



Accounting for the causal link between free adjuncts and their host clauses

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Introducing free adjuncts – I

Free adjuncts: non-clausal adjuncts that associate with an argument of the main clause and contribute propositional content about that argument

- (1) John, **being an Englishman**, is brave.
- (2) **As a child**, Mary had red hair.
- (3) **Wearing this**, Peter would appeal to Mary.



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Their main semantic property to be explained is the **variability** regarding **how the proposition relates to the matrix proposition**:

- (1') Since John is an Englishman, he is brave. (“causal”)
- (2') When Mary was a child, she had red hair. (temporal)
- (3') If Peter were wearing this, he would appeal to Mary. (conditional)



Introducing free adjuncts – II

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(See Stump 1985, Zobel 2018)



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- ▶ **Observation:** the potential relations vary for different free adjuncts

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- ▶ **Observation:** the potential relations vary for different free adjuncts
- ▶ **Weak free adjuncts:** allow for the full spectrum of relations

⇒ temporal & conditional relations arise via interactions with operators

⇒ other relations arise independently of operators

⇒ may lead to ambiguities

(4) **As a teacher**, Mary knew what to do. (“causal” or temporal)

(See Stump 1985, Zobel 2018)



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(4) **As a teacher**, Mary knew what to do. (“causal” or temporal)

- ▶ **Strong free adjuncts**: only allow for those relations that arise independently (⇒ no interaction with operators)

(5) **Being a teacher**, Mary knew what to do. (only “causal”)

(See Stump 1985, Zobel 2018)



Questions addressed today and proposal

One relation that “arises independently” is the **causal relation**.

- (6)
- a. **As a teacher**, Mary knows what to do.
 - b. **Being a teacher**, Mary knows what to do.
- ▶ How does the causal relation arise?
 - ▶ At which level of meaning does the causal relation come in?



Questions addressed today and proposal

One relation that “arises independently” is the **causal relation**.

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 b. **Being a teacher**, Mary knows what to do.

- ▶ How does the causal relation arise?
- ▶ At which level of meaning does the causal relation come in?

The proposal in a nutshell:

- ⇒ The proposition p expressed by free adjuncts is presuppositional but not *lexically linked* to the truth-conditional content q .
- ⇒ **Relation to host utterance**: The use of a free adjunct addresses the felicity conditions for asserting q : the speaker has reasons to believe that q is true.
- ⇒ **Inference**: p is a/the reason for why the speaker believes q .



Roadmap

Introduction

The causal relation of free adjuncts

Previous account of the causal relation: Stump 1985

Background: syntax/semantics of weak adjunct 'as'-phrases

Proposal: the causal relation

Summary



Three types of causal relations – I

Charnavel (2017:148) distinguishes three types of causal relations that are cross-linguistically expressed by causal subordinators:

1. **Eventive causal clauses:** the cause of / reason for the matrix eventuality

(7) Liz left because she was tired.

2. **Evidential causal clauses:** indirect evidence for the truth of the matrix proposition

(8) Liz (must have) left, since/because her coat is gone.

3. **Speech act causal clauses:** the reason for the speech act

(9) Since you know everything, did Liz leave?



Three types of causal relations – II

The different causal adverbial clauses have **different semantic and pragmatic properties**.

- ▶ *Why*-questions only ask for eventive causal clauses.

(10) A: Why did Liz leave?
B: Because she was tired.
B': #Since her coat is gone.

- ▶ Evidential causal clauses are not subject to the **temporal precedence constraint** in place for eventive causal relations.

(11) a. The streets are wet because it rained.
b. #It rained because the streets are wet.

(12) a. The streets are wet since it rained.
b. It rained since the streets are wet.



Causal relation of free adjuncts

The causal relation involved in the interpretation of free adjuncts is most plausibly the relation expressed in an evidential causal clause.

- ▶ They cannot answer *why*-questions:

(13) A: Why did Peter catch a cold?
B: #Not having worn a coat.



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- ▶ They are not subject to the **temporal precedence constraint**:

(14) Being a general physician, Peter had to take three anatomy classes in med school.

(15) Having listed “World Peace” as his goal in high school, Peter was an idealist from a very young age.



