

# Reference tracking and non-canonical referring expressions in Indonesian

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We propose a functional category of People Referring Expressions, or PREs, which cuts across multiple lexical categories and which makes essential reference to the act of referring in the speech situation. Included in this functional category are non-CREs, or non-Canonical Referring Expressions, including both anaphoric null expressions and imposter uses of nominal and pronominal phrases. We lay out an inventory of types in Indonesian which express reference and coreference against a more cross-linguistic inventory of types.

## 1. Introduction: Problem statement and the research frame

Expressing what is going on in the world is a basic function of language, and this function includes the identification and tracking of the individuals spoken of in a discourse. We presuppose that all languages have ways of referring to individuals in the world spoken of. One of the worlds that may be spoken of is the speech event, which may include the Speech Act Participants (SAPs) as well as others.<sup>1</sup>

Our primary goal in this paper is to look holistically at the range of lexical and grammatical strategies available to a speaker (and requiring interpretation by an interlocutor) to refer to individuals. In contrast to much past work—both explicitly stated and presupposed — we do not limit our exploration to sub-categories of referring expressions, since there are many parameters along which different strategies can be explored: first vs. second person, animate vs. inanimate, personal pronoun vs. descriptive noun phrase, etc. Rather, we propose a language neutral template encompassing the full range of potential referring strategies within a language, and we show how this template can be applied to Indonesian referring strategies.

This paper is part of a larger research effort to discover the range of systems that can function across languages to make reference to people —what we call as People-Referring Expressions, or PREs. Our undertaking is to think about reference to people as a functional category and discover the various means and conventions that languages use to fulfil this function.

We approach this investigation distinguishing between reference and coreference, independent of lexical category (e.g. “pronoun” vs. “noun”) and independent of the scope of the binding domain. Given our holistic approach, we must draw on multiple subfields of linguistics: saliently, discourse studies for the establishment of initial reference and discourse-based conditions on coreference, and syntax for local conditions on coreference. Much past and current work in both fields pays greater attention to languages in which descriptive noun phrases are categorically disjoint from anaphoric expressions, in terms of both their lexical inventory and their phrasal syntax. Similarly, in such languages, distributional restrictions on both types of expressions are viewed as being disjoint (having different clausal syntax). We do not focus on such languages here; rather,

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<sup>1</sup> We thank our colleagues Brook Hefright and Amalia Gnanadesikan for their contributions to the project, and an anonymous reviewer for very helpful comments on an earlier version.

we focus on languages for which these conditions appear not to hold. For example, in Indonesian, a descriptive noun phrase may fulfill a coreferring function within a local domain.

A more general goal is to explore the possibility that in some languages, null expressions are the default means of referring and co-referring to individuals; Indonesian may be such a language. Speakers of Indonesian also make extensive use of overt expressions whose denotational features do not directly pick out the referent—known as “imposters”. Together, these two sub-classes, null expressions and imposters, form a functional category that we call non-canonical referring expressions (NCREs).<sup>2</sup> Indonesian appears not to observe the rough functional distinction of many European languages: that descriptive NPs are used to establish reference and coreferring functions are fulfilled primarily through pronouns. It may, in fact, represent a limiting case on many dimensions, given the ubiquity of null elements for both establishing reference and indicating coreference. In this respect Indonesian contrasts with most European languages.<sup>3</sup> Furthermore, it has no agreement morphology of the kind normally associated with “pro-drop” languages. Finally, Indonesian tests the limits of imposterhood<sup>4</sup> in that imposter uses of a class of nouns are pervasive outside of the marked contexts that characterize imposter usage in English. So although this paper is not intended to lay out the conditions on referring or coreferring, we emphasize that the function of coreferring is as basic a function of NPs as it is of pronominal expressions in Indonesian.

This paper will first lay out the problem space of the referential and coreferential functions of (pro)nominal expressions by providing an overview of Person-Referring Expressions, or PREs, against the typologically-oriented framing that we are undertaking. Having established the general typological framework of PREs, we then move on to consider the inventory in Indonesian. We explore and refine the notion of NCRE, using data from Indonesian to expand the definition of imposters and imposter use. Finally we explore the implications of this holistic view for theories of coreference.

Expressions that refer to people, as opposed to other kinds of individuals, interest us as a functional group because they are distinctively cognitively salient, a fact that we believe affects the forms and distributions of PREs (Kibrik 2011), and because PREs are one point of nexus between grammatical organization and the expression of social-interactional status and relations. While some strategies apply uniquely to people reference, we do expect our focus on people reference to cover any strategy for reference to individuals other than people.<sup>5</sup>

“Reference”, “coreference”, “anaphora”, “anaphor”, etc. are terms that have different meanings within different subfields of linguistics and across different frameworks. It is helpful then to make explicit our understanding and usage of these terms.

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<sup>2</sup> These referring expressions are viewed as non-canonical from the perspective of mainstream linguistic theory. We believe that in the languages under study, they may in fact be the default way of referring.

<sup>3</sup> See for example, Haspelmath (2001) on SAE, or ‘standard average European’; and the original formulation of SAE by Whorf (1941).

<sup>4</sup> In section 5 below, we suggest a broadening of the typology of imposter types given in Collins & Postal (2012) to include a wider range of related phenomena.

<sup>5</sup> We note in that many languages, such as those in the Bantu and Otomanguean families, there are formal differentiations between expressions that index people, animals, and other organisms such as saints or ghosts. We expect that describing how the PREs in these systems work will *a fortiori* provide principles for the distribution of other members of these systems.

In the current paper, we are interested in the possibilities of “coreference”, by which we mean the relationship between expressions designating the same entity in the world spoken of.<sup>6</sup> We talk about “establishing reference” as the use of a linguistic expression to prompt the initial identification of a person in the world spoken of. We use the term “referring expression” to refer to an expression that refers, irrespective of its phrasal/lexical class or status or overtness. “SAP” denotes speech act participants—that is, interlocutors as distinct from bystanders—and we refer to the speech event, which may but need not include elements of the world spoken of. Discussion of the speech event and SAPs entails the consideration of exophoric reference—that is, reference to an entity in the speech situation, whether to SAPs or others. Imposters are particularly salient in Indonesian as expressions referring to SAPs. We assume an intuitive notion of denotation, whereby the features of the denotatum correspond to some distinctive semantic and/or distributional features of the expression denoting it (which we refer to as its “denotational properties”); these include those lexically encoded (and language-specific) meaning elements of PREs, such as gender or number, that index potential referents.

The analysis of “imposter” usage rests critically on a mismatch between reference and denotation<sup>7</sup> that we hope will be similarly intuitive; the distinction between denotation (decontextualized meaning potential) and reference (contextualized language use) is critical to the analyses of the languages discussed here, because, within linguistic theory, mismatches between the lexical features of PREs and their reference in context are assumed to be highly marked<sup>8</sup>, while in Indonesian and the other languages included in the larger study, the phenomenon of mismatch is pervasive and socially unmarked. We further differentiate between a denotative use of a descriptive noun(phrase) and a vocative use of that expression—acknowledging that in some cases it is impossible to determine which function is being exemplified.

Finally, we use the term “referential ambiguity”. What we mean by this term is that in its speech-event (discourse or non-linguistic) context, a term may have more than one possible referent, even when used canonically; when an expression can be used non-canonically, the referring possibilities increase.<sup>9</sup> “Referential ambiguity” is our term for the state of an expression whose referential possibilities are greater than one. We differentiate this from referential indeterminacy, failed reference, and generic reference, which will not be our concern in this paper.<sup>10</sup>

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<sup>6</sup>We do not differentiate “anaphora” in the narrow sense (descriptor first, anaphor second) from “cataphora” (anaphor first, descriptor second). Further, we do not discuss any conditions on cataphora for the simple reason that, particularly in colloquial varieties, word order is generally very free in Indonesian such that the relative order of noun–pronoun relations is a separate question.

<sup>7</sup>In this our characterization differs from the Collins and Postal model, which utilizes denotation only.

