Two Constructions with *Most* and their Semantic Properties[*]

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1. Introduction

In this paper, we examine the semantic properties of two constructions involving *most* in English, namely, *most of the NPs* and *for the most part*, as exemplified in (1).

(1) a. Most of the linguists from the East Coast came to NELS.
b. For the most part, the linguists from the East Coast came to NELS.

In (1b), *for the most part* induces a so-called Quantificational Variability Effect (QVE) on the NP *the linguists from the East Coast*, yielding roughly the interpretation 'most of the linguists from the East Coast came to NELS'. We claim that the two constructions above differ in the domain where they apply, producing similar but not identical quantificational interpretations over the NP. In particular, we argue that *most of the NPs* applies to the nominal domain, while *for the most part* applies to the verbal domain. Our claim is based on two sets of novel semantic data. First, we show that the distribution of *most of the NPs* is parallel to that of *all the NPs* in terms of its selective compatibility with collective predicates. To account for this data, we extend Brisson's (1998, 2003) analysis of *all the NPs* to *most of the NPs*, concluding that *most* is an ∃-quantifier introducing a group of a certain proportion. Second, we show that, when *for the most part* gives rise to a QVE on a definite NP, the collective interpretation is not available. We develop a semantic analysis of *for the most part* as a verbal modifier that explains the lack of collective readings and that extends to interpretations other than QVE.

The structure of the paper is as follows: in section 2, we introduce some general background on events and distributivity that are relevant to the current paper. In section 3, we propose the analysis of *most of the NPs*, followed by the analysis of *for the most part* in section 4. Section 5 concludes the paper and discusses further issues.

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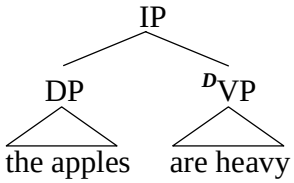
2. General Background

Before we discuss the data on *most*, we introduce some background notions relevant to our analysis. First, a relation between a plural individual or event and its subparts is expressed by the ordering part-of relation ≤, as shown in (2) (Link 1983).

(2) $a \leq a+b+c$ (a is a part of the plural individual a+b+c)
$e_1 \leq e_1+e_2+e_3$ (e_1 is a part of the plural event $e_1+e_2+e_3$)

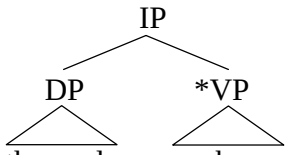
Second, a distributive reading arises when a distributive operator *D* attaches to the verbal predicate, ^{D}P, as in (3). Furthermore, a VP predicate P can be pluralized, *P (Link 1983), yielding a reading that is vague between collective and distributive, as in (4).

(3)



a. $^{D}P = \lambda x\ \forall y\ [\ y \leq x \rightarrow P(y)\ ]$
b. $\forall y\ [\ y \leq$ the.apples $\rightarrow$ be.heavy(y) $]$

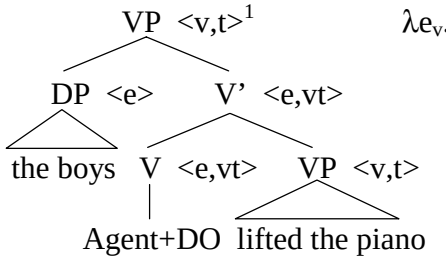
(4)



a. ⟦the.apples⟧ = a+b+c
b. ⟦be.heavy⟧ = {a, b, c, d, …}
⟦*be.heavy⟧= {a,b,c,d,a+b, a+b+c, a+b+c+d, …}
b'. ⟦be.heavy⟧ = {a+b+c, d, …}
⟦*be.heavy⟧ = {a+b+c, d, a+b+c+d, …}
c. ⟦IP⟧=1 iff a+b+c ∈ ⟦*VP⟧

Third, we assume that thematic roles are introduced by neo-Davidsonian predicates (Higginbotham 1985, Parsons 1990, Landman 2000; Kratzer 1996 for the Agent head).

(5)



λe_v. lift(e) ∧ Agent(e, the.boys) ∧ Theme(e, the.piano)

λe_v. lift(e) ∧ Theme(e, the.piano)

3. The Analysis of *Most of the NPs*

3.1. Data

Vendler (1957) proposed that verb phrases can be classified into four aspectual classes, that is, states, activities, accomplishments, and achievements. The examples in (6) show that predicates which allow both collective and distributive readings can be classified into

[1] We use type v for events.

the four classes and that definite plural NPs can have both a collective and distributive interpretations regardless of the aspectual classes.

(6)	a.	States:	The bottles are too heavy to carry. √collective, √distributive
	b.	Activities:	The boys lifted the piano. √collective, √distributive
	c.	Accomplishments:	The girls built a raft. √collective, √distributive
	d.	Achievements:	The girls found a cat. √collective, √distributive

However, definite NPs with *all* shows a different pattern: Taub (1989) found that these NPs allow a collective reading with activities and accomplishments, but not with states and achievements. Achievements can be coerced into accomplishments when predicates are understood to have some process. In such a case, a collective reading obtains.

