

# Ostension and the nature of multimodal referential relations

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## 1. Background

Using a multimodal corpus, constructed from TED videos, and adopting a corpus-based linguistic analysis, this paper examines the uses and referential properties of demonstratives-based ostensions in multimodal contexts. The context of demonstratives-based ostension is a multimodal deictic context wherein the semantic meaning of the demonstrative is fixed, but its denotational meaning varies depending on time and/or place of the utterance (Kaplan 1978; Evans 1982; Webber 1991; Hedberg *et al* 2007; among others). We assume that the ostensive use of the demonstratives is also accompanied by a visualization of the referent through visual and non-vocal clues (a gaze, an eye movement, a head tilt, etc.) that serve to signal a referent and relate that referent to a common perceptual ground shared by the speaker and the addressee.

## 2. Previous studies

The interpretation of the referential relations of a demonstrative-ostensive is relative to the context of the utterance in terms of many cross-dependent variables, and it is not entirely clear whether the referential dependency established in ostension contexts is a referential proposition or a quantificational proposition (Evans 1982). Early studies have addressed the interpretative properties of demonstratives and ostension, using logical, philosophical, and linguistic approaches (Russell 1905; Quine 1968; Kaplan 1977, 1978; Evans 1982; Webber 1991; Nunberg 1993; among others). In this study, we examine the causal links that can determine how ostension mediates referential relations in a spoken context. We explore these causal links through asking whether the referential relations between the object pointed to and the object referred to are reinforced by ostension.

## 3. Results and analysis

We propose that the referential dependencies established in ostension contexts can be either a referential proposition or a quantificational proposition, and that these two referential dependencies are not mutually exclusive. The examination of naturally occurring instances of demonstratives-based ostension in our multimodal corpus shows that: (i) there are individual differences in the frequency of demonstratives-based ostension (ranging from 1% to 40% of the total number of demonstratives), with some that can be characterised as referential in nature and others that can be characterized as quantificational, (ii) the differences in the rate of the occurrences of demonstratives-based ostension seem to correlate with the topic/object being discussed. The lowest occurrences of demonstratives-based ostension are observed with topics that require an abstract (metalinguage) discussion. The use of ostensives increases in the context of dialogues, (iii) our corpus analysis shows that the occurrences of the demonstratum as a *state*, *activity* or an *event* are less frequent than its occurrences as an *object*, and (iv) the demonstratum is referred to in terms of its structure in *whole* as well as in *parts* (properties, features). We analyze these properties as the by-product of the fact that the referential relations expressed by ostension *can* but *need not* reinforce the relation between the linguistic form and the object this form refers to.

#### 4. Selected references

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