



(6) What is theoretically interesting about MORE-MOREs?

It's been argued that MORE-MOREs are oddballs out, bearing properties that are unable to be accounted for under a minimalist framework or if UG is assumed (McCawley, 1988; Culicover & Jackendoff, 1999; Culicover, 1999; Borsley, 2003; Goldberg & Jackendoff, 2004). We'll see here that this generalization is wrong. MORE-MOREs act a lot like conditionals – syntactically and semantically.

(7) Where is this talk going?

- a. Present the behavior of MORE-MOREs with respect to tag questions, NPI licensing, and extraction.
- b. Show that the syntactic behavior of a MORE-MORE's two clauses patterns very similarly to that of the IF-clause and main clause of a standard conditional.
- c. Demonstrate that the two clauses in a MORE-MORE are codependent syntactically and semantically.
- d. Briefly discuss how the data of MORE-MOREs as presented in Culicover & Jackendoff (1999) is not complete and how it leads to a faulty analysis.

## II. Observable behavior of MORE-MOREs

**OBSERVATION #1:** clause<sub>1</sub> and clause<sub>2</sub> behave like a subordinate and matrix clause, respectively.

EVIDENCE - TAG QUESTIONS FORM ON CLAUSE<sub>2</sub>, AND NOT ON CLAUSE<sub>1</sub>:

- (8) a. ✓ The more pizza Romeo eats, the more disappointed Juliet is, isn't she?  
b. \* The more disappointed Juliet is, the more pizza Romeo eats, isn't she?

- (9) a. ✓ If Romeo eats more pizza, (then) Juliet is more disappointed, isn't she?  
b. \* If Juliet is more disappointed, (then) Romeo eats more pizza, isn't she?

EVIDENCE - CLAUSE<sub>2</sub> CAN HOST SUBJUNCTIVE CASE, BUT CLAUSE<sub>1</sub> CANNOT (CULICOVER & JACKENDOFF, 1999):

- (10) a. ✓ I demand that the more John eats, the more he pay(s)  
b. \* I demand that the more John eat, the more he pay(s)

EVIDENCE - IN GERMAN, THE WORD ORDER OF EACH CLAUSE IS CONSISTENT WITH CLAUSE<sub>1</sub> BEING SUBORDINATE AND CLAUSE<sub>2</sub> BEING THE MATRIX CLAUSE (MCCAWLEY 1988)

- (11) a. Je länger du in Deutschland wohnst, desto besser wirst du Deutsch sprechen.  
'The longer you live in Germany, the better you will speak German'

EVIDENCE - IN DUTCH, THERE IS FLEXIBILITY IN THE WORD ORDER OF CLAUSE<sub>2</sub>  
CHARACTERISTIC OF THE MATRIX CLAUSE (DEN DIKKEN 2003)

- (12) des te meer je (in dit boek) leest, des te minder {begrijp je / je begrijpt}  
the-GEN to more you in this book read the-GEN to less {understand you/you understand}  
'the more you read (in this book), the less you understand'
- (13) ik denk dat des te meer je (in dit boek) leest, des te minder {je begrijpt/\*begrijp je}  
'I think that the more you read (in this book), the less you understand'

**OBSERVATION #2:** The two clauses act differently with respect to NPI licensing

EVIDENCE – NPIs are licensed in clause<sub>1</sub>, but not in clause<sub>2</sub>

- (14) a. ✓ The more anyone drinks, the faster we'll leave the party  
b. \* The more Bill drinks, the faster anyone will leave the party

**OBSERVATION #3:** The two clauses behave similarly

EVIDENCE: EXTRACTION IS EQUALLY PREMISSIBLE FROM BOTH CLAUSE<sub>1</sub> AND CLAUSE<sub>2</sub>  
(CULICOVER & JACKENDOFF, 1999).

"core" sentence

- (15) The sooner you solve this problem, the more easily you'll satisfy the folks up at corporate headquarters.

Relativized extraction

- (16) a. This is the sort of problem which<sub>1</sub> the sooner you solve t<sub>1</sub>, the more easily you'll satisfy the folks up at corporate headquarters. [extraction from clause<sub>1</sub>]  
b. The folks up at corporate headquarters are the sort of people who<sub>1</sub> the sooner you solve this problem, the more easily you'll satisfy t<sub>1</sub>. [extraction from clause<sub>2</sub>]

Topicalization

- (17) a. This problem<sub>1</sub>, the sooner you solve t<sub>1</sub>, the more easily you'll satisfy the folks up at corporate headquarters.[extraction from clause<sub>1</sub>]  
b. The folks up at corporate headquarters<sub>1</sub>, the sooner you solve this problem, the more easily you'll satisfy t<sub>1</sub>. [extraction from clause<sub>2</sub>]

WH-extraction?

