### *Every* versus *Each*: Some Observations and Proposals

## 1. Introduction: Some Reflections on the Meaning of "Each"

(1) **Overarching Question:**      What the heck does "each" mean…

   a.    … *when it is adnominal*:               Each boy walked in.

   b.    … *when it is adverbial / floated:*     The boys each walked in.

(2) **An Initial, Naïve Guess**

   a.    <u>Adnominal Each = Every:</u>     [ λP : [ λQ : ∀y . P(y) → Q(y) ] ]

   b.    <u>Floated Each = *DIST*:</u>         [ λP : λx : ∀y . y ≤ x & y ∈ *cov* → P(y) ]

(3) **Some Initial Challenges**

   a.    Are floated *each* and adnominal *each* really separate lexical items? Can we get a univocal interpretation at all, or some principled derivation of former from the latter?

   b.    Unlike *DIST* (or '*'), floated *each* seems to require distribution down to atoms.

       (i)    The boys met in the field.
           (Can describe two groups of boys meeting in separate parts of the field.)

       (ii)    ?? The boys each met in the field.
           (Seems to require each atomic boy to 'meet'; hence, anomalous)

   c.    Despite the predictions of (2a), there seem to be various subtle differences between *every* and adnominal *each*, as we will see below…

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(4) **Some Disappointing News**

   - To my knowledge, there is no fully worked out, explicit semantics for floated *each* that goes much beyond the semantics in (2b).

   - To my knowledge, there is no fully worked out, explicit semantics for adnominal *each* that goes much beyond the semantics in (2a).
     - Many authors have noticed various contrasts between *every* and *each*…
     - But usually an analysis is only vaguely/informally stated (Vendler 1967, Farkas 1997, Tunstall 1998), or…
     - Or, the observed differences are analyzed as ultimately syntactic (Beghelli & Stowell 1997).

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(5)     **Some Oft-Encountered Perspectives on *Every* vs. *Each***

   a.     <u>*Each* is 'More Distributive' than *Every*</u>

   • There are some contexts where *every* displays behavior expected of plural (in)definites, where *every* NP seems to allow a kind of collective prediction.

   • In these same contexts, *each* NP behaves differently, and as you'd expect an obligatorily distributive operator to behave.

   • Even amongst cases of clearly 'distributive predication', there are instances where *every* NP is preferable to *each* NP, and where this seems connected with the way in which *each* 'puts a spotlight on' the individual entities…

   (i)     John took **every** apple.       (Fine on its own.)
   (ii)    ?? John took **each** apple.    (Anomalous without some kind of 'follow up')

   b.     <u>*Each* NP Always Requires Contextual Restriction of the NP</u>

   • It is possible to understand *every* NP to quantify over every single entity in the universe that satisfies NP (5bi).

   • It does not seem possible to understand *each* NP in a similar way; rather, there must be some salient contextual restriction of the NP (5bii)

   (i)     **Every** theory is open to objection.
                        (characterizing statement about theories)

   (ii)    **Each** theory is open to objection.
                        (statement about some contextually given set of theories)

   • As noted by Tunstall (1998), this basic fact is observed in the OED.

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**2.     Vendler (1967) "Each and Every, Any and All"**

The main focus of this paper is the semantics of "any"; Vendler offers from very precient observations about its licensing conditions, and attempts a unified analysis of NPI and FCI *any*.

However, he also observes some differences between *each* and *every*, and so this work remains a *locus classicus* on the semantics of *each*…

   • Vendler does not offer a very systematic discussion (and no formal analysis).

   • He does offer a variety of tantalizing observations and programmatic hypotheses…

*The judgments below are those offered by Vendler; Many strike me as dubious…*

(6)     **Observation 1: Co-occurrence with "One"**

   a.     **Every** one of them smokes.          (Perfectly fine)

   b.     ?? **Each** one of them smokes.          (Sounds redundant)

Generalization:
*Each* already implies *one* in a way that *every* does not. *Each* already serves the function of "drawing our attention to the individual elements."


(7)     **Observation 2: Co-occurrence with Ordinal Numerals**

   a.     He came **every** second day.

   b.     ?? He came **each** second day.

Generalization:
*Every* allows us to consider the days in combination with other days; thus ordinals are OK as in (7a). *Each* allows us only to consider the days on their own, divorced from others, and so ordinals are not permitted.


