Vol. 44, No. 2 (July – December 2026)
ปีที่ 44 ฉบับที่ 2 (กรกฎาคม – ธันวาคม 2569)

The Typology of Implicit Cause(r)s: Evidence from Mandarin Chinese

Matthew Reeve[i*]
Min Zhang[ii]
[i]Faculty of Liberal Arts, Thammasat University, Thailand
[ii]Department of Linguistics, Zhejiang University, Chaina
*Corresponding author's email: m.reeve@tu.ac.th
Received 12 March 2026; revised 11 May 2026; accepted 25 May 2026

Abstract

We argue that Mandarin Chinese provides evidence for a distinction between three types of implicit cause or causer arguments: causing events, semantic causers and syntactic causers. We assemble a number of diagnostics that, taken together, point to a four-way distinction between anticausatives (no causing event or causer), *gei*+unaccusative sentences (implicit causing event), pseudo-anticausatives (implicit semantic causer) and *gei*/*bei*-passives (implicit syntactic causer). First, the 'direct cause' clause test of Härtl (2003) indicates that all these constructions except for anticausatives have causative semantics of some kind. Second, 'by itself' readings of reflexive *ziji*, which are arguably incompatible with a linguistically represented causer, indicate that such a causer is present in pseudo-anticausatives and passives only. Third, agentive adverbs, which arguably require a syntactically represented causer, are only compatible with passives. Our findings support the claim that anticausatives, and unaccusatives more generally, lack any linguistic representation of causation (e.g., Reinhart, 2002, 2016), as well as the claim that some constructions introduce a causing event without a linguistic causer (e.g., Pylkkänen, 2008). They furthermore challenge Landau's (2010) typology of implicit arguments, according to which the binding principles diagnose the presence of a syntactic causer, as the implicit causers of both passives and pseudo-anticausatives are subject to Binding Condition B.

Keywords: implicit arguments, Mandarin Chinese, passives, unaccusatives, anticausatives, causation

1. Introduction

The status of 'implicit arguments' has been a matter of much discussion and controversy in the literature (e.g., Bhatt & Pancheva, 2017; Landau, 2010; and references cited in those works). Various possibilities exist within the assumptions of generative and related frameworks: an implicit argument might be syntactically represented as an unpronounced DP/NP or as an 'inactivated' theta-role, or it may be a purely semantic argument or a pragmatically inferred entity. This paper brings evidence from Mandarin Chinese to bear on this question. The following examples illustrate constructions that have been claimed to involve an implicit causer argument: the anticausative in (1a), passive-like constructions involving the verbal formatives *bei* and *gei* in (1b–c), and what we call the 'pseudo-anticausative' in (1d):[1]

(1) a. Men dakai le.
door open PRT
'The door opened.'

b. Men bei (Zhangsan) dakai le.
door BEI Zhangsan open PRT
'The door (was) opened (by Zhangsan).'

c. Men gei (Zhangsan) dakai le.
door GEI Zhangsan open PRT
'The door (was) opened (by Zhangsan).'

d. Men tui-kai le.
door push-open PRT
'The door was pushed open.'

Passives and pseudo-anticausatives are generally agreed to have an implicit external argument of some kind (e.g., Cheng & Huang, 1994; Huang, 1999; Ting, 2006), and the question is at what level(s) that implicit argument is represented. Anticausatives, by contrast, are generally agreed to lack a syntactic external argument, and debate concerns whether they have a semantically represented causer argument (e.g., Beavers & Koontz-Garboden, 2013; Horvath & Siloni, 2011, 2013; Koontz-Garboden, 2009). A further point of difference is whether

[1]Of course, Mandarin famously has null subjects (*pro* and PRO; see, e.g., Huang, 1984, for classic discussion), which we leave aside in this paper. We use the term 'causer' to describe any initiator of an event, whether it is 'agentive' (i.e., having a relevant mental state) or not (e.g., a natural force).

authors distinguish between a causer argument and a causing event. For instance, some authors claim that anticausatives and other constructions lack a (semantic or syntactic) causer argument but express a causing event in the form of a syntactic Cause head (e.g., Alexiadou et al., 2015; Pylkkänen, 2008).

