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Silent Nouns in English, Chinese and Naxi

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Abstract

This paper argues that the lexical item *grand* in DPs expressing the notion of "thousand" in colloquial American English is best considered to be a modifier of the silent noun *BUCKS* appearing after a silent *THOUSAND*. Certain facts concerning locality, the pronunciation of silent expressions and coordination indicate that *grand* cannot be part of a PP containing the silent expressions *IN* and *TOTAL*. Numerals can almost never be left out, a fact that has little bearing on silent nouns. The acquisition of silent expressions is unproblematic, insofar as their distributions can be deduced from that of the overt expressions to which they are related.

Keywords

adjectives, classifiers, coordination, locality, numerals, pronunciation and acquisition of silence

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1. Introduction

In an inspiring article, Kayne (2012) suggests that the syntax of *grand* in colloquial American English is essentially related to that of adjectives, in particular, with the PP *in grand total*.

Thus, the sentence in (1a) is related to the sentence in (1b) in that it has silent expressions, in capital letters, that are in fact audible in the sentence to which it is related:

(1) a. It'll cost you ten THOUSAND BUCKS IN grand TOTAL.
b. It'll cost you ten thousand bucks in grand total.

Kayne gives several syntactic arguments showing that *grand* is not a variant of *thousand*. For reason of space I will not repeat them here.

In this squib I would like to consider the analysis in the light of some other facts. To the extent it does not readily account for certain problems with the PP *IN grand TOTAL*, I propose a minor change to the account in order to bring these facts under its purview. In connection with the issue of whether or how the noun associated with the preceding or following numeral can be left silent, some empirical facts in Mandarin Chinese and Naxi (also spelled as Nahsi), a Tibeto-Burman language (Bradley 1997) spoken in Yunnan, China, appear to suggest that the numeral is associated with the classifier rather than with the noun. Lastly, I discuss the issue of how knowledge of silent nouns can be acquired.

2. Locality

Kayne does not specify the structural relation between the DP having the numeral and the associated noun *THOUSAND BUCKS* on the one hand and the PP *IN grand TOTAL* on the other. Nor does he specify the structural condition under which the silent expressions are sanctioned. Several facts indicate that the two are subject to some locality constraint.

The DP *thousand bucks* may or may not be contiguous with the PP *in grand total*, as the examples in (2)-(5) show:

(2) a. How many thousand bucks in (grand) total did you pay for that trip?
b. How many thousand bucks did you pay in (grand) total for that trip?

(3) a. The two thousand bucks in (grand) total that they paid for that trip.
b. The two thousand bucks that they paid in (grand) total for that trip.

(4) a. They credited two thousand bucks in (grand) total to his account.
b. They credited two thousand bucks to his account in (grand) total.

(5) a. Two thousand bucks in (grand) total was credited to his account.
b. Two thousand bucks was credited in (grand) total to his account.

In sharp contrast, the PP *IN grand TOTAL* must be contiguous with the DP containing the silent expression *THOUSAND BUCKS*:

(6) a. How many THOUSAND BUCKS IN grand TOTAL did you pay for that house?
b. *How many THOUSAND BUCKS did you pay for that house IN grand TOTAL?

(7) a. The two THOUSAND BUCKS IN grand TOTAL that they paid for that trip.
b. *The two THOUSAND BUCKS that they paid IN grand TOTAL for that trip.

(8) a. They credited two THOUSAND BUCKS IN grand TOTAL to his account.
b. *They credited two THOUSAND BUCKS to his account IN grand TOTAL.

(9) a. Two THOUSAND BUCKS IN grand TOTAL was credited to his account.
b. *Two THOUSAND BUCKS was credited to his account IN grand TOTAL.

The contrast between the b-examples in (2)-(5) with the PP *in grand total* and the b-examples in (6)-(9) with the PP *IN grand TOTAL* indicates that *grand* in the a-examples in (6)-(9) is not on the same footing as *grand* in the a-examples in (2)-(5), i.e., it is not part of the PP containing the silent *IN* and *TOTAL*.

3. Pronunciation of silence

Other facts show that more is at stake than contiguity. While the a-examples in (10)-(15), with the silent expressions, sound perfectly fine, the b-examples where the silent expressions are pronounced seem much less good, if grammatical at all:

(10) a. How many THOUSAND BUCKS IN grand TOTAL in (grand) total did you pay for that trip?
b. *?How many thousand bucks in grand total in (grand) total did you pay for that trip?

(11) a. The two THOUSAND BUCKS IN grand TOTAL in (grand) total that they paid for that trip.
b. *?The two thousand bucks in grand total in (grand) total that they paid for that trip.

(12) a. They credited two THOUSAND BUCKS IN grand TOTAL in (grand) total to his account.
b. *?They credited two thousand bucks in grand total in (grand) total to his account.

(13) a. Two THOUSAND BUCKS IN grand TOTAL in (grand) total to his account.
b. *?Two thousand bucks in grand total in (grand) total to his account.

(14) a. They paid a grand total of two THOUSAND BUCKS IN grand TOTAL.
b. *?They paid a grand total of two thousand bucks in grand total.

(15) a. A grand total of two THOUSAND BUCKS IN grand TOTAL was credited to his account.
b. *?A grand total of two thousand bucks in grand total was credited to his account.

