rual variety was sufficiently distinct to imply a separate historical signal and merit independent description and documentation. The present article represents a first step in this descriptive endeavor, and Sections 3 and 4 provide a preliminary outline of the main structural and lexical features of the variety, based on extensive new fieldwork carried out in Rual by co-author Yager in 2013 to 2016. Given its comparatively unambiguous reference and accepted status in the community, the term *Jdek* (pronounced [jʔə'dək], romanized as Jedek) is here proposed as the scientific label for the object of our linguistic inquiry. However, we do not use this term in reference to a particular ethnic group or community, and we wish to emphasize that we introduce the term solely for the purpose of disambiguation and characterization of a linguistic entity, not an ethnographic one. Jedek replaces the term Menriq Rual, used in previous reporting of the survey data (Dunn et al. 2011, 2013; Burenhult et al. 2011; Yager 2013); it is currently subsumed under the ISO code "mnq" (Menriq).

Although the Rual community is ethnographically relatively well known, Jedek remained undiscovered as a linguistic variety until the start of the present research program. We believe the reason for this is threefold:

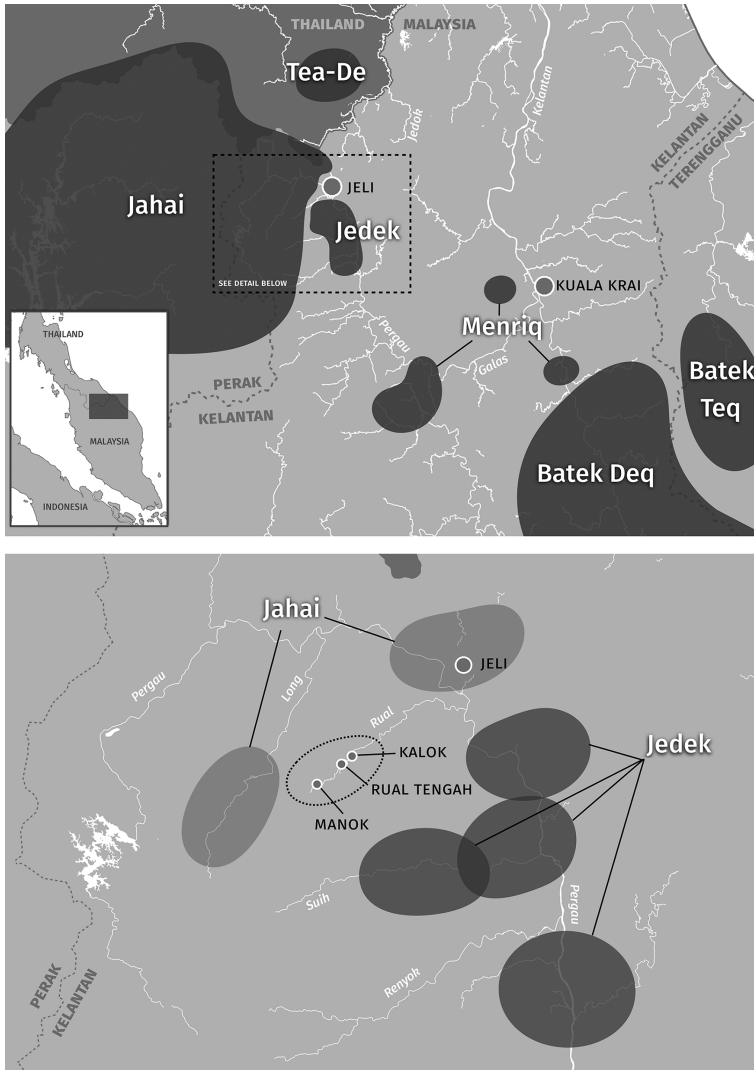
- (i) The lack of a common or standard ethnolinguistic label (exonymic or endonymic) has prevented Jedek from attracting the attention of linguists and ethnographers as a distinct entity; the speakers' habit of designating

themselves as either Jahai, Batek, or Menriq to outsiders has led analysts to believe that these were also their linguistic affiliations and that the sociolinguistic situation of Rual involved a mix of Northern Aslian varieties whose existence was already known.

- (ii) The high degree of multilingualism among the speakers of Jedek and their cohabitation and intermarriage with speakers with different language backgrounds (in particular Jahai), coupled with the reported Semang pattern of idiolectal variation (cf. Section 2), make for a metalinguistic fluidity in how Jedek speakers define their way of speaking. At times speakers define their way of speaking as “the same” as Jahai, or “the same as, mixed with” Jahai, and at times they are clear that “that is how it is in Jahai, in our language it’s different”. Thus speakers’ characterizations of their own language have not been revealing as to its nature.
- (iii) A general lack of knowledge about Northern Aslian varieties and a dearth of earlier surveys have prevented researchers from easily appreciating the diversity harbored by the subgroup; several of the varieties remain unexplored and it is only within the last 15 years that we have gained in-depth knowledge about some Northern Aslian varieties, and had access to materials with which we can compare new data.

## 2 Historical background, sociolinguistics, and endangerment

In the beginning of the 1970s, Jedek- and Jahai-speaking Semang groups in northwest Kelantan comprised at least six distinct bands scattered along the mid-section of the Pergau valley – roughly from Jeli in the north to Kampung Jebang in the south – as well as along the larger tributaries of the Pergau, especially the rivers Long, Suih, and Renyok (cf. Gomes 2007); see Map 1. Among these, the two most upstream bands (around Jeli and Long) are reported by Gomes as being primarily associated with the Jahai ethnicity, whereas the remaining four are reported as Menriq/Batek and are thus likely to have been primarily Jedek-speaking. It is possible that Jedek speakers were also present further east at an earlier stage, as suggested by the information given to Benjamin (see above) as well as an eyewitness account from the 1930s by Rentse (1937) which locates a Semang band to the Kelubi, a tributary of the Bertam river located some 20 kilometers east of Rual. This area is presently not associated with any Aslian-speaking groups. Rentse provides a hint of the linguistic identity of this band – the term *ʔabən* for ‘good’ (or



**Map 1:** The top map shows the approximate historical distribution of Northern Aslian varieties in northeastern Peninsular Malaysia and adjacent parts of southern Thailand. Speakers are currently mostly resettled in several permanent villages within these former areas of distribution. The two eastern enclaves of Menriq represent small populations who are sometimes referred to as Batek Teh; however, our current lexical data suggest their language is nearly indistinguishable from Menriq as spoken further west. The exact location and distribution of the enigmatic variety Tea-De in Thailand's Waeng district is unknown (cf. Phaiboon 2006: 208). The bottom map is a close-up of the middle and upper part of the Pergau watershed. The Sungai Rual resettlement area and its three hamlets are indicated, as is the approximate historical distribution and assumed linguistic affiliation of the six local bands settled at Sungai Rual (adapted from Gomes 2007: 77).



*abøtn* in his rendering; Rentse 1937: 130), later only documented in Jedek and Menriq.<sup>4</sup>

With government-sponsored resettlement in the 1970s, five bands from Pergau were relocated to the Rual site: three of the Jedek-speaking bands settled together to form the Rual Tengah hamlet, while one Jahai band and one Jedek-speaking band settled together to form the Kalok hamlet around 500 meters downstream. Soon after, the last remaining band of those that lived along the mid-section of the Pergau valley, a large group of Jahai, joined the resettlement area, forming a hamlet of their own, Manok, around two kilometers upstream from Rual Tengah (Gomes 2007). In the 1980s one further (smaller) Jahai band moved from the state of Perak to join the two bands already living at Kalok. Thus the Sungai Rual resettlement area was formed, consisting of three hamlets comprised of seven bands, of which three were primarily Jahai and four were primarily “Menriq/Batek” (in Gomes’s terminology).

The lifestyle of Semang groups is traditionally highly mobile, manifested in small-group nomadism as well as a pattern of group breakup and regrouping into new units in response to changing subsistence conditions. The Semang also practice band exogamy, which means that intermarriage between individuals of widely dispersed bands or of different linguistic backgrounds is common. It has been suggested that these spatial and social dynamics result in particular patterns of variation and change in individual language use among the Semang (see especially Benjamin 1985: 234–235, 1987: 114; Bishop & Peterson 1993; Endicott 1997; Wnuk & Burenhult 2014). Benjamin (2001: 111) reports that Semang groups have until quite recently maintained “a continuous mesh of communication” with each other covering the entire Semang area. In our phylogenetic analyses of Aslian basic vocabulary we indeed found signals of long-term lexical exchange among those Aslian languages that are spoken by the foraging Semang populations (Burenhult et al. 2011). Due to frequent contact with surrounding communities, Aslian speakers are typically multilingual and frequently speak three or more languages fluently, including neighboring Aslian languages and at least one of the adjacent majority languages Malay and Thai. And since most Semang groups contain members of several different language backgrounds, it has been suggested that Semang speech communities display a high degree of variation in individuals’ ways of speaking (Benjamin 2001). In addition, the fact that a Semang individual may

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4 Schebesta (1928) makes no mention of distinct groups although he traveled through the relevant area in search of Semang communities; Benjamin (1987: 115) designates the Northern Aslian groups of the Pergau valley as Jahai.

move through several linguistic environments throughout his or her lifetime has been suggested to result in high rates of idiolectal change among Semang communities. Thus the sociolinguistic characteristics of Semang groups have been described by scholars as highly fluid, highly idiolectally varied, and highly multilingual. Our data suggest that the Jedek speech community is no exception to this pattern.

While most Rual residents continue to live off the forest in various ways, since resettlement their lifestyle is no longer characterized by small-group nomadism. Rual residents do still adhere to rules concerning band exogamy. However, the resettlement of several bands together at the Rual site means that access to eligible partners within the Rual community is increased, and thus that band exogamy no longer necessarily requires the relocation of one of the parties. Nowadays, it is common for Rual residents to marry a partner who has also grown up in Rual, in fact roughly 90% of Rual residents have origins in the original seven Jedek- and Jahai-speaking bands that were resettled at Rual. Meanwhile, with a population of around 150 adult individuals, it is not always possible to find a partner within Rual and it is not uncommon that individuals relocate to or from Rual for marriage purposes. The Rual community contains a number of residents with origins in other areas, in particular Jahai speakers from Perak, Menriq speakers from Kuala Lah, Temiar speakers from the Gua Musang area and from Perak, and Semaq Beri or Semelai from Terengganu. The majority of Rual residents are however Jedek- and Jahai-speaking, and speakers of the two varieties have been involved in a high degree of intermixing. Over 50% of Rual residents are of mixed Jedek/Jahai-speaking parentage or are themselves part of a Jedek/Jahai-speaking parental pair. Thus while the Semang are known for their high levels of multilingualism, contact, and band exogamy, as described above, the Rual context is also strongly characterized by the intense intermixing of Jedek and Jahai speakers after more than 40 years of cohabitation and intermarrying.

With a speaker population of only around 280, Jedek is an endangered language variety. However, measuring the degree of its endangerment and vulnerability is not uncomplicated. As pointed out by Benjamin (2001, 2012), the Aslian language varieties spoken by the Semang foragers probably never had large numbers of speakers. Furthermore, the Semang communities have a long-standing tradition of maintaining their ethnic and linguistic identity in an environment defined by intense contact and constant social flux. Thus, to some extent, they are culturally primed to transmit their languages to the next generation. The exact number of Jedek speakers at the time of resettlement at Rual some 40 years ago is not known, but estimates based on Gomes (2007) suggest that it was smaller than today's figure. Increases in the Jedek

speaker population are indeed likely given the demographical effects of settlement and modernized healthcare. Jedek is currently spoken by all generations and in most domains at Rual, and transmission remains unbroken. Jedek is understood and/or spoken by the majority of Rual residents. At the same time, the Jedek speakers' resettlement at Rual – which entails permanent cohabitation with speakers of other Aslian language varieties, in particular Jahai – has left and continues to leave its mark on the variety. In addition, the Rual speech community is a small one surrounded by the Austronesian majority language Malay. Paid employment, where available, invariably involves communication in Malay, and all media and schooling is in Malay. Jedek is not officially recognized by any government departments and indeed its existence is unknown to officials, who define Rual as a Jahai resettlement area. No orthography is available to Jedek (or Jahai) speakers; however, there are some local attempts at improvised orthographical representation using Malay orthography. While attitudes of Jedek speakers toward their language variety are generally positive, the attitude of Malaysia's majority population toward indigenous groups is typically ignorant or dismissive, and at times hostile. In short, Jedek is endangered and vulnerable to influence in a variety of different ways. But this does not necessarily spell imminent extinction for the variety.

### 3 Typological outline

This section provides a first typological overview of Jedek. Aiming to give a broad description of the main grammatical features of the language, it also highlights features that make it typologically noteworthy in the Aslian context and beyond. The description begins with Jedek's phonological features (Section 3.1) before turning to aspects of word formation including derivational morphology and cliticization (Section 3.2), followed by nominal and verbal word classes (Section 3.3), and finally phrase and clause structure (Section 3.4). The description is based on data collected during fieldwork in Rual by co-author Yager between 2013 and 2016. Data collection involved stimulus-based elicitation and conventional elicitation of grammaticality judgments as well as collection of a corpus of recordings of natural language use. Many aspects of this structural analysis are still in their initial stages and the description is to be considered preliminary. Apart from illustrating the basic structural properties of Jedek, the description also serves to identify similarities and differences between Jedek and the other Northern Aslian varieties.

