1. INTRODUCTION

It is a characteristic feature of human linguistic communication that the same entity can be referred to with different forms, for example, *it*, *that*, *the restaurant*, *that restaurant around the corner*.

While accounts of reference differ, there is general agreement that the appropriateness of different forms is constrained by a speaker/writer’s assessment of the addressee’s knowledge and attention state. Gundel et al. (1988, 1993) take this observation one step further, proposing that determiners and pronouns encode, as part of their conventional meaning, information about the cognitive (memory and attention) status of the intended interpretation in the mind of the addressee, at the point just before the nominal form is encountered. If this account is correct, children’s use of such forms could shed light on the development of their sensitivity to the mental states of others, what has sometimes been called “theory of mind” (Baron-Cohen, 1995, inter alia). This paper reports on an ongoing study that investigates the connection between theory of mind and children’s use of referring expression.

The statuses proposed by Gundel et al. are given in (1), along with the English form that conventionally encodes that status (*it* stands for all unstressed personal pronouns, *SHE* for stressed personal pronouns, and *N* for an NP complement of a determiner).

(1) Givenness Hierarchy (GH)

| In focus > Activated > familiar > identifiable > Referential > Type identifiable |
|---|---|---|---|---|
| it | SHE/this/that/this N | that N | the N | indefinite this N | a N |
Givenness Hierarchy (GH) statuses encode the following procedural information about manner of accessibility. [The Givenness Hierarchy is not, however, a hierarchy of degrees of accessibility in the sense of Ariel (1988), for example.]

(2) In focus: Associate representation in focus of attention
   Activated: Associate representation in working memory
   Familiar: Associate representation in memory
   Uniquely identifiable: Associate unique representation with NP
   Referential: Associate unique representation
   Type identifiable: Associate type representation

For example, in the sentence *The dog next door barked*, the definite article *the* encodes the information that the addressee is expected to associate a unique representation of the dog, however he can do that, e.g. by retrieving a representation from memory or by constructing a new one.

Statues on the GH are in a unidirectional entailment. Anything in focus is also activated, anything activated is familiar, and so on. Thus, forms that explicitly encode a given status are underspecified for higher statuses rather than excluding them. This results in one-to-many mapping between statuses and forms, as illustrated in (3).

(3) A1: You’ve only known the dog how long did you say?
    B: Well, about a year, I guess.
    A2: Oh well. Is it, uh, how old is the dog? (Switchboard corpus)

The referent of *the dog* in A2 is in focus for B, as it has been the topic of conversation up to this point. Because anything in focus is also uniquely identifiable, A's use of *the* is licit here. However, he could also have used a pronoun or demonstrative determiner (*How old is it/this dog?*).

Unidirectional entailment of statuses on the GH gives rise to pragmatic inferences, specifically scalar implicatures (Horn, 1972), resulting from the first part of the Quantity Maxim – make your contribution as informative as required (Grice, 1967). The indefinite article is rarely used for statuses higher than referential, and typically implicates that the addressee is unable to uniquely identify the referent. Thus, both occurrences of *a student* in (4) would normally be interpreted as introducing an entity not uniquely identifiable, and therefore also not familiar to the addressee.

(4) A student came by after class yesterday; a student also came by today.

Similarly, forms which encode the status “activated” often implicate that the referent is at most activated, that is, not in focus. For example, *that* in (5) is interpreted as referring to the closet, not the in-focus kitchen.