

Fake nouns: reconsidering the role of presupposition in reference

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Abstract. Pronouns have been observed to have ‘fake features’, where their feature information is systematically ignored in alternatives. I show that bound descriptions also exhibit a parallel ‘fake’ property where their noun content is ignored in alternatives. After showing that the traditional ι -based analysis of *the* combined with Roothian focus semantics does not derive the data, I explore a minimal semantic account where all familiarity-denoting expressions including pronouns, descriptions, and names are minimal variables carrying indices with their content only contributing a non-interpreted label used for disambiguation. A mechanism for the valuation of a label is explored. The main consequences of this analysis are a) a uniform, minimal analysis of all anaphoric expressions that reduce their content difference to pragmatic mechanism of disambiguation, and b) analyzing pronouns as featural definites that only differ from definite descriptions in the level of conventionalization of their content. I compare the proposed analysis with existing analyses of apparent Principle C violations found in other languages and show that the existence of non-identical copies of R-expressions is better captured by the proposed analysis.

Keywords: definite descriptions · Principle C · pronouns · features · reference · uniqueness · presupposition

1 Introduction

Traditional accounts of pronouns and definite descriptions assume a categorical distinction between their underlying semantics: the former carries closed-class features as presuppositions to variables, while the latter carries some operator that takes an open-class NP as restriction. In this paper, I propose to remove that distinction and instead treat pronouns and definite descriptions as being subject to one underlying mechanism that extend to all expressions that refer to familiar entities in the discourse (called ‘definite expressions’ as a whole), including names and epithets.

The main empirical motivation for this proposal is a novel observation that when a noun-containing expression is bound under an exhaustive operator like *only*, their noun content is not interpreted in the alternatives. This phenomenon is shown to be productive across various languages including English, Tagalog,

and Korean. After showing that the traditionally-assumed ι -based analysis of *the* combined with Roothian focus semantics [33, 32] do not give us the desired result, I propose an alternative analysis where all definite expressions are analyzed as minimal variables that only carry indices and no interpreted content such as ϕ or nouns. I then argue that the resulting phonological form (*she* or *the linguist*, for example) is simply a label a speaker uses to express the minimal variable in the metalinguistic layer. The main consequences of this proposal are that a) a uniform, minimal analysis of all definite expressions is provided and b) the traditionally-assumed distinctions between expressions such as pronouns and definite descriptions are faded. The proposal is also shown to align with many existing works that derive Principle C as a consequence of pragmatic constraints rather than stipulating them as syntactic/semantic requirement and to provide better empirical coverage than existing analyses of apparent Principle C violations.

The rest of the paper is organized as follows. I will first discuss the phenomenon of ‘fake nouns’ in Section 2 and show that traditional accounts of ι and focus do not derive the observed interpretations. I then propose an alternative analysis where all definite expressions are minimal pronouns in Section 3. The consequences of the analysis is discussed in 4, where some remaining issues are laid out. Section 6 concludes with a discussion of how the current analysis better captures some examples of Principle C violations than existing analyses.

2 Fake nouns

2.1 Fake features and ϕ

Phi-features of pronouns have been observed to be systematically ignored in certain contexts, leading to terms like ‘fake features’ [21, 17, 5, 38]. This is shown in (1) where pronouns allow mismatched gender alternatives under focus operators.

- (1) Only Mary_F did her homework. [21, 17]
 = No one else (regardless of gender) did their homework

Under the traditional view of pronouns as variables carrying ϕ -features as presuppositions [18, 38], (1) is surprising because other presupposition triggers do project to all focus alternatives, as shown in (2) and (3).

- (2) Only Mary_F danced again
 a. Everyone else danced but didn’t dance again
- (3) Only Mary_F stopped smoking
 a. Everyone else used to smoke

There are two general approaches to ‘fake features’. The Weak Projection analysis [35] argues that ‘pure presuppositional triggers’ such as ϕ is not projected to focus alternatives. The Minimal Pronoun analysis [21] argues that pronouns do not contain any ϕ -information and get them later. Both approaches assume that

‘fake’-ness is a characteristic of ϕ -features. [35], for example, argues that only pure presupposition triggers which only add presuppositions and lack assertive content are the kinds of content that do not project to alternatives. In the Minimal Pronoun account, pronouns can be valued later in syntax because they are features that can be valued morphosyntactically rather than semantically [5, 21].

2.2 Challenge: fake nouns

The novel observation that motivates this paper is that nouns, in addition to ϕ -features can also be ‘fake’. Definite descriptions can be bound in English with sufficient contextual support [12, 37, 36], and when they are bound, they show the same ‘fake’ characteristic, which I will dub ‘fake nouns’. For example, consider (4) uttered in a conference-organizing context where the second instance of ‘the student’ is interpreted as a bound variable. In this reading, the NP property, namely the property of being a student, is not required in the alternatives, as shown in (4).