It cannot be that the b-examples in (10)-(15) sound odd because of the two

occurrences of *total*, for they appear in the grammatical a-examples as well.

The oddness of these examples may well be due to the fact that adjuncts of the same type, much like arguments, can only appear once per clause. It is the same reason why the examples in (16) are not good:[1]

(16) a. John arrived on Monday (*on Monday).
b. John spoke politely to Mary (*in a polite manner).
c. John totally (*totally) ignored the warning.
d. John put the book on the table (*on the table).
e. John painted the house red (*red).

The examples in (17) are of special interest, for the PP *in (grand) total* apparently co-occurs with the PP *IN grand TOTAL* in the same clause:

(17) a. How many THOUSAND BUCKS IN grand TOTAL did you pay in (grand) total for that trip?
b. The two THOUSAND BUCKS IN grand TOTAL that they paid in (grand) total for that trip.
c. They credited two THOUSAND BUCKS IN grand TOTAL to his account in (grand) total.
d. Two THOUSAND BUCKS IN grand TOTAL was credited to his account in (grand) total.

Given that in general no more than one adverbial of the same type, including PPs, may appear in the same clause, it is doubtful that the examples in (17) contain both the PP *IN grand TOTAL* and the PP *in grand total*, these being of the same type. The grammaticality of these examples also shows that the two occurrences of *total* do not result in redundancy. If this is correct, then the first *grand* in (17) is most likely not part of a PP with silent *IN* and *TOTAL*.

4. Coordination

Syntactic locality does not seem to suffice to explain why the example in (18a) with the silent expressions is fine, while that in (18b) is most probably ungrammatical with the meaning of the example in (18a) to which it is presumably related:[2]

(18) a. They paid [$_{DP}$ [$_{DP}$ two THOUSAND BUCKS IN grand TOTAL] and [$_{DP}$ eight hundred bucks]] for that trip.
b. *They paid [$_{DP}$ [$_{DP}$ two thousand bucks in grand total] and [$_{DP}$ eight hundred bucks]] for that trip.

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1 Examples (16c,e) with two occurrences of *totally* or *red* may be possible for emphatic effect in colloquial speech, but the same cannot be said of the b-examples in (10)-(15) with two instances of *total*.

2 The example in (18b) seems fine on the reading where *for that trip* is part of the second conjunct. That is, they paid a grand total of two thousand dollars for something unspecified and eight hundred dollars for that trip.

In (18a) the second conjunct is semantically in the scope of *IN grand TOTAL*, i.e., they paid for that trip a grand total of two thousand and eight hundred dollars. If scope correlates with structural c-command, then it is very unclear how the second conjunct can fall under the scope of *IN grand TOTAL* in the first conjunct without being c-commanded by it.

A similar problem arises in the examples in (19) even though *IN grand TOTAL* is superficially contiguous with *THOUSAND BUCKS*:

(19) a. They paid [$_{DP}$ [$_{DP}$ two million] and [$_{DP}$ three hundred THOUSAND BUCKS]] IN grand TOTAL for that mansion.
b. They paid [$_{DP}$ [$_{DP}$ two million] and [$_{DP}$ three hundred thousand bucks]] in grand total for that mansion.

Both sentences in (19) are fine, regardless of whether the silent expressions are pronounced or not. Semantically, the PP *in grand total* in (19b) scopes over the conjoined DP. It is therefore conceivable that the PP is syntactically associated with the conjoined DP *two million and three hundred thousand bucks* as a whole. Given that the sentence in (19b) has the same interpretation as that in (19a), it is but natural to take the PP *IN grand TOTAL* in (19a) to be structurally on par with the PP *in grand total* in (19b), i.e., they stand in the same structural relation with the DP *two million and three hundred THOUSAND BUCKS*. After all, when the silent expressions in (19a) are pronounced the result is the sentence in (19b).

A slightly formal way to state the condition licensing the silent *THOUSAND BUCKS* is to say that the PP *IN grand TOTAL* licenses *THOUSAND BUCKS* if the latter is part of a DP appearing to the immediate left of the former. The constraint is admittedly not sufficiently precise, e.g., what is "part of" and "immediate left"?, but the intuitive idea behind it seems clear enough. Nevertheless, the problem with (19a) is actually not that straightforward.

The examples in (20) are much like those in (19), except that *THOUSAND BUCKS* is in the left conjunct:

(20) a. *They paid [$_{DP}$ [$_{DP}$ two THOUSAND BUCKS] and [$_{DP}$ eight hundred bucks]] IN grand TOTAL for that trip.
b. They brought in [$_{DP}$ [$_{DP}$ two thousand beds] and [$_{DP}$ eight hundred tents]] in grand total for the refugees.

If *IN grand TOTAL* can be associated with the conjoined DP in (19a) and license the silent *THOUSAND BUCKS* in the right conjunct, then the same should be applicable to (20a) as well. *THOUSAND BUCKS* in the left conjunct in (20a) should be licensed by the PP *IN grand TOTAL*, for it bears the same structural relation to the conjoined DP just as it does in (19a). In (20b) the PP *in grand total* has scope over both conjuncts, i.e., the total number of goods they brought in is two thousand beds and eight hundred tents. The PP *IN grand TOTAL* in (20a), apparently in the

same position, should therefore be able to scope over both conjuncts and license the silent *THOUSAND BUCKS*.

