

The most descriptive depiction

Introduction: Deixis and depictions are universally used to convey information in an iconic way. Iconic information is generally not compatible with the composition of the grammatical content that is often descriptive: Davidson (2023) argues that iconic content is not compatible with partition-based descriptive operators like negation or questions, and depictive or deictic gestures are argued to contribute secondary, not-at-issue content (Ebert & Ebert 2014; Schlenker 2019, a.o.). In this paper we explore how iconic content can enter the descriptive content through the use of demonstratives. The role of demonstratives in bringing iconic content into truth-conditions of the sentence has been discussed previously: Ebert et al. (2020) argue that demonstratives serve to bring gestural meaning to at-issue, and Ahn (2025) argues that demonstratives turn depictive and deictic information into descriptive content. In this paper, we argue that even exophoric demonstratives can take rigid, iconic information such as pointing and incorporate it into kind-denoting descriptions.

Demonstratives have traditionally been highlighted for their rigidity, in that their referent is fixed across worlds of evaluation (Kaplan 1989). This is seen in (1) where the referent of *that linguist* with pointing to Mary (\rightarrow Mary) is fixed across all situations where the speaker meets some linguist, while the referent of *the linguist* can covary.

- (1) a. Whenever I meet a linguist, I will talk to $\text{that}_{\rightarrow\text{Mary}}$ linguist.
 b. Whenever I meet a linguist, I will talk to the linguist.

Even in works that treat demonstratives as non-rigid and definite-like, it is assumed that demonstratives that refer exophorically with pointing are still rigid designators in the object-level (Ahn 2022). However, exophoric demonstratives like English *that* and Xi'anese *uo* with pointing can refer at the kind-level as in (2). The number mismatch between the object-level entities in the context and the entities referred to by the speaker suggests that in this case, the demonstrative does not pick out the actual entities in the utterance context. We argue that this is a kind-level reference to some subkind represented by the entity being pointed to, and that a minimal update to the analysis of exophoric demonstratives in previous works can account for this interpretation.

- (2) a. I saw three of $\text{those}_{\rightarrow}$ dolphins before. (Pointing to a single dolphin)
 b. nge yijing he-lie san hui uo_{\rightarrow} kafei lie.
 I already drink-ASP three time that coffee SFP
 'I've already had that coffee three times.' (Pointing to a cup of coffee)

Kind readings: Demonstratives accompanied by pointing allow kind readings as shown by a) their compatibility with the kind-level predicate *extinct* (3) and b) their co-occurrence with kind-denoting nominals like 'kind' (4), in both Xi'anese and English.

- (3) uo_{\rightarrow} shizi iao juezhong lie. (4) uo_{\rightarrow} che si zhong xin paoche.
 that lion will extinct SFP that car be kind new sports car
 'Those lions are going to be extinct.' 'That car is a new kind of sports car.'

They also show another characteristic property of kind terms which is that they obligatorily take narrow scope with an existential interpretation (Chierchia, 1998b). Both *uo tuzi* in (5) and the English translation 'those rabbits' uttered at a part while seeing one Holland Lop and one Cottontail Rabbit and pointing at the latter, refer to different instantiations of Cottontail Rabbit across different feeding events. The fact that *uo tuzi*

must have an existential reading scoping under the adverbial *fanfu* ‘repeatedly’ shows that the demonstrative phrase patterns with kind terms and can be used to denote kinds.

- (5) Mali fanfu-di wei uo_→ tuzi.
 Mary repeatedly feed that rabbit
 ‘Mary repeatedly fed those_→ rabbits.’

Analysis: Definite determiners can form both object-level and kind-level expressions (Dayal, 2004). We argue that demonstratives exhibit the same flexibility in interpretation and that this flexibility arises from the relation that relates the entity being pointed to in the context to the intended referent. What is different is that only demonstratives allow iconic content to be part of the restriction.

At the object-level in (6), an exophoric demonstrative takes the NP property P and an additional property G that specifies where in the actual context the entity is located, and returns the unique object-level entity x such that every y that is P and G is part of x . This analysis adopts intuitions from previous accounts that demonstratives carry an additional restriction G (King 2001, a.o.) and that G can be a specification of where the entity is in the actual world (G for exophoric use: $[\lambda a. \lambda x. \text{located}(x, a)](a)$; Ahn 2022).

- (6) $\llbracket \text{uo}_{\rightarrow} \rrbracket = \lambda P. \lambda G. \iota x_{\text{object}}: \forall y [P(y) \wedge G(y) \leftrightarrow y \leq x]$

To derive the kind-level reading, we adopt the realization relation R (Krifka et al 1995) which relates an object individual to the kind it belongs to. This relation R replaces the parthood relation in (6) to require that the object individual y belong to the kind x . Thus, the returned entity is the unique kind entity x such that every object y that is P and G is an instantiation of x . This results in a subkind reading, returning the unique subkind that is realized by the entity that has the P property and the G property. If *uo shizi* (‘that lion’) is used with pointing to an African lion at A as in (8a), it returns a lion subkind AFRICAN-LION whose members include that particular lion at A .

- (7) $\llbracket \text{uo}_{\rightarrow} \rrbracket = \lambda P. \lambda G. \iota x_{\text{kind}}: \forall y [P(y) \wedge G(y) \leftrightarrow R(y, x_{\text{kind}})]$
 (8) a. $\llbracket \text{uo}_{\rightarrow A} \text{ shizi} \rrbracket$ are going to be extinct. (Pointing to an African lion)
 b. $\llbracket \text{uo}_{\rightarrow A} \text{ shizi} \rrbracket = \iota x: \forall y [\text{lion}(y) \wedge \rightarrow_A(y) \leftrightarrow R(y, x)]$ (AFRICAN-LION)

Since Xi’anese nouns are number-neutral, the kind reading of *uo shizi* (‘that lion’) is easily accessible. In contrast, a definite description in English favors an object-level reading in the singular form (Dayal 2004), and so the plural demonstrative description *those lions* more naturally allows a kind reading.

- (9) $\{ \% \text{That lion}_{\rightarrow A} / \text{Those lions}_{\rightarrow A} \}$ is going to be extinct.

This analysis can be extended to depictions as well, where instead of pointing, a property denoted by the depicted gesture can serve as the salient property that identifies the relevant subkind (e.g. ‘These whales_[horn gesture] are extinct’), as shown in (10).

- (10) $\llbracket \text{these whales}_{[\text{horn gesture}]} \rrbracket = \iota x: \forall y [\text{whale}(y) \wedge \text{horned}(y) \leftrightarrow R(y, x)]$

Definite descriptions or bare plurals do not allow such incorporation of iconic content, making demonstratives unique in this role of bringing depictive and deictic information into the descriptive, kind-level interpretation.

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