- (4) (Organizing a conference) Only one student complained that the poster dimension provided by the conference didn’t fit the student’s printer.
 a. Others (student or not) didn’t complain about their printer.

In English, such examples are rare because a pronoun sounds more natural and less redundant in these contexts. However, this phenomenon is more productive in languages where noun-containing expressions can be more readily bound. For example, in Tagalog, nouns with a namefier *si* can be used in place of the 2nd person pronoun due to honorification as shown in (5) and (6), and when they are, they show the same ‘fake’ property (Gérard Avelino, pc).

- (5) Si guro lang po ang nagreklamo na masyadong maliit ang
 SI teacher only HON ANG complain.PRF C too small ANG
 kuwarto ni guro.
 room NI teacher.
 ‘Teacher is the only one who complained that teacher’s room is too small.’
 (Others, teacher or not, did not complain about their room.)
- (6) Si guro lang po ang nagbasa ng papel ni guro.
 SI teacher only HON ANG read NG paper NI teacher
 ‘Only teacher read teacher’s paper.’
 (Others, teacher or not, did not read their own paper)

Not all descriptions can be used this way. For example, while *si* is often called a name-fier, actual proper names do not allow bound-readings as readily (Gérard Avelino pc). Furthermore, the definite-marked *ang* counterparts would not allow the bound variable reading. But what is crucial is that when a noun-containing expression is bound, the noun is not interpreted in the alternatives.

This phenomenon is more productive in Korean, where bare nouns can be used in place of 2nd and 3rd person pronouns. This productive use of bare nouns may be due to honorification as well as the lack of a 3rd person pronoun in the

language [1]. For example, the bare noun *kyoswunim* (‘professor’) in (7) and *emma* (‘mother’) in (8) can be bound with a variable bound reading and are not required on the alternatives.

- (7) kyoswunim-man kyoswunim nonmwun twu-pen ilkeyo pothong
 prof-only prof paper 2-CL read normal
 salam-tul-un caki nonmwun tasi an ilkeyo.
 person-PL-TOP self paper again NEG read
 ‘Only professor reads professor’s paper twice, others don’t read their papers again.’
- (8) emma-man emma os akkici talun salamtul-un caki os an
 mom-only mom clothes cherish other people-TOP self clothes NEG
 akkye
 cherish
 ‘Only mom cherishes mom’s clothing, others don’t cherish their clothing.’

In summary, noun-containing expressions (bare nouns, *si*-marked nouns, and definite descriptions) allow bound readings, and the nominal content does not project to alternatives. Note that parallel data have been observed previously, but not in this context and instead in terms of (apparent) Principle C violations. In languages such as Zapotec, Hmong, Vietnamese, and Thai, R-expressions can be bound by identical R-expressions [25, 8]. An example is shown in (9) in Thai.

- (9) John konnuad John.
 John shaved John
 ‘John shaved himself.’ [Thai; [23]]

These bound expressions also show fakeness: [8] show with (10) that these bound R-expressions in Thai allow sloppy readings.

- (10) Mii khĒĒ Nit thĭi khĭt wĕa Nit chĕlĕat.
 EXT just Nit REL think COMP Nit smart
 ‘Only Nit thinks that she’s smart.’ [[8]:(13)]

However, when these data are evaluated in light of ‘fakeness’, new challenges arise. First, the traditionally-assumed ι -based analysis of *the* combined with focus semantics [33, 32] does not give us the right reading. Second, existing analyses for fake features derive this property from the nature of a morphosyntactic feature and do not easily extend to nominal content.

Focus semantics and ι Assuming Roothian focus semantics [33, 32] and that bare nouns in Korea and *si*-nouns in Tagalog are underlyingly definite descriptions [24, 20, 1, 3], I first compute the meaning of (11) where the second instance of *professor* is not bound.¹

¹ The bare noun *professor* in (11) is intended to stand for the definite description in English, the bare noun in Korean, and the *si*-noun in Tagalog.

- (11) $[\alpha \text{ Only } [\beta \text{ professor}_F \text{ reads professor's paper}]]$
 a. $[[[\beta \text{ ..}]]]^o = \lambda w : \exists!x[\text{prof}(x)].\text{read}(\iota x[\text{prof}(x)], \text{paper.of}(\iota x[\text{prof}(x)]))$
 b. $[[[\beta \text{ ..}]]]^f = \{\lambda w : \exists!x[\text{prof}(x)].\text{read}(z, \text{paper.of}(\iota x[\text{prof}(x)])) \mid z \in D_e\}$
 c. $[[\text{(11)}]] = \text{No one else reads the unique professor's paper}$

If we assume following traditional literature that the definite description involves an ι operator that a) takes an NP argument, b) presupposes an existence of a unique entity that meets the NP property, and c) returns that entity, we correctly derive the meaning of (11). The ordinary value of (11) presupposes the existence of a unique professor (call them x) and asserts that that x read x 's paper. The focus-semantic value is a set of propositions each of which maintains the presupposition of a unique professor's existence, and asserts for each alternative z in D_e that z read the paper of that unique professor. Negating the alternatives results in the meaning where no one else read some unique professor's paper.²

The derivation of the bound reading is not as straightforward. In order to allow bound uses of definite descriptions, I assume that *the* carries an anaphoric index in addition to the NP in its restriction [37, 12] as in (12) from [37].

