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1 Introduction

In Mandarin Chinese and other languages in the immediate geographic region (Japanese, Korean, Vietnamese, etc.), nouns that are counted with a number must appear with a classifier. These classifiers are variable in form and depend on the noun being counted. In many dialects of Mandarin Chinese, however, it is possible to have numeral-classifier reduplication, or NCR. A sentence with the element that results from NCR, or NCR element, has a pluractional reading. Below is a transitive and an intransitive sentence without reduplication in (a) and with reduplication in (b) and (c).

(1a)	yi	ge		ren	zou le	jin lai				
	one	CLF-human		person	walk-PFR	in				
	'A person walked in.'									
(1b)	ren	yi	ge		yi	ge		de	zou	jin lai
	person	one	CLF-human		one	CLF-human		PRT	walk	in
	'People walk in one after another.'									
(2a)	wo men	chi le	yi	li		dou zi				
	1-PL	eat-PFR	one	CLF-bean		bean				
	'We eat one bean.'									
(2b)	wo men	yi	li		yi	li		de	chi le	dou zi
	1-PL		one	CLF-bean		one	CLF-bean	PRT	eat-PFR	bean
	'We eat one bean one after another.'									
(2c)	wo men	yi	ge		yi	ge		de	chi le	dou zi
	1-PL		one	CLF-human		one	CLF-human	PRT	eat-PFR	bean
	'We ate beans person by person.'									

The classifier in the NCR element must associate with a noun already within the sentence. In (1b), it associates with the subject and uses a human classifier; in (2b), it associates with the object and uses a bean classifier; and in (2c), it associates with the subject and uses the appropriate classifier. Though (2b) and (2c) are come from the same sentence in (2a), they have two different interpretations; the first has many eating actions distributed across beans (over

objects), and the second has many eating actions distributed over participants (over subjects).

Mandarin uses reduplication fairly often as a tool for pluractionality in a variety of parts of speech, such as nouns and verbs (Deng). A reduplicated noun indicates nominal plurality, and a reduplicated verb changes the intensity or iterative quality of the verb; these are both instances of pluractionality as discussed by Cusic (1981). In both nouns and verbs, the reduplication only affects within the same part of speech—reduplicated noun affects noun intensity, and a reduplicated verb affects verb intensity—how, then, is a modifier that associates with a noun modifying the pluractional value of a verb?

The aim of this paper is to investigate the distributive properties of numeral-classifier reduplication in Mandarin Chinese. What NCR does is it pluralizes the number of arguments that the event is looking for, as well as pluralizing the event as a whole. I propose that NCR creates an element that behaves like a manner adverbial and only modifies countable, bounded verbal events. Building on Kratzer (1996)'s separation of external and internal arguments, I propose that the NCR element can attach at two different stages of the attachment process. These different attachment sites allow NCR to associate with different arguments and have different interpretations.

The data in this paper was elicited from a single consultant, who is a native speaker of Beijing Mandarin. After additionally speaking to a Taiwan Mandarin speaker and a Fuzhouhua speaker, I have found that the interpretation differences between dialects is actually quite great. Therefore, the analysis in this paper only currently applies to Beijing Mandarin. All future instances of "Mandarin" will now refer specifically to Beijing Mandarin.

2 Data

As mentioned before, NCR is formed by taking a numeral and classifier associating with

a noun in the sentence and reduplicating it. NCR can only exist between the verb and the subject

when it occurs.

(1a)   yi   ge   ren   zou le   jin lai
         one   CLF-human person walk-PFR   in
         'A person walked in.'

(1b)   ren   yi   ge   yi   ge   de   zou   jin lai
         person one CLF-human one CLF-human PRT walk in
         'People walk in one after another.'

(2a)   wo men   chi le   yi   li   dou zi
         1-PL   eat-PFR   one CLF-bean bean
         'We eat one bean.'

(2b)   wo men   yi   li   yi   li   de   chi le   dou zi
         1-PL   one CLF-bean one CLF-bean PRT eat-PFR bean
         'We eat one bean one after another.'

(2c)   wo men   yi   ge   yi   ge   de   chi le   dou zi
         1-PL   one CLF-human one CLF-human PRT eat-PFR bean
         'We ate beans person by person.'

A sentence can only contain one instance of the NCR element, even if there are multiple

nouns that NCR could in principle associate with.