5. *Grand* as an adjective

The insight in Kayne's analysis of *grand* is that it relates the occurrence of *grand* in DP expressing the notion of "thousand" to the syntax of *grand* elsewhere, in particular, to the PP *in grand total*. We should bear this point in mind when exploring an alternative account that does not have the problems discussed above. In particular, we should exclude from consideration analyses in which *grand* is simply a special lexical item, e.g., it is much like *thousand* but does not have the properties of *thousand*, as Kayne discusses.

A possibility that comes to mind is that *grand* in DP expressing the notion of "thousand" is an adjective, as Kayne suggests, but it modifies a silent noun *BUCKS*, not *TOTAL*, and occurs after the silent *THOUSAND* as in (21a),[3] much as it appears between the overt *thousand* and *palaces* in (21b):

(21) a. two THOUSAND grand BUCKS
b. two thousand grand palaces

That is, silent *THOUSAND* and *BUCKS* are licensed when they flank two sides of *grand*.

Along these lines, the sentence in (22a) expressing the same idea as that in (22b) basically has the same lexical items in the same order as the sentence in (22b), except for the presence of *grand* (example (22b) is hence not the result of pronouncing the silent expressions in (22a)):[4]

(22) a. It'll cost you ten THOUSAND grand BUCKS.
b. It'll cost you ten thousand bucks.

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[3] *Thousand* is noun-like in that it takes plural morphology, though not when it is followed by an overt noun:

(i) a. The thousands that turned out at the rally.
b. The thousand/*thousands people that turned out at the rally.

Given that *grand* may not precede the overt *thousand* in (ii), there is no reason to take *grand* to precede the silent *THOUSAND* in (21b):

(ii) *two grand thousand palaces

[4] Kayne (2012: 74, 76) rejects the underlying structure in (ia) on the ground that example (ib) is ungrammatical in contrast with the desirable example in (ic):

(i) a. It'll cost you a grand TOTAL THOUSAND BUCKS ...
b. *It'll cost you grand TOTAL ten THOUSAND BUCKS ...
c. It'll cost you ten grand.

The contrast between (ib) and (ic) is expected in the proposal in the text, (ic) being underlyingly as in (22a). I thank a reviewer for pointing out the similarity between (ia) and a structure I had in an earlier version of the paper.

This view explains why the b-examples in (6)-(9), repeated in (23), are impossible:

(23) a. *How many THOUSAND BUCKS did you pay for that house grand? (=(6b))
b. *The two THOUSAND BUCKS that they paid grand for that trip. (=(7b))
c. *They credited two THOUSAND BUCKS to his account grand. (=(8b))
d. *Two THOUSAND BUCKS was credited to his account grand. (=(9b))

In (23), the silent *THOUSAND* and *BUCKS* fail to be licensed, for they do not flank *grand* on two sides. These examples are also ruled out, because *grand*, as an adjective, is illicit in this position. Adjectives generally occur in either predicate position (including secondary predicates) or pre-nominal position. But it is in neither position in (23).

The contrasts in (10)-(15) are due to the two *grand*'s being in different phrases. In the a-examples, the first *grand* occurs between *THOUSAND* and *BUCKS* that are part of a DP, while the second *grand* is in a PP, as in (24):

(24) a. How many THOUSAND grand BUCKS in (grand) total did you pay for that trip?
b. The two THOUSAND grand BUCKS in (grand) total that they paid for that trip.
c. They credited two THOUSAND grand BUCKS in (grand) total to his account.
d. Two THOUSAND grand BUCKS in (grand) total was credited to his account.
e. They paid a grand total of two THOUSAND grand BUCKS. (=(14b))
f. A grand total of two THOUSAND grand BUCKS was credited to his account. (=(15b))

On the other hand, in the b-examples the two *grand*'s are in two PPs *in grand total* that are of the same type. These are excluded, since a particular type of adverbial, including PPs, cannot occur more than once in the same clause (see the discussion of (16)).

The non-contiguous co-occurrence of *grand* and the PP *in (grand) total* in (17) is possible because the PP can be independently generated in that position, regardless of the presence of the PP *IN grand TOTAL* or *THOUSAND BUCKS*:

(25) a. How much did you pay in (grand) total for that trip?
b. The two thousand dollars that they paid in (grand) total for that trip.
c. They credited five hundred bucks to his account in (grand) total.
d. Five hundred dollars was credited to his account in (grand) total.

The surface forms of the examples in (17) are thus underlyingly as in (26):

(26) a. How many THOUSAND grand BUCKS did you pay in (grand) total for that trip?
b. The two THOUSAND grand BUCKS that they paid in (grand) total for that trip.
c. They credited two THOUSAND grand BUCKS to his account in (grand) total.
d. Two THOUSAND grand BUCKS was credited to his account in (grand) total.

The problems with coordination do not arise. The examples in (18a) and (19a) are in fact underlyingly as in (27):

(27) a. They paid two THOUSAND grand BUCKS and eight hundred bucks for that trip.
b. They paid two million and three hundred THOUSAND grand BUCKS for that mansion.

In these examples, *THOUSAND BUCKS* is licensed by an intervening *grand*.