- (12) $[[\text{the}_S]] = \lambda s_r. \lambda P. \lambda y. \exists!x(P(x)(s_r) \ \& \ x = y). \iota x[P(x)(s_r) \ \& \ x = y]$ [37]

The ordinary value of (13) now presupposes an existence of a unique entity that is a professor and is identical to 5 and asserts that 5 read the paper of the unique professor who is 5. The focus semantic value is a set of propositions iterating over alternatives z in D_e , each presupposing the unique existence of a professor that is identical to z and asserting that z read the paper of the unique professor identical to z . Combined with the meaning of *only*, the resulting meaning is that no one else read the paper by the unique professor that is themselves.

- (13) $[\alpha \text{ Only } [\beta \text{ professor}_F \ \lambda_5 \ t_5 \text{ reads professor}_5\text{'s paper}]]$
 a. $[[[\beta \text{ ..}]]]^o = \lambda w : \exists!x[\text{prof}(x) \wedge x = 5].\text{read}(5, \text{paper.of}(\iota x[\text{prof}(x) \wedge x = 5]))$
 b. $[[[\beta \text{ ..}]]]^f = \{\lambda w : \exists!x[\text{prof}(x) \wedge x = z].\text{read}(z, \text{paper.of}(\iota x[\text{prof}(x) \wedge x = z])) \mid z \in D_e\}$
 c. $[[\text{(13)}]] = \text{No one else read the paper by the unique professor that is them}$

Two issues arise. First, the unique presupposition of the definite projects to alternatives, requiring there to be a unique professor identical to the alternative in each world of evaluation. Second, each alternative entity is required to be a professor, contrary to intuition. This calls for a modification of either the theory of generating focus alternatives or the denotation of definite descriptions.

The second, conceptual issue is that in the literature looking at 'fake features', ϕ is argued to be 'fake' because they are ϕ . For example, in the Minimal

² Note that while the presupposition of ι is not problematic for this free use, issues with uniqueness has been observed in [19] for cases where a restriction-internal expression is focus-marked as in (i).

- (i) Jin only talked to the GERMAN_F professor.

Pronouns analysis, pronouns get their features valued through syntactic transmission [21] or morphosyntactic valuation [5], but nouns are not considered to be transmitted syntactically. In the Weak Projection analysis, ϕ are argued to not project to alternatives because they are ‘pure presuppositional triggers’ that only contribute presuppositions and no assertive content [35]. But nouns are not considered to be pure presuppositional triggers (cf. [2]).

Given the issues discussed above, I identify the source for ‘fakeness’ not in ϕ but in the general mechanism of anaphora. Specifically, I argue that in reference to a familiar entity content such as ϕ and NP are not interpreted truth-conditionally. This intuition can be implemented in many ways, including a) treating all anaphoric expressions as minimal variables and valuing the content later as labels and b) base-generating the content in LF but turning them into (uninterpreted) labels upon a referential use. This paper explores the first option, though some limitations discussed towards the end motivate the second option.

3 Analysis: Minimal variables

3.1 Intuition

In the Minimal Pronoun analysis, pronouns are argued to be minimal in that they lack features in their semantics. Some differences exist in the accounts as to which pronouns are minimal: only bound pronouns are analyzed as minimal in [21], both bound and free pronouns are in [5], and only A-bound anaphors are in [34]. However, they all converge on these expressions not carrying any ϕ -features. These features are later valued through syntactic transmission [21], information about the antecedent in the context [5], or syntactic configuration and the presence/absence of a local A-binder in the relevant phase [34].

Adopting the minimal pronoun analysis and extending to descriptions, I propose that all familiarity-denoting, anaphoric expressions are minimal variables that only carry indices and no content information. The content, namely ϕ -features and descriptions, is valued in morphology from some information of the antecedent available to the discourse participants in the context. This content is not interpreted but serve as *labels* that participants use for disambiguation. I further argue that the choice of a label signals the speaker’s partition of discourse referents (*R-partition* for ‘Reference-partition’), which fall outside of semantic interpretation. For example, the use of the pronominal label such as *she* signals an R-partition that is based on features like gender as in (14-a). In certain languages where pronouns realize animacy or status distinctions, the relevant partitions would be signaled as in (14-b). In the case of a description, the signaled R-partition would consist of different titles or descriptions that are contextually salient as in (14-c). This view of pronouns and descriptions can readily be extended to names as in (14-d) and epithets as in (14-e).

