

The role of context in focus intervention effects

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Introduction Focus intervention effects (FIEs) refer to the phenomenon that an interrogative *wh*-expression cannot be preceded by a focus expression (e.g. a focused phrase associated with a word like *only*), as exemplified by the Mandarin example in (1).

- (1) *Zhíyǒu [Xiǎoqí]_F mǎi-le ná-běn zázhi ne?
only Xiaoqi buy-ASP which-CL magazine SFP
Intended ‘Which magazine is the one that only Xiaoqi buy?’ (Target)

The role of context Earlier syntax and semantic accounts of FIEs typically attribute their ill-formedness to purely structural reasons in syntax or semantics (Beck 1996, 2006; Beck & Kim 1997; Kim 2006; Mayr 2014; Li & Law 2016; Erlewine & Kotek 2017; Kotek 2019; Demirok 2021; a.o.). A (perhaps simplified) prediction of these accounts is that FIEs are categorically ungrammatical. More recent pragmatic accounts, led by Tomioka (2007), however, suggest that FIEs may be more gradient in nature and even disappear if a context is provided that turns a focused expression into background information (Eiliam 2011, Glasbergen 2022). Given the state of the contention, it is important to clarify the role of context in modulating FIEs with the goals of understanding how it can be incorporated into the theorizing of FIEs.

Current study The current study conducts two experiments to probe the role of context on FIEs, using both a judgment and a processing task. The experimental results show a facilitation effect of context in both tasks, highlighting the need to incorporate context in accounts of FIEs. However, since the facilitation effect does not fully ameliorate the unacceptability of FIEs, we conclude that context has to be combined with structural components to adequately model FIEs.

Experimental design We combined a self-paced moving-window study and a judgment study in two experiments to probe the roles of **sentence structure**, **context**, and their potential interaction. Experiment 1 (Exp1) compared three question structures *without* any accompanying context—plain *wh*-questions (**Plain**, (2)), FIE questions (**Target**, (1)), and questions with fronted *wh*-expressions (**Fronted**, (3)). Experiment 2 (Exp2) compared the same three question structures *with* an accompanying context, an example of which is provided in Figure 1. Note that the expression being focused (i.e., *Xiaoqi*) is mentioned in the context, which shows that only Xiaoqi bought a different magazine, and hence is part of the background information. In both experiments, 63 experimental stimuli were grouped into three Latin-square lists along with 22 fillers in each list.

- (2) Xiǎoqí mǎi-le ná-běn zázhi ne?
Xiaoqi buy-ASP which-CL magazine SFP
‘Which magazine did Xiaoqi buy?’ (Plain)
- (3) ná-běn zázhi zhíyǒu [Xiǎoqí]_F mǎi-le ne?
which-CL magazine only Xiaoqi buy-ASP SFP
‘Which magazine is the one that only Xiaoqi buy?’ (Fronted)

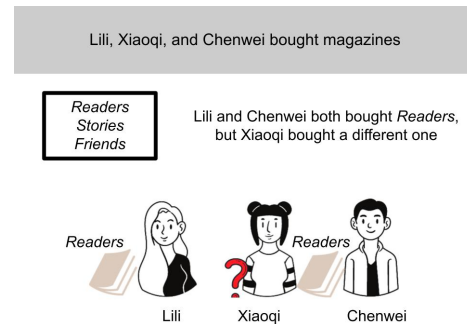


Figure 1

In each trial in both experiments, the participant did a self-paced reading task followed by a rating task based on a 5-point Likert scale. The descriptive labels are as follows: 1 = completely unnatural, 2 = basically unnatural, 3 = marginally natural, 4 = basically natural, 5 = completely natural. In Exp2, both tasks were preceded by a context. The participant had to answer a comprehension question after seeing the first context, which ensured that their understanding of the context was correct. 151 and 155 participants took part in the two experiments.

Results The results from the rating tasks and the self-paced reading tasks are summarized in Figure 2 and Figure 3, respectively.

Acceptability rating (Fig 2) Out of the three sentence types, **Target** received the lowest rating with and without context, in the ‘unnatural’ range of the scale. **Context** improved the acceptability rating of all question types ($\beta=0.47$, $SE=0.18$, $z = 2.67$ $p < .01$), while also interacting significantly with **structure** in the **Target** condition ($\beta = 0.83$, $SE=0.074$, $z=11.3$, $p < .001$), raising its mean rating from 2 to 2.7. However, context was insufficient to eliminate FIEs.