(2d)   *wo men   yi   li   yi   li   de
         *1-PL   one CLF-bean one CLF-bean PRT
                 yi   ge   yi   ge   de   chi   dou zi
                 one CLF-human ge CLF-human PRT eat bean
         'We eat one bean one after another, person by person.'

The 'de' particle glossed PRT is obligatory in the NCR element, and is also obligatory

when used in creating other manner adverbials in Mandarin. NCR and manner adverbials occur

in the same positions in a sentence, which is preverbally, and cannot occur in the same sentence

at the same time.

(3a)   *yi   li   yi   li   de   wo men chi   dou zi
         *one CLF-bean one CLF-bean PRT 1-PL   eat bean
         'We eat one bean one after another.'

(3b) *man   man   de   wo men   chi   dou zi
      *slow   slow   PRT   1-PL   eat   bean
      'We eat beans slowly.'

(3c) wo men   yi   li   yi   li   de   chi   dou zi
      1-PL   one CLF-bean   one CLF-bean   PRT   eat   bean
      'We eat one bean one after another.'

(3d) wo men   man   man   de   chi   dou zi
      1-PL   slow slow PRT   eat   bean
      'We eat beans slowly.'

(3e) *wo men chi   dou zi   yi   li   yi   li   de
      *1-PL   eat   bean   one CLF-bean   one CLF-bean   PRT
      'We eat one bean one after another.'

(3f) *wo men chi   dou zi   man   man   de
      *1-PL   eat   bean   slow   slow   PRT
      'We eat beans slowly.'

(3g) *wo men yi   ge   yi   ge   de
      *1-PL   one CLF-human   one CLF-human   PRT
               man man   de   chi   dou zi
               slow slow   PRT eat   bean
      'People slowly walk in one after another.'

Because NCR and manner adverbials are in complementary distribution, and they show up in the same locations when presented with the same sentences, I will analyze the NCR element as a type of manner adverbial.

2.1 Environments

NCR only occurs in telic verb phrases. However, the method of marking telicity that a sentence uses can differ from verb to verb. The data suggests the following ways as more commonly used telicity markers: having an object, having the perfective aspect 'le', having a non-nominal complement, or any combination thereof.

(4) below shows the usage of a resultative complement, which is a type of verb complement indicating the result of an action.

(4a) *tong xue men   yi   ge   yi   ge   de   zuo zai yi qi
      *classmate-PL   one   CLF-human   one   CLF-human   PRT   sit-together
'Classmates sit together one after another.'

(4b) tong xue men   yi   ge   yi   ge   de   zuo xia lai
      classmate-PL   one   CLF-human   one   CLF-human   PRT   sit-down
'Classmates sit down one after another.'

The only difference here is between the resultative complements. One gives the meaning of "sitting together", which is atelic, and the other gives the meaning of "sitting down", which is telic; NCR is only able to appear with the telic sentence.

(5) illustrates a similar difference, but with the perfective aspect.

(5)   bing ren men   yi   ge   yi   ge   de   ku *(le)
      patients-PL   one   CLF-human   one   CLF-human   PRT   cry-*(PFR)
'Patients cried one after another.'

"Crying" is an atelic verb, but the perfective aspect indicates that the VP is actually a completed action, which causes it to be telic. Another way to translate this sentence would be 'patients finished crying one after another.' Therefore, as long as a VP has a telic reading, then NCR is grammatical.

An event's bounded can be tested by methods given in Kearns (2000), such as by appending "for a minute" or "in a minute" to the sentence. Atelic verbs, such as states and activities, are only grammatical with "for a minute", while telic verbs, such as achievements and accomplishments, are only grammatical with "in a minute". Examples with "in a minute" are below, indicating the telicity of (4a) and (4b).

(4c) *tong xue men   zai   yi   fenzhong   zhi   nei   zuo zai yi qi
      *classmate-PL   at   one   minute   of   inside sit-together
'Classmates sit together within a minute'

(4d)　tong xue men　　zai　yi　fenzhong　zhi　nei　　zuo xia lai
　　　classmate-PL　　at　one　minute　　of　inside　sit-down
　　　'Classmates sit down within a minute'

2.2 Interpretations

NCR results in a pluractional interpretation as discussed by Cusic (1981). In the case of Mandarin, NCR is interpreted as plural distribution over individuals—corresponding with the associated noun—and time. The set of sentences below in (6)-(8) are accompanied by a table, which illustrates which distributions allow for possible readings. Some distribution interpretations are left empty—this is due to verb restrictions or classifier restrictions. In (6), the NCR element can only associate with the subject, so fields including the object are left blank. In (7) and (8), the classifier in the NCR element can only associate with one of the arguments of the verb, so fields including the other argument are left blank.