(7)	a.	States:	All the bottles are too heavy to carry. *collective, √distributive
	b.	Activities:	All the boys lifted the piano. √collective, √distributive
	c.	Accomplishments:	All the girls built a raft. √collective, √distributive
	d.	Achievements:	All the girls found a cat. ?collective, √distributive

As in (8), we found that *most of the NPs* shows the same distribution as Taub's pattern.

(8)	a.	States:	Most of the bottles are too heavy to carry. *collective, √distributive
	b.	Activities:	Most of the boys lifted the piano. √collective, √distributive
	c.	Accomplishments:	Most of the girls built a raft. √collective, √distributive
	d.	Achievements:	Most of the girls found a cat. ?collective, √distributive

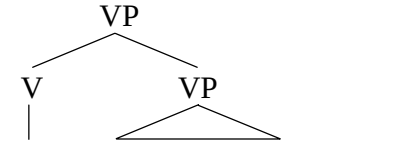
The question to be addressed is what is the source of the contrast between activities/accomplishments and states/achievements. We will turn in the next section to Brisson's (1998, 2003) analysis on definite NPs with *all* in (7).

3.2. Brisson's (1998, 2003) Proposal on *All*

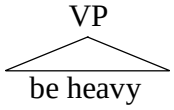
We have seen in (6) above that predicates applied to a definite plural NP allow for a collective and for a distributive interpretation. This fact is can be captured by saying that

the distributive operator *D* can optionally apply to the verbal predicate: ⟦ be.heavy⟧ generates the collective reading, and ⟦^{D}be.heavy⟧ the distributive reading. Brisson (1998, 2003) claims that *all* signals the presence of a distributive operator *D*. Furthermore, Brisson assumes that activities and accomplishments, but not states and achievements, are syntactically decomposed into two VPs, as shown in (9): a lower VP whose head is a state and a higher VP whose head is the abstract verb DO (e.g. DOings of *build a raft* are hammering, sawing wood, etc.; a DOing of *sweep the floor* is moving a broom) (cf. McClure 1994, among others).

(9) a. Activities, Accomplishments

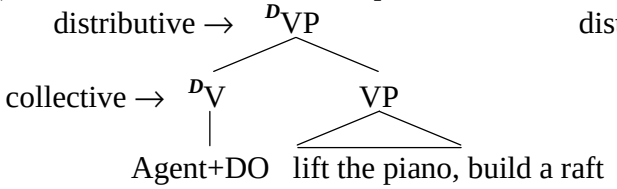


b. States, Achievements

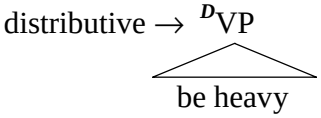


Given these structures, there are two possible insertion sites of the *D* operator in activities and accomplishments. If the operator is inserted at the higher VP, we obtain a distributive reading, roughly meaning that for each boy there is a different lifting the piano event e'. If the operator is attached to DO, we obtain a collective reading, roughly meaning that for each boy there is a different DOing event e' which is a part of the unique collective lifting e. For states and achievements, since they lack the head DO, the only possible attachment site of *D* is VP; hence, only the distributive reading is generated.[2]

(10) a. Activities, Accomplishments



b. States, Achievements



[2] In Brisson's (1998, 2003) analysis, *all* does not only signal the presence of the distributive operator *D* but it also imposes some constraints on *D*'s cover variable *Cov*. A cover *Cov* of the set of individuals D_e is a subset of $Pow(D_e)$ that exhausts D_e. *All* requires that *Cov* be a good fitting cover with respect to the relevant ⟦NP⟧, so that the ∀-quantification in reading (ii) of (i) does not leave aside any of the girls. By economy, Brisson also ensures that *all* is incompatible with a value of *Cov* for *D* that would accidentally generate a collective reading for (7a), e.g. a *Cov* where all the bottles (and only bottles) are in a set X member of *Cov*. Covers generating an intermediate reading for a bare definite, as paraphrased in (iii) for (6a), are allowed in Schwarzschild (1996) and are in principle predicted to occur under Brisson's account of *all the NPs*. However, intermediate readings for (7a) and (8a) are harder to obtain, and, if available, it is not clear whether the cover analysis would derive the correct truth conditions. We will leave this issue for future research and ignore intermediate readings in the present paper. (ii) can be thus simplified as in (iv).

(i) All the girls jumped in the lake.

(ii) $\exists e \forall x [\ x \leq ⟦\text{the.girls}⟧ \wedge \{z: \text{Atom}(z) \wedge z \leq x\} \in \text{Cov} \rightarrow \exists e' [\ e' \leq e \wedge \text{jump}(e') \wedge \exists e''[\ e'' \leq e' \wedge \text{DO}(e'') \wedge \text{Agent}(e'', z)\ ]\ ]\ ]$

(iii) Intermediate reading of (6a): 'Each group of bottles is too heavy to carry.'