We will argue that a closer examination of the constructions in (1) provides evidence for distinguishing four situations, each of which is instantiated by one of the constructions:

(2)
i. No causing event or causer (anticausative)
ii. Causing event but no causer (*gei*+unaccusative)
iii. Causing event and semantic causer (pseudo-anticausative)
iv. Causing event and syntactic causer (*bei*/*gei*-passive)

That is, we provide evidence both for distinguishing between causing events and causer arguments in certain cases and for distinguishing between syntactic and semantic causers. On the other hand, the causing event involved in *gei*-constructions cannot be of the same kind as that introduced by verbs with an explicit external argument, as this event is not part of the asserted ('at issue') meaning of the clause; we speculate on possible reasons for this in the conclusion.

In Section 2, we present three tests from the literature, involving (i) 'direct cause' clauses, (ii) the use of *ziji* to mean 'by itself', and (iii) the use of agentive adverbs such as *guyi* 'deliberately'. We show, on the basis of native speaker intuitions, that the four constructions behave differently with respect to these tests, and we argue that this is due to a difference in their semantic and/or syntactic argument structure: anticausatives lack any representation of causation (hence permitting direct cause clauses and *ziji* but disallowing agentive adverbs); *gei*+unaccusative constructions have a causing event but no linguistically represented causer (hence permitting *ziji* but not direct cause clauses or agentive adverbs); pseudo-anticausatives have a semantically represented causer with no syntactic counterpart (hence permitting none of direct cause clauses, *ziji* or agentive adverbs); and *bei*-passives have a syntactically represented causer (hence permitting agentive adverbs but not direct cause clauses or *ziji*). In Section 3, we draw further conclusions from our findings for the typology of implicit arguments proposed by Landau (2010). In particular, we argue that Binding Condition B/C effects are not a diagnostic for syntactic argument status, as pseudo-anticausatives show such effects but, by the above tests, do not have a syntactically represented causer argument. We close with some speculative remarks concerning the nature of the 'causing event' introduced by *gei*.

2. Distinguishing causing events, syntactic causers and semantic causers

2.1 'Direct cause' clauses

First, we adapt a test from Härtl (2003) that he used to show that anticausative variants of transitive verbs do not linguistically express causation:

(3) a. #Zhangsan dakai men de yuanyin shi ta ba men
Zhangsan open door LNKR reason be 3SG BA door
tui-kai le.
push-open PRT
'#The reason Zhangsan opened the door is he pushed the door open.'

b. Men dakai de yuanyin shi Zhangsan ba men
door open LNKR reason be Zhangsan BA door
tui-kai le.
push-open PRT
'The reason the door opened is Zhangsan pushed the door open.'

c. #Men bei/gei dakai de yuanyin shi Zhangsan ba
door BEI/GEI open LNKR reason be Zhangsan BA
men tui-kai le.
door push-open PRT
'#The reason the door was opened is Zhangsan pushed the door open.'

(3a) is semantically odd because the post-copular clause expresses a causing event for the pre-copular clause (*Zhangsan kai men*), which already has its own causing event and agent argument. This situation can be represented in terms of the simplified predicate calculus representation in (4a), where the outer cause predicate represents the relation between the two clauses. The acceptability of (3b) then suggests that the clause *men kai* does not have its own causer argument or causing event, a situation represented in (4b). Next, consider (3c), in which the 'caused' clause contains a passive marker *bei/gei*. The fact that this is unacceptable suggests that passives contain a causing event and agent argument, just like the corresponding transitives; this situation is expressed in (4c).

(4) a. #CAUSE(PUSH(Zhangsan, door), CAUSE(Zhangsan, OPEN(door)))

b. CAUSE(PUSH(Zhangsan, door), OPEN(door))

c. # CAUSE(PUSH(Zhangsan, door), CAUSE(someone, OPEN(door)))

Härtl argues on the basis of similar data from German that passives express a causing event, while anticausatives do not. Other authors, however, have argued that anticausatives do express a causing event, but that they differ from transitives and passives in not expressing an agent/causer argument (e.g., Alexiadou et al., 2015). The question that arises from the above discussion, then, is: does the 'direct cause' clause test indicate the presence of a causing event in the semantics of the verb, or (in addition) the presence of a causer argument? That is, does the difference between (3b, c) indicate that anticausatives lack a causing event, or merely that they lack a linguistic causer (i.e., an entity that initiates that causing event)? The following test, we think, provides a way of distinguishing these possibilities.