(6) Intransitive sentence; subject association (repeated from (1a))
　　　ren　　　yi　ge　　　　　yi　ge　　　　　de　zou　jin lai
　　　person　one　CLF-human　one　CLF-human　PRT　walk　in

	Interpretations	Distribution over…
(6a)	*Several people walk in all at once.	Subject
(6b)	--	Object
(6c)	*The same person walks in several times.	Time
(6d)	Several people walk in one by one.	Subject + Time
(6e)	--	Object + Time

(7) Transitive sentence; subject association
　　　xue sheng men　　yi　ge　　　　yi　ge　　　　de　qin　niu
　　　student-PL　　　one　CLF-human　one　CLF-human　PRT　kiss　cow

	Interpretations	Distribution over…
(7a)	*Each student kisses a cow once.	Subject
(7b)	--	Object
(7c)	*Students kiss the cow multiple times.	Time
(7d)	Each student kisses a cow, person by person.	Subject + Time
(7e)	--	Object + Time

(8) Transitive sentence; object association

xue sheng men	yi	zhi	yi	zhi	de	qin	niu
student-PL	one	CLF-animal	one	CLF-animal	PRT	kiss	cow

	Interpretations	Distribution over…
(8a)	--	Subject
(8b)	*Students kiss each cow once.	Object
(8c)	*Students kiss the cow multiple times.	Time
(8d)	--	Subject + Time
(8e)	Students kiss each cow one by one.	Object + Time

Other possible interpretations are allowed because of certain properties of the other

arguments or of the verb. For example, (7) minimally needs to be interpreted as distributed over

subjects and time. However, since there's no stipulation that the object needs to also be singular,

this sentence actually has one more possible interpretation, in which distribution happens over the

subject, time, and the object. The two possible interpretations are actually captured in the English

paraphrase of (7d); either each person can kiss the exact same cow, person by person

(distribution over subjects and time), or each person can kiss their own cows, person by person

(distribution over subjects, time, and objects). If we specify that there is only one cow though,

only the interpretation involving distribution over subject and time will be possible, and in fact,

this is the interpretation that has to be true for NCR to be grammatical.

Moreover, the semantics of certain verbs will block interpretations as well. In (2c),

repeated below as (9), only distribution over subject, object, and time is grammatical.

(9)	wo men	yi	ge	yi	ge	de	chi le	dou zi
	1-PL	one	CLF-human	one	CLF-human	PRT	eat-PFR	bean

	Interpretations	Distribution over…
(9a)	*Each of us eats the same bean, person by person.	Subject + Time
(9b)	Each of us eats many beans, bean by bean, person by person.	Sub + Obj + Time

This is because it's impossible for one person to finish eating a bean, and then have

another person come to eat the same bean again, which is what the interpretation in (9a) must have.

3 Previous Work

NCR poses a problem for previous theoretical work on pluractionality. Cusic (1981) presents generalizations about pluractionality that cannot be entirely applied to NCR. He says that reduplication often shows an underlying ergativity, with plural agreement of the verb showing up either on the subject of an intransitive or the object of a transitive. However, in Mandarin, NCR elements that associate with the subject distribute over the subject and time; NCR elements that associate with the object distribute over object and time. If there were ergative parallels in NCR, we may expect to see that the distributive interpretations or structure of an NCR element associating with the subject of a transitive sentence to be different from the subject of an intransitive and the object of a transitive sentence. There are no ergative parallels in NCR.

Other previous work has been done on the pluractional properties of reduplicated numerals, such as in Telugu (Balusu 2006) and Karitiana (Müller & Negrão, 2012). With reduplicated numerals, these two languages can also express distributed interpretations. However, the analyses for these two languages, summarized below, cannot be extended to Mandarin.

3.1 Telugu

In Telugu, a reduplication of numerals causes pluractional interpretations, where distribution could be over the subject, time, or location, illustrated in (10), (11), and (12) below.

