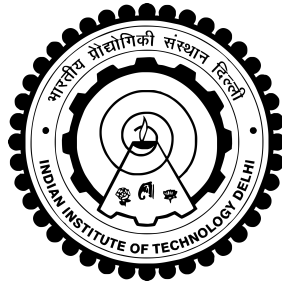


**PLANNING SCOPE IN
PRODUCTION: HOW GRAMMAR
SHAPES INCREMENTALITY**

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SCIENCES**

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Planning Scope in Production: How Grammar Shapes Incrementality

by

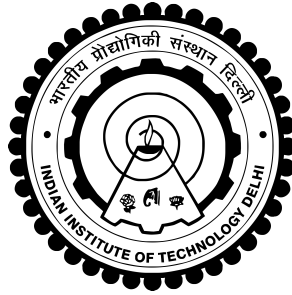
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Submitted in fulfillment of requirements of degree of

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July, 2025

CERTIFICATE

This is to certify that the thesis titled **Planning Scope in Production: How Grammar Shapes Incrementality**, submitted by **Mudafia Zafar**, to the Indian Institute of Technology, Delhi, for the award of the degree of **Doctor of Philosophy**, is a bonafide record of the research work done by her under my supervision and guidance. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

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Date: 25 July 2025

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ABSTRACT

Language production is an inherently incremental process, yet the extent to which speakers plan ahead before articulation varies across languages. This thesis examines how the grammatical structure of a language determines planning scope, influencing the degree of incrementality in sentence production. The investigation focuses on two critical processes unfolding during production: **verb planning** and **linearization**, using Hindi — an S-O-V language, as the primary empirical ground. The two processes are tested in the context of Hindi's unique structural properties, including aspect-induced case splits, verb-dependent ergativity, word order scrambling, right-extraposed and object-fronted constructions, as well as pre-nominal and post-nominal modifications.

Through a series of six experiments spanning across three chapters, the thesis addresses two key questions: (1) When are verbs planned during production, and how do different types of linguistic dependencies influence the extent of verb planning? (2) What factors determine word order during production, and how do grammatical properties of a language determine their influence? The findings provide novel insights into the flexibility and constraints in sentence planning demonstrating that incrementality is not only shaped by typological differences across languages but also by structural variations within a single language. Results from this thesis underscore the need for fine-grained grammatical distinctions in cross-linguistic studies of production.

सारांश

भाषा उत्पादन स्वाभाविक रूप से एक क्रमिक प्रक्रिया है, लेकिन वाक्य उच्चारण से पहले वक्ता कितनी योजना बनाते हैं, यह भाषाओं के अनुसार भिन्न होता है। यह शोध इस बात की जांच करता है कि किसी भाषा की व्याकरणिक संरचना योजना के विस्तार को कैसे निर्धारित करती है और यह वाक्य उत्पादन में क्रमिकता की सीमा को कैसे प्रभावित करती है। यह अध्ययन दो महत्वपूर्ण प्रक्रियाओं पर केंद्रित है, जो उत्पादन के दौरान विकसित होती हैं: **क्रिया योजना** और **रैखिकीकरण**, जिसमें हिंदी — एक कर्ता-कर्त्री-क्रिया संरचना वाली भाषा — को मुख्य अनुभवजन्य आधार के रूप में लिया गया है। इन दोनों प्रक्रियाओं की हिंदी की विशिष्ट संरचनात्मक विशेषताओं के संदर्भ में जांच की गई है, जिनमें पक्ष-प्रेरित कारक विभाजन, क्रिया-आधारित कर्ता विभक्ति, शब्द क्रम परिवर्तनशीलता, वाम और दक्षिण विस्तार संरचनाएँ, साथ ही पूर्वसंज्ञा और पश्चसंज्ञा संशोधन शामिल हैं।

तीन अध्यायों में फैले छह प्रयोगों की श्रृंखला के माध्यम से, यह शोध दो मुख्य प्रश्नों को संबोधित करता है: (1) उत्पादन के दौरान क्रियाओं की योजना कब बनाई जाती है, और विभिन्न प्रकार की भाषिक निर्भरताएँ क्रिया योजना की सीमा को कैसे प्रभावित करती हैं? (2) उत्पादन के दौरान शब्द क्रम किन कारकों द्वारा निर्धारित होता है, और किसी भाषा की व्याकरणिक विशेषताएँ इस प्रभाव को कैसे निर्धारित करती हैं? निष्कर्ष वाक्य योजना में लचीलेपन और सीमाओं के बारे में नए दृष्टिकोण प्रस्तुत करते हैं, यह दर्शाते हुए कि क्रमिकता केवल भाषाओं की प्रकारगत भिन्नताओं से ही नहीं, बल्कि एक ही भाषा के भीतर संरचनात्मक विविधताओं से भी प्रभावित होती है। इस शोध के परिणाम भाषाओं की तुलना करने वाले अध्ययनों में वाक्य उत्पादन को समझने के लिए सूक्ष्म व्याकरणिक भेदों की आवश्यकता को उजागर करते हैं।

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