The example in (20a) is ungrammatical, for the same reason that those in (23) are. In its underlying structure in (28), *THOUSAND* and *BUCKS* do not flank two sides of *grand* and hence are not licensed. Moreover, not being in a pre-nominal or predicate position, *grand* is also illicit:

(28) *They paid two THOUSAND BUCKS and eight hundred bucks grand for that trip.

The alternative I propose has the virtue of keeping Kayne's insight that *grand* in DPs expressing the notion of "thousand" is essentially an adjective, its syntactic distribution being like that of other adjectives. The contrast in (29c) is just the same as those in (29a,b), for adjectives do not take plural morphology in English:

(29) a. two big/*bigs cars
b. two thousand grand/*grands palaces
c. ten THOUSAND grand/*grands BUCKS

The position in which *grand* modifies the silent *BUCKS* in (29c) is just the same as that in (29b) where it modifies an overt noun.

My account nevertheless differs from Kayne's with respect to the relation between *grand* and the silent *THOUSAND BUCKS*. In my analysis, *grand* is not part of the PP containing *IN* and *TOTAL* but occurs between *THOUSAND* and *BUCKS*. More significantly, *THOUSAND BUCKS* can never be pronounced when *grand* occurs between them:

(30) a. It'll cost you ten THOUSAND grand BUCKS. (=(22a))
b. *It'll cost you ten thousand grand bucks. (cf. (22b))

In Kayne's analysis, *THOUSAND BUCKS* can sometimes be pronounced, e.g., in (1a) (to yield (1b)) but not in (10b). It is precisely because *THOUSAND BUCKS* as well as *IN* and *TOTAL* can sometimes be pronounced with *grand* that the idea that *grand* is related to these silent expressions has empirical support.

The obligatory non-pronunciation of *THOUSAND BUCKS* in (31a) may at first glance appear problematic, but not more than the obligatory non-pronunciation of *THOUSAND BUCKS* when *IN* and *TOTAL* following it are silent (see (31b) vs (31c)):

(31) a. It'll cost you ten thousand bucks in grand total.
b. It'll cost you ten THOUSAND BUCKS IN grand TOTAL.
c. *It'll cost you ten thousand bucks IN grand TOTAL.
d. *It'll cost you ten THOUSAND BUCKS in grand total.

Similarly, in the account with the PP *IN grand TOTAL*, it must be explained why *IN* and *TOTAL* in the ungrammatical (31c) can be pronounced to yield the grammatical (31a), but those in the grammatical (31b) may not be pronounced, example (31d) being ungrammatical. In the alternative I propose, example (31d) is ruled out, since *THOUSAND BUCKS* not flanking two sides of *grand* is not licensed. Therefore, insofar as it need not explain why *IN* and *TOTAL* cannot be pronounced when *THOUSAND BUCKS* is silent (see (31d)), taking *grand* to intervene between *THOUSAND* and *BUCKS* rather than as part of the PP with *IN* and *TOTAL* has a little edge.[5]

As *grand* is an adjective in my analysis as much as it is Kayne's account, the facts accounted for by the latter are also covered by the former. Thus, Kayne attributes the contrasts in (32) to *grand* not being a numeral, in contrast with *thousand*:

(32) a. thousandth vs *grandth
b. ?a thousand-ish vs *?a grandish

The same reason can be given in my account as well.

6. Silent noun, the numeral and the classifier

Kayne (2012: 78) suggests that a constraint having the effect in (33) explains why it is not possible to understand (34a) to have the numeral *four* left out before *squibs*:[6]

(33) Numerals cannot be left silent unless their (following) associated noun is also left silent.

(34) a. Mary has written four papers, whereas John has only written squibs.
b. *Mary has four thousand dollars in her account, and John has thousand (dollars) in his.
c. Mary has written four papers, whereas John has written only three.

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[5] Taking *grand* to modify the silent *BUCKS* recalls the relation between *grand* and *total* in (i), examples from Kayne (2012), in which *total* cannot be left out:

(i) a. The grand *(total) is 437.
b. It'll cost you a grand *(total) of a thousand bucks just to get into the game.

As a reviewer pointed out, if *TOTAL* can sometimes be silent, e.g., in (31b), then it is not clear why it cannot be silent in (i). No such problem arises in analyses like mine, in which *grand* is not related to a silent *TOTAL*. A more general question remains, though, as to why there is a silent *BUCKS*, but not a silent *TOTAL*.

[6] It is not clear to me to what extent, in the analysis taking *grand* to be part of the PP *IN grand TOTAL*, the effect in (33) bears on the contrast in (i):

(i) a. You shouldn't be asking for thirty THOUSAND BUCKS IN grand TOTAL for that car.
b. *You shouldn't be asking for thirty grand bucks/dollars for that car.

As *IN grand TOTAL* follows *THOUSAND BUCKS* in (ia) and *grand* precedes *bucks* in (ib), the two cannot be related by pronouncing the silent *BUCKS* in (ia) to derive (ib). Thus, the account for the ungrammaticality of (ib) need not having any bearing on the effect in (33), i.e., the numeral *THOUSAND* is left silent while the noun *bucks/dollars* associated with it is pronounced.

The example in (34a) with the reading in which the number of squibs is four would have a silent *FOUR* as in (35a). The example in (34b), understood to have the same numeral in the second conjunct as that in the first conjunct, would have a silent *FOUR* as well, as in (35b):

(35) a. Mary has written four papers, whereas John has only written (*FOUR) squibs.
b. *Mary has four thousand dollars in her account, and John has FOUR thousand (dollars) in his.
c. Mary has written four papers, whereas John has written only three PAPERS.

