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## Chapter 2. DP and DP.

### 0. Coordinating Generalized Quantifiers, and the syntax & semantics of collectivized Right-Node Raising

- (1) No more than one Columbia student openly convened and no more than 35 Harvard students privately formed a strike committee of 36 that the Columbia student chaired and the Harvard students staffed.
- (2) No more than one Columbia student openly and no more than 35 Harvard students privately formed a strike committee of 36 that the Columbia student chaired and the Harvard students staffed.

- (3) No more than one Columbia student openly *participated* and no more than 35 Harvard students privately *participated*, & it formed a strike committee of 36 that the Columbia student chaired and the Harvard students staffed.
- (4) No more than one Columbia student *participated* and no more than 35 Harvard students *participated*, & it formed a strike committee of 36 that the Columbia student chaired and the Harvard students staffed.
- (5) No more than one Columbia student and no more than 35 Harvard students formed a strike committee of 36 that the Columbia student chaired and the Harvard students staffed.
- (6) The Columbia students and the Harvard students formed the unbroken chain around the Pentagon.
- (7) No Columbia students and no Harvard students conspired to overthrow the government.
- (8) No Columbia students  $\Phi$  and no Harvard students conspired to overthrow the government.
- (9) Most stars and most dots are all connected.  
Few stars and few dots are all connected. (Barwise 1979)
- (10) Most stars are all connected, and most dots are all connected.  
Few stars are all connected, and few dots are all connected.
- (11) No Columbia students secretly and no Harvard students openly conspired to overthrow the government.
- (12) No Columbia students drafted and no Harvard students redacted their joint manifesto for the revolution.
- (13) Not many a Columbia student proposed to the strike committee to adopt a resolution to encourage violent resistance to— and not many a Harvard student accepted to endorse to the strike committee a call for illegal action against— attempts by police to prevent them from chaining each other to the White House fence.
- (14) No Columbia students ...  $W(e, x)$ ..., and no Harvard students ...  $W(e, x)$ ....
- (15) No Columbia students conspired to overthrow the government, and no Harvard students conspired to overthrow the government.

#### 0.0. Translating away DP-and-DP.

- (16) i. the conspiracies to overthrow the government concerned involve only Columbia students and Harvard students, and

- ii. the quantifiers apply to such conspiracies and not to other actions that the students may have engaged in, and
  - iii. the quantifiers emulate branching or binary quantification.
- (17) No Columbia students participated ( $'W(e,x)'$ ), and no Harvard students conspired (with Columbia students) to overthrow the government.
  - (18) No Columbia students participated in conspiracies to overthrow the government, and no Harvard students participated in conspiracies to overthrow the government.
  - (19) No Columbia students participated with *Harvard students* in conspiracies to overthrow the government, and no Harvard students participated with *Columbia students* in conspiracies to overthrow the government.
  - (20) No Columbia student and no Harvard student were a strike committee all by themselves.
  - (21) No Columbia student participated with *a Harvard student* in being a strike committee all by themselves, and no Harvard student participated with *a Columbia student* in being a strike committee all by themselves.
  - (22) No Columbia student and no Harvard students were a strike committee all by themselves.
  - (23) No Columbia student participated with *Harvard students* in being a strike committee all by themselves, and no Harvard students participated with *a Columbia student* in being a strike committee all by themselves.
  - (24) No Columbia students and no Harvard students were a strike committee all by themselves.
  - (25) No Columbia students participated with *Harvard students* in being a strike committee all by themselves, and no Harvard students participated with *Columbia students* in being a strike committee all by themselves.
  - (26) No Columbia students and no Harvard student were a strike committee all by themselves.
  - (27) No Columbia students participated with *a Harvard student* in being a strike committee all by themselves, and no Harvard student participated with *Columbia students* in being a strike committee all by themselves.
  - (28) No Columbia student(s) secretly and no Harvard student(s) openly were on a strike committee all by themselves.
  - (29) No Columbia student(s) launched and no Harvard student(s) joined a strike committee with only themselves in it.
  - (30) No Columbia student(s) secretly and no Harvard student(s) openly were on a strike committee in which the Columbia student(s) led and the Harvard student(s) followed.

- (31) No Columbia student(s) launched and no Harvard student(s) joined a strike committee in which the Columbia student(s) led and the Harvard student(s) followed.
- (32) Not many a Columbia student—exactly two, in fact— and no more than 35 Harvard students (in total) were a strike committee in which the Columbia student led and the Harvard students followed.
- (33) Not many a Columbia student secretly—exactly two, in fact— and no more than 35 Harvard students openly were on a strike committee in which the Columbia student led and the Harvard students followed.
- (34) Not many a Columbia student—exactly two, in fact— launched and no more than 35 Harvard students joined a strike committee in which the Columbia student led and the Harvard students followed.
- (35) A bishop, a rook and a pawn will always checkmate in ten moves; but, a rook, a pawn and a bishop only stalemate.
- (36) A bishop *here<sub>1</sub>*, a rook *here<sub>2</sub>* and a pawn *here<sub>3</sub>* while a bishop *here<sub>1</sub>*, a rook *here<sub>2</sub>* and a pawn *here<sub>3</sub>* will always checkmate in ten moves; but, a rook *here<sub>1</sub>*, a pawn *here<sub>2</sub>* and a bishop *here<sub>3</sub>* while a rook *here<sub>1</sub>*, a pawn *here<sub>2</sub>* and a bishop *here<sub>3</sub>* only stalemate.
- (37) A bishop, a rook and a pawn will always checkmate in ten moves but not without sacrificing the bishop, the rook or the pawn.
- (38) A bishop (here) retreats, a rook (here) advances and a pawn (here) remains in place to checkmate in ten moves with the sacrifice of the bishop, the rook or the pawn.
- (39) Not many a bishop from any position on a chessboard ever retreated, not many a rook from a second position ever advanced and not many a pawn at a third position ever remained in place to checkmate in ten moves without the sacrifice of the bishop, the rook or the pawn.
- (40) [ $\forall c$ : chessboard(*c*)] (Not many a bishop from any position on *c* ever retreated, not many a rook from a second position on *c* ever advanced and not many a pawn at a third position on *c* ever remained in place to checkmate in ten moves without the sacrifice of the bishop on *c*, the rook on *c* or the pawn on *c*).
- (41) Not many a bishop from any position on a chessboard *with a rook in a second position and a pawn in a third position* ever retreated, not many a rook from a second position *on a chessboard with a bishop in first position and a pawn in a third position* ever advanced and not many a pawn at a third position *on a*

*chessboard with a bishop in first position and a rook in second position* ever remained in place to checkmate in ten moves without the sacrifice of the bishop, the rook or the pawn.

- (42) [DP  $QX$ :  $\exists E \exists f$ (Address[ $E, f$ ] NP[ $E, X$ ])]  
[DP Det [AdrP Adr NP]]
- (43) Not many a bishop from any position on a chessboard ever retreated, not many a rook from a(nother/ second) position on such a chessboard ever advanced and not many a pawn at a(nother/ third) position on such a chessboard ever remained in place to checkmate in ten moves without the sacrifice of the bishop, the rook or the pawn.<sup>1</sup>
- (44) Not many a Columbia student *anywhere*—exactly two, in fact— launched and no more than 35 Harvard students *anywhere* (in total) joined a strike committee in which the Columbia student *there* led and the Harvard students *there* followed.
- (45) Not many a Columbia student *anywhere*—exactly two, in fact— launched and no more than 35 Harvard students *anywhere* (in total) joined so that *the events of the Columbia student there launching and the Harvard students there joining* amounted to a strike committee in which the Columbia student *there* led and the Harvard students *there* followed.
- (46) Biff did something and possibly Tiff did something. It started the riot.
- (47) Biff and possibly Tiff started the riot.
- (48) Every Columbia student and every Harvard student has sung a song of peace and love.
- (49) In perfect four-part harmony, every songstress sang solo a single melodic line.  
(Davies 1991, Taylor 1985)
- (50) Every songstress sang solo a single melodic line, and it was perfect four-part harmony.  
It being perfect four-part harmony, every songstress sang solo a single melodic line.
- (51) \* A Columbia student and a Harvard student has sung a song of peace and love.
- (52) A Columbia student and a Harvard student have sung a song of peace and love.

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<sup>1</sup> Compare:

- (i) Not many a king in legends with the characters herein, not many a knight in such, not many a succubus in the same, and not many a true lady joining them ever tell a story very different from that of Arthur, the Redcrosse Knight, Duessa and Una in Book I of *The Faerie Queene*.

- (53) DeHk-et alia w marwaan  
Laughed.3fs Alia and Marwan  
*Alia and Marwan laughed.*
- (54) DeHk-u alia w marwaan  
Laughed.3mp Alia and Marwan  
*Alia and Marwan laughed.*
- (55) Not many a Columbia student launched and no more than 35 Harvard students  
joined a strike committee in which the Columbia student led and the Harvard  
students followed.
- (56) Not many a Columbia student *anywhere* launched and no more than 35 Harvard  
students *anywhere* joined so that *the events of the Columbia student there*  
*launching and the Harvard students there joining* amounted to a strike committee  
in which the Columbia student *there* led and the Harvard students *there* followed.
- (57) Marta con María levantaron el piano (Spanish, Camacho 1997: 206)  
Martha with Maria lifted.PL the piano
- (58) The Columbia students and the Harvard students surrounded the Pentagon.
- (59) [The  $X$ :  $C(X)$ ]  $\exists e_i$  Agent( $e_i, X$ ) and [The  $X$ : ( $X$ )]  $\exists e_j$  Agent( $e_i, X$ ) &  
[ $\neg E_{ij}$ :  $pro_{ij}$ ] Cause[ $E_{ij}, \dots$ ]...
- (60) The Columbia students surrounded the Pentagon.
- (61) [The  $X$ :  $C(X)$ ]  $\exists e_i$  Agent( $e_i, X$ ) & [ $\neg E_i$ :  $pro_i$ ] Cause[ $E_i, \dots$ ]...
- (62) [The  $X$ :  $C(X)$ ]  $\exists e_i$  Agent( $e_i, X$ ) &  $\Delta_k$  and [The  $X$ : ( $X$ )]  $\exists e_j$  Agent( $e_i, X$ ) &  
[ $\neg E_{ij}$ :  $pro_{ij}$ ] Cause[ $E_{ij}, \dots$ ]...] ${}_k$ ,
- (63) What did Nixon know about and admit to?
- (64) \*What did Nixon know about and did he admit to?  
\*What did Nixon know about and he admitted to?
- (65) a. Sam repainted and Joe re-sided a new house.  
b. Sam repainted and later Joe re-sided a new house.
- (66) a. What Sam repainted and Joe re-sided was a new house.  
b. What Sam repainted and later Joe re-sided was a new house.
- (67) a. What Sam repainted and what Joe re-sided was a new house.  
b. What Sam repainted and what Joe later re-sided was a new house

### 0.1. Conspectus

- (68) Not many a Columbia student and no more than 35 Harvard students (in total) were a strike committee in which the Columbia student led and the Harvard students followed.
- (69) Not many a Columbia student secretly and no more than 35 Harvard students openly were on a strike committee in which the Columbia student led and the Harvard students followed.
- (70) Not many a Columbia student launched and no more than 35 Harvard students joined a strike committee in which the Columbia student led and the Harvard students followed.
- (71) \* No rocker and any roller has ever grooved to a funky disco beat.
- (72) No rocker and any roller have ever grooved to a funky disco beat.
- (73) No rocker and no roller has ever grooved to a funky disco beat.
- (74) No rocker and no roller have ever grooved to a funky disco beat.
- (75) \* Not any student of mine yesterday and any one of yours today has conjectured and proven  $p$  and *not p*.
- (76) Not any student of mine yesterday and any one of yours today have conjectured and proven (between them)  $p$  and *not p*.
- (77) No student of mine yesterday and none of yours today has conjectured and proven  $p$  and *not p*.
- (78) No student of mine yesterday and none of yours today have conjectured and proven (between them)  $p$  and *not p*.
- (79) No more than a single senator and no more than a single congressman from his home state have co-sponsored an antiwar resolution.
- (80) Not many a professor and not many a student of hers are conspiring to revive operant conditioning.
- (81) No more than a single senator introduced and no more than a single congressman from his home state co-sponsored an antiwar resolution.
- (82) Not many a professor secretly and not many a student of hers openly are conspiring to revive operant conditioning.
- (83) No more than a single senator sponsored an antiwar resolution, and no more than a single congressman from his home state helped him; and they were junior.
- (84) Not many a professor endorses operant conditioning, and not many a student of hers does either; but, they must all be behaviorist rats.

- (85) No more than a single senator sponsored an antiwar resolution, and *in any event of a senator sponsoring an antiwar resolution*, no more than a single congressman from his[=*the senator in that event*] home state helped him; and they were junior.
- (86) No more than a single senator *participated*, and *in any event of a senator participating*, no more than a single congressman from his[=*the senator in that event*] have co-sponsored an antiwar resolution.
- (87) No rocker and no roller has ever grooved to a funky disco beat.
- (88) a. No rocker and no roller have ever each grooved to a funky disco beat.  
b. No rocker and no roller have ever grooved together to a funky disco beat.
- (89) \* No rocker and none of his mamas has ever grooved to a funky disco beat.
- (90) No rocker and none of his mamas have ever grooved to a funky disco beat.
- (91) \*No math genius and no protégée of hers has conjectured and proven *p* and *not p*.
- (92) No math genius and no protégée of hers have conjectured and proven (between them) *p* and *not p*.
- (93) No rocker *somewhere<sub>i</sub>* *participates...& in those events there<sub>i</sub> all with the same one participant,...* and *in those events there<sub>i</sub>*, none of his[=*the rocker in those events*] mamas *somewhere<sub>i</sub>* *participates...& in those events there<sub>i</sub> all with the same one participant*+have ever grooved to a funky disco beat.

## 1. Syntax & semantics for DP-and-DP

### 1.0. Collectivized Right-Node Raising.

- (12) No Columbia students drafted and no Harvard students redacted their joint manifesto for the revolution.
- (94) No Columbia students drafted  $\Delta_\delta^2$  and no Harvard students redacted [ $\delta$  their joint manifesto for the revolution].
- (7) No Columbia students and no Harvard students conspired to overthrow the government.
- (11) No Columbia students secretly and no Harvard students openly conspired to overthrow the government.
- (95) No Columbia students *W-ed* (secretly) and no Harvard students *W-ed* (openly) conspired to overthrow the government.
- (96) No Columbia students *W-ed* (secretly)  $\Delta_\delta$  and no Harvard students *W-ed* (openly) [ $\delta$  conspired to overthrow the government].

<sup>2</sup> ‘ $\Delta$ ’ is used throughout to mark the deletion site or gap that Right-Node-Raising leaves behind in the first conjunct.



- (19) No Columbia students participated with *Harvard students* in conspiracies to overthrow the government, and no Harvard students participated with *Columbia students* in conspiracies to overthrow the government.
- (6) The Columbia students and the Harvard students formed the unbroken chain around the Pentagon
- (97) a. No Columbia students participated in *(any) such*, and no Harvard students participated in— *a conspiracy of theirs to overthrow the government*.  
b. No Columbia students participated in *it/that*, and no Harvard students participated in— *a conspiracy of theirs to overthrow the government*.
- (98) Not many a professor endorses operant conditioning; and, they must all be behaviorist rats.
- (99) Every wise investor invests her nest egg in the financial markets, and every foolish investor invests it also in the financial markets. (after Geach 1962)
- (100) No man can be friends with a woman he finds attractive. He always wants to have sex with her. (Billy Crystal in *When Harry Met Sally* (1989), cited in Poesio & Zucchi 1992)

### 1.1. Description without commitment

- (101) [No Columbia students  $W_j$ -ed (secretly)  $\Delta_\delta$ ] and no Harvard students  $W_k$ -ed (openly) [ $\delta$  [ $\neg E_{j,k} : pro_{j,k}$ ] conspired to overthrow the government].
- (102) [No Columbia students drafted<sub>j</sub>  $\Delta_\delta$ ] and no Harvard students redacted<sub>k</sub> [ $\delta$  [ $\neg E_{j,k} : pro_{j,k}$ ] their joint manifesto for the revolution].
- (103) *Not a single Columbia student (quickly) and not many a Harvard student (carefully) have redacted revolutionary tractates.*  
[[<sub>DP</sub>Not a single Columbia student] [ $W_j$ -ed (quickly)  $\Delta_\delta$ ]] and  
[[<sub>DP</sub>not many a Harvard student]  
[ $W_k$ -ed (carefully) [ $\delta$  [ $\neg E_{j,k} : pro_{j,k}$ ] have redacted revolutionary tractates]]]
- (104) *Not a single Columbia student quickly drafted and not many a Harvard student carefully redacted revolutionary tractates.*  
[[<sub>DP</sub> Not a single Columbia student] [quickly drafted<sub>j</sub>  $\Delta_\delta$ ]] and  
[[<sub>DP</sub> not many a Harvard student] [carefully redacted<sub>k</sub> [ $\delta$  [ $\neg E_{j,k} : pro_{j,k}$ ] revolutionary tractates]]]
- (105) Not many a professor endorses operant conditioning; and, they must all be behaviorist rats.

- (106) Not many a professor endorses operant conditioning, and not many a student does either; and, they must all be behaviorist rats.
- (107)  $[\iota X_{ij} : [\iota X_i : \text{professors who endorse operant conditioning}[X_i]] [\forall x: X_{ix}] X_{ij}x \ \& \ [\iota X_j : \text{students who endorse operant conditioning}[X_j]] [\forall x: X_{jx}] X_{ij}x]$   
*the  $X_{ij}$  such that the professor endorsing operant conditioning are among them & the students endorsing operant conditioning are among them.*
- (108)  $[\iota X: \Phi[X]] \Psi[X] \leftrightarrow_{\text{df}} \quad (\text{Sharvy 1980, with amendment})$   
 $[\exists X: \Phi[X] \ \& \ \forall Y(\Phi[X/Y] \rightarrow \forall y(Yy \rightarrow Xy)) \ \& \ \forall Z((\forall Y(\Phi[X/Y] \rightarrow \forall y(Yy \rightarrow Zy))) \rightarrow \forall x(Xx \rightarrow Zx))] \Psi[X]$
- (109) Few Columbia students drafted (press releases) and fewer Harvard students redacted joint manifestos, and it lasted no longer than a study break.
- (110) a. Lasting no longer than a study break, few Columbia students drafted (press releases) and fewer Harvard students redacted joint manifestos.  
 b. Few Columbia students drafted (press releases) and fewer Harvard students redacted joint manifestos, lasting no longer than a study break.

## 1.2. ‘Telescoping’ event pronouns

- (7) No Columbia student and no Harvard student conspired to overthrow the government.
- (8) No Columbia student  $\Phi$  and no Harvard student conspired to overthrow the government.
- (111) Biff did something and possibly Tiff did something, and it caused the riot.
- (112) No Columbia student cheered the other school’s football team, and no Harvard student did that either.
- (113) Not many a professor and not many a student of hers are conspiring to revive operant conditioning.
- (114) No more than a single senator and no more than a single congressman from his home state have co-sponsored an antiwar resolution.
- (115) No student and no professor she knew well collaborated.
- (116) No well-behaved child and none of her well-behaved siblings fought with each other over the bigger piece of cake.
- (117) Exactly one student and exactly one professor that shared the prize with her met at the awards ceremony.
- (118) Most any student and most any professor of his disagree at some point in graduate school.

