

1. はじめに

(1)と(2)は不定詞関係節の例である。(3)は不定詞目的節(infinitival purpose clause)の例である。(4)は関係節の例であるが、(5)はどちらにもとれる。(2)は関係節だが(5)はどちらにもとれるという点は本発表の議論において一つのポイントとなる。

- (1) The fork [with which to eat the dessert ___] is in the cupboard. (関係節)
 (2) The fork [to eat the dessert with ___] is in the cupboard. (関係節)
 (3) I bought it [to eat the dessert with ___]. (目的節)
 (4) I bought *at*the fork [with which to eat the dessert ___]. (関係節)
 (5) I bought *at*the fork [to eat the dessert with ___]. (関係節/目的節)

不定詞目的節は不定詞理由節(infinitival rationale clause)で言い換えることができる。(6)は不定詞理由節の例である。不定詞理由節は主語を修飾する位置には現れない((7))。このことから不定詞目的節も主語を修飾する位置には現れないと考えられる。ゆえに、(2)は目的節ではない(Jones (1985: 20)を参照)。

不定詞関係節は代名詞(および同定済みの名詞)を先行詞にしないので((8)・(9))、(3)は関係節ではない。

目的節は関係詞を顕在的に用いて表すことはできないので((10))、(4)は目的節ではない。

(5)については、先行詞の *at*the fork が同定済みであれば目的節(“in order to eat the dessert with it”)、そうでなければ関係節(“which I intended to eat the dessert with”)となる。

- (6) I bought the fork [(in order) to eat the dessert with it]. (理由節)
 (7) *The fork [(in order) to eat the dessert with it] is in the cupboard.
 (8) a. The man to talk to is here. (Jones (1985: 20)) b. *He to talk to is here. (*ibid.*)
 (9) (My friend recommended a fork_i to me.)
 a. *The fork_i [with which to eat the dessert ___] is in the cupboard.
 b. *The fork_i [to eat the dessert with ___] is in the cupboard.
 (10) *I bought it [with which to eat the dessert ___].

本発表では不定詞関係節と不定詞目的節における空所の埋め込みの深さに関する制限を記述する。主に以下の文の(非)文法性について見る。(11)-(16)は関係節について、(17)-(21)は目的節についてである。(19)と(20)については、かなり悪いとするものから、それほど悪くないとするものまで、インフォーマントの判断に幅があった。

問題となる空所は、(11)-(14)及び(17)-(20)では移動のコピー(Chomsky (2008)の意味で)、(15)-(16)及び(21)では PRO であると仮定する(それらを(b)で示す)。PRO が移動するか否かは本発表の議論を左右しない。

(関係節)

- (11) a. I bought a cot [on which to sleep ___].
 b. I bought a cot [on which to sleep on which].
 (12) a. *I bought a cot [on which to arrange [that Mary should sleep ___]].
 b. *I bought a cot [on which to arrange [that Mary should sleep on which]].
 (13) a. *I bought a cot [on which to arrange [for Mary to sleep ___]].
 b. *I bought a cot [on which to arrange [for Mary to sleep on which]].
 (14) a. ??I bought a cot [on which to convince Mary [to sleep ___]].
 b. ??I bought a cot [on which to convince Mary [to sleep on which]].
 (15) a. ??A man [to ___ fix the sink] is at the front door.
 b. ??A man_i [to PRO_i fix the sink] is at the front door.
 (16) a. The fork [to be sterilized ___] is in the tray.
 b. The fork_i [to be sterilized PRO_i] is in the tray.

(目的節)

- (17) a. I bought it [to sleep on ___].
 b. I bought it [which to sleep on which].
 (18) a. *I bought it [to arrange [that Mary should sleep on ___]].
 b. *I bought it [which to arrange [that Mary should sleep on which]].
 (19) a. *~?I bought it [to arrange [for Mary to sleep on ___]].
 b. *~?I bought it [which to arrange [for Mary to sleep on which]].
 (20) a. ??~?I bought it [to convince Mary [to sleep on ___]].
 b. ??~?I bought it [which to convince Mary [to sleep on which]].

- (21) a. We brought him along [to ___ show us the way].
 b. We brought him_i along [to PRO_i show us the way].

(注 1) (ic)については本発表では論じない。

- (i) a. I bought a fork with which to eat the dessert. b. I bought a fork to eat the dessert with.
 c. *I bought a fork which to eat the dessert with.

2. 定形節の中

2.1. 関係節

Ross (1986: 231)の文法判断によると、不定詞関係節において、空所が埋め込まれた定形節の中にあると容認度が下がる。本発表のインフォーマント調査でもそれは確認できた((23a)・(24a)・(25a)は定形関係節の例)。ただし Ross はその判断を?で示したが、本発表の調査結果としては*を与えたい。

- (22) a. Here's a knife for you to cut up the onions with. (Ross (1986: 230))
 b. ?Here's a knife for you to say that you cut up the onions with. (*ibid.*: 231)
- (23) a. Here is a knife [with which you would say [that you could easily cut up the onions ___]].
 b. *Here is a knife [to say [that you could easily cut up the onions with ___]].
 c. *Here is a knife [with which to say [that you could easily cut up the onions ___]].
- (24) a. That is the work [which you should claim [that you can't do ___]].
 b. *That is the work (for you) [to claim [that you can't do ___]].
- (25) a. I bought a cot [on which I could arrange [that Mary should sleep ___]].
 b. *I bought a cot [on which to arrange [that Mary should sleep ___]].

2.2. 目的節

本発表の調査によると、不定詞目的節も空所が定形節の中にあると容認されない。

- (26) *I bought it [to arrange [that Mary should sleep on ___]].

3. for 不定詞節の中

3.1. 関係節

石居 (1985: 73)は、不定詞関係節について、関係詞が顕在する場合は空所を埋め込まれた for 不定詞節の中に置くことは許されないが、顕在しない場合は許されると述べている。

- (27) a. I found a cot [to arrange [for Mary to sleep on]]. (石居 1985: 73)
 b. *I found a cot [on which to arrange [for Mary to sleep]]. (*ibid.*)
 c. I found a cot [on which I could arrange [for Mary to sleep]]. (*ibid.*)

しかし(27a)の文法判断は、(28)の解釈と同じ目的節の解釈に基づいているのではないと思われる。なぜなら(29)が容認されないからである。第1節で述べたように、(29)のような文は関係節の解釈しかない。(29)と(30)の間に対立はない。ゆえに、不定詞関係節において、関係詞が顕在していようがいまいが空所を for 不定詞節の中に置くことはできないと結論できる。この現象に関して関係詞の顕在と非顕在の対立は存在しない。

- (28) I found a cot [in order to arrange [for Mary to sleep on it]]. (理由節)
 (29) *The cot [to arrange [for Mary to sleep on ___]] is over there. (関係節)
 (30) *The cot [on which to arrange [for Mary to sleep ___]] is over there. (関係節)

3.2. 目的節

本発表の調査では、(31)のような不定詞目的節の例については、関係節の場合と同じくらい悪いとする判断から、関係節よりは良いとする判断まで、インフォーマントの判断に幅があった。

- (31) *~?I bought it [to arrange [for Mary to sleep on ___]].

4. 目的語制御動詞の不定詞補文の中

4.1. 関係節

第3節で、不定詞関係節において空所を for 不定詞節の中に置くことはできないということを見たが、convince のような目的語制御動詞(object-control verb)の不定詞補文の中にも空所を置くことはできない。

- (32) a. ??The cot [on which to convince Mary to sleep ___] is over there.
 b. ??The cot [to convince Mary to sleep on ___] is over there.
 c. ??I found/bought a cot [on which to convince Mary to sleep ___].

4.2. 目的節

本発表の調査では、(33)のような不定詞目的節の例については((31)と同様に)、関係節の場合と同じくらい悪いとする判断から、関係節よりは良いとする判断まで、インフォーマントの判断に幅があった。

- (33) ??~?I bought it [to convince Mary [to sleep on ___]].

5. 先行詞が不定詞の意味上の主語である場合

Chomsky and Lasnik (1977)は、先行詞が不定詞の意味上の主語である不定詞関係節について、(34a)のように、その先行詞が節の主語であると容認度が下がり、(34b)のように、目的語であれば容認されると述べている。(34a)のような例の容認度の低さは本発表の調査でも確認できた。Chomsky and Lasnik は(34a)に*/?などの容認度を表す記号を付けていないが、本発表の調査結果としては??を与えたい。

(34) a. A man [to fix the sink] is at the front door. (Chomsky and Lasnik 1977: 464)

(*/?などの容認度を表す記号は付されていない)

b. I found a man [to do the job]. (*ibid.*)

Chomsky and Lasnik は、(34a)と(34b)の対立から、先行詞が意味上の主語である関係節について、主語と目的語の対立が存在すると主張している。しかし(34b)の文法判断は、関係節ではなく、(35)の解釈と同じ目的節の解釈に基づいている可能性がある。(36)は先行詞が不定詞の意味上の主語である不定詞目的節(主語空所目的節(subject-gap purpose clause))の例である。主語空所目的節は完全に容認可能である。

(35) I found a man [in order for him to do the job].

(36) a. I found/employed him [to do the job].

b. We brought him along [to show us the way]. (Jones 1985: 23)

Chomsky and Lasnik の(34b)の文法判断が目的節の解釈に基づくものであったとすれば、不定詞関係節において、先行詞が節の主語であろうとなかろうと、先行詞が不定詞の意味上の主語であると容認度が下がると結論できる。この現象に関して主語と目的語の対立は存在しないと考えたい。これに一つの根拠を与えるために、第6節で Berman (1974)が提出した例について考察する。

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(注2)(ia)のような例は一般的に(ib)の in order が省略された理由節とみなされる。これに対して(ia)は、(ib)の in order の省略とみなすことはできない。

(i) a. I brought my wife along [to introduce her to my co-workers]. (意味上の主語は I)(理由節)

b. I brought my wife along [in order to introduce her to my co-workers]. ((a)=(b))(理由節)

(ii) a. I brought my wife along [to introduce me to my co-workers.] (意味上の主語は my wife)(目的節)

b. *I brought my wife along [in order to introduce me to my co-workers]. ((a)≠(b))

c. I brought my wife along [in order for her to introduce me to my co-workers]. ((a)=(c))(理由節)

(注3)(i)のような例は意味上の主語の例ではなく、with の省略だと思われる。本発表の調査では、省略できる前置詞は、不定詞関係節・目的節における「使う」という意味の with だけだった。

(i) Have you got a key [to open this door]?

(ii) Have you got a key [to open this door (with)]?

(iii) a. The fork [to eat the dessert (with)] is in the cupboard.

b. I bought it [to eat the dessert (with)].

c. The friend [to play games *(with)] is coming soon.

d. The bed [to sleep *(on)] is in the room next to.

e. The fork [(that/which) you can eat the dessert *(with)] is on the table.

f. I don't know [which fork to eat the dessert *(with)].

g. The fork is easy [to eat the dessert *(with)].

(注4)次のような例については本発表では論じない。

(i) a. He's the oldest athlete ever to win an Olympic gold medal.

b. Who was the first person to climb Everest without oxygen?

c. She's the only scientist to have won three Nobel prizes. (『オックスフォード実例現代英語用法辞典』(p. 427))

.....
先行詞が不定詞の意味上の主語である不定詞節について本発表で注目したいのは、(37)と(38)である。

(37)で示すように、主語空所目的節は“主語空所関係節”と違って完全に容認可能である。しかし、主語空所関係節も、(38b)で示すように、不定詞が受け身になっていれば容認される。

(37) a. ??A man [to fix the sink] is at the front door. (= (34a))(関係節)

b. We brought him along [to show us the way]. (= (36b))(目的節)

(38) a. ??A man [to fix the sink] is at the front door. (= (34a))(関係節)

b. The fork [to be sterilized] is in the tray. (関係節)

(39) The sentences [to be discussed below] reflect the facts for a particular dialect only. (奥野 1979: 150)

6. Berman (1974)

第5節で Chomsky and Lasnik (1977)の(40)は関係節ではなく目的節ではないかと述べた。これに一つの根拠を与えるために、Berman (1974)の(41)について考察する。Berman は、(41a)は容認できないと主張している。

(41a)では主節動詞に lose が用いられている。

(40) I found a man [to do the job]. (=34b)(Chomsky and Lasnik 1977: 464)

(41) a. *John lost a book for Mary to read. (Berman 1974: 38)

b. John bought a book for Mary to read. (*ibid.*: 37)

しかし本発表の調査では、(42)で示すように、定冠詞を用いると容認された。不定冠詞を用いた場合も(43)ほどは悪くないと判断された。(43)は(44)と同じ日常の論理に沿わない意味を持つ目的節である。(43)の目的節の容認度の低さは、(42)の文法判断が目的節の解釈に基づくものではないことを示している。(42)は目的節ではなく関係節であると考えたい。Berman の(41a)の判断は(43)と同じ目的節の解釈に基づいていたのではないかと思われる。

なお、(42)と(45a)の主節動詞に lose を用いた関係節((45a)は顕在的に関係節の例である)において、不定冠詞を用いるとなぜ容認度が下がるのかは今のところ不明である。今後の課題としたい。

(42) John lost *the*/?*a* book (for Mary) to read.

(43) *I lost it (for Mary) to read. (目的節)

(44) *John lost a book in order (for Mary) to read it.

(45) a. I lost *the*/?*a* fork [with which to eat the dessert]. (関係節)

b. I bought *the*/*a* fork [with which to eat the dessert]. (関係節)

.....