<sup>8</sup>Donnellan (1966) described a mismatch phenomenon quite different from the ones considered here, invoking the same intuitive distinction we are, as between the identification of an individual by means of a description (successful reference) and the accuracy of that description with respect to the referent (i.e. the appropriate application of denotational features). He also demonstrates the necessity of looking at particular utterances to determine the referential status of even definite descriptions.

<sup>9</sup>See for example Stivers, Enfield & Levinson (2007).

<sup>10</sup>Similarly we do not consider the issue of the binding relationship between quantified descriptions and anaphoric expressions; linguists including Partee (1978) have observed that anaphoric elements bound to quantified descriptions have very tight, intra-clausal constraints, at least in the languages in which they have been studied.)

We also here briefly touch on the notion that, if there is a language that defaults to referentially ambiguous expressions (Indonesian may be a candidate), we expect that language to have strategies independent of the PRE systems that may reduce the space of referential ambiguity.

## 2. Background: Theory and language description

Many aspects of the systems described here are found in languages all around the world, including more commonly studied languages – though in restricted contexts. We therefore bring into the forefront a set of strategies that should be receiving greater attention within theoretical and applied linguistics.

Our work takes the perspective that denotational, referential, and social-indexation functions of PREs are acknowledged to contribute equally to the shared common ground that is built up in the course of an ongoing discourse. Note that taking the category of PRE as the relevant range of phenomena to be described entails attention not only to denotational (“objective”) properties of the expression as they index their referents, but also to socially constructed, and contextually determined, properties as well: to varying degrees, languages encode social relationships, relative to a (personal/locative/social) deictic origo, which may be more elaborate than the T/V distinction found commonly in SAE (Brown & Gilman 1960).

Enfield’s (2006) description of the system of pronominal reference in Lao gives us a theoretical framework congruent with the phenomena described here, in contrast with other more familiar theories of reference resolution (*inter alia* Givenness Theory (Chafe 1976); Binding Theory (Chomsky 1982); Centering Theory (Gordon, Grosz & Gillion 1993)). In it, Enfield points to a multi-term pronoun system as an ideal locus for exploring social deixis and deriving additional social meaning. He claims that there is an informational logic which underlies any such system, which relies on two very distinct sources of information:

- i. the contrasting coded semantic content of alternative pronouns in a given system
- ii. the added meanings derived in inferential interpretation of a given pronoun’s use, where any given use is both linguistically and socially situated

Crucially, he identifies that **code** (the linguistic expressions available in the language), **context** (the location in the discourse and in the speech situation where such an expression is used), and **cognition** (what the speaker and hearer can discern about the referent, and about the interlocutor, based on the code and context) are all relevant and necessary factors for understanding and successfully resolving reference.

This approach highlights that there is simple lexical information (i.e., denotational properties) that is encoded in particular lexical items (including referring expressions), but that that information is inadequate for explaining or interpreting their use across discourse contexts. For that level of interpretation, we must understand the potential cognitive states of the speaker and the hearer of the utterance. In producing or understanding, participants bring to bear their knowledge of the alternative elements available to the speaker, and this knowledge allows them potentially not only to identify the reference of particular expressions but also to extract additional meaning regarding the speaker’s stance with respect to the individuals in the world spoken of.

Looking at complex pronominal systems as Enfield has done with Lao allows us to explore a number of these issues, but does not itself allow us to fully understand the processes involved in successful referring, as languages have available more than just pronouns to satisfy that function. It is striking, however, given the centrality of person reference to a wide range of behavioral and social sciences (cognitive psychology, neuroscience, anthropology, philosophy, linguistics), that “the empirical study of person reference in natural conversation—the central genre of language use—has been curiously neglected, particularly from a cross-cultural perspective that might throw much light on the relation between culture, social structure, and language use.” (Stivers, Enfield & Levinson 2007:1)

In this paper, we move beyond Enfield (2006), who focuses on pronominal systems, and Stivers, Enfield and Levinson (2007), who focus on initial third person references, and Senft (2007), who looks at a wide range of third person referring expressions. We adopt their perspective in order to look at entire systems of reference, including names, descriptions, anaphoric items, and non-canonical uses of referring expressions with first- and second-person as well as third-person referents. We focus on people-referring expressions (PREs), but we conjecture that the same strategies (lexical or grammatical forms and contextually-driven processes) hold for expressions that refer to non-people as well.

## 2.1 Systems of referring expressions

We start with an overview of categories and processes critical for understanding the problem space. We assume an understanding of reference as the relationship between an expression and the thing it designates in the world spoken of (which may or may not correspond to the real world); it includes exophoric and endophoric reference, including coreference. Denotation of an expression is independent of the speech situation; below, we use the term “denotational properties” to discuss those lexically encoded (and language-specific) meaning elements of PREs, such as gender or number, that index potential referents. The distinction between denotation and reference is critical to the analyses of the languages discussed here, because mismatches between the denotational features of PREs and their reference in context are pervasive in all of these languages. We note that in the range of contexts being discussed here, a single expression in context may have referential functions and coreference functions, understood as distinct functions.

Any type of mismatch between the denotational features of an expression and its referential value — person, number, gender, animacy, etc. — yields what is called an imposter use (Collins & Postal 2012; Collins 2014). We maintain the terminology *imposter* to refer to this kind of mismatch, and add a further distinction that emerges from our work in Indonesian (*shadow puppet*, to be discussed below).<sup>11</sup> We feel that *imposter* is nevertheless a misnomer as applied to Indonesian and similar languages, because this phenomenon is much broader (more frequent and less constrained) in these languages than in SAE languages, and in some cases there may be no “non-imposter” alternative—for instance, there are languages that have no third-person pronouns, so when coreference needs to be made more explicit, it will be accomplished via a referring expression. It is especially prevalent in many East and Southeast Asian languages, such as those under

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<sup>11</sup> It is possible, but remains to be proven, that many of the elements of Indonesian identified as imposters are *shadow puppets*, a term we introduce in section 5 below, in that these do not involve mismatches between denotational features and referential properties, but rather they involve underspecification of a value of a set of features that may be instantiated differently in different referential situations.

consideration here. In any given language, expressions available for imposter use may include, *inter alia*, kinship terms, proper names, titles, demonstrative pronouns, and locative nouns.

To circumscribe the problem space more clearly, we start with a consideration of PREs in more familiar languages. For example, if one wanted to refer to Claudia (an individual in the world) in a discourse in English, there are a number of different expressions one could choose, including those in (1–7).<sup>12</sup>

- (1) ***Claudia*** ate some cornflakes. (proper name)
- (2) ***She*** ate some cornflakes. (personal pronoun — non-SAP)
- (3) ***Professor Brugman*** ate some cornflakes. (title plus proper name)
- (4) *Herein, **the author** explains her model of cornflake metabolism.* ((definite description))
- (5)  **$\emptyset$** <sub>*i*</sub> eat your<sub>*i*</sub> cornflakes. (zero/null)
- (6) ***Everybody***<sub>*i*</sub> eat their<sub>*i*</sub> cornflakes. (possessive pronoun)<sup>13</sup>

The range of PREs attested in English includes referring expressions (1), pronouns (2), kinship terms (3), definite descriptors (4), null anaphora (5), possessive pronouns (6); this last example further demonstrates how these strategies can also be used to mark coreference. For (2) the pronoun may be used either anaphorically or exophorically. In (4) the neutral reading is with third person reference; however, in certain domains, this expression could also refer to a first person individual (i.e. the writer of the sentence). This mismatched use of a third person-denoting expression with first person reference is an example of an imposter use. Finally, (6) shows another use of a possessive pronoun; however, here the expression may include reference to a SAP, namely the hearer—in which case it is also an imposter. Crucially, each of the expressions in these examples can be used to identify the same entity in the world, through six linguistically distinct strategies.

Example (7) shows the canonical English construction with two coreferring expressions.