- (119) No man can be friends with a woman he finds attractive. He always wants to have sex with her. (Billy Crystal in *When Harry Met Sally*, cited in Poesio & Zucchi 1992)
- (120) Not many a linguistics professor endorsed operant conditioning, and not many a student of hers did either.
- (121) No more than a single senator sponsored an antiwar resolution, and no more than a single congressman from his home state helped him.
- (122) “No many a professor ...  $W$  ..., and *whenever a professor  $W$* , not many a student of *that professor* are conspiring to revive operant conditioning.”
- (123) ??Every boy<sub>k</sub>, every one<sub>j</sub> of his<sub>k</sub> aunts, and every one<sub>j</sub> of her<sub>j</sub> pets were proud (of its<sub>j</sub> showing) at the dog-and-pony show.
- (124) a. Every boy assists every one of his aunts. He escorts them to their starting positions at the dog-and-pony show.  
b. ???Every boy assists every one of his aunts. He escorts her to her starting position at the dog-and-pony show.
- (125) a. Every boy assists every one of his aunts with every one of her pets. He escorts them and their prize pets to their starting positions.  
b. ???Every boy assists every one of his aunts with every one of her pets. He escorts her and her prize pet to their starting position.
- (126) ?Every boy attends the dog-and-pony show. He escorts every one of his aunts to her starting position. She then preps and preens her prize pet.<sup>3</sup>

### 1.3. Minding the gap

- (127) [[<sub>DP</sub>No Columbia students] [ $W_j$ -ed (secretly)  $\Delta_\delta$ ]] and  
[[<sub>DP</sub>no Harvard students]  
[ $W_k$ -ed (openly) [ $\delta$ [ $\gamma E_{j,k} : pro_{j,k}$ ] conspired to overthrow the government]]]  
*No Columbia students (secretly) and no Harvard students (openly) conspired to overthrow the government.*

<sup>3</sup> The telescoping in (126) improves on (123). I expect that the independently tensed clauses of (126) have greater resources for referring to the events described by antecedent clauses. I will return to this point below with more to say about the logical form of (123).

- (128)  $[[_{DP} \text{No Columbia students}] [\text{drafted}_j \Delta_\delta]]$  and  
 $[[_{DP} \text{no Harvard students}] [\text{redacted}_k [\delta [\text{?}E_{j,k} : \text{proj}_{j,k}] \text{their joint manifesto}]]]$   
*No Columbia students drafted and no Harvard students redacted their joint manifesto for the revolution.*
- (129)  $[[_{DP} \text{Not many a Columbia student}] [\text{proposed to the strike committee to adopt a resolution to encourage violent resistance to}_i \Delta_\delta]]$  and  
 $[[_{DP} \text{not many a Harvard student}] [\text{accepted to endorse to the strike committee a call for illegal action against}_j [\delta [\text{?}E_{i,j} : \text{proj}_{i,j}] \text{attempts by police to prevent them from chaining each other to the White House fence}]]]]]$   
*Not many a Columbia student proposed to the strike committee to adopt a resolution to encourage violent resistance to— and not many a Harvard student accepted to endorse to the strike committee a call for illegal action against— attempts by police to prevent them from chaining each other to the White House fence.*
- (130) The Columbia students (quickly) and the Harvard students (slowly) surrounded the Pentagon and were crowded into the Mall.
- (131)  $[[_{DP} \text{The Columbia students}] [W_j\text{-ed } \Delta_\delta]]$  and  
 $[[_{DP} \text{The Harvard students}] [W_k\text{-ed } [\delta [\text{?}E_{j,k} : \text{proj}_{j,k}] [\text{?}E_{l,m} : \text{proj}_{l,m}] O[E_{j,k}, E_{l,m}]] \exists E_l(\text{surrounded}_l \text{the Pentagon}) \text{ and } \exists E_m(\text{were crowded}_m \text{into the Mall})]]]$
- (132) The Columbia students and the Harvard students donated ten thousand armbands for protest marches and sold fifty thousand peace buttons for mass distribution.
- (133) The Columbia students donated and the Harvard students sold ten thousand armbands to protesters and fifty thousand peace buttons to bystanders.
- (134)  $[[_{DP} \text{The Columbia students}] [\text{donated}_j \Delta_\delta]]$  and  
 $[[_{DP} \text{The Harvard students}] [\text{sold}_k [\delta [\text{?}E_{j,k} : \text{proj}_{j,k}] [\text{?}E_{l,m} : \text{proj}_{l,m}] O[E_{j,k}, E_{l,m}]] \exists E_l(10K \text{ armbands to}_l \text{protesters}) \text{ and } \exists E_m(50K \text{ buttons to}_m \text{bystanders})]]]$
- (135)  $[[_{DP} \text{No Columbia students}] [W_i\text{-ed } \Delta_\delta]]$  and  
 $[[_{DP} \text{No Harvard students}] [W_i\text{-ed } [\delta [\text{?}E_{i,i} : \text{proj}_{i,i}] \text{conspired to overthrow the government}]]]$
- (136) a. No Columbia students participated in *(any) such*, and no Harvard students participated in— *a conspiracy of theirs to overthrow the government*.  
b. No Columbia students participated in *it/that*, and no Harvard students participated in— *a conspiracy of theirs to overthrow the government*.
- (137)  $[\text{No } X: \exists E C[E, X]] (\exists E_j W[E_k, X] [\text{?}E_j : \text{proj}_j] \Delta_\delta[E_j])$  and... i.e.,  
*No Columbia students are such that they participate & it [their participation] is  $\Delta_\delta$ .*

- (138) [No  $X$ :  $\exists E$  C[ $E$ ,  $X$ ]]( $\exists E_i$  W[ $E_i$ ,  $X$ ] [ $\gamma E_i$  :  $pro_i$ ]]( $\forall e$ :  $E_i e$ ][ $\gamma E_\delta$  :  $\Delta_\delta$ ] $E_\delta e$ ) and...  
*No Columbia student are such that they participate and these events of participation are events that  $\Delta_\delta$ .*
- (139) ...[ $\forall e$ :  $E_i e$ ][ $\gamma E_\delta$  :  $\Delta_\delta$ ] $E_\delta e$ ) and...
- (140) ...[ $\forall e$ :  $E_i e$ ][ $\gamma E_\delta$  :  $\Delta_\delta$ ] $E_\delta e$ ) and...
- (141) [No  $X$ :  $\exists E$  C[ $E$ ,  $X$ ]]( $\exists E_i$  W[ $E_i$ ,  $X$ ] [ $\gamma E_i$  :  $pro_i$ ]]( $\forall e$ :  $E_i e$ ][ $\gamma E_\delta$  :  $\Delta_\delta$ ] $E_\delta e$ ) and  
 [No  $Y$ :  $\exists E$  H[ $E$ ,  $Y$ ]]( $\exists E_i$  W[ $E_i$ ,  $Y$ ]  
 ( $\delta$  [ $\gamma E_{i,i}$  :  $pro_{i,i}$ ] conspired to overthrow the government[ $E_{i,i}$ ]))
- (142) [No  $X$ :  $\exists E$  C[ $E$ ,  $X$ ]]  
 ( $\exists E_i$  W[ $E_i$ ,  $X$ ] [ $\gamma E_i$  :  $pro_i$ ]]( $\forall e$ :  $E_i e$ ][ $\gamma E_{i,i}$  :  $pro_{i,i}$  conspired...government[ $E_{i,i}$ ]]  $E_{i,i} e$ )  
 and  
 [No  $Y$ :  $\exists E$  H[ $E$ ,  $Y$ ]]( $\exists E_i$  W[ $E_i$ ,  $Y$ ]  
 [ $\gamma E_{i,i}$  :  $pro_{i,i}$ ] conspired to overthrow the government[ $E_{i,i}$ ]))
- (143) [ $DP_m$  D NP]( $\Phi$   $\Delta_\delta$ ) and [ $DP_n$  D NP]( $\Psi$  [ $\gamma E_{i,i}$  :  $pro_{i,i}$ ]  $\Omega_\delta$ )  $\Rightarrow$   
 [ $DP_m$  D NP]( $\Phi$  [ $\forall e$ :  $E_i e$ ][ $\gamma E_\delta$ :  $\Phi$ ;  $\Psi$ ]  $\Omega_\delta$ ] $E_\delta e$ ) and [ $DP_n$  D NP]( $\Psi$  [ $\gamma E_{i,i}$ :  $\Phi$ ;  $\Psi$ ]  $\Omega$ )  
 ‘[ $DP_m$  D NP]  $\Phi$  in the events of  $NP_m$ - $\Phi$ -ing and  $NP_n$ - $\Psi$ -ing that  $\Omega$ , and  
 [ $DP_n$  D NP]( $\Psi$  & the events of  $NP_m$ - $\Phi$ -ing and  $NP_n$ - $\Psi$ -ing  $\Omega$ )’
- (144) *Not many a Columbia student proposed to the strike committee to adopt a resolution to encourage violent resistance to— and not many a Harvard student accepted to endorse to the strike committee a call for illegal action against— attempts by police to prevent them from chaining each other to the White House fence.*  
 [[ $DP$  Not many a Columbia student] [proposed to the strike committee to adopt a resolution to encourage violent resistance to<sub>i</sub>  $\Delta_\delta$ ]] and  
 [[ $DP$  not many a Harvard student] [accepted to endorse to the strike committee a call for illegal action against<sub>i</sub> [ $\delta$  [ $\gamma E_{i,i}$  :  $pro_{i,i}$ ] attempts by police to prevent them from chaining each other to the White House fence]]]
- (145) After the dust settled—and nothing is certain given source confidentiality—, not many a Columbia student related to *The New York Times* a report of a police action to subdue a demonstrator at Columbia, and not many a Harvard student delivered to *The Boston Globe* an eyewitness account of an FBI attempt to silence a demonstrator at Harvard. They, in fact, were not more than a couple suspects, if any, and they must have been among those whom the NYPD and FBI had on a watch list.

- (146)  $[[_{DP} \text{ No Columbia students}] [\text{drafted}_i \Delta_\delta]]$  and  
 $[[_{DP} \text{ no Harvard students}] [\text{redacted}_i [\delta [\gamma E_{i,i} : \text{pro}_{i,i}] \text{ their joint manifesto}]]]$   
*No Columbia students drafted and no Harvard students redacted their joint manifesto for the revolution.*
- (147)  $[\text{No } X_1 : \exists E C[E, X_1]]$   
 $(\exists E_0 W[E_0, X_1] [\gamma E_0 : \text{pro}_0][\gamma E_1 : \text{pro}_1] O[E_0, E_1] \exists E_1 \exists X \text{ Agent}[E_1, X]$   
 $[\gamma E_1 : \text{pro}_1][\gamma E_2 : \text{pro}_2] \text{Cause}[E_1, E_2] \exists E_2 \text{ draft}[E_2]$   
 $[\gamma E_2 : \text{pro}_2][\forall e : E_2 e][\gamma E_\delta : \Delta_\delta] E_\delta e)$  and  
 $[\text{No } X_1 : \exists E H[E, X_1]]$   
 $(\exists E_0 W[E_0, X_1] [\gamma E_0 : \text{pro}_0][\gamma E_1 : \text{pro}_1] O[E_0, E_1] \exists E_1 \exists X \text{ Agent}[E_1, X]$   
 $[\gamma E_1 : \text{pro}_1][\gamma E_2 : \text{pro}_2] \text{Cause}[E_1, E_2] \exists E_2 \text{ redact}[E_2]$   
 $[\gamma E_{2,2} : \text{pro}_{2,2}][\gamma E_3 : \text{pro}_3] O[E_2, E_3]$   
 $[\text{the } X_3 : \exists E M[E, X_3]] \exists E_0 W[E_0, X_3][\gamma E_0 : \text{pro}_0][\gamma E_1 : \text{pro}_1] O[E_0, E_1]$   
 $\exists E_3 \exists X \text{ Patient}[E_3, X])$

#### 1.4. Translation myths & rules

- (148) No more than a few Deadheads could have all been at Magoo's Pizza in Menlo Park on May 5, 1965,..., at Ken Kesey's Acid Test in San Jose on December 4, 1965,..., at the Fillmore West in San Francisco on January 8, 1966, ..., at the Monterey Pop Festival 1967, ..., at Woodstock 1969, ..., and at the Grateful Dead's final concert July 9, 1995. They must all be no younger than 30.
- (149) (*Event descriptive anaphora*)  
 $[_{DPM} D NP](\Phi \Delta_\delta)$  and  $[_{DPn} D NP](\Psi [\gamma E_{j,k} : \text{pro}_{j,k}] \Omega_\delta) \Rightarrow$   
 $[_{DPM} D NP](\Phi \Delta_\delta)$  and  $[_{DPn} D NP](\Psi [\gamma E_{j,k} : ([\gamma X_m : NP_m] \Phi, [\gamma X_n : NP_n] \Psi)[E_{j,k}]) \Omega_\delta)$   
 $'[_{DPM} D NP](\Phi \Delta_\delta)$ , and  
 $[_{DPn} D NP](\Psi \& \text{ the events of } NP_m\text{-}\Phi\text{-ing and } NP_n\text{-}\Psi\text{-ing } \Omega)'$
- (150) (*description with split antecedents*)  
 $[ (\Phi, \Psi)[E_{j,k}] \text{ for } \gamma E_j : \Phi][\forall e : E_j e] E_{j,k} e \& [\gamma E_k : \Psi][\forall e : E_k e] E_{j,k} e \&$   
 $\forall E(([\gamma E_j : \Phi][\forall e : E_j e] Ee \& [\gamma E_k : \Psi][\forall e : E_k e] Ee) \rightarrow [\forall e :$   
 $E_{j,k} e] Ee)$   
*events  $E_{j,k}$  are the  $\Phi$ -ings  $E_j$  & the  $\Psi$ -ings  $E_k$*
- (151) (*Translation for Right-Node Raising*)  
 $[_{DPM} D NP](\Phi \Delta_\delta)$  and  $[_{DPn} D NP](\Psi [\gamma E_{j,k} : \text{pro}_{j,k}] \Omega_\delta) \Rightarrow$   
 $[_{DPM} D NP](\Phi [\forall e : E_j e][\gamma E_{j,k} : ([\gamma X_m : NP_m] \Phi, [\gamma X_n : NP_n] \Psi)[E_{j,k}] \Omega] E_{j,k} e)$  and  
 $[_{DPn} D NP](\Psi [\gamma E_{j,k} : ([\gamma X_m : NP_m] \Phi, [\gamma X_n : NP_n] \Psi)[E_{j,k}] \Omega)$   
 $'[_{DPM} D NP] \Phi \text{ in the events of } NP_m\text{-}\Phi\text{-ing and } NP_n\text{-}\Psi\text{-ing that } \Omega, \text{ and}$   
 $[_{DPn} D NP](\Psi \& \text{ the events of } NP_m\text{-}\Phi\text{-ing and } NP_n\text{-}\Psi\text{-ing } \Omega)$

### 1.5. Phrasing

(152)  $[\text{DP}_m \text{ D NP}](\Phi \Delta_\delta)$  and  $[\text{DP}_n \text{ D NP}](\Psi [\tau E_{i,i} : \text{pro}_{i,i}] \Omega_\delta)$

(153)  $*([\text{DP}_m \text{ D NP}](\Phi \Delta_\delta)$  and  $[\text{DP}_n \text{ D NP}]\Psi) \Omega_\delta$

(154) John whistled and Mary hummed at equal volumes. (Jackendoff 1977: 193)

(155) \*John whistled at equal volumes, and Mary hummed at equal volumes.

(156) (John whistled and Mary hummed)— at equal volumes.

### 2. Number agreement

(157) The two Harvard students cooked up the Harvard beets.

(158) Biff and Tiff cooked up the Harvard beets.

(159) The NYPD officer's counsel and his union delegate has submitted an affidavit to Internal Affairs.

(160) The NYPD officer's counsel and his union delegate have submitted an affidavit to Internal Affairs.

(161) Later that evening somewhere in Metropolis, ...

- a. a superhero stepped into a phone booth, and a mild-mannered civilian stepped out. He had held the forces of evil at bay for yet another day.
- b. the superhero stepped into a phone booth, and a mild-mannered civilian stepped out. He had held the forces of evil at bay for yet another day.
- c. a superhero stepped into a phone booth, and the mild-mannered civilian that Lois loved stepped out. He had held the forces of evil at bay for yet another day.
- d. the superhero stepped into a phone booth, and the mild-mannered civilian that Lois loved stepped out. He had held the forces of evil at bay for yet another day.

(162) Later that evening somewhere in Metropolis, a/the superhero stepped out of a phone booth, and a/the mild-mannered civilian (that Lois loved) stepped in. They were both trying to reach the Mayor on secret hotlines that only they knew about.

(163) Lindak ardau eta Anderek esnea edaten dabez. (Sjoblom 1980)

Linda wine and Ander milk drink be (3pl)

'Linda will drink wine and Ander milk'

(164) a. Robin earlier today and Hillary yesterday were drinking more Bordeaux between them than the region produces in a week.

b. Robin by this morning and Hillary by last night have drunk more Bordeaux between them than the region produces in a week.

- (165)  $SG[E] \leftrightarrow_{df} \forall X(W[E,X] \rightarrow \forall x\forall y((Xx \ \& \ Xy) \rightarrow x = y))$   
 (166)  $PL[E] \leftrightarrow_{df} \forall X(W[E,X] \rightarrow \exists x\exists y(Xx \ \& \ Xy \ \& \ \neg x = y))$
- (167) No Columbia student (secretly) and no Harvard student (openly) was on a strike committee in which the Columbia student led and the Harvard student followed.
- (168) Not many a Columbia student (secretly) and not many a Harvard student (openly) was on a strike committee in which the Columbia student led and the Harvard student followed.
- (169) No Columbia student *anywhere* **anywhere** a Columbia student is does she participate ('W') (secretly)  $\Delta$ ; and, no Harvard student *anywhere* **anywhere** a Harvard student is does she participate (openly):  $\&$ , the SG.event of her participating **there** was being on a strike committee in which the Columbia student *there* led and the Harvard student *there* followed.
- (170)  $[D \ NP][\lambda E : NP] [[\exists E_0 : there[E, E_0]] \Phi \ \Delta_\delta] \text{ and } [D \ NP][\lambda E : NP] [[\exists E_0 : there[E, E_0]] \Psi \ SG.\Omega_\delta]$   
 (171)  $[D \ NP][\lambda E : NP] [\exists E_0 : there[E, E_0]] [\Phi \ \Delta_\delta] \text{ and } [D \ NP][\lambda E : NP] [\exists E_0 : there[E, E_0]] [\Psi \ SG.\Omega_\delta]$

## 2.0. (In)definite descriptions vs. distributive quantifiers

- (172) \* A Columbia student and a Harvard student was on a strike committee.  
 \* A Columbia student and a Harvard student has joined a strike committee.
- (173) \* A Columbia student secretly and a Harvard student openly was on a strike committee.  
 \* A Columbia student secretly and a Harvard student openly has joined a strike committee.
- (174) A Columbia student was and a Harvard student was (too) on a strike committee to divest from the war.  
 A Columbia student was and a Harvard student still is on a strike committee to divest from the war.  
 A Columbia student has and a Harvard student has (too) joined a strike committee to divest from the war.  
 A Columbia student has and a Harvard student will have joined a strike committee to divest from the war.
- (175) \* A Columbia student were and a Harvard student were (too) on a strike committee to divest from the war.  
 \* A Columbia student were and a Harvard student still were on a strike committee to divest from the war.  
 \* A Columbia student have and a Harvard student have (too) joined a strike



committee to divest from the war.