主節動詞が lose であっても不定詞関係節は使える(I)、と主張した。ここで、Chomsky and Lasnik (1977)の主語と目的語の対立を思い出してほしい。先行詞が不定詞関係節の意味上の主語であるとき、その先行詞が節の主語であると容認度が下がるが、目的語であれば容認される(II)、というものだった。本発表の主張(I)とChomsky and Lasnik の主張(II)がともに正しければ、(47b)は(46b)と同じように容認されるはずであるが、本発表の調査によると、(47b)の容認度は、(47a)(および(46a))と同じくらい低かった。

本発表ではChomsky and Lasnik の主張(II)は誤りであると考えたい。すなわち、次のように考える：不定詞関係節に先行詞の位置についての主語と目的語の対立は存在せず、先行詞が節の主語であろうとなかろうと、先行詞が不定詞の意味上の主語であると容認度が下がる。(47b)の容認度が低いのはそのためである。(47b)と(46b)の容認度の差は、(46b)が関係節ではないことを示している。(46b)は、第5節で述べたように、(48)と同じ意味を持つ主語空所目的節である。主語空所目的節は“主語空所関係節”と違って完全に容認可能である。(49a)も主語空所目的節の例ではあるが、この文の意味は(49b)と同様に日常の論理に沿っていない。

(46) a. ??A man [to fix the sink] is at the front door. (=34)

b. I found a man [to do the job].

(47) a. ??The woman [to marry me] is at the front door.

b. ??I lost *the*/*a* woman [to marry me].

(48) I found a man [in order for him to do the job].

(49) a. *I lost her [to marry me].

b. *I lost *the*/*a* woman [in order for her to marry me].

.....

(注4) 石居 (1985)に次のような文法判断が見られる。(ia)が容認可能になっているが、本発表の調査では全て容認不可であった。(ia)と(ib)、及び、(ia)と(ic)の間にもし対立が存在するなら、本発表の分析だけでは説明できない。

(i) a. I lost a lot of friends to talk with. (石居 1985: 73)

b. *I lost a lot of friends with whom to talk. (*ibid.*: 74)

c. *I lost a book for you to read. (*ibid.*)

7. 不定詞関係節の空所

不定詞関係節の空所に関する観察結果をまとめる。非容認度の差については本発表では論じない。

(50) 空所を定形節の中に置くことはできない。

*I bought a cot [on which to arrange [that Mary should sleep ___]].

(51) 空所を for 不定詞節の中に置くことはできない。

*I bought a cot [on which to arrange [for Mary to sleep ___]].

(52) 空所を目的語制御動詞の不定詞補文の中に置くことはできない。

??I bought a cot [on which to convince Mary [to sleep ___]].

(53) 先行詞を不定詞の意味上の主語にすることはできない(=問題の空所を不定詞の主語の位置に置くことはできない)。ただし不定詞が受け身の場合を除く。

a. ??A man [to ___ fix the sink] is at the front door.

b. The fork [to be sterilized ___] is in the tray.

不定詞関係節の空所に関する(50)-(53)の制限を、Chomsky (2008)のフェイズ(phase)を用いて、(54)のように統一的に記述する。フェイズは CP と v*P である。受け身の vP はフェイズではない。(54)の理論的位置付けについては、意味接合面(semantic interface)で適用される解釈規則であると仮定する。さらに、(55)-(57)を仮定する。(54)-(57)に基づいて、(58)-(67)の(a)の(非)文法性をそれぞれ(b)で形式的に表現する。<>でフェイズを示す。x と y が(最小の)<>の中にあれば文法的であり(<・x・y・>)、なければ非文である(*<・x・<・y・>・>)。(問題となる空所は、(58)-(65)では移動のコピー(Chomsky (2008)の意味で)、(66)-(67)では PRO であると仮定する。PRO が移動するか否かは本発表の議論を左右しない。)

(54) 不定詞関係節の条件：

DP(X)に不定詞節(Y)が付加されていて、かつ、Y の主動詞(y)(=不定詞)が基底生成されたフェイズに X の連鎖の tail(x)があれば、Y は X の関係節である。(要するに、x と y は同じフェイズで基底生成される)

(55) a. 関係詞とその先行詞は連鎖を成す。関係詞の先行詞は、関係詞が基底生成された位置で基底生成されたとみなす。

b. PRO とコントローラは連鎖を成さない(少なくとも、不定詞関係節では)。

(56) PRO を主語とする不定詞節 CP はフェイズではない。(Kanno (2008)を参照)

(57) 不定詞の主語は関係詞化できない。*xa man [_Y who to < x~~who~~ y fix the sink >]のような関係節は作れない。

(58) a. I bought a cot [on which to sleep ___].

b. I bought xa cot [_Y on which to < ysleep ~~on~~ xwhich >].

(59) a. *I bought a cot [on which to arrange [that Mary should sleep ___]].

b. *I bought xa cot [_Y on which to < yarrange < [that Mary should < sleep ~~on~~ xwhich >] > >].

(60) a. *Here is a knife [with which to say [that you could easily cut up the onions ___]].

b. *Here is xa knife [_Y with which to < ysay < [that you could easily < cut up the onions with xwhich >] > >].

(61) a. *That is the work (for you) [to claim [that you can't do ___]].

b. *That is xthe work (for you) [_Y which to < yclaim < [that you can't < do xwhich >] > >].

(62) a. Here is a coin [with which to demonstrate ___ [that gravity is in effect in this room]].

b. Here is xa coin [_Ywith which to < ydemonstrate with xwhich [that gravity is in effect in this room] >].

(63) a. Here is a book [from which to learn ___ [that life is beautiful]].

b. Here is xa book [_Yfrom which to < ylearn from xwhich [that life is beautiful] >].

(64) a. *I bought a cot [on which to arrange [for Mary to sleep ___]].

b. *I bought xa cot [_Y on which to < yarrange < [for Mary to < sleep ~~on~~ xwhich >] > >].

(65) a. ??I bought a cot [on which to convince Mary [to sleep ___]].

b. ??I bought xa cot [_Y on which to < yconvince Mary [to < sleep ~~on~~ xwhich >] >].

(66)と(67)では、PRO と先行詞(=コントローラ)が連鎖を成さない((55b))。先行詞は関係節の中に tail を持たず、その結果 X と x の区別がなくなる。(67)において受け身の vP はフェイズではない。

(66) a. ??A man [to ___ fix the sink] is at the front door.

b. ??< [_{X=x}A man_i [_Y to < PRO_iy fix the sink >]] > is at the front door.

(67) a. The fork [to be sterilized ___] is in the tray.

b. < [_{X=x}The fork_i [_Y to ybe sterilized PRO_i]] > is in the tray.

(注5) try のような主語制御動詞(subject-control verb)については今後の課題とする。

(i) a. I bought the shelf [in which to set all of my books ___].

b. I bought the shelf [in which to try to set all of my books ___].

c. ??I bought the shelf [in which to convince you to set all of your books ___].

8. 不定詞目的節の空所

不定詞目的節の空所に関する観察結果をまとめる。なお、空所を for 不定詞節の中、および、目的語制御動詞の不定詞補文の中に置いた場合、関係節の場合と同じくらい悪いとする判断から、関係節よりは良いとする判断まで、インフォーマントの判断に幅があった。(69)と(70)では、相反する二つの判断を併記する。

(68) (関係節と同じく)空所を定形節の中に置くことはできない。

*I bought it [to arrange [that Mary should sleep on ___]].

(69) a. (関係節と異なり)空所を for 不定詞節の中に置ける。

?I bought it [to arrange [for Mary to sleep on ___]].

b. (関係節と同じく)空所を for 不定詞節の中に置くことはできない。

*I bought it [to arrange [for Mary to sleep on ___]].

(70) a. (関係節と異なり)空所を目的語制御動詞の不定詞補文の中に置ける。

?I bought it [to convince Mary [to sleep on ___].

b. (関係節と同じく)空所を目的語制御動詞の不定詞補文の中に置くことはできない。

??I bought it [to convince Mary [to sleep on ___].

(71) (関係節と異なり)先行詞は不定詞の意味上の主語になれる(=問題の空所を不定詞の主語の位置に置ける)。We brought him along [to ___ show us the way].

不定詞目的節の空所に関する制限として、(68)・(71)に加えて、まず(69a)・(70a)を取る場合を考える。この場合、(72)のように記述できる。(72)に基づいて、(73)-(77)の(a)の(非)文法性をそれぞれ(b)で表す。定形節を{ }示す。

(72) 不定詞目的節の条件(A) : 関係詞の tail、および、先行詞をコントローラとする PRO は、不定詞目的節の主動詞と同じ最小の定形節で基底生成される。

(73) a. I bought it [to sleep on ___].

b. {I bought it [~~which~~ to sleep on which]}.

(74) a. *I bought it [to arrange [that Mary should sleep on ___]].

b. *{I bought it [~~which~~ to arrange {[that Mary should sleep on which] } }.

(75) a. ?I bought it [to arrange [for Mary to sleep on ___]].

b. ?{I bought it [~~which~~ to arrange [for Mary to sleep on which] } }.

(76) a. ?I bought it [to convince Mary [to sleep on ___].

b. ?{I bought it [~~which~~ to convince Mary [to sleep on which] } }.

(77) a. We brought him along [to ___ show us the way].

b. {We brought him_i along [PRO_i to show us the way] }.

次に、(69a)・(70a)ではなく、(69b)・(70b)を取る場合を考える。この場合、(79)を仮定すれば、(78)のように記述できる。(78)と(79)に基づいて、(80)-(83)の(非)文法性を表現する。x と y が(最小の)<>の中にあれば文法的であり、なければ非文である。非容認度の差については論じない。

(78) 不定詞目的節の条件(B) : VP(Z)に不定詞節(Y)が付加されていて、かつ、Yの主動詞(y)(=不定詞)が基底生成されたフェイズに、Zに含まれる DP(X)の連鎖の tail(x)があれば、YはZの目的節である。(要するに、x と y は同じフェイズで基底生成される)

(79) 不定詞目的節の場合、PRO とコントローラは連鎖を成す。不定詞関係節の場合は連鎖を成さない。

(80) *<I bought _xit [_y ~~which~~ to <_y arrange <[that Mary should <sleep on which>]>>]>].

(81) *<I bought _xit [_y ~~which~~ to <_y arrange <[for Mary to <sleep on which>]>>]>].

(82) ??I bought _xit [_y ~~which~~ to <_y convince Mary [to <sleep on which>]>>].

(83) We brought _xhim along [_y to <_x PRO_i_y show us the way >]>].

(79)の論証は今後の課題とするが、不定詞目的節と不定詞関係節の何らかの特徴がポイントになると思われる。例えば Bach (1982: 36)によると、(84)で示すように、目的節では主節動詞の選択に制限がある。また、(85)で示すように、目的節においては PRO が必ずコントローラを持つが、関係節では持たない場合もある。これらのことが関係しているかもしれない。

(84) a. *I read it to review. (Bach 1982: 36)(目的節)

b. I read it (in order) to review it. (*ibid.*)(理由節)

(85) a. I bought it [to PRO eat the dessert with ___]. (目的節)

b. The fork [to PRO eat the dessert with ___] is in the cupboard. (関係節)

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1. ドイツ語の完了助動詞選択

ドイツ語には二つの完了助動詞 *haben* (=have) 及び *sein* (=be) を使い分ける現象が存在する。

- (1) a. Wir *sind* gestern ins Kino gegangen.
we.NOM be.PRS yesterday in.the.ACC theater.ACC go.PP
私たちは昨日映画館に行った。
- b. Wir *haben* den ganzen Tag gearbeitet.
we.NOM have.PRS the.ACC all.ACC day.ACC work.PP
私たちは一日中働いた。

一般に語学の教科書等では場所移動や状態変化を表わす少数の自動詞のみが *sein* (=be) を選択し、それ以外の大半の自動詞や再帰動詞¹ 及び他動詞が *haben* (=have) を選択すると説明されることが多い。ただ例外は数多くあり、例えば移動を表わさない *bleiben* 「留まる」や *begegnen* 「出会う」といった自動詞も *sein* (=be) を選択することから、その詳細な原理については今日に至るまで様々な立場から議論が為されている。

表 1. 完了助動詞選択の伝統的記述

他動詞	再帰動詞	自動詞
haben		haben or sein

本発表では *sein* (=be) を選択する動詞の中でも、単独で主語を *telic* な事態を表現する項 (後述) にしうる動詞が、*atelic* な事態を表現する場合でも *sein* (=be) を助動詞に選択する事態について論じる。

2. 先行研究

助動詞選択という現象自体はドイツ語の他にフランス語やイタリア語、オランダ語やヒッタイト語など多くの言語に存在していることが知られており、それぞれの言語に於ける研究の他、複数の言語の振る舞いを比較した研究が存在する。

■Grewendorf (1989)

非対格仮説からドイツ語の完了助動詞選択を論じた研究として Grewendorf (1989) がある。Grewendorf (1989) は GB 理論に於ける D 構造で主語が目的語の位置にある非対格動詞が *sein* を完了助動詞に取り、D 構造で主語が主語位置を埋めている非能格動詞や他動詞が *haben* を選択するとする主張を行った。ドイツ語に於いて非対格動詞は *sein* を助動詞に選択する他、非人称受身や行為者名詞を構成出来ず、過去分詞を限定用法で用いることが出来るとされている。

しかし Kaufmann (1995:392-405) などが指摘している様に、非対格動詞かを決める以上の特徴が一致しない動詞が数多く観察されることが問題となる。例えば *gehen* 「行く」、*ausreißen* 「逃げる」、*einschlafen* 「寝入る」などは完了助動詞に *sein* を選択するが、非人称受身を構成することが可能な例として知られている。また Keller & Sorace

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¹ ドイツ語に於ける再帰動詞とは (本発表では特に対格の) 再帰代名詞 *sich* を取る動詞のことを指す。

(2003)では実験によって移動動詞が状態変化動詞に比べ非人称受身を構成し易いことを示したが、これも非対格仮説によって説明することは難しい。以上の議論から、非対格仮説を根拠に助動詞選択の現象を分析することには問題が残る。

■Sorace (2000)

Sorace (2000)ではイタリア語、フランス語、オランダ語、ドイツ語の母語話者から調査を行い、英語の *have* と *be* に当たる完了助動詞のどちらを選択しやすいかを示す通言語的な動詞の意味的性質の階層（助動詞選択階層）を提案した。これによれば、telic な移動や状態変化を表わす動詞（つまりある地点から別の地点への移動を表わす *come* などの動詞や、非連続的な状態変化を表わす *die* などの動詞）がより典型的に *be* を選択し、逆に atelic な動作を表わす動詞（*work* や *walk* などに当たる動詞）がより典型的に *have* を選択するとした。

Sorace (2000)は複数の言語の振る舞いの相違を丹念に観察したものであり、基本的な助動詞選択の振る舞いの予測に有用な研究ではあるが、助動詞選択の基準そのものについて論じた研究ではない。その為、基本的に例外的とされる動詞についての説明力は持たない。また Sorace (2000: 875)自身が指摘した通り、ドイツ語は telic でない移動を表わす動詞であっても（例えば英語の *walk* や *swim* など）、*sein* を選択する為、予測に沿わない形となっている。Diedrichsen (2013)では Sorace (2000)の助動詞選択階層を基に、ドイツ語独自の助動詞選択階層を提案したが、いずれにせよ例外的動詞の位置付けが不明であることに変わりはない。

■藤井 (2016)

藤井 (2016)では *kollidieren* 「衝突する」や *treffen* 「会う」といった「衝突」や「遭遇」を表わすとされる動詞が主語を TELIC ENTITY として実現させる場合に、完了助動詞に *sein* を選択する現象を検討した。TELIC ENTITY とは Ackerman & Moore (1999)が提案した、終結点の存在する事態を表現する項である。これはフィンランド語やチェコ語、エストニア語に於ける格の使い分け等の現象を説明する為に導入された概念だが、Ackerman & Moore (1999:6)で以下の様に定義されている。

- (2) A lexical predicate *P* is TELIC iff for every *e* and *e'*, such that $P(a_1, \dots, a_n, e)$ and $P(a_1, \dots, a_n, e')$, and where *e'* is a subevent of *e*, *e* and *e'* have the same boundaries (end-points).
(cf. Krifka 1998)
- (3) An argument a_i of predicate *P* is a TELIC ENTITY iff *P* is a telic predicate and entails that a subpart of the denotation of the entity that corresponds to a_i (under any use of *P*), expresses the end-point of any telic event denoted by *P* and its arguments.