2.2 *Ziji* 'by itself'

Among the various uses of the reflexive element *ziji* is one parallel in meaning to the English phrase *by itself*. Approximately speaking, the effect of *ziji* and *by itself* is to exclude an external causer distinct from the antecedent of *ziji/by itself* (e.g., Alexiadou et al., 2015; Horvath & Siloni, 2011, 2013; Liao, 2018; Schäfer & Vivanco, 2016). Thus, while anticausative verbs are compatible with this use of *ziji* in principle, as in (5a), (5b) seems contradictory because the post-copular clause expresses a causing event with Zhangsan as agent. By contrast, (5c) shows that natural force causers, unlike agents, are compatible with this use of *ziji*:

(5) a. Men ziji kai le.
door self open PRT
'The door opened by itself.'

b. #Men ziji kai de yuanyin shi Zhangsan ba men
door self open LNKR reason be Zhangsan BA door
tui-kai le.
push-open PRT
'#The reason the door opened by itself was that Zhangsan pushed the door open.'

c. Men ziji kai de yuanyin shi da-feng ba men
door self open LNKR reason be big-wind BA door
chui-kai le.
blow-open PRT
'The reason the door opened by itself was that the wind blew the door open.'

The difference between (5b) and (5c) does not have to do with the presence of a causing event, as the post-copular clauses in both examples introduce such an event, as represented in the chains of causation in (6a, b) respectively:

(6) a. CAUSE(PUSH(Zhangsan, ...), OPEN(door))

b. CAUSE(BLOW(wind, ...), OPEN(door))

Rather, it seems that what *ziji/by itself* excludes is a particular type of external causer, of which an agent is one type.[2] If we now turn to passive-like constructions, we see that *bei* and *gei* behave differently from one another with respect to this use of *ziji*. As shown in (7a), *bei* is incompatible with *ziji*, just as the English passive is incompatible with *by itself*. Interestingly, however, *gei* is compatible with *ziji*, as shown in (7b):

(7) a. *Men ziji bei dakai le.
door self BEI open PRT
'*The door was opened by itself.'

b. Men ziji gei dakai le.
door self GEI open PRT
'The door got open by itself.'

[2]With regard to the question of why *ziji* and *by itself* are compatible with natural force causers, as in (5b), we suspect that this ultimately has to do with how humans conceive causation. For instance, it may be that what *ziji/by itself* excludes is the presence of a 'contingent' causer: either a causer that has a choice whether or not to carry out action (i.e., an agent) or a causer whose action/motion depends on some other event that may or may not have triggered that an action/motion (e.g., a rock crashing into a door as a result of a storm). By contrast, natural forces such as wind might be thought of as relatively 'inevitable' and hence not 'contingent' in this sense. Regardless of the correct explanation, what is crucial for our argument is that there is a class of causers that *ziji/by itself* excludes, and not the exact nature of this class.

The incompatibility of *ziji* with *bei*-constructions, as well as the incompatibility of *by itself* with the passive in English, can be understood if these constructions both introduce an agent-like causer argument that is existentially quantified (e.g., Bhatt & Pancheva, 2017; Bruening, 2013). On the other hand, the reason why *gei* patterns with anticausatives rather than with passives is at first sight less clear. Shen and Sybesma (2010, p. 225) argue that this usage of *gei* introduces an 'external force' (*waili*) that can be understood as a causer (*zhishizhe lunyuan*) that is active in the semantics but not in the syntax. If *ziji* is incompatible with an external causer, however, its compatibility with *gei* is a mystery. An alternative possibility is that *gei* expresses a kind of causing event but does not necessarily express a distinct causer argument, as Pylkkänen (2008, pp. 89–95) argues for 'adversity causatives' in Japanese. This is supported by the fact that, while *gei* (like *bei*) can occur with an overtly expressed agent/causer argument when it occurs with a basically transitive verb, as in (8a), *gei* (unlike *bei*) may also occur with certain unaccusative predicates, as in (8b), in which case an overt agent/causer argument is impossible (e.g., Huang, 2013, pp. 107–109; Shen & Sybesma, 2010, p. 223):

(8) a. Xiao niao gei (tamen) xia-zou le.
little bird GEI them scare-away PRT
'The little bird was scared away (by them).'

b. Xiao niao gei (*tamen) fei-zou le.
little bird GEI them fly-away PRT
'The little bird flew away (*by them).'