\*A Columbia student have and a Harvard student will have joined a strike committee to divest from the war.

- (176) \* A Columbia student secretly and a Harvard student openly was on a strike committee.
- (177) Every Columbia student secretly and every Harvard student openly was on a strike committee.
- (178) A Columbia student secretly was and a Harvard student openly was on a strike committee.
- (179) Every Columbia student secretly was and every Harvard student openly was on a strike committee.
- (180) \*At graduation dinners in New York and Cambridge, a Columbia student (has) praised and a Harvard student (has) toasted his (own) mother(s).
- (181) At graduation dinners in New York and Cambridge, a Columbia student (has) praised and a Harvard student (has) toasted their (own) mother(s).
- (182) At graduation dinners in New York and Cambridge, every Columbia student (has) praised and every Harvard student (has) toasted his (own) mother(s).
- (183) [D NP] [ $\gamma E$  : NP] [ $\exists E_0$  : *there*[ $E, E_0$ ]] [ $\Phi \Delta_\delta$ ] and  
[D NP] [ $\gamma E$  : NP] [ $\exists E_0$  : *there*[ $E, E_0$ ]] [ $\Psi \Omega_\delta$ ]
- (184) [ $A(n)$  NP] [ $\gamma E$  : NP] [ $\exists E_0$  : *there*[ $E, E_0$ ]]  $\Phi \Delta_\delta$ ] and  
[ $A(n)$  NP] [ $\gamma E$  : NP] [ $\exists E_0$  : *there*[ $E, E_0$ ]]  $\Psi \Omega_\delta$ ]
- (185) \*At graduation dinners in New York and Cambridge, a Columbia student (has) praised to his roommate's parents, and a Harvard student (has) toasted to his roommate's whole family his (own) roommate's graduation at the head of the class.
- (186) At graduation dinners in New York and Cambridge, a Columbia student (has) praised to his roommate's parents, and a Harvard student (has) toasted to his roommate's whole family their roommates' graduation at the head of the class.
- (187) At graduation dinners in New York and Cambridge, every Columbia student (has) praised to his roommate's parents, and every Harvard student (has) toasted to his roommate's whole family his (own) roommate's graduation at the head of the class.

## 2.1. Number agreement under a frame of reference

- (188) No Columbia student (secretly) and no Harvard student (openly) was on a strike committee in which the Columbia student led and the Harvard student followed.
- (189) No Columbia student (secretly) and no Harvard student (openly) were a strike committee in which the Columbia student led and the Harvard student followed.

- (190) [No  $X$ :  $\exists E$  Columbia student[ $E, X$ ]] [ $\neg E$ : Columbia student[ $E, X$ ]]  
 [ $\exists E_0$ : there[ $E, E_0$ ]] [ $W[E_0, X]$  (secretly[ $E_0$ ])  $\Delta$ ] and  
 [No  $X$ :  $\exists E$  Harvard student[ $E, X$ ]] [ $\neg E$ : Harvard student[ $E, X$ ]]  
 [ $\exists E_0$ : there[ $E, E_0$ ]] [ $W[E_0, X]$  (openly[ $E_0$ ]) [ $\neg E_0$ : there[ $E, E_0$ ] SG. $W[E_0, X]$ ...]
- (191) \*No rocker and any roller has ever grooved to a funky disco beat.  
 (192) No rocker and any roller have ever grooved to a funky disco beat.
- (193) \*No Columbia student and any Harvard student was ever on a strike committee in which the Columbia student led and the Harvard student followed.  
 (194) No Columbia student and any Harvard student were ever on a strike committee in which the Columbia led and the Harvard student followed.
- (42) [<sub>DP</sub>  $Q$   $X$ :  $\exists E \exists f$ (Address[ $E, f$ ] NP[ $E, X$ ])]  
 [<sub>DP</sub> Det [<sub>AddrP</sub> Addr NP]]
- (195) No Columbia student at any address in a frame of reference (secretly)— and no Harvard student at another address in such a frame of reference (openly)— was/were...
- (196) No Columbia student at any address in a frame of reference  $f$ (secretly)— and no Harvard student at another address in such a frame of reference  $f$ (openly)— [ $\exists f$ : within( $f$   $f$ )] [ $\neg E_0$ : SG.*pro*<sub>0</sub>] was/were...
- (197) No Columbia student (secretly) and no Harvard student (openly) **somewhere there** was on a strike committee in which the Columbia student led and the Harvard student followed.
- (198) No Columbia student and no Harvard student was on a strike committee in which the Columbia student led and the Harvard student followed.  
 (199) No Columbia student and no Harvard student were on a strike committee in which the Columbia student led and the Harvard student followed.
- (193) \*No Columbia student and any Harvard student was ever on a strike committee in which the Columbia student led and the Harvard student followed.  
 (194) No Columbia student and any Harvard student were ever on a strike committee in which the Columbia student led and the Harvard student followed.

- (200) [No  $X : \exists E \exists f(\text{Address}[E, f] \text{Columbia student}[E, X])$   
 $[\neg E : \exists f(\text{Address}[E, f] \text{Columbia student}[E, X])$   
 $[[\exists E_0 : N[E, E_0] \text{there}[E, E_0]] W[E_0, X] (\text{secretly}[E_0]) \Delta_\delta]$  and  
 $[\text{No } X : \exists E \exists f(\text{Address}[E, f] \text{Harvard student}[E, X])$   
 $[\neg E : \exists f(\text{Address}[E, f] \text{Harvard student}[E, X])$   
 $[[\exists E_0 : N[E, E_0] \text{there}[E, E_0]] W[E_0, X] (\text{openly}[E_0])$   
 $(\delta [\exists E_f : \exists E_0(\mathbf{O}[E_0, E] \text{there}[E_0, E_f] \text{there}[E_f, E_0])$   
 $[\neg E_0 : \exists X (\text{SG}[E_0] N[E_f, E_0] \text{there}[E_f, E_0] W[E_0, X]) \dots \delta])$
- (201) [No  $X : \exists E \exists f(\text{Address}[E, f] \text{Columbia student}[E, X])$   
 $[\neg E : \exists f(\text{Address}[E, f] \text{Columbia student}[E, X])$   
 $[[\exists E_0 : N[E, E_0] \text{there}[E, E_0]] W[E_0, X] (\text{secretly}[E_0]) \Delta_\delta]$  and  
 $[\text{No } X : \exists E \exists f(\text{Address}[E, f] \text{Harvard student}[E, X])$   
 $[\neg E : \exists f(\text{Address}[E, f] \text{Harvard student}[E, X])$   
 $[[\exists E_0 : N[E, E_0] \text{there}[E, E_0]] W[E_0, X] (\text{openly}[E_0])$   
 $(\delta [\neg E_0 : \exists X (\text{PL}[E_0] N[E, E_0] \text{there}[E, E_0] W[E_0, X] \dots) \dots \delta])$
- (202) No rocker and no roller has ever grooved to a funky disco beat.  
(203) No rocker and no roller have ever grooved to a funky disco beat.  
(204) ... $[\neg E_i: \text{pro}_i] [A(n) x: \exists E \text{funky disco beat}[E, x]] \text{To}[E_i, x]$ <sup>4</sup>  
(205) No rocker and no roller have ever grooved *each* to a funky disco beat.

## 2.2. Thematic relations and number agreement

- (206)  $\text{\textcircled{f}}\text{amlit}$  alia w marwaan Hal'a Hawl š-šazra (Munn 1999)  
formed.3FS Alia and Marwan circle around the-tree  
*Alia and Marwan formed a circle around the tree.*
- (207)  $\text{\textcircled{f}}\text{amalou}$  alia w marwaan Hal'a Hawl š-šazra  
formed.3MP Alia and Marwan circle around the-tree  
*Alia and Marwan formed a circle around the tree.*
- (208) The humblest citizen is equal to the President.  
(209) The President is equal to the humblest citizen.

<sup>4</sup> Under the letter of supermonadicity, (204) expands to (i):

(i) ... $[\neg E_i: \text{pro}_i][\neg E_j: \text{pro}_j] \mathbf{O}[E_i, E_j] [A(n) x: \exists E \text{funky disco beat}[E, x]] \exists E_j \text{To}[E_j, x]$

Supermonadicity is suppressed in this chapter when there is no harm in it.

- (210) The President and the humblest citizen are equal(s).  
The humblest citizen and the President are equal(s).
- (211) Marta con María levantaron el piano (Spanish, Camacho 1997: 206)  
Martha with Maria lifted.PL the piano
- (212) Marta y María levantaron el piano  
Martha and Maria lifted.PL the piano

### 3. Number agreement in Lebanese Arabic

- (213) Biff and Tiff cooked up the Harvard beets.
- (214) l-muntijeh w l-muxrijeh maDyet contra ma' paramount  
the-producer.f and the-director.f signed.3fs contract with Paramount  
*The producer and the director has signed the contract with Paramount.*
- (215) l-muntijeh w l-muxrijeh maDuu contra ma' paramount  
the-producer.f and the-director.f signed.3mp contract with Paramount  
*The producer and the director have signed the contract with Paramount.*
- (216) DeHk-et alia w marwaan  
Laughed.3fs Alia and Marwan  
*Alia and Marwan laughed.*
- (217) DeHk-u alia w marwaan  
Laughed.3mp Alia and Marwan  
*Alia and Marwan laughed.*
- (218) \*DeHek alia w marwaan  
\*Laughed.3ms Alia and Marwan  
*Alia and Marwan laughed.*
- (219) alia w marwaan DeHk-u  
Alia and Marwan laughed.3mp  
*Alia and Marwan laughed*
- (220) \*alia w marwaan DeHk-et  
\*Alia and Marwan laughed.3fs  
*Alia and Marwan laughed*
- (221) \*alia w marwaan DeHek  
\*Alia and Marwan laughed.3ms  
*Alia and Marwan laughed.*

- (222) \*DeHek telmizen Harvard  
 \*Laughed.3s student.dual Harvard  
*The two Harvard students laughed*
- Yesterday, we managed in a stroke to hire the principals for both the production staff and cast...
- (223) maDyet l-muntijeh w l-muxrijeh w l-baTal w l-baTaleh  
 Signed.3fs the-producer.f and the-director.f and the-star.m and the-star.f  
 contra ma' paramount  
 contract with Paramount  
*The producer and the director and the leading man and the leading lady signed a contract with Paramount.*
- (224) maDuu l-muntijeh w l-muxrijeh w l-baTal w l-baTaleh  
 Signed.3mp the-producer.f and the-director.f and the-star.m and the-star.f  
 contra ma' paramount  
 contract with Paramount  
*The producer and the director and the leading man and the leading lady signed a contract with Paramount*
- (225) DeHket alia, w (DeHek) marwaan  
 Laughed.3fs Alia, and (laughed) Marwan.  
*Alia laughed and Marwan laughed.*
- (226) \*marwaan w alia DeHket  
 \*Marwan and Alia laughed.3FS.  
*Marwan (laughed), and Alia laughed.3FS.*
- (227) ʕamlit alia w marwaan Hal'a Hawl š-šazra (Munn 1999)  
 formed.3FS Alia and Marwan circle around the-tree  
*Alia and Marwan formed a circle around the tree.*
- (228) fallet alia w marwaan sekraneen  
 Left.3FS Alia and Marwan drunk.3MP (cf. (163))  
*Alia and Marwan left drunk.*
- (229) kenet hiyyeh w iyyeh ʕam yelʕabo  
 (230) Was.3FS she and him PROG playing.3MP  
*She and he were playing.*
- \*kenet henneh ʕam yelʕabo  
 \*Was.3FS they PROG playing.3MP

- (231) atlet alyā w marwaan l-bsayne  
Killed.3FS Alia and Marwan the cat<sup>5</sup>  
*Alia and Marwan killed the cat.*
- (232) kasaret alia w marwaan š-šebbek  
Broke.3FS Alia and Marwan the-window.  
*Alia and Marwan broke the window.*
- (233) kasaret r-riH w l-gheSn š-šebbek  
Broke.3FS the-wind and the-branch the-window.  
*The wind and the branch broke the window.*
- (234) fayya'et alia w marwaan l-bebe  
Woke.3FS Alia and Marwan the-baby  
*Alia and Marwan woke the baby.*
- (235) fayya' l-alarm w l-ette'iyyeh l-bebe  
Woke.3MS the-alarm and the-firecar the baby.  
*The car alarm and the fire engine woke the baby.*
- (236) Hamlet alia w marwaan l-piaano  
Lifted.3FS Alia and Marwan the piano.  
*Alia and Marwan lifted the piano.*
- (237) fatHet alia w marwaan beb l-xazneh  
Opened.3FS Alia and Marwan door the-vault  
*Alia and Marwan opened the vault doors.*
- (238) waSlet alia w marwaan š-šraayeT  
Connected.3FS Alia and Marwan the wires  
*Alia and Marwan connected the wires.*
- (239) waSlet alia w marwaan muxaTTaTaaton (bibaʕD)  
Connected.3FS Alia and Marwan plans-their (to each other)  
*Alia and Marwan connected their ideas/plans.*
- (240) xalTet alia w marwaan d-dheen l-azra'  
Blended.3FS Alia and Marwan the-paint the-blue  
*Alia and Marwan blended the blue paint.*
- (241) waffa'et tatsher w shmidt bein briitania w l-FDR  
Allied.3FS Thatcher and Schmidt between the UK and the-FRD.  
*Thatcher and Schmidt allied the UK and the FRD.*
- (242) SaalaHet maliket n-naruuj w klinton isra'iil w s-selTa  
Reconciled.3FS Queen Norway and Clinton Israel and the-authority  
l-felsTiiniyyeh  
the-Palestinian  
*The Queen of Norway and Clinton reconciled Israel and the Palestinian Authority.*
- (243) tweeZnet alia w marwaan ʕa l-marjouHa  
Balanced.3FS Alia and Marwan on the seesaw.  
*Alia and Marwan balanced on the seesaw.*

<sup>5</sup> Van Oirsouw (1987: 232) cites Mohammad Mohammad for the Palestinian (i):

(i) Gatal ʔelwalad we-l-banaat ʔel-bisse.  
Killed.3MS the-boy and-the-girl the-cat

- (244) weeznet alia w marwaan l-wleed ʔa l-marjouHa  
Balanced.3FS Alia and Marwan the-children on the-seesaw  
*Alia and Marwan balanced the children on the seesaw.*
- (245) tjammaʔet emma w l-anarkiyiin be l-haymarket  
Gathered.3FS Emma and the anarchists in Haymarket.  
*Emma and the anarchists gathered in Haymarket.*
- (246) ttaHdet emma w l-anarkiyiin taHt bayeen waahad  
United.3FS Emma and the anarchists under manifesto one.  
*Emma and the anarchists under one manifesto.*
- (247) ttaHdet chrysler w mercedes-benz taHt mudiir waahad  
United.3FS Chrysler and Mercedes-Benz under CEO one  
*Chrysler and Mercedes-Benz united under one CEO.*
- (248) ttaHdet chrysler w mercedes-benz ka ʃerkeh waHdeh  
United.3FS Chrysler and Mercedes-Benz as corporation one  
*Chrysler and Mercedes-Benz united as one corporation.*
- ttaHad obama w biden ʔa lista intixabiyyeh waHdeh  
United.3MS Obama and Biden on list electoral one  
*Obama and Biden united on one electoral list.*
- (249) Saaret 'eT ʔet z-zebdeh w T-THiin ʔajiineh  
Became.3FS stick the-butter and the-flour dough  
*The stick of butter and the flour became dough.*
- (101) Saret (maʔle't) z-zebdeh w l-THiin ʔajiineh  
Became.3FS (tbsp. of) the-butter and the flour dough.  
*The (tbsp. of) butter and the flour became dough.*
- Sar l-Haliib w l-xalTah gateau  
Became.3MS the-milk and the-mix cake  
*The milk and the mix became cake.*
- (102) \*keenet ma'le't z-zebdeh w l-THiin 'ajiin  
was.3FS spoon the-butter and the-flour dough  
*The spoon of butter and the flour were dough.*
- (103) Saro (maʔle't) z-zebdeh w l-THiin ʔajiineh  
Became.3MP (tbsp. of) the-butter and the flour dough.  
*The (tbsp. of) butter and the flour became dough.*
- (104) \*keeno ma'le't z-zebdeh w l-THiin 'ajiin  
were.3MP spoon the-butter and the-flour dough  
*The spoon of butter and the flour were dough.*

- (105) meetet alia w marwaan  
Died.3FS Alia and Marwan.  
*Alia and Marwan died.*
- (106) deHket alia w marwaan  
Laughed. 3FS Alia and Marwan.  
*Alia and Marwan laughed.*
- (107) meetou alia w marwaan  
Died.3MP Alia and Marwan.  
*Alia and Marwan died.*
- (108) deHkou alia w marwaan  
Laughed.3MP Alia and Marwan.  
*Alia and Marwan laughed.*

### 3.0. The distribution and interpretation of event quantifiers and descriptions

- (109) DeHket kell bent w kell Sabi  
Laughed.3FS every girl and every boy.  
*Every girl and every boy laughed.*
- (110) DeHket kell mara w ebn-a  
Laughed.3FS every woman and child-her.  
*Every woman and her child laughed.*
- (111) DeHket alia w DeHek marwaan  
Laughed.3FS Alia and laughed.3MS Marwan  
*Alia laughed and Marwan laughed.*
- (112) DeHket alia w DeHek marwaan ʔa esteez linguistics  
Laughed.3FS Alia and laughed.3MS Marwan at professor linguistics  
*Alia laughed and marwan laughed at a linguistics professor.*
- (113) DeHket kell bent w DeHek kell Sabi (ʔa esteez linguistics)  
Laughed.3FS every girl and laughed.3MS every boy (at professor linguistics)  
*Every girl and every boy laughed at a linguistics professor.*
- (114) DeHkou alia w marwaan ʔa esteez linguistics  
Laughed.3MP Alia and Marwan at professor linguistics
- DeHkou alia w marwaan ʔa nekteh la Woody Allen  
Laughed.3MP Alia and Marwan at joke of Woody Allen
- (115) DeHket alia w DeHek marwaan ʔa esteez linguistics  
Laughed.3FS Alia and laughed.3MS Marwan at professor linguistics
- DeHket alia w DeHek marwaan ʔa nekteh la woody allen



- Laughed.3FS Alia and laughed.3MS Marwan at joke of Woody Allen
- (116) DeHket alia w marwaan ʔa esteez linguistics  
 Laughed.3FS Alia and Marwan at professor linguistics
- DeHket alia w marwaan ʔa nekteh la Woody Allen  
 Laughed.3FS Alia and Marwan at joke of Woody Allen
- (117) DeHket kell bent w kell Sabi ʔa esteez linguistics  
 Laughed.3FS every girl and every boy at professor linguistics
- DeHket kell bent w kell Sabi ʔa nekteh la Woody Allen  
 Laughed.3FS every girl and every boy at joke of Woody Allen
- (118) DeHket kell mara w ebna ʔa esteez linguistics  
 Laughed.3FS every woman and child-her at professor linguistics
- DeHket kell mara w ebna ʔa nekteh la Woody Allen  
 Laughed.3FS every woman and child-her at joke of Woody Allen
- (119) DeHket kell mara w kell ebn men wleed-a ʔa esteez linguistics  
 Laughed.3FS every woman and every child of children-her at prof linguistics
- DeHket kell mara w kell ebn men wleed-a ʔa nekteh la  
 Woody Allen  
 Laughed.3FS every woman and every child of children-her at joke of W. A.
- (120) \*At Acropolis Pizza, the sauce is a perfect marriage of two rivals, and the cheese is a perfect marriage of two rivals.
- (121) At Acropolis Pizza, the sauce and the cheese are a perfect marriage of two rivals.
- (115)  $\exists e(\text{Laughed.3FS}(e) \ \& \ \text{Agent}(e, \text{Alia}) \ \& \ \text{at}(e, \text{a linguistics professor}))$ , and  
 $\exists e(\text{laughed.3MS}(e) \ \& \ \text{Agent}(e, \text{Marwan}) \ \& \ \text{at}(e, \text{a linguistics professor}))$ .
- $\exists e(\text{Laughed.3FS}(e) \ \& \ \text{Agent}(e, \text{Alia}) \ \& \ \text{at}(e, \text{a Woody Allen joke}))$ , and  
 $\exists e(\text{laughed.3MS}(e) \ \& \ \text{Agent}(e, \text{Marwan}) \ \& \ \text{at}(e, \text{a Woody Allen joke}))$ .
- (122)  $\exists e(\text{Laughed.3FS}(e) \ \& \ \text{Agent}(e, \text{Alia}) \ \& \ \text{Agent}(e, \text{Marwan}) \ \& \ \text{at}(e, \text{a linguistics professor}))$ .  
 $\exists e(\text{Laughed.3FS}(e) \ \& \ \text{Agent}(e, \text{Alia}) \ \& \ \text{Agent}(e, \text{Marwan}) \ \& \ \text{at}(e, \text{a Woody Allen joke}))$ .