(iv) $\exists e \forall x [\ x \leq ⟦\text{the.girls}⟧ \rightarrow \exists e' [\ e' \leq e \wedge \text{jump}(e') \wedge \exists e''[\ e'' \leq e' \wedge \text{DO}(e'') \wedge \text{Agent}(e'', z)\ ]\ ]\ ]$

3.3. The Extension of Brisson's Analysis to *Most of the NPs*

Brisson's analysis on *all the NPs* straightforwardly extends to *most of the NPs,* which shows the same pattern as *all the NPs*. We assume that *most of the NPs* introduces ∃-quantification over a group x whose cardinality is greater than a half of the NPs (i.e. 'a majority / major part of the NPs') (See Kroch 1974, cf. Kadmon 1987 for *at most three NPs*).[3] Furthermore, based on the parallelism between *all* and *most* with respect to Taub's generalization, we argue that *most* signals the presence of a distributive operator *D* in the same way as *all*. With the structures in (9), there are two possible insertion sites for the *D* operator with activities and accomplishments. The operator at the higher VP yields a distributive reading, where for each boy there is a different lifting the piano event e', as in (11a). In contrast, if the operator is at DO, we obtain a collective reading, where for each boy there is a different DOing event e" part of the unique collective lifting e, as in (11b).

(11) a. Distributive: $\exists e \exists x [x \leq [\![\text{the.boys}]\!] \wedge |x| > 1/2 |[\![\text{the.boys}]\!]| \wedge \forall z [z \leq x \rightarrow \exists e' [e' \leq e \wedge \text{lift}(e', \text{the.piano}) \wedge \exists e'' [e'' \leq e' \wedge \text{DO}(e'') \wedge \text{Agent}(e'', z)]]]]$

b. Collective: $\exists e \exists x [x \leq [\![\text{the.boys}]\!] \wedge |x| > 1/2 |[\![\text{the.boys}]\!]| \wedge \text{lift}(e, \text{the.piano}) \wedge \exists e' [e' \leq e \wedge \forall z [z \leq x \rightarrow \exists e'' [e'' \leq e' \wedge \text{DO}(e'') \wedge \text{Agent}(e'', z)]]]]$

In sum, we argued that *most of the NPs* introduces ∃-quantification over a sum x of individual whose cardinality is greater than half of the cardinality of [[the.NP]], and that it signals the presence of the distributive operator *D*.

4. The Analysis of *For the Most Part*

4.1. Data

In this section, we shift our attention to the VP-spine modifier *for the most part*. Quantificational Variability Effects (QVE) with *for the most part* are illustrated in (12) and (13), where *for the most part* yields the effect of quantification over the individuals introduced by plural definite NPs (Berman 1991, cf. Lahiri 1991, 2002, Williams 2000).

(12) (For the most part,) John (, for the most part,) likes his friends.
≈ John likes most of his friends.

(13) (For the most part,) the boys (, for the most part,) jumped in the lake.

Unlike *most of the NPs*, *for the most part* under QVE disallows a collective interpretation, even with activities and accomplishements:

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[3] *Most* in *most NPs* is generally analyzed as a generalized quantifier in (i).

(i) $\lambda P_{<e,t>} \lambda Q_{<e,t>}. \ |\{x: P(x) \wedge Q(x)\}| > 1/2 \ |\{x: P(x)\}|$

Under this proportional analysis, we only obtain a distributive interpretation. We suspect that this prediction is empirically correct (e.g., the collective reading of *Most boys lifted the piano* seems quite hard, if possible at all). All the arguments in the present paper about adnominal *most* concern exclusively the construction *most of the NP*.

(14) a. Activities: For the most part, the boys lifted the piano.
*collective, √distributive
b. Accomplishments: For the most part, the girls built a raft.
*collective, √distributive

These examples show that *for the most part* is semantically different from *most of the NPs*. While *most of the NPs* means 'a major part of ⟦NP⟧', we cannot derive QVE from the claim that *for the most part* has a hidden argument semantically equal to ⟦NP⟧ (with the underlying syntactic structure *[for the most part ~~of NPs~~]* with ellipsis, or with the structure *[for the most part (of) C]*, where the value of the variable *C* is pragmatically determined). If QVE was simply the result of having ⟦NP⟧ as this hidden argument, it would mean 'for the major part of ⟦NP⟧', incorrectly allowing collective readings in (14).

Note that *for the most part* allows readings other than QVE over an NP: (15)-(16). Crucially, in these readings, collective readings of that NP are available, as in (17)-(18).

(15) Quantification over times reading
Q: What tasks did Jon perform last month?
A: For the most part, he cooked.
≈ Most of the times he performed a task, the task consisted of cooking.