- (7) *After **Claudia**<sub>*i*</sub> eats her cornflakes, she<sub>*i*</sub> will walk to the office.*

Let's call the English system basic, yet it demonstrates a range of uses beyond the use of simple referring expressions. Specifically, (4) through (6) show what we refer to as non-canonical uses. "Non-canonical" uses represent a category in that they do not behave in the way expected by standard SAE languages. These are, in reality, two very distinct classes, and we will discuss the properties of each independently.

Other languages employ additional methods for referring to people. For example, in the Campania dialect of Italian, in addition to having equivalents to all of the forms in (1–7), one can also use the following strategies:

- (8)  $\emptyset$ <sub>*i*</sub> ha mangiato i suoi<sub>*i*</sub> cereali. (Campania Italian)  
 (she) have.3SG eaten 3SG.POSS.MASC.PL cereals  
 'She ate her cereal.'

<sup>12</sup> We bold the exemplified PRE in each, and the intended coreference is indicated by subscript.

<sup>13</sup> Note that this is a compensatory strategy: on the reading in which *everybody* and *their* are coreferential, the referential interpretation of *their* can only be second person; this reading also holds of the universal quantifier, a reading forced by the imperative mood of the sentence. This mood in turn is signaled only by the use of the bare-stem verb form.



- (12) 성미는 어제 봤다고 Korean: null object  
 Seongmi-neun oeje bwattago  
 S.-TOP yesterday saw-QUOT  
 ‘Seong-Mi<sub>i</sub> said that Ø<sub>i</sub> saw Ø yesterday.’
- (13) Tom은 선물 주었어 Korean: null indirect object  
 T.-neun seonmul jueosseo  
 T.-TOP gift gave  
 ‘Tom gave Ø a gift.’

Beyond the use of null anaphora, Korean has a wide range of overt strategies for referring to people. In (14), a kinship term ‘older sister’ appears as the subject of the clause. This expression may refer to *Claudia* if the social relations are appropriate.<sup>14</sup> Interestingly, the referential value relative to the speech situation is ambiguous, as it could have a third person, or a second person interpretation—that is, the referent of the expression could be either the addressee—a second person ‘you’ interpretation—or not a SAP—a third person ‘she’ interpretation.

- (14) 언니가 나에게 주었어 Korean: kinship imposter  
 Eonni-ga naegae Jueosse (person reference)  
 Older.sister.of.female-NOM to.me gave  
 ‘**You/She** gave Ø to me.’

In (15) the use of an honorific with person reference is exemplified. Here, *Claudia* is a possible referent of ‘the teacher’, where ‘teacher’ may denote her actual profession or serve as a general honorific form of address. In the case of the former, the interpretation is second person or third person, and in the case of the latter, the interpretation is second person.

- (15) 선생님께서는 주셨어 Korean: honorific  
 seonsaengnim-kkaeseo jusheosseo verb with honorific  
**teacher-HON.NOM** gave [honorific marked verb] nominative marking  
 ‘**The teacher/you** gave Ø to Ø.’

In (16) the use of a locative noun with person reference is shown. Here, *Claudia* may be the referent of the noun phrase ‘that side’, where the noun ‘side’ may be used as a form of honorific address.<sup>15</sup>

- (16) 그쪽은 어떻게 생각하세요? Korean: locative noun  
 geujjok-eun eotteoke saengkakhaseyo  
**that side-TOP** how think (honorific verb)  
 ‘What do **you** think?’

In (17), *Claudia* may be referred to by a second person pronoun. Finally, in (18), *Claudia* is referred to simply by her name.

<sup>14</sup> This is another instance of a compensating strategy: if the social relations are not appropriate, look elsewhere for the referent.

<sup>15</sup> This usage is not common, but the example given has been confirmed with speakers.



- (17) 너 먹고 있잖아? Korean: pronoun  
 neo meokko issjana  
 You eat PROG-tagQ  
 ‘You are eating, right?’
- (18) Claudia가 밥을 먹고 있어. Korean: R-expression<sup>16</sup>  
 C.-ga pabeul meokko isseo (proper name with  
 C.-NOM eat eat PROG non-imposter use)  
 ‘Claudia is eating food (lit. rice).’

The examples from English, Italian and Korean demonstrate some aspects of the range that comprise the grammatical and lexical systems that languages have to refer to people. Crucially, languages incorporate canonical and non-canonical means of referring into unified systems. The members of the system are the code—the actual linguistic structure being used; the context—or where in the discourse and in the speech situation such expressions are used; and cognition—that is, the speaker and hearer’s mental models of possible referential values, informed both by the rules of the language and sociopragmatic principles such as when to express politeness.

**2.2 The speech situation, SAP expressions, and exophora**

We need to invoke the distinction between the participants in the speech situation (SAPs), associated with first- and second-person pronouns, and individuals in the world spoken of, which are generally associated with referring expressions (including third-person pronouns) and descriptions.

- (19) *Ya ga bisa begitu sih.* Indonesian  
 AFF NEG can like.that PRTCL  
 ‘Yeah, it can’t really happen like that.’
- Soalnya, dia-nya ga mau ikut.* [pointing]  
 issue-ASSOC 3SG-ASSOC NEG want follow  
 ‘Because **she** [that one] doesn’t want to come along!’  
 [Indonesian Corpus Example]

In the context of the utterance in which example (19) occurred, the speaker is pointing to an individual located in the speech situation. The referent of the third person pronoun is made clear only through this deictic gesture; there is no preceding, discourse internal antecedent to provide meaning to the otherwise indeterminate pronoun.

For languages like English, SAP reference anaphora are equivalent to the use of first and second person pronouns. In the usual case, everything else is interpreted as having some other function, typically third person reference, and in particular, expressions used anaphorically never overlap in function with R-expressions such as proper names. The languages that our broader project focuses on—Indonesian, Korean, Chinese, and Dhivehi—employ strategies of referring that contrast markedly with the English situation. In the Dhivehi example in (20), the proper name *Hassan* is used with second person reference. This use is striking for the speaker of SAE, for whom proper names can only have third person reference, unless used vocatively.

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<sup>16</sup> See section 3.2 below on referring expressions, or R-expressions.



null anaphors are not bound by the clause and where there is no grammatical information encoding or indexing the referent of the null anaphor. This “type” is the least studied and least understood, and while it is treated as a homogenous category within syntactic theories (e.g. Sigurðsson 2011), we demonstrate below that there are significant differences among languages that are so categorized.

In fact, because our approach looks at the entire system of people reference, it is apparent that the four languages show different inventories of PREs and that they show different imposter behavior, i.e. in terms of which kinds of PREs may function as imposters; in addition, we have pointed to some differences in the distribution of null anaphors, in the kinds of arguments that can be expressed through null elements.

The approach here represents a significant conceptual advance over past approaches to the exploration of PREs. From both a theoretical and a pedagogical perspective, people referring strategies are rarely explored systematically within a language, let alone comparatively across languages. Generally, some highly circumscribed subset of the full range of potential strategies is isolated and analyzed. Be it the differences between first and second person pronouns on the one hand and third person pronouns on the other; pronominal versus R-expression; polite versus familiar forms; or null versus overt anaphora, the predominant approach is to examine one dimension of contrast within a system. Taking into account only the Indonesian pronouns, Kartomihardjo (1981), Errington (1998), Djenaar (2007), and Englebretson (2007) model the Indonesian first person-referring choice of item in terms of Brown & Gilman’s (1960) T/V distinction (extending their model of second person pronouns); Sneddon (1996) describes the distinction in first person pronouns in terms of formal vs. informal; Djenaar (2008) explains the use of various first and second person pronouns as ‘strategic acts of self-categorization’, rejecting the formal/informal/intimate labels as too simplistic. More recently, Manns (2012) has analyzed variation in first person pronouns as instantiations of different ‘stances.’ McGinn (1991) actually goes furthest in accounting for the range of elements that can function anaphorically in Indonesian, extending his politeness analysis to proper names and kin terms.