以上の定義に従えば、以下の(4a)の目的語 *water* は文の表わす事態が atelic である為に TELIC ENTITY となっていないが、(4b)では telic な事態を表現している為に目的語 *the water* が TELIC ENTITY となっている。この差異がフィンランド語等の格交替の要因となっていると Ackerman & Moore (1999)は主張した。

- (4) a. Kim drank *water*.
b. Kim drank *the water*.
Ackerman & Moore (1999: 7)

藤井 (2016)は「衝突」や「遭遇」を表わす動詞の取る項は *hit* や *kick* といった surface-contact verbs 「表面接触動詞」(Fillmore 1970 や Tsunoda 1981 の議論を参照) の目的語に近い性質の項、つまり TELIC ENTITY として実現しうるとし、主語が TELIC ENTITY として実現する場合に完了助動詞に *sein* を選択すると主張した。例えば *kollidieren* 「衝突する」では、(5a)の様に具体物「飛行機」が主語となる場合には主語への「衝突」の反作用が意識され易く、結果として TELIC ENTITY として実現する為に *sein* を完了助動詞に選択するが、(5b)の様に抽象的概念「行事」が主語となる場合には主語への「衝突」の反作用ないしフィードバックが意識され難く、結果として TELIC ENTITY として実現しないことで *haben* を選択するとする観察を行った。

- (5) a. Zwei Flugzeuge *{*haben/sind}* in der Luft miteinander kollidiert.
 two airplanes.NOM *{*have.PRS/be.PRS}* in the.DAT sky.DAT with.each.other collide.PP
 二機の飛行機が空中で互いに衝突した。
- b. Die beiden Veranstaltungen *{haben/*sind}* miteinander kollidiert.
 the.NOM both.NOM events.NOM *{have.PRS/*be.PRS}* with.each.other collide.PP
 両方の行事の日取りが被ってしまった。
 藤井 (2016: 35)

以上が藤井 (2016)の概要であるが、藤井 (2016)でも言及されている様に、単独で主語を TELIC ENTITY として実現させうる動詞は移動・状態変化のみを表わす動詞に比べて特異な振る舞いが観察される。次節ではこの特異な振る舞いについて検討を行う。

3. 文の意味と助動詞選択との不一致

動詞単独で主語を TELIC ENTITY として実現させうる *begegnen* 「出会う」や *erscheinen* 「現れる」には *telic* な事態を表わす用法の他に *atelic* な用法も有しているが、これらの動詞は *atelic* な用法（「対応する」及び「思われる」）であっても *sein* を完了助動詞に選択する。

- (6) a. Ernst *{*hat/ist}* ihr unterwegs begegnet.
 Ernst.NOM *{*have.PRS/be.PRS}* her.DAT halfway meet.PP
 エルンストは彼女に途中で出会った。
- b. Ernst *{*hat/ist}* ihr freundlich begegnet.
 Ernst.NOM *{*have.PRS/be.PRS}* her.DAT friendly behave.PP
 エルンストは彼女に親切に対応した。
- (7) a. Rita *{*hat/ist}* als Zeuge vor Gericht erschienen.
 Rita.NOM *{*have.PRS/be.PRS}* as witness before court appear.PP
 リタは目撃者として出廷した。
- b. Die Idee *{*hat/ist}* mir gewöhnlich erschienen.
 the.NOM idea.NOM *{*have.PRS/be.PRS}* me.DAT ordinarily appear.PP
 その考えは私にはありきたりに思われた。

これに対し、単独で主語を TELIC ENTITY として実現させ得ないが、移動や状態変化を表わし得る *rasen* 「疾走する」や *folgen* 「ついて行く」、*frieren* 「凍える」は実際の文の意味に合わせて助動詞選択も変化する。

- (8) a. Ernst *hat* wie wild gerast.
 Ernst.NOM have.PRS like mad rage.PP
 エルンストは狂った様に暴れた。
- b. Ernst *ist* wie wild gerast.
 Ernst.NOM be.PRS like mad rush.PP
 エルンストは狂った様に疾走した。
- (9) a. Rita *hat* den Eltern gefolgt.
 Rita.NOM have.PRS the.DAT parents.DAT obey.PP
 リタは両親に従った。
- b. Rita *ist* den Eltern gefolgt.
 Rita.NOM be.PRS the.DAT parents.DAT follow.PP
 リタは両親について行った。

- (10) a. Hans *hat* gefroren.
 Hans.NOM have.PRS freeze.PP
 ハンスは寒かった。
- b. Hans *ist* gefroren.
 Hans.NOM be.PRS freeze.PP
 ハンスは凍えた。

(8b)や(9b)の様に動詞が移動を表現する場合、完了助動詞としては *sein* を選択するが、(8a)や(9a)の様に動詞が移動を表現しない場合には *haben* を選択する。同様に、体が冷え切った程度が重い場合は(10b)の様に *sein* を選択するが、その程度が軽い場合には(10a)の様に *haben* を選択する。よって動詞単独で見ると、主語を TELIC ENTITY として実現するか否かで実際の用法と助動詞選択との不一致が起こるか否かが異なるという差異が存在することが確かめられた。

しかし奇妙なことに、動詞が前置詞句や不変化詞を伴う場合には、動詞単独とは異なる振る舞いが見られる。単独で主語を TELIC ENTITY に実現させ得ない動詞が前置詞句や不変化詞を伴う場合、当該の文の主語を TELIC ENTITY として実現させる場合は *sein* を選択するが、当該の文の主語を TELIC ENTITY として実現させない場合には *haben* を選択する（文の意味と助動詞選択の不一致が起きない）。

- (11) a. Die Gäste *{haben/*sind}* im Saal getanzt.
 the.NOM guests.NOM {have.PRS/*be.PRS} in.the.DAT hall.DAT dance.PP
 客人達は広間で踊った。
- b. Die Gäste *{*haben/sind}* in den Saal getanzt.
 the.NOM guests.NOM {*have.PRS/be.PRS} in the.ACC hall.ACC dance.PP
 客人達は踊りながら広間に入った。
- (12) a. Der Ofen *{hat/*ist}* die ganze Nacht durchgebrannt.
 the.NOM stove.NOM {have.PRS/*be.PRS} the.NOM all.ACC night.ACC through_burn.PP
 暖炉は一晩中燃え続けた。
- b. Die Sicherung *{*hat/ist}* durchgebrannt.
 the.NOM fuse.NOM {*have.PRS/be.PRS} through_burn.PP
 ヒューズが切れた。

前置詞句が着点を表わし、主語が移動の主体及び TELIC ENTITY となる(11b)では完了助動詞に *sein* を選択するが、前置詞句が場所を表わす(11a)では主語は移動の主体としても TELIC ENTITY としても実現せずに結果として *haben* を選択する。同様に不変化詞 *durch* 「～を貫いて」を伴う *durchbrennen* 「焼き切れる」は主語が状態変化の主体及び TELIC ENTITY として実現する(12b)では *sein* を選択するが、そうならない(12a)では *haben* を選択する。また前置詞 *mit* 「共に」を含む *miteinander* 「互いに」を伴う場合でも同様の振る舞いが観察される。

- (13) a. Zwei Flugzeuge *{*haben/sind}* in der Luft miteinander kollidiert.
 two airplanes.NOM {*have.PRS/be.PRS} in the.DAT sky.DAT with.each.other collide.PP
 二機の飛行機が空中で互いに衝突した。
- b. Die beiden Veranstaltungen *{haben/*sind}* miteinander kollidiert.
 the.NOM both.NOM events.NOM {have.PRS/*be.PRS} with.each.other collide.PP
 両方の行事の日取りが被ってしまった。

以上の観察から、動詞単独で主語を TELIC ENTITY として実現させ得る動詞のみが実際の文の意味と助動詞選択の不一致を惹き起こすことが分かった。次節ではこの奇妙な振る舞いを統語的観点から説明する。

4. Aspectual head

本発表では、3 節で観察した文の意味と完了助動詞選択の不一致は、動詞のAspectが変更を受ける位置に起因するものであると考え。即ち、Asp (aspectual head)によってAspectの変更が起こされる前の段階が完了助動詞選択の基準になっている為に、単独で主語を TELIC ENTITY として実現させる動詞では実際に選択される助動詞と文の意味の齟齬が生まれうると考える。Asp の統語位置については議論があるが (Fukuda 2012 等を参照)、本発表では Voice と T の間に存在すると考え、VoiceP が完了助動詞選択の基準となっていると考える。以下では VP 内で前置詞句や不変化詞によって既にAspectの強制が起こされている例との比較を行いながら考察を進める。

Asp (aspectual head)とは機能範疇の一つであり、動詞のAspectを決定する機能を持っている。例えば *begegnen* は基本Aspect²では「出会う」という telic な事態を表わすが、これを「対応する」という atelic な用法で用いる場合は Asp によって基本Aspectが強制を受け、Aspectを atelic なものに変化させる必要がある。

- (14) *begegnen* のAspectの変更: 出会う [+Telic] → 対応する [-Telic]
(15) 6b でAspectの変更が起こる構造: [AspP [VP ...*begegnet*] ..Asp]

これに対し、前置詞句を伴うことで動詞のAspectが変化する場合異なる統語段階でのAspectの変更を想定することになる。例えば *tanzen* 「踊る」は単独では atelic な事態 (Activity) を表わすが、方向を表わす前置詞句 (10 では *in den Saal*) を伴う場合には前置詞句によってAspectが telic なもの (Accomplishment) に変更される。これは当然 VP 内で起こる現象であり、AspP 内で起こるAspectの変更とは統語的位置が異なるものである。

- (16) 11b でAspectの変更が起こる構造: [VP ...[V' [PREPP ...*in den Saal*] [v *getanzt*]]]

また同様に不変化詞を伴う場合も AspP とは異なる統語位置でAspectの変更が起こる。不変化詞を伴う動詞の構造についても議論があるが (Zeller 2001 を参照)、VP 内で動詞のAspectが語彙的にせよ統語的にせよ変化することに関しては変わらない (*brennen* 「燃える」の基本Aspectは Progressive だが、12b では Achievement に変化している)。

- (17) 12b でAspectの変更が起こる構造: [VP ...*durchgebrannt*]

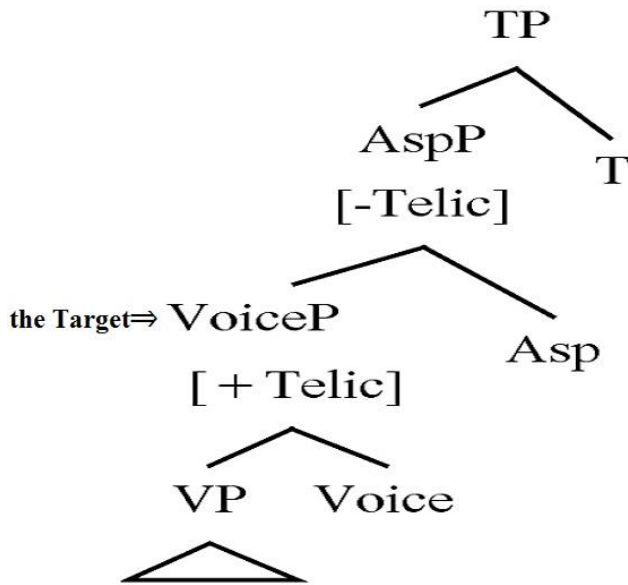
rasen 「疾走する」や *folgen* 「ついて行く」などの動詞については、移動の有無は文によって異なるが、Aspectはどちらでも変わらない。つまり *rasen* は「暴れる」の用法でも「疾走する」の用法でも Activity であり、*folgen* は「従う」の用法でも「ついて行く」の用法でも Progressive である。よって、これらの動詞で問題になるのは統語的なAspectの変更ではなく、移動や状態変化の有無である。これらは語彙的な問題に還元されると解される為、文での意味と完了助動詞選択との不一致は起こり得ない。

