

Principles of Argument Structure: A Merge-Based Approach

Chris Collins, New York University

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(<https://www.crisp.be/bcgl-15-argument-structure/program/>)

1. Merge-Based Theory of Argument Structure

(For the monograph, see: <https://ling.auf.net/lingbuzz/006409>)

- (1) The only way to build argument structure is by Merge.
- (2) Theta-Criterion (Chomsky 1986: 97)
Each argument α appears in a chain containing a unique visible theta-position P, and each theta-position P is visible in a chain containing a unique argument α .
- (3) a. Terminology:
A head H introduces an argument A iff A externally merges with a projection of H.
b. Argument-Introducing Heads: v, Appl, etc.
- (4) Argument Criterion
a. Each argument is introduced by a single argument introducing head.
b. Each argument introducing head introduces a single argument.
- (5) Bruening (2013: 23): “Because there are no syntactic thematic roles in this system, there is also no θ -Criterion... All the work of the θ -Criterion is done by the semantics.”
(see also Heim and Kratzer 1998: 51, Myler and Mali 2021: 3, Harley 2011: 430)
- (6) Table of Contents of Monograph
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2 On the Phi-Features of the Implicit Argument

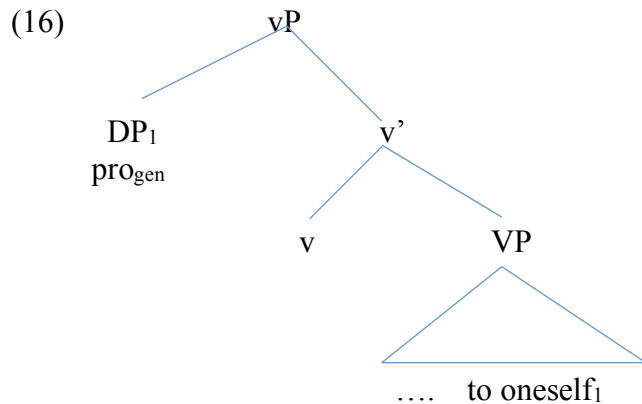
2.1 Introduction

- (1) a. Such privileges should be kept to oneself.
(Baker, Johnson and Roberts 1989: 228, Roberts 1987: 162))
b. Damaging testimony is always given about oneself in secret trials.
(Roberts 1987: 162)
- (2) Principle A: An anaphor must be bound in its domain.
Principle B: A pronoun cannot be bound in its domain.
(Sportiche, Koopman and Stabler 2014: 168)
- (3) Bruening (2013: 22): “I propose that passive is a head (Pass) that selects a projection of Voice that has not yet projected its external argument.”
- (4) Legate (2014: 141)
“In chapter 2, I argued for a new analysis of the implicit initiator in passives: this is present on the Voice head, both as a T-role, introduced but not assigned to any DP, and as features restricting this T-position.”
- (5) Alexiadou et. al. (2015: 131): “...the English data might also find a quite different explanation, as they could arguably involve a logophor instead of an ordinary reflexive pronoun.” (see also Reed 2011)
- (6) John_i kept those privileges to himself_i/*him_i

2.2 Generic *one* and *you*

- (7) Increased privacy and individuality result in more time spent on oneself.
(<https://www.sciencedirect.com/science/article/pii/S2452315116000035>)
- (8) Anything done for another is done for oneself.
(https://en.wikiquote.org/wiki/Talk:Pope_John_Paul_II)
- (9) Depression is anger turned against oneself.
(http://www.parentingmatters-epc.org/wp-content/uploads/2017/10/18_suicide.pdf)
- (10) An email sent to oneself as a “memo to file” is considered a university record if it documents university business.
(<http://ipo.info.yorku.ca/tool-and-tips/tip-sheet-5-email-management/>)
- (11) We know that, in general, humor aimed at oneself is well received by others.
(<https://www.aath.org/levity-defies-gravity-using-humor-in-crisis-situations>)
- (12) Therefore, certain private matters must be kept to oneself and remain untouched.
(<https://books.google.com/books?isbn=0857720147>)