- | | | |
|------|------------------------------------|--------------------------|
| (14) | a. {female, male, other} | <i>she</i> |
| | b. {honored, non-honored} | <i>pro_{HON}</i> |
| | c. {singer, philosopher, linguist} | <i>the linguist</i> |

- d. {Jin, RJ, Dorothy} *Jin*
 e. {positive, negative} *the idiot*

3.2 Implementation

In this section, I discuss the implementation of the intuition laid out in the previous section. There are two main components of this analysis: a) the minimal indices, and b) spelling-out.

Part 1: Minimal indices I assume that discourse referents are tracked with dynamically-updated assignment functions. The LF for *he*₇ or *the linguist*₇ are simply x_7 as shown in (15) and (16), respectively, and against an assignment function mapping 7 to *jin*, the output is simply Jin.

- (15) LF of *he*₇: $[D_{[\text{num}:\text{gend}:\text{pers}]} 7]$
 (16) LF of *the linguist*₇: $[D_{[\text{num}:\text{gend}:\text{pers}]} 7]$

Fake features and fake nouns are no longer an issue in this analysis because the mismatching ϕ and NP information are not there to begin with. This is exactly how [5] resolve the fake feature issue for ϕ . We can see that with the description simply denoting an index, the problematic case of bound description in (13) is derived correctly in (17).

- (17) $[_{\alpha}$ Only $[_{\beta}$ professor_F λ_5 t₅ reads professor₅'s paper]
 a. $[[[_{\beta} \dots]]^o = \lambda w.read(5, paper - of(5))$
 b. $[[[_{\beta} \dots]]^f = \{\lambda w.read(z, paper - of(z)) \mid z \in D_e\}$
 c. $[[(17)]]$ = No one else read their own paper

Part 2: Spelling-out Given the minimal denotations above, how do we get the morphological form? In particular, how does $[D_{[\text{num}:\text{gend}:\text{pers}]} 7]$ get pronounced as ‘the linguist’ in contexts as in (18)?

- (18) I met a linguist₇. The linguist₇ looked happy.

Two mechanisms are necessary. The first is a way to get information about the relevant antecedent so that the right content can be selected. The second is a way to choose an appropriate label given the context. Getting the information about the antecedent is simpler in global contexts where the assignment function simply provides the relevant entity. It is less straightforward in local contexts where the index is bound because the relevant antecedent information is not available after being bound. In order to make the antecedent information accessible to the pronoun in the bound context, I follow [5] and [10]. In [5], a local context is defined as in (19), so that the information that i maps to Mary is available to the pronoun *her* _{i} in (20), allowing the relevant morphological features to be valued as shown in (21).

- (19) Local Context (LOCO) of α embedded in some LF as the smallest set of assignments that expand the global context (the starting assignment) with referents recorded by λ operators that c-command α
- (20) Only Mary_F [λ_i] t_i did her_i 's homework.
 a. [${}_{vP}$ t_i did pro_i 's homework]
 b. starting assignment: \emptyset
 c. Local context of vP : $\{\emptyset^{[i \rightarrow \text{Mary}]}\}$
- (21) her_7
 a. LF: [${}_{D[\text{num}:\text{gend}:\text{pers}]} 7$]
 b. Information from context: the index is mapped to a female atomic individual
 c. After valuation: [${}_{D[\text{num}:\text{sg},\text{gend}:\text{fem},\text{pers}]} 7$]

In [10]'s event dynamic semantics, the scoping binder only binds its trace, but predicates are assumed to introduce discourse referents for each of the relevant thematic roles. In contexts as in (22), the trace is equated with the experiencer thematic argument, and this thematic argument discourse referent binds the subsequent pronoun. The main consequence of this proposal is that pronouns are bound in the same way they would be in intersentential uses, just over conjunctions.

- (22) Jin loves his cat.
 a. [Jin_i [t_i v^5 TH^1 loves his₅ cat]]
 b. Jin ($\lambda x_i. \exists e$ [$[\text{EX}(e)]^5(x_i) \wedge [\text{TH}(e)]^1(\text{his}_5 \text{ cat}) \wedge [\text{love}]^2(e)$])

By the time his_5 is interpreted in (22), the antecedent information ($[5 \rightarrow \text{Jin}]$) is available. This applies in a parallel manner in quantified cases as in (23).

