

Published in: *Linguistics in the Netherlands 1998*, eds. R. van Bezooijen and R. Kager, 81-93. AVT/John Benjamins, Amsterdam.

On Dummy Objects and the Transitivity of Run

Lisa Lai-Shen Cheng and Rint Sybesma,
Universiteit Leiden

1. The questions

This paper starts out from the observation that, strikingly, the Chinese counterparts of virtually all intransitive verbs in English are transitive. This is not only the case with the intransitive or so-called unspecified object reading of verbs like *eat*, whose Mandarin counterpart is *chi-fan* ‘eat-rice’, but also with verbs such as *yawn* and *walk* which in Mandarin come out as *da-haqian* ‘hit/do (a) yawn’ and *zou-lu* ‘walk-road’ respectively. (All Chinese data in this paper are drawn from Mandarin.) The observational generalization is that in all these VO combinations, either the verbal part is “light” or “empty” in the sense that it does not seem to contribute very much to the meaning of the combination as a whole (like in the *hit/do (a) yawn* example), or the object does not contribute much to the meaning: *zou* and *chi* already mean ‘walk’ and ‘eat’ respectively, and semantically, *lu* ‘road’ and *fan* ‘rice’ do not add anything. So either the verb or the object is a syntactic dummy. In this paper, we concentrate on the latter group of VO combinations, and explore some issues related to the dummy objects, both from a Chinese and from a comparative angle, trying to explain some of the differences between Chinese and English. The VO combinations with dummy verbs will only be mentioned briefly in section 3.

I. The first question we would like to address is: Why do verbs like *chi-fan* ‘eat’ in Mandarin need a non-referential object in their unspecified object reading, whereas their counterpart in English does not (as is illustrated in (1))?

- (1) a. wo bu ai chi-*(fan)
I not like eat-rice
‘I don’t like to eat’
b. John doesn’t like to eat

Eat — *chi-fan* ‘eat-rice’ is one of a large group of verbs which behave similarly in both languages; more examples are given in (2) (see Keyser & Roeper 1992, Levin 1993):

(2) <i>English</i>	<i>Mandarin</i>
drink	he-dongxi 'drink-thing = drink'
eat	chi-fan 'eat-rice = eat'
read	kan-shu 'read-book = read'
sing	chang-ge 'sing-song = sing'
study	nian-shu 'study-book = study'
speak	shuo-hua 'speak-speech = speak'
teach	jjiao-shu 'teach-book = teach'
write	xie-zi 'write-character = write'

II. As noted above, verbs like English *walk* have a VO counterpart in Chinese: *zou-lu* 'walk-road'. Here are some more examples:

(3) <i>English</i>	<i>Mandarin</i>
drive	kai-che 'drive-car = drive'
move	ban-jia 'move-house = move'
run	pao-bu 'run-step = run'
skate	liu-bing 'slide-ice = skate'
walk	zou-lu 'walk-road = walk'

The second question we would like to address is: Why would Chinese have these objects while English does not?

A related issue we will consider concerns the fact that, in Chinese, there is a very small class of intransitive verbs, which do not consist of a VO combination; as far as we have been able to find out, this class is constituted by two verbs: *xiao* 'laugh' and *ku* 'cry'. Why is it the case that verbs like *xiao* 'laugh' do not have an object, while verbs like *pao-bu* 'run' do, as is illustrated in (4)?

(4) a.	ta	xihuan	xiao	b.	ta	xihuan	pao-(bu)
	he	like	laugh		he	like	run-step
		'he likes to laugh'				'he likes to run'	

III. The third question is related to similarities and differences between verbs such as *chi* 'eat' on the one hand and verbs like *pao* 'run' on the other. They are **similar** in that both types of verb have an object in the intransitive/unspecified object reading. They are **different**, first, in that in this reading *chi* 'eat' requires the object *fan* 'rice' to be there, while *bu* 'step' is optional with *pao* 'run' (as one can see in (4b)). Secondly, in other contexts, if they occur without an overt object, the interpretation is different: as is illustrated in (5a), when *chi* 'eat' is used without an overt object, the interpretation involves a definite object inter-

pretation (*pro*); (5a) cannot mean that Zhang San “had a meal”. Instead, it conveys that there was something specific, known from context and that is what he ate. In (5b), on the other hand, we see that when *pao* is used without an object, we get a totally different interpretation (i.e., ergative).