(16) Temporal span reading
Q: What did Amy do yesterday?
A: For the most part, she was building a sand castle.
≈ Most of yesterday was spent by Amy in building a sand castle.

(17) [In this dorm, the students in each room form a team to do household chores.]
Q: What tasks did the students from Room A perform last month?
A: For the most part, they cooked.

(18) Q: What did the boys do yesterday afternoon?
A: For the most part, they were building a (large) sand castle.

The question is why *for the most part* behaves differently from *most of the NPs*, that is, why *for the most part* generates the effect of distributive quantification over ⟦NP⟧ (QVE reading) but not the effect of collective quantification over ⟦NP⟧.

4.2. The Analysis of *For the Most Part*

The upshot of our analysis is that *for the most part* quantifies over the domain of events, unlike *most of the NPs* that applies to the nominal domain (cf. Nakanishi 2003, to appear).

4.2.1. Focus Sensitivity

For the most part adjoins to and modifies the VP spine (cf. Ginzburg 1995). Like other quantifiers over events adjoining to the VP spine, e.g. *only* in (19), *for the most part* is focus-sensitive, with different readings depending on the position of focus: (20)-(21).

(19) a. Sandy only feeds [Fido]$_F$ Nutrapup.
b. Sandy only feeds Fido [Nutrapup]$_F$. (Beaver and Clark 2003:325)

(20) a. (Q: Who do the students admire?)
A: For the most part, the students admire [Mary]$_F$. (But some admire Sue.)
b. (Q: What is the students' opinion about Mary?)
A: For the most part, the students [admire]$_F$ Mary. (But some despise her.)

(21) a. For the most part, the conventioneers partied on [Friday]$_F$ night.
b. For the most part, the conventioneers [partied]$_F$ on Friday night.

These different readings result from different ways of dividing the content of the sentence between the Restrictor and Nuclear Scope of the adverbial quantification. In the case of *only*, Beaver and Clark (2003:349-50) propose the syntax-semantics mapping in (22), where the non-focused material is mapped both to the restrictor and to the nuclear scope and focused material is mapped exclusively to the nuclear scope (see also Bonomi and Casalegno 1993:16, Herburger 2000:18).

(22) Truth conditions of 'NP only VP' in Beaver and Clark (2003):
$\forall e$ [**p**(e) $\rightarrow$ **q**(e)], where
RESTRICTOR **p** = the meaning of 'NP VP' minus content related to any focused parts, and
NUCLEAR SCOPE **q** = the ordinary meaning of the sentence 'NP VP'.

Another possible syntax-semantics mapping is given in (23), where non-focused material is mapped only to the restrictor. Given the logical equivalence in (24), (22) and (23) yield the same truth-conditions for examples with *only*. Two readings are given in (25)-(26):

(23) Modified truth conditions of 'NP only VP':
$\forall e$ [**p**(e) $\rightarrow$ **q**(e)], where
RESTRICTOR **p** = the meaning of 'NP VP' minus content related to any focused parts, i.e., the meaning of the non-focused material, and
NUCLEAR SCOPE **q** = the meaning of 'NP VP' minus content related to any non-focused parts, i.e., the meaning of the focused material.

(24) $a \rightarrow a \wedge b$ iff $a \rightarrow b$

(25) a. Sandy only feeds [Fido]$_F$ Nutrapup.
b. $\forall e$ [feed(e) $\wedge$ Agent(e, sandy) $\wedge$ Theme(e, nutrapup) $\rightarrow$ Goal(e, fido)]

(26) a. Sandy only feeds Fido [Nutrapup]$_F$.
b. $\forall e$ [feed(e) $\wedge$ Agent(e, sandy) $\wedge$ Goal(e, fido) $\rightarrow$ Theme(e, nutrapup)]

We adopt the schema in (23) and extend it to *for the most part*.[4] A first try is (27). Then, we take our findings on *most of the NPs* from section 2 and we propose to apply them to *for the most part* as well: *most (part) of* introduces ∃-quantification over a sum x_e or e'_v whose cardinality is greater than half the cardinality of the relevant general individual (⟦*the boys*⟧) or general event e described by the restrictor **p** – subformula **p**(e) ∧ ∃e' [e'≤e ∧ |e'| ≥ 1/2 |e|] in (28) – and it signals the presence of a distributive operator *D* – subformula ∀e"[e"≤e' → …]. The focused material mapped to the nuclear scope **q** falls under the scope of *D*. This gives us the syntax-semantics mapping in (28).

(27) Truth conditions of 'For the most part NP VP': (First try)
MOST e [**p**(e)] [**q**(e)]
Most events e for which **p**(e) holds are such that **q**(e) holds.
RESTRICTOR **p** = the meaning of the non-focused material
NUCLEAR SCOPE **q** = the meaning of the focused material.