According to Shen and Sybesma (2010, pp. 225–226), the meaning contributed by *gei* in examples such as (8b) (without *tamen*) is that the above-mentioned 'external force' caused the bird to fly away.[3] Nevertheless, as shown, this 'external force' cannot be expressed as an overt NP. Nor is the 'external force' incompatible with *ziji* meaning 'by itself'. Thus, just as the apparently passive use of *gei* in (7b) is compatible with *ziji*, so is the unaccusative use of *gei* in (8b):

[3]We should note that Huang (2013, p. 109) describes the 'external force' as an 'affectee'; thus, he states with respect to (8b) that "[it] says that this event is surprising or undesirable to someone, but this affectee is only implicit but not overtly expressed." While acknowledging this possible reading of *gei* (which Shen & Sybesma also mention), we leave it aside in this paper, as we are mainly interested in implicit cause(r)s.

(9) Xiao niao ziji gei fei-zou le.
little bird self GEI fly-away PRT
'The little bird flew away by itself.'

Importantly, though, the unaccusative use of *gei* is incompatible with a 'direct cause' clause, as shown in (10):

(10) #Xiao niao gei fei-zou de yuanyin shi Zhangsan rang ta
little bird GEI fly-away LNKR reason be Zhangsan let it
fei-zou le.
fly-away PRT
'The reason the little bird flew away was because Zhangsan let it fly away.'

This shows that, although the 'external force' introduced by *gei* cannot be analysed as an implicit external causer argument, it does represent some kind of causing event, contrary to claims that *gei* introduces a 'becoming' or 'happening' event (Huang, 2013; Tang, 2006).[4]

Thus, our claim is that the *ziji* test supports the idea that a construction may introduce a causing event that lacks a linguistically represented agent/causer argument. There is an alternative potential explanation of the above observations that should be considered, however – namely, that both *bei* and *gei* represent a causer argument (rather than just a causing event in the latter case), and that the difference between them is that the causer argument of *bei* is syntactically represented, while that of *gei* is merely semantically represented. Under this alternative, the 'direct cause clause' test could be viewed as a test for (syntactic or semantic) causers, rather than for causing events, while the *ziji* test could be a test for syntactic causers. This would explain why neither *bei* nor *gei* is compatible with a direct cause clause, while *gei* but not *bei* is compatible with *ziji*. Next, we argue that this is unlikely to be correct, on the basis of a comparison between anticausatives, *bei-* and *gei*-constructions and 'pseudo-anticausatives' in Mandarin.

2.3 Agentive adverbs and 'pseudo-anticausatives'

In this subsection, we examine a type of verbal compound that in some respects resembles agentive transitive verbs (or passives of such verbs) and in other respects resembles

[4]Taken together, (9–10) also suggest that *ziji* meaning 'by itself' is compatible with a linguistically represented causing event, in contrast to Pylkkänen's (2008, p. 94) claim about Japanese *katteni*.

anticausatives. This construction, which we refer to as a 'pseudo-anticausative', is illustrated in (11b) (Cheng & Huang, 1994, p. 215):[5]

(11) a. Zhangsan chui-po qiqiu le.
Zhangsan blow-break balloon PRT
'Zhangsan burst the balloon through blowing.'

b. Qiqiu chui-po le.
Balloon blow-break PRT
'The balloon (was) burst (through blowing).'

The verbal compound *chui-po*, made up of the unergative verb *chui* 'to blow' and the unaccusative verb *po* 'to break', can be used as a transitive verb as in (11a) or as an intransitive verb as in (11b). While the usage in (11b) superficially looks like an anticausative, it differs from anticausatives in that the first member of the verbal compound contributes an implicit agent argument. The relevant question for our purposes is whether this implicit agent is syntactically represented or only present in the semantics.

With respect to the tests for implicit causers already presented above, pseudo-anticausatives behave like transitives and passives: they are incompatible with a 'direct cause' clause or *ziji* 'by itself' (cf. Cheng & Huang, 1994, p. 212, where *zidong* 'automatically' is used; Ting, 2006, p. 102):[6]

(12) a. *Wawa chui-po de yuanyin shi ta ba ziji
doll blow-break LNKR reason be 3SG BA self
chui-po le.
blow-break PRT
'*The reason the doll was blown up until he burst was because he blew himself up until he burst.'