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|--------|-----------|--------------------|----|-----------|------------------------------|
| (5) a. | Zhang San | chi-le | b. | Zhang San | pao-le |
| | Zhang San | ate-PRF | | Zhang San | run-PRF |
| | | ‘Zhang San ate it’ | | | ‘Zhang San ran away/escaped’ |

This pattern is typical of the whole class of these verbs. The other verbal elements mentioned in (3) also shift to ergativity (if this is the right way of characterizing it), as the following sentences show:

- | | | | | | | |
|--------|-------|-------------------------|-----------|-------|---------------------|----------|
| (6) a. | tamen | pao-le | c. | zei | liu le | |
| | they | run-PRF | | thief | slide-PRF | |
| | | ‘they ran away/escaped’ | | | ‘the thief is gone’ | |
| | b. | huoche | kai-le | d. | ta | ban-le |
| | | train | drive-PRF | | he | move-PRF |
| | | ‘the train is gone’ | | | ‘he moved away’ | |

The question then is: Why do *chi* ‘eat’ and *pao* ‘run’, which are both verbs with an object in their intransitive/unspecified object reading, behave so differently in these two respects: (a) in the unspecified object reading, the object is optional for *pao* but not for *eat*; (b) if the object is missing, *chi* gets a *pro*-object reading, *pao* shifts to ergativity?

2. Other languages

The data in this section show that we are not dealing with a Chinese peculiarity or an isolated phenomenon. In fact, Chinese is by no means exceptional in having these VO combinations as counterparts of intransitive (uses of) verbs in languages like English. The literature on West-African languages, for instance, refers often to what we called dummy verbs (referred to as “pro-verbs” in this literature) and dummy objects (“inherent complements”), in addition, of course, to the abundance of cognate objects some of these languages display. Here are two “dummy object” examples from Mundang (spoken in Cameroon and Chad) (from Elders, in progress):

- | | | | | | |
|--------|--------|----------|----|-------|---------|
| (7) a. | rù-n | sálf | b. | žòò | záá |
| | attack | war | | vomit | mouth |
| | | ‘attack’ | | | ‘vomit’ |

- (10) a. *xiao* 'laugh'
- VP
 / \
 V NP
 | |
 Ø N
 |
xiao
- b. *pao-bu* 'run'
- VP
 / \
 V NP
 | |
pao N
 |
bu

the dummy are rare. In many instances, these combinations are of the other VO class mentioned in section 1, in which the verb is the dummy (exemplified in (11a)). In the remaining cases, neither V nor O seems a dummy, (11b).

- (11) English Mandarin
- a. hiccup da-ge 'hit/make hiccup = hiccup'
 sneeze da-penti 'hit/make sneeze = sneeze'
 snore da-hulu 'hit/make snore = snore'
- b. cycle qi-che 'ride-cart = cycle'
 rain xia-yu 'fall-rain = rain'
 shower xi-zao 'wash-bath = shower'

We suggest that the class of Chinese words in (11a) has the underlying denominal structure of (10a). The difference with their English counterparts is that no incorporation takes place; instead, the V slot is filled by a dummy. The derivation of *xiao* 'laugh' and *ku* 'cry' is not clear: either (a) they are like their English counterparts (the object noun incorporates into V); or (b) the object does not incorporate and the V slot is filled with an empty V. Whatever the solution, it is unclear why *xiao* 'laugh' and *ku* 'cry' differ from the Chinese verbs in (11a).

As to the "full object structure", we have the following reasons for claiming that dummy objects like *bu* 'step' in *pao-bu* 'run' (as well as *fan* 'rice' in *chi-fan* 'eat') are syntactically active objects (additional arguments based on English follow). First, dummy objects are in complementary distribution with other objects.

- (12) chi (*fan) pingguo (*fan)
 eat rice apple rice
- (13) a. pao shang-dian
 run shop
 'run from shop to shop'
- b. *pao bu shang-dian/ *pao shang-dian bu
 run step shop/ run shop step

- (14) a. pao cai-liao
 run material
 'run about collecting material or making inquiries'
- b. *pao bu cai-liao/ *pao cai-liao bu
 run step material/ run material step

Chi 'eat' can, of course, have all sorts of objects and these objects never cooccur with *fan* 'rice'. Similarly, a verb like *pao* 'run' can have a small number of un-specific objects, as is illustrated in the examples above. Crucially, these objects and *bu* 'step' never cooccur. The complementary distribution suggests that they occupy the same slot.