- (123)  $\exists e(\text{Laughed.3MP}(e) \ \& \ \text{Agent}(e, \text{Alia}) \ \text{and} \ \text{Agent}(e, \text{Marwan}) \ \& \ \text{at}(e, \text{a linguistics professor}))$ .  
 $\exists e(\text{Laughed.3MP}(e) \ \& \ \text{Agent}(e, \text{Alia}) \ \text{and} \ \text{Agent}(e, \text{Marwan}) \ \& \ \text{at}(e, \text{a Woody Allen joke}))$ .
- (114) DeHkou      alia      w      marwaan      ʔa      esteez      linguistics  
Laughed.3MP   Alia      and      Marwan      at      professor      linguistics
- DeHkou      alia      w      marwaan      ʔa      nekteh la      Woody Allen  
Laughed.3MP   Alia      and      Marwan      at      joke      of      Woody Allen
- (116) DeHket      alia      w      marwaan      ʔa      esteez      linguistics  
Laughed.3FS   Alia      and      Marwan      at      professor      linguistics
- DeHket      alia      w      marwaan      ʔa      nekteh la      Woody Allen  
Laughed.3FS   Alia      and      Marwan      at      joke      of      Woody Allen
- (117) DeHket      kell      bent      w      kell      Sabi      ʔa      esteez      linguistics  
Laughed.3FS   every      girl      and      every      boy      at      professor linguistics
- DeHket      kell      bent      w      kell      Sabi      ʔa      nekteh la      Woody Allen  
Laughed.3FS   every      girl      and      every      boy      at      joke      of      Woody Allen
- (124) DeHkou      shi      bent      w      shi      Sabi      ʔa      esteez      linguistics  
Laughed.3MP   some      girl      and      some      boy      at      professor linguistics
- DeHket      shi      bent      w      shi      Sabi      ʔa      esteez      linguistics  
Laughed.3FS   some      girl      and      some      boy      at      professor linguistics
- (125) DeHkou      bentein      w      tlat      Sebyen      ʔa      esteez      linguistics  
Laughed.3MP   girl.DUAL      and      three      boys      at      professor linguistics
- (126) \*A Columbia student (secretly) and a Harvard student (openly) was on a strike committee that met in her dorm room.
- (127) A Columbia student (secretly) and a Harvard student (openly) were on a strike committee that met in their dorm room(s).
- (128) Every Columbia student (secretly) and every Harvard student (openly) was on a strike committee that met in her dorm room.

- (129)  $\exists e(\text{Laughed.3FS}(e) \& [\text{Every } x : \text{girl}(x)][\exists e' : e' \leq e](\text{Agent}(e', x) \& \text{at}(e', \text{a linguistics professor}))]$ , and  
 $[\text{Every } x : \text{boy}(x)][\exists e' : e' \leq e](\text{Agent}(e', x) \& \text{at}(e', \text{a linguistics professor}))]$ )).
- $\exists e(\text{Laughed.3FS}(e) \& [\text{Every } x : \text{girl}(x)][\exists e' : e' \leq e](\text{Agent}(e', x) \& \text{at}(e', \text{a Woody Allen joke}))]$ , and  
 $[\text{Every } x : \text{boy}(x)][\exists e' : e' \leq e](\text{Agent}(e', x) \& \text{at}(e', \text{a Woody Allen joke}))]$ )).
- (130) a.  $*\exists e(\text{Laughed}(e) \& [\text{Some } x : \text{girl}(x)][\exists e' : e' \leq e](\text{Agent}(e', x) \& \text{at}(e', \text{a linguistics professor}))]$ , and  
 $[\text{Some } x : \text{boy}(x)][\exists e' : e' \leq e](\text{Agent}(e', x) \& \text{at}(e', \text{a linguistics professor}))]$ ))
- b.  $\exists e(\text{Laughed}(e) \& [\text{Some } x : \text{girl}(x)]\text{Agent}_t(e, x)$  and  
 $[\text{Some } x : \text{boy}(x)]\text{Agent}_t(e, x) \& \text{at}(pro_{i,i}, \text{a linguistics professor}))]$
- (131) a.  $*\exists e(\text{Laughed}(e) \& [\exists X : 2(X) \& \dots \text{girl}(x) \dots][\exists e' : e' \leq e](\text{Agent}(e', X) \& \text{at}(e', \text{a ling prof}))]$ , and  
 $[\exists X : 3(X) \& \dots \text{boy}(x) \dots][\exists e' : e' \leq e](\text{Agent}(e', X) \& \text{at}(e', \text{a ling prof}))]$ ))
- b.  $\exists e(\text{Laughed}(e) \& [\exists X : 2(X) \& \dots \text{girl}(x) \dots]\text{Agent}_t(e, X)$  and  
 $[\exists X : 3(X) \& \dots \text{boy}(x) \dots]\text{Agent}_t(e, X) \& \text{at}(pro_{i,i}, \text{a linguistics professor}))]$
- (132) DeHket      alia      w      marwaan      ʔa      esteez      linguistics  
Laughed.3FS   Alia   and   Marwan   at   professor   linguistics
- (133) DeHkou      alia      w      marwaan      ʔa      esteez      linguistics  
Laughed.3MP   Alia   and   Marwan   at   professor   linguistics
- (134) \*keenet      alia      w      marwaan      bi      ouda  
\*was.3FS   Alia   and   Marwan   in   room
- \*ken      marwaan      w      alia      bi      ouda  
was.3MS   Marwan   and   Alia   in   room
- (135) keenet Alia      w      ken      marwaan      bi      ouda  
Was Alia   and   was Marwan   in   room
- (136) ken      kell      esteez      w      kell      telmiiz      bi      saff      imtiHaneet  
Was every teacher and every student in class exams
- (126) \*A Columbia student (secretly) and a Harvard student (openly) was on a strike committee that met in her dorm room.
- (128) Every Columbia student (secretly) and every Harvard student (openly) was on a strike committee that met in her dorm room.

- (137) [Every NP] [ $\gamma E$  : NP] [[ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W_0$  (secretly)  $\Delta_\delta$ ] *and*  
[Every NP] [ $\gamma E$  : NP] [[ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W_0$  (openly) [ $\gamma E_0$  : SG.*pro* $_0$ [ $E_0$ ]]. $\Omega_\delta$ ]
- (138) [ $\gamma E_0$  : SG.(*there*[ $E, E_0$ ]  $W_0$ )[ $E_0$ ]]
- (139) [ $A(n)$  NP] [ $\gamma E$  : NP] [ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W$  (secretly)  $\Delta_\delta$ ] *and*  
[ $A(n)$  NP] [ $\gamma E$  : NP] [ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W$  (openly) [ $\gamma E_0$  : SG.*pro* $_0$ [ $E_0$ ]]. $\Omega_\delta$ ]
- (140) ken            kell    estez   w    alia    bi    ouda  
Was.3MS        every teacher and Alia in room
- (141) kenet            alia    w            kell    estez    bi    ouda  
Was.3FS        Alia    and            every teacher in room
- (142) [ $\exists E$  Was.3MS[ $E$ ] [ $\gamma E$  : *pro*[ $E$ ]] [ $\gamma E_{0,0}$  : *pro* $_{0,0}$ [ $E_{0,0}$ ]]  $O$ [ $E, E_{0,0}$ ]  
[ [Every teacher] [ $\gamma E$  : teacher] [[ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W_0$   $\Delta_\delta$ ] *and*  
[ $\gamma$  Alia] [ $\gamma E$  : Alia] [[ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W_0$  [ $\gamma E_0$  : *pro* $_0$ [ $E_0$ ]] in room $_\delta$ ]]]
- (143) [ $\exists E$  Was.3FS[ $E$ ] [ $\gamma E$  : *pro*[ $E$ ]] [ $\gamma E_{0,0}$  : *pro* $_{0,0}$ [ $E_{0,0}$ ]]  $O$ [ $E, E_{0,0}$ ]  
[ [ $\gamma$  Alia] [ $\gamma E$  : Alia] [[ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W_0$   $\Delta_\delta$ ] *and*  
[every teacher] [ $\gamma E$  : teacher] [[ $\exists E_0$  : *there*[ $E, E_0$ ]]  $W_0$  [ $\gamma E_0$  : *pro* $_0$ [ $E_0$ ]] in room $_\delta$ ]]]

### 3.0.0. Summary

- (132) DeHket        alia    w        marwaan    ʕa    esteez        linguistics  
Laughed.3FS    Alia    and    Marwan    at    professor    linguistics
- (133) DeHkou        alia    w        marwaan    ʕa    esteez        linguistics  
Laughed.3MP    Alia    and    Marwan    at    professor    linguistics
- (144) keenoualia    w        marwaan    bi        ouda  
Were.3MP        Alia    and    Marwan    in    room
- (134) \*keenet        alia    w        marwaan    bi        ouda  
was.3FS        Alia    and    Marwan    in    room.
- \*ken            marwaan    w        alia    bi        ouda  
was.3MS        Marwan    and    Alia    in    room
- (136) ken            kell    estez   w        kell    telmiiz    bi        ouda  
Was.3MS        every teacher and every student in room
- (140) ken            kell    estez   w        alia    bi        ouda  
Was.3MS        every teacher and Alia in room

- (141) kenet            alia    w        kell    estez    bi        ouda  
          Was.3FS        Alia    and       every   teacher   in        room

### 3.1. Number agreement and sub-atomic telescoping

- (145) DeHket        alia    w        marwaan  
       Laughed.3FS   Alia    and       Marwan.  
       DeHket        alia    w        marwaan    ʔa        esteez        linguistics  
       Laughed.3FS   Alia    and       Marwan        at        professor    linguistics
- (146) DeHket        kell    bent w    kell    Sabi  
       Laughed. 3FS   every girl and every   boy.  
       DeHket        kell    bent w    kell    Sabi    ʔa        esteez        linguistics  
       Laughed.3FS   every   girl and   every boy        at        professor    linguistics
- (147) DeHket        kell    bent    w        marwaan  
       Laughed.3FS   every   girl        and       Marwan  
       DeHket        kell    bent    w        marwaan    ʔa        esteez        linguistics  
       Laughed.3FS   every   girl        and       marwaan    at        professor    linguistics
- (148) DeHket        alia    w        kell    Sabi  
       Laughed.3FS   Alia    and       every   boy  
       DeHket        alia    w        kell    Sabi    ʔa        esteez        linguistics  
       Laughed.3FS   alia    and       every   boy        at        professor    linguistics
- (149) DeHket        kell    mara            w        ebn-a  
       Laughed.3FS   every   woman            and       child-her  
       DeHket        kell    mara    w        ebn-a            ʔa        estez    linguistics  
       Laughed.3FS   every   woman and       child-her        at        professor    linguistics
- (150) DeHket        kell    mara            w        kell    walad    men    wleed-a  
       Laughed.3FS   every   woman            and       every   child    from    children-her  
       DeHket        kell    mara            w        kell    walad    men    wleed-a  
       Laughed.3FS   every   woman            and       every   child    from    children-her  
       ʔa        esteez            linguistics  
       at        professor        linguistics
- (151) DeHket        kell    mara            w        walad    men    wleed-i  
       Laughed.3FS   every   woman            and       child    from    children-me  
       DeHket        kell    mara            w        kell    walad    men    wleed-i  
       Laughed.3FS   every   woman            and       every   child    from    children-me  
       ʔa        esteez            linguistics

at professor linguistics

- (152) DeHek walad men wleed-i w kell mara  
 Laughed.3MS child from children-me and every woman  
 DeHek walad men wleed-i w kell mara  
 Laughed.3MS child from children-me and every woman  
 ʃa esteez linguistics  
 at professor linguistics

- (153)  $\exists e(\text{Laugh}(e) \ \& \ [\text{every } x : \text{woman}(x)][\exists e' : e' \leq e] \dots W(e', x) \dots]$ , and  
whenever a woman  $W'$ ed, her child  $W'$ ed (at a linguistics professor)).

$\exists e(\text{Laugh}(e) \ \& \ [\text{every } x : \text{woman}(x)][\exists e' : e' \leq e] \dots W(e', x) \dots]$ , and  
whenever a woman  $W'$ ed, every child of her children  $W'$ ed (at a linguistics professor)).

$\exists e(\text{Laugh}(e) \ \& \ [\text{every } x : \text{woman}(x)][\exists e' : e' \leq e] \dots W(e', x) \dots]$ , and  
whenever a woman  $W'$ ed, a child of mine  $W'$ ed (at a linguistics professor)).

- (168) kenou alia w marwaan bi ouda  
 Were.3MP Alia and Marwan in room.

- (169) ken kell esteez w alia bi ouda  
 Was.3MS every teacher and Alia in room

kenet alia w kell esteez bi ouda  
 Was.3FS Alia and every teacher in room

- (170) kenou kell esteez w alia bi ouda  
 Was.3MP every teacher and Alia in room

kenou alia w kell esteez bi ouda  
 Was.3MP Alia and every teacher in room

- (171) ba'd noss se'a, kenet kell seHfet bouza w l-gato glace berak  
 After half hour, was.3fs each bowl ice-cream and the-cake iced puddles  
*After a half hour, every bowl of ice cream and the ice cream cake were puddles.*

ba'd noss se'a, ken l-gato glace w kell seHfet bouza berak  
 After half hour, was.3ms the-cake iced and each bowl ice-cream puddles  
*After a half hour, the ice cream cake and every bowl of ice cream were puddles.*

- (172) # ba'd noss se'a, kenou kell seHfet bouza w l-gato glace berak  
 After half hour, was.3mp each bowl ice-cream and the-cake iced puddles  
*After a half hour, every bowl of ice cream and the ice cream cake were puddles.*

# ba'd noss se'a, kenou l-gato glace w kell seHfet bouza berak

After half hour, was.3mp the-cake iced and each bowl ice-cream puddles  
*After a half hour, the ice cream cake and every bowl of ice cream were puddles.*

- (173)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W(e', x) \ \& \ \Delta_\delta \text{ and } [ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ] [ \lambda x : \text{her child}(x) ] \dots W(e'', x) \dots \ \& \ (\delta \text{ at}(e'', \text{ a linguistics professor}) \delta) )$
- (174)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W(e', x) \ \& \ \Delta_\delta \text{ and } [ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ] [ \lambda x : \text{her child}(x) ] \dots W_i(e'', x) \dots \ \& \ (\delta [\lambda e'' : \text{pro}_i] \text{ at}(e'', \text{ a linguistics professor}) \delta) )$
- (175)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W(e', x) \ \& \ \Delta_\delta \text{ and } [ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ] [ \lambda x : \text{her child}(x) ] \dots W(e'', x) \dots \ \& \ (\delta [\lambda e'' : C(e', e'') \ \& \ \exists y W(e'', y)] \text{ at}(e'', \text{ a linguistics professor}) \delta) )$
- (176)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W_i(e', x) \ \& \ [\lambda e' : \text{pro}_i] \ \Delta_\delta[e'] \text{, and } [ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ] [ \lambda x : \text{her child}(x) ] \dots W(e'', x) \dots \ \& \ (\delta [\lambda e'' : C(e', e'') \ \& \ \exists y W(e'', y)] \text{ at}(e'', \text{ a ling. professor}) \delta) )$
- (177)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W_i(e', x) \ \& \ [\lambda e' : \text{pro}_i] [\forall e : e \leq e'] [\lambda e_\delta : \Delta_\delta] e \leq e_\delta \text{, and } [ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ] [ \lambda x : \text{her child}(x) ] \dots W(e'', x) \dots \ \& \ (\delta [\lambda e'' : C(e', e'') \ \& \ \exists y W(e'', y)] \text{ at}(e'', \text{ a ling. professor}) \delta) )$
- (178)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W_i(e', x) \ \& \ [\lambda e' : \text{pro}_i] [\forall e : e \leq e'] [\lambda e'' : C(e', e'') \ \& \ \exists y W(e'', y) \ \& \ \text{at}(e'', \text{ a ling. prof.})] e \leq e'' \text{, and } [ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ] [ \lambda x : \text{her child}(x) ] \dots W(e'', x) \dots \ \& \ ([\lambda e'' : C(e', e'') \ \& \ \exists y W(e'', y)] \text{ at}(e'', \text{ a ling. professor}))$
- (179) Laughing, every laugher laughs laughing.

- (180)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W_i(e', x) \ \& \ [ \gamma e' : \text{proj}_i ] [ \forall e : e \leq e' ] \ [ \gamma E'' : C[e', E''] \ \& \ \exists Y W[E'', Y] \ \& \ \text{at}[E'', \text{a lx. prf.}] ] e \leq E'' ,$   
and  
 $[ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ]$   
 $[ \gamma x : \text{her child}(x) ]_j \dots W(e'', x) \dots \ \& \ [ \gamma E'' : C[e', E''] \ \& \ \exists Y W[E'', Y] \ \text{at}[E'', \text{a lx. prf.}] ] )$
- (150) DeHket      kell      mara              w      kell      walad men      wleed-a  
Laughed.3FS   every   woman              and      every   child   from   children-her  
fa      esteez              linguistics  
at      professor      linguistics  
*Every woman and every child of hers laughed at a linguistics professor.*
- (181)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W_i(e', x) \ \& \ [ \gamma e' : \text{proj}_i ] [ \forall e : e \leq e' ] \ [ \gamma e''' : \text{proj}_j \ \& \ \text{at}(e''', \text{a lx. prf.}) ] e \leq e''',$   
and  
 $[ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ]$   
 $[ [ \text{every } x : \text{child of hers}(x) ] [ \exists e''' : e''' \leq e'' ] (\dots W_i(e''', x) \dots \ \& \ [ \gamma e''' : \text{proj}_j ] \text{at}(e''', \text{a lx. Prf.})) ]$
- (182)  $[ \gamma e''' : \exists e''(C(e', e'') \ \& \ e''' \leq e'') \ \& \ [ \gamma y : y = x ] W(e''', y) ]$
- (183)  $\exists e(\text{Laughed}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W_i(e', x) \ \& \ [ \gamma e' : \text{proj}_i ] [ \forall e : e \leq e' ] \ [ \gamma e''' : \exists e''(C(e', e'') \ \& \ e''' \leq e'') \ \& \ [ \gamma y : y = x ] W(e''', y) \ \& \ \text{at}(e''', \text{a lx. prf.}) ] e \leq e''',$   
and  
 $[ \forall e' : e' \leq e \ \& \ [ \exists x : \text{woman}(x) ] \dots W(e', x) \dots ] [ \exists e'' : C(e', e'') ]$   
 $[ [ \text{every } x : \text{child of hers}(x) ] [ \exists e''' : e''' \leq e'' ] (\dots W(e''', x) \dots \ \& \ [ \gamma e''' : \exists e''(C(e', e'') \ \& \ e''' \leq e'') \ \& \ [ \gamma y : y = x ] W(e''', y) ] \text{at}(e''', \text{a lx. Prf.})) ]$
- (184)  $\exists e(\text{Laugh}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W(e', x) \dots ,$  and  
whenever a woman *W'*ed,  
her child *W'*ed (at a linguistics professor)).  
 $\exists e(\text{Laugh}(e) \ \& \ [ \text{every } x : \text{woman}(x) ] [ \exists e' : e' \leq e ] \dots W(e', x) \dots ,$  and  
whenever a woman *W'*ed,  
every child of her children *W'*ed (at a linguistics professor)).