Culicover & Jackendoff's (72) reproduced here as (18)

- (18) a.\* Which problem<sub>1</sub> does the sooner (that) you solve t<sub>1</sub>, the more easily you'll satisfy the folks up at corporate headquarters?  
b.\* Which problem<sub>1</sub> the sooner (that) you solve t<sub>1</sub>, will the more easily you satisfy the folks up at corporate headquarters?

(19) interfering factors<sup>2</sup>

- a. (18a) and (18b) could be out due to SAI interference (see (20a) and (20b))
- b. (18a) could be out due to too many INFLs (see (20b))

- (20) a. √ Mary wonders which problem<sub>1</sub> the sooner Bill solves t<sub>1</sub>, the more easily he'll satisfy the folks up at corporate headquarters
- b. ? Which problem<sub>1</sub> the sooner that Bill solves t<sub>1</sub>, the more easily he'll satisfy the folks up at corporate headquarters?

### III. What do all these syntactic behaviors hold in common?

#### Enter: conditionals.

A standard conditional:

- (21) If Romeo eats more pizza, (then) he will get fatter  
apodosis (IF-clause)                      protasis (main clause)

The syntactic behaviors of clause<sub>1</sub> and clause<sub>2</sub> in MORE-MOREs we just observed behave strikingly similarly to the apodosis and protasis of a conditional respectively.

#### SIMILARITY #1: PRESENCE OF "THEN" IN MORE-MOREs

In some dialects of English, *then* appears clause initially in clause<sub>2</sub>

- (22) The hungrier Romeo gets, then the more pizza he eats
- (23) If Romeo gets hungrier, then he eats more pizza

#### SIMILARITY #2: TAG QUESTIONS

- (24) a. √ The more pizza Romeo eats, the more disappointed Juliet is, isn't she?  
b. \* The more disappointed Juliet is, the more pizza Romeo eats, isn't she?
- (25) a. √ If Romeo eats more pizza, (then) Juliet is more disappointed, isn't she?  
b. \* If Juliet is more disappointed, (then) Romeo eats more pizza, isn't she?

#### SIMILARITY #3: NPI LICENSING (IT IS STANDARDLY ASSUMED IN THE LITERATURE THAT THE APODOSIS OF A CONDITIONAL LICENSES NPIs, WHEREAS THE PROTASIS DOES NOT.)

- (26) a. √ The more anyone drinks, the faster we will leave the party  
b. \* The more Bill drinks, the faster anyone will leave the party
- (27) a. √ If anyone drinks more, we'll leave the party faster  
b. \* If Bill drinks more, anyone will leave the party faster

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<sup>2</sup> Thank you to Howard Lasnik for pointing this out to me.

**SIMILARITY #4: EXTRACTION**

Relativized extraction

- (28) a. This is the sort of problem which<sub>1</sub> if you solve t<sub>1</sub> soon, (then) you'll more easily satisfy the folks up at corporate headquarters.  
b. The folks up at corporate headquarters are the sort of people who<sub>1</sub> if you solve this problem soon, (then) you'll more easily satisfy t<sub>1</sub>.

Topicalization

- (29) a. This problem<sub>1</sub>, if you solve t<sub>1</sub> soon, (then) you'll more easily satisfy the folks up at corporate headquarters  
b. The folks up at corporate headquarters<sub>1</sub>, if you solve this problem soon, (then) you'll more easily satisfy t<sub>1</sub>.

WH-extraction

- (30) Which problem<sub>1</sub>, if Bill solves t<sub>1</sub> soon, will he more easily satisfy the folks up at corporate headquarters?  
(31) Who<sub>1</sub>, if Bill solves this problem soon, will he more easily satisfy t<sub>1</sub> ?

NOTE: Culicover & Jackendoff (1999) claim that extraction out of IF-clauses is not permitted. their examples include only data in which the IF-is sentence final (see (32) below, Culicover & Jackendoff's (77a)). But, they do not consider data relevant in which the IF-clause is sentence-initial (as in (33) below). As we've just seen, insomuch as MORE-MOREs pattern with conditionals, the "IF-clause" in MORE-MOREs always appears sentence-initial.