- (23) Every boy loves his cat.
 a. [every boy_i [t_i v^5 TH^1 loves his₅ cat]]
 b. every boy ($\lambda x_i. \exists e$ [$[\text{EX}(e)]^5(x_i) \wedge [\text{TH}(e)]^1(\text{his}_5 \text{ cat}) \wedge [\text{love}]^2(e)$])

Thus, following [5] or [10], it is possible to come up with a mechanism for getting the relevant information about the antecedent. The second step is the choosing of an appropriate label. In the original minimal pronoun analysis, all that needs to be valued are morphosyntactic features. But in the current analysis, the content contains not only features but nouns, names, and more.

I argue that labels are the speaker's way of expressing the relevant variable with index by choosing the most appropriate and informatively optimal label for it. The labels reflect a certain partition of discourse referents (R-partition), and these are not part of the semantics: they are metalinguistic tags for the relevant discourse referent.

More precisely, I assume that the context also provides metalinguistic labels for concepts/entities that discourse participants want to talk about. The set of metalinguistic labels used may differ from one particular conversation to another, depending on the social norms and the topic. For example, a group of

semanticists may have a different set of metalinguistic labels for referring to entities than a group of medical professionals. A speaker may be proficient in using multiple sets of labels depending on the given context. Thus, the context is assumed to provide a) information about the world and discourse participants, b) the assignment function, and c) the metalinguistic labels for concepts/entities. R-partitions, then, are simply the speaker’s partition of referents using these metalinguistic labels. In a context where the speaker is narrating a story about Jin and RJ and distinguishing them based on their occupations, the context would provide the following:

- (24) Context: $\langle w, g, R\text{-partition} \rangle$
 a. $g: \{ \langle 7, \text{jin} \rangle, \langle 8, \text{rj} \rangle \dots \}$
 b. R-partition: {linguist, astronomer}

R-partition can be provided with indefinites or determined through QUD as shown in (25), or it can be covert and require abductive reasoning.

- (25) a. A linguist and an astronomer entered. The astronomer danced.
 b. Which one, the linguist or the astronomer, danced?

In spelling out some variable x_7 , the speaker is given a) the index (7), b) contextual information including the QUD, global and local assignments ($[7 \rightarrow \text{Jin}]$), and c) the relevant R-partitions which may include the following:

- (26) a. features

fem	male	other
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 b. nouns

linguist	astronomer
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 c. epithets

positive	negative
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 d. names

Jin	RJ
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The speaker is in principle allowed to use any of the labels to express x_7 , since the index already resolves reference. However, some constraints apply. For example, if x_7 is bound by a phase-internal A-binder, a reflexive form would appear as argued in [34]. Outside the phase, economy principles would require speakers to prioritize simpler expressions as argued by *Minimize Restrictors!* [36]. Taken together, the expectation is that in default cases, the speaker would use unmarked, minimal, and conventionalized labels that make use of closed-class features such as gender.

When the speaker makes use of less minimal and marked labels, the choice reflects and highlights the speaker’s R-partition of discourse referents and has pragmatic consequences. For example, in the context where the speaker is only talking about a single linguist, the use of a definite description as in (27) would highlight that the speaker is partitioning the discourse referents based on titles, leading to an expectation that there is some non-linguist entity relevant in the conversation. If the speaker in the same context uses an epithet as in (28), the resulting inference would be that the speaker has a negative attitude towards the linguist.

- (27) The linguist is happy.

- a. LF: happy(x_7)
 b. R-partition:

linguist	astronomer
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- (28) The idiot is happy.
 a. LF: happy(x_7)
 b. R-partition:

positive	negative
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Because R-partition and labels are metalinguistic, they are predicted to be subject to the manner maxim, in that the choice of an anaphoric expression x would only be considered cooperative in discourse if the R-partition and the label are sufficiently informative. For example, the use of the description in (27) would only be cooperative if R-partition of {linguist, astronomer} and the label ‘linguist’ are sufficient to indicate to the hearer that the intended antecedent is $g(x_7)$. If a simpler, more conventionalized form would do, the use of a description would be deemed redundant or result in some implicature that other entities are relevant. Note that while disambiguation is more prevalent in global contexts, we might have some local contexts that require disambiguation. For example, in (29), two pronouns appear bound and refer to female entities. In such cases, the minimal expression, namely the pronoun *she* would not sufficiently disambiguate, and so more complex forms would be licensed.

- (29) Every girl _{i} told every woman _{j} that she _{i} likes her _{j} .
 a. LF: Every girl λ_i every girl λ_j [t_i told t_j that pro_i likes pro_j].