[5]We use this name instead of the term 'pseudo-passive' (e.g., Cheng & Huang, 1994) to avoid confusion with the English construction frequently called the 'pseudopassive' (e.g., *The chair was sat on*). It is important to note that not all (apparent) intransitive VV compounds with a patient subject can be classed as pseudo-anticausatives. For example, while *dakai* 'to open' in (1a, b) is made up of the verbs *da* 'to hit' and *kai* 'to open', it behaves like an anticausative in all the respects listed in this paper (when intransitive).

[6]Note that, because the verb *chui* 'blow' prefers to have a sentient agent, we use *wawa* 'doll' as the subject in these examples, where it should be imagined that the doll is sentient and can inflate himself by blowing into a nozzle.

b. *Wawa ziji chui-po le.
doll self blow-break PRT
'The doll {*blew up/was blown up} by himself until he burst.'

The incompatibility of pseudo-anticausatives with 'direct cause' clauses, as in (12a), suggests that pseudo-anticausatives express a causing event. Their incompatibility with *ziji* 'by itself', as shown in (12b), suggests that they also introduce an agent/causer argument (the agent of *chui* 'blow'). Yet in another respect, pseudo-anticausatives behave as if they lack an agent/causer argument. Consider the well-known fact that passives in English and Mandarin can be modified by agentive adverbs taking the implicit agent as antecedent, while anticausatives cannot (e.g., Bhatt & Pancheva, 2017; Huang, 1999; and references cited in those works), as illustrated in (13a–b) below:[7]

(13) a. Wawa bei guyi-de/buxiaoxin-de/fennu-de
doll BEI deliberate-LNKR/accidental-LNKR/angry-LNKR
dapo le.
break PRT
'The doll was burst deliberately/accidentally/angrily.'
(agent ≠ the doll)

b. *Wawa guyi-de/buxiaoxin-de/fennu-de
doll deliberate-LNKR /accidental-LNKR/angry-LNKR
po le.
break PRT
'*The doll burst deliberately/accidentally/angrily.'
(agent ≠ the doll)

Now consider the fact that pseudo-anticausatives cannot be modified by the adverbs in (13), even though transitives based on the same VV compound are compatible with such adverbs (see, e.g., Liu, 2021):

[7]As expected if *gei* in *gei*-unaccusatives introduces only a causing event, not an agent/causer argument, it is also incompatible with modification by an agentive adverb, but we do not illustrate this here.

(14) a. Zhangsan guyi-de/buxiaoxin-de/fennu-de/
Zhangsan deliberate-LNKR/accidental-LNKR/angry-LNKR
yongli-de chui-po le wawa.
with.force-LNKR blow-break PRT doll
'Zhangsan deliberately/accidentally/angrily burst the doll through blowing.'

b. *Wawa guyi-de/buxiaoxin-de/fennu-de/
doll deliberate-LNKR/accidental-LNKR/angry-LNKR/
yongli-de chui-po le.
with.force-LNKR blow-break PRT
'The doll was deliberately/accidentally/angrily burst through blowing.'

It seems to us that the incompatibility of pseudo-anticausatives with agentive adverbs could potentially be understood in two ways. One possibility is that the first member of the verbal compound (V1) in (14b) is inaccessible to adverbial modification altogether, perhaps because it is structurally subordinate to V2 (essentially as Tai, 2003, proposes for resultative VV constructions in general) or is a mere 'manner modifier' (as in Liu, 2021). A second possibility is that the agent of V1 is only semantically, not syntactically, represented, and that agentive adverbs are only able to modify a syntactically represented agent (e.g., Bruening & Tran, 2015, p. 144).[8] We believe that this latter possibility is the more likely of the two to be correct.

Under the first option, it must be assumed that V1 can be modified in a transitive VV compound but not in a pseudo-anticausative. The first problem with this option is that it requires an implausible structural difference between the VV compounds in (14a) and (14b). A second problem is that some speakers do actually allow certain agentive adverbs, such as *yongli-de* 'using force' (though not the other agentive adverbs in (14b)), to modify pseudo-anticausatives. Thus, whatever causes the incompatibility of the other adverbs in (14b) with pseudo-anticausatives, it is not (at least for those speakers) that the agent argument of V1 is necessarily inaccessible to modifiers. Rather, for these speakers, we must apparently say that some adverbs, such as *guyi-de* 'deliberately', require the presence of a syntactic

[8]Bhatt and Pancheva (2017, p. 8) in fact claim that "it is not clear that anything more than the presence of agentivity in the semantics is needed" for an agentive adverb to be licensed. The contrast between Mandarin *bei*-passives and pseudo-anticausatives, both of which have 'agentivity in the semantics', suggests that more is needed, namely a syntactically realised agent.

external argument, while others, such as *yongli-de* 'forcefully', only require the agent argument to be present in the semantics.