These item-centered approaches fall significantly short of accounting for the full range of possibilities that are available to a speaker when they are referring. The selection of one form over many others is a choice, and it is a meaningful choice (see Kibrik 2011). Therefore the most comprehensive description requires a holistic view of the system of PREs. In order to begin to make sense of those choices, we must acknowledge and account for the full range of potential candidates, not just some subset. Our approach therefore aims to answer the question: how can a user of this language refer to individuals (in particular, to people)? We have developed a classification schema of expression types. The development of this classification schema is meant to be near exhaustive only for these four languages and to allow for the systematic investigation of imposter usages. Future work will explore the meaning signaled through the choice of one strategy over another.

### **3.2 The corpus of Indonesian**

In order to identify exemplars of the full range of PREs used in a particular language, we relied on corpora of naturalistic, colloquial speech for each language.

We start from the premise that the more standardized registers of languages and more formal uses of language make less use of non-canonical referring expressions, such as null anaphora and pronoun imposters. We have therefore selected linguistic materials that are both less standardized and more colloquial. There will necessarily be differences in

how non-canonical referring expressions are used across different registers and different genres; that however is not the focus of the present study. Rather, we aim ultimately to develop cross-linguistically comparable characterizations of the use and distribution of non-canonical referring expressions.

The corpus of Indonesian was created by the Max Planck Institute for Evolutionary Anthropology, Jakarta Field Station, from recordings of spontaneous, colloquial, naturalistic speech, made in Jakarta between 2005 and 2010 (Gil & Tadmor 2014). It consists of some 50 hours of recordings, and over 300,000 fully transcribed, glossed, and translated utterances. We therefore characterize the language variety as colloquial Jakarta Indonesian. Unless otherwise noted, all of the full phrasal, clausal, and sentential examples are taken from the corpus. The inventory of PREs in Indonesian includes items not attested in the corpus, but attested elsewhere and verified through elicitation with native speakers.

#### **4. People-referring expressions: A cross-linguistic classification schema and a language-specific investigation**

##### **4.1 Overview**

Here, we propose cross-linguistically pervasive people referring expression (PRE) categories; we study all the PREs as holistic systems that differ from language to language, rather than just looking at some properties of the individual pieces. The classification schema that we have developed details, exhaustively, the various ways in which languages refer to people in an effort to provide the empirical base for a theoretical framework that will account for them in a principled way. It also provides the set over which any indeterminate or ambiguous referring expression can range in order to resolve that indeterminacy or ambiguity, within the discourse—in the world spoken of, and possibly external to the speech situation. For the present paper, this schema is exemplified with Jakarta Indonesian. This classification schema can be expanded to account other languages. For example, given that none of the languages currently under investigation in the larger project has inflectional morphology that encodes person, number, gender, or animacy, such elements have not been included. These would be relevant for languages like English or Italian, however. We advocate an empirically grounded approach that describes each language's PRE strategies and adds them to this inventory.

##### **4.2 Lexical and grammatical PRE strategies as exemplified by Indonesian**

Languages have a variety of lexical and grammatical strategies available with which to refer to people. The categories contained in the classification schema are introduced and described here, and the full set of Indonesian exemplars is detailed. Taken together, these categories form a single functional system containing the set of possible referring expressions that a language contains. They are also, therefore, the set of any and all possible antecedents for any anaphoric expression contained within a discourse -- a functional rather than lexical or syntactic means of classification. Whereas in English the set of items with denotational value is largely disjoint from the set of items with anaphoric value, in the languages under consideration in this project, these sets are overlapping. The set of categories has emerged from cross-language investigation.

###### **4.2.1 R-expressions or descriptions**

**Lexical noun phrases** can be divided into three categories: R-expressions, pronouns, and anaphors, that differ systematically and cross-linguistically in their syntactic distribution and their semantic content. R-expressions can be headed by either common or proper

nouns, contain independent semantic content, and are unbound in their syntactic distribution. In most languages and in most varieties of communication, these are the most commonly encountered non-pronominal PREs. They are non-anaphoric when they are not used as imposters (or shadow puppets). The following subtypes are found as PREs in Indonesian:

- a. Kinship terms
- b. Titles/role terms (in the sense of Fauconnier 1994)
- c. Proper names
- d. Phrasal NPs, including title/kin term + proper name

Like all languages, Indonesian uses lexical noun phrases to refer to people. These can be headed by common or proper nouns. Because the use of a determiner is optional in Indonesian, there is no strict functional demarcation between definite descriptions and non-definite noun phrases.

With the exception of a subset of kinship terms, all lexical nouns can head phrases used vocatively or referentially in Indonesian.

Many kinship terms have both a full and a reduced form and for Jakarta Indonesian especially the set of kin terms includes whole systems that have been borrowed from other languages:

**Table 1. Kin terms used in Indonesian**

Malay Kin Term	Full Form	Reduced Form
mother	<i>ibu</i>	<i>bu</i>
father	<i>bapak</i>	<i>pak</i>
older brother	<i>abang</i>	<i>bang</i>
older sister	<i>kakak</i>	<i>kak</i>
younger sibling	<i>adik</i>	<i>dik</i>

  

Javanese Kin Term	Full Form	Reduced Form
older brother	<i>kangmas</i>	<i>mas</i>
older sister	<i>mbakyu</i>	<i>mbak</i>

  

Hokkien Kin Term	Full Form	Reduced Form
grandfather	<i>engkong</i>	<i>kong</i>
grandmother	<i>engkim</i>	<i>kim</i>
older brother	<i>engko</i>	<i>ko</i>
older sister	<i>encik</i>	<i>cik</i>

In general, when in construction with a proper name, only the reduced form is used, thus *Mas Tomo* and not *\*Kangmas Tomo*. Similarly, when used vocatively only the reduced form is commonly used, with or without the name (Grijns 1980). This latter, vocative use, however, holds true more of the standard language than of colloquial forms (Sneddon 2006).

The following markedness relations obtain representing differences in situation and use:

**Table 2. Markedness relations in uses of referential terms**

	Full form + name	Full form without name	Reduced form + name	Reduced form without name
Vocative use	rare	rare	common	common
Denotative use	rare	common	common	rare
Imposter use	marked	common <sup>17</sup>	common	common

#### 4.2.2 Personal Pronouns

These are grammatical anaphors that potentially encode a range of information such as person, number, gender, politeness, animacy, inclusivity/exclusivity, etc. They are not sensitive to grammatical or thematic relations, that is, there is no formal distinction between the forms used for, say, subject and object, nor for those used for agent or patient.

Given the varied language ecology of Jakarta, Jakarta Indonesian employs a wide variety of personal pronouns of diverse etymological origins. The most neutral set is given below.

**Table 3. Paradigm of neutral personal pronouns**

	Singular	Plural
First	<i>aku</i>	<i>kita</i>
Second	<i>kamu</i>	<i>(kaliyan)</i>
Third	<i>dia</i>	<i>(mereka)</i>

In a more formal register, the following paradigm obtains:

**Table 4. Paradigm of formal register personal pronouns**

	Singular	Plural
First	<i>saya</i>	<i>kita (inclusive)</i> <i>kami (exclusive)</i>
Second	<i>anda</i>	<i>kaliyan</i>
Third	<i>dia</i>	<i>mereka</i>

In more formal registers, there is an inclusive/exclusive distinction in the first person plural forms that is not found in lower registers. Further, there is a clear number distinction in the second and third person pronouns. In more colloquial varieties, the second and third person forms are underdetermined for number, that is, for example, *dia* can sometimes be used with either singular or plural reference.

In addition to independent pronouns, there are also morphologically bound forms. Here the proclitic forms are given:

**Table 5. Paradigm of proclitic personal pronouns**

	Singular	Plural
First	<i>ku-</i>	<i>kita-</i>
Second	<i>kau-</i>	

Enclitic forms are discussed shortly.

<sup>17</sup> The assessment of commonness differs depending on the lexical item; *bapak* would be common whereas *kangmas* rare. We assert that this is a feature of the lexical item, and where lexical items differ in markedness, a default assessment of “common” has been entered.

