## Dependency and grammatical relations<sup>\*</sup>

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My goal in this paper is to examine the role of dependency in Dependency Grammar, and especially in one particular theory, namely Word Grammar (WG).<sup>1</sup> In the light of my conclusions in \$1-2 about the role of dependency, I shall in \$3-4 examine some English constructions which might hitherto have been problematic for a dependency analysis.<sup>2</sup> \$5 looks at how the ideas of this paper square with Hudson's (1987) convincing defence of the notion 'head'.

## 1 The principles of projectivity and parallelism

According to the theory of Word Grammar, as developed in such works as Hudson 1984, 1990, the minimal utterance is a word; sentential utterances are composites — structured sequences — of minimal word utterances. I interpret the theory to hold that the syntactic structure (defined narrowly, to exclude morphology and morphosyntax) of an utterance consists entirely of the categorization (or, synonymously, 'classification') of the word utterances.<sup>3</sup> (This position is of course more restrictive than some other theories. For instance, in the Transformational model of grammar it is not only words whose classification matters; traces, morphosyntactic elements like 'Tense', and phrases, for example, are classified as parts of such and such a phrase.) WG makes the assumption that categories in language, and in cognition in general, are of two types: nonrelational, like 'Dog', 'Verb' and 'HAPPY' (the lexeme), and

<sup>&</sup>lt;sup>\*</sup>The work leading to this paper has benefited from discussions with Dick Hudson and Anat Ninio, as well as Bas Aarts, Nik Gisborne, Christian Kreps, Chuck Meyer, Dimitra Tzanidaki, and participants on the Dependency Grammar email discussion group (DG@ai.uga.edu), which is maintained by Michael Covington, especially Karel Oliva, Sasha Rosen and Stan Starosta. All of these people would dissent to various extents from what I say in this paper. I welcome further comments, to *a.rosta@ucl.ac.uk*.

<sup>&</sup>lt;sup>1</sup>See Hudson (this volume) for a discussion of issues related to those I discuss in this paper. The application of WG to similar problematic data has led us both to draw conclusions that are strikingly similar (though also interestingly different).

<sup>&</sup>lt;sup>2</sup>They are mostly also awkward for a constituency analysis.

<sup>&</sup>lt;sup>3</sup>In Hudson's (1988a, 1990) analysis of coordination, it is word-strings (as opposed to words) that are categorized; coordination requires different formal structures from the rest of syntax.

## 2 Name

relational, like 'Sister (of)', 'Husband (of)' and 'Subject (of)'. As predicates, these categories are one-place ('Dog(x)') or two-place ('Sister(x,y)'). One can easily conceive of categories with three or more arguments, such as 'Parent-Spouse(x,y,z)', where y is the child of x and z the spouse of x, or, for the phrase *Green ideas sleep*, a three-place category whose first argument is filled by *ideas*, whose second is filled by the adjunct of *ideas*, or the word that precedes *ideas*, and whose third is the word that *ideas* is the subject of, or that follows *ideas*. However, such categories are proscribed by WG, for the sake of restrictiveness.<sup>4</sup>

The obligatory binarity of relations is widespread in linguistic theory, if generally unremarked upon; to take a few random examples, grammatical relations in Relational Grammar (Blake 1990) and Lexical Functional Grammar (Bresnan & Kaplan 1982) and conceptual relations in the systems of de Beaugrande (1980) and Sowa (1983) are binary.