(10) Intransitive sentence; subject association
        renDu   renDu   kootu-lu-ni   egir-i-niyyi
        two   two   monkey-PL-acc   jumped-PAST-3.PL

	Interpretations	Distribution over…
(10a)	--	Participants
(10b)	2 monkeys jumped in each time interval.	Time
(10c)	2 monkeys jumped in each location.	Location

(11) Transitive sentence; subject association

      iddaru   iddaru   pilla-lu   kootu-lu-ni   cuus-ee-ru

      two   two   kid-PL   monkey-PL-acc   see-PAST-3.PL

	Interpretations	Distribution over…
(11a)	Each of the monkeys was seen by 2 kids.	Participants
(11b)	The monkeys were seen by 2 kids in each time interval	Time
(11c)	The monkeys were seen by 2 kids in each location.	Location

(12) Transitive sentence; object association

      ii   pilla-lu renDu renDu kootu-lu-ni   cuus-ee-ru

      these   kid-PL two   two   monkey-PL-acc see-PAST-3.PL

	Interpretations	Distribution over…
(12a)	These kids each saw 2 monkeys	Participants
(12b)	These kids saw 2 monkeys in each time interval.	Time
(12c)	These kids saw 2 monkeys in each location.	Location

Balusu proposes that the reduplication numeral, or RedNum, is associated with a

D(istributivity)- operator. This D-operator causes distribution over events or event-aspects, and

the event/event- aspect is called its sorting key.

The first problem with applying Balusu's analysis for Telugu to Mandarin is that the

RedNum construction does not have a telicity requirement. This means that directly applying the

analysis to Mandarin would over-generate possible sentences, like in (13), where an attempt at

applying NCR to 'children saw monkeys' results in an ungrammatical sentence.

(13a)   *xiao hai men yi   ge   yi   ge   de   kan hou zi

        *children   one CLF-human one CLF-human PRT see monkey

    'Children see monkeys person by person

(13b)   *xiao hai men   yi   zhi   yi   zhi   de   kan   hou zi
         *children   one   CLF-animal   one   CLF-animal   PRT   see   monkey
'Children see monkeys one by one

This could be fixed by stipulating that the RedNum analysis can only be applied to telic VPs.

RedNum also allows for spatial distribution, which is not possible with NCR in Mandarin. However, the analysis is unclear in what the specific interpretation of the location sorting key is. Using (12c) as an example, are the children moving from location to location and viewing monkeys? What if the children were stood in one location, while monkeys appear from different locations? In both of those scenarios, there needs to be time passing between each viewing event, so that children or monkeys can travel from location-to-location, so it's unclear whether the location sorting key is actually simply an extension of the time sorting key. This could be fixed by another stipulation, namely only the RedNum analysis for distribution over time should be applied to NCR.

Another problem is that RedNum is able to occur multiple times in a sentence, whereas in Mandarin, only one NCR element is able to occur at a time in a sentence. Another stipulation could take care of this problem by requiring that only one application of the RedNum analysis be used for NCR.

The last problem, and the most problematic, is that none of the interpretations for (11) correspond with any NCR interpretation in Mandarin. In (14) below, (7) is repeated but with "two" in place of the "one" in the NCR element. Because of the first reason, there is no way to translate the Telugu sentence with RedNum into a Mandarin sentence with NCR, but that is not necessary to illustrate the problem.

(14)   xue sheng men   lian ge   lian ge   de   qin niu
          student-PL   two CLF-human two CLF-human PRT kiss cow
'Students kiss each cow in groups of two, group by group.'

In (14), there needs to be more than one group of two students for the VP to distribute over multiple groupings of students; however, in (11a, b, c), there is only two students total. Even if the numeral in (14) was switched back to "one" so that the interpretation could be that "each student, of which there are two total, …", because (11b, c) does not require that each child see the monkeys in a different time interval, which is what (7) and (14) require for one and two children respectively.

In summary, the analysis proposed for RedNum is not adequate as an analysis for NCR because in some cases, it generates ungrammatical sentences, and in other cases, it fails to generate the possible meaning.

3.2 Karitiana

In Karitiana, a reduplication of numerals causes pluractional interpretations, where distribution could be over the associated argument or time, as shown in (15) below.

(15)   syomp   syomp   w   nakam-at   gooj
         two-OBL two-OBL child 3-DECL-CAUS-build-NFT canoe

	Interpretations	Distribution over…
(15a)	Each child built two canoes.	Participants
(15b)	Children built two canoes in each (contextually given) occasion.	Time

Müller & Negrão propose that these distributive numerals are adverbial pluractional operators and pluralize the event argument of the predicate.

