The Projective Meaning of Gei in Mandarin Chinese

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Introduction: The morpheme gei in Mandarin has many functions, e.g. marking a benefactive and marking the indirect object in a double object construction. In this paper, I investigate a less well-known use of gei, which I call the projective gei because it introduces a projective meaning that the verbal event is undesirable and unexpected for the speaker (or some context-salient entity). I propose an analysis that accounts for its syntax and semantics at both the at-issue and the not-at-issue tiers.

Syntax: Projective gei has two salient syntactic properties. First, it occurs in constructions with a fronted object, e.g. the Bei-construction (1a), the Ba-construction (1b), with an unaccusative verb (1c) or topicalization (1d). Projective gei also seems to be able to license a fronted object by itself which otherwise has to be postverbal, (2). The agent of (2) is existentially quantified instead of being a PRO/pro, as shown by the fact that it cannot be controlled: (3) cannot mean that Everyone thinks that Zhangsan was hit and hurt by him,. Projective gei cannot occur in constructions where the object is postverbal (4), which is the unmarked object position in Mandarin. Second, the presence of projective gei requires a change of state predicate, otherwise the sentence is ungrammatical. (5). Note that the Bei-constructions, the unaccusatives and topicalization do not require a change of state predicate. The requirement must come from the projective gei.

Semantics: The projective meaning introduced by gei is that the verbal event is undesirable and unexpected for the speaker (or some context-salient entity). So projective gei is always found in sentences with a negative meaning (6), and is very odd in sentences that have a positive meaning (7). The projective meaning passes the family of sentences tests (Beaver et al. 2009): (i) The projective meaning cannot be negated. (8a) can only mean that it is undesirable and unexpected for the speaker that the kitten was not killed, but not that the kitten was killed and it is not undesirable and unexpected for the speaker (or some context-salient entity). (ii) The projective meaning also projects through a yes-no question. (8b) asks about whether the kitten was killed. Answering no cannot mean that the killing-kitten event is not undesirable and unexpected for the speaker (or some context-salient entity). (iii) When appearing in the antecedent of a conditional, the projective meaning does not add to the condition. The speaker of (8c) has to give the money no matter the killing-kitten event is undesirable and unexpected for him (or some context-salient entity) or not. (iv) Finally, the epistemic modal cannot have scope over the projective meaning. (8d) only means that it is possible that the kitten was killed, but not that it is possible that killing the kitten is undesirable and unexpected for someone.

Proposal: I propose that projective gei is a syntactic head with multidimensional semantics. Syntactically, gei selects a change-of-state VP as complement and introduces the internal argument of the verb at its specifier (9). Semantically, gei combines the verb with the individual argument and introduces a not-at-issue meaning that the verbal event is undesirable and unexpected for the speaker or some context-salient entity. The denotation of projective gei is shown in (10), where the not-at-issue meaning follows the colon. For the semantic computation of the at-issue tier, the argument at Spec GeiP saturates the internal argument of the verb (10). The result is exactly like the sentence with a postverbal object. The projection of Gei prevents the internal argument of the verb to be projected in the postverbal position, as shown by the ungrammaticality of (11). The internal argument of the verb must be projected at the specifier of Gei, where I suggest it cannot get structural case from the verb, thus the ungrammaticality of (11). To case mark the argument at Spec GeiP, either the case marker ba is inserted (1b) (Huang 1982), or the argument has to be phonologically empty as in topicalization (1d) and the Bei-construction (1a), where the internal argument is argued to be a null operator (Huang 1999). In the case where gei seems to independently license object fronting (2), the fronted object is in the subject position getting case from INFL, since the agent is existentially quantified instead of being a PRO/pro.

Implications: The properties of projective gei discussed in this paper help to distinguish it from the other uses of gei, some of which also have object-fronting (e.g. (13)) and therefore have the same surface form with projective gei. There are two major differences between (13) and sentences with projective gei (e.g. (14)). First, sentence (13) does not have a not-at-issue meaning while (14) does. Second, the gei morpheme in (13) can be omitted while the projective gei in (14) cannot. Without gei becomes very awkward and the agent is not existentially quantified, but a null pronoun. So projective gei licenses an existentially quantified external argument, while other uses of gei do not.
(1) a. Zhangsan bei Lisi gei da-shang-le. Zhangsan BEI Lisi GEI hit-hurt-ASP ‘Zhangsan was hit and hurt by Lisi.’
   b. Lisi ba Zhangsan gei da-shang-le. Lisi BA Zhangsan GEI hit-hurt-ASP ‘Lisi hit and hurt Zhangsan.’

(2) Zhangsan * (gei) da-shang-le. Zhangsan GEI hit-hurt-ASP ‘Zhangsan was hit and hurt.’

(3) Meigeren dou yiwei Zhangsan gei da-shang-le. everyone DOU think Zhangsan GEI hit-hurt-ASP ‘Everyone thinks that Zhangsan was hit and hurt.’

(4) Lisi * (gei) da-shang-le (*gei) Zhangsan. Lisi GEI hit-hurt-ASP GEI Zhangsan

(5) a. Zhangsan bei dajia (*gei) liaojie. Zhangsan BEI people GEI know ‘Zhangsan was known by people.’

(6) a. Zhangsan bei laoban gei kaichu-le. Zhangsan BEI boss GEI fire ‘Zhangsan was fired by his boss.’
   b. Zhangsan gei da-si-le. Zhangsan GEI hit-dead-ASP ‘Zhangsan was hit to death.’

(7) a. # Zhangsan bei laoban gei biaoyang-le. Zhangsan BEI boss GEI praise-ASP ‘Zhangsan was praised by the teacher.’
   b. # Zhangsan gei biaoyang-le. Zhangsan GEI praise-ASP ‘Zhangsan was praised.’

(8) a. Xiaomao mei gei da-si. kitten not GEI hit-dead ‘The kitten was not hit to death.’
   b. Shi-bu-shi xiaomao gei da-si-le? be-not-be kitten GEI hit-dead-ASP ‘Is it the case that the kitten was killed?’

(9) GeiP
    NP kitten Gei’
    Gei VP
    hit-dead

(10) a. \[ [VP] = [V] = \lambda x. \lambda e. HIT-DEAD(e)(x) \]
    b. \[ [Gei] = \lambda f < e, \lambda x e. f(e,x) \]
    c. \[ [GeiP] = \lambda e. HIT-DEAD(e)(kitten) \]


(12) \[ [Gei] = \lambda f < e, \lambda x e. f(e,x); e is undesirable and unexpected for the speaker or some context-salient entity. \]

(13) Yifu (gei) (ta) xi-ganjing-le. clothes GEI he wash-clean-ASP ‘The clothes were washed clean (for him).’

(14) Zhangsan *(gei) da-si-le. Zhangsan GEI hit-dead-ASP ‘Zhangsan was hit to death.’