In order to facilitate this comparison, the outline is structured loosely on Kruspe et al. (2015).<sup>5</sup>

### 3.1 Phonology, phonotactics, syllabic structure

#### 3.1.1 Phoneme inventory

The Jedek phoneme inventory is given in Table 1. The system of vowel qualities is distinguished by three degrees of height in front, central, and back positions. Nine oral vowels contrast with seven nasal vowels (contrasting, e.g., /wɛʔ/ ‘be quiet!’ and /wɛʔ/ ‘leftside’; /paw/ ‘side of body’ and /pāw/ ‘to be different’). Phonemic nasality is a feature of all Aslian languages but is almost unheard of elsewhere in Austroasiatic.

**Table 1:** Jedek vowel phonemes.

Oral			Nasal		
Front	Central	Back	Front	Central	Back
i	ɨ	u	ĩ	ĩ	ũ
e	ə	o	ẽ	ẽ	õ
ɛ	a	ɔ	ẽ	ã	õ

The following set of words illustrates the contrast between the nine oral vowels in Jedek:

- |     |                         |                            |                             |
|-----|-------------------------|----------------------------|-----------------------------|
| (1) | <i>ctis</i> ‘long time’ | <i>gis</i> ‘to climb down’ | <i>gus</i> ‘to be together’ |
|     | <i>get</i> ‘to cut’     | <i>gəs</i> ‘to carve’      | <i>ros</i> ‘liver’          |
|     | <i>ges</i> ‘gas’        | <i>hagas</i> ‘mosquito’    | <i>gɔs</i> ‘to live’        |

The back vowels are rounded while the front and central vowels are not. Height distinctions between the three central vowels are not unproblematic and the material contains cases that on the basis of auditory impressions might

<sup>5</sup> The practical orthography adopted in the present work for the most part follows the phonemic representation. However, in line with the orthographic conventions of Burenhult (2006 and later), Kruspe (2004), Benjamin (1976), and Diffloth (1976), this orthography departs from standard IPA representation in that the voiced palatal stop /j/ is written as <j> and the palatal approximant /j/ as <y>.

suggest a fourth central vowel height. However no unequivocal instances of minimal pairs distinguishing a fourth vowel height are found in the material and thus only three are posited at this stage. Vowels in the final syllable are subject to slight palatal diphthongization if followed by a palatal consonant /c, ɲ, s/ (as in *bc* ‘arrow’, phonetically [lɔ<sup>h</sup>c̟]).

The Jedek consonants (see Table 2) follow the standard Northern Aslian pattern, including bilabial, alveolar, palatal, and velar voiced (/b/, /d/, /j/, /g/) and voiceless stops (/p/, /t/, /c/, /k/) and nasals (/m/, /n/, /ɲ/, /ŋ/), voiceless glottal stop (/ʔ/), voiceless bilabial (/ɸ/), palatal (/s/) and glottal (/h/) fricatives, bilabial (/w/) and palatal (/y/) approximants, the lateral liquid /l/, and the rhotic /r/ (the realization of which is subject to individual variation, see below). The voiceless bilabial fricative /ɸ/ is a phoneme in most Northern Aslian varieties but is otherwise exceedingly rare in Southeast Asia.

**Table 2:** Jedek consonant phonemes.

	Bilabial		Alveolar		Palatal		Velar		Glottal
Stop	p	b	t	d	c	j	k	g	ʔ
Nasal	m		n		ɲ		ŋ		
Fricative	ɸ				s				h
Lateral			l						
Rhotic			r						
Approximant	w				y				

Where unvoiced stops /p, t, c, k/ occur in final position they are unreleased, phonetically [p̚, t̚, c̚, k̚]. Nasal consonants are prestopped in word-final position when preceded by an oral vowel, phonetically [ᵐm, ᵐn, ʲɲ, ᵐŋ], preventing anticipatory nasalization of non-nasal preceding vowels. Nasal consonants following nasal vowels are not prestopped. Furthermore, nasal consonants cause progressive nasalization of vowels – and nasal consonants following such progressively nasalized vowels are thus not prestopped. Thus for example *tanem* ‘to plant’ is phonetically [ta<sup>h</sup>nēm] and *knɔm* ‘urine’ is [kə<sup>h</sup>nɔm]. The material contains a handful of forms in which progressive nasalization does not occur. Some of these are Malay loanwords in which a consonant cluster of nasal + stop has been reduced in Jedek to a simple nasal, suggesting that the stop has left a trace that prevents nasalization from spreading to following vowels. For other, indigenous forms the explanation is less clear. Such forms are analysed (and represented orthographically) as containing an underlying consonant cluster whose realization is variable and at times indiscernible, as in *ʔndaŋ* [ʔə<sup>h</sup>na<sup>h</sup>ŋ ~ ʔən<sup>h</sup>a<sup>h</sup>ŋ] ‘side’ or *lmbuʔ* [lə<sup>h</sup>muʔ ~ ləm<sup>h</sup>uʔ] from Malay *lembu* ‘cow’.

The realization of /r/ is subject to individual variation. Some individuals realize /r/ as an apical trill [r], some as a uvular fricative [ʁ], and some speakers varyingly produce either realization. It is likely that this can be explained by a generational shift: younger Jedek speakers (those in their 40s and below) tend to use [r] while older Jedek speakers tend to use [ʁ] or a mixture of [ʁ] and [r]. Cohabitant Jahai realizes /r/ as a distinct apical trill in all positions, so it is likely that this shift has been brought on by the presence of a larger number of Jahai-speaking individuals and larger number of children of mixed Jedek/Jahai-speaking parentage in the Rual speech community since resettlement. The uvular realization considered as a peculiarity of Jedek by speakers of nearby languages (see Section 1) is a feature encountered in some other Northern Aslian varieties (e.g., Batek Deq) as well as local dialects of Malay, but it is not present in Jedek's closest neighbors Jahai and Menriq.

### 3.1.2 Phonotactics

As is typical in Aslian, the full range of Jedek vowels occur in word-final syllables while only a limited range of vowels may occur in non-final syllables: none of the nasal vowels, nor /ɔ/, /ɛ/, /i/, or /ə/ occur (and /e/ and /o/ are rare) in non-final syllables. Most consonant phonemes occur in both initial and final position. Exceptions are the voiced stops /b, d, j, g/ which occur only in initial position, the rare bilabial fricative /ɸ/ which occurs only in final position, as well as /r/ which does not occur word-finally but may occur as coda in non-final syllables.

### 3.1.3 Word and syllable structure

The analysis of word and syllable structure is based on the citation forms of Jedek words. As is typical of Aslian languages, most lexemes in Jedek are monosyllabic, sesquisyllabic, or disyllabic. Trisyllabic forms also occur, but words longer than three syllables occur only as a result of affixation. The minimal Jedek word has the form /CV/ (such as *bɛ* 'younger sibling'), while the maximal words found in the material are the tetrasyllabic (C.C.CV.CVC) *b-plagan* 'to be joking' (phonetically [bəpəla'ga<sup>s</sup>ŋ]) and (C.C.CC.CVC) *b-k<n>rja?* 'to have a job' (phonetically [bəkənər'ʔaʔ]).

Phonetically, the minimal Jedek syllable consists of a consonant plus a vowel [CV]σ. The maximal syllable has the form [CVC]σ, with a simple onset, nucleus, and coda. Thus onsets are obligatory while codas are not. While

phonetically the minimal syllable in Jedek includes a vowel nucleus, this nucleus may be predictable and underspecified. In such cases vowel nuclei are treated as epenthetic. Epenthetic vowels may occur in open (/C/) or closed (/CC/) syllables, thus phonemically the minimal syllable in Jedek consists of a consonant onset only, /C/. Such syllables are termed half syllables. Half syllables are allowed only in prefinal position – word-final syllables are obligatorily full syllables (/CV(C)/). A distinction is also made in Jedek between light and heavy syllables. Light syllables are those which do not have a coda: /C/ or /CV/, and heavy syllables are those with a coda: /CC/ or /CVC/. Prefinal syllables may be heavy or light and contain either a full phonemic or epenthetic vowel nucleus. Word-final syllables may be either heavy or light but always contain a full phonemic vowel nucleus.

In most cases the epenthetic vowel of half syllables is realized as [ə]. Epenthetic vowels followed by the palatal approximant /y/ are commonly realized as [i] (e.g., *kyəm* [kiʲə<sup>b</sup>m] ‘lower side’). Glottal consonants (/ʔ/ and /h/) are transparent to vowel assimilation and thus epenthetic vowels followed by glottal consonants may in some cases take on an identical quality to vowels in the following syllables (e.g., *cʔay* [c<sup>ə</sup>aʔaj] ‘what’). Epenthetic vowels occurring in heavy non-final syllables (e.g., in /CC.CVC/ words) are most commonly realized as [ə].

In Jedek, as in other Aslian varieties, sesquisyllabic words consist of a final syllable preceded by a half penultimate syllable /C.CV(C)/ as in *ksiy* ‘husband’. The category of sesquisyllabic words is justified on morphological grounds (see the nominalizing morpheme in Section 3.2.3 below, and cf. Burenhult 2005; Kruspe 2004). Disyllabic words consist of a final syllable preceded by a full penultimate syllable: /CV.CV(C)/ as in *baboʔ* ‘woman’, /CC.CV(C)/ as in *tmkal* ‘man’, or /CVC.CV(C)/ as in *kaltorŋ* ‘knee’. Trisyllabic words follow the form of disyllabic words with the addition of an initial half syllable or full, open syllable: /C(V).CV.CV(C)/ as in *klabas* ‘sun bear (*Helarctos malayanus*)’, /C(V).CC.CV(C)/ as in *glmhēm* (meaning unknown), /C(V).CVC.CV(C)/ as in *cmaldik* ‘to hiccup’.

As in some other Northern Aslian varieties (such as Maniq, Kensiw, and Ceq Wong), but in contrast to Jahai, Batek, and Menriq (those varieties most closely related to Jedek), open word-final syllables are allowed in Jedek. Such syllables are partly the result of a process whereby word-final /r/ has been lost leaving final syllables formerly with an /r/ coda open. The forms *be* ‘younger sibling’ and *ha* ‘road, path’ are examples of this (compare with the Jahai equivalents *ber* and *har*). Open final syllables also occur in many Malay loans. That is, while a handful of Malay loans with open final syllables are subject to addition of word-final consonants (e.g., *dwaʔ* from *dua* ‘two’), most retain their open final

syllables, e.g., *mejə* from *meja* ‘table’, *buku* from *buku* ‘book’, *baka* from *bakar* ‘to bake, burn’, *pike* from *pikir* ‘to think’.<sup>6</sup> Occasional presumably indigenous forms that may not originally have had /r/-codas also occur, including the species terms *kasɔ* ‘chestnut-winged babbler (*Stachyris erythroptera*)’ and *tiwɔ* ‘cream-colored giant squirrel (*Ratufa affinis*)’, as well as the toponyms *Kte* (a river name) and (possibly) *Swe* (a river which in Malay is called Suih). Vowels in word-final open syllables are phonetically lengthened, e.g., *bɛ* [bɛ:] ‘younger sibling’, *kasɔ* [ka'sɔ:] ‘chestnut-winged babbler (*Stachyris erythroptera*)’.

### 3.1.4 Prosodic features

Stress falls invariably on the final syllable of words. Despite suggestions that some Northern Aslian varieties display marginal tonal contrasts (Hajek 2003), we have so far found no evidence of suprasegmental contrastive strategies in Jedek, neither tone nor register.

## 3.2 Word formation

This section provides a brief introduction to the units, processes, and functional categories of Jedek morphology. For definitions of Jedek’s word classes – nouns, verbs, prepositions, pronouns, quantifiers, classifiers, demonstratives, adverbs, negators, connectives/conjunctions, and interjections – see Section 3.3. The principles of word formation described here are similar to those described for other Aslian languages, especially those of Jedek’s close relatives Jahai and Menriq (cf. Burenhult 2005, field notes; Kruspe et al. 2015).

### 3.2.1 Morphological units

The morphological units of Jedek involve three kinds of free forms – roots, lexemes, and bases – and two types of bound morphemes – affixes and clitics. Roots are defined as morphologically unanalysable words. Lexemes are minimal free forms but do not necessarily consist of a bare root: some Jedek lexemes are morphologically complex and analysable into morphemes that do not exist in contemporary Jedek. Bases are defined as those units to which bound

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<sup>6</sup> Note that word-final /r/ in many Malay varieties is unrealized and thus *bakar* and *pikir* in fact have open final syllables.



morphemes may be added, and may consist of either roots or lexemes. A Jedek word is defined as a morphologically free form – it may consist of a single root, base, or lexeme, or it may be a compound or a form derived through affixation or cliticization. Following Klavans (1985), affixes and clitics are analysed as phonologically bound morphemes that differ in their domain of attachment. Whereas the domain of attachment of affixes is words, the domain of attachment of clitics is phrases or clauses. Affixes may be either prefixes or infixes, not suffixes, and clitics are always proclitics. Affixes attach to bases before clitics and a derived form can in turn act as a base for further derivational processes or for the attachment of clitics. Following the convention introduced by Kruspe (2004), clitics are represented in the orthography by the equals sign (=), prefixes with a hyphen (-), and infixes with angle brackets (<>).