From the perspective of (33), example (35a) is excluded, as the noun *squibs* after *FOUR* is not left silent. As the presence of *dollars* in (35b) makes no difference to the grammaticality of the example, what is illicit here is apparently the association of the silent numeral *FOUR* with the pronounced noun-like *thousand*. Example (35c) has little bearing on (33), as the numeral *three* is not left out.

The patterns in (34) recall those in Mandarin Chinese. Much like English, the numeral associated with a pronounced noun may not be left out. The sentence in (36a) cannot be understood to contain the silent numeral *SAN* 'three' in the second conjunct, for the associated noun *lunwen* 'thesis' is pronounced (abbreviations: Cl=classifier, Perf=perfective):

(36) a. *Zhangsan xie-le san pian wenzhang, Lisi xie-le SAN pian lunwen.
Zhangsan write-Perf three Cl essay Lisi write-Perf three Cl thesis
'Zhangsan wrote three essays, and Lisi wrote theses.'
b. *Zhangsan you san qian kuai qian, Lisi ye you SAN qian kuai qian.
Zhangsan have three thousand Cl money Lisi also have three thousand Cl money
'Zhangsan has three thousand dollars, and Lisi has thousand.'
c. Zhangsan xie-le san pian wenzhang, Lisi xie-le liang pian WENZHANG.
zhangsan write-Perf three Cl essay Lisi write-Perf two Cl essay
'Zhangsan wrote three essays, and Lisi wrote two.'

The ungrammaticality of example (36b) can be likened to that of (35b), for the silent numeral *SAN* 'three' is impossible in the presence of the associated noun *qian* 'money'.[7] Much like example (34c), that in (36c) with the silent *WENZHANG* 'essay' has little bearing on (33), for the numeral *liang* 'two' is pronounced. It thus

[7] One might argue that (36a) is ruled out because the classifier in Chinese DP usually requires a numeral in front of it. This explanation is not general enough to exclude cases where the classifier is absent (see the discussion around (46)-(48)).

seems that Mandarin Chinese is quite similar to English with respect to the effect in (33).

Kayne raises the question of whether languages in which numerals follow their associated noun work the same way as languages in which the numeral precedes. Naxi seems to work this way. In this language, the numeral follows the noun (He and Jiang 1985, He 1987):

(37) a. ɕi^{33} ndɯ^{33} kv^{55}
person one Cl
'one person'
b. tsuɑ^{33} ȵi^{33} ly^{33}
bed two Cl
'two beds'

With a clear antecedent, the noun associated with a numeral can be left out. Thus, the silent nouns (enclosed in square brackets) *ɕi^{33}* 'person' and *tsua^{33}* 'bed' in (38) are possible:

(38) a. ŋə^{31} ɕi^{33} ȵi^{33} kv^{55} ndø^{31}. [ɕi^{33}] ndɯ^{33} kv^{55}
I person two Cl see. person one Cl
sua^{31}, [ɕi^{33}] ndɯ^{33} kv^{55} ɕu^{31}.
tall person one Cl short
'I saw two persons. One is tall and one is short.'
b. ŋə^{33}gɯ^{31} tsuɑ^{33} lu^{33} tsu^{31} ha^{31} se^{31}. [tsuɑ^{33}] ȵi^{33}
we bed four Cl buy Perf bed two
tsu^{31} tʂʰʅ^{33} we^{55} tɕʰi^{33}.
Cl this place put
'We bought four beds. Two of them are put in this place.'

Silent nouns in Naxi in fact have a wider distribution than co-occurrence with a numeral. Much like those in Chinese, nouns with a modifier in Naxi can be left out (abbreviations: C=complementizer, Poss=possessor):[8]

(39) a. ŋə^{33} gə^{33} [tʰe^{33}ɣɯ^{33}]
I Poss book
'my book(s)'
b. ŋə^{31} sɯ^{55} gə^{33} [ɕi^{33}]
I know C person
'people who know me'

(40) a. wo de SHU
I Poss book
'my book(s)'

[8] It is quite possible that the morphemes *gə^{33}* in (39a,b) is the same, just as the morpheme *de* in (40a,b). This issue need to be resolved on independent grounds.

b. renshi wo de REN
know I C person
'people who know me'

It therefore comes as no surprise that the nouns in (38) can be left silent. Of course, the examples in (39)-(40) have no bearing on the effect in (33), there being no numeral.

As in English and Chinese, the numeral in Naxi cannot be left silent if the associated noun is pronounced. The example in (41a) cannot be understood to contain a silent numeral [sɯ^{33}] 'three' associated with the noun *lui^{55}ve^{31}* 'thesis' in the second conjunct, and the example in (41b) cannot be understood to contain a silent numeral [sɯ^{33}] 'three' and [tv^{31}] 'thousand' associated with the noun *tɕə^{55}* 'money' in the second conjunct, even though the same numeral is present in the first conjunct and can act as its antecedent:

(41) a. *ɑ^{55}lia^{13} tʰe^{33}ɤ^{33} sɯ^{55} pʰe^{33} mbər^{55} se^{31}, ɑ^{55}xua^{33} lui^{55}ve^{31}
Alian essay three Cl write Perf Ahua thesis
[sɯ^{55}] pʰe^{33} mbər^{55} se^{31}.
three Cl write Perf
'Alian wrote three essays, and Ahua wrote thesis.'

b. *ɑ^{55}lia^{13} tɕiə^{55} sɯ^{33} tv^{31} mbe^{31} ndʑy^{33}, ɑ^{55}xua^{33} la^{33}
Alian money three thousand Cl have Ahua also
tɕiə^{55} [sɯ^{33}] [tv^{31}] mbe^{31} ndʑy^{33}.
money three thousand Cl have
'Alian has three thousand dollars, and Ahua has three thousand.'