- (32) ?? This is a problem<sub>1</sub> that you'll be able to tell the folks up at corporate headquarters to buzz off if you solve t<sub>1</sub>.  
(33) ✓ This is a problem that if you solve, you'll be able to tell the folks up at corporate headquarters to buzz off.

MORE....

**SIMILARITY #5: VARIABLE BINDING**

When variable binding is permitted in MORE-MOREs, it is permitted in the corresponding conditional and vice versa:

- (34) a. ✓ The more **every girl scout** learned about fire safety, the less likely **she** was to have a fire accident  
b. ✓ The more **every girl scout** learned about fire safety, the more the park ranger trusted **her**  
c. \* The more **she** learned about fire safety, the less likely **every girl scout** was to have a fire accident  
d. ? The more **she** learned about fire safety, the more the park ranger trusted **every girl scout**  
e. ✓ The more quickly fire safety was taught to **every girl scout**, the more easily **she** earned her badge  
f. ✓ The more quickly fire safety was taught to **every girl scout**, the more the park ranger trusted **her**  
g. \* The more quickly fire safety was taught to **her**, the more easily **every girl scout** earned her badge  
h. ? The more quickly fire safety was taught to **her**, the more the park ranger trusted **every girl scout**

- (35) a. ✓ If **every girl scout** learned more about fire safety, (then) **she** was less likely have a fire accident  
b. ✓ If **every girl scout** learned more about fire safety, then the park ranger trusted **her** more  
c. \* If **she** learned more about fire safety, (then) **every girl scout** was less likely to have a fire accident  
d. \* If **she** learned more about fire safety, then the park ranger trusted **every girl scout** more  
e. ✓ If fire safety was taught to **every girl scout** quickly, then **she** earned her badge easily  
f. ✓ If fire safety was taught to **every girl scout** quickly, then the park ranger trusted **her** more  
g. \* If fire safety was taught to **her** quickly, then **every girl scout** earned her badge easily  
h. \* If fire safety was taught to **her** quickly, then the park ranger trusted every **every girl scout**

**SIMILARITY #6: LACK OF CONDITION C BINDING BETWEEN CLAUSES IN A MORE-MORE**

In conditionals, the only configuration in which a condition C violation occurs is if the IF-clause is in sentence final position, and the subject of the main clause is coindexed with an R-expression in the IF-clause. No such violation will occur if the IF-clause is sentence initial (Iatridou 1991):

- (36) a. \* She<sub>1</sub> yells at Bill if Mary<sub>1</sub> is hungry  
b. ✓ If Mary<sub>1</sub> is hungry, she<sub>1</sub> yells at Bill

In MORE-MOREs, clause<sub>1</sub> must always come first. Thus, if MORE-MOREs pattern exactly like conditional with, we would predict that a condition C violation will never occur between the two clauses of a MORE-MORE. This is borne out:

- (37) a. ✓ The hungrier Mary<sub>1</sub> is, the more she<sub>1</sub> yells at Bill,  
b. ✓ The hungrier she<sub>1</sub> is, the more Mary<sub>1</sub> yells at Bill  
c. ✓ The hungrier Mary<sub>1</sub> is, the more food Bill gives to her<sub>1</sub>  
d. ✓ The hungrier she<sub>1</sub> is, the more food Bill gives to Mary<sub>1</sub>  
e. ✓ The more Bill talks to Mary<sub>1</sub>, the angrier she<sub>1</sub> gets  
f. ✓ The more Bill talks to her<sub>1</sub>, the angrier Mary<sub>1</sub> gets  
g. ✓ The more Bill talks to Mary<sub>1</sub>, the more he calms her<sub>1</sub> down  
h. ✓ The more Bill talks to her<sub>1</sub>, the more he calms Mary<sub>1</sub> down

**IV. There's more that MORE-MOREs have in common with conditionals: Interclausal codependency**

There is one behavior of MORE-MOREs that hasn't been mentioned in the literature: Clause<sub>1</sub> and clause<sub>2</sub> are syntactically and semantically dependent upon each other (i.e., codependent).

**CODEPENDENCE #1:** EACH CLAUSE IN A MORE-MORE IS DEPENDENT UPON THE PRESENCE OF THE OTHER FOR ACCEPTABILITY (BORSLEY 2003).