- (13) If feelings and emotions and fears and frustrations are to be kept inside oneself, those emotions are often also kept away from God.
(<https://books.google.com/books?isbn=1929626177>)
- (14) If there is one thing any artist knows, it is that art - whatever form it takes - cannot be kept inside oneself.
(<https://janepenfield.com/blog/77021/i-have-had-singing>)
- (15) Generic Implicit Argument pro_{gen} :
- pro_{gen} is a DP
 - Phi-features: third person, singular, human, animate, generic
 - Interpretation: pro_{gen} is of type $\langle e \rangle$ and is bound by a generic operator Gn.



- (17) The Pronominal Agreement Condition (PAC)
An anaphor agrees in phi-features with its antecedent.
(see Collins and Postal 2012: 92, Sportiche, Koopman and Stabler 2014: 160)
- (18) Time spent on yourself is time well spent.
(<https://carsontate.com/work-life-balance-how-to-balance-your-life-like-the-four-seasons/>)
- (19) Some things are better kept to yourself.
(<https://www.facebook.com/GriffinsNZ/...kept-to-yourself.../1253558661331547/>)
- (20) In the case of an e-mail sent to yourself, it decides to show it in Inbox, even if its true location is in Sent Mail.
(<https://github.com/nylas/nylas-mail/issues/2456>)
- (21) In the case of an e-mail sent to you, ...

Note: The disjoint reference in (21) follows from Condition B:
*[In the case of an e-mail sent pro_1 to you_1].

2.3 Existential UN

- (22) a. The proposal was criticized at the meeting.
b. The package was sent this morning.
c. John was killed this morning.
- (23) “If reduced passives are to be analyzed as having underlying subjects, the underlying subject must be something more indefinite than any expression of English is: it must be neutral with regard to whether it refers to human or non-human entities, and with regard to whether its referent is the same as or different from other individuals mentioned in the discourse. I will invoke a *deus ex machina* at this point and simply assume that such an element, hereby christened UNSPEC, is available, and will set up deep structures having UNSPEC as subject in the case of reduced passives...” (McCawley 1988: 82)
- (24) (see Grinder 1971: 86)
a. Someone₁ stole the painting, and he₁ left his fingerprints on the wall.
b. The painting was stolen by someone₁, and he₁ left his fingerprints on the-wall.
c. The painting was stolen and he left his fingerprints on the wall.
- (25) a. If somebody₁ sends an e-mail to his₁ mother, how long does it take to arrive?
b. If an e-mail is sent to his mother, how long does it take to arrive?
- (26) *If an e-mail is sent UN₁ to his₁ mother....

Note: Since UN does not have phi-features, (26) violates (17) requiring phi-feature agreement between the possessive pronoun *his* and its antecedent UN.

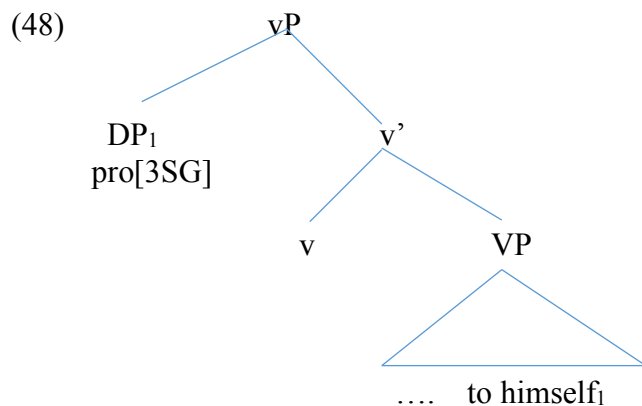
- (27) Existential Implicit Argument UN:
a. UN is a DP
b. Phi-features: none
c. Interpretation: existential quantifier of type $\langle\langle e,t \rangle, e \rangle$.