3.3 Arbitrary partitions

The system built so far predicts speakers to use the simplest and most conventionalized expressions in the default, unmarked cases. However, it is also possible for speakers to introduce relevant labels in discourse, which would allow for more arbitrarily-set labels that do not depend on shared conventionalization or knowledge. For example, a speaker may use supplements when introducing the relevant discourse referents as in (30). In this case, even if there is no shared knowledge about where the entities come from, the addressee is able to understand the subsequent label *my fellow Pennsylvanian* as referring to the poet. What (30) also suggests is that the NP information that the speaker uses, namely *this poet*, is also serving the same role of giving an arbitrary label. Thus, in this account, an NP introduced by an indefinite or a demonstrative description does not differ from supplementary information that the speaker adds about some referent. Any of these contents can be used as labels in subsequent discourse.

- (30) I saw this poet, who was from Pennsylvania, and this linguist, who was from New York, at the conference. **My fellow Pennsylvanian** greeted me kindly, but **the New Yorker** seemed upset about something.
 a.

from PA	from NY
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It is also possible for the label to completely lack informative content. For example, in (31), the speaker is using arbitrary letters A and B to distinguish

referents. Despite the lack of any meaningful, world-dependent content, the labels A and B can readily be used for disambiguation. This highlights the main thesis of this paper: the content is merely playing a disambiguating, labeling role, so it is possible for the mechanism to rely wholly on arbitrary labels.

- (31) I saw this poet, \underline{A} , and this linguist, \underline{B} , at the conference. \mathbf{A} greeted me kindly, but \mathbf{B} seemed upset about something.
- a. $\boxed{A}\boxed{B}$

Loci in sign languages as arbitrary partitions This arbitrary use of labels is reminiscent of a recent analysis of the use of spatial information in sign languages. Signers often use arbitrary locations in the signing space (‘locus’, ‘loci’) to keep track of referents. For example, in (32), an American Sign Language signer introduces two entities, a boy and a girl, and when she does, she points to two abstract locations (represented here as A and B ; IX_A means the signer points to some arbitrary location A). Then, subsequent pointing to that same locus functions as an anaphoric reference to the entity first introduced and associated with that locus. In (32), IX_A refers to the boy.

- (32) BOY IX_A GIRL IX_B SIT CLASS CLASS FINISH IX_A DANCE
 boy IX-A girl IX-B sit class class finish IX-A dance
 ‘A boy and a girl sit in class. When class finishes, the boy dances.’

Because of their function in keeping track of referents, loci in sign languages have been analyzed as overt instantiations of indices [26]. However, [4] argue based on their marked and infrequent nature that indexical pointing to a location (IX_{LOC}) should instead be analyzed as spatial modifiers relating the given entity to some location. This ‘relation’ between the entity and the location is flexibly defined and represented as the variable R in (33).

- (33) a. $\llbracket IX_{LOC} \rrbracket = \lambda o. \lambda x. R(x, o)$
 b. $\llbracket IX_A \rrbracket = \llbracket IX_{LOC} \rrbracket(A) = [\lambda o. \lambda x. R(x, o)](a) = \lambda x. R(x, a)$
 ‘associated with location a ’ (a : the location represented by A)

The location A can carry fully iconic content if A is where the intended referent is actually placed, as in the case of first or second and deictic third person reference. The location can also be semi-iconic in that it can be a location generally associated with the intended referent, like the office desk of the entity that is being referred to. The location can also be fully arbitrary as in the case of (32) where the signer simply points to some abstract space in front of her. In this respect, loci behave similarly to other labels identified in this paper: they vary in their level of content but uniformly serve the role of a label.

4 Consequences

The main two consequences of this analysis are a) that content of referential expressions is reduced to labels; and b) the difference between pronouns and descriptions is faded. I discuss each in turn.

4.1 Content as labels

In this analysis, the content of the anaphoric expressions including ϕ -features, nouns, names, as well as epithets only function in contributing information about R-partition. The label and the R-partition have pragmatic consequences, but is not interpreted for their truth-conditional content.

Let's return to the presuppositions traditionally assumed for these expressions. We start with the definite description which is assumed to carry an ι operator that presupposes uniqueness and existence. This proposal renders uniqueness an epiphenomenon subsumed under the general mechanism of anaphora and manner implicatures. Uniqueness is required on definite descriptions to the same extent that there is a pragmatic pressure not to use a name *Jin* in a context where three salient entities are named Jin.

This consequence aligns with familiarity theories of definites such as [16, 22, 29] and is desirable given that the uniqueness is often not required in contexts that license *the*. For example, [15] notes that the definite description *the sage plant* can be used even in contexts where there are multiple sage plants in the context as in (34). Even in the famous bishop sentences that are used to argue against uniqueness-based accounts of pronouns, it is possible to use a definite description with a different, simpler noun quite readily as shown in (35).

(34) Everyone who bought a sage plant bought 8 others with {it / the sage plant}. [15]

(35) If a bishop meets a bishop, the guy blesses the guy.