There are constraints on the use of morphologically bound forms (Kaswanti Purwo 1984:62). There is, however, no morphological agreement between pronominal subject or object and verb form to signal person.

#### 4.2.3 Pronouns from other languages

Pronouns from other languages may also be used by monolingual speakers of a language to refer to an entity. In English for example, the use of French *moi* may be used by a speaker to signal simultaneous acknowledgment and deflection. The category is included here as the existence of multiple pronominal paradigms from diverse languages is common in some languages, as is the case in Jakarta Indonesian. We are not making any claim to cross-linguistic pervasiveness. The potential choice of one use by the speaker is therefore meaningful as a strategy for social indexation in relation to the speaker, hearer, or both.

Pronouns from languages other than Indonesian are frequently encountered in Jakarta Indonesian speech. The most common colloquial, familiar form of the first and second person pronouns comes originally from Hokkien. Until very recent times, these marked the speech of native Jakartans, not of Hokkien descent, from speakers of other varieties of Indonesian. However, more recently as the capital dialect gains prestige, and popular media such as television series and movies adopt more colloquial language, these forms have begun to spread across the archipelago (Sneddon 2006, Djenar 2006). Note that the second person form is not specified for number, whereas the first person form is.

- a. Hokkien  
     *gue~gua* 1SG  
     *lu~lo* 2

While the Hokkien pronouns have wide currency across the city and increasingly beyond, pronouns from Arabic and English are also used in Indonesian but in much more restricted contexts. Arabic first and second person pronouns are used by some speakers to signal in-group solidarity and establish authority.

- b. Arabic  
     *ana* 1(SG)  
     *ente* 2(SG)
- c. English  
     *I* 1SG (word forms do not vary with grammatical relation)  
     *you* 2

All borrowed pronouns are restricted to first and second person form and reference. This may be due to a combination of the fact that third person is most frequently null in colloquial speech, and that the first and second person are necessarily associated with the SAPs. Given that use of Arabic or English is marked in some way, affecting some particular stance (Manns 2012; Djenar 2008), it makes sense that this is most readily signaled in the first and second person forms.

#### 4.2.4 Demonstrative pronouns

Demonstrative pronouns, such as ‘this’ and ‘that’, are available in many languages to refer to people. While it is perhaps obvious how this works with third person reference, in many languages, demonstratives can also have first and second person reference. The proximal form generally maps onto first person usage and the distal maps onto second person usage (see for example the complex system in Tuvaluan: Besnier 2000:409).

There are two demonstrative pronouns in Indonesian, expressing distinct distalities. The two forms have both a more standard form, *ini/itu*, and a more colloquial form *nih/tuh*. There are constraints on where the colloquial forms can occur, though they are not relevant to the current discussion.

Demonstrative pronouns can be used either substantively, to mean something like ‘this one’ or ‘that one’, or as a determiner within a noun phrase—e.g., *rumah ini*, ‘this house’. They can also be used either exophorically or anaphorically, with the following forms:

*ini~nih* ‘this’ 1/(2)/3 proximal either notionally, temporally, or spatially  
*itu~tuh* ‘that’ (1)/2/3 distal notionally, temporally, spatially

The parentheses indicate that that person value requires a special discourse context; normally, the proximal and distal terms will, as predicted, differentiate first and second persons, in addition to their common use with third person reference.

Locative pronouns include items like ‘here’ and ‘there’.<sup>18</sup> Related both in form and meaning to the demonstrative pronouns are the locative pronouns. In Indonesian, the formal relationship is clear in the proximal forms, with the proximal demonstrative *ini* ‘this’ and the proximal locative *sini* ‘here’. In more formal registers, there is actually a three place distinction in the set of locative nouns, with *situ* ‘there (far from speaker and hearer/unseen)’ clearly related to the proximal demonstrative *itu* ‘that’. In colloquial registers, however, the following, two-place system is generally observed:

*sini* ‘here’ 1/(2)/3  
*sono* ‘there’ (1)/2/3

Similarly to the demonstratives, the locative pronouns can function as imposters; cross-linguistically this is more highly marked than the demonstrative cases, where the mapping of proximal onto first person reference and distal onto second person reference is more common. Here, the anaphoric use of the pronouns is unspecified for both number and person, and marked negative for animacy. This gives a default person reading of third person, i.e. non-SAP. As imposters, they therefore exhibit a mismatch on two features. The proximal locative pronoun as an imposter generally maps to the speaker, and hence is referentially specified for first person and positive for animacy. Similarly, the distal locative pronoun as an imposter generally maps to the hearer, and so is specified for second person and positive for animacy.

#### 4.2.5 Reflexive pronouns

Reflexive pronouns are anaphors that refer back to an entity within the same clause as the reflexive. In English, this includes items like *himself*, and *ourselves*. These can be used to fill argument slots, as in *I see myself* or *He bought it for himself*, or to specify a manner of action, as in *Susan did it by herself*.

Indonesian has several variants of reflexive pronouns. All of them incorporate the element *diri*, which can be translated ‘self’.

- a. *diri(-nya)* ‘self’
- b. PRONOUN + *sendiri* ‘X self’

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<sup>18</sup> Locative nouns, meronyms like ‘side’, ‘front’, ‘back’, etc. also function as PREs in some languages (as shown in ex. 16). We believe this to be the case for many colloquial varieties of Indonesian as well, but do not have irrefutable evidence.



- c. *diri sendiri* ‘self alone’
- d. *diri* + PRONOUN + *sendiri*

Unlike in English, the basic reflexive, often modified with the associative marker *-nya*, can function as subject, object, or indirect object in Indonesian.

(22) *Jon mikir dirinya mau ke Bandung besok.*  
 Jon think REFL-NYA will to Bandung tomorrow  
 ‘Jon<sub>i</sub> thinks that he<sub>i</sub> will go to Bandung tomorrow.’

(23) *Ahmad liat dirinya di kaca.*  
 Ahmad see REFL-NYA in glass  
 ‘Ahmad saw himself in the mirror.’

(24) *Siti nunjukin Intan<sub>i</sub> ama dirinya<sub>i</sub> di kaca.*  
 Siti show Intan with REFL-NYA in glass  
 ‘Siti showed Intan to herself in the mirror.’

Further, a reflexive can have an antecedent in a non-local relationship (i/j below) or even have exophoric though readily recoverable reference, as indicated in subscript /k/ below.

(25) *Ahmad<sub>i</sub> tahu Salmah<sub>j</sub> akan membeli baju untuk dirinya<sub>i/j/k</sub>*  
 Ahmad know Salmah will buy clothes for REFL-NYA  
 ‘Ahmad knows that Salmah will buy clothes for him/herself.’

Cole & Hermon (2005) argue that *diri* + PRONOUN is actually not specified in the lexicon as either a pronoun or a reflexive, and it is therefore an intermediate category showing mixed properties unexpected for long-distance reflexives (polymorphic; object oriented, etc.). The forms differ in their distribution and their behavior with respect to binding conditions, but that is beyond the scope of the current paper.

#### 4.2.6 Enclitic pronouns

In addition to the agentive proclitics discussed in section 4.2.2 above, Indonesian also has a set of enclitics that function either as possessive markers or as non-agent/actor thematic role markers, in both direct and indirect object grammatical functions. Their forms are as follows:

- ku* 1SG
- mu* 2
- nya* 1/2/3

The three forms all encode a distinct set of features. *-ku* is marked for person and number; *-mu* is marked simply for person; and *-nya* is unmarked for person or number. It is possible that *-nya* is not properly a member of this set, given how its feature specification differs. Gil (1999) for example analyzes this enclitic as an ‘associative marker’; Yap (2011) analyzes it as a nominalizer (with a wide range of functions). Note that full form personal pronouns can also function as possessive determiners in paratactic relation with their heads.

In their function as thematic role markers, these enclitics are unambiguously PREs. However, in their role as possessive markers, these are not strictly referring expressions. We include them here because they importantly enter into coreference relations and have been used as a heuristic for determining the imposter status of lexical items.