- (185)  $\exists e(\text{Laugh}(e) \ \& \ [\text{every } x : \text{woman}(x)][\exists e' : e' \leq e] \dots W(e', x) \dots, \text{ and}$   
 $[\text{whenever } e' : e' \leq e \ \& \ [\text{a } x : \text{woman}(x)] \dots W(e', x) \dots,$   
her child  $W'$ ed (at a linguistics professor)).
- $\exists e(\text{Laugh}(e) \ \& \ [\text{every } x : \text{woman}(x)][\exists e' : e' \leq e] \dots W(e', x) \dots, \text{ and}$   
 $[\text{whenever } e' : e' \leq e \ \& \ [\text{a } x : \text{woman}(x)] \dots W(e', x) \dots,$   
every child of her children  $W'$ ed (at a linguistics professor)).
- (186)  $\exists e(\text{Laugh}(e) \ \& \ [\text{every } x : \text{woman}(x)][\exists e' : e' \leq e] \dots W(e', x) \dots, \text{ and}$   
 $[\text{whenever } e' : e' \leq e \ \& \ [\text{a } x : \text{woman}(x)] \dots W(e', x) \dots,$   
 $[\exists e'' : C(e', e'')]$  (her child  $W'$ ed (at a linguistics professor)[ $e''$ ])).
- $\exists e(\text{Laugh}(e) \ \& \ [\text{every } x : \text{woman}(x)][\exists e' : e' \leq e] \dots W(e', x) \dots, \text{ and}$   
 $[\text{whenever } e' : e' \leq e \ \& \ [\text{a } x : \text{woman}(x)] \dots W(e', x) \dots,$   
 $[\exists e'' : C(e', e'')]$  (every child of her children  $W'$ ed (at a linguistics professor)[ $e''$ ])).
- (187)a. Sam repainted and Joe re-sided a new house.  
b. Sam repainted and then Joe re-sided a new house.
- (188)a. What Sam repainted and Joe re-sided was a new house.  
b. What Sam repainted and then Joe re-sided was a new house.
- (189)a. What Sam repainted and what Joe re-sided was a new house.  
b. What Sam repainted and what Joe then re-sided was a new house
- (190)  $\dots [\exists e' : \xi[e']] (\Phi[e'] \ \& \ \Delta_\delta[e']) \text{ and } \dots [\exists e' : \zeta[e']] (\Psi[e'] \ \& \ \Omega_\delta[e'])$
- (191)\*  $\dots [\exists e' : \xi[e']] (\Phi[e'] \ \& \ \Delta_\delta[e']_i) \text{ and } [\forall e' : \text{pro}_i][\exists e'' : C(e', e'')](\Psi[e''] \ \& \ \Omega_\delta[e''])$   
\*  $\dots [\exists e' : \xi[e']] (\Phi[e'] \ \& \ \Delta_\delta[e']_i) \text{ and } [\forall e' : \text{pro}_i][\exists e'' : C(e', e'')](\Psi[e''] \ \& \ \Omega_\delta[e'])$   
\*  $\dots [\exists e' : \xi[e']] (\Phi[e'] \ \& \ \Delta_\delta[e'']_i) \text{ and } [\forall e' : \text{pro}_i][\exists e'' : C(e', e'')](\Psi[e''] \ \& \ \Omega_\delta[e''])$
- (192)  $\dots \Phi_i \ \Delta_\delta \quad \text{and } \dots \Psi_j \ \Omega_\delta \Rightarrow$   
 $\dots \Phi_i [\tau E_i : \Phi_i][\forall e_i : E_i e_i][\tau E_{ij} : \Omega] E_{ij} e_i \text{ and } \dots \Psi_j [\tau E_j : \Psi_j][\forall e_j : E_j e_j][\tau E_{ij} : \Omega] E_{ij} e_j$
- (193) aryet            kell    mara    w    ebn-a            essa  
Read.3FS        each    woman    and    child-her        story
- (194) kell        mara    aryet            essa    baʔdein    ebn-a            eri-a            baʔd-a  
each    woman    read.3FS        story    (&) then child-her    read.3MS-it after-her
- (195)\* aryet            kell    mara    essa    baʔdein    eri-a            ebn-a            baʔd-a  
Read.3FS        each    woman    story    then    (it)read.3MS child-her    after-her

(196)\* aryet            kell    mara    essa    baʕdein eri-a            Sami    baʕd-a  
                          Read.3FS   each   woman story   then   (it) read.3MS   Sami   after-her

(197) aryet            kell    mara            essa  
                          Read.3FS   each   woman            story (v. (234))

(198) kell            mara            aryet            essa  
                          each   woman            Read.3FS   story

(199)  $[\exists e : \text{Past}(e)](\text{Read}(e) \ \& \ [\text{Each } x : \text{Fx}][\exists e' : e' \leq e](\text{W}(e',x) \ \& \ [\eta e' : \text{SG.W W}(e',x)] [\exists y : \text{Sy}]_{\text{OF}[e',y]})$   
 “There was reading in which every woman was such that she read a story.”

(200)  $[\text{Each } x : \text{Fx}][\exists e : \text{Past}(e)](\text{W}(e,x) \ \& \ [\eta e' : \text{SG.W W}(e',x)](\text{Read}(e) \ \& \ [\exists y : \text{Sy}]_{\text{OF}[e',y]}))$   
 “Every woman was such that she reads a story.”

(201)  $[\text{Each } x : \text{Fx}][\exists e : \text{Past}(e)](\text{W}(e,x) \ \& \ [\eta e' : \text{SG.W W}(e',x)](\text{Read}(e) \ \& \ [\exists y : \text{Sy}]_{\text{OF}[e',y]}),$   
*and*  $[\forall e : [\exists x : \text{Fx}](\text{Past}(e) \ \& \ \text{W}(e,x) \dots)][\exists e' : \text{C}(e,e')],$   
 $[\lambda x : \text{her child}(x)]\text{W}(e',x) \ \& \ [\exists e' : \text{Past}(e')][\eta e' : \text{SG.W W}(e',x)] (\text{Read}(e') \ \& \ \dots).$   
 “Every woman was such that she reads a story, and *whenever a woman read a story*, that woman’s child read that story.”

(202)  $[\exists e : \text{Past}(e)](\text{Read}(e) \ \& \ [\text{Each } x : \text{Fx}][\exists e' : e' \leq e](\text{W}(e',x) \ \& \ [\eta e' : \text{SG.W W}(e',x)] [\exists y : \text{Sy}]_{\text{OF}[e',y]}),$   
*and*  $[\forall e' : [\exists x : \text{Fx}](e' \leq e \ \& \ \text{W}(e',x) \dots)][\exists e'' : \text{C}(e',e'')],$   
 $[\exists e'' : \text{Past}(e'')](\text{Read}(e'') \ \& \ [\lambda x : \text{her child}(x)]\text{W}(e'',x) \ \& \ [\eta e' : \text{SG.W W}(e',x)] \dots).$   
 “There was reading in which every woman reads a story, and whenever within it a woman reads a story, that woman’s child reads that story.”

(203) ...*and*  $[\forall e' : [\exists e : \text{Past}(e)][\exists x : \text{Fx}](e' \leq e \ \& \ \text{W}(e',x) \dots)][\exists e'' : \text{C}(e',e'')], \dots$

(145) DeHket            alia    w            marwaan  
                          Laughed.3FS   Alia    and            Marwan

DeHket            alia    w            marwaan            ʕa            esteez            linguistics  
                          Laughed.3FS   Alia    and            Marwan            at            professor            linguistics

- (147) DeHket      kell   bent   w      marwaan  
 Laughed.3FS   every   girl   and   Marwan
- DeHket      kell   bent   w      marwaan   ʔa   esteez      linguistics  
 Laughed.3FS   every   girl   and   marwaan   at   professor   linguistics
- (149) DeHket      kell   mara      w      ebn-a  
 Laughed.3FS   every   woman      and   child-her
- DeHket      kell   mara   w      ebn-a      ʔa   estez   linguistics  
 Laughed.3FS   every   woman   and   child-her      at   professor   linguistics
- (151) DeHket      kell   mara      w      walad   men   wleed-i  
 Laughed.3FS   every   woman      and   child   from   children-me
- DeHket      kell   mara      w      kell   walad   men   wleed-i  
 Laughed.3FS   every   woman      and   every   child   from   children-me  
 ʔa      esteez      linguistics  
 at      professor      linguistics
- (204) ... $[\forall x : NP][\exists e : \Phi]\Psi$ , and  $[whenever\ e : \Phi \ \& \ \Psi][\exists e' : C(e, e')](\dots \Gamma[e'] \dots)$
- (205)  $[\exists e : \Phi][\forall x : NP][\exists e' : \Gamma[e]] \Psi$ , and  $[whenever\ e' : \Gamma[e] \ \& \ \Psi][\exists e'' : C(e', e'')] \dots$

### 3.2. Vagaries of number agreement amid the layers of event quantification

- (163) Lindak arda eta Anderek esnea edaten dabez. (Basque, Sjoblom 1980)  
 Linda wine and Ander milk drink be (3pl)  
 'Linda will drink wine and Ander milk'
- (164) a. Robin earlier today and Hillary yesterday were drinking more bordeaux  
 (between them) than the region produces in a week.
- b. Robin by this morning and Hillary by last night have drunk more bordeaux  
 (between them) than the region produces in a week.

#### 3.2.0. Interaction with the linear order of subjects and adverbs

- (206) a. Robin (earlier today), and Hillary yesterday, was drinking more Bordeaux  
 (\*between them) than the region produces in a week.
- b. Robin (as of this morning), and Hillary as of last night, has drunk more  
 bordeaux (\*between them) than the region produces in a week.

- (207)a. \* (Earlier today) Robin (earlier today) and yesterday Hillary were drinking more bordeaux (between them) than the region produces in a week.
- b. \* (As of this morning) Robin (as of this morning) and as of last night Hillary have drunk more bordeaux (between them) than the region produces in a week.
- (208)a. (Earlier today) Robin (earlier today), and yesterday Hillary, was drinking more bordeaux (\*between them) than the region produces in a week.
- b. (As of this morning) Robin (as of this morning), and as of last night Hillary, has drunk more bordeaux (\*between them) than the region produces in a week.
- (209)a. \* Earlier today Robin and (yesterday) Hillary (yesterday) were drinking more bordeaux (between them) than the region produces in a week.
- b. \* As of this morning Robin and (as of last night) Hillary (as of last night) have drunk more bordeaux (between them) than the region produces in a week.
- (210)a.. Earlier today Robin, and (yesterday) Hillary (yesterday), was drinking more bordeaux (\*between them) than the region produces in a week.
- b. As of this morning Robin, and (as of last night) Hillary (as of last night), has drunk more bordeaux (\*between them) than the region produces in a week.
- (211)In the course of a day, every Ninja turtle ate a whole pizza.  
 $[\exists e: \text{In}(e, \text{a day})][\text{every } x : \text{Tx}][\exists e' : \text{Past}(e') \ \& \ e' \leq e](\text{Agent}(e, x) \ \& \ \dots)$
- (212)a. Yesterday Robin was, and today Hillary is, drinking more bordeaux (\*between them) than the region produces in a week.
- b. As of last night Robin has, and as of this morning Hillary (also) has, drunk more bordeaux (\*between them) than the region produces in a week.
- (213)a. \*Yesterday Robin was, and today Hillary are, drinking more bordeaux (between them) than the region produces in a week.
- b. \*As of last night Robin has, and as of this morning Hillary (also) have, drunk more bordeaux (between them) than the region produces in a week.
- (214) $[\exists e : \text{Past}(e)]$   
 $([\lambda x : \text{Rx}][\exists e' : \text{earlier today}(e') \ \& \ e' \leq e]W(e', x) \ \dots \text{and} \dots$   
 $[\lambda x : \text{Hx}][\exists e' : \text{yesterday}(e') \ \& \ e' \leq e]W(e', x) \dots)$

- (215) \* $[\exists e : \text{Past}(e)]$   
 ( $[\exists e' : \text{earlier today}(e') \ \& \ e' \leq e] [\lambda x : Rx] W(e', x) \dots$  and ...  
 $[\exists e' : \text{yesterday}(e') \ \& \ e' \leq e] [\lambda x : Hx] W(e', x) \dots$ )
- (216)  $[\exists e' : \text{earlier today}(e')] [\lambda x : Rx] [\exists e : \text{Past}(e) \ \& \ e \leq e'] W(e, x)$   
 ...and ...  $[\exists e' : \text{yesterday}(e')] [\lambda x : Hx] [\exists e : \text{Past}(e) \ \& \ e \leq e'] W(e, x) \dots$

### 3.2.1. Molecular event quantifiers licensing distributivity

- (217) šerbou            alia    w        marwaan        anninet        pepsi  
       Drank.PL        Alia    and        Marwan        bottle        Pepsi
- (218) šerbou    alia    mbeereH        w        marwaan        lyom    anninet    pepsi  
       Drank.PL    Alia    yesterday        and        Marwan        today    bottle    Pepsi
- (219) \* $\exists e(W(e, r) \ \& \ \text{today}(e) \ \text{and} \ W(e, h) \ \& \ \text{yesterday}(e) \dots)$
- (144) keenou            alia    w        marwaan        bi        ouda  
       were.3MP        Alia    and        Marwan        in        room
- kenou            marwaan        w        alia    bi        ouda  
       were.3MP        Marwan        and        Alia    in        room
- (134) \*keenet            alia    w        marwaan        bi        ouda  
       \*was.3FS        Alia    and        Marwan        in        room
- \*ken            marwaan        w        alia    bi        ouda  
       was.3MS        Marwan        and        Alia    in        room<sup>6</sup>
- (220) šerbou            alia    w        marwaan        anninet        pepsi  
       Drank.3MP        Alia    and        Marwan        bottle        Pepsi
- (221) šerbet            alia    w        marwaan        anninet        pepsi  
       Drank.3FS        Alia    and        Marwan        bottle        Pepsi
- (222) alia            mbereH    w        marwaan        lyom    šerbou        anninet        pepsi  
       Alia            yesterday    and        Marwan        today    drank.3MP        bottle        pepsi
- (223) \* alia            mbereH    w        marwaan        lyom    šerbet        anninet        pepsi  
       Alia            yesterday    and        Marwan        today    drank.3FS        bottle        pepsi

<sup>6</sup> Singular agreement in (134) and (221), only under the comitative conditions imposed by a different structure, "...Cum..." (v. §5.0), and the condition of eventivity makes this structure unacceptable in (134).

\* alia mbeereH w marwaan lyom šereb anninet pepsi  
Alia yesterday and Marwan today drank.3MS bottle pepsi

(224)\*šerbet alia mbeereH w marwaan lyom anninet pepsi  
Drank.3FS Alia yesterday and Marwan today bottle Pepsi.

(225)a. \*Robin (earlier today) and Hillary yesterday was drinking more bordeaux than the region produces in a week.

b. \*Robin (as of this morning) and Hillary as of last night has drunk more bordeaux than the region produces in a week.

(226)Marvin this afternoon from Great Neck and Bernice this evening from Syosset are arriving at Leonard's in a rented Mercedes.

(227)\*Marvin this afternoon from Great Neck and Bernice this evening from Syosset is arriving at Leonard's in a rented Mercedes.

(218) šerbou alia lyom w marwaan mbeereH anninet pepsi  
Drank.3MP Alia today and Marwan yesterday bottle Pepsi

(228)Drank.PL Alia [PRO participating today]  $\Delta_i$ , and Marwan [PRO participating yesterday] *a bottle of Pepsi*<sub>i</sub>.

(229)[ $\exists e : \text{Past}(e)$ ]( $[\lambda E : \text{pro}] \text{drink}(e)$  &  
[ $\lambda x : \text{Ax}] [\exists e' : e' \leq e \ \& \ W(e', x) \ \& \ \text{today}(e')] [\exists e'' : C(e', e'')] (W(e'', x) \ \& \ \Delta)$  and  
[ $\lambda x : \text{Mx}] [\exists e' : e' \leq e \ \& \ W(e', x) \ \& \ \text{yesterday}(e')] [\exists e'' : C(e', e'')] (W(e'', x)) \ \& \$

[ $\lambda E' : \text{whatever they did}] [\exists y : \text{Py}] \dots \text{Patient}(e', y) \dots$ )

(230)[ $\exists e : \text{Past}(e)$ ]( $[\lambda E : \text{pro}] \text{drink}(e)$  &  
[ $\lambda x : \text{Ax}] [\exists e' : e' \leq e \ \& \ W(e', x) \ \& \ \text{today}(e')] [\exists e'' : C(e', e'')] (W(e'', x) \ \& \ \Delta)$  and  
[ $\lambda x : \text{Mx}] [\exists e' : e' \leq e \ \& \ W(e', x) \ \& \ \text{yesterday}(e')] [\exists e'' : C(e', e'')] (W(e'', x)) \ \& \$

[ $\lambda E'' : \text{whatever (s)he did}] [\exists y : \text{Py}] \dots \text{Patient}(e'', y) \dots$ )

(231)šerbou t-telmizeen (mbeereH) anninet pepsi  
Drank.PL the-students.DUAL (yesterday) bottle Pepsi

(232)baštet liina alia w marwaan (mbeereH) ʔa ouda  
Sent.3FS Lina Alia and Marwan (yesterday) to room

liina baštet alia w marwaan (mbeereH) ʔa ouda  
Lina Sent.3FS Alia and Marwan (yesterday) to room

baštet liina telmiizeen (mbeereH) ʔa ouda  
Sent.3FS Lina student.DUAL (yesterday) to room

liina	baʕtet	telmiizeen	(mbeereH)	ʕa	ouda
Lina	Sent.3FS	student.DUAL	(yesterday)	to	room

baʕtet	liina	t-tleemiiz	(mbeereH)	ʕa	ouda
Sent.3FS	Lina	the-students	(yesterday)	to	room.

liina	baʕtet	t-tleemiiz	(mbeereH)	ʕa	ouda
Lina	Sent.3FS	the-students	(yesterday)	to	room.

(233) ʕarrafaʕet liina alia w marwaan ʕa esteez linguistics  
 Introduced.3FS Lina Alia and Marwan to professor linguistics.  
 liina ʕarrafaʕet alia w marwaan ʕa esteez linguistics  
 Lina Introduced.3FS Alia and Marwan to professor linguistics.