### 3.2.2 Compounding

Jedek compounds are nominal and in many cases compositional. Compounds involve the combination of two nouns of which the initial noun forms the head, and are especially frequent in species names as well as topographical and body part terms. Another compound-like construction is the associative phrase, a syntactic construction described in Section 3.4.4. Essentially, the difference between compounds and associative phrases is that the meaning of a compound is not simply the sum of the meaning of its parts, as in *tɔm naʔ* [water mother] ‘big stream’ and *ʔɔʔ bintan* [tiger star] ‘leopard’, while the meaning of an associative phrase is.

### 3.2.3 Derivational morphology

Jedek derivational morphology primarily functions to transfer words between word classes, as in the case of the nominalization morpheme operating on verbs and the property morpheme operating on nouns, or between subclasses within a word class, as in the collective plural and unitization morphemes within nominal word classes and the aspectual/Aktionsart derivations within verbal word classes. Causative constructions are the only clear example of valency-increasing operations, while progressive and imperfective constructions are often associated with decreased valency. Derivational morphology in Jedek and other Aslian languages is rich and mostly productive, which makes it typologically unusual in the wider Austroasiatic and Mainland Southeast Asian context (cf. Matisoff 2003: 22–23).

There are two kinds of affixation process in Jedek: inner affixation whose domain of attachment is the penultimate syllable of bases, and outer affixation whose domain of attachment is the base in its entirety (the distinction was first described for Jahai, see Burenhult (2005: 46–64)). Inner affixation may involve prefixes or infixes, while outer affixation always involves prefixes. Outer affixation may result in forms that do not conform to Jedek word-structure constraints observed in citation forms (such as the constraint prohibiting half penultimate syllables in trisyllabic forms, violated in, e.g., *p-bkit* ‘to heat’). Inner affixation is more prevalent than outer affixation.

Affixes also differ in their degree of phonological prespecification. Inner affixes may be fully prespecified, partly prespecified, or fully underspecified while outer affixes are always fully prespecified. Where affixes are phonologically underspecified the segmental content of the affix is filled through copy of segments from the final syllable of the base, specifically the consonant onset and/or coda.<sup>7</sup> Fully prespecified affixes do not involve any copy (as in the nominalized *bdɛl* ‘to shoot’ → *b<n>dɛl* ‘act of shooting’) while fully underspecified affixes are formed wholly through copy (as in the imperfective *ciʔ* ‘to eat starchy food’ → *cʔ-ciʔ* ‘to be eating starchy food’). Affixation may result in the creation of a new syllable, as in the case of outer affixation (e.g., the causative *kjeŋ* ‘to hear/listen’ → *p-kjeŋ* ‘to cause to hear/listen’), or inner affixation on monosyllabic words (as in imperfective *cp-cip* ‘to be going’, distributive *cip-cip* ‘to go (here and there)’, or iterative *lp-cip* ‘to go (all the time)’ from *cip* ‘to go’). Or it may result in the restructuring of an existing syllable, such as creating a full syllable from a half syllable (as in imperfective *kjeŋ* ‘to hear’ → *k<ŋ>jɛŋ* ‘to be hearing’) or a heavy syllable from a light one (as in imperfective *tolɛk* ‘to push’ → *to<k>lɛk* ‘to punch (here and there)’). There are two examples in Jedek of inner affixation that does not involve copy: the allomorph of the nominalizing morpheme used for sesqui- and disyllabic bases <*n*>, and the collective plural <*ra*>, infixed without the copy of any of the segments of the base. These are also the only examples of inner affixation that may result in a trisyllabic word, as in the nominalized *h<n>aluh* from *haluh* ‘to shoot with blowpipe’ and the collective plural form *b<r>aboʔ* from *baboʔ* ‘woman’.

### 3.2.3.1 Deriving nouns

Jedek derivational processes that produce nouns include the nominalizing morpheme which derives nouns from verbs and numerals, and two relatively

<sup>7</sup> The use of the term “copy” follows Kruspe (2004).

uncommon derivations that derive nouns from nouns: the collective plural and unitization derivations.

**3.2.3.1.1 Deriving nouns from verbs.** Nouns may be derived from verbs by means of the nominalizing (NMZ) morpheme *n-* ~ *<n>*. Nouns derived in this way have meanings relating to the act denoted in the verb. On monosyllabic bases, nominalizing *<n>* forms a CC prefix whose onset is *n-* and whose coda is an underspecified consonant filled through copy of the coda of the base. On sesqui- and disyllabic bases, *<n>* follows the onset of the penultimate syllable, in the case of sesquisyllabic bases becoming the coda of the penultimate syllable and in the case of disyllabic bases creating a trisyllabic word where *<n>* is the onset of the penultimate syllable.

- (2) a. Monosyllabic:
- |                                  |   |  |
|----------------------------------|---|--|
| <i>ciʔ</i> ‘to eat starchy food’ | → | <i>nʔ-ciʔ</i> ‘act of eating starchy food’ |
| <i>cip</i> ‘to go’               | → | <i>np-cip</i> ‘act of going’               |
| <i>cɔl</i> ‘to speak’            | → | <i>nl-cɔl</i> ‘act of speaking’            |
| <i>kap</i> ‘to bite’             | → | <i>np-kap</i> ‘act of biting’              |
- b. Sesquisyllabic:
- |                        |   |   |
|------------------------|---|---|
| <i>bdɛl</i> ‘to shoot’ | → | <i>b&lt;n&gt;del</i> ‘act of shooting’      |
| <i>tbɔh</i> ‘to beat’  | → | <i>t&lt;n&gt;bɔh</i> ‘act of beating’       |
| <i>ʔnay</i> ‘to bathe’ | → | <i>n-ʔnay</i> <sup>8</sup> ‘act of bathing’ |
- c. Disyllabic:
- |                         |   |   |
|-------------------------|---|---|
| <i>ckwik</i> ‘to talk’  | → | <i>c&lt;n&gt;kwik</i> ‘act of talking’  |
| <i>kijəw</i> ‘to stand’ | → | <i>k&lt;n&gt;ijəw</i> ‘act of standing’ |
| <i>haluh</i> ‘to shoot’ | → | <i>h&lt;n&gt;aluh</i> ‘act of shooting’ |

**3.2.3.1.2 Deriving nouns from numerals.** The nominalizing morpheme may also be used on some numerals to form a noun referring to the state of being that number, as in *tigaʔ* ‘three’ → *t<n>igaʔ* ‘state of being three’. The most common use of this affix is on the numeral *dwaʔ* ‘two’, its derived form *d<n>waʔ* meaning ‘both’, see (3).

- (3) *d<n>waʔ d<n>waʔ ton srupaʔ blakaʔ*  
 two<NMZ>.two<NMZ> that to.be.the.same all  
 ‘They’re both the same.’

<sup>8</sup> The root is sesquisyllabic but has irregular derivation; the pattern is found in nominalized sesquisyllabic forms with a glottal initial.

**3.2.3.1.3 Deriving nouns from nouns: Collective plural (COLL) and unitization (UNIT).** The infix <ra> may be added to human nouns to form collective nouns. The allomorph <r> occurs with disyllabic bases with an open penultimate syllable and the allomorph <a> occurs with disyllabic bases with a closed penultimate syllable and an epenthetic vowel. Another collective plural form is that of *ken* ‘child’ as in *gin gr-ken* ‘those kids’. This is the only instance of this allomorph of the collective plural that has been recorded. The following collective plural forms have been attested to date:

- |     |                                    |   |   |
|-----|------------------------------------|---|---|
| (4) | <i>kdah</i> ‘young woman’          | → | <i>k&lt;ra&gt;dah</i> ‘young women’         |
|     | <i>kjih</i> ‘young man’            | → | <i>k&lt;ra&gt;jih</i> ‘young men’           |
|     | <i>babo?</i> ‘woman’               | → | <i>b&lt;r&gt;abo?</i> ‘women’               |
|     | <i>tmkal</i> ‘man’                 | → | <i>tm&lt;a&gt;kal</i> ‘men’                 |
|     | <i>bidan</i> ‘old person’          | → | <i>b&lt;r&gt;idan</i> ‘old people’          |
|     | <i>mnra?</i> ‘(indigenous) person’ | → | <i>mn&lt;a&gt;ra?</i> ‘(indigenous) people’ |

Another rarely-used nominal derivation is the unitization morpheme *nC-*, primarily serving to turn mass nouns into count nouns in cases of reference to discrete units of the noun, exemplified in (5).

- |     |  |             |            |              |             |
|-----|--|-------------|------------|--------------|-------------|
| (5) | <i>?iŋ reŋ</i>                               | <i>dah</i>  | <i>wəŋ</i> | <i>?həy,</i> | <i>wəŋ</i>  |
|     | 1SG  | to.eat.meat | already    | to.be.little | to.be.small |
|     | <i>s-nc-sec</i>                              |             |            |              |             |
|     | one-UNIT-flesh                               |             |            |              |             |
|     | ‘I’ve only eaten one small piece (of meat).’ |             |            |              |             |

Unitization is a typologically unusual phenomenon which seems largely restricted to Aslian languages. The Jedek unitization morpheme has been recorded in only a very few contexts and does not give the impression of being as fully productive as its equivalent in Jahai, for example (Burenhult 2005: 75–77). The following unitized forms have been recorded in Jedek:

- |     |                           |   |                                     |
|-----|---------------------------|---|-------------------------------------|
| (6) | <i>sec</i> ‘flesh’        | → | <i>nc-sec</i> ‘piece of flesh’      |
|     | <i>?ay</i> ‘meat animal’  | → | <i>ny-?ay</i> ‘unit of meat animal’ |
|     | <i>te?</i> ‘ground/earth’ | → | <i>n?-te?</i> ‘place/location’      |
|     | <i>təm</i> ‘water’        | → | <i>nm-təm</i> ‘unit of water’       |
|     | <i>can</i> ‘foot/leg’     | → | <i>nm-can</i> ‘unit of foot/leg’    |

### 3.2.3.2 Deriving verbs

**3.2.3.2.1 Deriving verbs from nouns.** The property morpheme *b-* (most likely borrowed from Malay *ber-* also used to derive verbs from nouns) may be added to nouns through outer affixation to form property verbs. Verbs derived in this manner denote notions of being ‘characterized by’ the referent of the base noun and may have vaguely possessive meanings. The use of the morpheme in positive contexts is restricted to a subset of nouns: it has been recorded primarily in connection with nouns characterized by inalienability such as body parts and children or spouses as in (7a), although other nouns may also receive the morpheme (7b). Meanwhile, in negated contexts the property morpheme is productive and may be used with any noun (7c).

- (7) a. *ʔoʔ b-knih*  
 3SG PROP-wife  
 ‘He has a wife.’
- b. *brapaʔ hariʔ, b-bulan bulan leh dah*  
 how.many day PROP-month.month EMPH EMPH  
 ‘How many days (did we camp)? For months and months!’
- c. *blap b-swal blap b-bajuʔ ʔoʔ wāŋ*  
 to.not.exist PROP-pants to.not.exist PROP-shirt 3SG to.be.naked  
 ‘He has no pants, no shirt, he’s naked.’

**3.2.3.2.2 Deriving verbs from verbs.** A number of Jedek affixes function to derive verbs from verbs: the aspectual/Aktionsart derivations, and the causative. Examples of the Jedek verbal derivations are given in Table 3. The imperfective and distributive derivations operate according to inner affixation while the causative and progressive derivations operate according to outer affixation. The iterative derivation operates according to inner affixation on monosyllabic bases and outer affixation on sesqui- and disyllabic bases. Many of the verbal derivations of Jedek are also present in Jahai (Burenhult 2005: 94).

**3.2.3.2.2.1 Causative (CAUS).** The causative morpheme derives transitive verbs with meanings of ‘to cause to X’. The causative involves outer affixation and has three allomorphs (*p-*, *pi-*, and *pr-*). There is no evidence for semantic differences between the allomorphs. Rather, as is common in Aslian causative morphology, their use appears to primarily be determined by the syllabic structure of bases. In addition, the allomorphs have different degrees of productivity: the allomorph *pr-* has only been attested on a handful of (mostly monosyllabic) bases

Table 3: Jedek verb-to-verb derivations.

Derivational morpheme		Monosyllabic <i>ciʔ</i> 'to eat'; <i>ciʔ</i> 'to go'	Sesquisyllabic <i>kjeŋ</i> 'to listen'	Disyllabic <i>haluh</i> 'to shoot with a blowpipe'
Causative		<i>p-ciʔ</i> ~ <i>pi-ciʔ</i> ~ <i>pr-ciʔ</i>	<i>p-kjeŋ</i> ~ <i>pi-kjeŋ</i>	<i>p-haluh</i>
Aspect/ Aktionsart	Imperfective	<i>cʔ-ciʔ</i>	<i>k&lt;ŋ&gt;jeŋ</i>	<i>to&lt;k&gt;lek</i> ( <i>tolek</i> 'to push')
	Progressive	<i>b-cʔ-ciʔ</i>	<i>b-kjeŋ</i>	<i>b-haluh</i>
	Iterative	<i>lʔ-ciʔ</i>	<i>l-kjeŋ</i>	<i>l-haluh</i>
	Distributive	<i>ciʔ-ciʔ</i>	<i>k&lt;iŋ&gt;jeŋ</i>	<i>j&lt;iʔ&gt;wəp</i> ( <i>jawəp</i> 'to answer'), <i>p&lt;i&gt;ʔjiʔ</i> ( <i>pʔjiʔ</i> 'to sleep')

(8a), while *pi-* and *p-* are more productive. *Pi-* is the preferred allomorph on monosyllabic bases (8b) and is attested on a handful of sesqui- and disyllabic bases (8c), while *p-* is preferred and used exclusively on sesqui- and disyllabic bases.