以上の議論を整理すると、Asp によってAspectの変更が起こされるのは *begegnen* 「出会う」や *erscheinen* 「現れる」といった、単独で主語を TELIC ENTITY として実現させ得る動詞が atelic な用法で用いる場合だけであり、これは文の意味と完了助動詞選択との不一致が起こる用例と重なる。両者に何らかの因果関係が存在すると仮定すると、完了助動詞選択の基準が Asp よりも先に設定されていることで、*begegnen* 「出会う」などでは変更が起こる前のAspectが基準となることで文の意味と完了助動詞選択との不一致が起こると考えることが出

² Croft (2012: 84)によれば、語彙的Aspectと実際の文に於けるAspectとの関係に関するアプローチとしては、主に三つのものを挙げることが出来るとされている。一つ目は語彙的多義性によるもの (polysemy)、二つ目は本発表が採用する基本Aspectとその変更によるもの (derivation)、三つ目については、語彙的Aspectは中立的であり、環境によって初めてAspectが決まるとするもの (vagueness) である。仮に本発表が採用するもの以外のアプローチを採用する場合、全く異なる議論を展開しなければならないが、これについては本発表では議論しない。

来る。以下にその概要を示す。

- (18) 文の意味と完了助動詞選択との不一致が起こる場合の統語構造



以上の議論より、文の意味と完了助動詞選択との不一致は、アスペクトの変更の起こる統語的位置が完了助動詞選択の基準となる位置より高い場合に起こることが示された。

略号

ACC 対格 DAT 与格 NOM 主格 PP 過去分詞 PREP 前置詞 PRS 現在 V 動詞 T 時制

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1. Introduction

- (1) Purpose of this talk
- to make clear the property of the surface object position of unaccusative verbs in Chinese
 - to address an interesting issue: the relation of Partitive Case and “part of the whole”
- (2) Unaccusative verbs
- Surface Unaccusativity (Sybesma 1999, Xu 2001, etc.)
- | | |
|--|--|
| <p>a. Yi geren si le.
a man die-ASP ‘A man died.’</p> <p>b. Liang geren lai le.
two men come-ASP
‘Two men came.’</p> | <p>a’. Si le yi geren.
die-ASP a man ‘(There) died a man.’</p> <p>b’. Lai le liang geren.
come-ASP two men
‘(There) came two men.’</p> |
|--|--|
- (3) Unergative verbs
- | | |
|--|--|
| <p>a. Yi geren xiao le.
a man laugh-ASP
‘A man laughed.’</p> <p>b. Liang geren jiehun le.
two men marry-ASP
‘Two men married.’</p> | <p>a’. * Xiao le yi geren.
laugh-ASP a man
* ‘(There) laughed a man.’</p> <p>b’. * Jiehun le liang geren.
marry-ASP two men
* ‘(There) married two men.’</p> |
|--|--|
- Why do unaccusative verbs in Chinese allow the single argument to stay in the surface object position?
- What Case is assigned to the surface object?

2. Core Data**2.1 Surface Unaccusativity and the so called Definiteness Effect**- Noncontextualised¹ Surface Unaccusativity

- | | |
|--|--|
| <p>(4) a. Zhangsan si le.
Zhangsan die-ASP
‘Zhangsan died.’</p> <p>b. Zhangsan de suoyou de qinren (dou) si le.
Zhangsan’s all of family (even) die-ASP
‘All of Zhangsan’s family died.’</p> | <p>a’. * Si le Zhangsan.
die-ASP Zhangsan
** ‘(There) died Zhangsan.’</p> <p>b’. * Si le Zhangsan de suoyou de qinren.
die-ASP Zhangsan’s all of family
* ‘(There) died all of Zhangsan’s family.’</p> |
|--|--|

- Contextualised Surface Unaccusativity

- (5) Q: Nachang jiaotongshigu si le naxieren?
the traffic accident die-ASP who ‘Who died in the traffic accident?’
- A1: Si le Zhangsan.
die-ASP Zhangsan. ‘(There) died Zhangsan.’
- A2: Si le Zhangsan de suoyou de qinren.

¹ ‘Noncontextualised’ and ‘Contextualised’ are terminology from Abbott (1993).

die-ASP Zhangsan's all of family '(There) died all of Zhangsan's family'
 A3:*Si le suoyou de qinren.

die-ASP all of family * '(There) died all family.'

- What makes (5A1) and (5A2) a lot better than (4a) and (4b)?
- Why is (5A3) bad without 'Zhangsande 'Zhangsan's', which is contrary to (5A2)?

2.2 Unaccusative Transitives

(6) a. Zhangsan si le fuqin.
 Zhangsan die-ASP father
 (intended meaning: 'Zhangsan experienced an event that his father died.')

b. Zhangsan si le suoyou de qinren.
 Zhangsan die-ASP all of family
 (intended meaning: 'Zhangsan experienced an event that all of his family died.')

- Why is an NP with a strong determiner (e.g. *suoyou* 'all') admitted in the surface object position in (6b), while not in (5A3)?

(7) a. * Zhangsan si le Lisi.
 Zhangsan die-ASP Lisi
 (intended meaning: 'Zhangsan experienced an event that Lisi died.')

b. Zhangsan si le zhushou Lisi.
 Zhangsan die-ASP assistant Lisi
 (intended meaning: 'Zhangsan experienced an event that (his) assistant Lisi died.')

- One might assume some semantic relation between surface subject and surface object (e.g. possessor-possessee relation) licenses the sentence in (6a-b) and (7b) (Pan & Han 2008, etc.).

- However,

(8) a. Zhangsan si le yuefu.
 Zhangsan die-ASP father-in-law
 (intended meaning: 'Zhangsan experienced an event that his father-in-law died.')

b. * Zhangsan si le qizi de fuqin.
 Zhangsan die-ASP wife's father
 (intended meaning: 'Zhangsan experienced an event that his wife's father died.')

- We will propose a syntactic account for the contrast in (8) in Section 3.2 below.

3. The property of the surface object position of unaccusative verbs

(9) Descriptive Generalization (A)

The argument staying in the complement position of unaccusative verbs receives an interpretation as a part of the whole. (the whole \supset a part)

3.1 Surface Unaccusativity

- (10) Indefinite NPs (e.g. *yigeren* 'a man') express the existence of an individual by definition ($\exists x, x$ a man ...), which presupposes a set of individuals (e.g. *men*) as the relevant whole. Definite NPs (e.g. *Zhangsan* 'John') denote a specific individual not as a part of some set, unless there is an appropriate context to denote 'the whole'.

NPs with a strong determiner (e.g. *suoyou* 'all') denote 'the whole' not a part of some set by itself, unless there is an appropriate context to denote 'a bigger whole'.

- (11) Si le yi geren. die-ASP a man '(There) died a man.'
- (12) *Si le Zhangsan. die-ASP Zhangsan *'(There) died Zhangsan.'
- (13) *Si le Zhangsan de suoyou de qinren. die-ASP Zhangsan's all of family *'(There) died all of Zhangsan's family.'
- (14) Q: Nachang jiaotongshigu si le naxieren? the traffic accident die-ASP who Who died in the traffic accident?
 A1: Si le Zhangsan. (people who died in the accident \supset Zhangsan) die-ASP Zhangsan. '(There) died Zhangsan.'
 A2: Si le Zhangsan de suoyou de qinren. (people who died in the accident \supset all of Zhangsan's family) die-ASP Zhangsan's all of family '(There) died all of Zhangsan's family.'
 A3:*Si le suoyou de qinren. (people who died in the accident $\not\supset$ all family)² die-ASP all of family *'(There) died all family.'

3.2 Unaccusative Transitives

(15) Descriptive Generalization (B)

A sentence "NP₁ V(unaccusative) le NP₂" is good to the extent that a noun phrase [NP₁ de NP₂] ('NP₁'s NP₂') is good.

- (16) a. Zhangsan si le fuqin. (Zhangsan de fuqin 'Zhangsan's father')
 Zhangsan die-ASP father (people related to Zhangsan \supset Zhangsan's father)
 (intended meaning: 'Zhangsan experienced an event that his father died.')
- b. Zhangsan si le suoyou de qinren. (Zhangsan de suoyou de qinren 'all of Zhangsan's family')
 Zhangsan die-ASP all of family (people related to Zhangsan \supset all of Zhangsan's family)
 (intended meaning: 'Zhangsan experienced an event that all of his family died.')
- (17) a. *Zhangsan si le Lisi. (*Zhangsan de Lisi '*Zhangsan's Lisi')
 Zhangsan die-ASP Lisi
 (intended meaning: 'Zhangsan experienced an event that Lisi died.')
- b. Zhangsan si le zhushou Lisi. (Zhangsan de zhushou Lisi 'Zhangsan's assistant Lisi')
 Zhangsan die-ASP assistant Lisi (people related to Zhangsan \supset Zhangsan's assistant Lisi)
 (intended meaning: 'Zhangsan experienced an event that (his) assistant Lisi died.')

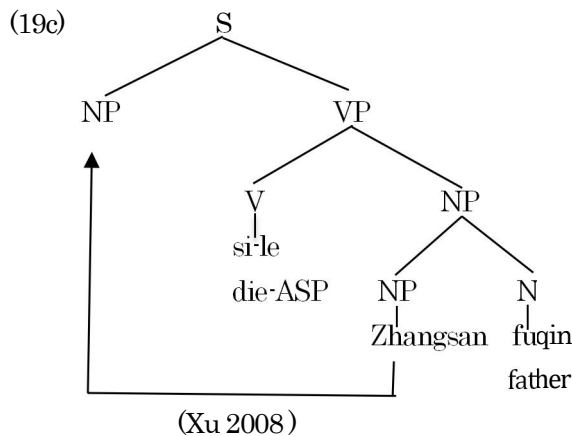
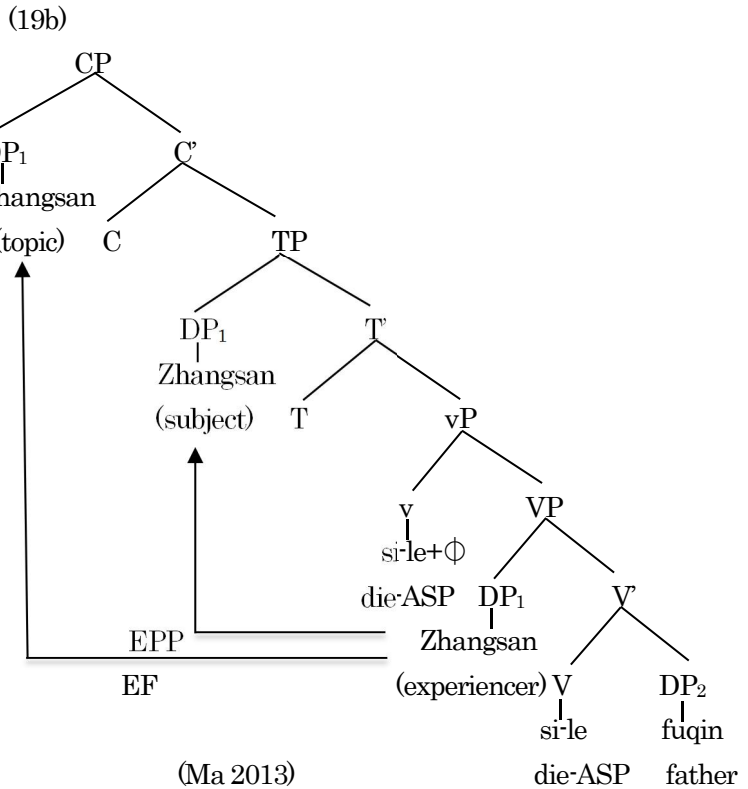
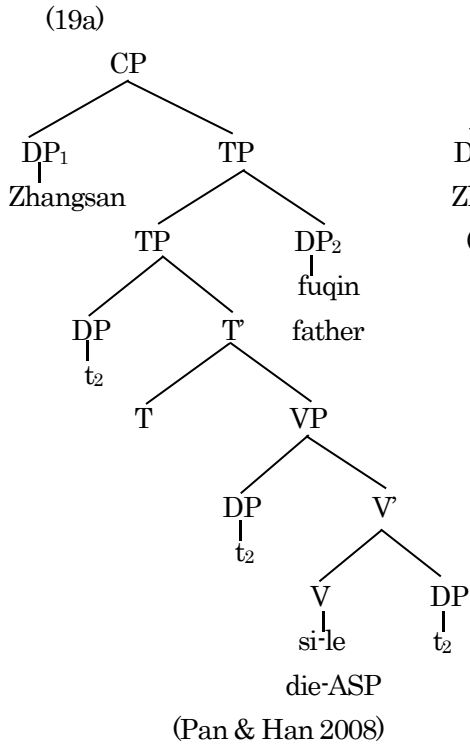
- Argument for syntactic possessor raising analysis

- (18) a. Zhangsan si le yuefu. ('Zhangsan de yuefu' 'Zhangsan's father-in-law')
 Zhangsan die-ASP father-in-law (people related to Zhangsan \supset Zhangsan's father-in-law)
 (intended meaning: 'Zhangsan experienced an event that his father-in-law died.')

² *suoyou de qinren* 'all family' is not semantically complete unless 'whose family' is specified by 'Zhangsan's' or in context. This is supported by the fact that even *suoyou de qinren* 'all family' appearing in the surface subject position such as *Suoyou de qinren (dou) si le* 'All family died' is still unnatural unless explained as the speaker's family meaning 'All of my family died'.

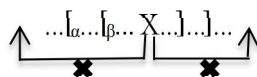
- b. * Zhangsan si le qizi de fuqin. (Zhangsan de qizi de fuqin 'Zhangsan's wife's father')
 Zhangsan die-ASP wife's father (people related to Zhangsan \supset Zhangsan's wife's father)
 (intended meaning: 'Zhangsan experienced an event that his wife's father died.')