(28) Truth conditions of 'For the most part NP VP': (Second try)
∃e [**p**(e) ∧ ∃e' [e'≤e ∧ |e'| ≥ 1/2 |e| ∧ ∀e"[e"≤e' → **q**(e")]]]
There is a general (possibly plural) event e for which **p**(e) holds and there is a (possibly plural) event e' that is a major part of e such that, for all subevents e" of e', **q**(e") holds.
RESTRICTOR **p** = the meaning of the non-focused material
NUCLEAR SCOPE **q** = the meaning of the focused material.

4.2.2. Deriving QVE over an NP

Several factors will further constrain the general truth-conditions in (28). First, the focus pattern of the sentence will determine what material is mapped to **p** and **q**. Second, the general event e must be somehow 'cut' into subevents $e"_1$, $e"_2$, $e"_3$, etc. so that there is a sum of them e' whose measure is more than half the measure of e, and so that, for each of the subevents of e that are part of the major event e', **q** holds. Different 'cuttings' of the general event e may yield different readings. Third and finally, for a given NP, it will be relevant whether or not that NP is interpreted distributively in a one-to-one mapping with respect to the verbal predicate. These parameters are summarized in (29):

(29) Relevant factors
(i) What material is focused and non-focused in the sentence.
(ii) How the general event e is 'cut' into subevents $e"_1$, $e"_2$, $e"_3$, etc.
(iii) Whether the NP is interpreted distributively in a one-to-one mapping.

[4] For our analysis of *for the most part*, it is crucial that non-focused material is mapped *exclusively* to the restrictor **p**, as in (23) and contra (22) (see footnote 6). This means that we cannot derive the content of **p** and **q** directly from Rooth's (1992) alternative semantics of focus, which would assign (the great union of) the focus semantic value $⟦IP⟧^f$ to **p** and the ordinary semantic value of the sentence $⟦IP⟧^o$ to **q**, hence including non-focused material in **q** as well. Also, we leave for future research the question of whether the restrictor **p** of *for the most part* is entirely determined by focal structure (with its concomitant pragmatic restriction on relevant focus alternatives) or it includes other presuppositions, as discussed in Beaver and Clark (2003) for *only* and *always*.

We will show that the QVE-reading with respect to a given NP arises as a side effect of the following choices:

(30) Choices for the QVE-reading:

(i) The semantic content and thematic predicate on the NP are within the restrictor **p**.
(ii) The general event e is 'measured' by counting its atomic event units in $[\![V^0]\!]$.
(iii)The NP is interpreted distributively in a one-to-one mapping.

4.3. Application to the Data

Let us now apply our analysis to some examples. The first example, in (31), involves an inherently distributive predicate *admire* and thus a plural general event e. The denotation of (31a) is given in (31b), which is paraphrased in (31c).

(31) a. For the most part, the students admire $[\text{Mary}]_F$.

b. $\exists e [*\text{admire}(e) \wedge \text{Agent}(e, \text{the.students}) \wedge \exists e' [e' \leq e \wedge |e'| \geq 1/2|e| \wedge \forall e'' [e'' \leq e' \rightarrow \text{Theme}(e'', \text{mary})]]]$[5]

c. There is a general (possibly plural) event e such that *admire(e) ∧ Agent(e, the.students) and there is a (possibly plural) event e' that is a major part of e such that, for all subevents e" of e', Theme(e", mary).

The QVE reading results from the combination of the event quantification introduced by *for the most part* in (31b) and the factors discussed in (30). First, as in (32i), *the students*, i.e. Agent(e, the.students), is in the restrictor, since the NP is not focused. (This is already encoded in the truth conditions (31b-c).) Second, as in (32ii), the general event e such that *admire(e) ∧ Agent(e, the.students) is semantically plural. This pluralized event e is measured by counting its atomic event units e". Third, as stated in (32iii), since *admire* is inherently distributive, each atomic event is mapped to a student; let us assume that each student is mapped to exactly one (relevant) admiring event. This gives us the picture in (33): atomic events e" part of the general event e are related to their agents in a one-to-one fashion, and thus quantification over the atomic events e" yields the effect of quantification over the corresponding agents. This derives the QVE interpretation.[6]

(32) Relevant factors (cf.(29)):

(i) The meaning of *the students* is within the restrictor **p** (given the focus).

(ii) The predicate *admire* is semantically plural: $[\![*\text{admire}]\!] = \{e''_1, e''_2, e''_3, e''_4, e''_5, e''_1+e''_2, e''_1+e''_2+e''_3, \ldots\}$. The atomic units in the extension of *admire are taken as the units to measure the general event e.