- (8) a. *ʔoʔ bəw* → *ʔom=pr-bəw* *kbiʔ leh* *k=kareɣ*  
 3SG to.be.big IRR.3SG=CAUS-to.be.big fruit EMPH SUB=Karei  
 'He's big.' 'Karei will make the fruit big.'
- b. *ʔapay tek* → *ʔapay pi-tek* *wəŋ ʔapay*  
 1PL.EXCL to.lie.down 1PL.EXCL CAUS-to.lie.down child 1PL.EXCL  
 'We were lying down.' 'We put our children to bed.'
- c. *ʔiŋ ʔntiŋ* → *ʔiŋ pi-ʔntiŋ* *ʔoʔ*  
 1SG to.be.afraid 1SG CAUS-to.be.afraid 3SG  
 'I'm afraid' 'I'm scaring her (causing her to be afraid).'

**3.2.3.2.2 Imperfective (IPFV) and progressive (PROG).** The imperfective morpheme derives imperfective verbs which may in turn feed derivation with the progressive morpheme. Both are used to describe situations as ongoing, in progress, or habitual. While the progressive morpheme *b-* is fully productive and may be used on any verb, imperfective-marked verbs without the progressive morpheme are relatively rare in the material. The imperfective morpheme is an example of fully underspecified inner affixation – its segments are filled entirely through copy of segments of the base. On monosyllabic bases both onset and coda of the base are copied and attached to the base as a prefix (as in *jok* 'to move around' → *jk-jok* 'to be moving around'). On sesquisyllabic bases and disyllabic bases with an open penultimate syllable, the coda of the

penultimate syllable is filled through copy of the coda of the final syllable of the base (as in *pgeŋ* ‘to hold’ → *p<ŋ>geŋ* ‘to be holding’, *tolek* ‘to push’ → *to<k>lek* ‘to be pushing’). The progressive *b-* (most likely a borrowed form of the Malay prefix *ber-* with a similar function) operates according to outer affixation. The progressive may attach to either the imperfective or bare root form of sesqui- and disyllabic verbs (with no apparent difference in meaning), but monosyllabic verbs must be marked with the imperfective or, more rarely, distributive, iterative, or causative morphemes in order to receive progressive marking.

Any subtle differences in meaning between the imperfective and progressive morphemes are difficult to discern: both may express notions of ongoingness (9a) or habituality (9b) and may be used to convey the ongoingness of a certain situation in relation to other events (9c). As a result of this as well as the paucity of imperfective forms in the material, the imperfective and progressive morphemes are considered here to be semantically equivalent. The imperfective morpheme is also present in several fossilized forms whose morphologically unanalysable root form does not exist in contemporary Jedek (such as *lclɛc* ‘to be wrong’, *plpɛl* ‘to drip’, *ʔmʔəm* ~ *kmʔəm* ‘to hug’).

- (9) a. *ja=Nin lɛh d=ʔoʔ d=ʔoʔ bʔ-baʔ ton*  
 RT=Nin EMPH CONTR=3SG CONTR=3SG IPFV-to.carry that  
 ‘also Nin, the one that was being carried’
- b. *ʔapay jk-jok lɛh d=k=seŋ kaduy*  
 1PL.EXCL IPFV-to.move.around EMPH CONTR=LOC=front PSTDIST  
 ‘We used to move around in the old days.’
- c. *hiʔ pʔjiʔ dah d=hiʔ ʔoʔ b-cl-cɔl*  
 1PL.INCL to.sleep already CONTR=1PL.INCL 3SG PROG-IPFV-to.speak  
*lagiʔ d=ʔoʔ*  
 still CONTR=3SG  
 ‘We were already asleep, but he kept on telling (the story).’

**3.2.3.2.2.3 Distributive (DISTR).** The Jedek distributive morpheme operates on verbs to express non-temporal multiplicity of a situation. Such situations may involve multiple individuals as subject, as in (10a), multiple locations or directions, as in (10b, c), or other features involving multiplicity. The distributive is often used in contexts involving reciprocity among participants, as in (10a), but is also often found in non-reciprocal contexts involving multiple participants as well as contexts involving a single participant but multiple locations, as in (10b, c). Its functions are very similar to those described for Jahai (Burenhult 2011). The distributive morpheme is partially

prespecified, involving the prespecified vowel *i*. On monosyllabic bases the prespecified *i* forms the nucleus of a new penultimate syllable whose onset and coda are filled through copy of the onset and coda of the base, as in *cip* ‘to go’ → *cip-cip* ‘to go (here and there)’. On sesquisyllabic bases the coda of the final syllable of the base is copied and becomes the coda of the penultimate syllable, with the prespecified *i* as its nucleus, as in *bdel* ‘to shoot’ → *b<i>del* ‘to shoot (here and there)’. On disyllabic bases with an open penultimate syllable the coda is also filled through copy of the coda of the final syllable of the base, while the nucleus is in most cases replaced with the prespecified *i*, as in *bagi?* ‘to give’ → *b<i?>gi?* ‘to give (here and there)’. There are no examples in the material of distributive derivation on disyllabic forms with a closed penultimate syllable.

- (10) a. *wih miy-may kuy*  
 3DU DISTR-to.delouse head  
 ‘Those two are delousing each other.’<sup>9</sup>
- b. *ʔoʔ b<i>del pāw pāw tmpət dah ləh*  
 3SG to.shoot<DISTR> different.different place EMPH EMPH  
 ‘He shot all around.’
- c. *ʔoʔ ʔil-ʔel da=tūn da=tadeh*  
 3SG DISTR-to.look GOAL=there GOAL=here  
 ‘S/he looked around over there, over here.’

**3.2.3.2.2.4 Iterative (ITER).** The Jedek iterative morpheme signals temporal multiplicity of an action, usually involving multiple repetition of a complete action on a single occasion, as in (11a, b). It may also be used to signal multiplicity over separate occasions, as in (11c), but this use is more rare in the material. The iterative morpheme involves the prespecified onset *l* and operates according to two different morphological processes depending on the syllabic structure of the base to which it attaches. On sesqui- and disyllabic bases it operates according to the process of outer affixation, with the prespecified *l* attaching to the left edge of the base, as in *kdih* ‘to say’ → *l-kdih* ‘to say repeatedly’ and *haluh* ‘to shoot with a blowpipe’ → *l-haluh* ‘to shoot repeatedly with a blowpipe’. On monosyllabic bases it operates according to inner

<sup>9</sup> Description obtained during elicitation by means of the “Reciprocal constructions and situation type” task (Evans et al. 2004), a video stimulus kit designed to probe linguistic expressions of reciprocity.



affixation, the prespecified *l* forming the onset of a new penultimate syllable and the coda being filled through copy of the coda of the base, as in *ʔel* ‘to see/look’ → *ll-ʔel* ‘to look repeatedly’.

- (11) a. *ʔoʔ cirit s-ʔomo ʔomo ja=ʔoʔ lc-ʔɛc*  
 3SG to.have.diarrhea always.always RT=3SG ITER-to.defecate  
 ‘S/he is pooping all the time (because of diarrhea), s/he poops and poops.’
- b. *bɛʔ l-ʔaŋket bɛʔ l-tulis*  
 2SG ITER-to.get 2SG ITER-to.write  
 ‘You pick up (your notebook) and write all the time.’
- c. *ʔoʔ lp-cip ʔoʔ lk-ŋɔk s-miŋgu s-kaliʔ*  
 3SG ITER-to.go 3SG ITER-to.sit one-week one-time  
 ‘She always goes there and stays a week at a time.’

There are many contexts in the material in which the iterative morpheme appears to have a kind of imperative function, as in (12a, b). The semantic connection between such contexts and the more straightforwardly iterative contexts in the material is at this stage unclear.

- (12) a. *pɛy pɛy lk-wek, lk-wek ʔujan*  
 BECK BECK ITER-to.return ITER-to.return rain  
 ‘Come, come, come home, come home, it’s raining.’
- b. *lp-cip l-kdih, l-kdih ll-cɔl da=Yati, ʔiŋ*  
 ITER-to.go ITER-to.say ITER-to.say ITER-to.speak GOAL=Yati 1SG  
*ma=cip da=hip*  
 IRR=to.go GOAL=forest  
 ‘Go and tell Yati that I’m going to the forest.’

### 3.2.4 Clitics

Like affixes, clitics are distinct from words in that they are bound forms – they exist only attached to a base and do not appear as free forms, and they cannot receive stress. Jedek clitics have a [C], [CV], or [CVC] structure. Due to their bound status, final vowels of [CV] clitics are not lengthened and nasal codas of [CVC] clitics are not prestopped. Like outer affixes, clitics do not have different allomorphs that depend on the structure of the base to which they attach, but appear in the same form in all contexts.

Clitics differ from affixes, however, in that their domain of attachment is phrases or clauses rather than words. Clitics are invariably proclitics and attach to the left edge of a base within the phrase or clause that forms the domain of their attachment. The different clitics differ in terms of the kinds of constituents which may function as hosts to which they attach. The contrastive proclitic *d=* (described in Section 3.3.8) may be hosted by any constituent. The irrealis proclitics *ma=* ~ *na=* and *ʔom=* are hosted by verbs (see Section 3.3.11), and the imperative proclitics *ca=* ~ *ka=* and *ha=* are hosted only by verbs in imperative form (see Section 3.3.11). Prepositional proclitics (see Section 3.3.8) are hosted by the first constituent of noun phrases. The relational tense proclitic *ja=* (see Section 3.3.15) and question proclitic *ha=* (see Section 3.3.13) are hosted by the first constituent of a clause.

### 3.2.5 Full reduplication

Full reduplication of lexemes occurs in the case of Jedek adverbs and interrogative pronouns (forming indefinite pronouns). Fully reduplicated forms do not conform to Jedek word constraints or word-level stress patterns and are thus not interpreted as the result of a morphological process forming a word-like unit. It is likely that the process is a borrowed form of a similar process in Malay.

## 3.3 Word classes

Jedek has the distinct open word classes of nouns (Section 3.3.1) and verbs (Section 3.3.10) and closed classes of prepositions (Section 3.3.8), pronouns (Section 3.3.2), quantifiers (Section 3.3.3), classifiers (Section 3.3.4), demonstratives (Section 3.3.6), adverbs (Section 3.3.15), negators (Section 3.3.12), connectives/conjunctions (Section 3.3.14), and interjections.

### 3.3.1 Nouns

Jedek nouns denote concrete or abstract concepts and occur as part of noun phrases, either as noun phrase heads or as modifiers of other nouns. Nouns may be modified by pronouns, demonstratives, quantifying expressions, another noun, or a relative clause, and may be marked with the derivational categories applied to nouns that are described in Section 3.2.3.

### 3.3.2 Pronouns and question words

#### 3.3.2.1 Personal pronouns

Jedek personal pronouns distinguish singular, dual, and plural number in the 1st, 2nd, and 3rd person distinctions. The Jedek personal pronoun system is untypical among the Northern Aslian varieties in the existence of two separate forms distinguishing 2nd and 3rd person plural, a distinction which is otherwise collapsed in all Northern Aslian varieties except Ceq Wong (Kruspe et al. 2015). The system is otherwise typically Aslian in that gender is not marked, and 1st person dual and plural pronouns are marked for inclusion/exclusion.

**Table 4:** Jedek personal pronouns.

Singular			Dual		Plural		
1	<i>ʔijŋ</i>			Inclusive <i>hey</i>	Exclusive <i>yeŋ</i>	Inclusive <i>hiʔ</i>	Exclusive <i>ʔapay</i>
2	General <i>bεʔ</i>	Familial <i>mɔh</i>	Friendship <i>bɔʔ</i>	<i>jih</i>		<i>smpay</i>	
3	<i>ʔom</i>			<i>wih</i>		<i>gin</i>	

Three 2nd person singular forms have been recorded. Of these, *bεʔ* is the most general and widely used, used to address interlocutors ranging from complete strangers to one's friends and acquaintances, spouse, parents, siblings, and other family members for which use of in-law avoidance pronouns (described below) is not prescribed. One's own children or the children of one's siblings may be addressed with the pronoun *mɔh*, which may also be used by children to address younger children to whom they are related. However *bεʔ* may also be used in these contexts. The less frequent *bɔʔ* is used optionally and occasionally between close friends who are not related by kinship.

Jedek pronouns occur both as unstressed subject-markers on verbs (obligatory on dynamic verbs in realis clauses) and as noun phrase constituents (either heads or modifiers) which may receive stress. The 3rd person singular irrealis form *ʔom* = (see Section 3.3.11) may also be argued to have pronominal status, since unlike the other irrealis proclitics it does not co-occur with the subject-marking 3SG pronoun. The form is a proclitic and is used only as an unstressed preverbal marker, not as part of a noun phrase.