ʕarrafaʕet	liina	telmiizeen	ʕa	esteez	linguistics
Introduced.3FS	Lina	student.DUAL	to	professor	linguistics.
liina	ʕarrafaʕet	telmiizeen	ʕa	esteez	linguistics
Lina	Introduced.3FS	student.DUAL	to	professor	linguistics.

ʕarrafaʕet	liina	t-tleemiiz	ʕa	esteez	linguistics
Introduced.3FS	Lina	the-students	to	professor	linguistics.
liina	ʕarrafaʕet	t-tleemiiz	ʕa	esteez	linguistics
Lina	Introduced.3FS	the-students	to	professor	linguistics.

(234) ʕereb kell telmiiz (mbeereH) anniinet pepsi  
 Drank.3MS every student (yesterday) bottle Pepsi

(235) baʕtet liina kell telmiiz (mbeereH) ʕa ouda  
 Sent.3FS Lina every student (yesterday) to room.  
 liina baʕtet kell telmiiz (mbeereH) ʕa ouda  
 Lina Sent.3FS every student (yesterday) to room.

(236) ʕarrafaʕet liina kell telmiiz (mbeereH) ʕa esteez linguistics  
 Introduced.3FS Lina every student (yesterday) to professor linguistics.  
 liina ʕarrafaʕet kell telmiiz (mbeereH) ʕa esteez linguistics  
 Lina introduced.3FS every student (yesterday) to professor linguistics

(163) Lindak ardaʕ eta Anderek esnea edaten dabez. (Basque, Sjoblom 1980)  
 Linda wine and Ander milk drink be (3pl)  
 ‘Linda will drink wine and Ander milk’

- (237) ... $\exists e([\lambda x : Lx]Agent(e,x) \ \& \ \exists e'C(e,e') \ \& \ [\lambda x : Wx]Patient(e',x))$  and  
 $\exists e([\lambda x : Ax]Agent(e,x) \ \& \ \exists e'C(e,e') \ \& \ [\lambda x : Mx]Patient(e',x))$ ...

### 3.2.2. Subatomic event quantifiers: plural reference to events without phrasal distributivity

- (238) keenou l-snoubraat w l-sendyeeneet xfeef bi mantʕa  
 Were.3MP the-pines and the-oaks sparse in region  
 Hadd mantaʕa bašariyyeh  
 near region human  
*The pines and the oaks were sparse in a region near human settlement.*

- (239) keenou l-snoubraat men 5000 seneh w l-sendyeeneet  
 Were.3MP the-pines from 5000 year and the-oaks  
 men 1000 seneh xfeef bi mantʕa Hadd mantaʕa bašariyyeh  
 from 1000 year sparse in region near region human  
*The pines 5000 years ago and the oaks 1000 years ago were sparse in a region near human settlement.*

- (240) ghaTToul-snoubraat w l-sendyeeneet mantʕa  
 covered.3MP the-pines and the-oaks region  
 Hadd mantaʕa bašariyyeh  
 near region human  
*The pines and the oaks covered a region near human settlement.*

- (241) ghaTToul-snoubraat men 5000 seneh w l-sendyeeneet men  
 covered.3MP the-pines from 5000 years and the-oaks from  
 1000 seneh mantʕa Hadd mantaʕa bašariyyeh  
 1000 years region near region human  
*The pines 5000 years ago and the oaks 1000 years ago covered a region near human settlement.*

- (242) [ $\exists e : Past(e)$ ]( $[\lambda E : pro]Be(e) \ \& \$   
 $[\lambda X : \dots Px \dots][\exists e' : e' \leq e]W[e', X] \ \& \ \Delta$  and  
 $([\lambda X : \dots Ox \dots][\exists e' : e' \leq e]W[e', X] \ \& \ [\lambda E : whatever \ they \ did](sparse[E] \ \& \$   
 $[\exists y : Ry] \dots In(E,y) \dots))$ )

### 3.2.3. Pre- and Post-verbal subjects, the distribution of tacit *each* in Lebanese and Slavic, and further evidence of Conjunction Reduction

- (243) t-telmiizeen šerbou (mbeereH) anninet pepsi  
 the-student.DUAL drank.PL (yesterday) bottle pepsi



- (244) alia w marwaan šerbou (mbeereH) anninet pepsi  
Alia and Marwan drank.PL (yesterday) bottle Pepsi
- (245) l-snoubrat w l-sendyeeneet keenou xfeef bi mantaʕ Hadd  
The-pines and the-oaks were.PL sparse in region near  
mantaʕa bašariyyeh  
region human
- (246) l-snoubrat w l-sendyeeneet ghaTTou mantaʕa Hadd mantaʕa bašariyyeh  
The-pines and the-oaks covered.PL region near region human
- (247) t-telmiizeen šerbou (mbeereH) *kell waaHad* anninet pepsi  
student.dual drank.pl (yesterday) *each* bottle pepsi  
The two students drank.PL (yesterday) *each* a bottle of Pepsi.
- (248) alia w marwaan šerbou (mbeereH) *kell waaHad* anninet pepsi  
Alia and Marwaan drank.pl (yesterday) *each* bottle pepsi  
Alia and Marwan drank.PL (yesterday) *each* a bottle of Pepsi.
- (249) Alia yesterday and Marwan today drank a bottle of Pepsi.
- (250) Marvin this afternoon from Great Neck and Bernice this evening from Syosset are  
arriving at Leonard's in a rented Mercedes.
- (251)  $\exists E$ (  
[ $\lambda x : Mx](W(e,x) \ \& \ [\exists E' : \forall e(E'e \rightarrow Ee) \ \& \ \text{afternoon}(e')](W(e',x) \ \& \ \text{from}(e',g)))$   
and  
[ $\lambda x : Bx](W(e,x) \ \& \ [\exists E' : \forall e(E'e \rightarrow Ee) \ \& \ \text{evening}(e')](W(e',x) \ \& \ \text{from}(e',s))) \ \& \$   
[ $\lambda E : \exists X(\geq 2(X) \ \& \ \forall e(Ee \rightarrow E'e) \ \& \ \forall x(Xx \rightarrow \exists e(Ee \ \& \ W(e,x)))](\text{arrive}(e) \ \& \$   
[ $\forall x : [\exists e : Ee]W(e,x)] \ [\exists E' : \forall e(E'e \rightarrow Ee)](\text{at}(e',l) \ \& \ \text{in}(e',m)))))$
- (252) \*šerbou t-telmiizeen (mbeereH) *kell waaHad* anninet pepsi  
\*Drank.PL the-student.DUAL (yesterday) *each* bottle Pepsi.
- (253) \*baʕtet lina alia w marwaan (mbeereH) *kell waHad* ʕa ouda  
\*Sent.3FS Lina Alia and Marwan (yesterday) *each* to room.  
\*lina baʕtet alia w marwaan (mbeereH) *kell waHad* ʕa ouda  
\*Lina Sent.3FS Alia and Marwan (yesterday) *each* to room
- \*baʕtet lina telmiizeen (mbeereH) *kell waHad* ʕa ouda  
\*Sent.3FS Lina students.DUAL (yesterday) *each* to room.  
\*lina baʕtet telmiizeen (mbeereH) *kell waHad* ʕa ouda  
\*Lina Sent.3FS students.DUAL (yesterday) *each* to room.
- \*baʕtet lina t-tleemiiz (mbeereH) *kell waHad* ʕa ouda  
\*Sent.3FS Lina the-student.PL (yesterday) *each* to room.

\* lina baʃtet t-tleemiiz (mbeereH) *kell waHad* ʃa ouda  
 \* Lina sent.3FS the-student.PL(yesterday) *each* to room.

- (254)\*ʃarrafet lina alia w marwaan *kell waHad* ʃa esteez linguistics  
 \*Introduced.3FS Lina Alia and Marwan *each* to professor linguistics  
 \*lina ʃarrafet alia w marwaan *kell waHad* ʃa esteez linguistics  
 \*Lina \*Introduced.3FS Alia and Marwan *each* to professor linguistics

\*ʃarrafet lina telmiizeen *kell waHad* ʃa esteez linguistics  
 \*Introduced.3FS Lina student.DUAL *each* to professor linguistics  
 \* lina ʃarrafet telmiizeen *kell waHad* ʃa esteez linguistics  
 \* Lina introduced.3FS student.DUAL *each* to professor linguistics

\*ʃarrafet lina t-tleemiiz *kell waHad* ʃa esteez linguistics  
 \*Introduced.3FS Lina the-student.PL *each* to professor linguistics  
 \*lina ʃarrafet t-tleemiiz *kell waHad* ʃa esteez linguistics  
 \*Lina Introduced.3FS the-student.PL *each* to professor linguistics

- (255)Tense—each—the two students—drink  $\Rightarrow$   
 the two students<sub>j</sub>— drink<sub>i</sub>+tense —each—  $t_j t_i$

- (256)Lina sent Alia and Marwan to a room.  
 Lina sent two students to a room.  
 Lina sent the students to a room.

- (257)Lina introduced Alia and Marwan to a linguistics professor.  
 Lina introduced two students to a linguistics professor.  
 Lina introduced the students to a linguistics professor.

- (258)a. Mužčiny vyigrali \$100.  
 men.NOM won \$100

b. Mužčiny vyigrali po \$100.

- (259)a. Mužčiny s ženščinami vyigrali \$100.  
 men.NOM with women.INST won \$100

b. Mužčiny s ženščinami vyigrali po \$100.

- (260)Mužčiny i ženščiny vyigrali \$100.  
 men.NOM and women.NOM won \$100

- (261)Boris i Natasha vyigrali \$100.

- (262)  $[\exists e : \text{Past}(e)]([\iota x : Bx] \Delta \text{ and } [\iota x : Nx][\iota E : \text{whatever they did}](\text{win}[E] \& [\exists e' : e' \leq e](W[e', x] \& [\iota E' : \text{whatever } x \text{ did}](\text{win}[E'] \& [\exists Y : \dots \$100 \dots] \dots \text{Theme}(E', y) \dots))))))$
- (217) šerbou alia w marwaan anninet pepsi  
Drank.PL Alia and Marwan bottle Pepsi.
- (218) šerbou alia mbeereH w marwaan lyom anninet pepsi  
Drank.PL Alia yesterday and Marwan today bottle Pepsi.
- (238) keenou s-snoubraat  $\Delta$  w l-sendyeeneet xfeef bi mantaṣa Hadd mantaṣa  
Were.PL the-pines  $\Delta$  and the-oaks sparse in region near region  
bašariyyeh  
human  
Were.PL the pines  $\Delta$  and the oaks sparse in a region near human settlement.
- (239) keenou s-snoubraat  $\Delta$  men 5000 seneh w l-sendyeeneet men 1000  
Were.PL the-pines  $\Delta$  from 5000 year and the-oaks from 1000  
seneh xfeef bi mantaṣa Hadd mantaṣa bašariyyeh  
year sparse in region near region human  
Were.PL the pines 5000 years ago  $\Delta$  and the oaks 1000 years ago sparse in a region near human settlement.
- (260) Mužčiny i ženščiny vyigrali \$100.  
men.NOM  $\Delta$  and women.NOM won.PL \$100
- (261) Boris i Natasha vyigrali \$100.  
Boris.NOM  $\Delta$  and Natsha.NOM won.PL \$100

#### 4. Coordination and subordination in Davidsonian logical form

- (259) mužčiny s ženščinami vyigrali \$100.  
men.NOM with women.INST won.PL \$100
- (263) Boris s Natashej vyigrali \$100.  
Boris.NOM with Natasha.INST won.PL \$100
- (264) a. povar i ego pomoščniki prigotovili obed.  
Chef.NOM and his assistants.NOM prepared.PL dinner.  
b. \*povar i svoj pomoščniki prigotovili obed.  
Chef.NOM and self's assistants.NOM prepared.PL dinner.
- (265) a. povar s ego pomoščnikami prigotovili obed.  
Chef.NOM with his assistants.INSTR prepared.PL dinner.  
b. povar so svoim pomoščnikami prigotovili obed.  
Chef.NOM and self's assistants.INSTR prepared.PL dinner.

- (266) a. Maša i eë sestra ušli.  
Masha.NOM and her sister.NOM left.PL.  
b. \*Maša i svoja sestra ušli.  
Masha.NOM and self's sister.NOM left.PL.
- (267) a. Maša s eë sestroj videli film.  
Masha.NOM with her sister.INSTR saw.PL film  
b. Maša so svoej sestroj videli film.  
Masha.NOM with self's sister.INSTR saw.PL film
- (268) ...([ $\lambda x$ : Boris( $x$ )]  $\Delta$ ) (**and** ([ $\lambda x$ : Natasha( $x$ )]... $\overline{W}[e,x]$  ...))  
(269) ... [ $\lambda x$ : Boris( $x$ )] $\overline{W}[e,x]$  & ([ $\lambda x$ : Natasha( $x$ )]...**with**[ $e,x$ ] ...)
- (270) The Strand Bookshop bought and sold used books.  
(271) The Strand Bookshop ((bought  $\Delta$ ) (and (sold used books)))  
(272) \* The Strand Bookshop ((bought and sold) used books).  
(273) \* The Strand Bookshop (bought (and (sold used books)))
- (274) ... [ $\lambda x$ : Boris( $x$ )]  $\Delta$  and [ $\lambda x$ : Natasha( $x$ )]... [ $\exists e'$ : ...]( $W[e',x]$ ...)  
(275) ... [ $\lambda x$ : Boris( $x$ )] $\overline{W}[e,x]$   $\Delta$  & ([ $\lambda x$ : Natasha( $x$ )]...**with**[ $e,x$ ] ... [ $\exists e'$ : ...]( $W[e',x]$ ...))
- (276) a. Boris with Natasha and with Rocky won \$100.  
b. #Boris with Natasha and with Natasha won \$100.
- (277) \*Boris with Natasha with Rocky won \$100.  
(278) Boris and Natasha have won \$100.  
(279) \*Boris Natasha have won \$100.
- (262) [ $\lambda x$ : Bx]  $\Delta$  and  
[ $\lambda x$ : Nx][ $\lambda E$ : Past( $e$ )] [ $\lambda E$ : whatever they did][ $\lambda E$ : win[ $E$ ]] [ $\exists e'$ :  $e' \leq e$ ]( $W[e',x]$  &  
[ $\lambda E'$ : whatever  $x$  did](win[ $E'$ ] & [ $\exists Y$ : ...\$100...]. Theme( $E',y$ )...)))))
- (280) [ $\lambda x$ : Bx]  $\Delta$  and  
[ $\lambda x$ : Nx][ $\lambda E$ : Past( $e$ )] [ $\lambda E$ : whatever they did][ $\lambda E$ : win[ $E$ ]] [ $\exists e'$ :  $e' \leq e$ ]( $W[e',x]$  &  
[ $\lambda E'$ : whatever they did](win[ $E'$ ] & [ $\exists Y$ : ...\$100...]. Theme( $E',y$ )...)))))
- (281) [ $\lambda x$ : Bx][ $Q_1 e_1$ :  $\Phi[e_1]$ ]... [ $Q_n e_n$ :  $\Phi[e_n]$ ] $\Psi$  and [ $\lambda x$ : Nx] $\Delta$   
(282) \* [ $\lambda x$ : Bx][ $Q_1 e_1$ :  $\Phi[e_1]$ ]... [ $Q_n e_n$ :  $\Phi[e_n]$ ] $\Psi$  & [ $\lambda x$ : Nx] $\Delta$   
(283) [ $\lambda x$ : Bx][ $Q_1 e_1$ :  $\Phi[e_1]$ ]... [ $Q_n e_n$ :  $\Phi[e_n]$ ]( $\Psi$  & [ $\lambda x$ : Nx] $\Delta$ )

(284) Boris participated ('W'), and in some of *this* Natasha participated ('W'), and *that* was winning \$100.

(285)  $[\lambda x : Bx] \dots W[e, x] \dots \& [\exists e' : [_{this} \lambda E : [\lambda x : Bx] W[e, x]] Ee'] \dots [\lambda x : Nx] W[e', x] \& [_{that} \lambda E' : \dots] \text{was}(e')$  winning \$100.

(286)  $[\lambda x : Bx] \dots W[e, x] \dots \& [\exists e' : [_{this} \lambda E : [\lambda x : Bx] W[e, x]] e' \leq e] \dots [\lambda x : Nx] W[e', x] \& [_{that} \lambda E' : \dots] \text{was}(e')$  winning \$100.

(263) Boris s Natashej vyigrali \$100.  
Boris.NOM with Natasha.INST won.PL \$100

(275)  $[\dots [\lambda x : \text{Boris}(x)] \mathcal{W}[e, x] \Delta \& ([\lambda x : \text{Natasha}(x)] \dots \text{with}[e, x] \dots [\exists e' : \dots](W[e', x] \dots))$

(287) Boris participated ('W'), and *this* was with Natasha, and some of *that* was winning \$100.

(288)  $[\lambda x : Bx] \dots W[e, x] \dots \& [_{this} \lambda E' : e' \leq e \& [\lambda x : Bx] W[e, x]] \dots [\lambda x : Nx] \text{With}[e', x] \& [\exists e'' : [_{that} \lambda E' : \dots] e'' \leq e'] \text{was}(e'')$  winning \$100.

(289)  $*[\lambda x : Bx] \dots W[e, x] \dots [\exists e'' : [_{that} \lambda E' : \dots] e'' \leq e'] \text{was}(e'')$  winning \$100 &  $[_{this} \lambda E' : e' \leq e \& [\lambda x : Bx] W[e, x]] \dots [\lambda x : Nx] \text{With}[e', x] \& [\exists e'' : [_{that} \lambda E' : \dots] e'' \leq e'] \text{was}(e'')$  winning \$100.

(266) b.\* Maša i svoja sestra ušli.  
Masha.NOM and self's sister.NOM left.PL.

(267) b. Maša so svoej sestroj videli film.  
Masha.NOM with self's sister.INSTR saw.PL film

## 5. First-conjunct agreement (with conjoined (in)definite descriptions)

(290) meetet alia w marwaan  
Died.3FS Alia and Marwan

(291) DeHket alia w marwaan ʕa esteez linguistics  
Laughed. 3FS Alia and Marwan at professor linguistics

(292) \*keenet alia w marwaan bi ouda  
\*Was.3FS Alia and Marwan in room.

(293) meetou alia w marwaan  
Died.3MP Alia and Marwan.