- (19) a. Base-generated topic (Pan & Han 2008, etc.)
 b. Subject-topic copy (Ma 2013)
 c. Possessor Raising (Xu 2001, 2008)



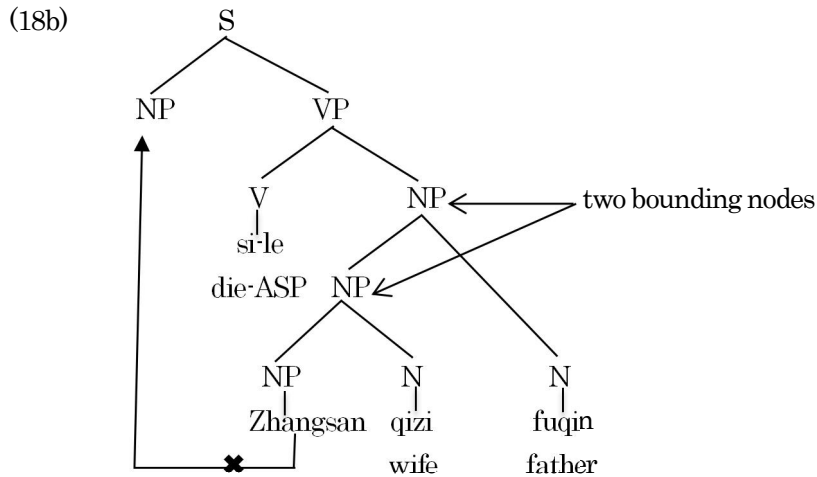
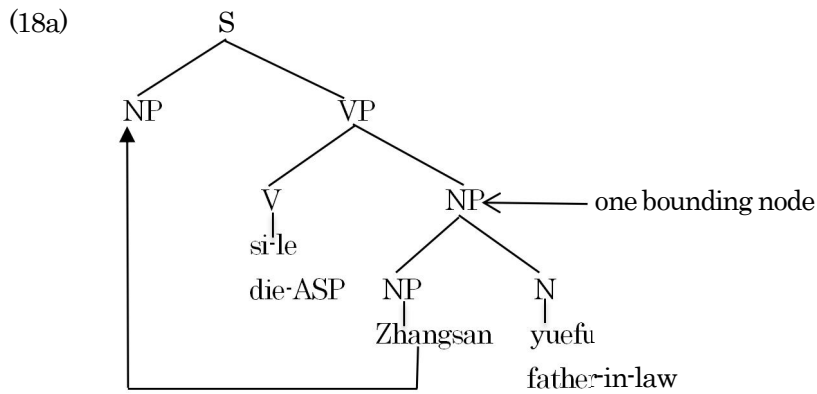
- Do the possessor and the possessee make an underlying single constituent or not? If the possessor and the possessee do not make an underlying single constituent such as (19a, b), how can we account for the grammatical difference between (18a) and (18b)? Whereas the possessor raising analysis as shown in (19c) can make a plausible explanation based on Subjacency Condition.

- (20) Subjacency Condition (Chomsky 1981, 1986)



α, β : bounding node Cf. NP is universally a bounding node.

- (21) Possessor Raising and Subjacency Condition (Xu 2008)



4. Partitive Case and “part of the whole”

- Why (9)? The argument staying in the complement position of unaccusative verbs receives an interpretation as a part of the whole. (the whole \supset a part)

- **Proposal:** Partitive Case is responsible for (9)

A unified account for Surface Unaccusativity and Unaccusative Transitives in Chinese
There-construction in English
 Possessive-construction in Japanese

- Partitive Case and Definiteness Effect (Belletti 1988)

- (22) a. There are { many / some } books on the table.
 b. * There are { most / all / the } books on the table.
 c. There was most of a large birthday cake sitting on the buffet. (Abbott 1993: 45)
 (a large birthday cake \supset most of a large birthday cake)

- (23) a. ジョンには { たくさんの / 3人の } 兄弟が いる。
 to John { many / three } brother-NOM exist
 ‘There exist { many / three } brothers to John.’
 b. * ジョンには { ほとんどの / すべての / あの } 兄弟が いる。
 to John { most / all / those } brother-NOM exist
 * ‘There exist { most / all / those } brothers to John.’ (Kishimoto 2005)

-Contextualization

- (24) Q: Who is at the party?
 A1: Well, there’s Mary, Suzan, and John. (people at the party \supset Mary, Suzan, and John)
 A2:*There’s most people. (Kishimoto 2005: 224, 230)

A3: There are most of the people who I talked about to you yesterday.
 (people at the party \supset most of the people who I talked about to you yesterday)

(25) Q: Is there anybody we can get to help clean up?

A: Well, there's everyone in the room.

(people who we can get to help clean up \supset everyone in the room) (Abbott 1993: 47)

5. Conclusion

(26) Being assigned Partitive Case, the argument staying in the complement position of unaccusative verbs receives an interpretation as a part of the whole.

(27) NP₂ in “NP₁ V(unaccusative) le NP₂” is compatible with the “part of the whole” interpretation to the extent that [NP₁ de NP₂] (‘NP₁'s NP₂') is semantically feasible.

(28) The (syntactic) “possessor raising” analysis is empirically more plausible than base-generation analysis and Subject-topic copy analysis.

Further thoughts

(29) Q: Nachang jiaotongshigu si le cheshang de naxieren?

the traffic accident die-ASP bus of who

‘Which people in the bus died in the traffic accident?’

A: Si le suoyou de ren / daduoshu de ren.

die-ASP all people / most people ‘There died all the people / most of the people (in the bus).’

(30) a. Zhangsan de tui duan le.

Zhangsan's leg break -ASP ‘Zhangsan's leg(s) broke.’

b. Zhangsan de tui duan le yitiao.

Zhangsan's leg break -ASP one ‘One of Zhangsan's legs broke.’

c. ?* Zhangsan de tui duan le liangtiao

Zhangsan's leg break -ASP two ‘Two of Zhangsan's legs broke.’

d. Zhangsan de tui meiduan liangtiao

Zhangsan's leg not-break two ‘It is not two legs that Zhangsan had broken.’

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C-4

Language Acquisition of Parametric Variation in Clausal Comparatives based on Subset Principle

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1. Introduction: Variation in *than* Complement

• English

- Phrasal Comparatives

- (1) a. Sam ate more apples than [DP oranges] (Quantity)
b. This umbrella is longer than [DP that one] (Degree)

- Clausal Comparatives

- (2) a. John bought more books than [CP Mary sold magazines] (Quantity)
b. This table is longer than [CP that door is wide] (Degree)

• Japanese

- Phrasal Comparatives

- (3) a. Taro –wa [DP orenji] yori takusan ringo –o tabeta (Quantity)
-Top orange than many apple –Acc ate
'Taro ate more apples than [DP oranges]'
b. Kono kasa –wa [DP ano kasa] yori nagai (Degree)
this umbrella –Top that umbrella than long
'This umbrella is longer than [DP that one]'

- Clausal Comparatives (Ishii 1991)

✓ *Quantity Clausal Comparatives (QCC)*

- (4) Taro –wa [CP Hanako –ga zassi –o utta] yori takusan
-Top -Nom magazine –Acc sold than many
hon –o katta
book -Acc bought
'Taro bought more books than [CP Hanako sold magazines]'

✗ *Degree Clausal Comparatives (DCC)*

(5) a. *Kono teeburu-wa [CP ano doa –ga hiroi] yori nagai

This table-Top that door –Nom wide than long

‘(Intended) This table is longer than [CP that door is wide]’

b. Kono teeburu –no nagasa –wa [DP ano doa –no hirosa] yori nagai

(Paraphrase)

this table –Gen length –Top that door –Gen width than long

‘The length of this table is longer than the width of that door’

• Cross-linguistic Variation

Lg. \ Cons.	Phrasal	QCC	DCC
English	yes	yes	yes
German	yes	yes	yes
Bulgarian	yes	yes	yes
Japanese	yes	yes	no
Russian ¹	yes	yes	no
Hungarian ²	yes	yes	no
Chinese	yes	no	no
Hindi	yes	no	no
Samoan	yes	no	no

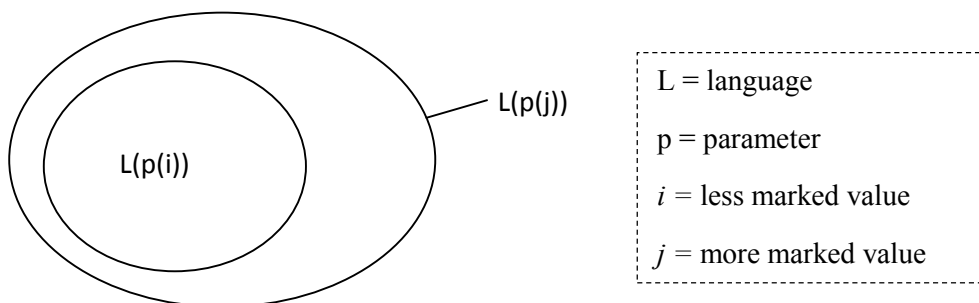
• Parameter: [\pm DCC] (a language allows or disallows a DCC)

→ [+DCC] languages: English, German, Bulgarian, etc.

→ [-DCC] languages: Japanese, Russian, Hungarian, etc.

2. The Subset Principle and Prediction

• Subset Principle (Wexler and Manzini 1987)



¹ Following Berezovskaya (2013)

² Following Snyder (1995)

- A language learner select the value i first and then stay with the choice / switch to j if s/he encounters a positive evidence that is outside of $L(p(i))$ ³.

→ **Prediction** (with $p = [\pm DCC]$, $i = [-DCC]$, $j = [+DCC]$):

A learner of English (which allows DCCs) should select the $[-DCC]$ and switch to $[+DCC]$ after getting positive evidence of $L(p(j))$

→ English-learning children's comprehension: $QCC \geq DCC$

3. Previous Study and Problem

Production

- Not so much data of QCC/DCC in the first place (Hattori 2015)
 - Only 9 clausal comparatives (in 786 transcripts of CHILDES)
 - Hohous et al. (2014)
 - looked at DCC using attributive/adverbial comparatives as evidence, but no QCC
- (6) a. *Pooh built a taller tower than Piglet.* (Attributive comparatives)
b. *Pooh jumps higher than Piglet.* (Adverbial comparatives)

Comprehension

- Snyder et al. (1995)
 - Truth Value Judgment Task (TVJT; Crain and McKee 1985)
 - 8 children (4;1-5;1, mean age 4;7)
 - checked differences between noun (quantity) versus adjective (degree) comparison
 - Correct percentage: 54% vs. 67% (not significant)
 - Problem: tested only with *full comparative deletion*

- (7) a. The troll has more soap than Homer ~~has~~.
b. The troll is bigger than Homer ~~is~~.

→ children could comprehend the sentences as phrasal comparatives with correct truth value

→ cannot confirm if children can comprehend DCC

³ The subset relation here is crucial to overcome the learnability dilemma that there is no way (given only positive data and no negative data) to correct the overgeneralization if the child ever picks a parameter setting which gives too large a language which is a superset of the correct target language s/he is learning. (Wexler and Hamburger 1973, Baker 1979)

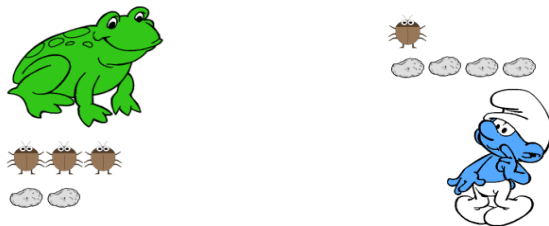
4. The Current Study

- TVJT with power point animation for the story; puppet (Cookie Monster; CM) say the test sentences after each story
- 1 practice and 7 test stories with 3-4 test sentences
- 15 monolingual English-learning children (3;3-5;10, mean age 4;5) + 10 adult control
- To avoid the problem (of Snyder et al. 1995)
 - Used unambiguously clausal comparatives (both QCC and DCC)
i.e. “subdeletion” (Bresnan 1975)
- Sample items

(8) Quantity subdeletion item (for QCC):

Context: Frog found 3 bugs and 2 rocks; Smurf found 1 bug and 4 rocks

CM: Oh, I know. The frog found more bugs than Smurf found rocks. (0)

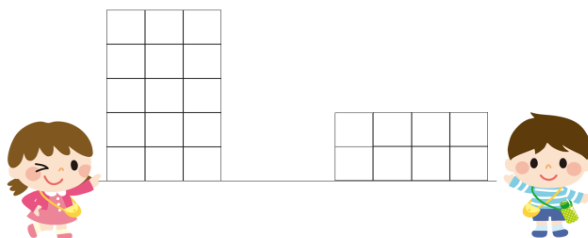


(9) Degree subdeletion item (for DCC):

Context: Girl built 5 bricks high × 3 bricks wide wall;

Boy built 2 bricks tall × 4 bricks wide wall

CM: So, the boy's wall is wider than the girl's wall is tall? (0)

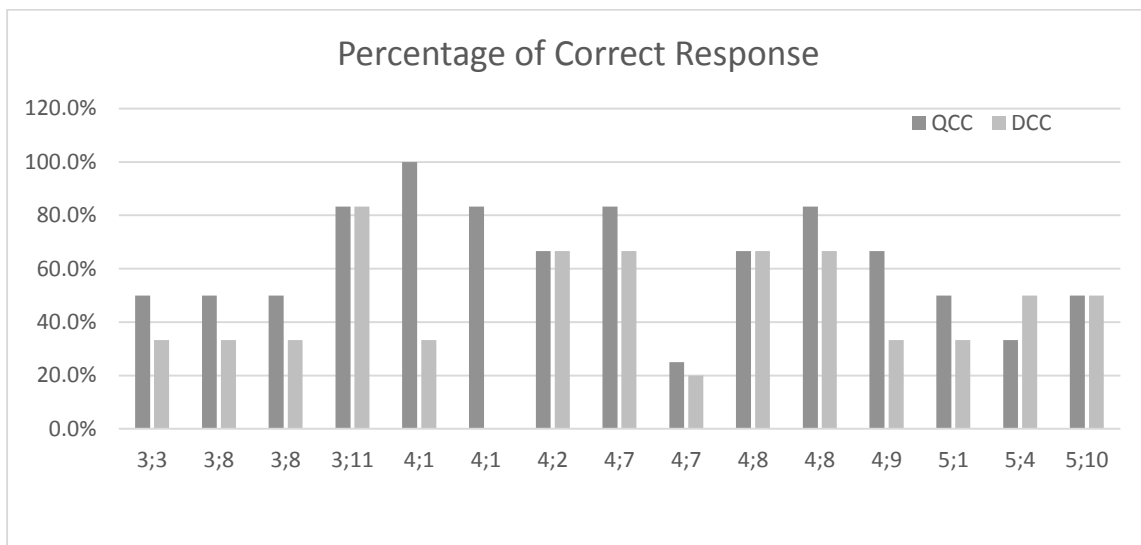


- If the subject child doesn't have the adult grammar for QCC/DCC, s/he would disregard the second clause in the test sentences and interpret them as phrasal comparatives, thus answer with "yes."