### 3.3.2.2 In-law avoidance pronouns

As is a common feature of Aslian varieties, Jedek has a set of pronouns used specifically to make reference to and address affinal kin with whom interaction is restricted by sets of rules. Interaction with an opposite gender parent-in-law is especially restricted, but a set of rules also governs the nature of interactions between brothers- and sisters-in-law. The forms of the Jedek in-law pronouns are taken from the 2nd and 3rd person dual and plural forms of the personal pronoun system. Parents- and children-in-law address and refer to each other with the form *gin* while siblings-in-law address one another using the pronoun *jih*, and refer to one another using *wih*. Jedek and other Aslian in-law pronoun systems are a typologically unusual form of affine avoidance register, not to be confused with the more well-known honorific registers of the Southeast Asian area (Kruspe & Burenhult, submitted; cf. Fleming 2014).

### 3.3.2.3 Interrogative pronouns

Jedek has a number of indigenous and borrowed question words to question thing, reason, person, place, manner, time, quantity, and identity. The system is especially rich in forms, the use of which appears to be subject to within- and between-speaker variation. The forms of the Jedek question words are given below:

- |                      |   |
|----------------------|---|
| (13) a. Thing/Reason | <i>cʔay, cbap, cbap ʔay, baʔay</i>                |
| b. Person            | <i>maken</i>                                      |
| c. Place             | <i>ʔnah (~ pǎn, ~ gel, ~ leŋ, ~ ʔirah, ~ cǎn)</i> |
| d. Manner            | <i>mancin ~ maʔancin</i>                          |
| e. Time              | <i>ʔnah pyan, bilaʔ</i>                           |
| f. Quantity          | <i>brapaʔ</i>                                     |
| g. Identity          | <i>ʔnah ʔoʔ teʔ</i>                               |

The identity-questioning *ʔnah ʔoʔ teʔ* (14a) is untypical among the Northern Aslian varieties, none of which are reported as possessing a distinct term for questioning the identity of a referent. Specifically, it questions the identity of a thing, person, or place among multiple competing referents, akin to English ‘which’. Person-questioning *maken* also questions possessor, as in *maken ʔasuʔ* [who dog] ‘whose dog?’. The place-questioning *ʔnah* is combined with the mostly transparent *pǎn*, *gel*, *leŋ*, *ʔirah*, and *cǎn* to form place-questioning phrases. The five terms differ as to the location and direction of movement questioned. *ʔnah pǎn* is the most commonly used and may question either location or direction (14b) of movement. *ʔnah leŋ* (14c) and *ʔnah gel* question

the location of a referent, *?nah ?irah* questions the goal of movement, and *?nah cǎn* questions the source of movement. Location-questioning *?nah lɛŋ* contains the preposition *lɛŋ* ‘at/in/on’, *?nah gɛl* contains the noun *gɛl* ‘middle portion’ (and cf. Menriq *gɛl* ‘at/in/on’), *?nah cǎn* contains the form also functioning as source-marking preposition *can* = , and *?nah ?irah* contains the relational noun *?irah* ‘side’. Complex WH-constructions of this type are otherwise so far only attested in Ceq Wong (cf. *han hala?* ‘to/from where’ and *han mata?* ‘on where?’) among Aslian varieties, among which location-questioning typically involves prepositional phrases (see, e.g., Kruspe 2004: 187–188 for Semelai). The thing-questioning forms (two of which, *c?ay* and *cbap*, are also used to question reason) are also somewhat analysable: as a combination of synchronically non-existing prefixes and two of the food class nouns: *bap* ‘starchy food’ and *?ay* ‘meat’.<sup>10</sup> Person-questioning *maken* contains the noun *ken* ‘child’ and identity-questioning *?nah ?o? te?* is constructed using place-questioning *?nah*, 3rd person singular pronoun *?o?*, and noun *te?* ‘earth’.

- (14) a. *?nah ?o? te? cnel ?iŋ ma=cɔl*  
 which origin.being 1SG IRR=to.speak  
 ‘Which origin being story should I tell?’  
 b. *?nah pǎn be? ma=cip*  
 where.goal 2SG IRR=to.go  
 ‘Where are you going?’ [a common greeting]  
 c. *?nah lɛŋ smpay ma=goreŋ*  
 where.location 2PL IRR=to.fry  
 ‘Where are you going to fry it?’

### 3.3.2.4 Indefinite pronouns

Indefinite pronouns are formed through reduplication of question words: *c?ay c?ay*, ‘whatever’ (15a), *?nah ?nah ?o? te?* ‘whichever’, *?nah ?nah pǎn* ‘wherever (location or goal)’ (15b), *?nah ?nah cǎn* ‘wherever (source)’, *?nah ?nah gɛl* and *?nah ?nah lɛŋ* ‘wherever (location)’, and *brapa? brapa?* ‘however many’.

- (15) a. *hɛy hagu? c?ay c?ay ja=?o? gɔŋ*  
 1DU.INCL to.request whatever RT=3SG to.withhold  
 ‘We request whatever and s/he refuses to give it.’

<sup>10</sup> The form *?ay* also occurs in interrogatives of several other Aslian languages (in most of which it also means meat), cf. Ceq Wong *cɔ? ?ay* ‘what’ and *bi? ?ay* ‘who’, Batek *?ay ləw* ‘what’, and Semaq Beri *m?ay* ‘what’ (Nicole Kruspe, personal communication).

- b. *gin ly ?nah ?nah pān*  
 3PL to.run wherever  
 ‘They ran away to wherever.’

### 3.3.3 Quantifiers

Quantifiers are most commonly found prenominally as modifiers of nouns or classifiers (17a). They may also form a phrasal head on their own (17b). Jedek numerals, see (16), are, with the exception of the numeral ‘one’, all borrowed from Malay. In addition, the borrowed Malay form *s-* from Malay *se-* ‘one’ may be used as a quantifying affix. Its use is especially common with Malay loans, as in (17c). The numeral *nay* ‘one’ is also used as a quantifier with delimiting function, meaning ‘only, just’ (17d), often accompanied by relativizing *d=* which attaches to the left edge of the element introduced by *nay*.

- |        |              |    |                |      |                  |
|--------|--------------|----|----------------|------|------------------|
| (16) 1 | <i>nay</i>   | 6  | <i>?nam</i>    | 11   | <i>s-blas</i>    |
| 2      | <i>dwa?</i>  | 7  | <i>tujuh</i>   | 12   | <i>dwa? blas</i> |
| 3      | <i>tiga?</i> | 8  | <i>lapan</i>   | 100  | <i>s-ratos</i>   |
| 4      | <i>?mpət</i> | 9  | <i>smilan</i>  | 1000 | <i>s-ribu?</i>   |
| 5      | <i>lima?</i> | 10 | <i>s-puloh</i> |      |                  |

- (17) a. *dwa? hari? da=tkih*  
 two day GOAL=behind  
 ‘two days ago’
- b. *?apay jok ?iŋ ba? dwa? dwa?*  
 1PL.EXCL to.move.around 1SG to.carry.child two.two  
 ‘We moved around, I carried two children.’
- c. *s-jam, dwa? jam*  
 one-hour two hour  
 ‘one hour, two hours’
- d. *?o? lt?et nay basa? hami?*  
 3SG to.know only language Malay  
 ‘He only understands Malay.’

Jedek has three additional quantifiers: indigenous *kəm* ‘many/much’ and *pāw* ‘other’ along with the Malay loan *blaka?* ‘all’ (from Malay *belaka* ‘entire’). As described above for quantifiers in general, these quantifiers may form a phrasal head on their own (18a) or occur as prenominal modifiers of heads (18b).

- (18) a. *gin k<i>mʔəm blakaʔ*  
 3PL to.hug<DISTR> all  
 ‘All of them are hugging each other.’  
 b. *ja=pāw ktɔʔ wel*  
 RT=other day again  
 ‘another day’

### 3.3.4 Classifiers

Classifiers have a relatively marginal status in Jedek. Two forms are found in the data, both borrowed from Malay: *ʔoran* from Malay *orang* ‘person’ used for human referents, as in (19a), and *ʔekɔ* from Malay *ekor* ‘tail’ used for animals, as in (19b). These borrowed forms are not found as ordinary nouns in the data – indigenous Jedek equivalents *mnraʔ* ‘person’ and *hatēʔ* ‘tail’ are used elsewhere. Classifiers are modified by numerals, forming a noun phrase with the function of specifying the number of some referent. Classifiers do not co-occur with ordinary nouns in a noun phrase but always replace them as head. Classifiers are used in combination with numerals but are not attested with the other quantifiers described above.

- (19) a. *gin k<i>mʔəm gin tigaʔ ʔoran*  
 3PL to.hug<DISTR> 3PL three CLF  
 ‘They are hugging each other, those three.’  
 b. *cnɛl planok, ʔoʔ [s-ʔekɔ] s-ny-ʔay*  
 origin.being mouse.deer 3SG one-CLF one-UNIT-meat.animal  
*planok nay*  
 mouse.deer one  
 ‘The origin mouse deer, it was one mouse deer.’

### 3.3.5 Proper nouns: Personal names

As is common among Aslian speech communities, individual Jedek speakers typically have several names. Most children are given two names at birth: an indigenous name, and a Malay name which becomes the child’s registered name and is used in interactions with outsiders. Within Rual, Jedek speakers are referred to variously by their indigenous or Malay name. After the birth of their first child, adults are most commonly known by the name of their firstborn child, as in *Naʔ Jila*, ‘Jila’s mum’ (a practice referred to as teknonymy which also

exists in many other Aslian-speaking communities, e.g., Temiar, Semelai, Semaq Beri, Batek, and Maniq; Kruspe et al. (2015: 453); Nicole Kruspe, personal communication; Ewelina Wnuk, personal communication). Grandparents are commonly known by the name of their firstborn grandchild, as in *Ya? Mira* ‘Mira’s grandmother’. In addition to this, informal and often humorous nicknaming is common, in some cases with the knowledge of the nicknamed individual (as in *Ta? Spek* ‘grandpa spectacles’), in other cases not (as in *Ta? ʔɲjulən* ‘grandpa ambulance’, so named after his use of a flashing head torch). Often a single individual will be known by several different nicknames, given by different people. Thus each individual is typically known by at least four different names throughout their lifetime, with the addition of any (and in some cases many) nicknames.

### 3.3.6 Demonstratives

#### 3.3.6.1 Spatial demonstratives

Jedek has a single set of nine spatial demonstratives that are used both nominally and adverbially, shown in (20). Four demonstratives encode distance and accessibility distinctions (*ʔūh*, *ton*, *tani?*, and *tūn*), two encode elevation (*titih* and *tuyih*), and two encode exteriority in relation to the speech dyad (*tadeh* ~ *tudeh* ~ *tude?* and *ʔni?*, see Burenhult (2005: 84–87, 2008, in press) for in-depth discussion of the Jahai equivalents); one demonstrative denotes referents predominantly perceived with senses other than vision (such as heard or smelled, *cin*).

(20) <i>ʔūh</i>	accessible and usually proximal to speaker
<i>ton</i>	accessible to addressee, attention confirmer
<i>tani?</i>	inaccessible to and usually distant from speaker
<i>tūn</i>	inaccessible to addressee, attention drawer
<i>tadeh</i> ~ <i>tudeh</i> ~ <i>tude?</i>	exterior: outside speaker’s side of speech dyad
<i>ʔni?</i>	exterior: outside addressee’s side of speech dyad
<i>titih</i>	superjacent to speech situation
<i>tuyih</i>	subjacent to speech situation
<i>cin</i>	perceived through its emissions (e.g., heard or smelled)

In their nominal function the spatial demonstratives are used either pronominally and then represent the heads of noun phrases, as in (21a), or adnominally and then follow a head noun, as in (21b).



- (21) a. *cʔay d=tũn, ha=gulə*  
 what CONTR=that Q=candy  
 ‘What’s that? Candy?’  
 b. *ma=cip da=taniʔ hagas kɔm*  
 IRR=to.go GOAL=there mosquito many  
 ‘If we go over there there’s lots of mosquitoes.’

In their adverbial function they occur as part of locative prepositional phrases headed by locative prepositional proclitics (described in Section 3.3.8). The functional distinctions are akin to those documented for Jahai and Menriq, but unlike these languages Jedek does not have parallel sets of nominal and adverbial demonstrative forms.

The forms *tadeh*, *tudeh*, and *tudeʔ* are all found in the material. *Tadeh* is the most commonly used of the three; *tudeh* is a relatively common variant; *tudeʔ* occurs only rarely. All three are analysed as expressing the speaker-exterior dimension but they have yet to be explored systematically. Addressee-anchored *tũn* and *ton* additionally encode pragmatic meanings related to the addressee’s attention relative to the referent. While *tũn* is used for introducing a new referent in discourse or drawing the addressee’s attention to a referent *ton* denotes a referent known by the addressee (cf. Burenhult (2003, in press) for the Jahai equivalents).

### 3.3.6.2 Temporal demonstratives

Jedek has three demonstrative-like forms which express temporal meanings: *kaʔũn*, *kaduy*, and *hkit*. They may be used either adverbially (22a) or adnominally (22b). While *kaduy* refers to the more distant past, *kaʔũn* refers to the more recent past. *Hkit* refers specifically to the previous day, ‘yesterday’.