The two main problems with this analysis is the same as the problems for Telugu. First, there is no telicity requirement, so it is possible to over-generate illicit constructions. Second, it

does not generate the correct interpretation for a Mandarin sentence with NCR. (15) only has two readings, because for (15b), the subjects will always act as one unit. Though Karitiana nouns always occur without any numerical or definiteness morphology and thus can be interpreted as one or many in a sentence, its interpretation in (15) is restricted to one collective group. In Mandarin, however, a sentence with NCR can have both its arguments be plural, such as in the case of the two interpretations discussed in section 2.2 about (8).

The interpretation for (15b) is possible in Mandarin, but the NCR element would have to associate with the object instead of the subject, such that the interpretation would be "children built canoes in groups of two, group by group". Since the paper does not present any other configurations of the distributive numerals associating with other arguments of the verb, there is no way to analyze the other possible constructions in Karitiana and determine whether this interpretation mismatch could be explained.

4 Analysis

As discussed above, NCR is only permitted with telic sentences. I propose that NCR counts and pluralizes bounded verbal events, which is only possible because these events are required to be telic and discrete. A bounded-unbounded parallel exists between verbs and nouns. Individual bounded nouns, also known as count nouns, are inherently countable, such as something like 'a bean' or 'a cow'. Unbounded nouns, or mass nouns, are only countable with the help of an extra measure word to help quantify the mass noun, such as something like 'a cup of water' or 'a bowl of rice'. Likewise, with a telic verb, one can determine when such an event is finished. With an atelic verb, however, there is no way to say when the action is truly finished without extra material. In "John cried for a minute", we know that after a minute has passed, John has stopped his crying action, but in "John cried", we do not have a definite end; this is similar in

Mandarin, illustrated by (5). This parallel between verbs and nouns has been explored previously by Bach (1986) and Krifka (1990) and is a property that NCR is sensitive to. This accounts for why NCR cannot occur with atelic verbs.

For Telugu and Karitiana, this analysis doesn't seem to pose a problem yet. The sentences in Karitiana are all telic and grammatical, so there is no issue. For Telugu, Balusu proposes that RedNum actually pluralizes the numeral phrase, so having atelic VPs are not an issue, since those are not the ones being counted.

A preliminary analysis using Functional Application seems to yield the wrong results. To get an object-distributed interpretation, it is easy to say that the distributive semantics of NCR combines with the event and its internal argument. For the subject-distributed interpretation, however, if NCR combines with the event after both arguments are combined as well, then how come distribution is not required across both subjects and objects?

The ability for NCR to distribute over one argument and not the other may be explained if we draw from Kratzer (1996), who states that external arguments are separate from the VP. What separates the verb and its internal argument from the external argument is the Voice head. I propose that NCR's attachment and plural distribution involve this Voice head. Below the Voice head, the only thing to pluralize is the VP, which contains the verb and the internal argument. Above the Voice head, there are two possible events to pluralize: either just the VP, or the VP including the external argument. Depending on the attachment location, NCR can yield different interpretations Below in (16a) is a non-canonical word ordering of (7).

(16a)	xue sheng men	ba	yi	zhi	niu	qin le
	student-PL	take	one	CLF-animal	cow	kiss-PFR

'Students kiss one cow.'

The "ba" has traditionally been analyzed as a realization of the syntactic Voice head

(Huang et. al). When NCR is applied, we find that the NCR element can appear in two locations, each with their own set of allowable associations.

(16b)	xue sheng men	ba	niu	yi	zhi		yi	zhi		de	qin le
	student-PL	take	cow	one	CLF-animal		one	CLF-animal		PRT	kiss-PFR

'We eat one bean one after another.'

(16c)	xue sheng men	yi	ge		yi	ge		de	ba	niu	qin le
	student-PL	one	CLF-human		one	CLF-human		PRT	take	cow	kiss-PFR

'Each student kisses a cow, person by person.'

(16d)	*xue sheng men	ba	niu	yi	ge		yi	ge		de	qin le
	*student-PL	take	cow	one	CLF-human		one	CLF-human		PRT	kiss-PFR

'We ate beans person by person.'