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Free adjuncts present the speaker's epistemic grounds for the claim.



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Core of Stump's proposal – I

Main idea: all relations that “arise independently” are introduced as values of a **free relational variable** L that is part of the truth-conditional content contributed by the free adjuncts

- ⇒ these free adjuncts are “adsentential adjuncts”
- ⇒ the values of L are inferred pragmatically

$$(16) \quad \llbracket \textit{as a child} \rrbracket = \lambda P. \lambda t. \mathcal{K}(L)(\exists t' [\underline{M(t, t')} \ \& \ \underline{AT(t', \textit{child}'(y^i))}]) (\underline{P(t)})$$

(Stump 1985: 58–64, 86–89; Zobel 2018)



Core of Stump's proposal – II

$$(17) \quad \llbracket \text{as a child} \rrbracket = \lambda P. \lambda t. \mathcal{K}(L)(\exists t' [M(t, t') \ \& \ AT(t', \text{child}'(y'))]) (\underline{P}(t))$$

- ▶ **free variable L** : propositional relation between the free adjunct proposition and the matrix proposition P
- ▶ **operator \mathcal{K}** : takes propositional relations and makes them factive/veridical;
 $\mathcal{K}(L)$ = factive variant of L ;

⇒ The values for L are inferred pragmatically.

Importantly: L is contributed to the truth-conditional content



Core of Stump's proposal – III

Stump's (1985:22) argument for making *L* part of the truth-conditional content:

- (18) A: John, being an Englishman, is brave.
 A': John, who is an Englishman, is brave.
 A'': John is an Englishman, and he is brave.
- (19) B: Are you implying that John is brave because he is an Englishman?
 B': No, that's not why he is brave.

⇒ A cannot be answered with B, while A' and A'' can

⇒ A can only be answered with B'

⇒ B' cannot answer A' or A''



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 B': No, that's not why he is brave.

- ⇒ A cannot be answered with B, while A' and A'' can
 ⇒ A can only be answered with B'
 ⇒ B' cannot answer A' or A''

However: my native speaker informants do not agree!





Problem for Stump: the causal relation is not at-issue

Standard tests: the causal relation is not part of the at-issue content

1) Direct denial

- (20) A: Being a cat owner, Peter is a bachelor.
B: No, that's not true. (only: Peter is not a bachelor.)



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2) Embedding under sentential negation

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 (22) It's not the case that Peter is a bachelor because he owns cats.



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(22) It's not the case that Peter is a bachelor because he owns cats.

3) Answers to *why*-questions

- (23) A: Why is Peter a bachelor? / Why do you think that...?
B: *Being a cat owner.
B': Because he is a cat owner.

(For further problems with Stump's account of weak adjuncts see Zobel 2018.)



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Weak adjunct *as*-phrases – I

Why *as*-phrases?

- ▶ **not verbal** = do not come with their own temporal/aspectual content
- (24) Spying on his neighbors, Peter saw Mary enter the house.
- (25) Taken in the prescribed dosage, it would work better.
- (26) Having seen an accident ahead, I stopped my car.



Weak adjunct *as*-phrases – I

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 - (24) Spying on his neighbors, Peter saw Mary enter the house.
 - (25) Taken in the prescribed dosage, it would work better.
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- ▶ robust causal or concessive relation in **episodic, present-orientend sentences** (⇒ no other interpretation possible!)
 - (27)
 - a. As a cat owner, Peter is reading up on cats.
 - b. ?As a cat owner, Peter is reading the newspaper.
 - (28) Peter really surprised me. As a cat lover, he likes his neighbor's dogs.



