Distinguishing *already* from Perfect Aspect: A Case Study of Javanese *wis*

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English *already* and the perfect aspect are both acceptable in many of the same environments. For example, both can express the recent past, an experiential reading, or a result. In investigating the semantics of a marker with these properties in an understudied language, it is easy to categorize such a marker as either notion. The auxiliary *wis* in Javanese (Western Malayo-Polynesian) is a case in point: different grammars, typological studies, dissertations, and journal articles on Javanese have glossed *wis* as expressing *already,* a (present) perfect, a past tense, or a perfective. However, the semantics of Javanese *wis* has not been formally studied. In this paper, we first identify several cross-linguistic properties that distinguish *already* from the perfect aspect. Using these diagnostics, we then propose that Javanese *wis* cannot be analyzed as a perfect aspect. Instead, *wis* is a focus operator that presupposes that the focus is a maximal element among a set of ordered alternatives, following Krifka's recent analysis of English *already.*

1. INTRODUCTION.[1] English *already* and the perfect aspect are acceptable in many of the same environments, since both refer to an event prior to the utterance time without relying on a specific past reference time. For instance, both *already* and the perfect can express the recent past, an experiential reading, or a result. In examining the semantics of a marker that expresses these properties in an under-studied language, it is easy to categorize such a marker as either notion. Possible misanalysis between *already* and the perfect aspect is reinforced in questionnaires for cross-linguistic semantic use such as that of Dahl (1985), wherein many of the questions identified as targeting perfect aspect could equally target *already*. Indeed, Dahl himself notes (1985:129) that, in Yoruba, the particle used in perfect contexts "also has the (basic?) meaning *already*."

Given the similar attributes of *already* and the perfect, our main goal is to establish a set of diagnostics to distinguish them for cross-linguistic use. The auxiliary *wis* in Javanese (Western Malayo-Polynesian) presents an ideal case study, as it has been variously

characterized as *already*—in, for example, Robson's (2002) student grammar and the first entry for *wis* in Robson and Wibisono's (2002) Javanese-English dictionary—or as a perfect, as in Dahl's (1985) typological study. Javanese *wis* has also been glossed as a perfective in a number of theses (Conners 2008; Hoogervorst 2010; Vander Klok 2012), and defined as a past tense marker (in the second entry in Robson and Wibisono's dictionary). This paper is the first targeted investigation of the semantics of *wis* in Javanese, and we present new data on this auxiliary from primary fieldwork on a dialect of Javanese spoken in Paciran, East Java, Indonesia. We argue that based on our set of diagnostics, Javanese *wis* can only have the semantics of *already*, and we provide an analysis of it broadly following the semantics that Krifka (2000) proposes for English *already*.

This paper is structured as follows. We first show in section 2 that *wis* in Javanese cannot be analyzed as a perfective or a past tense marker. This leaves the question of whether *wis* is best analyzed as a perfect aspect marker or as a marker denoting *already*. After highlighting the close similarities between *already* and the perfect aspect in section 3, we devote section 4 to identifying general cross-linguistic properties that distinguish *already* from perfect aspect. We present the following diagnostics:

(i) truth-conditional equivalency in interactions with negation (or the duality of *already*) (Löbner 1989, 1999; König 1977, 1991; Krifka 2000);

(ii) an "earliness" implication (Löbner 1989; Mittwoch 1993; Michaelis 1992, 1996; Krifka 2000);

(iii) inchoative interpretation with stative predicates;

(iv) compatibility with adverbs specifying a past time interval (Giorgi and Pianesi 1997; Portner 2003); and

(v) the "Extended Now" interpretation (McCoard 1978).

Based on this set of diagnostics, we propose that Javanese *wis* cannot be analyzed as a perfect aspect; instead, *wis* expresses *already*. We show that Javanese *wis* interacts with negation as a dual, has an earliness implication, and allows for inchoative interpretations with states but not an "Extended Now" interpretation; it thus follows the properties of *already* rather than those of the perfect.[3] In section 5 we argue that *wis* is a focus operator which presupposes that the focus is a maximal element among a set of ordered alternatives, following Krifka (2000) for English *already*.

Our findings have implications for the cross-linguistic study of aspect in understudied languages. This study has the potential to be particularly useful for Austronesian languages, as evident in the following conflicting characterizations: In Colloquial Malay, postverbal/sentence-final *dah* is variously argued to have the semantics of *already* (Soh 2011, 2012) or completive or perfective aspect (Koh 1990:202). Similarly, *sudah* in Standard Formal Malay is argued to be best translated as *already* by Kader (1981:36), but is

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2. The situation is in fact even more complex, since as pointed out by Olsson (2013), there are markers in various Southeast Asian languages that simultaneously display some properties supposedly specific to perfects, and some properties of *already*. Olsson calls such markers "iamitives" (cf. Latin *iam* 'already'). We do not address the proposed iamitive category directly here, but will briefly indicate in section 7 why we are not yet convinced that a separate category is required.

3. *Wis* is compatible with adverbs specifying a past time interval, which on the surface further supports the proposal that it is not a present perfect; however, we argue in section 4 that this diagnostic is not conclusive in Javanese due to independent features of its tense and aspect system.

also argued to express completive or perfective aspect (Omar 1970; Salleh 1989; Soh 1994). In Indonesian, which is closely related to Malay, *sudah* is noted to express properties of both *already* and the perfect aspect (Kaswanti Purwo 1984, 2011; Sneddon et al. 2010; Grangé 2010; Olsson 2013). Finally, Madurese *(el)la* is glossed as *already* and "denotes perfectivity" (Davies 2010:270-1). Our set of diagnostics can be used to help distinguish the closely similar markers *already* and the perfect, which could otherwise be left unnoticed or misanalyzed.

1.1 BACKGROUND ON JAVANESE AND THE MARKER *wis*. Javanese is an SVO Western Malayo-Polynesian language of the Austronesian family, spoken by over 90 million people in Indonesia, primarily in central and east Java. The data in this paper are from an understudied and underdocumented dialect of East Javanese spoken in Paciran, which is part of the Pesisir continuum along the northern coast of central and east Java (Hoogervorst 2010). All our examples are from fieldwork on Paciran Javanese, unless otherwise noted.

A well-known property of Javanese is its speech levels: *ngoko* 'Low Javanese', *madya* 'Mid Javanese', and *krama* 'High Javanese' (for example, Errington 1985, 1988). Geography also plays a role in the knowledge and use of all speech levels. In the principalities of Yogyakarta and Solo, where the Javanese court resides, these speech levels are important, although *krama* 'High Javanese' is becoming endangered as its domains of use are shifting (see, for example, Kurniasih 2006; Poejosoedarmo 2006; Smith-Hefner 2009; Zentz 2012; Cohn and Ravinandrath 2013). Further from the Javanese court center and in smaller villages, speech levels tend to play less of a role (Hatley 1984) and reflect different notions of politeness (Hoogervorst 2010:32) or intimacy (Goebel 2010 and references therein). The village of Paciran in East Java, where our data are collected, is situated approximately three hours west of the major city Surabaya and ten hours northeast of the Yogyakarta-Solo principalities. Paciran reflects the effect of geography on speech levels in that speech levels are not widely or regularly used there. Our Paciran Javanese data are primarily in *ngoko*, the everyday speech of the villagers.

Predicates in Javanese are not inflected for tense, aspect, gender, or number (Horne 1961; Robson 2002). With respect to tense specifically, Javanese does not have grammaticalized overt tense markers. We assume that Javanese is a tenseless language in the sense of Tonhauser (2011), whereby there is (also) no covert tense morpheme. A Javanese predicate (event or state) with no tense, aspect, or modal marker is compatible with past, present, or future temporal reference as provided by a context. For instance, the predicate *marut kelopo* 'shave coconut' is possible as a response to a question about a past, present or future reference time, and can be translated as either past, present, or future in English:[4]

(1) A: Wingi / saiki / sesok   ewoh opo?
        yesterday / now / tomorrow busy   what
        'Yesterday what [were you] doing?'   PAST
        'Now what [are you] doing?'   PRESENT
        'Tomorrow what [will you be] doing?'   FUTURE

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4. Abbreviations not covered by the Leipzig Glossing Rules are: AV, actor voice; CIRC, circumstantial modality; EXP, experiential; KE. *ke* verbal prefix; KRAMA, High Javanese; LNK, linker; NE,*(n)e* adverbializer suffix; POS = possibility, PRT = particle, RED = reduplication.

B: Aku marut kelopo.
   1SG   AV.grate coconut
'I shaved coconut.' or 'I was shaving coconut.'   PAST
'I am shaving coconut.'   PRESENT
'I will be shaving coconut.'   FUTURE

It is important to point out that the absence of tense in no way rules out the possibility that Javanese possesses a perfect aspect. For example, Paraguayan Guaraní, which is analyzed by Tonhauser (2011) as tenseless, has a well-developed aspectual system, including a perfect morpheme. Javanese also has a number of markers with aspectual meanings that help disambiguate the temporal reference of predicates, such as *tau* 'EXP.PRF' or *lagi* 'PROG' (Standard Javanese; Robson 2002) */(la)gek* 'PROG, just' (Paciran Javanese; Vander Klok 2012).

In this paper, we are concerned with the auxiliary *wis*. While we do not make any claims about the specific semantics of *wis* in other dialects of Javanese (given that Javanese dialects vary significantly from each other in both lexical and grammatical properties), we do note that properties of *wis* seem to be stable across dialects, and therefore the proposed analysis for *wis* may be appropriate for the Javanese language in general. For instance, its lexical form has the same instantiation across a number of dialects, as indicated in table 1.[5] This is different from other auxiliaries across Javanese dialects, such as the future-oriented root modal, which has different lexical forms: *ape* (Paciran), *arep* or *bakal* (Standard), *meh* (Peranakan), and so on (cf. Vander Klok 2012:35,141–45).

The syntactic position of *wis* is also stable across Javanese dialects. *Wis* can occur between the subject and the predicate, but can never occur sentence-initially; see (2).