2.4 Definite pro

- (28) (see Helke 1973: 11)
a. *The lady hopes that the gentleman won't lose her mind.
b. *The man who found the girl lost her mind.
c. *The girl's father lost her mind.
d. *The girl and the boy lost her mind.
- (29) a. I did the homework on my own.
b. *I did the homework on John's own.
c. *Mary said I did the homework on her own.
d. *John's mother did the homework on his own.
e. *Somebody did the homework on my own.
f. *It rained on my own.

- (30) In the expression *on X's own*, X is a locally bound pronominal possessor.
- (31) A: Did you get help on this assignment?
B: No, it was done completely on my own.
- (32) a. It was done completely on your own, right?
b. It was done completely on his own, right?
c. Homework done on one's own is never easy.
- (33) I'm not even going to lie, but the solo has been the hardest to create and perform as everything was done on my own.
(<https://www.mandy.com/news/dancer-yukiko-masui-interview-hip-hop-contemporary>)
- (34) This was done on my own time and with no reimbursement for my gasoline.
(<https://books.google.com/books?isbn=311097391X>)
- (35) Occasionally, he was able to study formally with an accomplished artist, but much of his training was done on his own.
(<https://helpinghandhomeschool.com/vincent-van-gogh-artist-study-activities/>)
- (36) This work was written on my own during the summer and fall of 1963,...
(www.smcq.qc.ca/smcq/en/oeuvres/216/87.php)
- (37) First, the research framework was created on my own.
(epub.lib.aalto.fi/en/ethesis/pdf/12502/hse_ethesis_12502.pdf)
- (38) Definite Pronominal Implicit Argument (Null pro):
a. Null pro is a DP
b. Phi-features: any non-null combination of phi-features (other than [+generic])
c. Interpretation: Null pro is of type <e>.
- (39) I cannot receive emails sent to myself from Outlook though they appear in Webmail
(<https://crowdsupport.telstra.com.au/t5/Telstra-Mail/I-cannot-receive-emails-sent-to-myself-from-Outlook-though-they/td-p/770123>)
- (40) The time spent on myself daily was like giving myself a big hug.
(<https://nsmh.org/images/docs/nsmh-program-guide-2018-ver2.pdf>)
- (41) Most of this blog is self-deprecating humor aimed at myself as much as others.
(<http://eveoganda.blogspot.com/2016/01/rixx-in-local.html>)

- (42) Please understand that my family does not excuse her mistakes. She knows she made them, and she knows that she should not have gotten pregnant so young. I would really appreciate it if any negative feelings you have toward teen mothers were kept to yourselves.
(<https://www.disboards.com/threads/the-multi-reason-special-family-wdw-trip.1800085/>)
- (43) In a blistering farewell e-mail sent to himself, Jones defended his stance against further cuts.
(<http://www.nottheletimes.com/fired.html>)
- (44) He is so self involved he could not even think of a title for a song dedicated to himself other than his own name.
(<https://www.thequiz.com/finish-the-lyrics-disney-edition/>)
- (45) Gore delivered the message with a mix of seriousness, humor aimed at himself and measured alarm.
(<https://newspaperarchive.com/santa-ana-evening-blade-aug-28-1996-p-13/>)
- (46) Rumor has it that Mike Tyson bought over 200 cars throughout his career, totaling at \$4,5 million. Many were bought for himself and others as gifts for his friends and family.
(<https://gazetterevue.com/2016/06/mike-tyson-net-worth/>)
- (47) His interest in hockey, soccer and chess was never displayed and *was kept to himself*.
(www.biography.co.in/justin-bieber-biohraphy.html)



2.5 Binding the Implicit Argument

- (49) John wants Mary to be seen.
- (50) “When an implicit argument is existentially quantified, it acts like an R expression, in that it is disjoint from c-commanding NPs...The unassigned Agent is understood as disjoint from John, or at least is vague on that point in the same way that John wants Mary to be seen by somebody is; neither means John wants to see Mary.” (Williams (1987: 155))
(see also Bruening 2013: 19, Bhatt and Pancheva 2017: 16):