Weak adjunct *as*-phrases – II

Zobel 2017: proposal for the syntax and semantics of *as*-phrases

(29) $[_{asP} \text{ as } [_{SC} \text{ PRO } [_{DP} \text{ a NP}]]]$

(30) $[[_{as} \text{ PRO}_c \text{ a NP}]^{g, w_0, t_0} =$
 $\lambda p_{\langle i, st \rangle} . \lambda t' . \lambda w' : [[\text{NP}]^{g, w_0, t_0} (g(c))(t')(w') = 1. p(t')(w')$

- ▶ propositional modifier $\langle \langle i, st \rangle, \langle i, st \rangle \rangle$ with a contribution that is mainly projective (\rightarrow presuppositional)
- ▶ temporal variable t' : identified either with the evaluation time or the reference time of the matrix (\rightsquigarrow temporal relation)
- ▶ world variable w' : either identified with the world of evaluation or bound by a modal quantifier (\rightsquigarrow conditional relation)



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Importantly: the meaning of the *as*-phrase does not encode its relation to the matrix proposition!



Evidence: causal relation is not semantically encoded

1) **Causal relation in the projective/not-at-issue content:** we should always understand a causal link (in addition to any other relation)

(31) As a child, Mary had red hair.

BUT: some *as*-phrases are not understood with a causal relation



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BUT: some *as*-phrases are not understood with a causal relation

2) **Free relational variable in the projective/not-at-issue content:** we should be able to infer any type of propositional relation in any context

(32) Peter really surprised me. As a cat owner, he likes dogs.

(33) ?As a cat owner, Peter likes dogs.

BUT: the causal link seems to be the default while the concessive link needs contextual support



Evidence: *as*-phrase proposition is presuppositional

1) Projective content:

(34) ??It's not the case that Peter, as a cat owner, is a bachelor.

(35) A: As a cat owner, Peter is a bachelor.

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Evidence: *as*-phrase proposition is presuppositional

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2) Can be established:

(36) Peter has three cats, and *as a cat owner*, he understands my cat troubles.

(37) Peter has three cats. #He, who is a cat owner, understands my cat troubles.

⇒ would be degraded for conventionally implicated content (Potts 2011)



Combinatorics: the truth-conditional content

Combining the weak adjunct *as*-phrase with the matrix clause:

proposition where the world and time of evaluation of the presupposed content and the at-issue content are linked

(38) *As a cat lover*, Peter owns two cats.

(39) $\lambda t'.\lambda w' :$

cat-lover(Peter)(t')(w') = 1.

owns-two-cats(Peter)(t')(w')



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After *evaluation at t_0 and w_0* :

(40) (38) is true in w_0 at t_0 iff

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provided that: cat-lover(Peter)(t_0)(w_0) = 1



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⇒ *the causal relation is inferred*



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- ▶ **Result of the computation:** two propositions about the same individual, one of which is asserted and one is presupposed



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- ▶ The explanatory/causal link is inferred to establish discourse coherence.

(see also Jäger 2003)



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How do interpreters make sense of the connection for:

(41) **As a cat lover**, Peter owns two cats.

First try:

- ▶ use world knowledge: *cat lovers normally own cats*
- ▶ infer the explanatory/causal link based on the world-knowledge regularity



The main idea – II

BUT: interpreters do not always use a previously established/given world-knowledge regularity

(42) **As a bleep**, Peter bleeps.

- ▶ even with non-words, the *as*-phrase is inferred to provide an explanation
- ▶ the use of the *as*-phrase seems to allow us to infer the regularity



The main idea – III

Claim: the causal link is the most plausible link given that

- the proposition p expressed by free adjuncts is presuppositional.
- p is not *lexically linked* to the truth-conditional content q .



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Question: how is the p connected to the assertability of the sentence?



The main idea – III

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- ▶ **Presupposed content** is flagged as a condition on the assertability of the truth-conditional content.

Question: how is the p connected to the assertability of the sentence?

- ▶ **Lack of a lexical link:** the *as*-phrase content is connected to the assertability not by satisfying a requirement of a lexical item



The main idea – III

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- p is not *lexically linked* to the truth-conditional content q .
- ▶ **Presupposed content** is flagged as a condition on the assertability of the truth-conditional content.

Question: how is the p connected to the assertability of the sentence?

