

Asymmetric Coordination

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1.1 Three properties of symmetric CSs

For a coordinate structure to count as ‘symmetric’ it should have ALL 3 of the following properties:

-Substitutability:

“If a CS occurs in *S*, each of its coordinates must be individually syntactically licensed in *S*; that is, each of the CS’s coordinates, when substituted for the CS, must lead to a grammatical structure (Goodall 1987).”

- (2) a. A well-known [[poet] and [actor]] was awarded the medal.
b. A well-known [poet/actor] was awarded the medal.
- (3) a. *A [[man] and [from Boston]] arrived.
b. A [man/*from Boston] arrived.

-Syntactic Symmetry:

“none of the coordinates is in any obvious way syntactically subordinate to any of the others – that is, none of the coordinates (or material within it) may asymmetrically c-command any of the other coordinates. “

- (4) a. *John hasn't ever talked to Peter or Mary has ever danced with Jim.
- b. *John has ever talked to Peter or Mary hasn't ever danced with Jim.

-Semantic Symmetry:

“the linear order of the coordinates has no truth-conditional impact on the interpretation of the sentence”

- (5) a. John talked to Peter, and Mary danced with Jim.
- b. Mary danced with Jim, and John talked to Peter.
- (6) a. John talked to Peter, or Mary danced with Jim.
- b. Mary danced with Jim, or John talked to Peter.

In the absence of one of these 3 properties, we have Asymmetric Coordination.

AC

AC lacking semantic symmetry:

Conditionality:

- (10) Big Louie sees you with the loot and he puts a contract on you.
(Culicover and Jackendoff 1997, 198)
- a. *It is both the case that Big Louie sees you with the loot and that Big Louie puts a contract on you.*
 - b. *If Big Louie sees you with the loot, he will put a contract on you.*
- (11) Big Louie puts a contract on you and he sees you with the loot.

Causation:

- (12) The police came into the room and everyone swallowed their cigarettes.
(Lakoff 1971, 127)
- a. *It is both the case that the police came into the room and that everyone swallowed their cigarettes.*
 - b. *Everyone swallowed their cigarettes because the police came into the room.*
- (13) Everyone swallowed their cigarettes and the police came into the room.

“pseudo-coordination”

- (16) John will go and read a book.
- a. *It is both the case that John will go and that John will read a book.*
 - b. *John is going to read a book.*

All the above cases violate the Coordinate Structure Constraint

- (17) a. [This is the loot]₁ that Big Louie sees you with t₁ and puts a contract on you.
(see Culicover 1997 for analogous examples)
- b. [Which room]₁ did the police enter t₁ and everyone swallowed their
cigarettes?
(see Culicover 1972 for analogous examples)
- c. What₁ did John go to the store and buy t₁?
(Lakoff 1986)
- d. What₁ will John go and read t₁?
(see DeVos 2005 for analogous examples)

CSC violations are characteristic of semantic asymmetry. Moreover, they only happen with ‘and’.

Some (eg Postal) have argued that this sort of ACs are subordination, not coordination.

AC lacking substitutability

MY description: V2 word order in both conjuncts with a shared subject found just in the first conjunct.

- (20) German
 Gestern [_{C'} musste **der Hans** morgens mit der Anna
 yesterday must.FIN the Hans in.morning with the Anna
 frühstücken] und [_{C'} sollte ____ abends mit der Maria
 have.breakfast and should.FIN in.evening with the Maria
 ausgehen]].
 go.out
 'Yesterday, Hans had to have breakfast with Anna in the morning, and was
 supposed to go out with Maria in the evening.'

These have syntactic symmetry.

And semantic symmetry:

(21) German
 Leider [[_{C'} haben **viele Kinder** Probleme mit dem Gewicht]
 unfortunately have many children problems with the weight
 und [_{C'} können ____ nicht lesen]].
 and can not read
 'Unfortunately, many children have weight problems and are unable to read.'