(8') *The frog found more bugs than [DP Smurf] ~~found~~ rocks.* (1)

(9') *The boy's wall is wider than [DP the girl's wall] ~~is~~ tall.* (1)

5. The Result and Conclusion



- Ordering effect, i.e. $QCC \geq DCC$

($n_{s/r} = 11$, $W = 54$, $Z = 2.38$, two-tailed $p = .0173^{**}$ by Wilcoxon signed-rank test)

- Cf. Adult data

QCC	100%
DCC	98%

→ supporting the parametric view based on the Subset Principle:

Children switch the value from [-DCC] to [+DCC] after getting positive evidence

ACKNOWLEDGEMENTS

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- In this talk, I will:
 - show that counterfactuality triggered by deontic modals behaves differently from that triggered by epistemic modals
 - claim that in deontic *should have* statements, (a) the accessibility relation is evaluated with respect to a time-insensitive modal base and (b) the modal base undergoes revision

1. Introduction; counterfactuality and modal flavor

- In English, constructions which involve a modal and perfect aspect often yield a counterfactual inference

(1) He might have won the game. \rightsquigarrow He didn't win the game.

- The counterfactual inference triggered by epistemic modals is cancellable. Consequently, it has been analyzed as an instance of (conversational) implicature (e.g. Condoravdi 2002, see also Iatridou 2000).

(2) If Jones had taken arsenic, he would have shown just exactly those symptoms which he does in fact show. [So, it is likely that he took arsenic.] (Anderson 1951, von Stechow 1998)

- However, counterfactual inference triggered by deontic modality is stronger; it is not cancellable.

(3) # (According to the library regulations,) you should have returned the book yesterday. And return it you did. (Congratulations!)

- Roadmap:

Section 2: Literature review; status of counterfactuality and the hindsight effect

Section 3: Proposal; revision of time-insensitive modal base

Section 4: Consequences and conclusion

2. Status of counterfactuality and the hindsight effect

- In the previous literature, one of the representative theories of English deontic *should (have)* is

* I would like to thank the following people for their helpful comments, discussion, and/or judgments; Lily Kwok, Emma Nguyen, Ian Roberts, Laura Snider, William Snyder, Brendan Sugrue, Chantale Yunt, and especially Magdalena Kaufmann.

Arregui’s (2010) analysis.

- Arregui (2010) assumes a standard Kratzer-style analysis of modality (Kratzer 1991, 2012); modals quantify over possible worlds.
- According to Arregui, aspect plays a crucial role for counterfactuality. Based on Arregui (2007), she defines perfective and perfect aspect heads as in (4).¹

(4) a. *should* statements: [should [$\emptyset_{\text{perfective}}$ [p]]]

$$\llbracket \emptyset_{\text{perfective}} \rrbracket^c (P) = \lambda t. \lambda s. \exists w. w \in c \& s \leq w. \exists e. [P(e)(s)=1 \ \& \ \tau(e) \subset t]$$

b. *should have* statements: [should [have_{perfect} [p]]]

$$\llbracket \text{have}_{\text{perfect}} \rrbracket (P) = \lambda t. \lambda s. \exists e. [P(e)(s)=1 \ \& \ \tau(e) <_{\text{precedes}} t \ \& \ t \subset \tau(s)]$$

where P is a property of events, and the restriction on the output function indicates that the function is defined only for situations that are parts of worlds in the context set (c)

- (4a) “carries the presupposition that the event is found in a world in the context set” (Arregui 2010: 268); the perfective aspect conveys the information that quantification is taking place over worlds in the context set.
- As in (4b), *should have* statements do not impose any restriction on the quantificational domain of *should*; “with perfect aspect, we are free to look for best [world] outside the context set”²
- Hence, Arregui’s account **allows** counterfactuality of *should have* statements. However, crucially, her analysis cannot **enforce** it, even though counterfactuality of *should have* is not cancellable, as shown in (3).
- An alternative analysis is to evaluate a (time-sensitive) modal base (e.g. circumstantial modal base) in the past (e.g. Condoravdi 2002, Ippolito 2013).
- However, as pointed out by Arregui (2010), this approach cannot explain why the speaker can take hindsight for granted (i.e. what happens later than the time at which the accessibility relation is evaluated).

(5) Context: There is a military parade in front of the governor’s house, and it is being shown on TV. A coin is tossed, and one of the soldiers, Joe, is randomly chosen to be shown in a close-up on TV. Looking at him, someone could utter:

John should have shaved.

(Arregui 2010: 251)

- In (5), the worlds in which John shaves were not the best ones at any past point (he was randomly

¹ Couched in Kratzer’s (2007) situation semantics framework.

² This is slightly simplified from Arregui’s (2010) original proposal for the current purposes.

- I assume that Diversity Condition is evaluated with respect to this modal base.
- Felicitous use of *x should have p* statements.
 - When we know x did not p , *x should have p* is felicitous⁵
 - Recall that our modal base is time-insensitive. No p -worlds are accessible even at t' in (6c) (=past)
 - Diversity Condition is violated!
 - Revision of the modal base
 - I suggest that the modal base f undergoes revision with the proposition $\neg [x \text{ chose } \neg p]$
- (7) Revision of modal base f by q (S. Kaufmann 2013)⁶

Add the proposition q to the modal base f , and exclude any proposition r inconsistent with q and any proposition causally dependent on r .
- Assuming that p and $\neg p$ are causally dependent on x 's choice of p and $\neg p$, respectively:
- (8) a. If $\neg p \in f(w_c, t')$, $\neg[x \text{ chose } \neg p]$ is incompatible with the original modal base.

Revision: $\neg p \notin f[\neg [x \text{ chose } \neg p]](w_c, t')$

The revised modal base is compatible with p and $\neg p$. (The revision opens up both p and $\neg p$.)

→ Diversity Condition is satisfied
- b. If $p \in f(w_c, t')$, the proposition $\neg[x \text{ chose } \neg p]$ is already compatible with the modal base f .

→ The revision is vacuous; $p \in f[\neg [x \text{ chose } \neg p]](w_c, t')$. i.e., $\neg p$ is incompatible with f

→ Diversity Condition is not satisfied.

 - If we know that p is the case, *should have p* always yields infelicity because of the presupposition failure
 - The infelicity of (3).
- Prediction: If the truth of the prejacent is uncertain, *should have* statements should be felicitous.
 - Both p and $\neg p$ are compatible with the original modal base, so the proposed revision is vacuous. Still, Diversity Condition is met.
 - This prediction is borne out.

⁵ See also (9), where the truth of p is uncertain.

⁶ The revised modal base with q is written as $f[q]$.

(9) Context: According to the library regulations, you should return books on time. The speaker is not sure if the addressee returned the book or not.

You should have returned the library book on time. Did you?

- The hindsight effect

- Our modal base assigns CG in the context of evaluation; time-insensitive

- The speaker should be able to evaluate the prejacent considering what happens later than the time at which the accessibility relation is evaluated (e.g. t' in (6c))

- The felicity of (5).

(Note that the information that the TV-camera zooms in Joe remains unaffected after the revision of the modal base; this information is not causally dependent on the proposition we revise with (*it is not the case that John chose not to shave*.)

- The speaker evaluates the prejacent from the past and the current perspective

- The temporal location of p does not have to be in the past; counterfactual *should have* about the future

(10) John: I've had a great idea. We should include a breakfast application in the new iPhone!

Jane: Haven't you heard? We'll be laid off at the end of the month and the whole project will be cancelled!!

John: Oh no! That is dreadful!! ... But isn't it a great idea? We should have included a breakfast application in the new iPhone!

(Arregui 2010: 271)

4. Consequences and conclusion

- To capture the strong counterfactuality of deontic *should have* statements, I have proposed revision of the time-insensitive modal base

- Since the relevant modal base is time-insensitive, the speaker can access hindsight even though the modal base is evaluated in the past

- In contrast with *should have* statements, *should* statements do not yield counterfactuality; p has not been settled. Diversity Condition is satisfied without revision.

- Why is counterfactuality in deontic modality different?

- I suggest that this is because of the “choosing” component, which is absent in epistemic modals according to Mun (2016)

- The proposed revision is not available in epistemic modals.

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1 Introduction

(1) The Unaccusative Hypothesis claims that unaccusative verbs do not select the external argument (Perlmutter 1978, Burzio 1986, a.o.). By the hypothesis, we expect that a kind of Subject-oriented Adverbs (therefore, SoAs) such as *wazato*, *koini* ‘intentionally,’ and *kanasigeni* ‘sadly’ (Nakau 1980) should not be licensed in the unaccusative structure. Contrary to this expectation, such adverbs are actually allowed in a class of unaccusative clauses that represent the action (e.g., *taoreru* ‘fall.down’). The nominative subject in this construction reveals the dual nature of both the external and the internal argument; it can control like an agent and it can be a target of the quantitative adverb *ippai* ‘a lot of’ (Kishimoto 2005) like a direct object. The present study attempts to account for how these adverbs are licensed in the given unaccusative construction.

2. Issues

2.1 Distribution

(2) [+Agent] and SoAs

a. Taro-ga wazato mado garasu-o watta (koto)
 -Nom on.purpose window.glass-Acc broke (the fact)
 ‘(The fact that) Taro intentionally broke the window glass.’

b. Taro-ga wazato oogoe-de utatta (koto)
 -Nom on.purpose loud.voice sang (the fact)
 ‘(The fact that) Taro sang in a loud voice.’

(3) [-Agent] and SoAs

*Kouen-no ki-ga wazato taoreta (koto)
 park-Gen tree-Nom on.purpose fell.over (the fact)
 ‘(The fact that) Trees in the park intentionally fell over.’

(4) [-Agent] and SoAs

Taro-ga wazato Hanako-no maede {taoreta/koronda} (koto)
 -Nom on.purpose -Gen in.front.of {fell.over/tumbled} (the fact)
 ‘(The fact that) Taro intentionally {fell over/tumbled} in front of Hanako.’

2.2 The nature of nominative animate subjects

(5) The nominative animate subject in (6) shows some properties of the external argument.

* This study has been developed from several talks that I gave at various occasions. I would like to express my gratitude to the audience at the 24th Japanese and Korean Linguistics conference and an annual meeting of Fukuoka Linguistics Circles in 2016. I am particularly grateful for Hideki Kishimoto and Masaya Yoshida for their insightful comments and substantive discussions on this project. Special thanks also go to Caroline Heycock, Tomohiro Fujii, Miwa Isobe, Yasuhito Kido, Takaya Yamaguchi, and Akitoshi Maeda for their comments and supports on this project. Needless to say, all the errors are solely mine.

(6) a. Taro-ga Hanako_i-ni [PRO_i wazato Jiro-no maede taorete] hosii to itta
 -Nom -Dat on.purpose -Gen in.front.of fall.down want C said
 'Taro asked Hanako to fall down on purpose in front of Jiro.'

b. Taro_i-ga wazato zibun_i-no heya-de koronda (koto)
 -Nom on.purpose -Gen room-Loc tumbled (the fact)
 '(The fact that) Taro intentionally tumbled down in his room'

(7) The nominative animate subject in (8)-(10) shows the property of the internal argument.

(8) a. Gakusei-ga ohiru gohan-o ippai tabeta (koto)
 student-Nom lunch-Acc a.lot.of ate (the fact)
 '(The fact that) Many students ate their lunch a lot.' (*Quantitative R.)
 '(The fact that) Students ate their lunch a lot.' (Repetitive R.)

b. Gakusei-ga kesa-no koogi-de wazato ippai taoreta (koto)
 student-Nom this.morning-Gen lecture-At on.purpose a.lot.of fell.over (the fact)
 '(The fact that) Many students fell over on purpose at the lecture in this morning.' (Quantitative R.)
 '(The fact that) A student intentionally fell over many times at the lecture in this morning.' (Repetitive R.)

(9) a. Zemi-no gakusei-ga kinou-no konpa-de nomi-sugi-ta (koto)
 seminar-Gen student-Nom last.night-Gen party-Loc drink-too.much-Pres. (the fact)
 '(The fact that) many of my seminar students drunk too much last night.' (*Quantitative R.)
 '(The fact that) my seminar students drunk too much at the party last night.' (Repetitive R.)

b. Sakuya-no taifuu-de ekimae-no doozoo-ga taore-sugi-ta (koto)
 last.night-Gen typhoon-CAUSE in.station.square-Gen statue-Nom fall.over-excess-Past (the fact)
 '(The fact that) Too many statues in the station square fell over by the typhoon last night.' (Quantitative R.)
 '(The fact that) A statue in the station square fell over many times last night.' (Repetitive R.)

(10) Gakusei-ga kesa-no koogi-de wazato taore-sugi-ta (koto)
 student-Nom this.morning-Gen lecture-At on.purpose fell.over-excess-Past the fact
 '(the fact that) Too many students fell over on purpose at the lecture in this morning.' (Quantitative R.)
 '(the fact that) A student intentionally fell over too many times at the lecture in this morning.' (Repetitive R.)