#### 4.2.7 Reciprocal pronouns

Reciprocal pronouns are anaphors that also refer to individuals, often within the same clause as their antecedents. Indonesian has multiple strategies for expressing reciprocal relations, including lexical and morphological (Davies 2008). The lexical items *sama-sama* and *saling* mean ‘each other’ and can serve as arguments with any semantically appropriate predicate. *Sama-sama* is more commonly found in basilectal registers. Both forms tend to appear in preverbal position.

- a. lexical: *sama-sama* ‘each other’
- b. lexical: *saling* ‘each other’
- c. morphological: X meN-X ‘to X each other’ [where “X” stands for a predicate]<sup>19</sup>
- d. morphological: ber-X<sup>20</sup>, ber-X-an

The morphological reciprocal is restricted to the higher registers of the language, as signaled by the use of the prefix *meN-*, as opposed to the colloquial form *N-*. In this construction, the predicate can be a noun, verb, adjective, or any category other than a functional category.

- (26) *Tono dan Joko sering tukar-menukar.*  
 Tono and Joko often trade-MEN-trade  
 ‘Tono and Joko often trade with each other.’

Note that the morphological reciprocal is ungrammatical in lower registers: for example the form *tukar-nukar* is unacceptable.

### 5. People referring expressions bound to the speech event

Above, we provided the set of lexical categories used in Indonesian to refer to people. In addition to these lexical categories, there is also the functional category of non-canonical referring expressions (non-CREs) whose members can be used to refer to people. This functional category is comprised of elements whose referential or interpretive value cannot be directly read from their denotational value. These include null anaphors and imposters.

#### 5.1 Null anaphors

We define null anaphors as zeros with antecedents or referents in the world spoken of. They are exemplified in (5, 8, and 11–13) above. A null anaphor potentially fulfills any argument function in a clause.

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<sup>19</sup> We speculate that this may be an applicative marker rather than a true reciprocal, which both licenses an additional argument and changes the nature of the event. Regardless, this type of process applies to events or actions that are inherently bidirectional or reciprocal, like letter-writing, greetings, and exchanges.

<sup>20</sup> These forms generally yield what are more properly called reciprocal relations, such as *to be friends*, or *to be related*.

Three types of referential null subjects are often distinguished (Huang 1984b, 1989, 1991; Holmberg 2005; Neeleman & Szendrői 2007; Sigurðsson 2011).

- i. The Romance *pro drop* type, conditioned by agreement (27)
  - ii. The Germanic *topic drop* type, conditioned by syntactic structure (28)
  - iii. The Chinese *discourse pro-drop* type, not clause-internally constrained (29):
- (27) *Parlo/Parli* *islandese.* Italian  
 speak.1SG/2SG Icelandic  
 ‘I/You speak Icelandic.’
- (28) *Kommer* *tillbaks imorgon.* Swedish  
 come.Ø-AGR back tomorrow  
 ‘[I/We/She, etc.] will be back tomorrow.’
- (29) 看见 他 了。 Chinese  
 Kānjiàn tā le.  
 see.Ø-AGR him PERF.Ø-AGR  
 ‘[He/She, etc.] saw him.’ [plus ‘her/it’ in speech]

These distinctions are relevant in that most past research on understanding the distribution and interpretation of null anaphora has been done on the first type, *pro drop*. This type is found in languages like Italian, Spanish, and Turkish. These differ crucially from the languages of the so-called *discourse pro-drop* type in having rich inflectional morphology. The languages under investigation here all fall into this third category. Much work needs to be done to understand the properties of null anaphora in these languages and in particular the discourse and grammatical constraints on their distribution. That, however, is beyond the scope of the current paper.

Indonesian allows for **null anaphors** as subjects, objects, and indirect objects in most constructions. There is a strong preference to omit arguments. Analogous to the case for Javanese as shown by Ewing (2014), null anaphora in Indonesian, or ellipsis as he calls it, is best understood as the default mode for subject representation in conversational interaction.

## 5.2 Imposters

Indonesian makes extensive use of **imposters**. Generally, these are deployed as a politeness strategy, as it is considered impolite to make direct lexical reference to oneself, an interlocutor, or a person spoken of. Use of an imposter obviates using personal pronouns, and is sometimes termed pronoun-avoidance, in cases where it expresses some politeness or taboo stricture. The principles of social indexation demonstrated through the use of various categories of imposters is complex, and moves well beyond simple ‘politeness,’ the details of which are also beyond the scope of the present description.

In many cases, however, imposter use is simply the basic strategy used by most speakers of Indonesian to make overt reference to people, and is not (necessarily) attributable to any avoidance function. In the following examples, the translation gives one interpretation of the Indonesian sentence—one that involves the “imposter” function. The use of bold in the original, gloss, and translation indicates this reading.

Kinship terms

- (30) *Nanti kamu dimarahin Bapak lo!*  
 later 2SG DI-anger-APPL **father** EXCL  
 ‘I will be angry with you!’

Titles

- (31) *Pak ya makan olahan sini mah ya?*  
**Sir** ya eat menu here PRCL ya  
 ‘You are eating (off) the menu here ya.’

Proper names

- (32) *Saya sama Adi ngoyor ke sono...*  
 1SG with **Adi** swim to there  
 ‘I swam with **you** (Adi) there...’

Demonstrative pronouns

- (33) *Ini udah mau bobo!*  
**this** already want sleep  
 ‘I want to go to bed!’
- (34) *Tuh mau pergi kan?*  
**that** want go PRCL  
 ‘You want to go, right?’

Locative pronouns

- (35) *Sini dah kasi dech.*  
**here** already give PRCL  
 ‘I already gave it!’
- (36) *Sono ikut ga?*  
**there** follow NEG  
 ‘Are **you** coming?’

**6. Strategies for decreasing referential ambiguity**

In addition to the categories listed in (1-8) above, and the two strategies given in (9-10), languages use a number of other possible strategies that identify a particular entity in the world, or have some grammatical system that necessarily indexes some particular entity. For example, some languages encode social deixis by means of sets of denotationally synonymous vocabulary items whose usage is determined by the particular relationship between the individuals in the speech situation or between them and individuals in the world spoken of. In many of these systems and as a general characteristic of pronouns, the construction or form underdetermines its referent because it does not encode features associated uniquely with that referent. The social-interactional categories encoded in pronoun systems do not exist as denotational features, but rather as features that emerge from the interactional nature of the speech setting. For example, Javanese contains multiple speech levels, including different pronouns used when a speaker addresses someone of equal, higher, or lower status. If referring to someone other than the speaker or the hearer, the speaker employs a different set of forms, which encode both the speaker’s status and the status of the referent. Through the speaker’s use of such a system, we can tell, for example, that an interlocutor or non-SAP individual is of high status. This

strategy can reduce the potential search space for possible antecedents, while potentially falling short of uniquely establishing the referent of that item.

Patterns of inflectional agreement can serve a similar function. Though none of the languages under investigation here has obligatory verbal agreement with any arguments, some of them show optional agreement. In other languages not currently under investigation, this category would be more salient.

The following functional categories similarly serve to reduce the indeterminacy of reference of a PRE (canonical or non-):

### 6.1 Honorifics

We characterize honorifics as words or expressions which encode levels of respect or politeness. They often indicate the status of the person to whom they refer, including social, academic, political, aristocratic, and occupational position or status. Typically honorific forms are restricted to second and third person referents and include English forms such *your majesty*, *Doctor*, and *sir* (all honorific when used as titles). Humbling items, or *humilifics*, are specific forms with first person reference used to convey deference to the interlocutor.

Many of the 700 local languages of Indonesia have elaborate honorific systems, and these are very often used when speaking Indonesian. In Indonesian itself, the kin terms listed above can function as honorific or humilific terms, that is they can be deployed strategically within the general honorific/humilific system. A generic honorific used to address an interlocutor is *saudara* for a male and *saudari* for a female. These are derived from Sanskrit (as indicated by their distinct masculine and feminine forms) and otherwise mean ‘relative’. To address an audience, the combined form *saudara-saudari* is used as an honorific. In speeches, this can be used with both a vocative and a referential function.