If this is correct, then it seems that the way the numeral can remain silent in Naxi is pretty much the same as that in English and Chinese, even though the numeral in Naxi follows and that in English and Chinese precedes the associated noun. It thus appears that regardless of its position relative to the associated noun, the numeral cannot be left out. That is, the parenthesized *following* in (33) can be removed.

Apart from the exclusion of a silent numeral being associated with a pronounced noun, the effect in (33) has little bearing on the case in which both the numeral and the associated noun are silent. The ungrammatical examples in (42) show that it is in fact not possible for both of them to be silent at the same time:[9]

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[9] Cantonese exceptionally allows the numeral *jat* 'one' or the demonstrative *go* 'that' associated with an overt noun in singular DPs to be silent (cf. Cheng and Sybesma 1999), in contrast with Mandarin Chinese:

(i) a. Ngo maai zo (jat) bun syu.
I buy Perf one Cl book
'I bought a book.'

(42) a. *Mary has written four papers, whereas John also has written FOUR PAPERS.

b. *Zhangsan xie-le san pian wenzhang, Lisi ye
Zhangsan write-Perf three Cl essay Lisi also
xie-le SAN pian WENZHANG.
write-Perf three Cl essay
'Zhangsan wrote three essays, and Lisi also wrote three papers.'

c. *ɑ^{55}lia^{13} t^{h}e^{33}ɤ^{33} sɯ^{55} p^{h}e^{33} mbər^{55} se^{31}, ɑ^{55}xua^{33} la^{33}
Alian essay three Cl write Perf Ahua also
[sɯ^{55}] p^{h}e^{33} [t^{h}e^{33}ɤ^{33}] mbər^{55} se^{31}.
three Cl essay write Perf
'Alian wrote three essays, and Ahua also wrote three essays.'

One might argue that in languages like English in which null argument is impossible, a DP cannot be totally devoid of phonetic content. The example in (42a) is therefore impossible. For the examples in (42b,c), one might make the argument that these are ruled out independently, for the classifier usually must be preceded by a numeral in Chinese and Naxi:

(43) a. Zhangsan xie-le yi pian wenzhang, Lisi ye xie-le *(yi) pian.
Zhangsan write-Perf one Cl essay Lisi also write-Perf one Cl
'Zhangsan wrote an essay, Lisi also wrote one.'

b. ɑ^{55}lia^{13} t^{h}e^{33}ɤ^{33} sɯ^{55} p^{h}e^{33} mbər^{55} se^{31}, ɑ^{55}xua^{33} la^{33}
Alian essay three Cl write Perf Ahua also
*(sɯ^{55}) p^{h}e^{33} mbər^{55} se^{31}.
three Cl write Perf
'Alian wrote three essays, and Ahua also wrote three.'

The explanation for the ungrammatical example in (42a) in terms of null

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b. (Go) go jan lai zo.
that Cl person come Perf
'That person came.'

(ii) a. Wo mai le *(yi) ben shu.
I buy Perf one Cl book
'I bought a book.'

b. *(Na) ge ren lai le.
that Cl person come Perf
'That person came.'

For plural DPs with the morpheme *di*, the numeral *jat* 'one' may be left out but the classifier may not appear; the same is true of Mandarin Chinese plural DPs with the morpheme *xie* (see Li 1999):

(iii) a. Ngo maai zo (jat) di (*bun) syu.
I buy Perf one Pl Cl book
'I bought some books.'

b. Wo mai le (yi) xie (*ben) shu.
I Cl Perf one Pl Cl book
'I bought some books.'

argument being impossible in English does not explain why the examples in (44) are ungrammatical:

(44) a. *Mary has written two long papers, and John has written TWO short PAPERS.
b. *Mary has bought two books about phonology, and John has bought TWO BOOKS about syntax.

The DP containing silent *TWO* and *PAPERS* in (44a) and the DP containing *TWO BOOKS* in (44b) are not totally devoid of phonetic content, the former having overt *short* in it and the latter overt *about syntax*.

The ungrammaticality of the examples in (43) is of special interest, for it shows that the numeral cannot be left out in Chinese and Naxi, even when the associated noun is silent. This is surprising from the perspective of (33). However, if the numeral is in fact associated with the classifier, which is most probably of the category noun, then the reason why the numeral cannot be silent is quite straightforward. As the classifier associated with it is almost always present, the exceptions being generic bare nouns and a few other cases (see note 9), the numeral associated with it may therefore not be left silent. So the effect in (33) holds in Chinese and Naxi as much as it does in English.