- (51) a. John₁ wants Mary to be seen pro₁.
 b. John₁ wants Mary to be seen by him₁.
- (52) John wants Mary to be seen by somebody.
- (53) a. I set myself some health-related goals and I want those goals to be met by the new year.
 b. I plan on going on vacation to Jamaica this summer, so I want all revisions to be made on my thesis before then.
- (54) He reveals to Skyler in the end that everything was done for himself, as it made him feel alive.
 (villains.wikia.com/wiki/Walter_White)
- (55) He is so self involved he could not even think of a title for a *song dedicated to himself* other than his own name.
 (<https://www.thequiz.com/finish-the-lyrics-disney-edition/>)
- (56) John₁ thought that a friendly e-mail sent to himself₁ would cheer him₁ up.

Conclusion: Implicit arguments in the passive may be bound
 (contra Williams 1987: 155, Bruening 2013: 19, Bhatt and Pancheva 2017:16)

2.6 Conclusion

- (57) Phi-Features of the Implicit Argument in the Passive
- a. Generic pro_{gen}:
 Phi-features: third/second person, singular, human, animate, generic
- b. Existential UN:
 Phi-features: none
- c. Definite pro:
 Phi-features: any non-empty combination of phi-features
 (other than [+generic])

3 Secondary Predicates and the Implicit Argument

3.1 Introduction

- (1) a. John wrote the book.
 b. The book was written by John.
- (2) a. The book was written.
 b. The book was [pro written]
 c. The book was [written pro]
- (3) At the commune, breakfast is usually eaten nude.
 (Collins 2005: 101)

- (4) At the commune, the campers usually eat breakfast nude.
- (5) Depictive secondary predicates can modify the implicit argument of the short passive. (contra Williams 1985, Chomsky 1986, Pylkkänen 2008, Landau 2010)

3.2 Secondary Depictive Predicates in the Short Passive

- (6) Roeper (1987: 297)
The game was played drunk/nude/sober/angry.
- (7) Baker (1988: 318)
 - a. This song must not be sung drunk.
 - b. Such petitions should not be presented kneeling.
- (8) Collins (2005: 101)
At the commune, breakfast is usually eaten nude.
- (9) Meltzer-Asscher (2012: 281)
 - a. Traditionally, the koto was played seated on the floor.
 - b. The hula is danced barefoot.
- (10) Stroik (1992: 132, fn. 7)
 - a. The painting was painted blindfolded.
 - b. I can tell that this letter was written in a good mood.
 - c. This bank-job wasn't done alone.

Generic Examples:

- (11) If beach volleyball was played nude I would never leave my house.
(<http://imgur.com/gallery/fPIhe>)
- (12) So here's looking at top 15 sports that should be played nude.
(<http://www.thesportster.com/entertainment/top-15-sports-that-should-be-played-nude/>)
- (13) Originally the game was played naked in the burning sun,
(<http://uncyclopedia.wikia.com/wiki/Australia>)
- (14) The school has settled on badminton as the best PE activity because it can be played fully clothed.
(<http://islamversuseurope.blogspot.com/2010/08/>)
- (15) At the refugee camp, soccer was played barefoot,
(<http://www.youthsoccerfun.com/2007/09/>)

- (16) Next the procession headed for the Chapel of the Burning Bush, which was entered barefoot:...
- (<https://www.google.com/search?tbm=bks&q=pilgrims+to+jerusalem+in+the+middle+ages>)
- (17) Anyone like their coffee served topless?
- (<http://www.theoryland.com/vbulletin/showthread.php?t=1184>)
- (18) It really should be sung drunk, or not at all.
- (<https://twitter.com/stephenkb/status/781142776570339328>)
- (19) Our album is meant to be listened to stoned.
- (<http://www.nme.com/news/music/warpaint-61-1293400>)
- (20) Morning prayer was sung together at 6.55am before going to work.
- (<http://www.walsinghamcommunity.org/about-us/history/the-cornerstone-community>)
- (21) ...dinner was eaten together...
- (http://www.huffingtonpost.com/entry/a-different-kind-of-dinnertime-grace_us_58f51c4fe4b04cae050dc9df)
- (22) A duet can't be sung alone.
- (<http://archiveofourown.org/works/11051532/chapters/24638334>)
- (23) Completion of the hike must be done unassisted.
- (<http://www.margarita-adventures.com/faq/>)