- ▶ **Lack of a lexical link:** the *as*-phrase content is connected to the assertability not by satisfying a requirement of a lexical item
- ▶ **Proposal:** the content is connected to the felicity conditions for asserting q
 - ▶ the speaker has reasons to believe that q is true (see Pagin 2014)
 - ▶ p is *a/the* reason for why the speaker believes q



More on: *lexically linked* – I

Observation: presupposed content is not normally understood to be linked causally to the main clause content

- (43) The King of France is bald. >> There is a unique King of France.
- (44) Peter's sister owns three cats. >> Peter has a unique sister.
- (45) Mary stopped smoking. >> Mary used to smoke.
- (46) Mary knows that Peter owns cats. >> Peter owns cats.

(see list of triggers in e.g. Beaver & Geurts 2011)



More on: *lexically linked* – II

BUT: the presuppositions that are traditionally discussed name a requirement on the successful interpretation of a lexical item that is part of the asserted content

- (47) The King of France is bald. >> There is a unique King of France.
 (48) Peter's sister owns three cats. >> Peter has a unique sister.
 (49) Mary stopped smoking. >> Mary used to smoke.
 (50) Mary knows that Peter owns cats. >> Peter owns cats.

- ⇒ there is a lexical link to the assertability of the sentence
- ⇒ the *as*-phrase proposition is not connected in this way to any lexical element in the asserted content

- (51) As a cat lover, Peter owns cats. >> Peter is a cat lover.



More on: presuppositionality – I

- ▶ The relation that is inferred for other not-at-issue content that is not explicitly linked to its host clause is also frequently a causal relation.

- (52)
- I visited my sick mother.
 - Peter, a cat lover, has three cats.

- ▶ **Leffel et al. (2014)**: appositive content requires “pragmatic licensing”

- ⇒ content needs to be linked pragmatically to the truth-conditional content
- ⇒ interpreters aim to *maximize discourse coherence*

(Asher & Lascarides 2003)



More on: presuppositionality – II

- ▶ **BUT:** appositive content can be understood to be linked to its host clause in other ways, provided the context allows for it

(53) A: Tell me something about Paul!
B: Paul, who is a teacher in school X, is tall and has brown hair.



More on: presuppositionality – II

- ▶ **BUT:** appositive content can be understood to be linked to its host clause in other ways, provided the context allows for it

(53) A: Tell me something about Paul!
B: Paul, who is a teacher in school X, is tall and has brown hair.

- ▶ The corresponding *as*-phrase content again receives a causal link:

(54) A: Tell me something about Paul!
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More on: presuppositionality – II

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⇒ **Difference:** appositive content vs. presupposed content



Extension to the concessive link

The concessive link with free adjuncts is only available with contextual support:

- (55) a. ?As a cat lover, he likes his neighbor's dogs.
b. Peter really surprised me. As a cat lover, he likes his neighbor's dogs.

- ▶ The first sentence in (55-b) says that something surprising for the speaker follows.

⇒ the causal link is implausible

⇒ **alternative:** infer a concessive link

But how?



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⇒ the causal link is implausible

⇒ **alternative:** infer a concessive link

But how?

- ▶ **Possible alternative:** the *as*-phrase provides the reason for why the speaker is surprised that Peter likes his neighbor's dogs

⇒ causal link to a complex discourse unit

⇒ **More work needed!**



Summary

- ▶ Free adjuncts are non-clausal adjuncts that contribute presuppositional propositional content.
 - ▶ This content is linked to the asserted content either by interacting with an operator that is part of the asserted content or via relations that “arise independently”.
 - ▶ The default relation that arises independently is an explanatory/causal link as the one expressed overtly by *because/since* in evidential causal clauses.
 - ▶ The default status of this inference was connected to:
 - the presuppositional status of the content of free adjuncts
 - the observation that this content is not lexically linked to an expression in the asserted content
- ⇒ the content connects to the felicity conditions of the assertion



Some open issues/questions

► Verb-based free adjuncts:

- (56) a. Walking home, Peter saw Mary. (weak)
 b. Being a blonde, Peter looked like Paul. (strong)
- (57) Taken in the prescribe dosage, it would be more effective.
 (weak)

⇒ What is the effect of the temporal/aspectual information?

► Free adjuncts in other types of utterances:

- (58) Is Peter, as a child, shy?
- (59) As a linguist: what do you think about these claims?

⇒ How is the *as*-phrase connected to the question?

⇒ Can imperatives contain free adjuncts?



Thank you!

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