2.4 Summary

Let us now summarise our findings in this section. First, the 'direct cause' clause test introduced in 2.1 distinguishes between anticausatives and the other three constructions (*bei*-passives, *gei*-constructions and pseudo-anticausatives), which we interpreted in terms of the presence of a causing event in the latter but not in the former. Second, the *ziji* test introduced in 2.2 distinguishes between anticausatives and *gei*-constructions on the one hand and *bei*-passives and pseudo-anticausatives on the other, which we interpreted in terms of the presence of a semantic agent/causer argument in the latter but not (necessarily) in the former. Third, the agentive adverb test introduced in 2.3 distinguishes between *bei*-passives on the one hand and anticausatives and *gei*-constructions on the other, with pseudo-anticausatives having an intermediate status. We interpreted this in terms of the presence of a syntactic agent/causer in *bei*-passives and its absence in anticausatives and *gei*-constructions; the special status of pseudo-anticausatives arises from the fact that some agentive adverbs require a syntactic agent/causer argument, while others only require a semantic agent/causer.

For ease of reference, these findings are summarised in Table 1 below:

Table 1
Tests for implicit cause(r)s applied to four constructions in Mandarin (AC = anticausative; PAC = pseudo-anticausative)

	AC	*Gei*	PAC	*Bei*
Direct cause clause (semantic cause)	Y	N	N	N
Ziji / by itself (semantic causer)	Y	Y	N	N
Agentive adverbs (semantic/syntactic causer)	N	N	N/Y	Y

In the final section, we point out some further implications of our findings for the typology of implicit arguments more generally.

3. Conclusion: The typology of implicit cause(r)s

We draw three main conclusions from the findings in Section 2. First, we have seen evidence that some constructions (*gei*-constructions with unaccusative verbs) introduce a causing event without a causer, as proposed for instance by Pylkkänen (2008). Second, the contrast between anticausatives and the other three constructions supports the idea that anticausatives do not introduce either an implicit causer argument or an implicit causing event (e.g., Horvath & Siloni, 2011, 2013; Neeleman & Van de Koot, 2012; Rákosi, 2012; Reinhart, 2002, 2016; Reinhart & Siloni, 2005; contra, e.g., Alexiadou et al., 2015; Beavers & Koontz-Garboden, 2013; Chierchia, 1989; Koontz-Garboden, 2009; Levin & Rappaport Hovav, 1995). Third, the pattern seen in Table 1 bears on the question of whether implicit arguments are syntactically represented or are merely present in the semantics (and/or pragmatics). This third point deserves some additional discussion as background.

Landau (2010) identifies four main diagnostics that he takes to indicate that an implicit argument is syntactically represented: the ability to be the subject of a predicate, sensitivity to Binding Condition A, sensitivity to Binding Conditions B and C, and the ability to control PRO.[9] Of these, we focus on Binding Conditions B and C, as these are the easiest to test for our purposes. Consider, in this regard, the examples in (15):

(15) a. Wawa bei chui-po le. (agent ≠ *wawa*)
doll BEI blow-break PRT
'The doll was burst (through blowing).'

b. Wawa chui-po le. (agent ≠ *wawa*)
doll blow-break PRT
'The doll (was) burst (through blowing).'

As noted by Williams (1987), the subject of a passive in English cannot be understood as coreferential with the implicit agent/causer of the passive. The same is true for Mandarin *bei*-passives, as in (15a); that is, the doll cannot be understood to have burst through self-inflation

[9]Landau (2010) presents a number of tests that are intended to distinguish between implicit arguments that are syntactically represented (e.g., as PRO, *pro* or some other kind of 'null' nominal) and those that are not, such as implicit 'objects' of derived nominals (e.g., Safir, 1991).

in this case. According to Landau's reasoning, this indicates that the implicit agent is syntactically present, as this effect is best explained as a Condition B or C effect whereby the subject and the implicit agent are in a relation of local c-command. Next consider the fact that the same effect arises in the pseudo-anticausative in (15b), where, again, the doll cannot be understood to have burst through self-inflation. For Landau, then, the implicit agent contributed by *chui* 'blow' must be syntactically, not just semantically, present.