TABLE 1. THE MARKER *wis* ACROSS A NUMBER OF JAVANESE DIALECTS

Form	Dialect	Reference
wis	Cirebon, West Javanese	Ewing (2005)
wis	Tegal, Central Javanese	Suwadji (1981)
wis	Semarang, Central Javanese	Goebel (2002, 2005, 2010)
wés, wis	Yogyakarta, Central Javanese Solo, Central Javanese ("Standard" Javanese)	Favre (1866); Horne (1961); Robson (2002); Robson and Wibisono (2002); Wedhawati et al. (2006)
wis	Peranakan; Semarang, Central Javanese	Cole, Hara, and Yap (2008)
wis	Tengger, East Javanese	Conners (2008)
wis	Surabaya, East Javanese	Hoogervorst (2010)
wes, wis	Paciran, East Javanese	Vander Klok (2012)

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5. The different spellings reflect the facts that (i) the Romanization of Javanese orthography has various forms and (ii) dialects have different phonology. Concerning orthography, only Standard Javanese as spoken in the principalities of Yogyakarta and Solo has a standardized orthography; other dialects of Javanese are uncodified. The form *wés* is from Horne (1961); she distinguishes the vowel <é> (/ɛ/ in open syllables; /ɪ/ in closed syllables) from <è> (schwa). Concerning phonological differences across dialects, East Javanese vowels are lowered in closed syllables (Hoogervorst 2010). Paciran Javanese spelling reflects this fact; Paciran speakers offer both the spellings *wis* and *wes*, but primarily use the form *wes*, which transparently illustrates the vowel lowering. In this paper, we adopt the Standard Javanese form in the text (*wis*), but use *wes* in the examples from Paciran Javanese.

Wis can also occur sentence-finally, but with the addition of the suffix *-an,* as in (3) for Standard Javanese.[6]

(2) PACIRAN JAVANESE
   a. Pak Suwanan **wes**   maten-i   lampu.
       Mr. Suwanan   already AV.die-APPL light
       'Mr. Suwanan has turned off the light.'

   b. ***Wes** Pak Suwanan mateni lampu.   (Vander Klok 2012:57)

(3) STANDARD JAVANESE
   a. Tinah **wis**   budhal sekolah.
       Tinah   already leave   school
       'Tinah already left for school.'

   b. Tinah budhal sekolah **wis-an**.
       Tinah   leave   school   already-AN
       'Tinah left for school already.'
                          (Wedhawati et al. 2006:498; morpheme gloss and English translation added)

The sentence-final position has been documented across dialects, such as in Standard Javanese (Robson and Wibisono 2002; Wedhawati et al. 2006); Semarang Javanese (Goebel 2002; our fieldwork); Surabayan Javanese (Hoogervorst 2010); Tengger Javanese (Conners 2008); and Paciran Javanese (our fieldwork). We return to this property of *wis* in section 5.

Concerning its semantics, the auxiliary *wis* in Javanese has been defined or characterized in at least four different ways (*already,* perfect, perfective, or past tense).[7] Considering traditional grammars on Standard Javanese, an early grammar written in French by Favre (1866:124) states that the past tense can be expressed by *wis*.[8] Robson's student grammar (2002:54) states that the auxiliary *wis* expresses "'already'; indicates completion, translate with past tense." Horne's (1961:91) grammar offers 'by this time, by now, already' in sentences and 'yet' in questions for *wis*. Further, Horne states that in nonequative sentences, *wis* "correspond[s] in meaning more closely to the English present perfect tense than to other translations." Wedhawati et al.'s (2006:168-169;498) reference grammar glosses *wis* as '*sudah*' (Indonesian), and offers examples of *wis* as a verb phrase modifier expressing *keusaian* 'perfect', *aspek perfektif* 'perfective aspect' or *keberlangsungan* 'on-going', but does not offer a unified meaning of *wis* (2006:168–69, 498).[9]

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6. A reviewer notes that unaffixed *wis* can also occur sentence-finally (one example is given in Conners 2008:162). We believe that in these cases, *wis* without *-an* represents a separate proposition involving VP-ellipsis and subject pro-drop (wherein the antecedents are taken from the immediately preceding sentence). Further investigation such as on the prosody would serve to corroborate this hypothesis.

7. In order to be clear about the distinction between the perfect and perfective, given potential confusion (cf. Comrie 1976), the perfect "links a present state to a past situation, whether this past situation was an individual event, or a state, or a process not yet completed" (Comrie 1976:62), while "perfectivity involves lack of explicit reference to the internal temporal constituency of a situation … subsumed as a single whole" (Comrie 1976:21).

8. "Le passé s'exprime ordinairement par le moyen des auxiliaires *wus, wis, awis* NG[OKO], *sampun* K[RAMA]" (Favre 1866:124).

9. Wedhawati et al. (2006) do not discuss the distribution of these expressions of *wis*. The *keberlangsungan* 'ongoing' uses only occur with states; see data in section 2 below.

Robson and Wibisono's (2002) dictionary defines *wis* has having two meanings: (i) 'already finished, over, done', and (ii) 'past tense marker'.[10] Dahl (1985), discussed in detail in section 3, proposes that Javanese *wis* is a perfect marker based on answers from his typological survey. Finally, in theses or journal articles on various dialects of Javanese, in which the marker *wis* is not the focus of study, *wis* has been glossed as 'already' (Ewing 2005; Cole, Hara, and Yap 2008) or as a perfective (Vander Klok 2012). Conners (2008:113) on Tengger Javanese glosses *wis* as both 'already' and a perfective. Hoogervorst (2010:29) on Surabayan Javanese glosses *wis* in the examples as a perfective marker, but in the text refers to it as a past tense marker as well as 'already'.

Until now, to our knowledge no one has specifically studied the semantics of *wis* in a targeted fashion. The varying glosses of Javanese *wis* listed above may reflect how easy it is to conflate distinctions that, while similar, can be proven to be distinct in their semantics.[11] After a note on our methodology in 1.2, we show in section 2 that Javanese *wis* cannot be analyzed as expressing perfective aspect or past tense. We then establish a set of cross-linguistic diagnostics to differentiate the perfect from *already*.

1.2 METHODOLOGY. Our data-collection methodology includes a variety of fieldwork methods, including questionnaires, direct elicitation, and recordings of natural conversation. Throughout, we follow Matthewson (2004) in that felicity judgments or grammatical judgments of a sentence are taken as results, and translations and consultant's comments are taken as clues. For instance, one cannot conclude based on a translation of *wis* into the past tense in English that the semantics of *wis* is therefore the past tense.

The questionnaire used in this paper is Dahl's (1985) TMA (tense-mood-aspect) questionnaire, discussed in further detail in section 3. The contact language used was English, and two consultants were asked to translate sentences as well as the contexts in the questionnaire from English to Javanese. Elicitation was conducted individually with four consultants as well as in a group setting with two to six consultants. Elicitation was mainly conducted monolingually, with Javanese being both the contact and object language; otherwise, either English or Indonesian were occasionally used as the contact language. Consultants often used Indonesian or, to a lesser degree, English to give comments or translations. Only four of the eleven consultants had knowledge/some fluency of English. For elicitation involving translation from Javanese to English, we offered the English translations for acceptance to these four consultants only. Finally,

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10. Although the separate entries for *wis* in Robson and Wibisono (2002) indicate that *wis* has two different grammatical categories, it is not clear what they specifically correspond to.

11. Another hypothesis, pointed out to us by a reviewer, is that there are homophonous *wis* morphemes, perhaps similar to how Robson and Wibisono (2002) define *wis*. We argue that this hypothesis is not substantiated by the data. As shown in section 2, *wis* does not conform to properties of either a past tense or a perfective marker. Further, in section 3, we show that *wis* behaves as expressing only 'already' according to diagnostics used to distinguish 'already' from the perfect. Beyond these arguments, we have found no additional reasons that could indicate there are homophonous *wis* markers. For instance, we show below that although *wis* has two different syntactic positions—between the subject and predicate and sentence-final, affixed with *-an*—this different distribution and morphological requirement does not correlate with different semantics. This contrasts with preverbal vs. postverbal/sentence-final *dah* in Colloquial Malay, which *are* argued to have different semantics (see Soh 2011, 2012).

examples involving conversational or interview data are taken from our ELAN database of close to nine hours of recordings in Paciran Javanese.

2.   JAVANESE *WIS* CANNOT BE A PAST TENSE OR A PERFECTIVE ASPECT MARKER.   In this section, we first show that Javanese *wis* cannot be a past tense marker as claimed in Favre's (1866) grammar and Robson and Wibisono's (2002) dictionary, both on Standard Javanese. In general, under the hypothesis that *wis* expresses past tense, we would expect that all event classes have a past time reference with *wis*. However, this analysis immediately runs into problems with stative predicates, as shown in (4). If *wis* were a past tense marker, we would expect that (4) in Paciran Javanese would be best translated as 'Mrs. Siti was fat.' However, stative predicates modified by *wis* do not have a past reference time, but must be interpreted with present reference time, as indicated in the translation of (4). Therefore, stative predicates do not behave as expected if *wis* is a past tense marker. Another example, from Standard Javanese, is given in (5).[12] We give additional examples of obligatory present reference time with both individual-level and stage-level stative predicates in 4.3 below.

(4)   Bu   Siti   **wes**   lemu.
    Mrs.   Siti   already   fat
    'Mrs. Siti is (already) fat.' / #'Mrs. Siti was fat.'

(5)   Saqiki,   dhèwèqé   **wés**   adôh   banget   sôkô   oma-é.
    now   3SG   already   far   very   from   house-DEF
    'He's a long way from home by now.'
      (Horne 1961:92, morpheme glosses added)

Second, we argue that the auxiliary *wis* in Javanese cannot be a perfective marker, as glossed in Conners (2008), Hoogervorst (2010), and Vander Klok (2012).[13] Languages that have perfective aspect also have a contrasting imperfective. However, some languages only overtly mark one of these aspects; across languages, there is no "marked/unmarked" distinction between the perfective/imperfective aspect (for example, Dahl 1985; Dahl and Velupillai 2013). At first glance, it could be the case that *wis* marks perfective aspect overtly, while imperfective aspect in Javanese is not overtly marked. This partition would predict that all sentences with the marker *wis* are perfective and all those without are to be understood as imperfective. However, this prediction is not upheld in either direction.

First, if *wis* marks perfective aspect, we would expect that *wis* is incompatible with a habitual interpretation, since the habitual is considered to be a typical reading of imperfective aspect (Comrie 1976:25). In Javanese, an overt adverb such as *gawene* 'habitually', *adate* 'customarily', or *biasane* 'usually' may indicate habitual aspect. Contrary to the predictions if *wis* were a perfective, *wis* can cooccur with adverbs indicating habitual

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12. We maintain Horne's (1961) Javanese spelling and orthography in her examples.

13. Dahl (1985:161) mentions that Javanese, similar to the closely related languages Indonesian and Sundanese, does not have grammatical marking to indicate either perfective/imperfective aspect or past tense. He argues that Javanese *wis* is a perfect marker. We agree with Dahl that Javanese does not mark perfective/imperfective aspect or past tense, but we disagree that *wis* expresses perfect aspect.

aspect, as shown in (6) with *biasane* 'usually' in Semarang Javanese and in (7) with *adaté* 'customarily' in Standard Javanese.