(294) DeHkou alia w marwaan ʕa esteez linguistics  
Laughed.3MP Alia and Marwan at professor linguistics

- (295) keenou            alia    w        marwaan        bi        ouda  
Was.3MP            Alia    and       Marwan        in        room
- (296) ʕamlit        alia w marwaan    Hal'a Hawl    š-šazra            (Munn 1999)  
formed.3FS Alia and Marwan    circle around the-tree  
'Alia and Marwan formed a circle around the tree.'
- (297) fallet            alia    w        marwaan        sekraaniin  
Left.3FS            Alia    and       Marwan        drunk.3MP        (cf. (163))
- (298) atlet            alia    w        marwaan        l-bsayneh  
Killed.3FS            Alia    and       Marwan        the-cat
- (299) kasret            alia    w        marwaan        š-šebbeek  
Broke.3FS            Alia    and       Marwan        the-window
- (300) kasret            r-riiH            w        l-gheSn        š-šebbeek  
Broke.3FS            the-wind        and       thebranch        the-window
- (301) waʕʕet            alia    w        marwaan        l-bebe  
Woke.3FS            Alia    and       Marwan        the-baby
- (302) waʕʕet            l-'eTee'iyyeh        w        alarm    s-sayyaara        l-bebe  
Woke.3FS            the-fire-engine        and       alarm    the-car        the baby
- (303) Hemlet            alia    w        marwaan        l-piano  
Lifted.3FS            Alia    and       Marwan        the-piano
- (304) fatHet            alia    w        marwaan        bweeb            l-xazneh  
Opened.3FS            Alia    and       Marwan        doors            the-vault
- (305) waSalet            alia    w        marwaan        l-waSleet  
Connected.3FS            Alia    and       Marwan        the-wires
- (306) waSalet            alia    w        marwaan        afkaar-un  
Connected.3FS            Alia    and       Marwan        ideas-their
- (307) xalaTet            alia    w        marwaan        d-dheen        l-azra'  
Blended.3FS            Alia    and       Marwan        the-paint        the-blue
- (308) waffa'et tatsher    w        shmidt        briitania        w l-FDR  
Allied.3FS            Thatcher and Schmidt    Britain    and       the-FRD.
- (309) SaalaHet maliket n-naruuj    w        klinton    isra'iil w        s-selTa    l-felsTiiniyyeh  
Reconciled.3FS the Queen of Norway and Clinton Israel and the Palestinian Authority
- (310) tweezanet        alia    w        marwaan        ʕa        l-marjuuHa  
Balanced.3FS            Alia    and       Marwan        on        the-seesaw
- (311) weeznet alia        w        marwaan        l-wleed        ʕa        l-marjouHa  
Balanced.3FS            Alia    and       Marwan        the-children    on        the-seesaw
- (312) tjammaʕet        emma w        l-anarkiyiin        be        l-haymarket  
Gathered.3FS            Emma and        the anarchists    in        Haymarket
- (313) ttaHdet            emma w        l-anarkiyiin        taHt        bayeen        waahad  
United.3FS            Emma and        the anarchists    under    manifesto        one
- (314) ttaHdet            chrysler w        mercedes-benz        taHt        mudiir        waahad  
United.3FS            Chrysler and        Mercedes-Benz        under    CEO        one

(315) ttaHdet chrysler w mercedes-benz ka šerkeh waHdeh  
United.3FS Chrysler and Mercedes-Benz as corporation one

ttaHad obama w biden řa lista intixabiyyeh waHdeh  
United.3MS Obama and Biden on list electoral one  
(316) Saaret 'eTřet z-zebdeh w T-THiin řajiineh  
Became.3FS stick the-butter and the-flour dough

### 5.0. The logical form of first-conjunct agreement

(317) DeHkou alia w marwaan  
Laughed.3MP Alia and Marwan

(318)  $\exists e(\text{Laughed.3MP}(e) \ \& \ W(e, \text{Alia}) \ \text{and} \ W(e, \text{Marwan}))$

(319) DeHket alia w marwaan  
Laughed.3FS Alia and Marwan

(320)  $*\exists e(\text{Laughed.3FS}(e) \ \& \ W(e, \text{Alia}) \ \text{and} \ W(e, \text{Marwan}))$

(321)  $*\exists e(\text{Laughed.3FS}(e) \ \& \ W(e, \text{Alia}) \ \text{and} \ \exists e(\text{Laugh}(e) \ \& \ W(e, \text{Marwan})))$

(322)  $*\exists e(\text{Laughed.3FS}(e) \ \& \ W(e, \text{Alia}) \ \text{and} \ \text{Laugh}(e) \ \& \ W(e, \text{Marwan}))$

(323) DeHket alia w marwaan  
Laughed.3FS Alia and Marwan

$\exists e(\text{Laughed.3FS}(e) \ \& \ W(e, \text{Alia}) \ \text{and} \ \text{Cum}(e, \text{Marwan}))$

(324) DeHkou alia w marwaan  
Laughed.3MP Alia and Marwan

$\exists e(\text{Laughed.3MP}(e) \ \& \ W(e, \text{Alia}) \ \text{and} \ W(e, \text{Marwan}))$

(325) The Columbia students and the Harvard students surrounded the Pentagon and were crowded into the Mall.

(326)  $\exists e_i \exists e'_j \exists e''(W(e_i, c) \ \text{and} \ W(e_i, h) \ \& \ O(\text{pro}_i, \text{pro}_j) \ \& \ [\exists x \text{Agent}(e'_j, x) \ \& \ C(e'_j, e'')] \ \& \ \text{surround}(e'') \ \& \ \text{Theme}(e'', p)] \ \text{and} \ [\exists x \text{Theme}(e'_j, x) \ \& \ C(e'_j, e'')] \ \& \ \text{crowd}(e'') \ \& \ \text{Into}(e'', m)])$

(327) The Columbia students and the Harvard students surrounded the Pentagon.

(328)  $\exists e_i \exists e'_j \exists e''(W(e_i, c) \ \text{and} \ W(e_i, h) \ \& \ O(\text{pro}_i, \text{pro}_j) \ \& \ [\exists x \text{Agent}(e'_j, x) \ \& \ C(e'_j, e'')] \ \& \ \text{surround}(e'') \ \& \ \text{at}(e'', p)])$

(329)  $\exists e([The\ X: \dots Cx \dots][\gamma E : pro_k] W_i(E, X) \text{ and } [The\ Y: \dots Hy \dots](W_i(e, Y) \& (\gamma_k [\gamma E : pro_i][\gamma E' : pro_j] O(E, E') \& (\gamma_j \exists e' \exists e'' [\exists x Agent(e', x) \& C(e', e'') \& surround(e'') \& Theme(e'', p)]))))$

(330) Lifted.3MP Alia and Marwan the piano.

(331)  $\exists e \exists e'' (\text{lift.3MP}(e'') \& [\gamma x: Ax][\gamma E : pro_k] W_i(E, x) \text{ and } [\gamma y: My](W_i(e, y) \& (\gamma_k [\gamma E : pro_i][\gamma E' : pro_j] O(E, E') \& (\gamma_j \exists e' [\exists x Agent(e', x) \& C(e', e'') \& Theme(e'', p)]))))$

(332) Lifted.3FS Alia and Marwan the piano.

(333)  $\exists e \exists e'' (\text{lift.3FS}(e'') \& [\gamma x: Ax][\gamma E : pro_k] W_i(E, x) \text{ and } [\gamma y: My](Cum_i(e, y) \& (\gamma_k [\gamma E : pro_i][\gamma E' : pro_j] O(E, E') \& (\gamma_j \exists e' [\exists x Agent(e', x) \& C(e', e'') \& Theme(e'', p)]))))$

(334) Not many a student proposed and not many a professor (of his) accepted that they should collaborate even more than they already have.

(335) Thirty authors donated and ten publishers sold 1500 textbooks to inner city schools and 200 recordings to inner city libraries.

### 5.1. The meaning of first-conjunct agreement

(336) DeHket alia w marwaan  
Laughed.3FS Alia and Marwan  
 $\exists e(\text{Laughed.3FS}(e) \& W(e, Alia) \text{ and } Cum(e, Marwan))$

(337) Hamlet alia w marwaan l-piano  
Lifted.3FS Alia and Marwan the-piano  
 $\exists e(\text{lift.3FS}(e) \& (W(e, Alia) \text{ and } (Cum(e, Marwan) \& VP[e])))$

(338) DeHkou alia w marwaan  
Laughed.3MP Alia and Marwan  
 $\exists e(\text{Laughed.3MP}(e) \& W(e, Alia) \text{ and } W(e, Marwan))$

(339) Hamlou alia w marwaan l-piano  
Lifted.3MP Alia and Marwan the-piano  
 $\exists e(\text{lift.3MP}(e) \& (W(e, Alia) \text{ and } (W(e, Marwan) \& VP[e])))$

(340) nhazzet l-bineeyeh w l-fareš  
Shook.FS the-building and the-furniture

(341) nhazz l-fareš w l-bineeyeh  
Shook.MS the-furniture and the-building



- (342)nhazzou l-bineeyeh w l-fareš  
Shook.MP the-building and the-furniture
- (343)nhazzou l-fareš w l-bineeyeh  
Shook.MP the-furniture and the-building
- (344)tHarrket t-tayyara w l-xeit maṣ l-riiH  
Moved.3FS the-kite and the-string with the-wind
- (345)tHarrak l-xeit w t-tayyara maṣ l-riiH  
Moved.3MS the-string and the-kite with the-wind
- (346)tHarrakou t-tayyara w l-xeit maṣ l-riiH  
Moved.3MP the-kite and the-string with the-wind
- (347)tHarrakou l-xeit w t-tayyara maṣ l-riiH  
Moved.3MP the-string and the-kite with the-wind
- (348)ghaTTa l-ghaTa l-'mesh w l-aber d-dahabi l-muumia  
Covered.MS the-shroud the-linen and the-sarcophagus the-gold the-mummy
- (349)ghaTTa l-aber d-dahabi w l-ghaTa l-'mesh l-muumia  
Covered.MS the-sarcophagus the-gold and the-shroud the-linen the-mummy
- (350)ghaTTou l-ghaTa l-'mesh w l-aber d-dahabi l-muumia  
Covered.MP the-shroud the-linen and the-sarcophagus the-gold the-mummy
- (351)ghaTTou l-aber d-dahabi w l-ghaTa l-'mesh l-muumia  
Covered.MP the-sarcophagus the-gold and the-shroud the-linen the-mummy
- (352)ghaTToul-Hajra w l-'eshre bezret l-fekha  
Sheath.MP the-stone and the-peel seed the fruit
- (353)ghaTTet l-'eshre w l-Hajra bezret l-fekha  
Sheath.FS the-peel and the-stone seed the fruit
- (354)ghaTToul-Hajra w l-'eshre bezret l-fekha  
Sheath.MP the-stone and the-peel seed the fruit
- (355)ghaTToul-'eshre w l-Hajra bezret l-fekha  
Sheath.MP the-peel and the-stone seed the fruit
- (356)Howard Carter , muktašef 'abr Tutankhamen, ṡam yektešef ennou  
Howard Carter, discoverer tomb Tutankhamen PROG discovering that  
ghaTTa l-aber d-dahabi w l-ghaTa l-'mesh l-muumia  
covered.MS the-sarcophagus the gold and the-shroud the-linen the-mummy  
*Howard Carter, the discover of Tutankhamen's tomb, is discovering that the gold sarcophagus and the linen shroud covered the mummy.*
- (357)#Howard Carter, muktašef 'abr Tutankhamen, ṡam yektešef ennou  
Howard Carter, discoverer tomb Tutankhamen PROG discovering that  
ghaTTa l-ghaT l-'mesh w l-aber d-dahabi l-muumia

Covered.MS the-shroud the-linen and the-sarcophagus the-gold the-mummy  
*Howard Carter, the discoverer of Tutankhamen's tomb, is discovering that the  
 linen shroud and the gold sarcophagus covered the mummy.*

(358)Howard Carter , muktašef 'abr Tutankhamen, ʕam yektešef ennou  
 Howard Carter, discoverer tomb Tutankhamen PROG discovering that  
 ghaTTou l-aber d-dahabi w l-ghaTa l-'mesh l-muumia  
 covered.MP the-sarcophagus the gold and the-shroud the-linen the-mummy  
*Howard Carter, the discover of Tutankhamen's tomb, is discovering that the gold  
 sarcophagus and the linen shroud covered the mummy.*

(359)Howard Carter, muktašef 'abr Tutankhamen, ʕam yektešef ennou  
 Howard Carter, discoverer tomb Tutankhamen PROG discovering that  
 ghaTTou l-ghaT l-'mesh w l-aber d-dahabi l-muumia  
 Covered.MP the-shroud the-linen and the-sarcophagus the-gold the-mummy  
*Howard Carter, the discoverer of Tutankhamen's tomb, is discovering that the  
 linen shroud and the gold sarcophagus covered the mummy.*

(360)Alia am tekol w 'am tekteshef ennou mghaTTayeh l-'eshreh w l-'ajweh bezret l-  
 fekha  
 Alia is eating and discovering that covering.FS the peel and the stone the fruit's  
 seed.

(361)# Alia am tekol w 'am tekteshef ennou mghaTTayeh l-'ajweh w l-'eshreh bezret l-  
 fekha  
 # Alia is eating and discovering that covering.FS the stone and the peel the fruit's  
 seed.

(362)Alia am tekol w 'am tekteshef ennou mghaTTayiin l-'eshreh w l-'ajweh bezret l-  
 fekha  
 Alia is eating and discovering that covering.PL the peel and the stone the fruit's  
 seed.

(363)Alia am tekol w 'am tekteshef ennou mghaTTayiin l-'ajweh w l-'eshreh bezret l-  
 fekha  
 Alia is eating and discovering that covering.PL the stone and the peel the fruit's  
 seed.

(364)raH l-lansh w s-skiyyeur ʕa š-šaTT  
 Went.MS the-motorboat and the-water-skier to the-shore

(365)# raHet s-skiyyeur w l-lansh ʕa š-šaTT  
 #Went.FS the-water-skier and the-motor-boat to the-shore

(366)raHou l-lansh w s-skiyyeet ʕa š-šaTT  
 Went.MP the-motorboat and the-water-skier to the-shore

(367)raHou s-skiyyeet w l-lansh ʕa š-šaTT  
 Went.MP the-water-skier and the-motor-boat to the-shore

**Comment [S.O.1]:** The issue here is "Water skier" is plural non-human, meaning it accepts Feminine Singular agreement

**Comment [S.O.2]:** The issue here is "Water skier" is plural non-human, meaning it accepts Feminine Singular agreement

- (368)xtafet Tayyara w xaTT dexxaan abyaD bi l-maghreb  
Disappeared.FS jet and streak smoke white into the-sunset
- (369)# xtafa xaTT dexxaan abyaD w Tayyara bi l-maghreb  
Disappeared.FS streak smoke white and jet into the-sunset
- (370)xtafou Tayyara w xaTT dexxaan abyaD bi l-maghreb  
Disappeared.MP jet and streak smoke white into the-sunset
- (371)xtafou xaTT dexxaan abyaD w Tayyara bi l-maghreb  
Disappeared.MP streak smoke white and jet into the-sunset
- (372)T-Talla' l-aeni w l-mariiDa  
Divorced.MS the-selfish and the-infirm
- (373)# T-Talla'et l-mariiDa w l-aeneeni  
#Divorced.MS the-infirm and the-selfish
- (374)T-Talla'ou l-aeni w l-mariiDa  
Divorced.MP the-selfish and the-infirm
- (375)T-Talla'ou l-mariiDa w l-aeneeni  
Divorced.MP the-infirm and the-selfish
- (376)ntaşret l-mayy w t-talawwos bi l-madiineh  
spread.FS the-water and the-infection in the-city
- (377)# ntaşar t-talawwos w l-mayy bi l-madiineh  
Spread.MS the-infection and the-water in the-city
- (378)ntaşrou l-mayy w t-talawwos bi l-madiineh  
spread.MP the-water and the-infection in the-city
- (379)ntaşrou t-talawwos w l-mayy bi l-madiineh  
Spread.MP the-infection and the-water in the-city
- (380)Teleſ s-samm w xaTT d-damm l-aHmar men maHall el 3aDDa la ketf-ou  
Climbed.SG. the poison and streak the-blood the-red from location the bite to his-shoulder.  
*The toxin and the red blood streak traveled from the bite to his shoulder.*
- (381)Teleſ xaTT d-damm l-aHmar w s-samm men maHall el 3aDDa la ketf-ou  
Climbed.SG. streak the-blood the-red from location the bite to his-shoulder  
*The red blood streak and the toxin traveled from the bite to his shoulder.*
- (382)Telſou s-samm w xaTT d-damm l-aHmar men maHall el 3aDDa la ketf-ou  
Climbed.PL. the-poison and streak the-blood the-red from location the-bite to his shoulder.
- (383)Telſou xaTT d-damm l-aHmar w s-samm men maHall el 3aDDa la ketf-ou  
Climbed.PL. streak the-blood the-red from location the bite to his-shoulder

- (105) meetet alia w marwaan  
Died.3FS Alia and Marwan
- (106) DeHket alia w marwaan  
Laughed.3FS Alia and Marwan
- (107) meetou alia w marwaan  
Died.3MP Alia and Marwan
- (108) DeHkou alia w marwaan  
Laughed.3MP Alia and Marwan
- (384)nfajret andromeda w s-surayya  
Exploded.FS Andromeda and the-Pleiades
- (385)alia w marwaan Hamalou l-piano sawa  
Alia and Marwan held-up the-piano together.
- alia Hamlet l-piano maṣ marwaan  
Alia held up the-piano with Marwan
- (386)alia w marwaan Hamalou souret hawiyyeh sawa  
Alia and Marwan held up photo ID together.  
Alia and Marwan held up an ID photo together.
- alia Hamlet souret hawiyyeh maṣ marwaan  
Alia held up photo ID with Marwan
- (387)alia w marwaan ṢaTaSou sawa  
Alia and Marwan sneezed together
- alia ṢaTset maṣ marwaan  
Alia sneezed with Marwan
- (388)ashum Dow Jones w ashum NASDAQ Ṣelyou sawa  
stocks Dow Jones and stocks NASDAQ rose together
- ashum Dow Jones Ṣelyou maṣ ashum NASDAQ  
stocks Dow Jones rose with stocks NASDAQ
- (389)alia w marwaan sawa  
Alia and Marwan (are)together
- alia maṣ marwaan  
alia (is) with marwaan
- (390)#alia w marwaan Ṣandon Ṣyoun zer' sawa  
#Alia and Marwan at-them eyes blue together.

*Alia and Marwan have blue eyes together.*

#alia ʕanda ʕyoun zer' maʕ marwaan  
 #Alia at-her eyes blue with Marwan.  
*Alia has blue eyes with Marwan*

(391) #alia w marwaan amerkeen sawa  
 #Alia and Marwan Americans together.

#alia amerkeniyyeh maʕ marwaan  
 #Alia American with Marwan.

(392) alia w marwaan sawa  
 Alia and Marwan (are) together

alia w marwaan maʕ baʕDon  
 Alia and Marwaan (are) with each-other

(393) alia maʕ marwaan  
 Alia (is) with Marwaan

marwaan maʕ alia  
 Marwaan (is) with Alia

(394) a. The humblest citizen is equal to the President.  
 b. The President is equal to the humblest citizen.

(395) a. The humblest citizen and the President are equal.  
 b. The President and the humblest citizen are equal.

(396) a. North Korea is similar to Red China.  
 b. Red China is similar to North Korea.

(397) a. The button matches the shirt.  
 b. The shirt matches the button.

(398) a. The waitress resembles the senator.  
 b. The senator resembles the waitress.

(399) a. Meryl Streep met my sister.  
 b. My sister met Meryl Streep.

(400) a. The bicycle is near the garage.  
 b. The garage is near the bicycle.