Episodic Examples:

- (24) At one place in one year, everything I saw was performed nude - a double bill of Baal and Woyzek, cabaret and improvisational dance.
- (<https://www.timeshighereducation.com/news/marks-for-the-nude-artists-and-beer-glass-hurler/163984.article>)
- (25) The field was crowded onto a relatively clear stretch of sand, the game was played barefoot,...
- (<https://rosethomson.wordpress.com/tag/spirit-circles/>)
- (26) All of this very important work was done shirtless (natch), giving Zac plenty of opportunity to show off his newly acquired six-pack.
- (http://www.huffingtonpost.co.uk/entry/zac-efron-body-chest-shirtless-pictures-baywatch_uk_56dfffd2e4b05c52666e6558)
- (27) Minaj admitted that the lapdance was completely choreographed, and was performed drunk.
- (<https://uinterview.com/news/nicki-minaj-twerks-and-gives-drake-a-lap-dance-in-anaconda-video/>)

- (28) and I'm pretty sure most of the part of Benjy in *The Sound and the Fury* was written drunk...
(<https://arstechnica.com/civis/viewtopic.php?f=23&t=710318>)
- (29) I mean most of the album was written drunk.
(<http://www.genesis-news.com/c-Ray-Wilson-Interview-in-Heiligenhaus-2006-s119.html>)
- (30) ...but the whole staggering shebang sounds like it was done stoned...
(<http://homeofthegroove.blogspot.com/2006/11/>)
- (31) Not all of this was written sober, apologies.
(<https://www.fanfiction.net/s/8858368/1/Check-The-Second-Box%29>)
- (32) The first verse was sung alone, with instrumental accompaniments, then gradually the choir joined in.
(http://libera-historicaltimelinepart7.blogspot.com/2013_12_01_archive.html)
- (33) It was done BLINDFOLDED, and this is one of the hardest Chopin etudes.
(<https://www.facebook.com/LangLangPiano/posts/1606890532901147>)
- (34) The concert had some amazing moments, but by far the most touching was the final piece which was played blindfolded as a tribute to World Peace.
(<http://www.milapfest.com/news/raams-samyo-diary-6/>)
- (35) All this was done unarmed!
(<https://afrolegends.com/2009/12/03/the-forgotten-angel-of-rwanda-capt-mbaye-diagne/>)
- (36) Almost all the lifting was done unassisted.
(<https://www.cdc.gov/niosh/nioshtic-2/00231105.html>)
- (37) This journey will be made unassisted and with no back up or support persons.
(<https://www.linkedin.com/pulse/cycling-fundraising-making-difference-don-morris>)
- (38) ...so some of the work was done unprepared in the frigid (2 degree F windchill) weather without tripod or gloves.
(<http://gopro.trendolizer.com/2016/03/toronto-cyyz-spotting-2015-a-glorious-return.html>)
- (39) **Four generalizations:**
- a. The presence of depictive predicates in the short passive is productive.
 - b. All the above examples also admit a *by*-phrase.
 - c. All of the examples are good in the active.
 - d. If a secondary depictive predicate is not possible in the active, then it will not be possible in the passive either.

- (40) a. He read the book *intelligent/*knowing/*knowledgeable.
 b. The book was read *intelligent/*knowing/*knowledgeable.

3.3 Some Counter-Proposals

- (41) Williams (1985: 308, example attributed to Roeper)
 The game was played nude.