(6) SEMARANG JAVANESE
   Aku **biasa-ne wis**   tekan omah jam papat sore.
   1SG usual-NE already arrive house hour four   afternoon
   'I usually (already) arrive at home by 4 o'clock.'

(7) STANDARD JAVANESE
   Aku, **adat-é**   bedhog **wés** tekô ngomah.
   1SG   custom-NE noon   already come AV.house
    'I'm usually home by noon.'   (Horne 1961:92, morpheme glosses added)

Second, if unmarked predicates (without *wis*) are interpreted as imperfective, we would expect that these unmarked predicates will preferentially be interpreted with non-past reference time (to the extent that Javanese falls into the general correspondence of past : nonpast with perfective : imperfective; Dahl 1985:92). However, as shown in (1) above, unmarked predicates are easily compatible with past reference time. Another example is given in (8), from a recorded conversation.

(8) Context: *Bu G. talking to Zum about taking care of her now deceased mother in the past.*

   ... mbes tak ganti banyu kono Yu   Zum.
     then 1SG change water   there older.sister Zum
   '... then I changed the water there, Mrs. Zum.'

In this section, we have shown that *wis* in Javanese cannot be analyzed as a past tense marker or a perfective marker. Two remaining hypotheses are that (i) *wis* could express perfect aspect, or (ii) *wis* could express *already*. We will provide evidence that Javanese *wis* can only express *already*, given that it can express additional meanings such as an earliness implication, discussed in 4.2 below. These additional meanings are also evidence against the hypothesis that *wis* is a perfective or a past tense, as we would not expect these interpretations with either perfective aspect or past tense.

3.   SIMILARITIES BETWEEN *already* AND THE PERFECT ASPECT. Before disambiguating the two hypotheses that *wis* could express perfect aspect or *already*, in this section we first focus on similarities between the perfect and *already* to show how these two hypotheses could easily be conflated or misapplied. We draw on examples from English and Javanese to review these similarities.

First, *already* and the present perfect pattern similarly in that both refer to an event prior to the utterance time without a specific past reference time. Javanese *wis* is compatible with this type of context as shown in (9), from a recording of a conversation, or (10), from elicitation; a further clue is that consultants accepted translations into English with either *already* or the perfect when they were offered to them.

(9) Context: *Bu Z. talking to Bu S. about Jozi's background*.

Wes belajar nek Jogja nem ulan.
already study   at   Jogja six   month
  'She **has studied** in Jogja for six months.'
  'She **already** studied in Jogja for six months.'

(10) Jozi koyok-e **wes**   balek neng Kanada; kok ora ono.
   Jozi like-NE   already return at   Canada   PRT NEG there
   'Jozi likely **has gone** back to Canada; she's not here!'
   'Jozi likely **already** went back to Canada; she's not here!'

In English, it has been noted that the perfect aspect can express a number of different readings, such as the recent past, a result, or an experiential reading (for example, Comrie 1976; Smith 1997). *Already* is similarly compatible with recent past, result state, or experiential contexts (cf. Mittwoch 1988; Michaelis 1992:324):

(11) **Recent past:** (Context: *Jordan left at 8p.m. It is now 8:10p.m.*)
   a. Jordan has (just) left.
   b. Jordan already left.

(12) **Result:**
   a. Andrea has arrived in London.
   b. Andrea already arrived in London.

(13) **Experiential:**
   a. Bethany has visited Edinburgh (before).
   b. Bethany already visited Edinburgh (before).

In fact, *already* often cooccurs with the perfect aspect in English, as shown in the examples from the Corpus of Contemporary American English (COCA) in (14) below. We investigated the contexts of the first 100 occurrences of *already* in a COCA search (conducted on April 9, 2014). Based on this search, we found that *already* cooccurs with perfect aspect in almost one-third of the tokens (27/100).[14] Of these 27 tokens, *already* primarily occurs with the present perfect (21/27); the other 6 tokens cooccur with the past perfect. The frequent cooccurrence of *already* with the perfect observed in this small sample study is expected if they are compatible with the same temporal relations between event time, reference time, and utterance time.[15]

(14) a. This study suggests several directions for further work, some of which we **have already begun** to investigate.

(Cole et al. 2012 via COCA)

   b. A subculture of childlessness **has already developed** in these countries; many people choose to have no children at all.

(Kramer 2012 via COCA)

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14. The other cooccurrences of *already* within this sample are the following: 27/100 with present tense; 9/100 with present progressive; 30/100 with states (13 past participles; 2 gerunds; 15 adjectives); 6/100 with simple past; 1/100 with future progressive.

15. This compatibility has also been noted by Löbner (1989:182) between the perfect and *schon* 'already' in German, in particular for resultative and experiential perfects, as in (i), "where the course of events expressed in these cases is compatible with the perspective of *schon.*"

   (i) Ich habe schon gegessen.
      'I have already eaten.'   (Löbner 1989:182)

Because of these similarities, when it comes to identifying and analyzing an element that is used in situations that meet this temporal configuration in an understudied language, there is a risk of misanalysis. The possibility for misdiagnosing a marker expressing *already* as the perfect, or vice versa, is reinforced in questionnaires for cross-linguistic semantic use, such as that of Dahl (1985). Many of the sentences that are classified by Dahl as hallmark examples of perfect aspect could equally target *already*, as was the case with the data in (11)–(13) above. Consider the examples in (15) from Dahl's questionnaire (Dahl's #64, 42, 56, 53, respectively): (15a) can be considered as expressing recent past, (15b) and (15c) as expressing a result, and (15d) as an experiential reading of the perfect aspect.[16] All examples are from Dahl (19__).

(15) a. Child: Can I go now?
          Mother: You BRUSH your teeth?   (RECENT PAST)
       b. A: Is the King still alive?
          B: (No,) he DI__   (RESULT)
       c. A: I want to give your brother a book to read, but I don't know
                 which. Is there any of these books that he READ already?
          B: (Yes,) he READ this book.   (RESULT)
       d. You MEET my brother (at any time in your life until now)? (EXPERIENTIAL)

In each of these English examples, the uninflected verb in capital letters is equally compatible with three different conjugations: the (present) perfect, the simple past, or the simple past with the adverb *already*. Take (15b) as one illustration. Although Dahl (1985) intends to target the present perfect in response to the question *Is the King still alive?*, it is possible to answer in English with *No, he has died* (present perfect); *No, he died* (simple past); or *No, he died already/No, he already died* (simple past with *already*). One can imagine how easy it is then to misdiagnose an element as one of these semantic notions.

Now consider Javanese. Dahl (1985) reports that, based on his questionnaire, the marker *wis* expresses perfect aspect because it occurs in all of his prototypical examples for the perfect.[17] We reran this questionnaire on the dialect of Paciran Javanese, conducted with two speakers together, and found similar results to Dahl's. Specifically, we found that for the questionnaire examples that have recent past or resultative readings of the perfect aspect, the verbal predicate is modified by *wis* in Javanese, as shown in (16). These examples correspond to Dahl's questions #64, 134, 42, 56, respectively.

(16) a. Child: Aku iso   lungo sa'iki?
                  1SG   CIRC.POSgo   now
                  'Can I go now?

          Mother: Opo awakmu **wes** sikat-an?   (RECENT PAST)
                  Q   2SG   already brush-AN
                  'You BRUSH your teeth?'

---

16. In this questionnaire, participants are asked to translate the English sentences into the object language. To avoid possible influence from the English conjugation, Dahl (1985) presents the target verbs as uninflected verbs.

17. Dahl does not report which dialect of Javanese is researched for the questionnaire. Dahl (1985:39) also notes that the questionnaire was only completed by one consultant for most languages, which likely includes Javanese.

b. A: Awakmu **wes**   krungu berita?
      2SG   already hear   news
      'Have you heard the news?'

   B: Rojo-ne **wes**   teko.   (RECENT PAST)
      king-DEF already co
      'The king ARRIVE'

c. A: Opo rojo-ne iseh urip?
      Q   king-DEF still alive
      'Is the King still alive?

   B: Ora, rojo **wes**   mangkat.[18]   (RESULT)
      NEG   king already pass.away
      '(No,) he D'

d. Context: I want to give your brother a book to read, but I don't
   know which ...

   A: Nek antara-ne buku-buku iki, opo enek buku seng
      if   between-NE book-RED   DEM Q   exist book REL

      wes   di-woco dulur-mu?
      already PASS-read sibling-your

      'Is there any of these books that he READ already?'

   B: Yo, dulur-ku **wes**   moco buku iki.   (RESULT)
      yes, sibling-my already AV.read book   DEM
      '(Yes,) he READ this book.'

With regard to (15d), Dahl (1985) identifies this as a prototypical example of experi-
ential perfect aspect, and he notes that some languages have separate lexical markers for
expressing this perfect reading. Dahl argues that Javanese *tau* expresses this subtype of
perfect aspect. We also find in our fieldwork on Paciran Javanese that the auxiliary *tau* is
used for experiential readings of the perfect. For instance, in the translation of (15d), *tau* is
offered as demonstrated in (17):

(17) Opo awakmu durung **tau**   ke-temu karo dulur-ku sampek sa'iki?
     Q   2SG   not.yet EXP.PRF KE-meet with sibling-my until   now
     'You MEET my brother (at any time in your life until now)?'

While *tau* is the most appropriate marker in Javanese for expressing an experiential
reading of the perfect aspect, *wis* is also compatible with experiential readings, as shown
in (18) for Paciran Javanese (from Dahl's questionnaire #39).

(18) Context: *'Do you know my brother?'*

     Yo, aku **wes**   ke-temu dulur-mu sepisan pirang-pirang taun kepungkor.
     yes, 1SG already KE-meet sibling-your once   RED-some   year ago
     '(Yes,) I MEET him (once) several years ago.'

---

18. In Javanese, when speaking about the King, it is more appropriate to use the high speech level
    krama 'High Javanese'. The answer in *krama* is as in (ii) (where *sampun* is the *krama* counter-
    part to *ngoko* 'Low Javanese' *wis*):

    (ii) Mboten,   rojo-ne   **sampun**   tilar   donyo.
          NEG.KRAMA king-DEF already.KRAMA leave.KRAMA world
          'No, the king has already passed away.'

Without further evidence, the results of this questionnaire for Javanese would lead us to conclude that *wis* is a perfect, as *wis* is acceptable in each of these environments: recent past, resultative, and experiential. This is indeed what Dahl (1985) concludes. However, as shown above in examples (11)–(13) in English, *already* is equally compatible with each of these environments. This compatibility renders Dahl's questionnaire results inconclusive. What is lacking, then, are diagnostics that differentiate the perfect aspect from *already*.

In the following sections, we develop a general set of diagnostics to distinguish *already* from the perfect aspect for use not only in Javanese but across languages. We then specifically revisit Dahl's (1985) claim that Javanese *wis* expresses the perfect by comparing it with *already*.