The problem this gives rise to in the present context is that, if the implicit agents of *bei*-passives and pseudo-anticausatives are both syntactically represented, it is hard to see how their different compatibility with agentive adverbs can be explained.[10] That is, we have seen evidence that pseudo-anticausatives permit some agentive adverbs but not others, indicating that the first verb of the verbal compound is accessible in principle to such modification. The fact that they do not accept all agentive adverbs is then best explained by differentiating agentive adverbs in terms of whether they require a syntactic or only a semantic antecedent. This is of course impossible if the implicit agent of pseudo-anticausatives is syntactically represented. In turn, then, the properties of pseudo-anticausatives support the idea that Binding Conditions B and C are semantic rather than syntactic in nature, contra Landau (2010). For example, Reinhart and Reuland (1993, p. 662) propose a version of Condition B that states that "a predicate can be reflexive only if it is reflexive-marked", where the terms 'predicate' and 'reflexive' are understood as notions referring to a semantic rather than a syntactic representation.

Thus, we conclude that there is evidence from Mandarin Chinese for a distinction between linguistically represented causing events, semantic causers and syntactic causers. There is, however, a wrinkle in this conclusion, which is that the 'causing event' that *gei* represents cannot be the same 'causing event' that is part of the meaning of transitive causatives. This is because the putative causing event introduced by *gei* cannot be independently negated:

---

[10]Both are additionally compatible with rationale clauses:

(i) Men (bei) tui-kai le shi weile jinqu fangjian.
door BEI push-open PRT be in.order.to enter room
'?The door was pushed open in order to enter the room.'

Landau (2000, 2010), however, provides convincing evidence that the subject of rationale clauses does not require a grammatical relation with its antecedent.

(16) Men mei(you) gei dakai.
door not.PERF GEI open
='The door did not open.'
≠'The door opened, but nothing caused it.'

This test is generally assumed to identify content that is not 'at issue' (roughly, asserted) in the sense of Potts (2005) (e.g., Bosse et al., 2012; Bruening & Tran, 2015; Wood & Marantz, 2017, p. 276). We leave it to further research to elucidate the status of the causing event introduced by *gei*, though we offer a suggestion based on the proposal of Tang (2001, pp. 282–287) that *gei* is an 'affectedness marker'. It could be that *gei* introduces an AFFECT function in the sense of Jackendoff (1990), with the causing event being represented as the first argument of AFFECT. If properties such as affectedness and mental state relations occupy a distinct tier of meaning from those aspects of meaning that are asserted or 'at issue', then both the sensitivity of certain tests to the causing event, and its resistance to negation, can perhaps be reconciled.

References

Alexiadou, A., Anagnostopoulou, E. & Schäfer, F. (2015). *External arguments in transitivity alternations: A layering approach*. Oxford University Press.

Beavers, J., & Koontz-Garboden, A. (2013). In defense of the reflexivization analysis of anticausativization. *Lingua, 131*, 199-216.

Bhatt, R., & Pancheva, R. (2017). Implicit arguments. In M. Everaert & H. van Riemsdijk (Eds.), *The Wiley-Blackwell companion to syntax*. Wiley Blackwell.

Bosse, S., Bruening B., & Yamada, Y. (2012). Affected experiencers. *Natural Language and Linguistic Theory, 30*, 1185-1230.

Bruening, B. (2013). *By*-phrases in passives and nominals. *Syntax, 16*(1), 1-41.

Bruening, B., & Tran, T. (2015). The nature of the passive, with an analysis of Vietnamese. *Lingua, 165*, 133-172.

Cheng, L. L.-S., & Huang, C.-T. J. (1994). On the argument structure of resultative compounds. In M. Chen & O. T.-L. Tzeng (Eds.), *In honor of William S.-Y. Wang: Interdisciplinary studies on language and language change* (pp. 187-221). Pyramid Press.

Chierchia, G. (1989). A semantics for unaccusatives and its syntactic consequences. In A. Alexiadou, E. Anagnostopoulou & M. Everaert (Eds.), *The unaccusativity puzzle: Explorations of the syntax-lexicon interface* (pp. 22-59). Oxford University Press.