(8)     **Observation 3: Cardinality Requirements of Complement.**

   a.     (i)     **Every** one of these 10 men smokes.
          (ii)    ?? **Every** one of these 2 men smokes.

   b.     (i)     **Each** of these 10 men smokes.
          (ii)    **Each** of these two men smokes.

   c.     (i)     **All** of these 10 men smoke.
          (ii)    ?? **All** of these 2 men smoke.

Generalization:
*Every* NP sounds "pompous" if NP complement consists of only two individuals. *Each* NP is OK in these circumstances. *Every* NP shares this property with *all*, which suggests that *every* is "halfway between *all* and *each*", and shares with *all* the function of 'summing up' a large set of objects.

   •   *Related Etymological Note:*          every *< *ever each*

(9)     **Observation 4: Collectivity with *Each* and *Every***

     a.     Take **all** these apples.
         (i)     *OK if you take the whole bushel at once.*
         (ii)    *Not really OK if you take each apple one by one.*

     b.     Take **every** one of these apples.
         (i)     *OK if you take the whole bushel at once.*
         (ii)    *OK if you take each apple one by one.*

     c.     ?? Take **each** of these apples.
         (i)     *Only OK if you take each apple one by one.*
         (ii)    *Not really OK if you take the whole bushel at once.*
                *Also sounds 'kind of incomplete'*

     d.     Take **each** of these apples and examine it.
         (i)     *Only OK if you take each apple one by one.*

Generalizations:
- *All* is obligatorily collective; *every* allows a kind of collective construal; *each* is obligatorily distributive.
- The primary meaning of *every* 'stresses completeness or exhaustiveness'.
- The meaning of *each* 'directs one's attention to the individuals as they appear one by one'.
- The individual attention entailed by *each* cannot be 'in vain'. "You have to *do* something with each of them, one after the other." (*cf.* (9c) vs. (9d)).
(*This last notion in echoed in the work of Tunstall 1998).*

(10)    **Observation 5: *Each* and Pluractionality**

     a.     When the king entered the House…
         (i)     … **all** the deputies rose at once.
         (ii)    … **every** deputy rose at once.
         (iii)   … ?? **each** deputy rose at once.

     b.     (i)     **Each** deputy rose when his name was called.
         (ii)    ?? **Every** deputy rose when his name was called.

Generalization:
Again, there has to be a 'reason' for using *each* and focusing attention on the individual entities separately.
- In an event where every deputy rises at the same time, this individual attention is not motivated, and so is infelicitous.
- In an event where each deputy rises separately, this individual attention *is* motivated.

> The facts like those in (9) and (10) are a major focus of the work of Tunstall (1998)
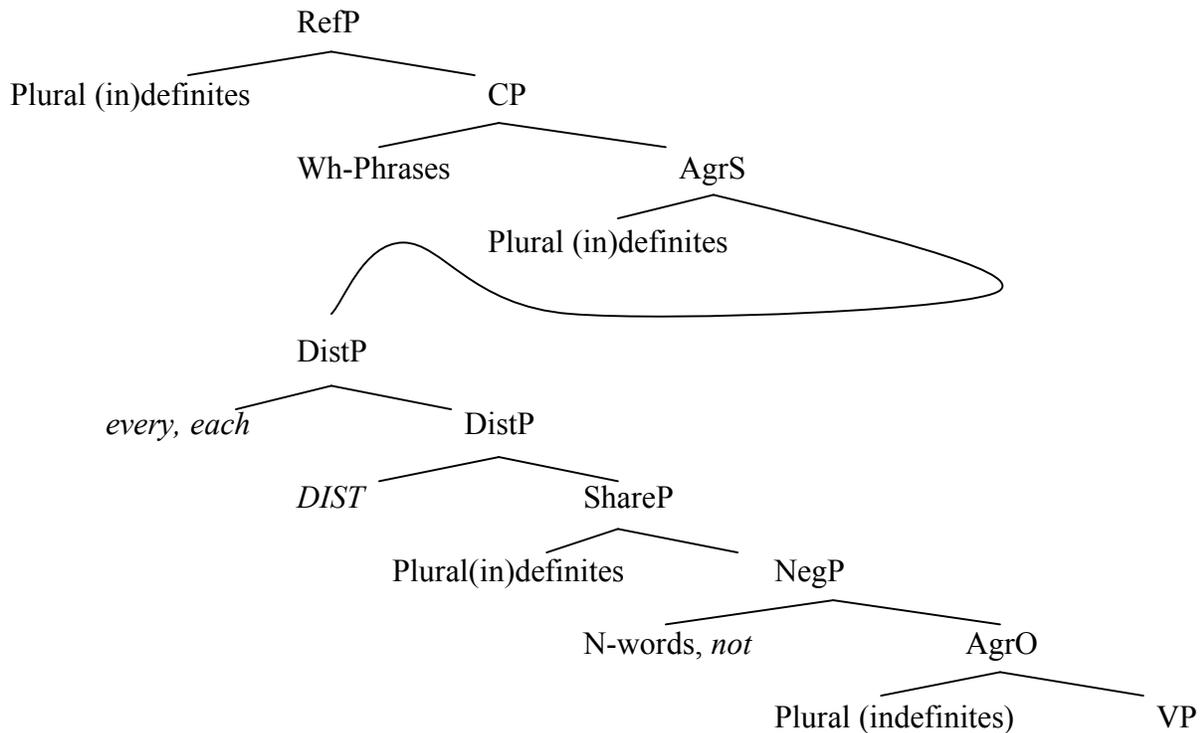
**3.       Beghelli & Stowell "Distributivity and Negation: The Syntax of *Each* and *Every*"**