- (22) a. *cbap bɛʔ jim kaʔũn*  
 why 2SG to.cry PSTPROX  
 ‘Why were you crying just now?’  
 b. *buku hkit*  
 book yesterday  
 ‘the book from yesterday’

### 3.3.7 Relational nouns

Another set of nominal forms with locational meaning is what are treated here – following the terminology of Kruspe et al. (2015: 463) – as relational nouns. The

full set of recorded relational nouns is: *ʔates* ‘upside’, *kyəm* ‘downside’, *daləm* ‘inside’, *hip* ‘outside’, *seŋ* ‘front’, *krəʔ* ‘back’, *ʔndaŋ* and *ʔirah* ‘side’, and *ditep* ‘other side’. These nouns refer to spatial zones and may form part of a prepositional phrase headed by prepositional proclitics expressing goal (*da=*), source (*can=*), and location (*leŋ*, *la=*, and *k=*), as in (23a). They may also appear without these prepositional proclitics, as the head of an associative phrase, where they denote a spatial area in relation to another nominal referent, as in (23b).

- (23) a. *mɔh hɔk da=seŋ*, *mɔh hɔk da=ʔates*, *mɔh hɔk can=kyəm*  
 2SG to.throw GOAL=front 2SG to.throw GOAL=upside 2SG  
 to.throw SOURCE=under  
 ‘You throw it forward, you throw it up above, you throw it under.’ [on how to fish]
- b. *wih ŋik-ŋɔk wih cil-cɔl*, *ʔates mejə*  
 3DU DISTR-to.sit 3DU DISTR-to.speak upside table  
 ‘They are sitting and talking, on a table.’

### 3.3.8 Prepositions

Jedek has a number of prepositions that express location (*leŋ*, *la=*, *k=*), goal (*da=*), source (*can=*), comitative (*lɔʔ ~ ʔalbɔʔ*), instrument/subject/object (*k=*), contrast (*d=*), and similarity (*laguʔ*). The prepositions combine with noun phrases to form a prepositional phrase. Many of these prepositions are proclitics which attach to the left edge of noun phrases. Others are free morphemes: the comitative preposition *lɔʔ ~ ʔalbɔʔ*, the semblative *laguʔ*, and the general location-marking *leŋ*. The remnant of a semblative proclitic form *man=* can be found in a small set of words, most of them derived from demonstratives, but is unattested outside of these contexts.<sup>11</sup>

*Da=* marks the goal, *can=* the source, and *leŋ*, *la=*, and *k=* the location of an action, situation, or referent. The goal- and source-marking prepositions may mark concrete or abstract goals and sources, as in (24a). Location-marking *k=* is rare and is used only in combination with demonstratives and relational nouns. It may also be added to the left edge of constructions with locative *leŋ* and *la=*, apparently without any change in meaning, see (24b).

<sup>11</sup> The forms attested so far are *manton* ‘like that’, *mantadeh* ‘like that’, *mancin* ‘like this’, and *mantün* ‘like this’, derived from demonstratives, as well as *mancin* manner-questioning ‘how?’. The manner-questioning *mancin* bears some resemblance to Ceq Wong manner-questioning *cin* (Nicole Kruspe, personal communication).

- (24) a. *ʔoʔ cip da=hip da=cbaʔ, ja=ʔoʔ wek da=hayãʔ*  
 3SG to.go GOAL=forest GOAL=hill RT=3SG to.return GOAL=house  
 ‘He went to the forest, to the hills, then he returned home.’
- b. *ja=d=ʔoʔ ton ʔoʔ pʔjiʔ k=la=hayãʔ*  
 RT=CONTR=3SG that 3SG to.sleep LOC=LOC=house  
 ‘And that guy, he was sleeping at home.’

The instrument/subject/object preposition *k=* occurs in three kinds of context. As instrument marker, *k=* is used to mark an instrument with which the activity described in the verb is executed (25a). As subject marker, *k=* may be used to mark full subject arguments of the verb but is not obligatory (25b). Subject-marking *k=* is most commonly found on postverbal subject arguments, and its use on subject arguments to the left of the verb is rare in the material. The argument marked by subject-marking *k=* may be a stressed version of the pronoun that forms the subject marker on the verb (see Section 3.3.2 above), or may function to further specify the referent of the subject marker. *K=* may also introduce a direct object argument, turning the object into a partially-affected object at which the action is directed rather than implying that the entire object is affected (25c).<sup>12</sup> The construction is akin to the use of English *at* in contexts such as *eat at* and *hit at*.

- (25) a. *ʔoʔ cek k=mataʔ gajah kaʔün leh*  
 3SG to.stab INSTR=spear elephant PSTPROX EMPH  
 ‘He stabbed that elephant with a spear.’
- b. *ʔoʔ ʔo k=ciʔgu*  
 3SG to.order SUB=teacher  
 ‘The teacher asked us to.’
- c. *ja=bah ha=ciʔ k=nasiʔ*  
 RT=to.go.to.a.place Q=to.eat.starchy.food OBJ=rice  
 ‘Go and eat some rice.’

The prepositional proclitic *d=* attaches to the left edge of an argument in order to mark a focus on its referent, most often to express contrast to some other possible referent.<sup>13</sup> It is most commonly found on subject arguments but may also be used on object arguments. As with subject-marking *k=*, subject arguments marked with contrastive *d=* may consist of a stressed version of the

<sup>12</sup> Jahai *k=* and Ceq Wong *kaʔ* are also used in this way.

<sup>13</sup> The label “contrastive” (CONTR) is known from previous Aslian grammars. Despite the name, however, note that this proclitic does not always overtly mark a contrast with another referent.

pronoun that forms the subject marker on the verb, as in (26a, b), or may function to further specify its referent, as in (26c). Another function of contrastive *d=* is to mark ownership or change of ownership of a referent, as in (26d). In this context it is attached to an argument whose referent possesses or comes to possess something.

- (26) a. *ʔiŋ ma=wək d=ʔiŋ*  
 1SG IRR=to.return CONTR=1SG  
 ‘Me, I want to go home.’
- b. *d=məh ha=məh dəpət dah?*  
 CONTR=2SG Q=2SG to.meet already  
 ‘Have you ever encountered (a tiger)?’
- c. *ʔnah pān ʔo? cɪp dən d=ʔabi kaʔün?*  
 where 3SG to.go that.one CONTR=Bi PSTPROX  
 ‘Where did that Bi go?’
- d. *wə? d=ʔiŋ dah b<n>ulaŋ*  
 to.exist CONTR=1SG already headdress  
 ‘I’ve already got a headdress.’

### 3.3.9 Coordinating morphemes

A relative marker *d=* attaches to the left edge of the first word of a phrase or clause that is embedded within a noun phrase, creating a relative clause that modifies the head of the noun phrase, as in (27a, b). Relative clause markers of this kind are attested in other Aslian languages – see, e.g., Burenhult (2005: 122–126) for Jahai exponents – but only Jedek is recorded using the form *d=*. It is also found in two further kinds of context in the material. It may attach to the left edge of a property verb or adverb, as in (27c). It may also be used to mark direct quotes. In this context it attaches to the left edge of the phrases *ʔo? cəl* or *ʔo? kdih* ‘s/he says’ to specify that the preceding content is a direct quote, as in (27d).

- (27) a. *ʔnah pān ckla? d=ʔiŋ bli? kaʔün*  
 where candy REL=1SG to.buy PSTPROX  
 ‘Where’s the candy that I bought before?’
- b. *ʔo? d=bəw liy*  
 3SG REL=to.be.big body  
 ‘the fat one’

- c. *ci?* *d=ʔabən*  
 to.eat REL=good  
 ‘Eat carefully!’
- d. *na?* *ʔijŋ* *ja=ʔijŋ* *rɛŋ* *lɛh* *d=ʔo?* *cɔl*  
 mother 1SG RT=1SG to.eat.meat EMPH REL=3SG to.speak  
 ‘I ate my mother, he said.’

### 3.3.10 Verbs

Jedek verbs denote actions and states, and they are defined as words that may take irrealis marking as well as the verbal derivations presented in Section 3.2.3. Jedek verbs function most commonly as predicates. The most important distinction within the class of verbs is that between dynamic and stative verbs.

Dynamic verbs denote actions or processes, such as *bay* ‘to dig’ and *gɔs* ‘to live’. While dynamic verbs denote situations that involve some form of internal change, stative verbs do not. Stative verbs are distinct from dynamic verbs also in their morphological and syntactic characteristics. While dynamic verbs are obligatorily marked with preverbal subject- or irrealis-marking (except in the case of imperative constructions, see Section 3.3.11), this is not obligatory for stative verbs (28a). Stative verbs may also be used as adverbial modifiers of other verbs (28b), and be used attributively in their root form, as in *jkɔp bəw* [snake to.be.big] ‘a big snake’.

- (28) a. *ta?* *ʔapɔh,* *we?* *makɔw* *ja=blap* *ma=lbit*  
 NEG anything to.exist tobacco RT=NEG IRR=to.be.tired  
 ‘It’s ok, I’ve got tobacco so I won’t get tired.’
- b. *ʔel* *gnɔ?*, *ʔel* *d=ʔabən* *buku* *ʔo?* *ʔo?* *sayerŋ*  
 to.look to.be.quiet to.look REL=to.be.good book 3SG 3SG to.love  
 ‘Look quietly, look carefully at her book, it’s dear to her.’

Meanwhile, dynamic verbs require nominalization (see Section 3.2.3) if they are to be used attributively, as in *baju?* *p<n>ʔji?* [shirt to.sleep<NMZ>] ‘pajamas’ – most likely a calque from Malay *baju tidur*. This feature of stative verbs is shared with Ceq Wong and Maniq (Kruspe et al. (2015); see Wnuk (2016) for in-depth discussion of the two verb types in Maniq). Stative verbs refer to states and include verbs of existence and non-existence (*we?* ‘to exist’ and *blap* ‘to not exist’, which also functions as a negator; see Section 3.3.12), and the adjective-like property verbs which denote properties of referents, such as *ʔhəy* ‘to be small’ and *mɔji?* ‘to be far’.

The citation form of dynamic verbs most often consists of the verb plus preverbal subject marking, typically the 3rd person singular, as in *ʔoʔ lwec* [3SG to.climb] ‘to climb’. Irrealis-marked forms (see Section 3.3.11.1 below) may also be used as citation forms of dynamic verbs, as in *ma=cip* [IRR=to.go] ‘to go’. For stative verbs, the unmarked form (without irrealis proclitics or preverbal subject-marking pronouns; see Section 3.3.2) is used as citation form (as in *bəw* ‘to be big’).

### 3.3.11 Markers of modality

In Jedek, two kinds of proclitics attach to verbs to express modality: the irrealis and the imperative proclitics. While their domain of attachment is the entire clause, their phonological host is always a verb.

#### 3.3.11.1 Irrealis

Jedek has three irrealis proclitics which vaguely encode subject: *ma=* is used for all persons except 3rd person singular, for which the form *ʔom=* is used; *na=* is a less common allomorph of *ma=* variably used only in the case of 1st person singular.<sup>14</sup> The form *ʔom=* is likely a merging of the 3rd person singular pronoun *ʔoʔ* and a reduced form *-m*, thought to have originated in the irrealis form *ma=*.<sup>15</sup> It might be argued that *ʔom=* has a pronominal status: while *ma=* and *na=* may be preceded by subject-marking pronouns as in (29a, b), *ʔom=* may not. This further suggests that the form originated as a merging involving the pronoun *ʔoʔ*. The use of irrealis proclitics is obligatory in negative clauses, as in (29a). In other contexts they are used to signal the intention that an action/situation should happen, such as in (29b, c). An illustrative example of both uses of irrealis proclitics is seen in (29c).

<sup>14</sup> *Na=* may have roots in Malay *nak*, used to express intended situations (Mintz 1994: 73).

<sup>15</sup> The Jedek irrealis displays features documented in the diverse irrealis paradigms of some other Aslian languages. It shares with Jahai the abstract categorical distinction between 3SG and all non-3SG, although the Jahai forms are different (*wa=* vs. *ya=*, respectively; cf. Burenhult 2005: 110–112). The 3SG irrealis form also bears some resemblance to the Menriq and Batek paradigms, whose irrealis constructions involve systematic replacement of the final consonants of all pronouns with *-m*, much like the 3SG irrealis form in Jedek (Burenhult, field notes; cf. also Temiar irrealis pronouns (Benjamin 2016)). Furthermore, a proclitic *ma=* is the irrealis marker also in Semelai, a distantly related language of the Southern Aslian branch (Kruspe 2004: 161–163).

- (29) a. *blap bɛʔ ma=ʔɛl da=met ʔoʔ*  
 NEG 2SG IRR=to.look GOAL=face 3SG  
 ‘You didn’t look at her face.’
- b. *ʔijn na=wek na=pʔjiʔ*  
 1SG IRR.1SG=to.return IRR.1SG=to.sleep  
 ‘I’m going/want to go home and sleep.’
- c. *ʔoʔ ʔom ʔom=makɔʔ tapiʔ blap*  
 3SG to.want IRR.3SG=to.be.pregnant but NEG  
*ʔom=makɔʔ*  
 IRR.3SG=to.be.pregnant  
 ‘She wants to get pregnant but she’s not.’