Härtl, H. (2003). Conceptual and grammatical characteristics of argument alternations: The case of decausative verbs. *Linguistics, 41*(5), 883-916.

Horvath, J., & Siloni, T. (2011). Anticausatives: Against reflexivization. *Lingua, 121*, 2176-2186.

Horvath, J. & Siloni, T. (2013). Anticausatives have no cause(r): A rejoinder to Beavers & Koontz-Garboden. *Lingua, 131*, 217-230.

Huang, C.-T. J. (1984). On the distribution and reference of empty pronouns. *Linguistic Inquiry, 15*(4), 531-574.

Huang, C.-T. J. (1999). Chinese passives in comparative perspective. *Tsing Hua Journal of Chinese Studies, 29*, 423-509.

Huang, C.-T. J. (2013). Variations in non-canonical passives. In A. Alexiadou & F. Schäfer (Eds.), *Non-canonical passives* (pp. 95-114). John Benjamins.

Jackendoff, R. (1990). *Semantic structures*. MIT Press.

Koontz-Garboden, A. (2009). Anticausativization. *Natural Language and Linguistic Theory, 27*, 77-138.

Landau, I. (2000). *Elements of control: Structure and meaning in infinitival constructions*. Springer.

Landau, I. (2010). The explicit syntax of implicit arguments. *Linguistic Inquiry, 41*(3), 357-388.

Levin, B., & Rappaport Hovav, M. (1995). *Unaccusativity: At the syntax–lexical semantics interface*. MIT Press.

Liao, H.-C. D. (2018). Domains and CauseP in a unified semantics of Chinese adverbial *ziji* 'self'. *Acta Linguistica Academica, 65*(4), 597-650.

Liu, J. (2021). *The syntax of V-V resultatives in Mandarin Chinese*. Springer.

Neeleman, A., & Koot, H. van de. (2012). The linguistic expression of causation. In M. Everaert, M. Marelj, & T. Siloni (Eds.), *The Theta System: Argument structure at the interface* (pp. 20-51). Oxford University Press.

Potts, C. (2005). *The logic of conventional implicatures*. Oxford University Press.

Pylkkänen, L. (2008). *Introducing arguments*. MIT Press.

Rákosi, G. (2012). In defence of the non-causative analysis of anticausatives. In M. Everaert, M. Marelj, & T. Siloni (Eds.), *The Theta System: Argument structure at the interface* (pp. 177-199). Oxford University Press.

Reinhart, T. (2002). The theta system: An overview. *Theoretical Linguistics, 28*(3), 229-290.

Reinhart, T. (2016). *Concepts, syntax, and their interface: The Theta System*. MIT Press.

Reinhart, T., & Reuland, E. (1993). Reflexivity. *Linguistic Inquiry, 24*(4), 657-720.

Reinhart, T., & Siloni, T. (2005). The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic Inquiry, 36*(3), 389-436.

Safir, K. (1991). Evaluative predicates and the representation of implicit arguments. In R. Freidin (Ed.), *Principles and parameters in comparative grammar* (pp. 99-131). MIT Press.

Schäfer, F., & Vivanco, M. (2016). Anticausatives are weaker scalar expressions, not reflexive expressions. *Glossa, 1*(1), 1-36.

Shen, Y., & Sybesma, R. (2010). Jufa jiegou biaoji *gei* yu dongci jiegou de yansheng guanxi. *Zhongguo Yuwen, 336*, 222-237.

Tai, J. H.-Y. (2003). Cognitive relativism: Resultative construction in Chinese. *Language and Linguistics, 4*(2), 304-316.

Tang, S.-W. (2001). A complementation approach to Chinese passives and its consequences. *Linguistics, 39*(2), 257-295.

Tang, S.-W. (2006). A minimalist view on the syntax of BECOME. In C. Yim (Ed.), *Minimalist views on language design* (pp. 301-311). Hankook Publishing Company & Korean Generative Grammar Circle.

Ting, J. (2006). The middle construction in Mandarin Chinese and the presyntactic approach. *Concentric: Studies in Linguistics, 32*(1), 89-117.

Williams, E. (1987). Implicit arguments, the Binding Theory, and control. *Natural Language and Linguistic Theory, 5*, 151-180.

Wood, J., & Marantz, A. (2017). The interpretation of external arguments. In R. D'Alessandro, I. Franco & Á. Gallego (Eds.), *The verbal domain* (pp. 255-278). Oxford University Press.