“...rather than saying that the adjective *nude* modifies the implicit agent of *played* we might say that it modifies the (overt) subject *game*, since one may call a game nude if it is played by nude people.”

Bhatt and Pancheva (2006: 585, footnote 11) responding to this argument note that “We find *The movie was watched nude*...acceptable. However, it seems a much greater stretch to refer to a movie that is watched nude as a nude movie.”

- (42) Pylkkänen (2008: 22)
 “This state can be predicated of either an internal or an external argument, although if the external argument is implicit, as in a passive, it cannot be modified by a depictive.”

- (43) *This letter was written drunk.

Pylkkänen (2008a: 26): “The inability of depictives to modify an implicit external argument is predicted, as long as we assume that passive Voice makes the external argument syntactically unavailable. In (35), I assume that passive Voice existentially closes off the external argument.”

- (44) Landau (2010: 359)
 a. Strong Implicit Arguments (SIA): PRO, pro
 b. Weak Implicit Arguments (WIA): Passive agent, implicit object

- (45) An implicit argument must be strong to license a secondary predicate.

Landau (2010:360) gives the following two sentences to illustrate his claims:

- (46) a. *The issue was decided unassisted.
 b. *The game was played shoeless.

Landau notes in a footnote: “See Roeper 1987:297-298 for a different view.” In addition to Roeper 1987, evidence contrary to (45) had already been presented by Baker (1988), Roeper (1993), Collins (2005), Bhatt and Pancheva (2006) and Müller (2008).

3.4 Analysis

(47) A depictive secondary predicate can modify the implicit argument of a passive.

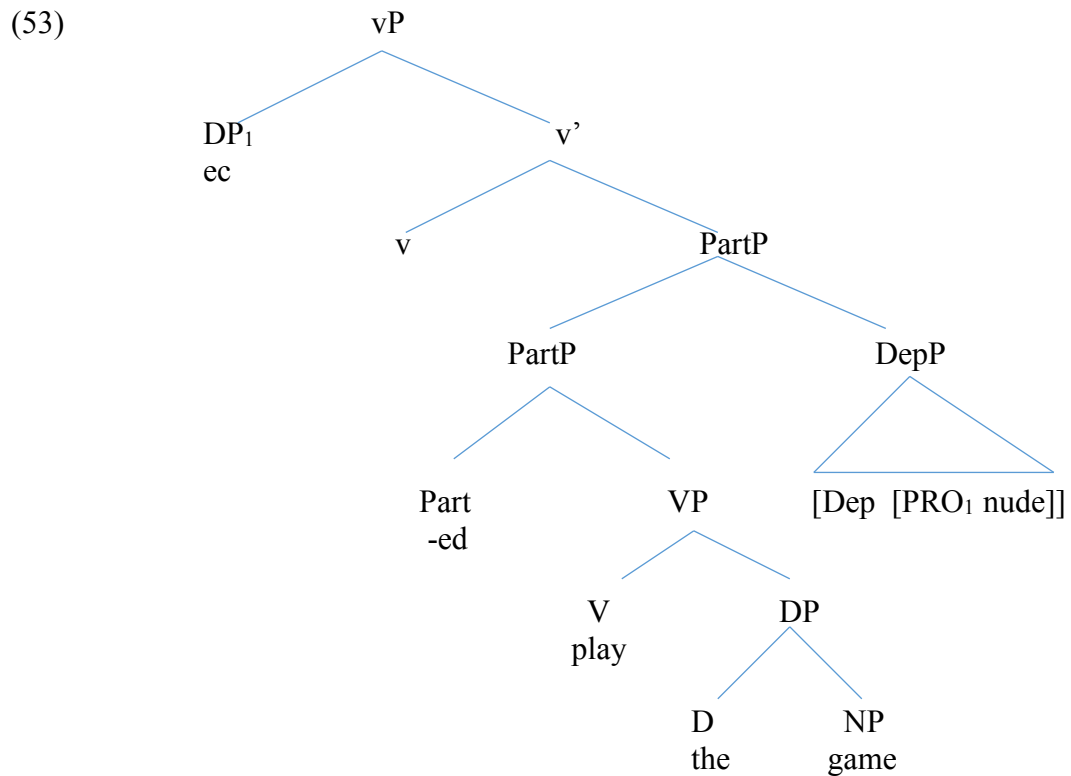
(48) They₁ played the game [Dep [PRO₁ nude]] (on PRO see Legendre 1997)