The second argument concerns the behavior of *bu* in the context of postverbal quantitative expressions like *yi-xia* 'a bit'. *Yi-xia* 'a bit' occurs between the verb and its object, regardless of whether it is definite or indefinite. Vis à vis *yi-xia* dummy objects like *bu* 'step' behave exactly like other objects:

- (15) a. pao yi-xia bu
 run a-bit step
 'run a bit'
- b. kan yi-xia shu
 read a-bit book
 'read a bit'
- c. kan yi-xia zhei-ben shu
 read a-bit this-CL book
 'read this book a bit'

Finally, dummy objects can be modified, especially by time expressions (Sybesma 1992).

- (16) a. ta pao-le yi-ge xiaoshi de bu
 he run-PRF one-CL hour DE step
 'he ran/jogged for an hour'
- b. ta kan-le liang tian de shu
 he read-PRF two day DE book
 'he read for two days'

This gives us enough reason to see *bu* 'step' as a syntactically active object and postulate (10b) as the underlying structure for the *run/pao-bu* class of unergatives.

Differences between *laugh* and *run* in English confirm our reasoning that there are two types of unergatives. It is well known that *laugh* and *run* in English differ with respect to the question as to what kind of objects they allow for (see Levin 1993). As Levin shows, verbs like *laugh* only allow for two types of

objects: (a) cognate objects, more specifically, zero-related copies (as is illustrated in (17a)); and (b) so-called reaction objects (the use of which is very limited), see (17b).

- (17) a. John smiled a charming smile
 2. John smiled his thanks

Run and similar verbs, on the other hand, do not have cognate objects, as is noted by Levin, see (18a). They may have causative objects (see (18b); *run a company*, *run a bath* are probably causatives too), as well as what we would like to call “full” (or “regular”) objects, exemplified in (18c).

- (18) a. *Bill ran a difficult run
 2. Bill ran the rats through the maze
 c. run an errand, run a test, run the fields, run the streets, run drugs, run a stop sign

We propose, then, that English *run* is like Mandarin *pao-bu*: it has the underlying structure in (10b), the full object structure.

However, if *run* is like *pao-bu* ‘run-step’, the question that comes up immediately is: Where is the English *bu* ‘step’?

We think that *run* and *pao-bu* differ from one another with regard to the unspecified object for the same reason why unspecified *eat* is different from *chi-fan*. These four verbs all have non-referential objects. The difference is that English uses empty nominals, as was proposed for *eat* by Keyser & Roeper (1992), whereas Chinese uses overt dummies.

This answer begs the next question, viz., Why can English make use of empty nominals for non-referential objects, while Chinese has to resort to overt dummies? We suggest that this is related to the fact that Chinese allows for empty objects with definite reference (Huang 1984, Lu 1994), while English does not. We refer to this empty object as *pro* to express that it refers to something specific or definite. Chinese, then, has object *pro*, while English does not. We assume further, that if a language has object *pro*, there can be no non-referential empty elements in object position: empty objects are necessarily *pro*. In such a language, non-referential objects are expressed by an overt dummy nominal.

- (19) If a language has object *pro* it does not have empty objects which are not referential. Such non-referential objects are expressed by an overt dummy nominal.

If this claim is correct, it explains why Chinese needs to resort to overt nominals to express non-referential objects (it has object *pro*). It also explains why English does not need to use overt dummies (it does not have object *pro*).

Note, however, that the fact that English *run* can never be *run-step*, means that English not only doesn't need overt dummies, it cannot even have them. This may be traced back to (other) fundamental differences between English and Chinese. Whatever the nature of this fundamental difference, let us, for ease of reference formulate the following observation:

(20) English nouns cannot be used as overt dummies, while Chinese nouns can.