4. DIAGNOSTICS TO DISTINGUISH *already* FROM THE PERFECT.
We have identified the following diagnostics to distinguish *already* from the perfect in a given language:[19]

    (i)   truth-conditional equivalency in interactions with negation (or the duality of *already*) (Löbner 1989, 1999; König 1977, 1991; Krifka 2000);

    (ii)   "earliness" implication (Löbner 1989; Mittwoch 1993; Michaelis 1992, 1996; Krifka 2000);

    (iii) inchoative interpretation with stative predicates;

    (iv) compatibility with adverbs specifying a past time interval (Giorgi and Pianesi 1997; Portner 2003); and

    (v)   "Extended Now" interpretation (McCoard 1978)

A marker in a given language that expresses *already* could involve (i) duality, (ii) an earliness implication, and (iii) an inchoative interpretation with states; but could disallow (v) an Extended Now interpretation. Evidence that a marker in a given language expresses the perfect aspect could involve (iv) incompatibility with adverbs specifying a past time interval and (v) an Extended Now interpretation. Further, we would expect that a marker expressing the perfect aspect would not have (i) duality or (ii) an earliness implication.[20]

We apply these diagnostics to Javanese *wis,* arguing that *wis* can only express *already*. Specifically, in the following subsections, we show that Javanese *wis* interacts with nega-

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19. A further diagnostic, which we do not discuss, is the incompatibility of *already* with downward-entailing quantifiers (for example, *only*, *less than*) relating to the endpoint of the event. There is cross-linguistic research on such co-occurrence restrictions, on English *already* (Soh and Gao 2008), sentence-final Mandarin *-le* (Soh and Gao 2008; Soh 2008, 2009), postverbal Colloquial Malay *dah* (Soh 2012), and other Southeast Asian languages (Olsson 2013 with the marker for *only*). However, we leave this potential diagnostic aside for future research due to a number of complications that seem to ameliorate the acceptability of at least English *already* with downward-entailing quantifiers. These factors include (i) the syntactic and semantic scope of *already*, (ii) the use of prosody in indicating corrective or contrastive focus, and (iii) the use of different types of predicates.

20. As noted in footnote 2, Olsson (2013) proposes a third category, "iamitives," which displays some properties of both the perfect and *already*. He argues for this new iamitive category primarily on the basis of Southeast Asian languages. Iamitives share a current relevance effect with the present perfect, but share with *already* a presupposition of a prior "negative situation" (that is, a time at which the predicate did not hold). We will indicate in footnotes below how iamitives pattern with respect to each of our five diagnostics, and will return briefly in the final section to why we are not convinced that a separate iamitive category is justified.

tion as a dual, has an earliness implication, and allows for inchoative interpretations with states but not an Extended Now interpretation. We also show that diagnostic (iv), compatibility with adverbs specifying a past time interval, does not lead to conclusive results for Javanese *wis*, since Javanese does not meet the condition of realizing present tense semantically and syntactically.

4.1 DUALITY OF *already*. A first diagnostic that differentiates *already* from the perfect aspect is interaction with negation.[21] This diagnostic picks out *already* in that *already* can be grouped with *still, not yet,* and *no longer/not anymore* based on equivalent truth-conditions in interactions with negation (König 1991; Löbner 1989, 1999; Krifka 2000; among others). Importantly, this property is not upheld with the perfect.[22]

Duality is a property normally discussed with respect to quantifiers (for example, the universal quantifier ∀ and the existential quantifier ∃); it concerns truth-conditional interactions between the quantifiers and negation. The quantifiers ∀ and ∃ are duals because the internal negation of the universal quantifier, $\forall x[\neg P(x)]$, is truth-conditionally equivalent to the external negation of the existential quantifier, $\neg \exists x[P(x)]$. For example, *Every light is off* is equivalent to *It is not the case that some light is on.* Conversely, the external negation of the universal quantifier is equivalent to the internal negation of the existential: $\neg \forall x[P(x)]$ is truth-conditionally equivalent to $\exists x[\neg P(x)]$. Thus, *Not every light is off* is equivalent to *Some light is on.*

Turning to *already*, Löbner (1989, 1999) presents evidence that *schon* 'already' and *noch* 'still' in German, as well as *already* and *still* in English are duals. He does this by testing the equivalency of the internal negation of one with the external negation of the other. This equivalency is observed in English with *already*: the external negation of *already* in (19a) ($\neg already\ p$) is truth-conditionally equivalent to the internal negation of *still* in (19b) ($still\ \neg p$).

(19) ENGLISH
    a. $\neg already\ [p]$ = b. *still* $[\neg p]$
        It is **not yet** [raining].   It is **still** [not raining].

Similarly, in (20), the external negation of *still* in (a) ($\neg still\ p$) is truth-conditionally equivalent to the internal negation of *already* in (b) ($already\ \neg p$).[23] A slight complicating factor is that English uses suppletive forms that are negative polarity items in some of these constructions. Thus, we use *yet* and *anymore* (or *longer*) to relate to *already* and *still*, respectively (Krifka 2000:401).

(20) ENGLISH
    a. $\neg still\ [p]$ = b. *already* $[\neg p]$
        It is **not** [raining] **anymore**.   It is **already** [not raining].

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21. Thanks to both reviewers for helping to improve the clarity of this section.
22. Olsson (2013:35–37) points out that putative iamitives pattern semantically with *already* in their interaction with negation (resulting in the meaning 'no longer'). However, he does not explicitly relate this pattern to the property of duality.
23. This truth-conditional equivalency is shown for *schon* 'already' and *noch* 'still' in German by Löbner (1989, 1999). Van der Auwera (1993:616) gives additional equivalency tests with negation such as 'Peter is already in Madrid' = 'It is no longer the case that Peter is not in Madrid,' or 'Peter is already in Madrid' = 'It is not the case that Peter is not yet in Madrid'. In other words, *already* is equivalent to *not still not,* and *still* is equivalent to *not already not*. These examples proved too difficult to properly elicit in Javanese.

Other languages display the duality more transparently. For example, in Hebrew, there is a duality relation between *kvar* 'already' and *'adayin* 'still'. The external negation of the *kvar* 'already' sentence in (21a) is lexically expressed by the internal negation of *'adayin* 'still', as in (21b). Conversely, the external negation of the *'adayin* 'still' sentence in (21c) is expressed by the internal negation of *kvar* 'already', given in (21d). In other words, *already* means 'not still not' and *still* means 'not already not'.

(21) HEBREW

    a. **kvar**   yored geshem   b. **'adayin lo** yored geshem
       already rain   is   still   not rain   is
      'it is already raining.'   'it is not yet raining.'

    c. **'adayin** yored geshem   d. **kvar lo** yored geshem
       still   rain   is   already not rain   is
      'it is still raining.'   'it is not raining anymore.'

                       (Krifka 2000:401, our glosses and translation)

This related system has been noticed in other languages as well, such as Dutch, French, English (Löbner 1989:170), Spanish, and Czech (Krifka 2000). We will now investigate whether in Javanese, *wis* forms part of a duality system.

If *wis* expresses *already*, then we expect to find truth-conditional equivalencies based on interaction with negation with an item that expresses *still*. In Paciran Javanese, the lexical item *isek* or *ijek* expresses 'still', as shown in (22a). The external negation of (22a) is expressed by the internal negation of *wis* as *wes ora* or *wes gak* in Paciran Javanese.[24] (22a,b) are parallel to the Hebrew forms in (21c,d) above.[25]

(22) a. *isek* [*p*]   b. *wis* [¬*p*]
     isek [udan]   **wes** [**gak** udan]
     still   rain   already NEG rain
     'it is still raining.'   'it is already not raining.'

Further examples of the internal negation of *wis* are given in (23). Again, these are truth-conditionally equivalent to the external negation of *isek* sentences.

(23) a. Pak Khoim **wes** **ora** ngombe jamu   soal-e
     Mr.   Khoim already NEG AV.drink medicinal.tea because-DEF
     wes   waras.
     already recover
     'Pak Khoim doesn't drink medicinal tea anymore because he has recovered.'

    b. Mas Mawon **wes** **gak** ndandan-i jareng-e.
     Mr.   Mawon already NEG AV.fix-APPL fishing.net-DEF
     'Mawon is no longer fixing the fishing net.'

---

24. Although *ora* and *gak* are two different lexical forms of negation, they are interchangeable in most environments in Paciran Javanese. The only distinctions we have found between these forms concern phonological conditioning (to avoid similar sounds) and that *gak* occurs more frequently in this dialect.

25. Explicitly externally negating *isek* 'still' is ungrammatical, as shown in (iii).

    (iii) ***gak isek** [udan]
        NEG still   rain
        Intended: 'it is no longer raining.'

Conversely, if *wis* and *isek/ijek* 'still' are duals, we expect that the external negation of *wis* ($\neg wis$ [*p*]) will be truth-conditionally equivalent to the internal negation of *isek* (*isek* [$\neg p$]). Here, just like English, Paciran Javanese uses a suppletive element—*durung* 'not yet' (Robson and Wibisono 2002:203)—for the external negation of 'already'. This is shown in (24) (cf. the English data in (19)).[26]

(24) a. $\neg wis$ [*p*]   = b. *isek* [$\neg p$]
     durung [udan]   **isek** [**gak** udan]
     not.yet   rain   still   NEG   rain
     'it's not yet raining'   'still not raining'

A further illustration of this correspondence is given in (25): (25b) is the external negation of (25a), and renders the same truth conditions as the internal negation of a corresponding sentence containing *isek* 'still'.

(25) a. Mas Mawon **wes**   ndandan-i jareng-e.
     Mr.   Mawon   already AV.fix-APPL fishing.net-DEF
     'Mawon already fixed the fishing net.'

    b. Mas Mawon **durung** ndandan-i jareng-e.
     Mr.   Mawon   not.yet   AV.fix-APPL fishing.net-DEF
     'Mawon didn't fix the fishing net yet.'

In sum, Javanese shows equivalent truth-conditions based on interaction with negation—duality—between *wis* and *isek*. Importantly, this type of truth-conditional equivalency with regards to the interaction with negation does not hold with the perfect. Therefore, based on the diagnostic of duality, *wis* behaves as expressing *already*, and not the perfect.