(11) Interim summary

	Transitive verbs	Unergative verbs	Unaccusative verbs
SoA-licensing	[+agent] OK	[+agent] OK	[-agent] (inanimate subject) *
			[-agent] (animate subject) OK

2.3 More on agentivity of the animate subject unaccusative construction

(12) Volitional and non-volitional use of English *let*

- a. Amy let Bill to go to the movies.
 b. The window let the light come in. (Jackendoff 1990: 134)

(13) The test frame for the volitionality

- a. What Harry did for Sam was let him come in.
 b. *What the window did to the light was let it come in. (Jackendoff 1990: 134, (26))

- (14) a. Taro-ga Chomsky-no hon-o yon-da (koto)
 -Nom -Gen book-Acc read-Past (the fact)
 '(The fact that) Taro read a book by Chomsky.'
- b. Taro-ga sita no-wa Chomsky-no hon-o yomu-koto da
 -Nom did Gen-Top -Gen book-Acc read-thing Cop
 'What Taro did is read a book by Chomsky.'
- (15) Kishimoto (2016) argues that this kind of cleft involves a control structure where the focus *vP* is controlled by the subject of the main verb in the presupposition, being based on Hasegawa's (1990) analysis for VP-preposing.
- (16) a. [_{TP} Kare-ga [_{VP} hon-o yon] da]
 he-Nom book-Acc read Past
 'He read a book.'
- b. [_{TP} Kare_i-ga [_{VP} [_{VP} PRO_i hon-o yomu] koto-o si] ta]
 he-Nom book-Acc read thing-Acc do Past
 'He_i did a thing that PRO_i read a book.'
- c. [_{CP} OP_j [_{TP} Kare_i-ga [_{VP} t_j si] ta] no-wa [_{VP} PRO_i hon-o yomu]_j koto da]
 he-Nom do Past Gen-Top book-Acc read thing Dec
 'What he_i did is a thing that PRO_i read a book.' (Kishimoto 2016: 133, (61))
- (17) a. [_{TP} Ame_i-ga [_{VP} t_i fut] ta]
 rain-Nom fall-Past
 'It rained.'
- b. *[Ame-ga si-ta] no-wa [furu] koto da
 rain-Nom do-Past Gen-Top fall thing Dec
 '*What rain_i did is a thing that it_i falls.' (Kishimoto 2016: 133, (62))
- c. *[_{TP} Ame_i-ga [_{VP} [_{VP} t_i furu] koto-o si] ta]
 rain-Nom fall thing-Acc do Past
 '*Rain_i did a thing that it_i falls.'
- (18) Other subject-oriented adjuncts such as Secondary Depictives (therefore, SDs) pattern different from the SoA with respect to appearing in this type of cleft construction.
- (19) a. Taro-ga sita-no-wa wazato Hanako-no maede taoreru koto da (SoA)
 -Nom did-Gen-Top on.purpose -Gen in.front.of fell.over C Cop
 'What Taro did is fell over on purpose in front of Hanako.'
- b. */??Taro-ga sita-no-wa deisuijyoutaide Hanako-no maede taoreru koto da (SD)
 -Nom did-Gen-Top drunk -Gen in.front.of fell.over C Cop
 'What Taro did is fell over drunk in front of Hanako.'
- (20) Jackendoff (1990) argues that the sentence in (21a) is ambiguous with respect to the volitionality of the subject. The *wh*-cleft test frame in (21b) picks up the agentivity of *Bill* in (21a), whereas the 'what happened to X' construction in (21c) picks up the nonvolitionality of *Bill* in (21a).
- (21) a. Bill rolled down the hill. (Jackendoff 1990: 128, (14))
 b. What Bill did was roll down the hill.
 c. What happened to Bill was he rolled down the hill. (Jackendoff 1990: 127, (11))
- (22) a. *Taro-ni okotta koto-wa wazato Hanako-no maede taoreta koto da
 -Dat happened C-Top on.purpose -Gen in.front.of fell.over C Cop
 '*What happened to Taro was he fell over on purpose in front of Hanako.'

b. Taro-ni okotta koto-wa deisuijyoutaide Hanako-no maede taoreta koto da
 -Dat happened C-Top drunk -Gen in.front.of fell.over C Cop
 'What happened to Taro was he fell ver drunk in front of Hanako.'

(23) The animate subject construction with the SoA has the agentive reading.

3. Proposals

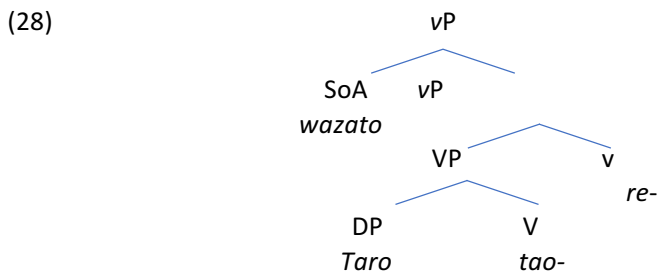
(24) How can we capture this fact? One might argue that the sentence in (4) is actually the unergative structure. This explains the facts that the nominative animate subject shows the agenthood, but it fails to capture the facts that it has the internal argument hood simultaneously. Furthermore, the given unaccusative sentence cannot take the cognate object which is the hallmark of the unergative construction (Hale and Keyser 2002). Examine the contrast in (25).

- (25) a. Taro-ga hadena danssu-o odotta (koto)
 -Nom showily dance-Acc danced (the fact)
 '(The fact that) Taro danced a showily dance.'
 b. *Taro-ga hadena taore-o taoreta (koto)
 -Nom big fall-Acc fell.over (the fact)
 '(The fact that) Taro had a big fall.'

(26) Proposal I: the animate nominative subject of the unaccusative structure is the complement of V, although it has the agentive reading.

3.1 The adjunction site of SoAs

(27) Where does the SoA adjoin to the unaccusative structure? Suppose that it adjoins to a higher VP layer with a functional head v , we obtain a structure like (28) for the construction. Since the verb does not select for the external argument, the functional head should be v but no v^* (Chomsky 1995) or Voice (Kratzer 1996).



(29) There is an advantage of this hypothesis. According to Kishimoto (2016), what constitutes the focus of the *wh*-cleft construction is the upmost v^*P . If the SoA adjoins to vP in the unaccusative structure, it is expected that it should appear in the focus of the quasi-cleft construction. This is indeed the case as we have already seen in (19a).

(30) Proposal II: The SoA in the unaccusative animate subject adjoins to vP .

3.2 The internal structure of SoAs

(31) In the case of the transitive and the unergative verbs, since they select for the agent, the agent and the SoA are able to be semantically associated with each other in the v^*P . If the SoA in the unaccusative construction is licensed at the vP , it hardly accounts for the fact that the SoA is semantically associated with the thematic subject. How can the SoA be related to the thematic subject in the unaccusative structure?

(32) Now we look into the internal structure of the SoA itself. As is well-known, a number of literature support the PRO analysis in explaining the syntax of the SDs (Williams 1980, Bowers 1993; 1997; 2001; 2004).

(33) $John_i$ left the room [_{SP} PRO_i angry]

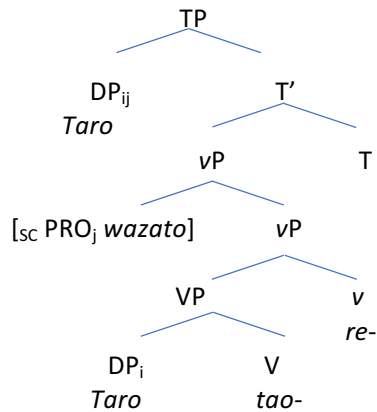
(34) (33) is the structure for the subject-oriented SD. In (33) the SP clause is licensed via the binding of PRO by the agent NP *John*. This PRO-binding provides the predication relation between *John* and *angry*.

(35) Let us assume that the SoA has the small clause structure whose subject is PRO (Bowers 1993) as in (36), like the one for the SD in (33).

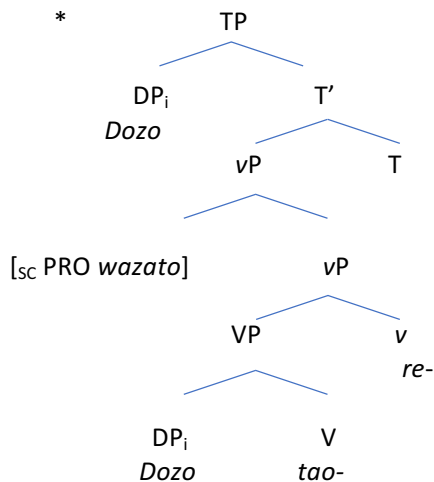
(36) Proposal III: The internal structure of SoA is a small clause whose subject is PRO: [_{SC} PRO *wazato*].

(37) The given PRO will be bound by the derived subject. In this way, the SoA constitutes a predication relation with the nominative subject, which results in the agentive reading on the nominative animate subject. This binding relation is represented via co-indexing j in the proposed structure (38).

(38) *Taro-ga wazato taoreru* (PRO is bound)



(39) **Dozo-ga wazato taoreru* (PRO is unbound)



4 Conclusion & Implications

(40) The current study offers a new perspective on how the SoA-licensing in Japanese is determined in cases where there is no external argument in the structure. On the basis of the PRO theory for the SD, I have proposed that the SoA has PRO in its subject and adjoins to *v*P of the unaccusative structure. When the PRO is bound by the derived thematic subject, a kind of predication relation is established between the subject and the SoA. In this way, the SoA is licensed in the unaccusative structure without recourse to the functional head *v** or its analogues such as Voice (Kratzer 1996, a.o.) or Pr (Bowers 1993; 2002). I have not provided an account for the licensing of the subject-oriented SD under the current theory. Apparently, this is highly relevant to the current issue. This will remain for the future work.

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1. Introduction

I will investigate a certain set of adverbs in Japanese regarding their syntax and semantics, and considers the empirical and theoretical consequences of the proposed analysis. The adverbs that are to be dealt with are those derived from onomatopoeias and mimetic expressions as in (1).

- (1) a. Isi-ga dosun-to oti-ta.
 stone-NOM ONOM(ATOPOEIA)-REP fall-PAST
 ‘A stone fell with a thud.’
 b. Taroo-wa pyonQ-to ton-da.¹
 Taro-Top MIM(ETIC)-REP jump-PAST
 ‘Taro jumped in the manner of *pyonQ*.’

In what follows, I call these adverbs *iconic adverbs*, following the spirit of Fujita (2000) (cf. Tamori and Schourup 1998). Then, I will argue that iconic adverbs must involve the quote semantics in the sense of Potts (2007), which is, as I will propose, triggered by the report marker (henceforth, Rep), and this in turn motivates the (covert or overt) presence of SAY. I will also claim that Rep is not a complementizer but an adjunct clitic in the sense of Aoyagi (1998), and this leads us to challenge the traditional perspective to Rep as a complementizer (Kuno 1973, Saito 2010 *i.a*). Then, extending the proposed semantics and syntax of Rep in (1) to clausal embedding, I will contend that what introduces the quote to the structure is not Rep *per se* but a covert or overt verb, SAY, which puts Japanese in the cross-linguistic setting with respect to the quote syntax (Baker 2011, Güldemann 2008, Lord 1993, Klamer 2000 *i.a*).

This paper is organized as follows. Section 2 will discuss the ingredients of Potts’s (2007) quote semantics needed to render the analysis here implementable, and I will propose an analysis of (1), and see its syntactic and semantic payoffs. Turning to clausal embedding, in Section 3, I will show that Rep is best analyzed as an adjunct clitic and the embedded clauses are merged with the matrix attitude predicates via complex predicate formation (Baker 2003, 2011). Specifically, I will propose, following Wurmbrand (2001), that the mode of this is restructuring. Section 4 concludes the paper.

2. The Quote Semantics and SAY

One of the questions toward a better understanding of the nature of iconic adverbs is how to merge (or adjoin) such adverbs to verbs. In this connection, Fujita (2000) argues that they are void of *sui generis* syntactic categories, so that they will syntactically function in accordance with the environment where they appear. Under this view, iconic adverbs are adverbs since they reside in the canonical position of adverbs. However, I will instead propose that iconic adverbs suffixed by Rep are introduced via SAY. This SAY, sometimes overtly expressed in *iw* ‘say’, is grammaticalized in the sense its literal meaning is now bleached, so it does not have to take linguistic utterances as shown in (2a). Note that there is a constraint on overt SAY: to wit, sound orientation, hence (2b).

- (2) a. Isi-ga dosun-to it-te oti-ta.
 stone-NOM ONOM(ATOPOEIA)-REP say-ADV fall-PAST
 ‘A stone fell with a thud.’

¹ Q stands for the geminated/double consonant, whose morphological/phonological manifestation is contingent on the following consonant. Therefore, insofar as the quoted adverbs are concerned, Q will be spelled out as *t*, for they are always followed by Rep (*to*).

- b. *Taroo-wa pyonQ-to it-te ton-da.
 Taro-TOP MIM(ETIC)-REP say-ADV jump-PAST
 Intended 'Taro jumped in the manner of *pyonQ*.'

Although (2b) is incompatible with overt SAY, I will argue that even for (2b), we have covert SAY for the reasons to be discussed below. Then, the way to combine an iconic advert and a verb is a predicate modification under the set of events (cf. Heim and Kratzer 1998, Tanaka 2014). To achieve this result, I will next discuss the ingredients of Potts's (2007) semantics.

2.1 Introducing Semantics of Subclausal Quote: Potts (2007)

Potts (2007), in analyzing the subclausal quote like (3), proposes that "...” in English denotes a quote shifter function as in (4), which is designed to take an utterance of type u and the quote source individual, yielding a (cartesian) product type. The product type is the combination of two items from different domains, hence D_σ and D_t . The former is the domain of the semantic representation of the utterance, and the latter is the domain of the utterance proposition, signifying "some individual utters the utterance quoted." Crucially, this utterance proposition is a conventional implicature (CI) (see Potts 2005 and references therein for the details of CI).

- (3) When in Amherst, Peter orders "[æ]pricots" at the local market. [Potts 2007: 405, (1b)]
 (4) **quote-shift** : $\langle u, \langle e, \sigma \times t \rangle \rangle$

Given (4), the input to (4) is the quoted expression of type u , whose semantic representation is a tripartite tuple of phonological, syntactic and semantic representations as in (5).