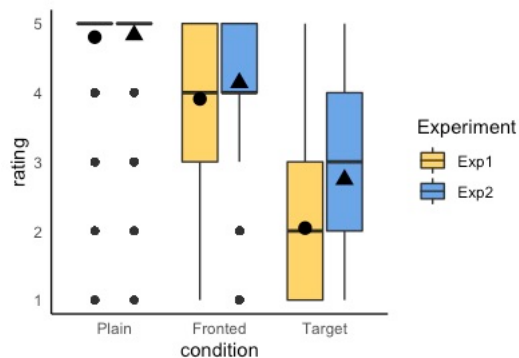


Figure 2

Self-paced reading (Fig 3) Context reduced the reading time across all sentence structures and regions, but **Fronted** is not reported here due to its different word order. However, context was more beneficial for **Target** than **Plain** in the spillover, NP region, as indicated by the significant interaction between **structure** and **context** ($\beta = -0.02$, $SE=0.007$, $t = -3.06$, $p < .01$). Concretely, while **Target** was processed significantly slower than **Plain** in the NP region in Exp1, the difference diminished in Exp2, in which context was provided.

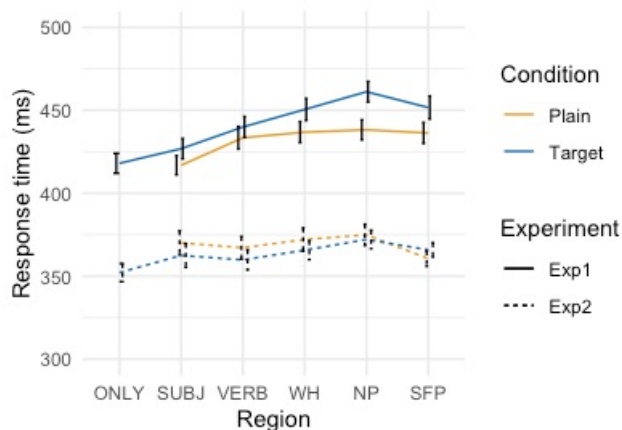


Figure 3

Discussion Combining results from both experiments, we see that context facilitates the processing and improves the judgment of FIEs. The reading time pattern also provides a plausible grounding for the improved acceptability of FIEs in terms of eased processing. Despite the facilitation, however, context is unable to fully ameliorate FIEs. What these findings highlight is the need to incorporate both structure and context in an account of FIEs.

While different accounts of FIEs can be extended to allow for the interaction of structure and context in different ways, we develop an account along the lines of Beck’s focus semantic approach, which takes FIEs to result from a compositionally banned interaction of focus expressions and *wh*-expressions (Beck 2006; Li & Law 2016; Kotek 2019; a.o.). Unlike previous studies, we make critical use of the context variable *C* in Rooth (1992). Since this variable bridges semantic computation and pragmatic information, it has the flexibility to adjust the semantic computation involved in FIEs based on different types of context. For example, if a focused expression supported by context is taken to be a *second-occurrence focus* along the lines of Partee (1994) and Krifka (2004), it can be analyzed as a special type of anaphora whose focus value is purely fixed by context without semantic composition with a focus-containing constituent. This explains the facilitating effect of context in Exp2.

We also hypothesize that contextual licensing of second-occurrence focus is itself a gradient phenomenon and can be exploited to explain the gradience involved in FIEs observed in the rating data. If a context can be set up to fully support a second-occurrence focus, the prediction is that FIEs should be fully ameliorated. This prediction is borne out by focused expressions in echo questions, which have all the hallmark properties of second-occurrence focus and do not give rise to FIEs (Beck & Reis 2018), as shown in (4).

(4) A: Zhǐyǒu [Xiǎoqí]_F mǎi-le Dúzhě.
only Xiaoqi buy-ASP Readers
‘Only Xiaoqi bought Readers.’

B: Á? Zhǐyǒu Xiǎoqí mǎi-le shá?
Ah only Xiaoqi buy-ASP what
‘Ah? Only Xiaoqi bought WHAT?’