4.2 "EARLINESS" OF *already*. Another property that distinguishes *already* from perfect aspect relates to an implicature of 'earliness'. In the literature on *schon* 'already' in German or *already* in English, all authors converge on the fact that *already* can express that the event or state obtained is earlier than some contextually relevant event or state (Steube 1980; Hoepelman and Rohrer 1981; Vandeweghe 1983; Löbner 1989, 1999; Michaelis 1992, 1996; van der Auwera 1993; Mittwoch 1993; among others). Different analyses have been proposed: van der Auwera (1993) analyzes the earliness factor of *already* as a presupposition, Michaelis (1992, 1996) as a pragmatic ambiguity, and Mittwoch (1993), Löbner (1989, 1999), and Krifka (2000) as a conversational implicature. In section 5 below, we reexamine the semantics/pragmatics of how earliness is derived, adopting Mittwoch's/Löbner's/Krifka's proposal that the earliness factor of *already* arises as a conversational implicature. In this section, we focus on the data difference between *already* and the perfect, wherein only *already* expresses earliness.[27]

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26. Speakers comment that *durung* 'not yet' is like *ora wis* 'NEG already'—that is, the external negation of *wis*—but this form is nonexistent.

27. Iamitives apparently do not display earliness effects, based on several of Olsson's (2013) examples, although he does not explicitly discuss these effects. For instance, (iv) sounds slightly odd in English using *already,* because it implies that the illness has come earlier than expected, whereas one does not typically expect illness to arrive at a certain time-point. Yet the equivalent of (iv) is good in some languages with an iamitive (for example, Vietnamese; Olsson 2013:28).

   (iv) I received some bad news about my uncle. ?He is already ill.

Löbner (1989:183) identifies an early valuation with *schon* 'already' wherein "the state *p* has been entered in relatively early." Michaelis (1992, 1996) uses "early eventuation" to describe that the state denoted by the clause modified by *already* is "prior to another point" (Michaelis 1996:485). Van der Auwera (1993:618) argues that "*already* expresses that the change into the positive [state] has happened relatively early." This earliness factor is illustrated in the following examples with German *schon* 'already'.

(26) GERMAN

    a. Es ist **schon** zwei—nicht erst eins.
       it is already two not only one
      'It is already two—not (still) one.'

    b. Sie kommt **schon** um zwei—nicht erst um drei.
       she comes already at two not only at three
      'She is already coming at two—not at three.'

                  (Löbner 1989:193, morpheme glosses added)

Löbner (1989:194) points out that the common denominator of *schon* 'already' between the two examples above is that "the event or state under consideration occurs earlier than in the contrasting case." In other words, in (26a), the time has passed by earlier than the speaker expects, and in (26b), the arrival is occurring earlier than the speaker expects.

The earliness factor holds equally for *already* in English, as shown in (27) and (28).

(27) When we arrived, before noon, Huey was **already** drunk.
      (Michaelis 1992:326, citing *Ken Kelley, 'Huey Newton', California Magazine 8/90*)

(28) Patty: If we win today, Marcie, I'm going to let you keep the game ball!
    Marcie: It's **already** my ball, sir. My dad gave it to me for my birthday.
                  (Michaelis 1992:335, citing *Peanuts 11/9/90*)

In (27), *already* "serves to assert that the state of inebriation has come about at a point prior to the time at which it might be expected to eventuate" (Michaelis 1992:326). In this case, a state of inebriation is expected to occur at least after noon. In (28), Marcie states that she possesses the ball prior to winning the game, which is earlier than the expected point of Marcie having the ball in Patty's view.

If we compare *already* in (27) with the corresponding example with the perfect aspect in (29), it is clear that the perfect does not express earliness. In (29), the perfect asserts that Huey's state of inebriation occurred before the reference time of arrival before noon, but it does not express that the state of inebriation is earlier than expected.

(29) When we arrived, before noon, Huey **had been** drunk.

Given this distinction, we now turn to how Javanese *wis* behaves. We show that *wis* expresses that the state obtained occurs earlier than expected, behaving like *already* and not like a perfect aspect marker. A first example is given in (30). In this part of a recorded dialogue, Bu G. reports that she said the following to her grandmother:

(30) Mbok **wes** jam setengah wolu ndak-an engko kari reng pasar.
    grandmother already hour half eight to-AN later left.behind at market
    'Grandmother, it's already 7:30 a.m. so there won't be anything at the market soon.'

In Indonesia, the morning market starts approximately at dawn (5:30 a.m.) and ends at 8 a.m. at the latest. This example is similar to that with *schon* in (26a): *wis* expresses that the time has passed by earlier than the speaker expects, and she now has to hurry before the market closes. This meaning would not be expressed by the perfect 'It has been 7:30a.m.*'*.

Consider also (31), which expresses that the baby can walk earlier than expected.[28]

(31) Bayi-ne **wes**   iso   melaku.
    baby-DEF already CIRC.POS walk
    'The baby can already walk.'

Another example is given in the following dialogue from a recorded conversation between Jozi and two women. Bu Z. is explaining to Bu S. that the reason why Jozi is in the village of Paciran, East Java, Indonesia is because Bu Z.'s son Khuluq met Jozi in Canada before.

(32) Bu Z: ...soale Khuluq tau   nok kono. Iki **wes**   iso   wani.
          because Khuluq EXP.PRF at   there   DEM already CIRC.POS brave
          'Because Khuluq has once been there [Canada]. [So] she already can be brave.'

      Bu S: **Wes**   wani.
          already brave
          'She's already brave.'

      Bu Z: Iya kan?
          yes   PRT
          'Right?'

      Jozi: Iya ... enggeh
          yes   yes.KRAMA
          'Yes ... *Enggeh.*'

      Bu Z: 'Enggeh' [hahaha] **wes**   iso   'enggeh' barang!
          yes.KRAMA [laughing] already CIRC.POS yes.KRAMA also
          '*Enggeh*, [...] she already can say *enggeh* as well!'

The first two occurrences of *wis* in this dialogue express that Jozi is brave enough to come to Indonesia by herself at an earlier point than if she had not met Khuluq in Canada first. This point would not be expressed if *wis* were a perfect ('She had been brave'). The third occurrence of *wis* here refers to the fact that Jozi can say *enggeh* 'yes.KRAMA' in the high speech level in Javanese earlier than expected, indicating knowledge of the social stratum and use of speech levels in Javanese, considered by many to be difficult to understand. This conversation was recorded in the first month Jozi was living in Paciran, when it was not expected that she would be able to properly use *enggeh*. Again, *wis* cannot be analyzed as a perfect here; it could not be translated as 'She has been able to say *enggeh*' in this context because this would tend to indicate that she can no longer say *enggeh* 'yes.KRAMA'.

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28. Note that because Javanese is tenseless (see 1.1), (31) is also acceptable in a context with a past reference time, in which a translation could be *The baby had already been able to walk* or *The baby was already able to walk/could already walk.* This example underlines the fact that, because of the lack of grammatical tense in Javanese, markers such as *wis* are compatible with different reference times, resulting in different translations in a language such as English, which does have grammatical tense.

These examples with Javanese *wis* exhibit an earliness factor, similar to German *schon* 'already' (for example, Löbner 1989, 1999) and English *already* (for example, Mittwoch 1993; Krifka 2000). If *wis* were to express the perfect aspect, the earliness component would not be captured.

4.3 INCHOATIVE INTERPRETATION WITH STATIVE PREDICATES.

Our third diagnostic for distinguishing the perfect aspect from *already* involves the interpretation obtained when a marker combines with a stative predicate.[29] Unlike a sentence containing the present perfect, a stative sentence containing *already* in English conveys a change *into* the state denoted by the predicate. This is illustrated in (33) and (34) for stage-level (temporary) and individual-level (permanent) states respectively. In each case, the (b) examples with *already* seem to commit the speaker to the claim that the subject did not previously possess the relevant attribute.

(33) a. Paula has been tired / disappointed / pregnant.
      b. Paula is already tired / disappointed / pregnant.   STAGE-LEVEL STATES

(34) a. The child has been tall / intelligent / fat.
      b. The child is already tall / intelligent / fat.   INDIVIDUAL-LEVEL STATES

This inchoative effect is particularly striking with the individual-level states, since these inherently do not typically convey an initial change into the relevant state.[30]

Applying this diagnostic to Javanese *wis,* we see a strong inchoative effect, which is especially detectable with individual-level states. The data are given in (35)–(41).

(35) Context: *Aku gak ketemu Kana wes satu taun. Pas tak tinggal biyen, Kana sek endhek.* 'I haven't seen Kana in one year. When I left before, she was still short.'

Kana (sa'iki) kok **wes**   gedhe / dhuwur!
Kana   now   PRT already   big   / tall
'Kana is already big now!'

(36) Bu Siti **wes**   lemu.
      Mrs. Siti already fat
      'Mrs. Siti is already fat.'

Comments: '*Sa'durunge, durung lemu.* Before she was not fat yet.'
Elicitor: *Yo ngomong, lemu toh?* 'When speaking this, is she fat?'
Consultant: *Lemu.* 'Yes.' (lit., 'Fat.')

(37) Pak Bambang **wes**   ngerti cara-ne ndandan-i   montor.
      Mr. Bambang   already AV.know way-DEF AV.repair-APPL car
      'Pak Bambang (already) knows how to repair cars.'

Consultant's comments: '*Bolahe kursus,* because [he took] a course. *Sa'durunge durung ngerti.* Before, he did not understand yet.'

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29. *Already* happens to pattern with perfective aspect here, which also induces an inchoative interpretation with states (see Smith 1997). This diagnostic is therefore only valid in addition to (i) duality of *already* and (ii) the implicature of earliness with *already,* which the perfective aspect does not share.

30. Olsson (2013:17–19) argues that his proposed class of iamitives displays inchoative effects with stative predicates. In this, iamitives pattern with *already* rather than with the perfect.

(38) Bunga **wes**   mirip koyok ibuk-ne.   Mbiyen cilik-an iku
     Bunga   already resemble like   mother-DEF long.ago small-AN DEM

persis bapak-ne.
persist father-DEF

'Bunga resembles her mother. Before when she was small, she still
   looked like her father.'

(39) Siti, mata-ne **wes**   biru.
     Siti   eye-DEF   already blue

'Siti, her eyes have become blue.'

Contexts offered by consultant:
(i) *Operasi, matane dadi biru*, She had an operation, her eyes became blue;
(ii) *Dike'i kontak lens*, She was given contact lenses.

(40) Yanti iku **wes**   pinter matematika.
     Yanti DEM already smart mathematics

'Yanti is smart in math.'

Context offered by consultant: *Dik ulangi matematika. Gak iso-iso.*
Terus sa'iki iso. She was taught mathematics. She couldn't manage to
do it. Then now she can.

(41) Context: *When Bu S. is asked how much money she gives to Universi-*
tas Gadjah Madah per month, she answers:

Aku **wes** emboh.   Gak ngitung.
1SG   already I.don't.know NEG   AV.count

'I already don't know. I didn't count.'