(16e)	xue sheng men	yi	zhi		yi	zhi		de	ba	niu	qin le
	student-PL	one	CLF-animal		one	CLF-animal		PRT	take	cow	kiss-PFR

'Each student kisses a cow, person by person.'

When the NCR element appears below the Voice head like in (16b) and (16d), the only possible event to count and pluralize is the event containing the VP, in this case "kiss cow". The only argument in this event is the object, so the NCR element only associates with the object. This is why only (16b), when associating with the object, is grammatical, whereas (16d), when associating with the subject, is not. When the NCR element appears above the Voice head like in (16c) and (16e), there are two events to count and pluralize: either the VP "kiss cow" or the VP and the external argument "student kiss cow". This is why both sentences are grammatical, even though the NCR element associates with two different arguments.

As mentioned before, (8) has two interpretations. One distributes over subject and time, whereas another distributes over subject, time, and object. This should not be an issue if we consider the pluralizing of events to have an ambiguity similar to strict and sloppy identity of verb phrase ellipsis. In a sentence like "John eats his beans and Bill did too", Bill could've eaten John's beans (strict reading) or his own beans (sloppy reading). In each of the pluralized events, we can chose to kiss the same cow or kiss a different cow. If we put plural morphology onto cow, then we

can choose to kiss the same group of cows or kiss a different group of cows. In terms of the Function Application, we can consider it as distribution of the non-trivial or of the trivial type. Trivially, there is only one individual or one group of individual, so distribution makes no impact on interpretation. Non-trivially, distribution happens over different configurations of the internal argument.

4 Conclusion

In this paper I have proposed that NCR is a distributive modifier that combines either above or below the Voice head of an event. This event predicate is required to be telic, so that it can be countable and pluralized by NCR. When attached below the Voice head, NCR pluralizes the verb and the internal argument; when attached above the Voice head, NCR pluralizes the verb and both its arguments. It supports long-standing theories about the properties of verbal events, such as a count/mass distinction that parallels nouns (Bach, 1986; Krifka, 1990) and a distinction between the external argument and its verbal predicate (Kratzer, 1996).

Despite a preliminary ability to account for the data, there are still many topics left to investigate. One such topic is the true nature of NCR's type or part of speech. What should the semantics of NCR be such that it can also distribute over the time its pluralized events? Furthermore, if we believe that NCR is a type of manner adverbial, are there situations in which manner adverbials can also associate with a particular argument? Is this a property shared by all manner adverbials, and if so, are there also semantic differences between which argument is associated by the manner adverbial? These are all topics that I wish to address in the future.

References

Bach, E. (1986). The algebra of events. *Linguistics and philosophy*, 9(1), 5-16.

Balusu, R. (2006). Distributive reduplication in Telugu. *In Proceedings of NELS* (Vol. 36, pp. 39-53).

Beck, S., & von Stechow, A. (2005, October). Dog after dog revisited. *In Proceedings of the Sinn und Bedeutung* (Vol. 10, pp. 43-54).

Cable, S. (2012) A Basic Introduction to Pluractionals: Lasersohn (1995: Chapter 13) [PDF document]. Retrieved from http://people.umass.edu/scable/LING753-SP12/Handouts/6.Pluractionals.pdf

Cheng, L. L. S. (2012). Counting and classifiers. *Count and Mass Across Languages,* 199-219.

Gil, D. (2013). Numerical Classifiers. In *The World Atlas of Language Structures Online*. Retrieved from http://wals.info/chapter/55

Deng, D. (n.d.). Verb Reduplication and Two Kinds of Pluractionality in Mandarin Chinese. Abstract retrieved from http://www.linguisticsociety.org/system/files/abstracts/Verb%20reduplication%20and%20two%20kinds%20of%20pluractionality%20in%20Mandarin%20Chinese.pdf

Farkas, D. (2001). Dependent indefinites and direct scope. In *Logical perspectives on language and information* (pp. 41-72).

Kearns, K. (2012) Aspectual Classes of Events. *Semantics*, 200-227.

Kratzer, A. (1996). Severing the external argument from its verb. In *Phrase structure and the lexicon*, 109-137.

Krifka, M. (1990). Four thousand ships passed through the lock: Object-induced measure functions on events. *Linguistics and Philosophy*, 13(5), 487-520.

Lasersohn, P. (1995). Pluractional Markers. *Plurality, Conjunction, and Events,* 267-286.