### 3.3.11.2 Imperative proclitics

Imperative clauses in Jedek are formed with the imperative form of verbs. The imperative form is unmarked, i.e., it is not marked by subject-marking pronouns or irrealis proclitics. Three proclitics with imperative function (*ka=*, *ca=*, and *ha=*) may optionally be added to verbs to express meanings ranging from commands (30a) to suggestions (30b). *Ka=* and *ca=* are equivalent and are placed at the left edge of a verb in imperative form, and *ha=* is attached to the second and subsequent verbs of a sequence of verbs with imperative function (30b). Invitational and beckoning particles *lah* ‘come on!’ and *pey* ‘come here!’ also have imperative functions. While *lah* is used in contexts where both speaker and addressee are to embark on the movement together (30c), *pey* is used in contexts where the interlocutor is beckoned to move toward the speaker (30d). The verb *bah* ‘to go to a place’ is also commonly used in imperative contexts instructing the interlocutor to move in a direction away from the speaker (as in (25c) above).

- (30) a. *ka=ŋɔk ba=ʔaniʔ baliʔ*  
 IMP=to.sit GOAL=there CURSE  
 ‘Sit over there!’ [a mother’s irritated command to her daughter]
- b. *ja=wek ha=ʔnay*  
 RT=to.return IMP=to.bathe  
 ‘Go home and bathe.’ [a polite response to the greeting that one is on one’s way home to bathe]
- c. *lah hey cip hey bliʔ leh*  
 INV 1DU.INCL to.go 1DU.INCL to.buy EMPH  
 ‘Come on, let’s go and buy (groceries)!’

- d. *pey da=ʔũh*  
 BECK GOAL=here  
 ‘Come here!’

### 3.3.12 Negators

Jedek has a number of negators which attach to the left edge of an irrealis-marked (see Section 3.3.11.1) verb. The dominant Jedek negator is *blap*, but six additional negators have been recorded: *braʔ*, *ckɔʔ*, *makaʔ*, *ʔayan*, and the borrowed *bukan* and *takan*,<sup>16</sup> as well as the prohibitive *ʔaket*. *ʔayan* and *bukan* are typically used as nominal negators and tend to be more common in contexts where it is the identity of the negated referent that is in focus, as in (31b), but may also be used in the same way as the other negators. *Takan* tends not to be used in contexts referring to situations in the past; otherwise, no apparent semantic differences have been found between the different negators. Apart from when they are used nominally (in the case of *bukan* and *takan*), negators are placed at the left edge of an irrealis-marked verb, as in (31a). Prohibitive marker *ʔaket* is placed at the left edge of verbs in imperative form. The form *blap* also functions as the stative verb ‘to not exist’. The Malay negator *tak ~ tidak* has been borrowed as part of some common expressions such as *taʔ ʔapɔh* [NEG anything] ‘it doesn’t matter; it’s o.k.’ and *taʔ pmah* [NEG ever] ‘never’.

- (31) a. *blap ʔapay ma=pakey bajuʔ*  
 NEG 1PL.EXCL IRR=to.wear shirt  
 ‘We didn’t wear t-shirts.’  
 b. *bukan ʔnjɔʔ ʔijn blaʔ*  
 NEG sarong 1SG self  
 ‘It’s not my own sarong (it was given to me by a friend).’

### 3.3.13 Interrogative

Polar questions are formed in Jedek by placing the interrogative proclitic *ha=* at the left edge of a clause, see (32).

- (32) *ha=bɛʔ ma=ɲɔk can=ton d=bɛʔ*  
 Q=2SG IRR=to.sit SOURCE=there CONTR=2SG  
 ‘Do you intend to sit there?’

<sup>16</sup> Cf. Malay *takkan*, a reduced form of *tidak akan* ‘will not’.



### 3.3.14 Conjunctions/connective words

A number of conjunctions are used to connect and relate phrases or clauses to one another. One coordinating conjunction, the comitative preposition *lɔʔ* ~ *ʔabɔʔ* ‘with/and’ acts as an additive conjunction, typically used to coordinate noun phrases, as in (33a). Eight subordinating conjunctions, all borrowed from Malay, are also used: the causal *pasəl* (33b) (from Malay *pasal* ‘on the subject of, about, concerning’), *malum* (from Malay *maalum* ‘known, grasped, understood’), *dapun* (from Malay *ada-pun* ‘now’), and *sbap* (from Malay *sebab* ‘because’), conditional *ʔamun* (from Malay *amun* ‘provided that’), *misaʔ* (possibly from Malay *miseh/maseh* ‘yet, still, continuously’), and *kaluʔ* (from Malay *kalau*, ‘if’), and the temporal *lɔəs* (from Malay *lepas* ‘after’). The four causal conjunctions appear to be used interchangeably, as do the three conditional conjunctions – the forms cannot be semantically differentiated at this point.

- (33) a. *ʔaŋket makɔw lɔʔ haliʔ mɛʔ*  
 to.get tobacco and leaf mum  
 ‘Fetch mummy’s tobacco and rolling-leaves.’
- b. *kɔm hagas pasəl ʔoʔ hltuh k=haliʔ*  
 many mosquito because 3SG to.fall SUB=leaf  
 ‘There’s lots of mosquitos because the leaves have fallen (from the trees).’

### 3.3.15 Auxiliaries and adverbs

Jedek has a number of elements that modify verbs and clauses, including a number of adverbs (Section 3.3.15.1), relational tense marker *ja=* (Section 3.3.15.2), a number of negators (see Section 3.3.12 above), interrogative proclitic *ha=* (see Section 3.3.13 above), and the emphatic particle *leh* (Section 3.3.15.3).

#### 3.3.15.1 Adverbs

Jedek has a number of indigenous and borrowed adverbs. Postverbal adverbs include the indigenous *hayeʔ* ‘also’, *sʔoʔ* ‘just, only’, *wel* ‘again’, and *sut* ‘always’ and the borrowed *sʔomo* ‘always’ (from Malay *seumur* ‘whole, entire’), *lagiʔ* ‘more, still, yet’ (from Malay *lagi* ‘more, again, still’), *trus* ‘straight away’ (from Malay *terus* ‘straight away’), and *dah* (from Malay *sudah* ‘already’). Two

adverbs typically occur clause-initially: the borrowed *saja?* ‘just’ (from Malay *saja* ‘just, only’) and *baru?* ‘newly, just now’ (from Malay *baru* ‘new, anew’), see (34a). The adverb *s?o?* ‘just, only’ is often used in polite commands or invitations, as in (34b). Property verbs may also be used to modify other verbs, thus functioning as adverbs, most commonly occurring postverbally, as in (34c).

- (34) a. *baru?* *?o?* *wek*  
 newly 3SG to.return  
 ‘She’s just gotten home.’
- b. *tutup* *s?o?* *hãŋ*  
 to.close only mouth  
 ‘Close your mouth.’
- c. *?o?* *ci?* *nasi?* *lagi?* *ton,* *?om=ci?*  
 3SG to.eat.starchoy.food rice still that IRR.3SG=to.eat.starchoy.food  
*s?o?* *hakïy*  
 only to.be.slow  
 ‘She’s still eating rice, she’s just eating.’ [of someone we were waiting for]

### 3.3.15.2 Relational tense (RT)

The proclitic *ja=* may be attached to the left edge of a verb to express temporal or consequential meanings. In its temporal sense it is used to denote that the situation referred to in the clause is temporally either anterior (35a) or posterior (35b) to the present time or some other time referred to in the utterance. In anterior contexts *ja=* is often used interchangeably with or in combination with the adverb *dah* (35a). Used in negative contexts, *dah* denotes that a situation is no longer the case, akin to English *anymore*, as in (35c). Where *dah* is combined with irrealis proclitics (see Section 3.3.11.1) it denotes that something is or was about to happen, as in (35d).

In its consequential sense the relational tense proclitic is used to introduce a result, as in (35e). It is also used as a discourse connector, as in (35f), and may be attached to a verb in imperative form as part of commands, as seen in (25c) and (30b) above.

- (35) a. *tani?* *ja=?o?* *pih* *dah* *Yati*  
 there RT=3SG to.wake.up already Yati  
 ‘There, Yati’s woken up now.’
- b. *pukul* *dwa?* *blas* *satu* *?nuy* *ja=?iŋ* *p?ji?*  
 o’clock twelve one later RT=1SG to.sleep  
 ‘At twelve, one o’clock I’ll have a nap.’

- c. *blap ma=lbit dah ja=?in p?ji? dah ka?ün*  
 NEG IRR=to.be.tired already RT=1SG to.sleep already PSTPROX  
 ‘I’m not tired anymore, I had a nap before.’
- d. *?om=ki? dah*  
 IRR.3SG=to.vomit already  
 ‘She was close to vomiting.’
- e. *kalu? ?o? ?o k=ci?gu ?apay ja=?apay*  
 if 3SG to.request SUB=teacher 1PL.EXCL RT=1PL.EXCL  
*mlawat*  
 to.vacation  
 ‘If our teacher tells us to we’ll go on a trip.’
- f. *m?h jok ja=m?h ?ok la=ton, ja=m?h*  
 2SG to.move.around RT=2SG to.sit LOC=there RT=3SG  
*b-cp-cip*  
 PROG-IPFV-to.go  
 ‘You move around, then you stay there, then you walk.’

### 3.3.15.3 Emphasis

The particle *leh*, which may be placed after any element, has the function of adding emphasis. The form originates in the Malay emphatic particle *lah*. The adverb *dah* also takes on an emphatic function when used in combination with the emphatic particle *leh*, as in (36).

- (36) *hã leh ma=c?l nay ?o? cin leh dah*  
 yes EMPH IRR=to.speak only 3SG this EMPH EMPH  
 ‘Yes, I’ll just tell this one (story).’

## 3.4 Phrase and clause structure

### 3.4.1 Basic clauses

Every Jedek clause contains a verb (with the exception of non-verbal clauses, see Section 3.4.2 below). Dynamic verbs (see Section 3.3.10 above) are obligatorily marked with a preverbal subject-marking pronoun, as in (37a), which may be replaced by or combined with irrealis proclitics, as in (37b). Stative verbs (see Section 3.3.10 above) are optionally marked with subject-marking pronouns or irrealis proclitics, (37c). In imperative clauses (described in Section 3.3.11), verbs do not receive subject marking. The order of Jedek constituents is relatively flexible: full subject and object arguments may be placed to the left or the

right of the verb, however their placement to the right of the verb is more common. Considering this and the fact that preverbal subject markers and irrealis proclitics (which make up an obligatory part of dynamic clauses) are invariably preverbal, Jedek may generally be characterized as following a SVO pattern.

- (37) a. *ʔoʔ cip*  
           3SG to.go  
           ‘S/he goes.’  
       b. *ʔiŋ ma=wek dah*  
           1SG IRR=to.return already  
           ‘I’m going home.’  
       c. *bəw liy ʔoʔ*  
           to.be.big body 3SG  
           ‘His body’s big.’

In addition to verbs, a clause may contain noun phrases or prepositional phrases representing full subject or object arguments. Subjects may be specified by a noun phrase preceding or following the verb, or by a prepositional phrase following the verb introduced by subject-marker *k=* or contrastive *d=*, as in (38a). Noun phrases representing direct objects may follow the verb, or, less commonly, precede it. Prepositional phrases representing direct or indirect objects may follow the verb. Where a clause contains both a direct and an indirect object the direct object typically precedes the indirect object. Ellipsis is widespread: omission of either direct or indirect objects, or both, is common and no verb requires either type of object, see (38b). In addition to the verb and its arguments, a clause may contain adjuncts: elements of a clause that are not arguments of the verb (this terminology follows Burenhult (2005)). Adjuncts most commonly occur to the right of the verb and its arguments, as in (38c).

- (38) a. *ʔoʔ ton blap ma=reŋ d=hiʔ*  
           3SG that NEG IRR=to.eat.meat CONTR=1PL.INCL  
           ‘We don’t eat that (animal).’  
       b. *ʔoʔ ʔɛk*  
           3SG to.give  
           ‘S/he gives (something to someone).’  
       c. *giŋ bacaʔ hkiʔ*  
           3PL to.read yesterday  
           ‘They read yesterday.’

### 3.4.2 Non-verbal clauses

Non-verbal clauses do not contain a verb, but rather consist of two noun phrases representing topic and comment. Semantically, non-verbal clauses may be identifying/presentative, as in (39), ascriptive, or locative. As in some other Northern Aslian varieties, but in contrast to Jahai (cf. Burenhult 2005: 125), Jedek does not employ an identificational phrase-coordination marker in this kind of clause.

- (39) *ʔoʔ tūn hayãʔ p<n>ʔjiʔ*  
 3SG that house to.sleep<NMZ>  
 ‘That one’s a sleeping-house.’

### 3.4.3 Complex clauses

Clauses may be combined in Jedek through the use of clause chaining, relative clauses, or complement clauses. In clause chaining, two or more independent clauses are simply placed one after the other, see (40a). Clauses are relativized with relative marker *d=* which attaches to the left edge of the initial constituent of an embedded phrase or clause (see Section 3.3.9 above). A complement clause is a clause which is used as an argument of a verb. A restricted set of verbs may take a complement clause as an argument, examples of verbs recorded so far in this context are the verbs *ʔom* ‘to want’, *yeʔ* or *ʔalah* ‘to refuse’, *sdəp* ‘to be tasty’, *susah* or *payah* ‘to be difficult’, *ʔnsol* ‘to be shy’, *lanʔkay* ‘to be lazy’, *ʔntiŋ* ‘to be afraid’, *pandey* ‘to be good at X’, and *boleh* ‘to be able’. Complement clauses do not receive any special marking: a clause acting as a complement clause has the same structure as when it is used elsewhere, see (40b). The complement of a negative or negated verb receives irrealis marking, as in (40c).