Note that *wis* is actually infelicitous with an individual-level state in a non-inchoative
discourse situation, as in (42), as compared to the inchoative discourse situation in (35):

(42) Context: *Kawit lahire sampek sa'iki mbak Ulum iku awake gedhe.*
'Ever since birth, mbak Ulum has been big.'

#Mbak Ulum **wes**   gedhe.
  Miss   Ulum already big

#'Miss Ulum is already big.'

This infelicity can be further illustrated with states that do not allow a ¬ p state before the
reference time, as shown in (43). Note that these states are felicitous with the perfect, as it
has no such requirements.

(43) a. # She is already young.

b. # She is already a virgin.   (Löbner 1989:181)

This prediction is also borne out with Javanese *wis*, showing that *wis* is restricted to
events/states that satisfy that ¬ p is true at a time before the reference time.

(44) #Dik   Tomo umur-e lima-ng taun. Tomo **wes**   **enom**.
     younger.brother Tomo age-DEF five-LNK year Tomo   already young

'Tomo is five years old.' #'Tomo is already young.'

(45) #Mbak Siti **wes**   **perawan**.
     Miss   Siti already virgin

#'Miss Siti is already a virgin.'

Finally, as pointed out by Mittwoch (1993) for English *already,* the inchoative effect is cancelable in certain environments:

(46) Peter's eyes were already brown when he was born.   (Mittwoch 1993:76)

(47) A: I've applied for American citizenship.
      B: Is your husband also applying?
      A: He is already American, for he was born in America.

(Mittwoch 1993:74)

Just like in English, the change-of-state effect is also cancelable in Javanese in certain discourse contexts:

(48) Srikoyo **wes** legi. Gak perlu namba gulo.
      sugar.apple already sweet. NEG need AV.add sugar
      'Sugar apples are (already) sweet. [You] don't need to add sugar.'

Example (48) seems to contrast with (44) and (45), where a noninchoative discourse context led to *wis* being judged as infelicitous. Interestingly, the cases where the noninchoative readings are licensed all seem to involve an expectation that the hearer assumes that the state does *not* hold. Thus, in English, (46) contrasts the facts with a potential situation where Peter's eyes have turned brown since his birth, and (47) involves a correction of B's assumption that the husband is not yet American. Similarly, in Javanese, (48) corrects the hearer in their apparent belief that sugar apples are not sweet.[31]

4.4 COMPATIBILITY WITH PAST TIME ADVERBIALS.

Compatibility with past time adverbials is a fourth diagnostic for empirically distinguishing *already* from the present perfect. In languages such as English, the present perfect is unacceptable with adverbs expressing a definite past time, as illustrated in (49) with *yesterday.*[32]

(49) *I have written yesterday.   (McCoard 1978:123, citing Pickbourn 1789)

As noted by McCawley (1971), this contrasts with the past perfect or tenseless perfect forms in (50), in which past time adverbials are acceptable.[33] Similarly, past time adverbials are compatible with the aspectual adverbial *already* in English, (51).

(50) a. Mary had arrived the day before.
      b. Having arrived yesterday, Mary can answer our questions.
          (Portner 2003:465)

(51) I already arrived yesterday.

For languages like English, Danish, Swedish, or Norwegian, specific past-time adverbials serve as a diagnostic to distinguish the present perfect from *already.* However, as noted by Giorgi and Pianesi (1997), adverbials expressing a past time reference *are*

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31. A minority of languages do have perfect aspects that induce inchoativity effects; see, for example, Koontz-Garboden (2007) on Tongan, and Matthewson, Quinn, and Talagi (2012, 2014) on Niuean. However, these effects are distinguishable from the inchoative feature of *already,* in that inchoative-perfect languages also allow inchoative readings with activity predicates, while *already* does not (and Javanese *wis* does not). Therefore *wis* is not an inchoativizing perfect.

32. Olsson (2013) does not discuss whether the proposed category of iamitives displays restrictions on specific past-time adverbials.

33. See Portner (2003) for a pragmatic approach to this distinction based on presuppositions of the present tense in the present perfect, and see Giorgi and Pianesi (1997) for a syntactic approach.

acceptable with the present perfect in a number of languages, including Italian, German, Dutch, and Icelandic, as illustrated in (52) for Dutch.[34]

(52) DUTCH
Jan is   om vier uur weggegaan.
Jan is   at   four hour away-gone(PST.PTCP)
 'John left at four.' (lit., 'John has left at four.')
    (Giorgi and Pianesi 1997:87, morpheme glosses added)

Giorgi and Pianesi tie the absence of past-time adverbial effects in Italian-type languages to the different nature of the present tense compared to English-type languages. They argue that the present tense has a syntactic realization in English, but not in Italian-type languages. That is, in Italian-type languages, the present is simply the absence of the past.[35] Note that the important point for this diagnostic is not the exact mechanism of how present tense is rendered. The important distinction is whether there is *some* kind of realization of the present tense (either as an overt or covert tense morpheme, as in English), or there is no realization whatsoever (as in Italian). Further examination of the present perfect puzzle may reveal a more precise distinction between the two language types (English-type vs. Italian-type) and the nature of the present tense cross-linguistically.

For this diagnostic, if present tense is grammatically realized, and the marker under investigation is incompatible with past time adverbials with the present tense, then this suggests that the marker is a perfect. If the marker is compatible with past time adverbials, then this is evidence that it expresses *already.* In a language where the present tense is not realized, this diagnostic will not distinguish *already* from the perfect: both could be compatible with past time adverbials.

This diagnostic does not distinguish *already* from the perfect in Javanese. The auxiliary *wis* is compatible with adverbs specifying a past time interval, as in (53) from a recorded conversation and (54) from elicitation:

(53) Context: *Two women, Bu Z. and Bu S., talking together:*

Gek ngi   aku **wes**   ngomong ... sik pak Arif iku loh.
just yesterday 1SG already AV.speak   Mr. Mr. Arif DEM PRT
 'Yesterday, I have already spoken to the Mr. Arif.' (Translation offered by consultant, including 'the'.)

(54) Bu Yeni **wes** manggon nok Denpasar **rong taun kepungkor**.
Mrs. Yeni   already live   in   Denpasar two   year ago
 'Bu Yeni had lived in Denpasar two years ago.'

We cannot conclude that *wis* expresses *already* from this diagnostic because in Javanese, as shown in 1.1 above, there is no grammaticalized present tense form that is syntactically overt (for example, Horne 1961; Robson 2002). Further, it seems that there is no covert realization of present tense in Javanese either. This is because an event or state in Javanese can be interpreted in the present, past, or future, depending on the context. The example in (1), repeated here as (55), illustrates this context dependence.

(55) A: Wingi / saiki / sesok   ewoh opo?
           yesterday / now / tomorrow busy   what
             'Yesterday what [were you] doing?'   PAST
             'Now what [are you] doing?'   PRESENT
             'Tomorrow what [will you be] doing?'   FUTURE

      B: Aku   marut   kelopo.
           1SG   AV.grate coconut
      'I shaved coconut.' or 'I was shaving coconut.' P
             'I am shaving coconut.'   PRESENT
             'I will be shaving coconut.'   FUTURE

Furthermore, a predicate can be modified by an adverb expressing future, present, or past reference time, as illustrated in (56), showing that the predicate does not seem to have any null tense specifications. This is different from St'át'imcets (Lillooet Salish), for instance, in which a bare predicate cannot cooccur with an adverb specifying future reference time, as shown in (57).

(56) Sego pecel-e bu Maula **wingi / sa'iki / sesok** di-murah-no.
      rice   *pecel*-DEF Mrs. Maula   yesterday / now / tomorrow PASS-cheap-APPL
      'Bu Maula's *pecel* rice was made cheaper yesterday.'
      'Bu Maula's *pecel* rice is made cheaper now.'
      'Bu Maula's *pecel* rice will be made cheaper tomorrow.'

(57) ST'ÁT'IMCETS
      *K'ác-an'=lhkan **natcw / zánucwem**.
       dry-DIR=1SG.SU   one.day.away / next.year
      'I will dry it tomorrow / next year.'   (Matthewson 2006:677)

This cooccurrence restriction, combined with the fact that bare predicates in St'át'imcets also cannot express a future reference time, has been taken as evidence that there is a null tense morpheme that restricts the reference time to being in the past or present (Matthewson 2006). However, given that Javanese has no temporal restrictions, it seems that there are no null tense specifications. In other words, there is no semantic realization of present tense in Javanese.

Considering these properties, the fact that there is no restriction with past time adverbials is inconclusive for distinguishing whether *wis* is best analyzed as a perfect or as *already.* Cross-linguistically, however, if a given language meets the condition that present tense is grammatically realized (either as an overt or covert morpheme), this diagnostic can serve to distinguish *already* from the perfect: infelicity with an adverb specifying a past time reference would suggest the marker under study expresses perfect aspect.

4.5 EXTENDED NOW OF THE PERFECT. Our fifth diagnostic to distinguish perfect aspect from *already* concerns "Extended Now'" or "lifetime" effects, which relate specifically to the present perfect. In (58a), for example, the present perfect is infelicitous due to Gutenberg no longer being alive. Similarly, in (59a), the present perfect suggests that Einstein is still alive. The corresponding (b) examples with *already,* however, are felicitous, and do not incur lifetime effects.[36]

(58) a. ??Gutenberg has discovered the art of printing.
> (McCoard 1978, citing Dietrich 1955)

b. Gutenberg already discovered the art of printing (in the fifteenth century).

(59) a. ?Einstein has visited Princeton.(Chomsky 197)

b. Einstein already visited Princeton (in 1921).

The lifetime effects also disappear with the past perfect, as shown in (60).

(60) a. Gutenberg had discovered the art of printing.

b. Einstein had visited Princeton.

Portner (2003) argues that these effects fall out from the Extended Now presupposition of the perfect, which derives from the temporal semantics of the present tense. More specifically, the Gutenberg example is odd because the "Extended Now [requirement of the present tense] would not include the past event of Gutenberg's discovery in any context" (Portner 2003:506). The Einstein example is similarly odd because the perfect's presupposition of Extended Now is not met: "In a conversation about Einstein, his death provides a natural boundary between the 'present', i.e., the Extended Now, and the 'past', the time before the Extended Now. Thus, the Extended Now most likely does not extend far enough back in time to encompass anything Einstein did" (Portner 2003:505).

Turning to Javanese, the Javanese counterparts of these sentences with *wis* are felicitous, as illustrated in (61) and (62).

(61) Columbus **wes** nemok-no Amerika (taun 1492).
Columbus   already AV.find-APPL America   year 1492
'Columbus already discovered America (in 1492).'