Li, C. N., & Thompson, S. A. (1989). *Mandarin Chinese: A functional reference grammar*. Univ of California Press.

Maienborn, C., von Heusinger, K., & Portner, P. (Eds.). (2011). *Semantics: an international handbook of natural language meaning* (Vol. 33). Walter de Gruyter.

Matthewson, L. (2000). On distributivity and pluractionality. In *Proceedings of SALT* (Vol. 10, pp. 98-114).

Müller, A., & Negrão, E. V. (2012). On Distributivity in Karitiana. *Verbal Plurality and Distributivity*, 546, 159.

Rothstein, S. (2008). *Structuring events: A study in the semantics of aspect* (Vol. 5). John Wiley & Sons.

Scontras, G. (2013). Accounting for counting: A unified semantics for measure terms and classifiers. In *Proceedings of SALT* (Vol. 23, pp. 549–569).

Wood, E. J., & Garrett, A. (2002). The semantics of Yurok intensive infixation. In *Proceedings from the fourth Workshop on American Indian Languages*.

Library Prize Reflection Essay

If I didn't have access to the UCLA library to find the one book that sparked it all, this research project wouldn't have been possible at all. Last Winter Quarter, I wanted to do some sort of research in my major, Linguistics. Since I am a bilingual speaker of Mandarin Chinese and English, that seemed like a natural topic to look into; being able to understand my own language really connects me to my identity and I would be contributing to the field as a whole as well. After a few conversations with one of my professors and obtaining the names of articles and books to peruse about current topics in Mandarin, I was all ready to begin an exciting new project—the problem was, how would I even be able to read these articles and books if I don't own any of them? I honestly had no idea where to even begin. I searched through the library catalog almost on a whim—after all, why would the UC libraries have what is essentially a dictionary for Chinese grammar?—but when I was actually able to check out a physical copy of *Mandarin Chinese: A Functional Reference Grammar* at the library, I was so excited that I borrowed it for almost two quarters straight. Without it, I never would've read about the particular grammatical construction that would then develop into a research project spanning 10 months and counting.

I took this topic and developed it into a final paper for a course I took with Professor Jessica Rett in the Spring Quarter of last year, which then in Fall Quarter became both my topic for both Linguistics 199 , Directed Research/Senior Project in Linguistics with her as my adviser, and Linguistics 200B, a graduate course that I took with another professor. The library system and its resources were with me every step of the way. Via the library catalog, I was able to find books that gave me a strong foundation in the linguistic phenomena I looked into called pluractionality, including David Cusic's *Verbal Plurality and Aspect*. My professor informed me of articles involving pluractionality in other languages like Karitiana and St'at'imcets, which I could access on the library's Linguistics and Language Behavior Abstracts database and using UC-eLinks. When the library had no physical books I needed, I could use library access to tap into other online databases too. With JSTOR and Springer access, I found articles that could help me understand the

data I had elicited, such as Emily Bender's *The Syntax of Mandarin Bǎ* and Rint Sybesma's *Why Chinese Verb-le is a Resultative Predicate*. I could also read articles like *The Algebra of Events* by Emmon Bach and *Severing the External Argument from its Verb* by Angelika Kratzer, both of which were instrumental in supporting my analysis.

The library's access to articles and research were not the only invaluable resources for my research. I did not, and still do not, have a laptop to bring to campus, but I needed to read these online articles and take notes on them. Instead, for several quarters now, I've been borrowing laptops from the CLICC lab and using them to work while in the library between classes. For this research in particular, I had to elicit linguistic judgments from my friends, which I did with the help of a CLICC laptop and a CLICC study room, where we could work without interruptions.

Even though now my 199 course has officially ended, my research, and thus scholarly attachment to the library system and all its capabilities, is definitely still on-going. Through submitting an abstract about my topic to a conference and receiving reviews from other linguists in the field, I obtained recommendations for other relevant books and articles to use. This time, there was no hesitation; I went straight for the library. In fact, I still have two books next to me that I checked out from the library—*Structuring Events* by Susan Rothstein and *Logical Perspectives on Language and Information* edited by Cleo Condoravdi and Gerard Renardel de Lavalette. Just like how my research continues to grow and mature, so does my time spent squinting at the online articles in my search results, or desperately reaching for that one book at the top of the shelves. 10 months in, and who knows where I'd be if I hadn't picked up that one book at the library that started it all.