The third person singular pronoun *beliau* is the only explicitly honorific Indonesian pronoun. It is used to refer to honored and high-status individuals. The second person *anda*, noted above as part of the more formal register of Indonesian, also has honorific uses; however, it generally connotes formality and distance rather than respect.

### 6.2 Speech levels

Speech levels are complete grammatical systems that reflect the relative status of the SAPs. These systems can index the relative status relations in their lexicon, morphology, syntax, and phonology; that is, distinct forms at these levels can be indexed for or reflect the relative status of interlocutors. Honorifics may make up part of a speech level system, but whereas honorific terms are restricted to referring to the honored person, the speech level system necessarily indexes but not necessarily refers to the status of the interlocutors. In many such systems, high-frequency verbs describing personal actions, such as EAT, SLEEP, and WALK have multiple lexical forms (often suppletive to the semantically equivalent terms) associated with the different levels. The system can extend to grammatical systems, with distinct forms of modals, articles, and conjunctions. Some systems reflect the relative social status of the interlocutors, as well as the person or people spoken of. In some rare systems, there are even special forms that are used when speaking not to or about someone, but simply in their presence, e.g. Javanese forms used when in presence of the Sultan.

Speech levels are not equivalent to registers, which are systematic distinctions in code (a language, a dialect, a variety), used symmetrically among speakers and varying depending on situation and context. A speech level system is comprised of systematic

distinctions in code, or some subset of the code, used asymmetrically among speakers and varying depending on the relative social status of the interlocutors.

As noted above, Indonesian has a large range of registers running from formal to informal that encompasses distinctions in lexicon, phonology, morphology, and syntax. Unlike several closely related languages such as Javanese and Sundanese, Indonesian has no speech level system. The distinction between the two is important, as different cues are signaled by the different systems.

### 6.3 Agreement

Agreement patterns and strategies vary across languages. A comprehensive look at PREs demands that we include agreement patterns. Some languages show verbal agreement with a subject, others with an object. Some show verbal agreement with all arguments. Other languages show agreement not with syntactic roles, but with semantic roles, such as agent, patient, experiencer. This is necessarily a broad category that has a number of different realizations cross-linguistically. For the languages under consideration here, there is, on the whole, minimal inflectional morphology and so agreement does not play a significant role in referring to people. Korean honorific morphology on verbs has been analyzed as agreement with an honored subject (Koopman 2005), though see (Brown 2011; pp 31-33) for problems with this analysis. For those languages with more elaborate and obligatory agreement, such as noted above for Italian (8-10), these systems provide grammatical information that aids in identifying referents.

## 7. On the pervasiveness and prevalence of NCREs in Indonesian

Beyond the categorical distinctions delineated in the classification schema above, there are also functional differences in how these referring expressions are used. Languages differ according to which members of the set of above PRE categories can also have an imposter function. Thus, in English, the phenomenon is highly restricted to cases such as the following:

- (37) CONTEXT: Nurse to patient  
*Have we taken our medicine today?*
- (38) CONTEXT: Queen to subject  
*We are not in favor of it.*

The personal pronoun *we* is used in both examples above. In its neutral usage, this has a first person plural referent. However, in (37), *we* (with first person plural denotation) refers only to the patient being addressed: it has a second person singular referential value. This is an example of the “nurses’ *we*” construction. In (38) the queen is referring only to herself, and so the *we* here has a referential value of first person singular. Imposter mismatch is also found in ‘motherese’—child-directed adult speech, and even at pet-directed speech.

In our classification schema, we include the category of imposters. This is not strictly speaking a category of referring expression. Rather, it is a function of a referring expression in a particular context. In Indonesian, imposter function is widespread and not restricted to genre, though, as we noted before, there are strong tendencies for the same lexical subcategories (e.g. kin terms and other relational nouns) to function as imposters (see Ewing 2014).

A claim we can make with some confidence is that for Indonesian, the use of the pronoun system is not the preferred strategy for referring to people, even when reference has been

pre-established in the discourse. For whatever reason, the Indonesian language prefers null elements, but since they are maximally ambiguous, when specificity is preferred, “imposter” uses of descriptors may be utilized. Any claim to the effect that “pronoun” is an open class in Indonesian fails to respect the difference between category and function: it is not that “pronoun” is an open class, but that discourse-sensitive referring functions can be freely fulfilled by members of an open class, namely nouns (Flannery 2010). This is not to say that all members of this class lend themselves equally well to imposter function. The discourse factors that condition overt, as opposed to null, referring expressions, are not entirely understood by us.

Within their social context of appropriateness, Indonesian imposters are virtually unrestricted in their distribution; in fact, it is the occurrence of the full personal pronoun in most cases that is more highly marked than the imposter use (see examples 30-36).

In a sample corpus of 1000 utterances of colloquial Jakarta Indonesian<sup>21</sup> annotated for null anaphors and imposters, we calculated the total number of null arguments, including subject, object and indirect object, with any of first, second, and third person reference. The methodology for determining the status of arguments was based largely on the Jakarta Indonesian Valency Project, reported on in Connors and Gil (2013) and Connors, Gil, and Bowden (2015). Additionally, the table gives the number of imposter arguments, calculated as a percentage of the total overt arguments. Both measures are broken out by person.

**Table 6. Percentage of null and imposter arguments**

	% null arguments	% of overt arguments realized as imposters
First Person	56.6%	8%
Second Person	68.9%	12.5%
Third Person	37%	.003%

What this shows is, for instance, for first person reference, fully 60% of instances in this corpus are NCREs. For second person reference, nearly 83% are NCREs. Predictably, the number is considerably lower for third person reference.

## 8. Theoretical implications and conclusion

We have here laid out a foundational analysis of systems of people referring expressions, in a way that, to our knowledge, has not heretofore been attempted. This includes these contributions to a coherent framework:

- a systematic review of the ways of establishing reference to people
- a cross-linguistic categorization<sup>22</sup> of expressions that refer and corefer
- the inclusion of items (null anaphors and imposters) that anchor the referring act to the speech event
- a list of language-specific strategies that reduce the ambiguity of null anaphors and imposters

Indonesian represents the limiting case -- where unambiguous reference is not observed under the usual circumstances; rather rampant ambiguity is tolerated in situations not found for other languages. It is unclear (*vis-à-vis* lack of work on speaker attitudes

<sup>21</sup> From the database of the Jakarta Field Station, Max Planck Institute for Evolutionary Anthropology.

<sup>22</sup> As noted above, we do not assert that the inventory provided here is cross-linguistically comprehensive.

towards ambiguity) what the Indonesian speaker's perspective is on this level of ambiguity.

The data discussed here and possibilities raised have interesting theoretical implications. The first of these speaks to the licensing of discourse pro-drop cross-linguistically. Many hypotheses have been advanced, and these fail to account for the data seen here. The oldest generalizations about rich agreement being the (only) licenser for pro-drop in general (Taraldsen 1978, Rizzi 1982, among others including Koenenman 2000; references in Neelman & Szendrői 2007) have been shown to be false for many languages (Huang 1984a), and they would similarly fail for Indonesian, as mentioned earlier, due to its lack of agreement morphology.

A more recent claim about the licensing of discourse pro-drop is found in Neelman & Szendrői (2007), who argue that discourse pro-drop (as opposed to subject pro-drop like that found in Spanish or Italian) is licensed by agglutinative case or agglutinative phi-feature agreement in the pronominal system. This is due to the nature of spell-out being a phonological process that can target different syntactic projections, where these syntactic projections could be filled by morpho-phonologically distinct values (i.e. agglutinative morphology). In short, agglutinative morphology is the overt expression of morphemes being projected in different syntactic nodes. For example, agglutinative case morphology will be in a Case Phrase (KP) above NP. For languages that have agglutinative morphology inside nodes above N, for example case morphology in KP, there are rules on spell-out targeting different projections within this extended noun phrase (targeting phonological deletion at NP and at KP), and they do not compete precisely because they target different nodes. The rule targeting the highest node will apply and the whole extended noun phrase does not undergo spell-out. For languages with fusional morphology, rules about spell-out of different features all target the same node, KP. Therefore, as these rules are in competition, none of them can be chosen, and thus none can apply. In particular, the rule responsible for whole noun phrase deletion in agglutinative languages, licensing the phonological deletion of the extended NP, cannot apply in languages with fusional morphology.