**3.1     Background Assumptions on the Syntax of Distributivity**

(11)    **The Syntax of Quantificational Scope**

The real focus of this paper is not the contrasts between *each* and *every*, which take up only the last 7 of the 34 pages. Rather, the focus of the paper is the exposition and defense of the following claims.

a.      Quantifiers do not move to their scope positions by a free 'QR' operation, one that can in principle move any DP to any clausally adjoined position.

b.      Rather, specific kinds of quantifiers move to specific kinds of functional projections, via the usual mechanisms of feature-checking and Agree.

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                     RefP
             _____|_____
Plural (in)definites              CP
                           _____|_____
                      Wh-Phrases              AgrS
                                        Plural (in)definites
                        DistP
                  _____|_____
            every, each        DistP
                         _____|_____
                      DIST            ShareP
                              _____|_____
                      Plural(in)definites       NegP
                                          _____|_____
                                    N-words, not          AgrO
                                                    _____|_____
                                            Plural (indefinites)   VP
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(12)    **An Alleged Prediction**

a.      *Sentence:*    (i)     A boy read **every** books.
        *Judgment:*   (ii)    **True** when each book is read by a different boy.

b.      *Sentence:*    (i)     A boy read **every** books.
        *Judgment:*   (ii)    **True** when each book is read by a different boy.

c.      *Sentence:*    (i)     A boy read **all** the books.
                       (ii)    **False** when each book is read by a different boy.

(13)   **The Explanation**

   a.   *Every book* and *each book* must target SpecDistP. When they do, something must also appear in SpecShareP. This can be the indefinite subject (which reconstructs to that position).

        [$_{DistP}$ Each / every book [ *DIST* [$_{ShareP}$ a boy [ … read … ]

   b.   *All the books* cannot target SpecDistP. Since there is no 'strongly distributive QP' in the sentence, there is DistP. Thus, the only LF allowed is one where *a boy* occupies AgrS and *all the books* occupies AgrO.

(14)   **Questions**

   a.   What about the high RefP position? Can't *all the books* move there?

        *Answer:* Sure, but when it does so, it's not SpecDistP, and so you don't get the distributive reading in (12c). Rather, you just the collective reading you'd get if you left it *in situ*.

   b.   What about the distributive readings we get for *all the NP* in sentences like "All the boys brought a pencil"?

        *Answer:* That is 'pseudo-distributivity'. See Beghelli (1996) for a theory of 'pseudo-distributivity'.

(13)   **Another Alleged Prediction**     a.   Each / every boy jumped.
                                          b.   * Each / every boy didn't jump.

(14)   **The Explanation**

   a.   *Each / every boy* must occupy SpecDP. When they do, something must also fill SpecShareP. If there is no overt QP indefinite, SpecShareP is occupied by the existential quantifier over the Davidsonian event argument.

        (i)    *LF:*     [$_{DistP}$ Each / every boy [ *DIST* [$_{ShareP}$ ∃e [ … jump … ]
        (ii)   *T-Conds:*     For every boy x, there is an event of jumping that x did.

   b.   *Not* in English is the (overt) 'neg-word' version of the (phonologically null) existential quantifier over the Davidsonian event argument

        [[ not ]]     =     [ $\lambda P_{<\varepsilon t>}$ : ¬∃e. P(e) ]

   c.   As a 'neg-word', *not* in English must in SpecNegP, never in SpecShareP. Thus, in (13b), there is nothing to fill SpecShareP, and the sentence crashes.