Beyond definites, other expressions have also been argued to carry some licensing conditions or presuppositions. For example, pronouns are argued to carry requirements of saliency [29, 13], and demonstratives are argued to carry presuppositions of anti-uniqueness [27, 31]. While I cannot elaborate on this in much detail, it is possible to reduce these requirements to pragmatic consequences of using certain types of labels. For example, the use of a simple, conventionalized label like ϕ may suggest that no further information was needed for the hearer to identify the intended referent, thus suggesting saliency. The use of a more complex content for the label despite the pragmatic economy principle may suggest that more information, and specifically more information than just the noun, was necessary to resolve reference, thus deriving anti-uniqueness. This is the intuition behind deriving anti-uniqueness as an implicature in [31, 2].³

³ A more fine-grained way to derive anti-uniqueness from focus is discussed in Chen, this volume.

4.2 Distinction between pronouns and definites

In this account, there is no fundamental semantic difference between pronouns and definites other than how conventionalized the content is. This aligns with the idea that pronouns are featural definites [3], namely that they are identical to definite descriptions except they carry less, conventionalized content like ϕ . This view has an advantage over traditional, categorical distinction between pronouns and definites when cross-linguistic patterns are observed. For example, not every language has morphosyntactically distinct pronouns [3] that rely on closed-class features like ϕ . Instead, Korean and Vietnamese rely on open-class nouns such as human nouns (*ku-ay* (that-kid) ‘that kid’ for Korean) and kinship terms (*anh ây* (older.brother DEM) ‘older brother’ in Vietnamese; Beryl Bui, pc) combined with demonstratives. Some languages have feature-based pronouns for animate nouns only, as in Kazakh and Hindi. Such gradience from the use of close-class features to open-class nouns in pronouns is more compatible with an analysis that treats pronouns and definites along with other familiar expressions in a parallel manner.

What causes the difference? Deriving Principle C Given the parallel treatment of pronouns and descriptions in this account, a question that arises is how to derive the differences pronouns and descriptions show in their distribution. Specifically, what is the status of Principle C in this account? I argue that Principle C is not a systematic principle that must apply uniformly to pronouns and definites. Instead, I argue that the inventory of other expressions and competition derive Principle C. This is in line with [34] in that natural-born pronouns and names are expected to be free because they compete with a D-bound as well as other accounts that derive Principle C from pragmatic factors rather than stipulating it as a categorical rule [36, 39, 1].

In particular, [1] argues that the use of a more complex form when a simpler form is sufficient to resolve anaphora results in a domain widening of discourse referents, where the widening is sensitive to the focus structure of the expression. Compare the use of a pronoun and a definite description below. In (36), the focus structure of the sentence suggests that the question under discussion (QUD) is (36-a), which is compatible with a bound variable reading. Instead, in (37), the focus structure signals (37-a) as the QUD, which does not allow a bound variable reading.

- (36) Only MARY did her homework.
 a. WHO_{*i*} did their_{*i*} homework?
- (37) Only the linguist did the LINGUIST’s homework.
 a. WHOSE_{*i*} homework is such that only the linguist_{**i*} did it?

Thus, I argue that in principle any of the labels can be used with bound reading, but that definites tend to be a) focused, and b) marked (compared to pronouns), and so it signals a QUD that resists bound-reading. The prediction that arises from this view is that a) if definite nouns are not marked, they should

allow variable bound reading more readily, and b) when definite is called for due to other reasons (disambiguation), bound reading should be possible. The first prediction is met by the use of nouns in bound readings in Tagalog and Korean, and the second prediction is met by English, where descriptions can also be bound as long as it serves some pragmatic function like disambiguation [36]:

- (38) [A linguist working on Binding Theory]_i was so devoid of any moral sense that he_i forced [a physicist working on particles]_k to hire [the linguist's]_i girlfriend in his_k lab. [36]

5 Complication: attributive uses

One complication of this label-based account is the existence of attributive uses of descriptions as in (39).

- (39) In a QP defense, the student presents and the advisor asks questions.

Note that the presence of an attributive use is not unique to pronouns as (40) from [30] shows.

- (40) In every 1960s marriage it was understood that he should take out the garbage and she should wash the dishes. [30]

A relevant observation is that labels can sometimes become at-issue with metalinguistic negation:

- (41) I don't know JIN because his name is Seokjin.

One possible solution is to argue that from a label, speakers are able to derive the kind of people who would generally be labeled that. For example, those who are familiar with the character Sheldon may be able to say something like (42-a), just as speakers who have some agreement on what mothers do in general can say something like (42-b). By extension, we may be able to extract the attributive use from descriptions and pronouns.

- (42) a. The Sheldon of that group will solve the problem.
 b. The Mom of that group will solve the problem.
 c. The advisor asks questions and the student answers.
 d. He takes out the garbage, she does the dishes.