(62) Context (fiction): *Gunung Krakatau iku gunung berapi. Gunung Krakatau meletus ping pisan taun 1800, us iku mati. Gunung Krakatau wes ora ape meletus maneh. * katau is a volcano. Krakatau erupted once in 1800, and then died. Krakatau will never erupt again.)

Gunung Krakatau **wes**   meletus.
mountain Krakatau   already erupt
'Krakatau had erupted.'

Similarly, the statements below in (63) and (64) are judged to be perfectly acceptable. There is no lifetime effect in that the subject must be still living in order for these sentences to be acceptable (cf. the English "Gutenberg" example in [58a]). All subjects were known by the consultants to have long passed away.

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36. Olsson (2013) does not discuss whether his proposed category of iamitives displays lifetime effects**.**

(63) Context: Kartini (1879–1904)

Kartini **wes** nules surat bongso kondisi wong wedhok nok Jawa.
Kartini already AV.write letter about condition person woman in Java
'Kartini has written letters about women's conditions in Java.' (Translation offered)

(64) Nabi Muhammad **wes** ngajar ajarane Allah.
prophet Muhammad already AV.teach way-DEF Allah
'The Prophet Muhammad had taught the teachings of Allah.'

However, the fact that lifetime effects only arise in the present perfect, along with the fact that Javanese is a tenseless language, raises the question whether the above cases could be interpreted with past reference times, as a past perfect. This would suggest that the data are compatible with *wis* expressing the perfect aspect.

Some cross-linguistic evidence against this alternative proposal comes from other languages that also do not have obligatory overt marking for past reference time, such as Niuean (Polynesian) and St'át'imcets. If the acceptability of (61)–(64) derives from their proposed status as past perfects due to the absence of overt marking for pastness, we would predict that corresponding examples in Niuean and St'át'imcets containing a perfect aspect, but no marking for pastness, would be acceptable. This is however not the case, as shown in (65) and (66) for Niuean, and (67) for St'át'imcets (where 7 represents the glottal stop).

(65) NIUEAN
Context: *You are teaching a history lesson. You tell the kids:*

#**Kua** kitia mua e Columbus a Amelika.
 PRF first sight ERG Columbus ABS America
'Columbus has discovered America.' (Matthewson, Quinn, and Talagi 2014)

(66) NIUEAN
Context: *You are teaching a history lesson. You tell the kids:*

#**Kua** taupega e Hitilā a ia nī.
 PRF hang ERG Hitler ABS 3SG EMPH
'Hitler has killed himself.' (Matthewson, Quinn, and Talagi 2014)

(67) ST'ÁT'IMCETS
Context: *You are teaching a history lesson. You tell the kids:*

(#**Plan**) zuqw-an-tsút=tu7 s=Hitler.
 PRF die-TR-REfl=then NMLZ=Hitler
'Hitler killed himself.' (Matthewson 2013)

The Niuean and St'át'imcets data suggest that lifetime effects are not dependent on a "real" present tense, but rather the Extended Now presupposition of the perfect.

If Javanese *wis* were a perfect marker, despite the fact that Javanese is tenseless, we would still expect lifetime effects to arise under the Extended Now presupposition of the perfect. Since lifetime effects are nonexistent in Javanese with *wis*, this leads to the conclusion that *wis* is best interpreted as *already*.

4.6 SUMMARY OF DIAGNOSTICS: JAVANESE *wis* AS 'ALREADY'. In the above subsections, we presented five diagnostics that can be used cross-linguistically to distinguish a marker that expresses *already* from one which expresses perfect aspect. The first diagnostic is whether the marker is related via negation to other markers. *Already* forms a dual pair with *still* (for example, Krifka 2000 and references therein), but the perfect does not. The second property is an earliness implication, specific to *already* but not the perfect aspect. The third is whether the marker under investigation induces an inchoativity effect; *already* standardly does this, while perfects do not (except for inchoativizing perfects in languages such as Tongan or Niuean; see footnote 32). The fourth diagnostic, compatibility with past temporal adverbs, is relevant only to languages in which present tense is both syntactically and semantically realized (Giorgi and Pianesi 1997). In languages in which this condition is met, compatibility with a past temporal adverb suggests that the marker expresses *already*, while incompatibility suggests that it is a perfect. Finally, for the fifth diagnostic, lifetime effects related to the Extended Now presupposition of the perfect are not present with *already*.

We have shown that Javanese *wis* has the property of duality, an implication of earliness, and an inchoativity effect, but lacks lifetime effects. These results strongly suggest that *wis* expresses *already*. The remaining diagnostic, compatibility with a past temporal adverb, was inconclusive due to independent features of the temporal system of Javanese, namely, that Javanese does not semantically or syntactically realize present tense. Before turning to our analysis of *wis* in section 6, we first show that the semantic properties of sentence-final *wisan* are the same as preverbal *wis* in Javanese.

5. PREVERBAL *wis* AND SENTENCE-FINAL *wisan* SHARE THE SAME SEMANTICS. As mentioned in 1.1 above, a property robust across Javanese dialects is that, in addition to its occurrence preverbally (that is between the subject and predicate), *wis* may also occur in sentence-final position with the suffix *-an*. Given its different syntactic position as well as the addition of the morpheme *-an*, one question that arises is whether *wisan* in sentence-final position shares the same semantics as preverbal *wis* in Javanese.[37] This question is particularly pertinent in light of Soh's (2011, 2012) recent work on Colloquial Malay, where the marker *dah* is argued to have different semantics based on its syntactic distribution. Specifically, preverbal *dah* is argued to be a perfect marker, while postverbal and sentence-final *dah* are argued to express 'already'. Unlike with preverbal *dah* in Colloquial Malay, we have argued above that Javanese preverbal *wis* expresses 'already' based on four diagnostics. It could be, however, that sentence-final *wisan* is best analyzed as, for instance, a perfect or perfective marker.

In this section, we argue that sentence-final *wisan* expresses the same meaning as preverbal *wis* in Javanese. Specifically, we show that just like preverbal *wis,* sentence-final *wisan* (i) maintains the same interaction with negation, (ii) has an earliness implication, (iii) has an inchoative interpretation with states, and (iv) does not have lifetime effects.

The proposal that the suffix *-an* has no semantic effect is not without precedent: Conners (2008) and Hoogervorst (2010) have argued that this suffix serves merely as a place marker. In other words, its function is purely syntactic. That *-an* is added in sentence-final

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37. Thanks to an anonymous reviewer for suggesting that we include discussion of *wisan*.

position without an obvious change in meaning is observed in Tengger Javanese for a number of other markers including *isih* 'still', *durung* 'not yet', the interrogative particle *kok*, the affirmative particle *ya,* the agreement particle *rak,* and the negative markers *ora* and *dudu* (Conners 2008:116). Hoogervorst (2010:29) also notes that in Surabayan Javanese, *-an* must occur with sentence-final *wis* 'already' and *jik* 'still'.[38]

Our first semantic diagnostic is interactions with negation. Since *wisan* occurs sentence-finally, we might expect that a different semantic interpretation arises given the different syntactic scope. That is, preverbal *wis* syntactically scopes above negation (*wis* > NEG), while sentence-final *wisan* scopes below negation (NEG > *wisan*). One prediction is that the different scope of NEG > *wisan* has semantic consequences and could result in a *durung* 'not yet' interpretation. However, this prediction is not borne out, as shown by the rejection of the equivalency in (68).

(68) a. Wuri **durung** turu. ≠ b. Wuri **ora** turu **wis-an**.
      Wuri not.yet   sleep   Wuri NEG sleep already-AN
      'Wuri is not asleep yet.'   'Wuri is not sleeping anymore.' (offered)

Instead, consultants accept the semantic equivalency of negated sentences containing *wis* and negated sentences containing *wisan*. In the examples in (69), consultants agree that both mean 'I'm no longer hungry' or *Aku wis wareg* 'I'm already full'.

(69) a. Aku **wis** **ora** ngeleh. = b. Aku **ora** ngeleh **wis-an**.
      1SG already NEG hungry   1SG NEG hungry   already-AN
      'I'm no longer hungry.'   'I'm no longer hungry.'

These results show that *wisan*, despite its sentence-final position, is still semantically interpreted as scoping over negation, just as preverbal *wis* does.

Second, *wisan* is compatible with an earliness implication just like preverbal *wis*, as revealed by the following two examples, both overheard in conversation. In (70), the speaker expresses that the rice is done earlier than expected, given that we recently came home. In (71), the speaker expresses that time has passed quicker than expected, and it's already late in the evening.

(70) Context: *We arrived at home half an hour before, and the speaker asked me if I wanted to eat. The speaker told me*:

    Sego-ne **wis-an**.
    rice-DEF   already-AN
     'The rice is already done.'

(71) Context: *The speaker suddenly realized the time, and started to prepare for bed.*

    Jam sepuloh **wis-an**!
    hour ten   already-AN
    'It's already 10p.m.!'

Sentence-final *wisan* also has an inchoative interpretation with states (both stage-level and individual-level), parallel to preverbal *wis* in Javanese, as shown in (72) and (73). For

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38. Hoogervorst (2010) reports that the use of *wisan* is "quite archaic or at least non-standard" in Central Java. However, we have found in our fieldwork on Semarang Javanese (spoken in the capital of Central Java) that speakers readily accept sentences with *wisan* and do not find it archaic.

instance, both examples in (72) are interpreted as a change into the state of being full. If sentence-final *wisan* were a perfect marker, we would have expected that the state of being full no longer holds (#*I have been full*), which is not available.[39]

(72) a. Aku **wis** wareg   b. Aku wareg **wis-an**.
     1SG already full   full   already-AN
     'I'm already full.' 'I'm full already.'

(73) a. Teh kuwi **wis** legi.   b. Teh kuwi legi **wis-an**.
     tea DEM already sweet   tea DEM sweet already-AN
     'The tea is already sweet.' 'The tea is sweet already.'

An additional argument that sentence-final *wisan* is best interpreted as 'already' is that, just like preverbal *wis,* sentence-final *wisan* also does not have lifetime effects. This is shown by the acceptability of (74), just like (64) above with preverbal *wis*. If sentence-final *wisan* were interpreted as a perfect, than we would expect lifetime effects to hold, contrary to fact.

(74) Nabi Muhammad ngajar ajaran Allah **wis-an**.
     prophet Muhammad   AV.teach way-DEF Allah   already-AN
     'The Prophet Muhammad taught the teachings of Allah already.'

Given these similarities with preverbal *wis,* we conclude that sentence-final *wisan* is also best analyzed as expressing *already* and not as a perfect.[40] Javanese *wis/wisan* therefore contrast with Soh's (2011, 2012) work on the different interpretations of preverbal vs. postverbal/sentence-final *dah* in Colloquial Malay.