(15)   **A Third Alleged Prediction**

      a.      *Sentence:*      Every / each boy didn't read one book.
      b.      *Judgment:*      Sentence (15a) only allows one scope reading: *every > one > not*

(16)   **The Explanation**

- Again, *every / each boy* must move to SpecDistP, and there must be something in SpecShareP.

- As explained in (14b,c), *not* cannot move to SpecShareP, but must stay in SpecNegP.

- Thus, the only DP able to move to SpecShareP is *one book*. We thereby can only map (15a) to the following LF:

$[_{\text{DistP}}$ **Each / every boy** $[\ DIST\ [_{\text{ShareP}}$ **one book** $[\ \ldots\ [_{\text{NegP}}$ **not** $\ldots\ [\ \ldots$ read $\ldots\ ]$


**3.2      Some Contrasts Between *Every* and *Each***

(17)   **Modification by *Almost***

      a.      Dave ate almost **twenty** apples.
      b.      Dave ate almost **no** apples.
      c.      Dave ate almost **all the** apples.
      d.      Dave ate almost **every** apple.
      e.      * Dave ate almost **each** apple.

(18)   **Generalization**

"*Every* has a function of pure universality that *each* lacks." That is, the meaning of *every* seems to be inherently connected with 'exhaustificiation.'

- Thus, *every* can designate the "end point of a scale", and so combine with *almost*.

- This property might also be related to the following fact: [1]

(19)   **Modification by *Not***

      a.      Not **all** the boys ate ice cream.
      b.      Not **every** boy ate ice cream.
      c.      * Not **each** boy ate ice cream.

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[1] Please bear in mind that I'm attempting to paraphrase here Beghelli & Stowell's own discussion. I don't myself clearly see how (19) is related to the generalization in (18).

(20)    ***Every*, *Each* and Collective Predication Again**

There seem to be environments where *every* can be forced into a kind of 'collective reading'. These environments are not able to force *each* into a similar such reading.

a.    (i)    *Sentence:*            It took **all** the boys to lift that piano.
       (ii)   *Verifying Scenario:*   The boys are lifting the piano together as a team.

b.    (i)    *Sentence:*            It took **every** boy to lift that piano.
       (ii)   *Verifying Scenario:*   The boys are lifting the piano together as a team.

c.    (i)    *Sentence:*            * It took **each** boy to lift that piano.

(21)    ***Every*, *Each* and Generics**

As we observed in (5b), it is possible to understand sentences of the form "Every NP VP" as generic statements about NPs. However, sentences of the form "Each NP VP" must be understood as restricted to some contextually salient subset of NPs.

a.    Every dog has a tail.         (Generic statement about dogs)
b.    Each dog has a tail.          (Statement about some salient subset of dogs.)

(22)    **Beghelli & Stowell's (1997) Hypothesis: "Every NP" is Not Quantificational**

• Like definites and indefinites, *every NP* is of type *e,* and denotes a variable that can be unselectively bound by a GEN operator (21a).

• Being of type *e, every NP* can also (in principle) allow for collective readings (20b).

• However, *each NP* truly is quantificational, and so cannot be unselectively bound by GEN (21b), and cannot allow for collective readings (20c).

(23)    **Obvious, Burning Question**        What about all the obvious differences between *Every* NP and (in)definites?

(24)    **Unsatisfying Answer**
         Hand-waving towards Szabolcsi (1996), which I'm not myself able to follow.

(25)    **Supporting Evidence?**

a.    *Sentence:*    One boy didn't read every book.
       *Judgment:*   Allows the following scope reading: *one > not > every*

b.    *Sentence:*    One boy didn't read each book.
       *Judgment:*   Allows only the following scope reading: *each > one > not*

(26)   **Explanation**

    a.    <u>For Fact in (25b):</u>
*Each book* must appear in SpecDistP. Thus, something must appear in SpecShareP. For reasons mentioned above, this can't be *not*, which has to stay in SpecNegP. Thus, the only thing that can be in SpecShareP is *one boy*. Thus, we can only map (25b) to the following LF:

[$_{DistP}$ **Each book** [ *DIST* [$_{ShareP}$ **one boy** [ … [$_{NegP}$ **not** … [ … read … ]

    b.    <u>For Fact in (25a)</u>
*Every book* doesn't always bear the [+DIST] feature, and so needn't raise to SpecDistP. Thus, we can map sentence (25a) to the following LF:

[$_{AgrS}$ **one boy** … [$_{NegP}$ **not** … [$_{AgrO}$ **every book** [… read … ]

(27)   **Burning, Unanswered Question**

What about the facts in (13) and (15), which suggested that *every NP* <u>does</u> have to move in to DistP, above negation?