(22) German
 Leider [[_{C'} können **viele Kinder** nicht lesen] und [_{C'} haben ____
 Unfortunately can many children not read and have
 Probleme mit dem Gewicht]].
 problems with the weight
 'Unfortunately, many children are unable to read and have weight problems.'

And this one also works with 'or':

(23) German
 Leider [[_{C'} können **viele Kinder** nicht lesen] oder [_{C'} haben ____
 unfortunately can many children not read or have
 Probleme mit dem Gewicht]].
 problems with the weight
 'Unfortunately, many children are unable to read or have weight problems.'

Can you think of an English sentence of this sort?

But there is no substitutability:

In particular, the second coordinate of (20) cannot appear on its own given that it does not have an overt subject and German is not a pro-drop language: (24) is ungrammatical.

(24) German
 *Gestern [_{C'} sollte ____ abends mit Maria ausgehen].
 yesterday should in.evening with Maria go.out

A syntactic answer to a pragmatic puzzle: The case of asymmetric *and**

Bronwyn M. Bjorkman In *Syntax and its Limits*. 2013. Eds. R. Folli, C. Sevdali, and R. Truswell

- (3) a. Water freezes at 0°C, and London is the capital of England.
b. London is the capital of England and water freezes at 0°C. (= (3-a))

- (1) a. The lights came on and the singer stepped onto the stage.
b. The sniper shot him and he died.

- (2) a. The singer stepped onto the stage and the lights came on. (≠ (2-a))
b. He died and the sniper shot him. (≠ (2-b))

A pragmatic effect?

p. 3: " It has generally been argued that the logical interpretation of *and* is semantically basic, and that asymmetric interpretations arise from general rules of pragmatic inference (Grice, 1975; Schmerling, 1975; Posner, 1980; Carston, 1993, 2002), though a minority have argued that asymmetric interpretations are basic and logical ones derived (Bar Lev and Palacas, 1980; Txurruka, 2003)."

BB: no, a syntax/semantics effect

Range of data:

temporal relationships: and + some Grice

- (4) a. The lights came on and the singer stepped onto the stage.
- b. The sniper shot him and he died.
- c. The dam broke and the valley flooded.
- d. We spent the day in town and I went to Harrods.³
- e. The lights were off and I couldn't see.⁴

An early common view: Some Gricean-like maxim dictates that situations are presented in their temporal sequence. (though not all of the above are sequence of events. In (d, e), the first clause is a background of the second one.)

Posner 1980:

Same holds with separate sentences:

- (5) a. The lights came on; the singer stepped onto the stage.
- b. The sniper shot him; he died.
- c. The dam broke; the valley flooded.
- d. We spent the day in town; I went to Harrods.
- e. The lights were off; I couldn't see.

Posner: the same facts hold for (4) and (5), so there should be a common explanation, not one that relies on the presence of *and* as such. Unless there turn out to be some *and*-specific properties in the data above.

Bar Lev and Palacas: There are exactly such differences!

There is a difference between coordination and sequencing. Backwards associations are permitted in sequencing but not coordination:

(6) (cf. (4))

- a. The singer stepped onto the stage and the lights came on.
- b. He died and the sniper shot him.
- c. The valley flooded and the dam broke.
- d. I went to Harrods and we spent the day in town.
- e. I couldn't see and the lights were off.

=/=

(7) (cf. (5))

- a. The singer stepped onto the stage; the lights came on.
- b. He died; the sniper shot him.
- c. The valley flooded; the dam broke.
- d. I went to Harrods; we spent the day in town.
- e. I couldn't see; the lights were off.

So, not just pragmatics of temporal ordering.

BB: "Bar Lev and Palacas conclude that *and*'s semantics is intrinsically asymmetric, proposing that it imposes a requirement that the second conjunct not temporally precede its second conjunct. "

But there are counterexamples (already noted by Bar Lev and Palacas):

- (8) The old king has died of a heart attack and a republic has been formed, **and the latter event has caused the former.**

(9) She did her PhD in the US and she did her MA in Canada.