4. Summary

The proposal as developed so far answers the questions in I and II. We proposed that there are two different types of unergative verbs, ascribing different underlying structures to *xiao* 'laugh' and *pao-bu* 'run-step = run' (see (10)). We extended our this proposal to English, claiming that *run* falls in the same category as Mandarin *pao-bu* 'run-step = run'. Consequently, English *run* has an empty non-referential object. In this respect, we argued, it is exactly like English *eat*, which, in its unspecified object use, also has an empty non-referential object. The reason why English has empty nominals in the object position of verbs like *eat* and *run* while Chinese uses overt dummy objects (*chi-fan* 'eat-rice = eat', *pao-bu* 'run-step = run') was said to be related (a) to the fact that Chinese has empty objects which are referential and specific (*pro*) in conjunction with (19) which states that if a language has object *pro*, it cannot have non-referential empty objects; (b) to the observation in (20).

5. The remaining questions: *pao* 'run' without *bu* 'step'

The remaining questions have to do with differences between *pao* 'run' and *chi* 'eat' in contexts in which they do not have an overt object. As we saw, when *chi* 'eat' has no overt object, the object is interpreted as definite (*pro*). *Pao* 'run' is different: depending on the context, *pao* 'run' without *bu* 'step' either still means just 'run' (these are the cases of which we said above that *bu* is optional) or it means 'escape/run away'. (We are not entirely sure as to the exact nature of the contexts in which *bu* is optional, all we can say is that modality plays a role.)

Let us start with the question why *bu* 'step' is optional whereas *fan* 'rice' is not. Or, phrased differently: Why can *pao* 'run' without *bu* 'step' still mean just 'run' while *chi* 'eat' without *fan* 'rice' cannot mean 'eat (something or other)'? The fact that *pao* without an overt object still means 'run' (instead of 'run

something specific’) forces us to conclude that, apparently, *pao* can use an empty nominal just like English *eat* and *run*. This, in turn, leads to the conclusion that Chinese allows two types of dummies: overt ones and empty ones. This obviously goes against (19) — thus constituting a problem for us.

This problem can be stated as follows: If *pao* can occur with an empty dummy, why can’t *chi* ‘eat’ cooccur with an empty dummy? We suggest that the difference between *pao* ‘run’ and *chi* ‘eat’ can be explained in a way similar to how we explained the difference between Chinese *chi-fan* ‘eat’ and *pao-bu* ‘run’ on the one hand and their English counterparts without the overt dummies on the other. *Pao* ‘run’ is different from *chi* ‘eat’ in that it only takes non-referential objects (see the examples in (13) and (14)) — hence, *pro* is not a possible object for *pao*. As a result, with *pao*, an empty object cannot be *pro* and this opens up the possibility of having a non-referential, empty dummy. In contrast, *chi* ‘eat’ does allow for referential objects. And, according to our reasoning, because if *pro* is available for an object position, that object position, if empty, can only be *pro*, *chi* ‘eat’ can never have an empty nominal dummy.

As indicated above, the difference between *pao* and *chi* in Chinese is the same as the difference we saw between English and Chinese on a bigger scale: if it is possible to have an empty object with a definite interpretation (*pro*), then empty objects can never be anything else and non-referential objects must be expressed with overt nominal dummies. Obviously, the claim in (19) must then be rephrased into (21), dropping the mention of the language:

- (21) If an object position allows for *pro*, then that position cannot be occupied by non-referential empty objects. Such non-referential objects are expressed by an overt dummy nominal.

We now understand why *pao* ‘run’, unlike *chi* ‘eat’, can have an non-referential null object (it cannot have a *pro* object); in this respect it is just like English *eat* and *run*. There is a difference too: *pao* optionally allows for an overt dummy while English *eat* and *run* cannot. This is related to the observation in (20).

6. Ergativity shift

The final question to be addressed concerns the shift to ergativity for the verbs of the *pao* class. The explanation consists of two parts. First, we would like to refer to the fact that in Chinese, all [NP-verb-result] phrases are ergative. Consider the following sentences:

- (22) a. zhe-dao cai shao-hu-le
 this-CL dish cook-burnt-PRF
 ‘this dish got burnt’
 b. zhe-shuang xie pao-huai-le
 this-CL shoerun-broken-PRF
 ‘this pair of shoes got broken’

It has been argued (Cheng 1989, Mulder and Sybesma 1992) that the NP in sentence initial position in these sentences is not a topicalized NP. The basic structure ascribed to sentences like these in Sybesma (1992) is the following:

- (23) V [result denoting XP NP X⁰-le]
 (cook) (dish) (burnt)

The matrix verb (*cook* in (23)) only has an internal complement, the result denoting small clause (*dish burnt*) (Hoekstra 1988). The NP (*dish*), the subject of the small clause, moves to the matrix subject position, most likely for reasons of case. In this sense, complex VPs like the ones in (22) are ergative.