- (49) a. PRO₁ requires a controller DP₁.
 b. The controller DP₁ c-commands PRO₁.
 c. Minimal Distance Principle:
 No DP₂ can intervene between the controller DP₁ and PRO₁.

- (50) a. *It rained [PRO sad].
 b. John's mother₁ wrote the book [PRO₁ drunk].
 c. [John and Mary]₁ wrote the book [PRO₁ drunk].
 d. John said that Bill₁ left [PRO₁ angry].

(51) DepP is the sister of a verbal projection.

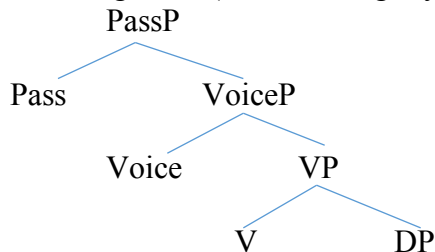
(52) The game was played nude.



4 A Theory of Implicit Arguments

- (1) a. The book was written by John. (long passive)
 b. The book was written. (short passive)

- (2) Bruening 2013 (modified slightly)



(pg. 22) “... that passive is a head (Pass) that selects a projection of Voice that has not yet projected its external argument.”

(pg. 23): “Although Pass syntactically selects an unsaturated Voice projection, it has the property of requiring that all of the arguments be saturated. This means that if the external argument of Voice has not been saturated, Pass will have to saturate it. It does this by existentially binding it. As stated earlier, all the evidence indicates that the external argument of a short passive is existentially quantified.”

- (3) Bruening (2013: 21, 23)

- a. $[[\text{Voice}]] = \lambda f \lambda x \lambda e. f(e) \ \& \ \text{Initiator}(e, x)$
 b. $[[\text{Pass}]] = \lambda f \lambda e. \exists x: f(e, x)$
 c. $[[\text{PassP}]] = \lambda e. \exists x: \text{bribing}(e, \text{the senator}) \ \& \ \text{Initiator}(e, x)$

Sigurðsson and Wood (2021: 584): “In both the active and the passive structures, there is a Voice head that introduces agentive semantics. In actives, the agent is projected syntactically in Spec, VoiceP. In passives, the agent remains part of the semantics of Voice, but is not projected syntactically.”

(pg. 602): “...the standard view is that in languages like English (with periphrastic, participle-based passives), a Passive head attaches outside of a specifierless VoiceP.”

- (4) **Theta-Criterion (Chomsky 1986: 97)**

Each argument α appears in a chain containing a unique visible theta-position P, and each theta-position P is visible in a chain containing a unique argument α .

- (5) **Argument Criterion**

- a. Each argument is introduced by a single argument introducing head.
 b. Each argument introducing head introduces a single argument.

(6) **Comparison of theories:**

Collins 2005/2022:

Principles: Theta-Criterion/Argument Criterion

Prediction: Implicit arguments *are* syntactically projected.

Empirical support: Distribution of reflexives and pronouns, Helke expressions and secondary predicates in the short passive in English

Bruening 2013 (and related theories):

Principles: No Theta-Criterion/Argument Criterion, only formal semantics

Prediction: Implicit arguments *are not* syntactically projected.

Empirical problems: Distribution of reflexives and pronouns, Helke expressions and secondary predicates in the short passive in English

(on theories related to Bruening 2013, see also Pylkkänen 2008, Legate 2014, Alexiadou et. al. 2015, etc.)

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