- (38) a.  $\checkmark$  The more pizza you eat, the fatter you'll get  
b. \* ~~The more pizza you eat, the fatter you'll get~~  
c. \* The more pizza you eat, ~~the fatter you'll get~~
- (39) a.  $\checkmark$  If you eat more pizza, then you'll get fat  
b. \* ~~If you eat more pizza, then you'll get fat~~  
c. \* If you eat more pizza, ~~then you'll get fat.~~

NOTE: the acceptability of the word string "you'll get fat" may be coincidental. The meaning of a sentence "you'll get fat" does not have the same interpretation of the protasis in (39).

**CODEPENDENCE #2:** THE LICIT VALUES OF 'X' IN THE 'COMPARATIVE STRINGS' OF THE TWO CLAUSES ARE DETERMINED BY EACH OTHER

The comparative string – the more X, the less X, the X-er

- (40) a. The more I think about the 80s, the more I wish I had never grown up  
b. The less informed one is about the war in Iraq, the less distressed they are  
c. The happier a book ends, the better chance it has of making it into the best seller list.

The same type of comparative string need not be in both clauses:

- (41) a. The more candy my daughter gets from her father, the less candy I give to her.  
b. The better chocolate my boyfriend brings, the more my daughter likes him.

Imagine a multiple question formed from a MORE-MORE:

- (42) MORE-MORE:  
a. The better chocolate my boyfriend brings, the more my daughter likes him.  
multiple question:  
b. How much does my daughter like my boyfriend according to how good the chocolate is that he brings?

The answer can't be a single pair; it needs to be a set of answer pairs

- (43) a. \* {(likes him a little, Hershey's chocolate)}  
b. {(likes him a little, Hershey's chocolate), (likes him ok, Toblerone), (likes him a lot, Lindt truffles and Godiva)}

The progression is not necessarily a proportional progression (Beck 1997).

- (44) The hotter the day is, the more goals Anna scores  
(45) {(60<sup>0</sup>, 0 goals), (65<sup>0</sup>, 1 goal), (70<sup>0</sup>, 4 goals), (75<sup>0</sup>, 7 goals)}

The progression is not necessarily unidirectional either (Beck 1997).

(46) The more pizza Romeo eats, the less money Juliet has

(47) {(1/2 pizza, \$20), (3 pizzas, \$10), (10 pizzas, \$0)}

	pizza	money	
↑	10	\$0	↓
	3	\$10	
	1/2	\$20	

Thus, the pairs of licit values for 'X' in the comparative string do not progress proportionately nor directionally. But, the values must progress together:

(48) # {(1/2 pizza, \$20), (3 pizzas, \$30), (10 pizzas, \$0)}

	pizza	money	
↑	10	\$0	
	3	\$30	
	1/2	\$20	

### CODEPENDENCE #3: COPULA DELETION

It is widely-noted and accepted in the literature (McCawley, 1988, 1998; Beck, 1997; Culicover & Jackendoff, 1999; Culicover, 2001; Borsley, 2003) that copular main verbs in MORE-MOREs can delete.

(49) The better an advisor ~~is~~, the more successful a student ~~is~~.

According to McCawley: Copular deletion can only occur "when the meaning is generic rather than specific" (McCawley 1988, 1998). ((52) below is McCawley's (1988) (14c)).

(50) The more obnoxious Fred ~~is~~/\*∅, the less attention you should pay to him.

### Not necessarily....

(51) ? The more obnoxious Fred's younger brother ~~is~~, the less attention you should pay to him

- (52) a. The more obnoxious one ~~is~~/\*∅, the less attention you should pay to him.  
b. The more obnoxious a prof ~~is~~/\*∅, the less attention you should pay to him.

**And another factor that affects whether copula deletion is permitted...**

Naïve informants express a clear preference towards allowing copula deletion only when the main verb in both clauses is copular ((53), (54)). They also show a preference towards deleting both copulas, rather than only one (55).

- (53) a. ?? The longer the day's activities last, the sleepier the campers ~~are~~  
b. ?The longer the day's activities are, the sleepier the campers are
- (54) a. ?? The more tiring the day's activities ~~are~~, the more food the campers eat  
b. ?The more tiring the day's activities are, the sleepier the campers are
- (55) a. ? The longer the day's activities are, the sleepier the campers ~~are~~  
b. ? The more tiring the day's activities are, the sleepier the campers are  
c. ✓ The more tiring the day's activities are, the sleepier the campers are

NOTE: this isn't just a case of "if you have the same verb, you can delete"

- (56) a. \* The more infants ~~sleep~~, the more their parents sleep  
b. \* The more chickens a farmer ~~has~~, the more eggs he has

Relevant factors in whether copula deletion can occur:

1. phonological weight
2. copula in both clause<sub>1</sub> and clause<sub>2</sub>

**INTERMEDIATE CONCLUSION:**

AS WE'VE SEEN, MORE-MORES HOLD QUITE A BIT IN COMMON WITH STANDARD CONDITIONALS. IT IS NOT CORRECT TO SAY THAT THEY ARE "PERIPHERAL" OR THAT THEY ARE ODD.