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[5] To be precise, we obtain the following formula if we incorporate the decomposed DO in (9):

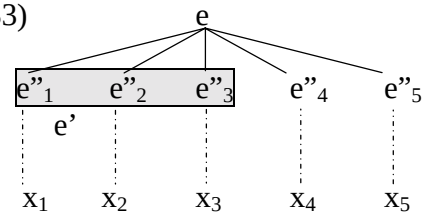
(i) $\exists e [*\text{admire}(e) \wedge \exists e'' [e'' \leq e \wedge \text{DO}(e'') \wedge \text{Agent}(e'', \text{the.students})] \wedge \exists e' [e' \leq e \wedge |e'| \geq 1/2|e| \wedge \forall e'' [e'' \leq e' \rightarrow \text{Theme}(e'', \text{mary})]]]$

[6] If we mapped non-focused material not just to the restritor **p** but also to the nuclear scope **q**, the truth condition of (31a) would be (i). (i) does not correspond to the QVE reading, since each e" has the sum denoted by *the students* as its Agent. That is, (i) would be parallel to (39), which does not yield QVE.

(i) $\exists e [*\text{admire}(e) \wedge \text{Agent}(e, \text{the.students}) \wedge \exists e' [e' \leq e \wedge |e'| \geq 1/2|e| \wedge \forall e'' [e'' \leq e' \rightarrow *\text{admire}(e'') \wedge \text{Agent}(e'', \text{the.students}) \wedge \text{Theme}(e'', \text{mary})]]]$

(iii) The NP necessarily has a distributive reading. Assume further that each student is the agent of exactly one admiring event.

(33)



e: Agent(e, the.students) ∧ *admire(e)

e”$_1$, e”$_2$, e”$_3$: Theme(e”$_1$, mary); Theme(e”$_2$, mary); Theme(e”$_3$, mary)

$x_1+x_2+x_3+x_4+x_5$ = the.students

If we minimally modify (31a) as in (34a) so that the focus is on the verb instead of the object, we obtain the truth condition in (34b). QVE results as before.

(34) a. For the most part, the students [admire]$_F$ Mary.
b. ∃e [Agent(e, the.students) ∧ Theme(e, mary) ∧ ∃e’ [e’≤e ∧ |e’|≥1/2|e| ∧ ∀e”[e”≤e’ → *admire(e”)]]]
c. There is a general (possibly plural) event e such that Agent(e, the.students) and Theme(e, mary) and there is a (possibly plural) event e’ that is a major part of e such that, for all subevents e” of e’, *admire(e”).

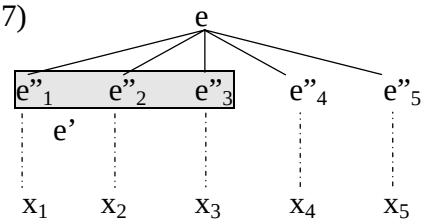
The second example involves a plural general event e and a predicate that allows both distributive and collective readings, for example, *lift the piano* in (35).

(35) For the most part, the students [lifted the piano]$_F$.
∃e [Agent(e, the.students) ∧ ∃e’ [e’≤e ∧ |e’|≥1/2|e| ∧ ∀e”[e”≤e’ → *lift(e”) ∧ Theme(e”, the.piano)]]]

Let us now examine the three factors given in (36). First, as in (36i), *the students*, being non-focused, is in the restrictor. Second, as in (36ii), the general event e such that Agent(e, the.students) is measured by counting its atomic events e”. We can obtain either a distributive or a collective reading depending on how to interpret the agent *the students*. If we assume the one-to-one distributive reading described in (36iii), each student is the agent of a different atomic event e”, as in (37). This gives rise to the QVE reading: quantifying over the atoms of the general event e”$_1$+e”$_2$+e”$_3$+e”$_4$+e”$_5$ produces the effect of quantifying over the atoms of $x_1+x_2+x_3+x_4+x_5$. This reading is illustrated in (38).

(36) Relevant factors (cf.(29)):
(i) The meaning of *the students* is within the restrictor **p** (given the focus).
(ii) The general event e is a plural event and it is measured by counting its atomic event e”.
(iii) Assume a distribute reading in which each student is paired with a single different atomic event of lifting the piano.
(iii’) Assume a collective reading in which each lifting of the piano is done collectively by the students.

(37)



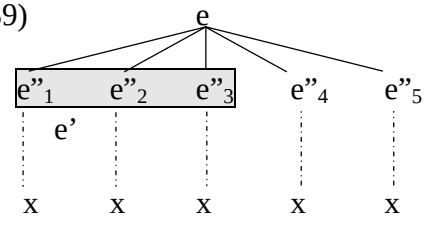
e: Agent(e, the.students)

e”$_1$, e”$_2$, e”$_3$:*lift(e”$_1$)∧Theme(e”$_1$, the.piano)
*lift(e”$_2$)∧Theme(e”$_2$, the.piano)
*lift(e”$_3$)∧Theme(e”$_3$, the.piano)
$x_1+x_2+x_3+x_4+x_5$ = the.students

(38) [Each of the students must perform a difficult task. Each of them is given a choice between lifting the piano, taking a syntax exam and wrestling a grizzly bear.]
Q: What tasks did the students do?
A: For the most part, they lifted the piano (… but some took the syntax exam).

