

ON THE USE OF IMPLICIT CAUSALITY INFORMATION IN ENGLISH PRONOUN ANAPHORIC INFERENCE: EVIDENCE FROM CHINESE SECOND LANGUAGE LEARNERS' EYE MOVEMENTS

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Introduction: Implicit causality is a well-known phenomenon where verbs supply information about the potential cause of the behavior or state to one of the antecedents (e.g., “*Mary praised David because...*” would continue about David, not Mary) (Garvey & Caramazza, 1974). The activation time of implicit causality information in pronoun anaphoric inference is still in dispute, and two accounts have been proposed: the focusing account (McKoon et al., 1993; Greene & McKoon, 1995; Long & De Ley, 2000; Koornneef & Van Berkum, 2006) and the integration account (Garnham et al., 1996; Stewart et al., 2000).

Aims and Objects: The present investigation is designed to explore whether and when Chinese English learners make use of verb-based implicit causality information in making English pronoun anaphoric inference, and whether language proficiency has an effect on this process.

Methodology: A normal sentence reading eye movement experiment (N=83) is conducted with verb bias (NP1 vs. NP2), congruency (congruent vs. incongruent) and language proficiency (high vs. low) being manipulated. Materials are constructed with the “NP1 + V-ed + NP2 + because + he/she...” structure.

Data and Analysis: Area of interests are the critical pronoun (he/she) and the critical region because he/she). The eye movement measures include first fixation durations, first gaze durations, regression path durations and total reading times. Linear mixed effects model with verb bias, congruency and language proficiency as fixed effects and subjects and items as random effects is fitted to every eye movement measure in each area of interests.

Findings and Conclusions: Results demonstrate that Chinese English learners can activate verb-based implicit causality information at an early time, before the disambiguating information appeared, and high proficiency level learners take less time to make pronoun anaphoric inference than low proficiency level learners. These findings suggest that Chinese English learners succeed in using verb-based implicit causality information in making pronoun anaphoric inference and language proficiency can also influence this process, which supports the focusing account.

Keywords: implicit causality; anaphoric inference; language proficiency

An example of the stimuli used in this experiment.

(a) NP1-biased verb, bias-congruent pronoun

John annoyed Mary because he kept making the same mistake while practicing.

(b) NP1-biased verb, bias-incongruent pronoun

Mary annoyed John because he hated people talking about his past life.

(c) NP2-biased verb, bias-congruent pronoun

John admired Mary because she could speak six foreign languages at a young age.

(d) NP2-biased verb, bias-incongruent pronoun

Mary admired John because she liked people with exploration and innovation spirit.