As shown here, however, Indonesian pronouns are fully suppletive, and not at all agglutinative, and yet they too can be omitted, showing that a language does not have to have agglutinative morphology to participate in this radical pro-drop. This was also shown for Kerinci (McKinnon, Cole & Hermon 2011) and Colloquial Singapore English (CSE) (Sato 2011). Typologically, Indonesian provides another instance of such a language, one that is not a creole and one unrelated to Mandarin, the language from which CSE takes its substrate and from which Sato suggests it also takes this radical pro-drop phenomenon.<sup>23</sup> Sato himself argues for a return to an analysis of CSE and such languages as being topic pro-drop languages, as Huang (1984a) argued.

Another implication has to do with what it is to be an imposter. For Collins and Postal (2012), imposterhood is defined in terms of mismatch of the person feature. It is unsurprising, given the placement of person at the top of the feature hierarchy (Greenberg 1963), that these would be most readily noticed. Here, however, we have shown that the same kinds of issues that are relevant for person imposters are also relevant for an account of mismatch in terms of other features, such as gender and animacy.

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<sup>23</sup> An anonymous reviewer notes, correctly we feel, that Mandarin came relatively late to Singapore and Malaysia, and that the substrate languages in CSE are most likely a mix of southern Chinese varieties and Malay, rather than Mandarin.



Collins & Postal identify three types of imposter-like phenomena: true imposters, camouflage items, and pseudo-imposters.<sup>24</sup> In the terms we have used here, imposters exhibit a mismatch between the denotational and the referential person features of a noun phrase, and the denotational features control agreement, binding and other relations. For pseudo-imposters, there is a mismatch between the denotational and referential features of a noun phrase, but the referential features control agreement, binding and other relations.<sup>25</sup> According to Collins & Postal, a camouflage noun phrase is a third person noun phrase that is used to refer to the addressee but includes an expression of second person, such as *your honor*, *your majesty*, etc.

Finally, though we have used the term “imposter” here to be in keeping with the literature that discusses similar phenomena, we do not commit to the notion that the non-canonical use of referring expressions in Indonesian necessarily involves a mismatch of features. The animacy imposters exemplified above may be true imposters, in that there is evidence that these items are marked negative for animacy and therefore their PRE use involves a mismatch. However, there is no evidence to suggest that in Indonesian full noun phrases or names are specified for a third person feature. As such, there is no evidence to support the idea that they are acting as imposters for the real features of the referent. Collins and Postal’s (2012) analysis results in an undesirable outcome for Indonesian, which does not exhibit the strict constraints on the use of imposters the way English does. Under their analysis, if Indonesian NPs were to behave like English, where a noun phrase actually carries first person features when referring to a first person, the Indonesian lexicon would need distinct first, second, and third person versions of every name and noun denoting humans. The proposal outlined below is more economical.

We therefore suggest that in Indonesian, and languages like it, nominals (including some pronominals) are underspecified for certain features, in particular person. The idea of feature underspecification is not new, and has been proposed for gender (Farkas 1990, Lumsden 1992) and for case (Dalrymple, King & Sadler 2009); similarly, English nouns can be analyzed as underspecified for number, rather than being marked as “singular” (or negative for plural). It is also in general an allowed and core property of certain theories (for example Distributed Morphology (Halle & Marantz 1994) and Lexical Functional Grammar and Head-Driven Phrase-Structure Grammar (Dalrymple, King & Sadler 2009)). However, person underspecification for anything other than anaphors has, to our knowledge, not been proposed. Recall, in fact, that in mainstream theories anaphors in the narrow sense are actually defined as not having their own person features, in contrast to all other nominals and pronominals (e.g. Burzio 1991). However, the fact that names and noun phrases are used frequently beyond initial reference in Indonesian and have distribution somewhat overlapping with that of anaphors (i.e. locally coreferring with some other R-expression<sup>26</sup>) naturally raises this possibility. That is, if names and noun phrases can in some ways behave like traditionally bound anaphors distributionally and referentially, maybe it is because in some way they are like bound anaphors—that way being that they are underspecified for certain features.

Arguing for the possibility of person underspecification requires a great deal more explanation, as feature valuation is done syntax-internally; in the model of syntax

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<sup>24</sup> Pseudo-imposters are exemplified for Mandarin in Wang (2014).

<sup>25</sup> Collins and Postal’s view highlights structural, rather than referring, differences between these two.

<sup>26</sup> Critically, it is always an identical R-expression. So ‘Tom<sub>i</sub> saw Tom<sub>i</sub>’ is acceptable, while ‘Tom<sub>i</sub> saw him<sub>i</sub>’ and ‘He<sub>i</sub> saw Tom<sub>i</sub>’ are both ungrammatical, facts like those in Japanese (Kuno 1988).

presupposed in Collins & Postal (2012), there is no mechanism in formal syntax that would allow, for example, features to be valued on a syntactic head from somewhere outside of the syntax, and certainly not from metalinguistic sources such as the discourse context. Syntax-internal means may be available, for example putting the relevant features in a null head of an appropriate phrase (e.g. Participant Phrase) and putting a DP in that phrase's specifier and in so doing, having that DP have its features valued by that head. We leave the possibility of person feature underspecification for future research.

Alternatively, such features may be not merely underspecified, but unspecified. In the same way that there are many attributes of a person that would help identify them as the referent, some of which one would not propose putting into the syntactic feature structure in a language (height, eye color, personality), perhaps even the canonical phi-features are not in the structure of some languages. In such cases, reference is established primarily or entirely through context and discourse, similar to deixis. We also leave this possibility for future research.

Under such an analysis, the majority of what have been presented above as imposters in Indonesian would not, in fact be, imposters. Nor would they qualify as pseudo-imposters or camouflage NPs. Strictly speaking, only the locative NPs (*sini, sana*), which are explicitly marked as [-human] would have an imposter use where their referential value would be [+human]. The demonstratives *ini* and *itu* are unspecified for person, so there would be not conflict in features. Similarly, the R-expressions—kin terms, titles, proper names — in Indonesian are arguably underspecified for person, as they can be used alternately with first, second, and third person reference, and can control agreement, binding and other relational features. To the three-way typology of Collins and Postal, then, we would add a fourth category, **shadow puppets**. This category would include any NP with inherently underspecified feature values, for things such as person, animacy, or number, which, being lexically underdetermined must therefore be specified pragmatically, or in some other way. There would not be any mismatch of features in these cases, but rather some underlying semantic content for which certain features would be contextually specified, and contextually fluid, much as the inherent structure of the puppet projects different shadows under different movements. Much work remains to be done on this proposal, which remains tentative.

In sum, this article details progress made on a basic research project exploring the nature of referring, with particular attention to non-canonical referring expressions. It represents a significant conceptual advance in that it shows the inadequacy of SAE-based models of reference resolution to explain the systems of many other languages. Our focus here has been to lay out the facts for Indonesian, with reference to other languages, and to describe aspects of the use of the expressions involved.

## Abbreviations

1	first person	2	second person
3	third person	ACC	accusative
AFF	affirmative	AGR	agreement
APPL	applicative	ASSOC	associative
DI-	patient focus	EXCL	exclamation
MASC	masculine	MEN-	agent focus
NEG	negator	NOM	nominative
NYA	associative marker	Ø	non-overt element
P	person	PERF	perfect
PL	plural	POSS	possessive
PROG	progressive	PRTCL	particle
Q	question	QUOT	quotative

REFL	reflexive	REL	relativizer
SAE	Standard Average European	SAP	speech act participant
SG	singular	TOP	topic

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