**V. How have MORE-MORES been analyzed previously?**

CULICOVER & JACKENDOFF (1999)

1. The two clauses of a MORE-MORE are two conjoined CPs under a maximal projection CP.
  - This explains why extraction from both clauses is equally permissible
    - Clause<sub>1</sub> is not an adjunct, so there is no CED violation
    - Since both clauses are in the same position syntactically, they should behave identically
  - Problems?
    - Since the two clauses are syntactic sisters, extraction from either one would violate the CSC. This structure would predict that NO extraction should occur.

2. Clause<sub>2</sub> gets its matrix reading from “main clause force” from a separate semantic module.
  - This explains why clause<sub>2</sub> behaves syntactically like a matrix clause
  - Problems?
    - What is “main clause force”? (C&J state that they don’t know how to conceptualize this, nor what consequences it has for the larger theory.)
  
3. MORE-MORE sentences, like all other kinds of sentences, are not acquired by the speaker via UG, but rather learned by “cobbling together” the constructions they have access to in their grammar (such as conditionals).
  - This explains (C&J claim) how a construction that “A learner would be unlikely to have enough experience with...to be able to identify their crucial properties,” could be learned.
    - The child has access to conditionals, and little access to MORE-MORE. As a result, once conditionals are learned, the child posits that this construction could be stretched in new ways, and “cobbles together” MORE-MOREs.
  - Problems?
    - This paper sets out as one of its primary goals to demonstrate that MORE-MOREs could never be mastered during childhood via UG and innateness principles. Yet, nothing about Culicover & Jackendoff’s explanation of how MORE-MOREs could be learned by construction-specific grammar demonstrates how the theory of innateness and UG is ill-equipped to explain the acquisition of MORE-MOREs.. It is just assumed that MORE-MOREs could not come about as a result of principles of grammar and parameters set by other related PLD.
    - If we assume, like Culicover & Jackendoff, that a construction-specific grammar is what equips the language learner to learn MORE-MOREs, we would predict that any language with conditionals should have MORE-MOREs. But, this is not the case (eg., Japanese). Interestingly, though, Japanese has been argued not to have degree abstraction (Beck, Oda, & Sugisaki, 2003), and thus does not form comparatives the way they are observed in MORE-MOREs. This can account for why Japanese does not have MORE-MOREs; by contrast, Culicover & Jackendoff’s explanation for learnability cannot account for this discrepancy.
  
4. More problems
  - This argumentation strongly implies that conditionals are syntactically similar to MORE-MOREs. So, the IF-clause and main clause of a conditional are analyzed as two syntactic sisters. Aside from the problems we have already seen above in this section with this type of structure, how can we explain the evidence that the subject of the main clause c-commands a sentence final IF-clause (Iatridou 1991)?

Effectively, Culicover & Jackendoff have restated the question of how the range of MORE-MOREs' syntactic behaviors can be explained:

- Postulate a structure that can explain some of the syntactic behaviors.
- Any syntactic behavior that does not fit into that syntactic structure is explained by a separate semantic module.

## VI Conclusion

1. MORE-MOREs are not as odd or unprecedented as they have been presented in the literature as being. They share a lot in common with standard conditionals.
2. MORE-MOREs (and conditionals) demonstrate interclausal codependency.
3. I have demonstrated that some of the descriptive data concerning MORE-MOREs is erred (i.e., McCawley (1988) with respect to copula deletion; Culicover & Jackendoff (1999) with respect to extraction from an IF-clause, and wh-extraction from MORE-MORE clauses), and has led to faulty generalizations and analyses.
4. In light of data I presented here, there are new questions to address:
  - a. Why is the "IF-clause" (clause<sub>1</sub>) required to be in sentence final position?
  - b. Why can't we get overt "if" like we get overt "then"?
  - c. What is the internal structure of each of clause<sub>1</sub> and clause<sub>2</sub>?
  - d. Why do these clauses look like DPs? Why don't they take the word order of other clauses?

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