- (5) $\langle \langle [\text{æ}prɛkɔts] ; \text{NP} ; \text{apricots} : e \rangle \rangle$ ($\langle [\text{æ}prɛkɔts] \rangle$ for shorthand)

In (5), $\langle \dots \rangle$ stands for the quotation mark. Then, (4) takes (5) as its first argument, and then the utterance source individual, which is Peter, as its second argument, giving the output in (6).

- (6) $\langle \langle [\text{æ}prɛkɔts] \rangle \rangle = \left\langle \begin{array}{l} \text{the } X \text{ such that } \text{say}(\langle X \rangle = \langle \langle SEM(\langle \langle [\text{æ}prɛkɔts] \rangle \rangle) \rangle \rangle)(\langle \text{peter} \rangle) \\ \langle \langle \text{utter} \rangle \rangle(\langle \langle [\text{æ}prɛkɔts] \rangle \rangle)(\langle \text{peter} \rangle) \end{array} \right\rangle$

Now, (6) is the semantic representation of the product type, an ordered pair, and the upper line is an at-issue semantics, whereas the lower line corresponds to the pertinent CI utterance proposition. *SEM* is the functor that accesses the semantic representation of the utterance, so that the X is **apricots** for $\langle [\text{æ}prɛkɔts] \rangle$ in (5), which is an individual that feeds into the object argument of the verb *orders* in (3). In this sense, the subclausally quoted object is a usual entity type just like the quoteless *apricots*, but at the same time, since it is subclausally quoted, it contributes to the utterance proposition that is a CI. Therefore, "[æ]pricots" is of type $e \times t$. The mode of merging the object with the verb involves the functor **project**, which virtually passes the CI up along the semantic parsetree, given the CI being a non-at-issue meaning (Grice 1973, Potts 2005 among others). The **project** is defined as in (7) from Potts (2007: 422, (38)).

- (7) a. **project** : $\langle \sigma, \langle \tau \times t, \rho \times t \rangle \rangle$
 b. $\langle \langle \text{project} \rangle \rangle(\alpha)(\beta \bullet \mathbf{p}) = \langle \langle \alpha(\beta) \rangle \rangle, \langle \langle \mathbf{p} \rangle \rangle$ or $\langle \langle \beta(\alpha) \rangle \rangle, \langle \langle \mathbf{p} \rangle \rangle$ whichever is well-formed

The function of **project** is such that it takes an expression α as its first argument and the product type $\beta \bullet \mathbf{p}$ as its second argument, and applies the first argument to the first member of the product type, or the reverse, contingent on whether α or β is the functor. See Potts (2007) for more details.

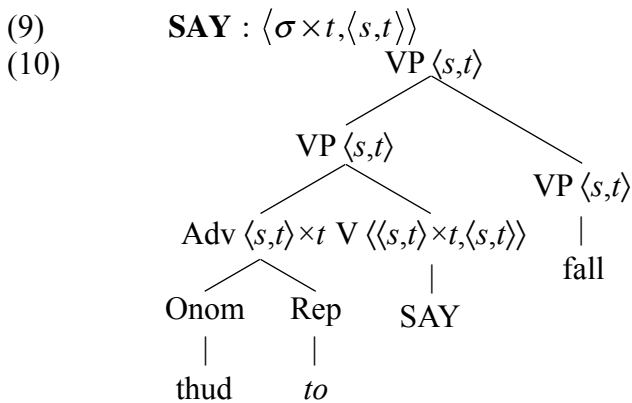
2.2 Iconic Adverbs

Now, I propose that Rep is also a quoter-shifter in Potts’s (2007) sense (cf. Maier 2014), so we have (8), where it takes any utterance, yielding a product type.

$$(8) \quad \mathbf{Rep} : \langle u, \langle e, \sigma \times t \rangle \rangle$$

Given (8), iconic expressions, mimetic or onomatopoeic, feed into Rep as the first argument, and some utterance source is plugged into the utterance source. Assuming for the simplicity’s sake that iconic adverbs are of type $\langle s, t \rangle$, where s is the event type the resulting object, is $\langle s, t \rangle \times t$. Note that the utterance source individual is *isi* ‘stone’ in (1a) and Taro in (1b). Although they do not literally say anything, but I assume that the relevant utterance relation does not have to be linguistic, but, insofar as (1a) is concerned, a broader sense of ‘utter’ for SAY that includes sound emission by inanimates (“make an X sound”), and, to relax real world knowledge such that the sound of a stone hitting another object can be attributed to the stone. Furthermore, (1b) has covert SAY just as expressing the manner of the mimetic adverb, so it is not sound-oriented.

Given that iconic adverbs with Rep denotes the product type, they cannot simply be predicate-modified under the set of events. Since *dosun-to* ‘with a thud’ for example is $\langle s, t \rangle \times t$, but the VP is $\langle s, t \rangle$. Then, I propose that SAY has the following semantics in (9), so that it can introduce the product type into the structure. Also, since it does not utilize **project**, it changes the utterance CI into an at-issue meaning. The first member of the product type can be any semantic representation of the quote that is accessed by SEM above. Then, the structure of (1a) is (10), where the VP headed by SAY and the VP headed by the lexical verb are combined via eventive predicate modification.



Although SAY is covert in (1a), it can be overt as in (2a), to the extent that the adverb has sound orientation. Notwithstanding (2b), SAY is needed for mimetic adverbs, as I adumbrated above. This is supported given (11). Unlike metalinguistic negation, it can be negated by the propositional negation like *that’s not true* (McCready 2007).

- (11) A: Taroo-wa kubi-o guruQ-to kugokasi-ta.
 Taro-TOP neck-ACC MIM-REP move-PAST
 ‘Taro moved his head round.’
- B: Iya, sore-wa hontoo-de-wa-nai. GuruguruQ-to-da.
 No that-TOP truth-COP-TOP-NEG.NONPAST MIM.MIM-REP-REP-COP.NONPAST
 ‘No, that’s not true. It is that the manner was *guruguruQ* (round and round).’

One may wonder at this point whether we really need the CI component in the Japanese quote. This is because the two-dimensional semantics is triggered only when Rep is inserted, but it always works together with SAY, so the CI utterance proposition is always converted to an at-issue mean-

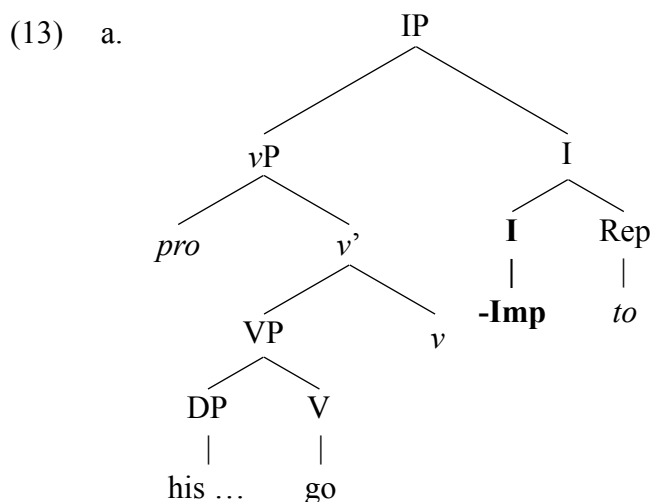
ing. However, to the extent that direct/subclausal quote is concerned with what is uttered, and that this is a property of direct/subclausal quote in general, it should be that Rep in Japanese should also behave in this way. Also, equally notable is that other CI items can contribute to an at-issue meaning when embedded by attitude predicates in Japanese (Sawada 2016). Here, SAY functions like an attitude predicate, albeit it is grammaticalized and has no attitude holder but a utterance source. Therefore, I conjecture that Rep invokes the CI utterance relation, but this is always turned into an at-issue meaning due to SAY. Notice also that the “utter” part is semantically encoded on Rep (just like the quote-sifter in (4)), but its morphological expression is SAY. Therefore, I surmise that Rep and SAY are stored, as the set of features, together in the lexicon, but the pertinent features are inserted to the structure in a split way (Agbayani and Ochi 2014). Specifically, the semantic feature of SAY is on Rep, but the syntactic and morphological features are embodied as SAY independently of Rep. In principle, Rep, being an adjunct clitic (Aoyagi 1998), can adjoin to various categories, insofar as other grammatical considerations are observed (see Shimamura in progress). As is discussed in Shimamura (in progress), Rep moves to unite with SAY from where it is originally inserted.

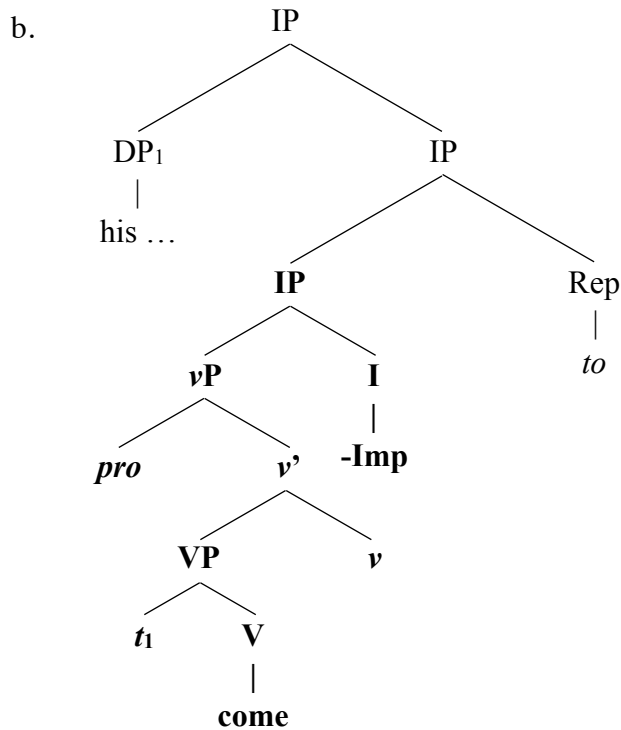
3. Clausal Complementation and SAY

Given that Rep is an adjunct clitic, the embedded clause does not have to be CP. I then argue that Kuno’s (1989) blended/quasi direct discourse is analyzed to be a case of subclausal quote. Relevant cases are embedded imperatives as in (12), where the embedded clause cannot be entirely a direct quote since the pronoun refers to the matrix subject.

- (12) Taroo₁-wa Ziroo-ni [kare₁-no ie-ni { ik/ko }- { e/i }-to] it-ta.
 Taro-TOP Jiro-DAT his-GEN house-to go/come-IMP-REP say-PAST
 Lit. ‘Taro said to Jiro that come to his house [imperative].’

Although embedded imperatives are not too rare (Kaufmann 2014), Japanese is different from e.g. English in that the latter is not compatible with embedded imperatives (but see Crnić and Trinh 2009). Kuno (1989) thus argues that the sentence-final position, when embedded with Rep, behaves like a direct quote in Japanese. Although Kuno’s idea is considered to be based on the consensus that imperatives cannot be embedded, which I disagree with, I do concur with Kuno for the imperative is directly quoted. More precisely, I propose that what is directly quoted by Rep is only the imperative head, which I assume to be I. Thus, I is subclausally quoted, hence (13a). Since I is in the quote domain (boldface in (13)), its perspective is shifted to the matrix subject, whence the embedded imperative is possible. Note that the contrast between *ik-* ‘go’ and *ko-* ‘come’ is also sensitive to the speaker’s perspective. Therefore, if *ko-*, the action toward to the speaker, is selected, it must also be in the quote domain. The minimal projection that contains both I and the verb is IP, hence (13b).





Note that in (13b), the pronoun is still third-person, so it is in the actual speaker's perspective. I thus argue that it is extracted from the quote domain. One may wonder why such extraction is possible, given that the quote domain in general is opaque to the syntactic operation. However, I suggest that Rep can be late-inserted. This should be possible if late-insertion is an option for other adjunct clitics in Japanese (Shibata 2015). Thus, after extraction, Rep kicks into the structure, activating the quote semantics and syntactic opacity. This has an interesting consequence for what Kamada (2000) terms 引用句創造仮説 (the hypothesis of quotation as creation by the reporting speaker), according to which quotation in Japanese is contingent on how much faithfully to the original form the reporter would like or try to report a given message in his/her context. Thus, all the wording is of the actual speaker's origin, but it will end up being understood as someone else's utterance. Under my analysis, this follows from the late-insertion of Rep.

Now, even cases like (12) have SAY, for Rep invokes the product type, which is only selected by SAY. Thus, in addition to the lexical *iw*- 'say' as the matrix predicate, we have SAY. Specifically, I propose that the matrix verb and SAY are combined via complex predicate (Baker 2003, 2011). More precisely, I propose that it is restructuring (Wurmbrand 2001). Therefore, we have (14).

(14) ... [VP [VP [... Rep] SAY] -*iw*] ...

In this context, SAY will never be overt since SAY and *-iw* are both V, and they are too close for linearization (Richards 2010).² Given this, Japanese patterns with various languages like e.g. Sakha in (15) in that embedded clause is introduced by SAY; *dien* is originally 'say' (Baker 2011).

(15) *Sardaana bügün Aisen kel-er dien ihit-te.*
Sardaana today Aisen come-AOR.3SS that hear-PAST.3SS
 'Sardaana heard that Aisen is coming today.' [Baker 2011: 1169, (7a)]

² Here, I suggest that no movement strategy is available to save the illicit PF configuration for linearization (see Shimamura in progress).

An evidence that supports (14) in Japanese is the fact that the *pro*-form of the embedded clause with Rep is adverbial as in (16). I argue that *soo* refers back to the set of events given by SAY's VP .

- (16) Hanako-mo { *soo*/**sore-o* } it-ta.
 Hanako-also so/that-ACC say-PAST
 'Hanako said so.'

4. Conclusion

In this paper, I proposed a new way to understand Rep in Japanese both syntactically and semantically. Syntactically, it is an adjunct clitic, which can be late-inserted, whereas semantically, it triggers two-dimensional quote semantics. Then, the element quoted by Rep must be selected by SAY, which is also validated both syntactically and semantically.

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