

Script Knowledge and Event Order in a Visual World Paradigm Study



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Introduction

Yesterday we went to a traditional Bavarian restaurant. Before the meal, we carefully read the menu ✔ / the bill Ⅹ / an appetizer Ⅹ

Do people integrate script knowledge, linguistic cues and temporal order cues early (as soon as cues become available) to predict what will be mentioned next?

Are people better at predicting the next script event when no reordering is needed?

Script knowledge and expectation-based processing:

► knowledge of everyday activities (e.g. going to a restaurant) and their participants, stored in our memory in an order-sensitive way (e.g. order, eat → pay, see Khalkhali et al. 2012) and available as source of expectations during processing



Iconicity assumption (Münte et al. 1998, Zwaan et al. 1996):

temporal connectors (before / after) signal reordering:

processing is easier when order of mention matches chronological order (no reordering is needed)

Experiment

Visual world paradigm study: 28 stories about a particular scenario + test sentences

Peter ging in sein Lieblingsrestaurant. Er setzte sich auf einen freien Platz direkt neben dem Fenster. Peter went to his favorite restaurant. He sat down at a free table right by the window.

(a) Vor / Nach dem Essen # las er eifrig # die Speisekarte / die Rechnung Before / After the meal read he eagerly the menu / the bill
(b) Vor / Nach dem Essen # bestellte er eifrig # eine Vorspeise / eine Nachspeise Before / After the meal ordered he eagerly an appetizer / a dessert

Visual worlds with four AOIs (areas of interest):

Target (e.g. menu)



- Temporal order (TO) competitor (e.g. appetizer)
- Selectional preference (SP) competitor (e.g. bill)
- Unrelated (UR) competitor (e.g. dessert)
- Two scenario-compatible fillers

	Predictions	Results	Discussion and Conclusions
oefore / after region	 more gazes at target, TO competitor (temporal cue + script knowledge guiding expectation-based processing) stronger effect for <i>after</i> vs. <i>before</i> (iconicity assumption) 	Χ	 Script knowledge and expectation-based processing: only target matches both temporal order in the script and verb's selectional preferences
verb region	 more gazes at target (temporal cue + script knowledge + linguistic knowledge guiding expectation-based processing) 	target >> TO competitor *** target >> SP competitor * target >> UR competitor **	people quickly integrate temporal cues, script knowledge and linguistic knowledge to predict what will be mentioned next

Logistic regressions for each r	egion with	trials with a	at least on	ne inspection a	s dependent v	/ariable,
AOI and condition (before/afte						

Iconicity assumption:

- ► no effect of *after* vs. *before*
- script knowledge cued both before- and