Nevertheless, when certain cases where the classifier can be omitted are considered, it becomes clear that the effect in (33) is actually simpler, namely, the numeral can never be left out, regardless of whether the noun or classifier associated with it is pronounced or not. For example, in modern Mandarin Chinese the classifier associated with the noun *ren* 'person' can be silent:

(45) a. Nei chang huo you yi bai (ge) ren
that Cl fire have one hundred Cl person
shoushang, san shi (ge) (ren) shizong.
injured three ten Cl person missing
'In that fire, a hundred people were injured and thirty people were missing.'
b. *Nei chang huo you yi bai (ge) ren
that Cl fire have one hundred Cl person
shoushang, YI BAI (ge) (ren) shizong.
injured one hundred Cl person missing
'In that fire, a hundred people were injured and a hundred people were missing.'

But the numeral cannot be left out. The sentence in (45b) is ungrammatical with the silent *YI BAI* 'one hundred'.

In list contexts and certain fixed expressions, the classifier is optional,[10]

[10] The optionality of *ge* in (46a) is consistent with classifiers for count nouns in headlinese sentences, e.g., of the sort in (46), being omissible in contrast with those associated with mass nouns (Tang 1998: 109 fn24). Although *tang* 'soup' is ordinarily understood to be a mass noun, the fact that it may be associated with the classifier *ge* for count nouns in (46a) (see Cheng and Sybesma 1998)

recalling the same of earlier period of Chinese:

(46) a. liu (dao) cai yi (ge) tang
six Cl dish one Cl soup
'six dishes, one soup'
b. yi (jian) fang liang (ge) ting
one Cl room two Cl living room
'one room, two living rooms'

(47) a. qian yan wan yu
thousand speech ten thousand speech
'endless talk'
b. qi shou ba jiao
seven hand eight foot
'many people'

But again, the numeral cannot be left silent. The expressions in (48) are good, if at all, only if the two nouns are understood to be conjoined, i.e., the total number of dishes and soups in (48a) is three and the total number of rooms and living rooms is two in (48b):

(48) a. *san cai SAN tang
three dish three soup
'three dishes, three soups'
b. *liang fang LIANG ting
two room two living room
'two rooms, two living rooms'

In Naxi, too, the classifier mostly cannot be left out, the exception being generic bare nouns. In a few cases, it is possible for both the noun *ɕi*^{33} 'person' and the associated classifier *kv*^{55} to be silent. But the classifier may not be left out if the noun associated with it is pronounced:

(49) a. mi^{33} tʂʰʅ^{33} tsa^{31} lø^{31} [ɕi^{33}] ndɯ^{33} ɕi^{33} [kv^{55}]
fire this Cl in person one hundred Cl
sə^{33} ma^{33} ndɯ^{33} ɕi^{33} [kv^{55}] pʰi^{55} tsɯ^{55}.
injured get one hundred Cl missing reportedly
'In this fire, a hundred people reportedly got injured and a hundred people were missing.'

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shows that it can also be a count noun, with the reading of a particular kind of soup. For a discussion for the count/mass distinction in Chinese and the difference between the two classes of classifiers, see Cheng and Sybesma (1999).

The noun *guo* 'pot' can appear in position of the classifier *ge* in (46a). In this case, *guo* is a measure phrase rather than a classifier. The expression *yi guo tang* is thus much like *a pot of soup* in English.

b. *mi^{33} tʂʰɻ^{33} tsa^{31} lø^{31} ɕi^{33} ndɯ^{33} ɕi^{33} kv^{55}
fire this Cl in person one hundred Cl
sə^{33} ma^{33} ɕi^{33} ndɯ^{33} ɕi^{33} [kv^{55}] pʰi^{55} tsɯ^{55}.
injured get person one hundred Cl missing reportedly
'In this fire, a hundred people reportedly got injured and a hundred people were missing.'

c. *mi^{33} tʂʰɻ^{33} tsa^{31} lø^{31} ɕi^{33} ndɯ^{33} ɕi^{33} kv^{55}
fire this Cl in person one hundred Cl
sə^{33} ma^{33} ɕi^{33} [ndɯ^{33}] [ɕi^{33}] (kv^{55}) pʰi^{55} tsɯ^{55}.
injured get person one hundred Cl missing reportedly
'In this fire, a hundred people reportedly got injured and hundred people were missing.'

The numeral may not be silent, however, regardless of the presence of the following classifier (see (49c)).

In list contexts, the classifier associated with a pronounced noun cannot be left out, in contrast with Chinese (see (46)):

(50) a. xopʰe^{55} tʂʰuɑ^{55} *(sy^{33}) xo^{33} ndɯ^{33} *(sy^{33})
dish six Cl soup one Cl
'six dishes, one soup'

b. see^{55} ka^{33} ȵi^{33} tʰi^{33}
three Cl two living room
'three rooms, two living rooms'

Example (50b) may seem to be borrowed in toto from the Chinese example in (46b), as the classifier *tʰi^{33}* 'living room' is not used as a classifier elsewhere. But it is in fact just the opposite of the Chinese example in (46b). In (50b), the noun is silent but the classifier is pronounced. The expression *tʰi^{33}* is borrowed from Chinese, but is placed in the classifier position. In (46b), the noun is pronounced and the classifier is silent.