Secondly, Hoekstra (1990a) argues that the internal argument of ergative verbs always takes the form of a resultative small clause, consisting of a subject NP and a result denoting predicate (as in (23)). Furthermore, Hoekstra (1990a,b) argues that with verbs of movement and verbs of caused movement (like *hit*), if there is no overtly expressed result denoting predicate, there is an empty predicate, typically meaning ‘away’: *hit the ball* typically means *hit the ball away*. The same applies to ergative verbs of motion: a sentence with *pao* meaning ‘escape/run away’, like (24a), has the underlying structure as in (24b):

- (24) a. tamen pao-le
 they run-PRF
 ‘they ran away/escaped’
 b. NP_i pao [Result XP t_i X⁰_{empty} ‘away’]

Strictly speaking, there is no difference with *chi* ‘eat’ in this respect. Although *chi* ‘eat’ is not a directional verb, it, too, leads to a typical result which can be characterized as ‘away’, viz., *up*:

- (25) a. tudou quan chi-le
 potatoes all eat-PRF
 ‘the potatoes got all eaten up’
 b. NP_i chi [Result XP t_i X⁰_{empty} ‘away’]

The sentence in (25a) is also an ergative sentence, the matrix V *chi* ‘eat’ having a complement in the form of a resultative small clause with an empty predicate

meaning *up*, as indicated in (25b) (see also Sybesma & Vanden Wyngaerd 1997).

We may conclude from this that the difference between *chi* ‘eat’ and *pao* ‘run’ as noted in the context of question III is not a real difference and the problem we noted turns out to be a non-problem. In view of the above, the sentences in (5), repeated here, do not constitute a minimal pair since the subject in (5a) is the external argument while the subject in (5b) is a derived subject, really the subject of the result denoting small clause predicate (with the empty head).

- (5) a. Zhang San chi-le
 Zhang San eat-PRF
 ‘Zhang San ate it’
 b. Zhang San pao-le
 Zhang San run-PRF
 ‘Zhang San ran away/escaped’

If we take real minimal pairs, for instance (24) and (25), we see that there is no difference: both cases confirm the statement that in Chinese phrases of the form [NP V result-XP] are ergative. We can fill in the empty X^0 and get the minimal pair in (26) ((26b) being the same as (22b)). In short, there is no real difference between *chi* ‘eat’ and *pao* ‘run’ that needs to be explained.

- (26) a. zhe-dao cai chi-guang-le
 this-CL dish eat-up-PRF
 ‘this dish got eaten up’
 b. zhe-shuang xie pao-huai-le
 this-CL shoe run-broken-PRF
 ‘this pair of shoes got broken’

7. Conclusion

We conclude that there are two types of unergative verbs, the ones with the “denominal structure” and those with the “full object structure”, as represented in (10). The reason why Chinese verbs like *chi-fan* ‘eat-rice = eat’ have an obligatory overt dummy object in the unspecified object reading is due to the claim in (21) which states that overt dummies obligatorily show up only if it is impossible to use an empty element with a non-referential interpretation in that position. The fact that English does not have overt dummies is explained by the same principle, which for English has the consequence that it does not need to use overt dummies, in conjunction with the observation in (20) which states that English

nouns are such that they cannot be used as dummies. The fact that the object *bu* 'step' in Mandarin *pao-bu* 'run step = run' is optional is also due to the combination of (21) and (20): according to the former it does not have to use an overt dummy and according to the latter it is free to do so.

Phrased differently, we claim that if a position can have a referential null object, we will not find a non-referential null object in that position (which gives us all the facts related to *chi-fan* 'eat'); if we cannot have a referential null object in a position, we may find a non-referential null object (which, in conjunction with (20), gives us *eat*, *run* and *pao(-bu)* 'run').

Acknowledgements

We would like to thank Stefan Elders for generously sharing his West-African expertise with us and an anonymous reviewer for helpful comments. Sybesma's part of the research reported here was financially supported by the Foundation for Language, Speech and Logic, which is in turn financed by the Dutch Organization for Scientific Research. The financial support is gratefully acknowledged.

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