Relationships between grammatical encoding and decoding: an experimental psycholinguistic study

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Contents

A note on the experimental set-up

All experiments reported in this thesis were conducted, that is prepared and executed, by means of the Nijmegen Experimental Set-Up (NESU) software and hardware, developed at the Max Planck Institute for Psycholinguistics in Nijmegen.

Introduction

Language is central to our behaviour. We use language all the time, but although speaking and understanding language seem so easy, automatic and effortless, the processes involved are by no means entirely clear and continue to be the subject of many studies. This thesis is no exception. It concerns sentences: how we build them, how we comprehend them. With words being the building stones of sentences, grammar is the mortar that glues together these bricks of meaning and ideas into firm and (usually) well-formed sentences. The bricks are important, but the mortar is essential. Without mortar the bricks are just a pile, but by means of the cement the meaningless pile can become a wall, a house, a church. Grammatical processing is the topic of this thesis. In particular, I will explore some relationships between grammatical production and comprehension processes, thus focussing on two aspects: the overlap between production and comprehension, and the mechanics of syntactic priming from comprehension to production.

Plan of this thesis

In Chapter 1, I will first introduce a widely accepted architecture of the language system. This architecture is based on the presumably distinct tasks of language production on the one hand, and language comprehension on the other. However, as far as grammatical processing is concerned, this duality is mainly motivated by theoretical arguments, rather than empirical data. In Chapter 2 some of the empirical implications of such a dual-processor model will be tested and alternative models will be discussed. I will report two experiments that aim to investigate the overlap between grammatical encoding

and decoding by means of two versions of a new paradigm, the Edited-Reading-Aloud (ERA) task: Pluralising and paraphrasing. At the end of Chapter 2, I will present preliminary comclusions about the relationship between syntactic comprehension and production.

Chapters 3 through 5 will subsequently consider another aspect of the relationship between grammatical encoding and decoding: syntactic priming. This phenomenon, the structural repetition of syntactic constructions, can offer more insight in the interplay between production and comprehension of sentences, and in the workings of grammatical processing in general, as it concerns representations that are shared between syntactic production and comprehension. In Chapter 3, I will therefore start out by giving an overview of syntactic priming studies, to be followed by two chapters in which the online dynamics of syntactic priming are investigated by means of experiments. More specifically, I was interested in studying reaction time effects of syntactic priming− effects that are predicted to occur by one of the dominant theories of syntactic priming. In order to rule out non-syntactic (lexical and conceptual) priming effects, we concentrated on word order as a possible target of syntactic priming mechanisms. However, the research took a special turn, because, although we did manage to replicate response tendency priming, we failed to find any reaction time effects of word order priming. This thesis ends with a concluding chapter in which I hope to integrate the results of all of the above.