The numeral in list contexts, too, cannot be silent. It is not possible to interpret the expressions in (51) as conjunctions of two nouns (cf. the discussion of the Chinese examples in (48)), for the two nouns are separated by a numeral and a classifier associated with the first noun:

(51) a. *xopʰe^{55} ndɯ^{33} sy^{33} xo^{33} [ndɯ^{33}] sy^{33}
dish one Cl soup one Cl
'one dish, one soup'

b. *ȵi^{33} ka^{33} [ȵi^{33}] tʰi^{33}
two Cl two living room
'two rooms, two living rooms'

Thus, to the extent that no case can be found where the numeral is silent, it may very well be that silent numerals are in general impossible, independently

from the pronunciation of the associated noun. In other words, the *unless*-clause in (33) may very well be irrelevant.

7. Acquisition

If *THOUSAND BUCKS* licensed by the intervening *grand* can never be pronounced, then an issue that immediately arises is on what basis speakers come to posit these silent expressions.

Obviously the evidence for the silent *THOUSAND BUCKS* cannot be directly observed. It can nevertheless be inferred on the basis of the independent distribution and the semantics of the adjective *grand* as well as the interpretation of DPs with *grand* expressing the notion of "thousand".

Upon exposure to the common expressions like those in (52) and the difference between (53a) and (53b), as Kayne points out, speakers would realize that *grand* cannot be a noun but is an adjective:

(52) a grand total/slam/palace/piano/opera/opening/jury/design/coalition

(53) a. two grand
b. *two grands

As expressions with *grand* elsewhere, e.g., in (52), are not interpretively related to "thousand", it must be that the interpretation of "thousand" in (53a) comes from some silent expression. Moreover, given its independent adjectival distribution, it must be that *grand* is followed by a silent nominal expression. Since DPs with *grand* expressing the notion of "thousand" are most appropriate in informal contexts in which *bucks* is used, it must be that the silent noun following *grand* is silent *BUCKS*. Overt evidence of the sort in (54) shows that *grand* can only follow *thousand*, not precede it. The learner, therefore, would posit for the example in (53a) the underlying representation in (55b), not that in (55a), even though both (55a,b) are pronounced identically (see also the discussion of (21)):

(54) a. *two grand thousand openings
b. two thousand grand openings

(55) a. *two grand THOUSAND BUCKS
b. two THOUSAND grand BUCKS

The acquisition of silent nouns in Chinese and Naxi can similarly be accounted for. Given that in many other cases a noun may follow the classifier in Chinese and precede the numeral in Naxi:

(56) a. yi ge ren
one Cl person
'one person'
b. liang zhang chuang
two Cl bed
'two beds'

(57) a. ɕi^{33} ndɯ^{33} kv^{55} (=(37))
person one Cl
'one person'
b. tsuɑ^{33} ŋi^{33} ly^{33}
bed two Cl
'two beds'

it must be that when the noun is missing in Chinese and Naxi there is a silent noun in the same position as the overt one:

(58) a. ... Lisi xie-le liang pian WENZHANG. (=(36c))
Lisi write-Perf two Cl essay
'..., and Lisi wrote two.'
b. ... [ɕi^{33}] ndɯ^{33} kv^{55} sua^{31}, [ɕi^{33}] ndɯ^{33} kv^{55} ɕu^{31}. (=(38a))
person one Cl tall person one Cl short
'..., one is tall and one is short.'

This is further re-enforced by the expressions containing a silent noun having the same interpretations as those containing an overt one. The positing of silent nouns would account for why these expressions have the interpretations they do.

8. Conclusion

In this squib, I argue that certain problems regarding locality, pronunciation of silent expressions and coordination for the analysis taking *grand* to be part of the PP *IN grand TOTAL* can be solved if *grand* is taken to occur between *THOUSAND* and *BUCKS*.

The alternative account I propose keeps the insight of Kayne's analysis according to which the syntax of *grand* in DPs expressing the notion of "thousand" is related to its independent syntactic distribution of an adjective.

The issue of how the numeral is licensed in connection with the pronunciation of the associated noun (or classifier) is ill-posed insofar as no numeral other than *THOUSAND*, in co-occurrence with the silent noun *BUCKS*, can be silent. An important question that need to be addressed is why among the numerals only *THOUSAND* may be silent.

Knowledge of silent expressions is not particularly problematic, insofar as they are inferrable from the co-occurring expressions that are related to them. The inference can be made on the basis of the semantics and syntax of the overt categories related to them as well as that of the constituents constituted by these categories. If an expression has a certain interpretation that is not related to any of the overt categories, then that interpretation must come from some silent categories. The syntactic category of silent expressions can be determined by the syntactic category of the overt expression occupying in the same position as well as by the category of the overt categories to which the silent expressions are related.

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英語、漢語及納西語裏的無聲名詞

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提要

本文討論美式英語口語帶“grand”表達“千”數字的名詞詞組裏的無聲數詞與名詞。基於定域條件，無聲詞的發音以及並列句法，我們主張“grand”並非出現在帶無聲的“IN”及“TOTAL”之間的介詞詞組裏面，而是出現於帶無聲的“THOUSAND”及“BUCKS”之間的名詞詞組。數詞一般不能是無聲的現象是跟無聲名詞無關。無聲詞類的存在可以從與其有關的顯性詞類推論，習得因此不是一個問題。

關鍵詞

形容詞，量詞，並列，定域，數詞，無聲成份的發音與習得