- (40) a. *wih ŋik-ŋək wih cil-cəl, ʔates mejə*  
 3DU DISTR-to.sit 3DU DISTR-to.speak upside table  
 ‘Those two are sitting and talking, on a table.’  
 b. *mŋjiʔ pon ʔoʔ pandey ʔoʔ coŋ*  
 to.be.far also 3SG to.be.good.at 3SG to.follow  
 ‘Even afar, he was good at following us.’  
 c. *ʔiŋ yeʔ ma=ʔãm*  
 1SG to.refuse IRR=to.drink  
 ‘I don’t want to drink.’

### 3.4.4 Noun phrases

Noun phrases consist of a nominal head (which may involve a simple nominal, a compound, or a nominalized verb) plus optional modifiers including pronominal determiners, quantifiers, nominal modifiers, deictic determiners (demonstratives or prepositional phrases), and relative clauses. These elements are arranged around the head noun in the following order, as in (42a, b):

(41) (DET:PRO) (QNT ) **N** (NOM MOD) (REL) (DET:DEI)

- (42) a. *wih*        *dwa?* *tm<a>kal*    *ton*  
           3DU        two    man<COLL>    that  
           DET:PRO QNT    N                    DET:DEI  
           ‘those two men there’
- b. *gin*        *cnɛl*            *gajah*        *d=bəw bəw*            *ton*  
           3PL        origin.being    elephant    REL=to.be.big.to.be.big    that  
           DET:PRO N            NOM MOD REL                    DET:DEI  
           ‘those elephant origin beings that are big’

Where a nominal head is modified by a nominal modifier, they form an “associative phrase” (cf. Kruspe 2004; Kruspe et al. 2015: 447). Such constructions express a range of functions including part/whole relationships as in *tʔa? hobi?* [green.leafy.vegetable casava] ‘casava leaves’, object/purpose relationships as in *baju? p<n>ʔji?* [shirt to.sleep<NMZ>] ‘pajamas’, and possession relationships as in *wɔŋ be ʔijn* [child younger.sibling 1SG] ‘my younger sibling’s child’, among other functions.

## 4 Notes on the lexicon

As mentioned in Section 1, the initial survey uncovered examples of lexicon not recorded among Jedek’s immediate neighbors and relatives within the Menraq-Batek branch of Northern Aslian. Some of this vocabulary has its closest equivalents in the Maniq varieties and/or Ceq Wong and Batek Nong, geographically and genealogically more distant Northern Aslian relatives with which Jedek has no documented history of contact (recall Jedek *ʔijn* ‘1SG’, *pip* ‘ashes’, *ʔɔ?* ‘tiger’, which have cognates in Maniq). The ensuing data analysis has added to this list a number of further candidates, such as *tiwɔ* ‘cream-colored giant squirrel (*Ratufa affinis*)’ (Maniq *ciwɔ* denoting the same species; Ewelina Wnuk, personal communication), *ʔayan* ‘NEG’ (Maniq and Ceq Wong *ʔayan* ‘not’, also recorded in

Batek Deq; Kruspe et al. 2015: 465), and *hagu?* ‘to request’ (Ceq Wong *hago?* ‘to ask’; Nicole Kruspe, personal communication). Furthermore, like the Maniq varieties and Ceq Wong, Jedek has retained the reflex of the proto-Aslian term for blood in the form of *bh̄im* ‘blood’ (Maniq and Kensiw *mh̄im*, Ceq Wong and Batek Nong *mh̄am*; proto-Aslian form rendered as *\*maha:m* by Sidwell & Rau (2015: 256)). The reflex does occur elsewhere in the Menraq-Batek branch but is then limited to certain registers (e.g., myths) or has a restricted meaning, such as Jahai *bh̄im* ‘menstrual discharge’.<sup>17</sup> Historical contact and lexical exchange with the Maniq varieties and Ceq Wong should not be ruled out, but the conservative nature of some of this vocabulary rather suggests that Jedek has retained some terms and form-meaning mappings from earlier stages of Northern Aslian which are now lost among other members of the Menraq-Batek branch.

Jedek also displays terminology or form-meaning mappings which are so far unknown elsewhere in Aslian. One conspicuous example is the word *kmɔc* ‘to die’. Cognates exist in other Aslian languages but with different, typically non-verbal meanings, e.g., Jahai *kmuc* ‘ghost’ (Burenhult 2005: 174), Jah Hut *kmɔc* ‘ghost’ (Diffloth 1976: 76), Semnam *kmuuc* ‘tiger’ (Burenhult & Wegener 2009: 304), Semaq Beri *kmuc* ‘deceased person’ (Nicole Kruspe, personal communication), and Mah Meri *kəmuɔc* ‘burial site, grave’ (Kruspe 2010: 90). Other examples include the form *blap* as negator and negative existential verb ‘to not exist’ (corresponding in form but not function to, e.g., the Jahai adverbial *blap* ‘only’), *bteh* as a basic term for ‘red’, *raŋah* ‘hornbill species’, *karēs* ‘gaur, wild ox (*Bos gaurus*)’, and *put* ‘porcupine species’.

Turning to basic vocabulary shared with Jedek’s three closest neighbors and relatives Jahai, Menriq, and Batek Deq, we find examples of uniquely shared items with each of these languages. For example, Jedek shares *jɔɔm* ‘to be dirty’ and *ʔabəŋ* ‘to be good’ only with Menriq; *ʔntiŋ* ‘to be afraid’ and *to?* ‘elder sibling’ only with Batek Deq; and *sagup* ‘cloud’ and *pis* ‘to wipe’ only with Jahai. Another noteworthy term shared only with Batek Deq is *klabas* or *tlabas* ‘sun bear (*Helarctos malayanus*)’, cf. Jahai and Menriq *kawip*. These correspondences seem to suggest that the intermediate status of Jedek within Menraq-Batek which is evident in parts of the grammar (e.g., irrealis constructions, Section 3.3.11) is also manifested lexically.

Several other basic meanings are represented by identical forms in Jedek, Menriq, and Batek Deq but not in Jahai: *kawaw* ‘bird’ (Jahai *kawōt*), *ʔasu?* ‘dog’ (Jahai *ʔōt*), *ci?* ‘to eat (starchy food)’ (Jahai *gey*), *makɔ?* ‘egg’ (Jahai *ktit*), *ʔikan* ‘fish’ (from Malay *ikan*, cf. Jahai *ʔikə?*), and *ʔasep* ‘smoke’ (from Malay *asap*, cf. Jahai *ʔyʔey*). This association is in agreement with a pattern of vowel

17 Our Menriq basic vocabulary data differ from Benjamin’s (1976: 103) in this respect. He gives the form *bəhəm* ‘blood’ for the variety he collected.

correspondences (outlined in Section 5 below) which unites Jedek and Menriq and to some extent Batek, but not Jahai, and may hint at a closer historical relationship with Menriq and Batek.

## 5 Notes on comparative phonology

There has been no attempt at an historical reconstruction of the Northern Aslian languages apart from brief preliminary notes by Diffloth (1975: 2–6) and Phillips (2012: 199), so it is problematic to situate our current data in a comparative context. Moreover, extensive lexical exchange between the Northern Aslian varieties has led to a dizzying blend of inherited and borrowed vocabulary which complicates any quest for systematic phonological correspondences. As far as Jedek and its closest relatives are concerned, evident patterns of comparison have so far only been identified among a subset of the vowels. These suggest a closer relationship to Menriq than to either Jahai or Batek. Occasional examples suggest a specific Jedek sound change  $\text{ɔ} \rightarrow \text{ə}$  where the other three languages have retained  $\text{ɔ}$ . Table 5 illustrates these correspondences.

**Table 5:** Vowel correspondences in Menraq-Batek languages.

	Jedek	Menriq	Batek Deq	Jahai
'1PL.INCL'	<i>hiʔ</i>	<i>hiʔ</i>	<i>heʔ</i>	<i>heʔ</i>
'bone'	<i>jʔiŋ</i>	<i>jʔiŋ</i>	—	<i>jʔeŋ</i>
'to make'	<i>diʔ</i>	<i>diʔ</i>	<i>deʔ</i>	<i>deʔ</i>
'thorn'	<i>jliʔ</i>	<i>jliʔ</i>	<i>jliʔ</i>	<i>jleʔ</i>
'tongue'	<i>lntik</i>	<i>lntik</i>	<i>lntĩk</i>	<i>lntek</i>
'butterfly'	<i>tawāk</i>	<i>tawāk</i>	<i>tawāk</i>	<i>tawēk</i>
'breast'	<i>ʔām</i>	<i>ʔām</i>	<i>ʔām</i>	<i>ʔēm</i>
'to eat vegetables'	<i>hāw</i>	<i>hāw</i>	<i>hāw</i>	<i>hēw</i>
'tooth'	<i>hāŋ</i>	<i>hāŋ</i>	<i>hāŋ</i>	<i>hēŋ</i>
'to squeeze'	<i>cpēt</i>	<i>cpēt</i>	<i>cpīt</i>	<i>cpīt</i>
'left side'	<i>wēʔ</i>	<i>wēʔ</i>	—	<i>wīʔ</i>
'to rain'	<i>hēc</i>	<i>hēc</i>	<i>hāc</i>	<i>hĩc</i>
'tail'	<i>hatēʔ</i>	<i>hatēʔ</i>	<i>hacēʔ</i>	<i>hatĩʔ</i>
'to be short'	<i>cnhēt</i>	<i>cnhēt</i>	<i>cnhāt</i>	<i>cnhēt</i>
'other'	<i>pāw</i>	<i>pāw</i>	<i>pōw</i>	<i>pēw</i>
'back'	<i>krəʔ</i>	<i>krɔʔ</i>	<i>krɔʔ</i>	<i>krɔʔ</i>
'underside'	<i>kyəm</i>	<i>kyɔm</i>	<i>kyɔm</i>	<i>kyɔm</i>



## 6 Conclusions

The above sections have introduced for the first time a previously unidentified Aslian variety, proposed here to receive the scientific label Jedek, and provided an outline of its grammatical and lexical characteristics. The study is an important one, being as it is only the second description of a variety of the Menraq-Batek group of the Northern Aslian subbranch. Previously we had detailed knowledge only of Jahai from this group and did not know to what extent its structural features were common across the group. A number of typological features of Jedek are indeed shared with Jahai as well as other described languages of the Aslian branch of Austroasiatic. For example, Jedek's phonemic distinctions, its rich and productive derivational paradigms and processes, as well as elaborate deictic classes, are shared by its Aslian relatives. However, a range of phenomena revealed by this study are not shared by Jahai, and several features of Jedek are either undocumented elsewhere in Aslian or attested only in distantly related Aslian languages. These Jedek-specific features are found at all formal levels of language, from phonetics and phonology to morphological paradigms and processes, as well as in the syntax. Unlike its closest Northern Aslian relatives, Jedek allows open final syllables. It makes pronominal distinctions which are not shared by close Northern Aslian relatives and, conversely, it has a formally less elaborate demonstrative paradigm in comparison to those same relatives. Furthermore, the Jedek paradigms of interrogatives and irrealis forms lack direct parallels in other Aslian languages, and its strategies of negation and argument-marking appear to be distinct. Jedek's lexicon is still largely unexplored, but on the basis of forms collected so far it is clear that it harbors basic terminology and principles of lexicalization which are either unrecorded elsewhere, or present only in more distantly related languages. This points to an element of lexical retention and conservatism not encountered in Jedek's close relatives. Our previous phylogenetic analyses of basic vocabulary, as well as our preliminary attempts here to map sound correspondences, similarly provide indications of a separate historical signal.

Like other unidentified languages, Jedek bears witness to the existence of not only undocumented but also entirely unrecognized linguistic diversity. It also reminds us of the existence of urgent but undiagnosed cases of endangerment. Linguistic surveying was critical to the discovery of Jedek. Although not typically a prioritized aspect of language documentation funding initiatives, surveying is clearly fundamental to the galvanization and regeneration of the documentation enterprise and to maximizing informed future coverage of the poorly charted corners of the world of languages. In the case of Jedek, brief surveying has

brought about an unexpected opportunity to deepen our understanding of the linguistic history of the Malay Peninsula, the typological diversity of Aslian, Austroasiatic, and Southeast Asia at large, as well as the dynamics of language use and maintenance in highly multilingual small-scale speech communities.

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**Abbreviations:** 1/2/3 = 1st/2nd/3rd person; BECK = beckoning particle; CAUS = causative; CLF = classifier; COLL = collective plural; CURSE = cursing word; DEI = deictic; DET = determiner; DISTR = distributive; DU = dual; EMPH = emphatic particle; EXCL = exclusive; CONTR = contrast-marking preposition; GOAL = goal-marking preposition; IMP = imperative; INCL = inclusive; INSTR = instrument-marking; INV = invitational particle; IPFV = imperfective; IRR = irrealis; ITER = iterative; LOC = location-marking preposition; N = noun; NEG = negator; NMZ = nominalizer; NOM MOD = nominal modifier; OBJ = object-marking preposition; PL = plural; PRO = pronominal; PROG = progressive; PROP = property; PSTDIST = distant past; PSTPROX = recent past; Q = question proclitic; QNT = quantifier; REL = relative; RT = relational tense; SG = singular; SOURCE = source-marking preposition; SUB = subject-marking preposition; UNIT = unitization.

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