Alternatively, one may pursue a different proposal that assumes that content is still base-generated and present in the LF, but is simply turned into a label upon a referential use. The idea would be that NP, ϕ , name are all just predicates [11, 7], and ambiguity falls on referential vs. quantificational use of the predicative content. When used referentially, an index would be introduced and the content would be come a label. When used predicatively, they would be subject to a typical ι operator or a quantifier [28].

The general name-bearing property familiar from predicativist views of names may serve as the mechanism to shift contents to labels in a referential use. Such a property has been extended to other name-fying expressions like *Mr* in [9] as in (43).

- (43) a. Mr. Science, Mr. Dog, Mr. I-like-demonstratives [9]
 b. $[[\text{Mr}]] = \lambda P_{\tau} \lambda w \lambda x : [male(x) \wedge R_{\langle \tau, et \rangle}(P)(x)].x$ bears P at w,
 where τ is a variable over types

Alternatively, a use-conditional type-shifter that takes a predicative meaning and turns it into a use-conditional felicity condition [14] may be used as the mechanism for shifting content upon a referential use. While I am not able to elaborate on this, the idea would be that only in referential uses, the content serves as a label.

Regardless of which route one takes, the result is the same: in referential uses, the content is not interpreted, and this is uniform regardless of whether we are looking at a pronoun, a definite description, a name, or an epithet. Together these analyses call for reconsideration of the traditionally assumed presuppositions of anaphoric expressions.

6 Conclusion

This paper starts with a new observation, namely the ‘fake noun’ phenomenon: when noun-containing descriptions are bound, the noun content is ignored in focus alternatives. After showing that the traditional ι -based analysis of definite descriptions does not derive the observed interpretation, I propose to extend the minimal pronoun analysis to all expressions used referentially in that they only contribute indexed variables. The content that the expression carries, be it ϕ -features, nouns, names, or epithets, is treated as a label that is a) valued from the antecedent information available in the context and b) a reflection of the speaker’s partition of salient discourse referents. The signaled partitions have pragmatic implications that derive uniqueness, saliency, as well as anti-uniqueness in these expressions, allowing for a more gradient and inventory-specific predictions over lexically-encoded alternatives.

One main implication of this study is that Principle C is derived as a pragmatic dispreference of using a more complex label when a simpler form is available. This is in line with many existing analyses that treat Principle C as more of an expectation rather than a requirement [34, 39, 36]. Recall that data similar to the ‘fake noun’ phenomena discussed here have already been observed for their apparent violation of Principle C as in (44).

- (44) R-yu’lààa’z ra bxuuhahz ra bxuuhahz
 hab-like pl priest pl priest
 ‘The priests like themselves.’ Zapotec; [6]

Such data where R-expressions are repeated and bound are often analyzed in terms of copy theory of reflexives [25], where the second instance of the descrip-

tion is treated as a copy pronounced in the trace position after movement to the antecedent position. In [8], on the other hand, Principle C violation in Thai is analyzed in terms of complex indices. Complex indices are assumed to carry not just indices and type information but also person features as shown in (45) [38].

(45) she₇: <7,e,3> [38]

[8] extends this to Thai and argue that in Thai, a subset of R-expressions such as titles, names, and kinship terms form an ‘open-class’ person features, thus appearing as information on the complex index as shown in (46).

(46) a. Nit₁: <1, e, Nit>
b. khruu₄: <4,e,teacher>

While both copy theory of reflexives and complex index analysis can account for the cases where R-expressions are repeated and identical to the antecedent, they fail to account for cases where the anaphoric expression contains a noun but differs from the antecedent. Because copies are copies, the anaphoric expression can carry at most the amount of content of the antecedent, and because person-features trigger agreement, [8] argue that the antecedent and the anaphoric expression must be identical R-expressions.

The current analysis based on labels, however, do not require identity between the antecedent and the anaphoric expression. The only requirement is that the label and the partition together allow resolution of the referent, and so the antecedent and the anaphoric expression can in principle use different labels as long as the labels and the respective partitions both resolve to the target referent. We do not expect this to be common, though, due to pragmatic and cognitive constraints against using multiple labels for a single entity, but it is possible especially when the anaphoric expression is an epithet. In both (47) and (48), the second instance of the description is an epithet that differs in content from the antecedent.

(47) Only *the linguist* called the philosopher for the news article that identified the idiot as a culprit.

(48) wuli kyoswunim-man cip-ey kase wuli taytanhan kyoswunim
our prof-only home-DAT go our awesome prof
nonmwun ilkeyo
paper read
‘Only our professor goes home and reads our awesome professor’s paper.’

Both examples allow the intended bound-variable interpretation, with some implication of negativity in (47) and sarcasm in (48). That different descriptions can be used as labels and still be bound by the antecedent is not predicted under copy theory or the complex index story. Thus, the current analysis has an advantage over existing analyses of apparent Principle C violations.

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