If we assume a collective reading in (36iii'), each atomic event e" has as its agent the sum of all the students x, as in (39). This does not evoke QVE on an NP, since quantifying over the atoms of e does not give rise to a parallel quantification over atoms of x. Instead, this yields the quantification over times reading in (17), repeated in (40), and in (41):[7]

(39)



e: Agent(e, the.students)

e”$_1$, e”$_2$, e”$_3$:*lift(e”$_1$)∧Theme(e”$_1$, the.piano)
*lift(e”$_2$)∧Theme(e”$_2$, the.piano)
*lift(e”$_3$)∧Theme(e”$_3$, the.piano)
$x = x_1+x_2+x_3+x_4+x_5$ (the sum of students)

(40) [In this dorm, the students in each room form a team to do household chores.]
Q: What tasks did the students from Room A perform last month?
A: For the most part, they cooked.

(41) [In a TV contest, the student team has to accumulate points by performing one or more of the following tasks, possibly more than once: lifting the piano, taking a syntax exam, or wrestling a grizzly bear.]
Q: What tasks did the students perform?
A: For the most part, they lifted the piano.

The third example involves a singular general event e and a temporal span reading (again, not QVE). Consider (42), where we obtain the reading 'a major part of yesterday'. Such a temporal span reading often arises with a progressive, whose (simplified) lexical entry is given in (43). With this entry, the truth value of (42A) will be (44).

(42) Q: What did the boys do yesterday afternoon?
A: For the most part, they were [building a raft]$_F$.

[7] QVE ceases to obtain as soon as there is no one-to-one mapping between the relevant events and relevant individuals. Hence, the quantification over times reading arises not only in the scenario (38), but also when some but not all atomic events have a collective agent, or when the same atomic individual is the agent of several events and the students as a group get "team credit" for each event.

(43) Lexical entry for PROG(essive aspect) (Bennett and Partee 1972, Krifka 1992, but see also Dowty 1979, Parsons 1989, Landman 1992):
PROG = $\lambda P \lambda e' \exists e [P(e) \wedge e' \leq e \wedge e'$ is not the final subevent of e]

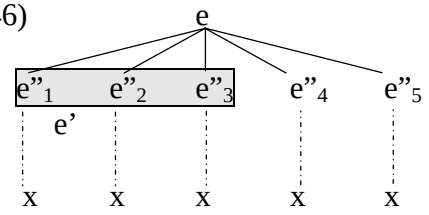
(44) a. $\exists e [\text{Agent}(e, \text{the.boys}) \wedge \text{At}(e, \text{yesterday}) \wedge \exists e' [e' \leq e \wedge |e'| \geq 1/2|e| \wedge \forall e'' [e'' \leq e' \rightarrow \text{PROG}([\![\text{build a raft}]\!])(e'')]]]$

b. $\exists e [\text{Agent}(e, \text{the.boys}) \wedge \text{At}(e, \text{yesterday}) \wedge \exists e' [e' \leq e \wedge |e'| \geq 1/2|e| \wedge \forall e'' [e'' \leq e' \rightarrow \exists e''' [e'' \leq e''' \wedge e''$ is not a final subevent of $e''' \wedge \text{build}(e''') \wedge \text{Theme}(e''', \text{a.raft})]]]]$

First, as in (45i), *the boys*, being non-focused, is in the restrictor. Second, let us assume that *build* is semantically singular, that is, there is only one relevant – perhaps partial – building event e'. Still, PROG([[build a raft]]) yields a similar lattice of events as pluralization: e' is the sum of all the subevents of being in the process of building a raft.

(45) Relevant factors (cf.(29)):
(i) The meaning of *the students* is within the restrictor **p** (given the focus).
(ii) Take *build* as semantically singular (there is only one – perhaps partial – building event e of a raft).
(iii) Assume a collective reading: the boys are building the raft together.

(46)



e: Agent(e, the.students)

e''_1, e''_2, e''_3: PROG([[build a raft]])(e''_1)
PROG([[build a raft]])(e''_2)
PROG([[build a raft]])(e''_3)
$x = x_1+x_2+x_3+x_4+x_5$ (the sum of students)

We have seen that *for the most part* in English gives rise to a variety of interpretations, including QVE over an NP, quantification over times, and a temporal span reading. A fourth reading that may fall under the present analysis is the path-quantification reading found in Japanese and Spanish. Besides the QVE interpretation in (47a), the Japanese example (47) has a reading (47b) where *for the most part* seems to quantify over (equally long) segments of a given path length l, meaning roughly 'John opened the door most of the way'. The same path reading obtains for Spanish in (48). Note that, under this reading, the NP *los chicos* 'the boys' can be interpreted collectively, i.e., the boys may have opened the door together.