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4.    **Farkas (1997) "Dependent Indefinites"**

- The main focus of Farkas's paper are so-called 'dependent indefinites', which are indefinites that seem to require that they be interpreted in the scope of another operator.

- At one point, Farkas considers whether the 'inverse' to this ever occurs, whether there are any quantificiational operators that require some other operator to be in their scope.

- Farkas proposes that *each* NP in English might be such a case, noting the (alleged) contrast between sentences like (28a) and (28b).

(28)   *Every NP* **Needs An Indefinite in Its Scope?**

    a.    Each child owns a book.
    b.    * Each child is intelligent.
    c.    Each child jumped.

- Farkas proposes that the existential operator over Davidsonian event arguments might satisfy this requirement of *each* NP, as the contrast between (29c) and (28b) indicates.

- Unfortunately, this proposal is not fully worked out or formalized by Farkas, but one can see affinities between it and the syntactic proposals of Beghelli & Stowell (1997).

## 5. Tunstall (1998) "Distributivity and Differentiation: *Each* and *Every*"

More than any work since Vendler (1967), Tunstall (1998) focuses on some apparent differences in the truth-conditions of sentences containing *every* and *each*.

Tunstall's discussion is relatively informal, but she makes a number of tantalizing observations and generalizations, ones that seem amenable to formal treatment…

(29) **The Distinction Between 'Partially Distributive' and 'Completely Distributive'**

- Tunstall begins by introducing a distinction between 'partially distributive' and 'completely distributive' events.

- She does not offer a formal definition of these terms, but from her informal examples, it seems rather clear what she intends…

a. <u>Sentence:</u>     Mary lifted the packages.

b. <u>Collective Scenario:</u>       *All the packages lifted at once.*

| Liftings | Agent | Theme |
|---|---|---|
| $e_1$ | Mary | $p_1 + p_2 + p_3 + p_4 + p_5$ |

c. <u>Partially Distributive Scenario:</u>
*All the packages were not lifted at once, **but some were**.*

| Liftings | Agent | Theme |
|---|---|---|
| $e_1$ | Mary | $p_1 + p_2 + p_3$ |
| $e_2$ | Mary | $p_4 + p_5$ |

d. <u>Completely Distributive Scenario:</u>    *The packages were lifted **one by one**.*

| Liftings | Agent | Theme |
|---|---|---|
| $e_1$ | Mary | $p_1$ |
| $e_2$ | Mary | $p_2$ |
| $e_3$ | Mary | $p_3$ |
| $e_4$ | Mary | $p_4$ |
| $e_5$ | Mary | $p_5$ |

(30) **First Key Claim: "The Event Distributivity Condition"**

A sentence containing a DP headed by *every* can be true of event structures that are at least partially distributive.

(31)　**Second Key Claim: "The Differentiation Condition"**

A sentence containing a DP headed by *each* can **only** be true of event structures that are completely distributive.

(32)　**Some Evidence: Ability to Combine with …*But Not Individually***

　　a.　　(i)　　Ricky weighed **every** apple from the basket, but not individually.
　　　　　(ii)　　?? Ricky weighed **each** apple from the basket, but not individually.

　　b.　　(i)　　Jake photographed **every** child, but not individually.
　　　　　(ii)　　?? Jake photographed **each** child, but not individually.

　　c.　　Explanation:
　　　　　The phrase *but not individually* rules out a completely distributive event structures like the following. Thus, *not individually* is incompatible with *each*, but not *every*

| Weighings | Agent | Theme | Photographings | Agent | Theme |
|---|---|---|---|---|---|
| $e_1$ | Ricky | apple$_1$ | $e_1$ | Jake | kid$_1$ |
| $e_2$ | Ricky | apple$_2$ | $e_2$ | Jake | kid$_2$ |
| $e_3$ | Ricky | apple$_3$ | $e_3$ | Jake | kid$_3$ |

(33)　**Some Further Evidence**

　　a.　　Sentence:　　　　　Carol mashed each potato.

　　b.　　Scenarios:　　　　(i)　　*Mashings at Different Times:*
　　　　　　　　　　　　　　　　　Carol mashed the potatoes one after the other.