6. ANALYSIS. The main goals of this paper are to lay out a set of diagnostics to distinguish *already* from a perfect aspect and to argue that Javanese *wis* represents *already* rather than a perfect (or a perfective, or a past tense marker). It would go beyond the scope of this paper to engage with the debate in the literature about the best way to formally analyze English *already* or German *schon*; see Löbner (1989, 1999), van der Auwera (1993), Michaelis (1992, 1996), Mittwoch (1993), Krifka (2000), and Fong (2005), among others, for discussion. In this section, therefore, we merely sketch an analysis of *wis*, basing our discussion broadly on Krifka (2000).

Krifka's core idea is that *already* is a focus-sensitive operator, which places a restriction on the alternatives to the focus. His denotation for *already* is given in (75):

(75) ALREADY($<B, F, \leq_A>$) $\Leftrightarrow$ $<B, F, \leq_A>$, presupposition: $\forall X \in A[X \leq_A F]$
                                                        (Krifka 2000:4)

According to (75), *already* applies to a proposition which consists of a Background (B) and a Focus (F), and which relies on an ordering A (which may be temporal, numerical, and so on). *Already* does not change the truth conditions of the proposition (it outputs the

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39. Robson and Wibisono (2002) define *wisan* as 'finished, over, etc.'. With states, *wisan* cannot have this interpretation, but instead an inchoative interpretation, as shown by these examples.

40. While it is beyond the scope of this paper, additional research is necessary to investigate comments that *wisan* is "emphatic" (Robson and Wibisono 2002) or places "stress" on a different element of the sentence (Hoogervorst 2010) as compared to preverbal *wis*. We suspect that the results might be similar to the distinction found with the different syntactic positions of *already* in English.

same < B, F, $\leq_A$ >); its only function is to introduce a presupposition that the asserted Focus is the highest-ranked salient alternative on the A-scale.

We illustrate how this works with respect to the sentence in (76), where the adjective *three* is in focus (indicated by the subscript F), following Krifka (2000).

(76) Lydia is already three$_F$ months old.

Example (76) asserts that Lydia is three months old, and presupposes that three is the highest-ranked salient alternative number of months for Lydia's age. In other words, Lydia is three months old, rather than the possible alternatives which could have been asserted, namely one or two months.

The contribution of *already* is schematized in (77) in comparison to the plain, *already*-less sentence.

(77) a. Lydia is three$_F$ months old.
  alternatives considered: {Lydia is 1 month old, Lydia is 2 months old, Lydia is 3 months old, Lydia is 4 months old, Lydia is 5 months old}
  alternative asserted: {Lydia is 3 months old}

  b. Lydia is already three$_F$ months old.
  alternatives considered: {Lydia is 1 month old, Lydia is 2 months old, Lydia is 3 months old}
  alternative asserted: {Lydia is 3 months old} (Krifka 2000:5)

In (77a) without *already,* the speaker asserts that Lydia is 3 months old rather than any of the other salient alternative possible ages of 1, 2, 4, or 5 months. In (77b) with *already,* the speaker asserts that Lydia is 3 months old and presupposes that the only salient possibilities for her age are 1, 2, or 3 months. The fact that Lydia's age is the greatest of those that are "considered entertainable" leads to the implicature that her age is greater than one might have expected (because it is greater than the average of her reasonably possible ages) (Krifka 2000:5).

This also captures the contribution of *wis* in Javanese, as shown by the felicity of *wis* in the discourse context in (78), paralleling (76) above.

(78) Context: *Awakmu pikir umure Dik Tomo iku mok 2 wulan. Terus ibuke ngomong:* 'You think that Tomo is only 2 months old. Then Tomo's mother says:'

Dik   Tomo umur-e **wes**   **telo-ng**   **wulan**!
younger.sibling Tomo age-DEF already three-LNK month
'Tomo is already three months old!'

Another example is given in (30) above, repeated here as (79):

(79) Mbok   **wes** jam setengah wolu ndak-an engko kari   reng pasar.
grandmother already hour half   eight to-AN   later   left.behind at market
'Grandmother, it's already 7:30 a.m. so there won't be anything at the market soon.'

alternatives considered: 5:30a.m. 6:30a.m. 7:30a.m.
alternative asserted: 7:30a.m.

PRESUPPOSITION: 7:30a.m. is the highest-ranked salient alternative among the market times.

ASSERTION: It is 7:30a.m.

IMPLICATURE: The time (7:30a.m.) has come earlier than one might have expected (7:30a.m. is later than the average of the reasonable market times).

A final example from Javanese overtly shows the implicature that the time has passed earlier than expected. In the recorded conversation in (80), Bu Z. exclaims that time has passed faster than she expected.[41]

(80) Context: *Yo lewat (Visiting a family to pay respects to the deceased.)*

Bu Z: Iki wes   pirang   ndina-ne loh?
      DEM already how.many AV.day-DEF PRT
      'How long has it been [since she passed away]?'

Bu G: Yo ... **wes   pitong ndina-ne** iki engko toh yu   Zum !
      yes ... already seven   N.day-DEF DEM later   FOC sister Zum
      'It's (already) seven days later, Mrs. Zum!'

Bu Z: Ya Allah ... wes   pitong ndino .... yo **kok cepet loh**.
      ya Allah   already seven N.day   yes PRT fast   PRT
      'Ya Allah, it's already been seven days. Wow, that's so fast!'

In (79) and (80), the main assertion concerned what time it is at the speech time. In cases where the time itself is not the main assertion, like (81), we need the alternatives considered to be those *after* the contextually salient reference time (in this case 3 p.m.), giving rise to the implicature that Lydia's arrival was earlier than expected.

(81) Lydia already arrived at 3p.m.$_F$.
     alternatives considered: 3p.m. 4p.m. 5p.m.
     alternative asserted: 3p.m.

Krifka achieves this by redefining the general scale requirement for *already* in terms of "development speed": *already* requires that the asserted event has a faster development speed than the alternatives. In (77b), the presupposition based on the ordering of the A-scale in terms of "fastest development speed" will result in Lydia's age being greater than the alternative ages, and in (81), it will require Lydia's arrival to be earlier than the alternative arrival times. This leads to a (cancelable) implicature that Lydia's arrival was earlier than expected. We assume that even if there is no overt adverbial phrase like *at 3p.m.,* the calculation proceeds similarly, comparing the actual arrival time (which may be implicit, based on the context) with other alternative arrival times.

With respect to the inchoative effects of *already,* Krifka observes (2000:7–8) that his analysis has no problem with the "already American" cases discussed by Mittwoch (1993),

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41. A reviewer suggests that Javanese *wis* and English *already* differ in their ability to appear in questions, based on the fact that the English translation of the first sentence in (80) does not readily include *already,* although the Javanese includes *wis.* Further research is required to establish whether this is a robust difference; for some speakers at least, the English question *How long has it been already [since she passed away]?* is fully acceptable. The reviewer's point does highlight the importance of extending the analysis sketched here to cover *already/wis* in interrogatives. See for example von Stechow (1991) for analysis of focus operators in interrogatives.

and introduced in (46) and (47) above. This is because Krifka's analysis does not hardwire an inchoative semantics, unlike for example the analysis of Löbner (1989, 1999), which models the change-of-state semantics of German *schon* 'already' as a presupposition: *schon* Φ presupposes a time before the reference time for which ¬ Φ is true. However, it seems that incorporating no inchoativity effect at all would also be a mistake, since the "already American" cases do require a very specific type of discourse context to be felicitous.

It seems to us that under a broadly Krifka-type analysis, the inchoative effect of *already* can be viewed as a conversational implicature which arises due to the following reasoning: if the speaker is conveying that the predicate becomes true at an earlier time point than would have been expected, then the speaker does not believe the predicate to be timelessly true. On the contrary, the speaker is acutely aware of a previous time interval during which the predicate did *not* hold. From this, the hearer concludes that there was an immediately prior time interval at which the plain proposition is false.

This captures the fact that the "already American" cases (repeated below) require a specific type of discourse context to be felicitous where the speaker addresses the fact that the hearer believes the plain proposition to be false. This is true in both English and Javanese:

(82) A: I've applied for American citizenship.
      B: Is your husband also applying?
      A: He is already American, for he was born in America.
                                         (Mittwoch 1993:7)

(83) Srikoyo **wes** legi. Gak perlu namba gulo.
     sugar.apple already sweet. NEG need AV.add sugar
     'Sugar apples are (already) sweet. [You] don't need to add sugar.'

In a nutshell, therefore, we propose that Javanese *wis* is a focus-sensitive operator. It applies to a proposition containing a Background and a Focus and asserts that same proposition, adding a presupposition that the asserted proposition has a faster development speed than the other alternatives. This in turn leads to implicatures both of earliness and of inchoativity.

7. CONCLUSION. This paper has put forward five diagnostics that distinguish the perfect aspect from *already*: (i) duality of *already,* (ii) earliness conversational implicature, (iii) inchoativity effects with stative predicates, (iv) compatibility with past temporal adverbials, and (v) Extended Now effects. We applied these diagnostics to Javanese *wis* in order to better understand its semantics, as it has been variously characterized as *already,* a perfect, a perfective, or a past tense. From these diagnostics, we established that Javanese *wis* is best analyzed as a marker expressing *already.* We then adopted the semantic analysis of English *already* proposed by Krifka (2000) for Javanese *wis,* where *wis* applies to a proposition containing a Background and a Focus, asserts that same proposition, and presupposes the asserted proposition has a faster development speed than other salient alternatives. This in turn leads to implicatures of earliness and of inchoativity.

Importantly, these diagnostics can be applied cross-linguistically. This is particularly useful for typological questionnaires or surveys such as in Dahl (1985) or Olsson (2013). We have shown in section 3 that most of Dahl's (1985) questions that are proposed to target a marker that expresses perfect aspect actually equally target markers that express

already. This paper serves to add additional diagnostics beyond Dahl's (1985) question-naire to disambiguate perfect aspect markers from those expressing *already.*

These diagnostics also can be helpful in deciding whether it is necessary to introduce a new grammatical category of iamitives, as advocated in Olsson (2013) for markers that display current relevance (like present perfect markers), as well as properties associated only with *already,* such as inchoativity with stative predicates. We suggest that a new cat-egory of iamitives is not warranted, as many of the properties Olsson discusses can be naturally explained under a focus-sensitive semantic analysis of *already.* For instance, the inchoativity effects arise as an implicature from the semantics of *already.* Indeed, Olsson (2013:35) himself claims that "words meaning 'already' and iamitives have essentially the same semantics." Finally, Olsson does not discuss additional properties associated with the perfect, such as lifetime effects or compatibility with past temporal adverbs. These diagnostics would be useful to investigate exactly what properties the so-called iamitives do or do not share with the perfect aspect.

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