- (401) a. A horse is tied to a tree.  
b. A tree is tied to a horse.
- (402) a. The drunk collided with the lamppost.  
b. The lamppost collided with the drunk.  
c. The drunk and the lamppost collided.
- (403) a. The critic compares Ecuador with the United States.  
b. The critic compares the United States with Ecuador.
- (404) JFK is with Marilyn Monroe, and Marilyn Monroe is with JFK.
- (405) If  $x$  is with a starlet, then  $x$  is damned.  
If  $y$  is with an adulterer, then  $y$  is damned.
- (406) At every moment, day or night, during the next fortnight, JFK and Marilyn Monroe are with each other exclusively. (More specifically, I can volunteer that) this week JFK is with Marilyn, and next week Marilyn is with JFK.
- (407) *At every moment, day or night, during the next fortnight, JFK and Marilyn Monroe [under a perspective that holds them in equal regard] are [under that perspective] with each other [i.e.,  $\exists e(\text{With}(\text{jfk}, \text{mm}, e) \ \& \ \text{With}(\text{mm}, \text{jfk}, e))$ ] exclusively. (More specifically, I can volunteer that) this week [there is an (asymmetric) perspective  $e$  under which] JFK is with Marilyn [ $\text{W}(\text{jfk}, e) \ \& \ \text{Cum}(\text{mm}, e) \ \& \ \exists e'(\text{O}(e, e')) \ \& \ \text{With}(\text{jfk}, \text{mm}, e')$ ], and next week [there is an (asymmetric) perspective  $e$  under which] Marilyn is with JFK [ $\text{W}(\text{mm}, e) \ \& \ \text{Cum}(\text{jfk}, e) \ \& \ \exists e'(\text{O}(e, e')) \ \& \ \text{With}(\text{mm}, \text{jfk}, e')$ ].*
- (408) Here on a sunny morning near the Kennedy compound, Jack and Jackie are with each other. Now Jack is with Jackie, and now Jackie is with Jack. The First Couple, just like couples everywhere in America,...
- (409) The truck hit the bus, and the bus hit the truck, at different times.
- (410) The truck and the bus hit each other (—but) at different times.
- (411) Each of the truck and the bus hit the other—(but) at different times.
- (412) The truck collided with the bus, and the bus collided with the truck, at different times.
- (413) #The truck and the bus collided (with each other) (—but) at different times.
- (414) Each of the truck and the bus collided with the other—(but) at different times.
- (415) JFK was against RFK, and RFK was against JFK—at different times.
- (416) JFK and RFK were against each other, at different times.
- (417) Each of JFK and RFK was against the other—(but) at different times.

(418) JFK was with Marilyn Monroe, and Marilyn Monroe was with JFK—at different times.

(419) #JFK and Marilyn Monroe were with each other—but at different times.

(420) Each of JFK and Marilyn Monroe were with the other—but at different times.

(421) The Columbia students and the Harvard students surrounded the Pentagon and were crowded into the Mall.

(422)  $\exists e, \exists e', \exists e'' (W(e, c) \text{ and } W(e, h) \ \& \ O(\text{pro}_i, \text{pro}_j) \ \& \ [\exists x \text{Agent}(e_j', x) \ \& \ C(e_j', e'')] \ \& \ \text{surround}(e'') \ \& \ \text{Theme}(e'', p)] \text{ and } [\exists x \text{Theme}(e_j', x) \ \& \ C(e_j', e'')] \ \& \ \text{crowd}(e'') \ \& \ \text{Into}(e'', m)])$

(423) Beneath Dr. No's laboratory,

- a. S-Sa'ef w l-'areD maʕasou James Bond  
the ceiling and the floor crushed/squashed.3MPL 007.
- b. nmaʕasou S-Sa'ef w l-'areD James Bond  
crushed/squashed.3MPL the ceiling and the floor 007.
- c. nmaʕas S-Sa'ef w l-'areD James Bond  
crushed/squashed.3SG the ceiling and the floor 007.

(424) Beneath Dr. No's laboratory,

- a. S-Sa'ef w l-'areD lta'u bbaʕDon  
the ceiling and the floor met.3MPL,
- b. lta'u S-Sa'ef w l-'areD  
met.3MPL the ceiling and the floor,
- c. lta'a S-Sa'ef w l-'areD  
met.3SG the ceiling and the floor,  
but 007 had escaped unharmed.

(425) lta'et            alia    w    marwaan  
Met.3FS        Alia    and    Marwan

(426) lta'ou        alia    w    marwaan  
Met.3MP        Alia    and    Marwan

(427) byelta'a l-baaS    w    t-treen    bi    mHaTTet grandcentral  
Meet.3MS the-bus and the-train in Station Grand Central

(428) byelta'ou l-baaS    w    t-treen    bi    mHaTTet grandcentral  
Meet.3MP the-bus and the-train in Station Grand Central

- (429) a. lta'et            l-'arD            w    l-marriix  
Met.3FS        Earth            and    Mars
- b. lta'a            l-muzannab        w    l-kuwaykeb  
Met.3MS        the-comet        and    the-asteroid
- (430) a. lta'ou        l-'ard            w    l-marriix  
Met.3MP        Earth            and    Mars

- b. Ita'ou l-muzannab w l-kuwaykeb  
Met.3MP the-comet and the-asteroid
- (101) Saret (maʕle't) z-zebdeh w l-THiin ʕajiineh  
Became.3FS (tbsp. of) the-butter and the flour dough
- (237) \*keenet (maʕle't) z-zebdeh w l-THiin 'ajjin  
was.3FS (tbsp. of) the-butter and the-flour dough
- (431) \*bteb'a alia w marwaan aghbiya  
\*Remain.3FS Alia and Marwan stupid.3MP
- (432) byb'ou alia w marwaan aghbiya  
Remain.3MP Alia and Marwan stupid.3MP
- (433) lamma stajwabet-on š-šerTa, be'yet alia w marwaan seektiin  
when questioned-them the-police, remained3FS Alia and Marwan silent.3MP
- (434)a. Meryl Streep met my sister.  
b. My sister met Meryl Streep.
- (435)a. The bus collides with the scooter.  
b. The scooter collides with the bus.
- (436)a. North Korea is similar to Red China.  
b. Red China is similar to North Korea.
- (437)a. The button matches the shirt.  
b. The shirt matches the button.

## 5.2. Summary remark on the logical form and meaning of first-conjunct agreement

## 6. Comitative phrases and number agreement in other languages

- (332) Hamlet alia w marwaan l-piano  
Lifted.3FS Alia and Marwan the-piano
- (333)  $\exists e \exists e'' (\text{lift.3FS}(e'') \ \& \ [\lambda x: Ax][\lambda E: pro_k] W_i(E, x) \text{ and } [\lambda y: My](\text{Cum}_i(e, y) \ \& \ (\lambda_k [\lambda E: pro_i][\lambda E': pro_j] O(E, E') \ \& \ (\lambda_j \exists e' [\exists x \text{Agent}(e', x) \ \& \ C(e', e'') \ \& \ \text{Theme}(e'', p)]))))$
- (163) Lindak arda eta Anderek esnea edaten dabez. (Basque, Sjoblom 1980)  
Linda wine and Ander milk drink be (3pl)  
'Linda will drink wine and Ander milk'



- (438) Marek z Piotrem podniesli pianino (Polish, McNally 1993: 376)  
M.NOM with P.INSTR lifted.PL piano  
'Mark with Peter lifted the piano.'
- (439) Boris s Petej podnjaj rojal' (Russian, McNally 1993: 373)  
B.NOM with P.INSTR lifted.PL piano  
'Boris with Peter lifted the piano.' [typographical correction, Denis Paperno]
- (440) Marta con María levantaron el piano (Spanish, Camacho 1997: 206)  
Martha with Maria lifted.PL the piano
- (441) ... $\mathcal{W}(e, \text{Alia})$  and  $\text{Cum}(e, \text{Marwan})$ ... (Semitic)
- (442) ... $\mathcal{W}(e, \text{Alia})$  &  $\text{Cum}(e, \text{Marwan})$ ... (Slavic, Romance, Turkish, etc.)
- (443) \*alia ma' marwan Hamalo l-piano.  
Alia with Marwan lifted.PL the piano.
- (444) Lifted.3FS Alia and Marwan the piano.  
... $[\lambda x: \mathbf{Ax}] \mathcal{W}(e, x)$ ... and ... $[\lambda x: \mathbf{Mx}] \text{Cum}(e, x)$ ...
- (445) Lifted.3FS Alia with Marwan the piano.  
... $[\lambda x: \mathbf{Ax}] \mathcal{W}(e, x)$  &  $[\lambda x: \mathbf{Mx}] \exists e' (\text{Cum}(e, x) \& \text{O}(e, e') \& \exists y \text{With}(y, x, e'))$ ...
- (446) (Lifted Alia  $\Delta$  (and (Marwan the piano))))
- (447) (Lifted Alia ((with Marwan) the piano))  
  
(Polish, McNally 1993)
- (448) Marek z Piotrem podniesli' pianino, ale Marek podniosl je zanim zrobil to Piotrek.  
M.NOM with P.INSTR lifted.PL piano but Mark lifted before did it Peter  
'Mark with Peter lifted the piano, but Mark did it before Peter did.'
- (449) \*Marek z Piotrem podniesli' pianino, ale naprawde kazdy zrobil to osobno.  
M.NOM with P.INSTR lifted.PL piano but really each did it separately  
'Mark with Peter lifted the piano; in fact, each did it separately'  
  
(Spanish, Camacho 2000)
- (450) \*Con Marta fuimos al cine, pero no fuimos juntos ni a la misma película.  
'I with Marta went.1PL to the movies, but we didn't go there together and not to the same picture.'

- (451) \*Montagnier con Gallo descubrieron el virus del SIDA al mismo tiempo.  
'Montagnier with Gallo discovered.3PL the AIDS virus at the same time.'
- (452) Anna z Piotrem mają brązowe oczy.  
A.NOM with P.INSTR have.PL brown eyes.
- (453) \*kent 'am fatteš be l-'ayleh 'ala l-mušerikin l-munesibin. kenet alia w marwan berS,  
fa 'melt t-tajrubeḥ 'layon.  
I was searching through the family for the right subjects. Was.FS Alia and Marwan albinos. So I experimented with them.
- (454) kent 'am fatteš be l-'ayleh 'ala l-mušerikin l-munesibin. kenou alia w marwan berS,  
fa 'melt t-tajrubeḥ 'layon.  
I was searching through the family for the right subjects. Were.PL Alia and Marwan albinos. So I experimented with them.
- (455) \*Anna z Piotrem ma brązowe oczy. (Maria Bittner, p.c.)  
A.NOM with P.INSTR has.SG brown eyes.
- (332) \* alia w marwaan Hamlet l-piano.  
\* Alia and Marwan lifted.3FS the-piano
- (456) Marek z Piotrem podniosł pianino (Polish)  
M.NOM with P.INSTR lifted.SG piano  
'Mark with Peter lifted the piano.'
- (457) Boris s Petej podnjaj' [ʔ] rojal' (Russian)  
B.NOM with P.INSTR lifted.SG piano  
'Boris with Peter lifted the piano.'
- (458) Marta con María levantó el piano (Spanish)  
Martha with Maria lifted.SG the piano
- (459) alia ma' marwan Hamlet l-piano  
Alia with Marwan lifted.3FS the piano.
- (460) \*alia ma' marwan Hamalo l-piano  
Alia with Marwan lifted.3PL the piano.

## 6.0. Counting participants and their accomplices at the scene

- (461) The Harvard students and the Columbia students sneered at the Columbia students.
- (462) Echo to Narcissus whispered sweet-nothings.

**6.0.0. The chains that bind accomplices**

- (463)a. Russell wrote the whole of *Principia Mathematica* with Whitehead.  
 b. Russell, with Whitehead, wrote the whole of *Principia Mathematica*.

- (464)a. Russell wrote the whole of *Principia Mathematica* with a Whitehead pencil.  
 c. Russell, with a Whitehead pencil, wrote the whole of *Principia Mathematica*.

(465) Russell wrote the whole of *Principia Mathematica*.

- (466)a. Nora melted the chocolate with her lens with Willy Wonka.  
 b. Nora, with Willy Wonka, melted the chocolate with her lens.

- (467)a. Nora melted the chocolate with Willy Wonka with her lens.  
 b. Nora, with her lens, melted the chocolate with Willy Wonka.

(468)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W_i(e, x) \& [\lambda E' : [\lambda E : pro_i](O(e, e') \& [\lambda x: Wx] Cum(e', x) \& With(e, e'))])$   
 $(\exists x W_j(e', x) \& [\lambda E' : pro_j][\lambda E'' : pro_k](O(e', e'') \& (\exists x Agent(e'', x) \& Cause(e'', e''') \& melt(e''')) \& [\lambda x: Cx] Patient[e''', x] \& [\lambda x: Lx] Instrument[e''', x])))$

'Nora participates, and her participation with Willy overlaps a melting of the chocolate using her lens'

(469)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W_i(e, x) \& [\lambda E' : [\lambda E : pro_i](O(e, e') \& [\lambda x: Wx] Cum(e', x) \& With(e, e'))])$   
 $(\exists x W_j(e', x) \& [\lambda E' : pro_j][\lambda E'' : pro_k](O(e', e'') \& (\exists x Agent(e'', x) \& Cause(e'', e''') \& melt(e''')) \& [\lambda x: Cx] Patient[e''', x] \& [\lambda x: Lx] Instrument[e'', x])))$

'Nora participates, and her participation with Willy overlaps a melting of the chocolate with her using her lens'

(470)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W_i(e, x) \& [\lambda E : pro_i][\lambda E' : pro_j](O(e, e') \& (\exists x Agent_k(e', x) \& [\lambda E'' : [\lambda E' : pro_k](O(e', e'') \& [\lambda x: Wx] Cum(e'', x) \& With(e', e'''))]) Cause(e'', e''') \& melt(e''')) \& [\lambda x: Cx] Patient[e''', x] \& [\lambda x: Lx] Instrument[e''', x])))$

'Nora participates, and it overlaps an action with Willy that melts the chocolate using her lens'

(471)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W_i(e, x) \& [\lambda E : pro_i][\lambda E' : pro_j](O(e, e') \& (\exists x Agent_k(e', x) \&$

$[1E' : [1E' : pro_k](O(e', e'') \& [1x: Wx]Cum(e', x) \& With(e', e''))]Cause(e', e'') \& melt(e'') \& [1x: Cx]Patient[e'', x] \& [1x: Lx]Instrument[e, x])]$

'Nora participates, and it overlaps an action with Willy that melts the chocolate with her using her lens'

(462) Nora with Willy have melted the chocolate.

(468)  $\exists e \exists e' \exists e'' \exists e''' ([1x: Nx]W_i(e, x) \& [1E' : [1E : pro_i](O(e, e') \& [1x: Wx]Cum(e', x) \& With(e, e''))]$   
 $(\exists x W_j(e', x) \& [1x: 1E' : pro_j][1E'' : pro_k](O(e', e'') \& (\exists x Agent(e'', x) \& Cause(e'', e''') \& melt(e'''))))$

(463) ...Nora  $W_i(e, x)$ ...  $[1E : pro_i] \dots (O(e, e') \& \exists x Agent(e', x) \& Cause(e', e'')) \dots$

(464) ...Nora  $W_i(e, x)$ ...with Willy...  $(\exists x W_j(e', x) \& [1x: 1E : pro_j] \dots (O(e, e') \& \exists x Agent(e', x) \& Cause(e', e'')) \dots)$

(465) \*Echo to Narcissus have whispered sweet-nothings.

(466)  $\exists e \exists e' \exists e'' ([1x: Ex]W_i(e, x) \& [1E' : [1E : pro_i](O(e, e'') \& [1x: Nx]To[e'', x])]$  Echo  
 $[1E' : [1E : pro_i](O(e, e'') \& [1x: Nx]To[e'', x])]$  To Narcissus  
 $[1E' : [1E : pro_i](O(e, e'') \& [1x: Nx]To[e'', x])]$   $(\exists x Agent(e', x) \& Cause(e', e'') \& whisper(e'')) \dots)$  Whispers

#### 6.0.1. A locality condition on the comitative phrases that count for number agreement

(467) Anna segodnja s Petej ušla (Russian, McNally 1993: 353)  
 A.NOM today with P.INSTR left.FSG  
 'Anna left today with Peter.'

(468) \*Anna segodnja s Petej pridut (Russian, McNally 1993: 354)  
 A.NOM today with P.INSTR come.3PL  
 'Anna came today with Peter.'

(462) Nora with Willy have melted the chocolate.

(468)  $\exists e \exists e' \exists e'' \exists e''' ([1x: Nx]W_i(e, x) \& [1E' : [1E : pro_i](O(e, e') \& [1x: Wx]Cum(e', x) \& With(e, e''))]$   
 $(\exists x W_j(e', x) \& [1x: 1E' : pro_j][1E'' : pro_k](O(e', e'') \& (\exists x Agent(e'', x) \& Cause(e'', e''') \& melt(e'''))))$

- (469)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W_i(e, x) \& [\lambda E' : [\lambda E : \text{pro}_i](O(e, e') \& [\lambda x: Wx] Cum(e', x) \& With(e, e'))][\lambda E: O(e', e)] (\exists x W_j(e, x) \& [\text{pl} \lambda E : \text{pro}_j][\lambda E'' : \text{pro}_k](O(e, e'') \& (\exists x \text{Agent}(e'', x) \& Cause(e'', e''') \& melt(e'''). \dots))))$
- (470)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W(e, x) \& [\lambda E' : [\lambda E : [\lambda x: Nx] W(e, x)](O(e, e') \& with Willy)][\lambda E: O(e', e)] (\exists x W(e, x) \& have melted the chocolate)))$
- (279) \*Boris Natasha have won \$100.
- (149) DeHket      kell      mara      w      ebn-a      ʒa      estez linguistics  
Laughed.3FS   every   woman   and   child-her   at   professor linguistics
- (471) \*Nora yesterday with Willy have melted the chocolate (v. (468))
- (472)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W(e, x) \& [\exists E' : (\exists e' \leq e \& yesterday(e'))] [\lambda E'' : [\lambda E' : \text{pro}_i(e')](O(e', e'') \& with Willy)][\lambda E: O(e'', e)] (\exists x W(e, x) \& have melted the chocolate)))$
- (473)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W(e, x) \& [\exists E' : (\exists e' \leq e \& yesterday(e'))] [\lambda E'' : [\lambda E : [\lambda x: Nx] W(e, x)](O(e', e'') \& with Willy)][\lambda E: O(e'', e)] (\exists x W(e, x) \& have melted the chocolate)))$
- (474)  $\exists e \exists e' \exists e'' \exists e''' ([\lambda x: Nx] W(e, x) \& [\exists E' : (\exists e' \leq e \& yesterday(e'))] [\lambda E'' : [\lambda E : e \leq e' \& [\lambda x: Nx] W(e, x)](O(e, e'') \& with Willy)][\lambda E: O(e'', e)] (\exists x W(e, x) \& have melted the chocolate)))$
- (475) \*Yesterday, the chocolate melted with Willy.
- (476) \*Yesterday the chocolate was melted with Willy.  
Cf. Yesterday, the chocolate was melted by Nora with Willy.
- (477) \*Yesterday, it rained with snow.
- (478) Nora yesterday with Willy has melted the chocolate (cf. (467)).
- (479)  $\exists e \exists e'' \exists e''' ([\lambda x: Nx] W_i(e, x) \& [\text{sg} \lambda E : \text{pro}_i] [\lambda E' : (\exists e' \leq e \& yesterday(e'))] [\lambda E'' : \text{pro}_j](O(e', e'') \& (\exists x \text{Agent}_k(e'', x) \& [\lambda E''' : [\lambda E'' : \text{pro}_k](O(e'', e''') \& with Willy)][\lambda E''': O(e''', e'')] (\exists x \text{Agent}_k(e'', x) \& Cause(e'', e''') \& melt(e'''). \dots))))$       Nora -SG  
yesterday  
with Willy  
melted...

### 6.1. Number agreement and comitativity

(452) Anna z Piotrem mają brązowe oczy.  
A.NOM with P.INSTR have.PL brown eyes.

(455) \*Anna z Piotrem ma brązowe oczy.  
A.NOM with P.INSTR has.SG brown eyes.

(480) ... $W(e,x)$  &...&  $O(e,e')$  &...& Possessor( $e',x$ )...

(425) Ita'yet alia w marwaan  
Met.3FS Alia and Marwan

## 7. Chapter Summary