　　　　　　　　　　　　　　(ii)　*Mashings at Different Locations, Same Time:*
　　　　　　　　　　　　　　　　　Carol arrayed the potatoes in a line. Then, using a board, she mashed them all simultaneously.

　　　　　　　　　　　　　　(iii)　*Mashing at Same Time, Location*
　　　　　　　　　　　　　　　　　Carol dumped a bowl of potatoes into a food processor and his 'Start'.

　　c.　　Judgment:　　Sentence (33a) is a felicitious description of (i) and (ii), but not (iii)

　　d.　　Explanation:　Only in (i) and (ii) are there (salient) subevents of mashing for each potato.

(34)  **A Challenge: Passivization of QDP**

    a.   (i)   *Sentence:*    Each basket was lifted.

         (ii)  *Judgment:*   True in a scenario where some baskets were lifted together.

    b.   <u>Explanation:</u>
- It's often been noted that the context determines where we stop dividing up events in our domain into subevents (Kratzer 2008)
  - Though we could continue *ad infinitum*, after a certain point, the subevents cease being salient, and so they aren't part of our model.

- Since they occupy different space, whenever two baskets are lifted together, there are (always) two subevents of the lifting event, one for each basket.

- Generally, however, these 'sub-lifting', 'basket-events' are not *salient*. Thus, they will not form part of our domain of events.

- When *each basket* is passivized, however, this can raise to saliency those distinct 'sub-lifting', 'basket events'.

- In such contexts, there will be a distinct sub-event of the lifting for each basket, and so (31) will be satisfied, and so (33a) will be acceptable.

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(35)  **General Prediction**

A general means of making sentences containing *each NP* acceptable is to raise the saliency of each individual entity in the extension of the NP.

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(36)  **Further Evidence**

Melinda wounded **each** cat, but not separately.

<u>Explanation:</u>
- Again, since they occupy different space, whenever two cats are wounded together, there are (always) two subevents of the wounding event, one for each cat.

- Unlike baskets, cats are inherently interesting, and so these 'sub-wounding', 'cat-events' are likely to be salient, and so part of our domain of events.

- Thus, there will be a distinct sub-event of the wounding for each cat (even if some are wounded together), and so (31) will be satisfied.

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(37)  **Burning Question:** Well, what about the alleged anomaly of (32bii)?

(38)    **A Further Puzzle: Descriptions of Processes versus Resulting States**

    a.    (i)    Carol mashed each potato.
            (ii)    ?? Carol cooked each potato.

    b.    (i)    The trainer carried each bag to the locker room.
            (ii)    ?? The trainer filled up each bag.

    c.    (i)    Terry photographed each lampshade.
            (ii)    ?? Terry destroyed each lampshade.

    d.    <u>Discussion:</u>

- Given its semantics, *each* describes how a particular (complex) event comes into being (*i.e.*, via distinct sub-events for each of a set of participants).

- Thus, *each* will be most natural in those contexts where the *process* component of an event is of most importance / relevance.

- In the (i)-sentences, the verb's semantics includes a kind of 'manner' component.
    - Thus, with these verbs, the *process* component of the event is made salient / relevant, and so use of *each* is felicitous.

- In the (ii)-sentences, the verb's semantics does *not* include any 'manner' component; rather it just describes a resulting state.
    - Thus, with these verbs, the *process* component of the event is *not* salient / relevant, and so use of *each* is not felicitious.

(39)    **Supporting Evidence?**

    a.    ?? Terry destroyed each lampshade.
    b.    ?? Terry completely destroyed each lampshade
    c.    Terry methodically destroyed each lampshade.

<u>Discussion:</u>     In (39c), the adverb *methodically* (unlike *completely*), provides a manner description. Thus, the *process* component of the event is made salient / relevant, and so *each* becomes felicitous.

(40)    **Supporting Evidence?**

    a.    Ricky weighed each apple.
    b.    ?? Ricky took each apple.

<u>Discussion:</u> This contrast, noticed by VanLehn (1978), may be due to the fact that there is a significant 'manner' component to the meaning of *weigh*, but not that of *take*.