(47) John-ga doa-o isoide hotondo ake-ta
John-NOM door-ACC quickly most open-PAST
a. NP-quantification reading: 'John opened most of the doors quickly'
b. Path-quantification reading: 'John quickly opened the door most of the way'

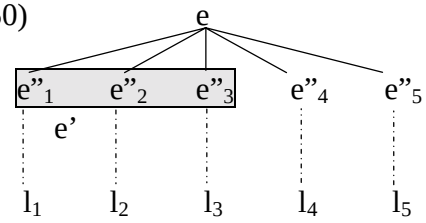
(48) Los chichos abrieron la puerta en su totalidad.
The boys opened the door in its totality

'The boys opened the door all the way.' √collective, √distributive

We tentatively extend the current analysis to path-readings, generating the truth conditions in (49) and the schema in (50) for (47). To yield the correct interpretation, one would have to assume that, while e"$_1$, e"$_2$ and e"$_3$ are opening events, e"$_4$ and e"$_5$ are failing-to-open events.

(49) $\exists e$ [Agent(e, john) $\wedge$ Theme(e, the.door) $\wedge$ Path(e, l) $\wedge$ $\exists e'$ [$e' \leq e \wedge |e'| \geq 1/2|e| \wedge \forall e''$[$e'' \leq e' \rightarrow$ open(e")]]]

(50)



e: Agent(e, john) $\wedge$ Theme(e, the.door) $\wedge$ Path(e, l)
e"$_1$, e"$_2$, e"$_3$: open(e"$_1$)$\wedge$Theme(e"$_1$,the.door)
open(e"$_2$)$\wedge$Theme(e"$_2$,the.door)
open(e"$_3$)$\wedge$Theme(e"$_3$,the.door)
$l_1+l_2+l_3+l_4+l_5$ = the complete path l

5. Conclusions and Further Issues

In this paper, we argued that *most* in *most of the NPs* applies to the nominal domain and thus quantifies over individuals. It contributes an $\exists$-quantifier – introducing a sum x of a certain proportion – and a distributor operator *D* that makes the predicate ^{D}P distribute over the atoms of the sum x. Following Brisson's (1998, 2003) analysis on *all*, the predicate $P_{<e,<vt>>}$ that *D* adjoins to can be the VP or DO: ^{D}VP derives distributive readings and ^{D}DO derives collective readings for activities and accomplishments. In contrast, *most* in *for the most part* applies to the verbal domain and thus quantifies over events. It contributes an $\exists$-quantifier – introducing a sum e' of a certain proportion – together with a distributor over that sum e' of events. The question is how to cut e' into units and measure it. A plural event e' can be measured by counting its atomic units. When there is a one-to-one pairing between atomic events and individuals, quantification over event units will produce the effect of NP-quantification, i.e., QVE-reading. When each atomic event has the same collective agent, we obtain the quantification over times reading, with no QVE. A singular event e' with a progressive aspect can be measured by counting subparts of e' that belong to PROG(⟦VP⟧). The result is a temporal span reading with no QVE. Finally, a singular event e with a path argument in Japanese and Spanish can be measured by counting subparts of the event e' as affecting each segment of the path, yielding the path reading.

An interesting remaining question is how the type of quantification over events discussed in this paper differs from quantification over situations (von Fintel 1994, see also Endriss and Hinterwimmer 2003). When quantifying over events, we can quantify over the many (generic) events that make the sentence 'NP VP' true, as in (51a), or over parts of one episodic event that makes the sentence 'NP VP' true, as in (52a). In contrast, when quantifying over situations, only the first option seems possible, as the markedness of (52b) suggest.

(51) a. For the most part, the students who sit over there are smart.
b. The students who sit over there are usually/always smart.

(52) a. For the most part, the students sitting over there now are smart.
b. #The students sitting over there now are usually/always smart.

An open question is whether themes should have a separate neo-Davidsonian predicate Theme. The literature on focus-sensitive quantification over events assumes representations like (53a), whereas Kratzer (1996, to appear) argues that (core) themes should not be introduced by a separate predicate but should be represented as in (53b). For our analysis, we need to assume a separate Theme predicate for examples like (54), since the unfocused theme should appear exclusively in the restrictor **p** and not also in **q** with the focused verb (see footnote 6).

(53) Mary ate the pie.
a. $\exists e$ [eat(e) $\wedge$ Agent(e, mary) $\wedge$ Theme(e, the.cake)]
b. $\exists e$ [eat(e, the.cake) $\wedge$ Agent(e, mary)]

(54) Q: What do you think about your classmates?
A: For the most part, I $[\text{like}]_F$ them.
$\exists e$ [Exp(e, I) $\wedge$ Theme(e, my.classmates) $\wedge$ $\exists e'$ [$e' \leq e \wedge |e'| \geq 1/2|e| \wedge \forall e''$[$e'' \leq e' \rightarrow$ *like(e'')]]]

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