(41)    **An Additional Means for Making Subevents Salient: Secondary Predicates**

       a.      (i)      ?? Mary remembered each camper.
               (ii)     Mary remembered each camper happy.

       b.      (i)      ?? Each person left the room.
               (ii)     Each person left the room happy.

Discussion:

• When sentences like (41ai) and (41bi) are said out-of-the-blue, it might not be clear to listeners why the individual 'remembering' and 'leaving' events should be salient enough to warrant use of *each*.

• However, when the secondary predicates in (41aii) and (41bii) are added, this "relays a property of those individuals that held during the event…the property adds content to the subevents", thus making those events salient and part of our domain of events.

(42)    **An Additional Means for Making Subevents Salient: Scope Over Indefinite**

       a.      (i)      ?? Rick took each apple.
               (ii)     A clerk took each apple.

       b.      (i)      ?? The trainer filled up each bag.
               (ii)     A clerk filled up each bag.

Discussion:

• As noted above, in the (i)-sentences, the individual subevents for each apple / bag are not usually salient in 'out-of-the-blue' contexts.

• However, in the (ii)-sentence, *each apple/bag* is able to scope over the indefinite *a clerk*. Under this reading, each subevent contains a different clerk as the agent, which serves to differentiate those events and make each one salient.

Supporting Evidence?:
If the verbs in (42a)/(42b) are changed to ones that have a 'manner'-component to their meaning, there is no longer a preference for wide scope of *each NP*.

       c.      A clerk weighed each apple.  (Narrow scope OK).

(43)     **Evidence from Questionnaire Study**

Tunstall (1998) reports a questionnaire study carried out with 38 UMass undergrads. Students were presented with a number of scenarios, akin to the following.

a.      "Different" Condition
        Max was writing a story about the uniforms that the workers at local stores had to wear. The new supermarket required their employees to wear a button-down shirt with a collar, but various colors were allowed. On Monday, the deli clerk had on a striped shirt, the cashier had on a floral shirt, … (*etc.*).

b.      "Same" Condition
        Max was writing a story about the uniforms that the workers at local stores had to wear. The new supermarket had a very strict dress code. They required their employees to wear a white button-down shirt with a collar, a red tie, black pants… (*etc.*)

After each scenario, students were asked to select a sentence describing the scenario. The choice was always between a sentence with *every* and one with *each*.

c.      Target Sentence:
        When Max visited the store, he wrote down what ( *every / each* ) person was wearing.

d.      Predictions:

        • In the 'different conditions', the individual persons are clearly differentiated according to their outfits. Thus, the individual subevents containing them are made salient. Thus, *each* should be possible / preferred.

        • In the 'same conditions', the individual persons are not clearly differentiated. Thus, the subevents containing them are no salient, and so *each* should be dispreferred, resulting in a preference for *every*.

d.      Results:        Predictions Supported!

|                     | **Each**   | **Every**  |
| ------------------- | ---------- | ---------- |
| **Diff. Condition** | 29 (76%)   | 9 (24%)    |
| **Same Condition**  | 14 (37%)   | 24 (63%)   |

        • But note that in the 'different condition', there's more of a 'pressure' to use *each* than there is to use *every* in the 'same condition'…

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## 6.      Concluding Summary

Again, to my knowledge, there isn't much else on the syntax/semantics of *each* and how it might differ from that of *every*. There are definitely a few key generalizations that seem to pop out.

(44)     **Some Generalizations**

* With *each NP*, the quantification always has to be over some contextually salient set of NPs, and not over all NPs in the universe.

    o   Put differently, *every NP* is OK in 'characterizing sentences' (generics), but not *each NP*

* *Every NP* does seem to sometimes allow for collective readings; these aren't as possible for *each NP*. However, such readings do become more possible for *each NP* if the individual NPs are in some way 'made salient'.

    a.      Bill took every one of the apples.     (can describe collective taking of the bushel)

    b.      Bill took each one of the apples.     (cannot describe collective taking)

    c.      Each of the apples was taken.     (can describe collective taking)

* *Each NP* – but not *every NP* – seems to carry a kind of obligatory pluractionality (modulo saliency conditions mentioned above)

    d.      Every / *Each deputy rose at the same time.

* *Every NP* – but not *each NP* – can be modified by *almost*

    e.      Almost every / *each boy showed up.

* *Each NP* – but not *every NP* – seems to require some quantifier in its scope (Beghelli & Stowell 1997, Farkas 1997)

    f.      Every student was intelligent.

    g.      * Each student was intelligent.