(10) A: Did Bill break the vase?

B: Well, the vase BROKE, and HE dropped it.

(10 is Horn's)

So what to do?

(8-10) are counterexamples to a unified asymmetric *and*, just as much as (4-6) were counterexamples to the pragmatic account.

BB: look at the syntax!

There is a logical *and* and an asymmetric *and*, and they differ (at least) in the size of the constituents they conjoin. Asymmetric *and* conjoins smaller constituents than logical *and*.

- (11)
- a. The newspaper reported that a new government was elected and there was a riot.
 - b. The newspaper reported that a new government was elected and that there was a riot.

TP coordination can only convey asymmetrical *and*:

- (13) *Scenario 1: the newspaper ran two unrelated stories yesterday. In the first it reported that the incumbent government was defeated in yesterday's election; in the second it reported on a riot that occurred in the wake of a hockey game.*
- a. #The newspaper reported that a new government was elected and there was a riot. (= TP coordination)
 - b. The newspaper reported that a new government was elected and that there was a riot. (= CP coordination)
- (14) *Scenario 2: An engineer said: "The dam broke. As a direct consequence of that, the valley below the dam flooded."*
- a. The engineer has confirmed that the dam broke and the valley flooded. (= TP coordination)
 - b. The engineer has confirmed that the dam broke and that the valley flooded. (= CP coordination)
- (15) *Scenario: same as (14)*
- a. #The engineer has confirmed that the valley flooded and the dam broke. (= TP coordination)
 - b. The engineer has confirmed that the valley flooded and that the dam broke. (= CP coordination)

TP coordination conveys asymmetric *and*. For CP coordination, anything goes. It's fine in situations without any relationship between the two conjuncts, as well as in situations with such a

relationship.

p. 13: " TP coordination, at least in embedded contexts, gives rise to asymmetric *and*: it expresses a “forward” temporal or causal relationship between events, it is felicitous only in contexts that involve such event relationships, and it does not allow its conjuncts to be reversed while maintaining its interpretation."

⁸There is also some evidence that this is true of embedded non-finite clauses, with the complementizer *for*:

- (16) a. The opposition planned for the vote to take place and the government to fall.
 b. The opposition planned for the vote to take place and for the government to fall.

(16-b), but not (16-a), seems to be compatible with a plan in which the government is not planned to fall as a result of the vote.

An interpretive contrast between embedded TP and CP coordination also arises beyond the domain of attitude and reportative verbs. The same contrast can be found under modals such as *necessary* and *possible*:

- (17) a. It is possible that it will rain tomorrow and we'll cancel the party.
 b. It is possible that it will rain tomorrow and that we'll cancel the party.

(17-b), but not (17-a), seems to be true if it rains tomorrow but the party is cancelled for some other reason. Thank you to an anonymous reviewer for pointing out the relevance of the modal examples.

The need for TP- coordination for asymmetrical *and* can also be seen in languages that don't drop their complementizer, like Greek:

- (18) Ksero *(oti) i Maria ton apelise
 know.1SG COMP DET Maria him fired.
 "I know (that) Maria fired him."

- (19) a. Ksero oti o Yanis skondapse ke i Maria ton apelise
 know.1SG COMP DET Yanis tripped.3SG and DET Maria him fired.
 “I know that Yanis tripped and Maria fired him.” (... from the dance troupe)
- b. Ksero oti o Yanis skondapse ke oti i Maria ton apelise
 know.1SG COMP DET Yanis tripped.3SG and COMP DET Maria him fired.
 “I know that Yanis tripped and that Maria fired him.” (... but the two aren’t
 necessarily related)

With unembedded conjunctions, It is unclear whether we are dealing with TP or CP coordination:

- (21) a. The lights came on and the singer stepped onto the stage.
 b. The sniper shot him and he died.
 c. The dam broke and the valley flooded.

BB: Cancellation of causal relationship etc is not pragmatics (cancelling of implicature etc) but disambiguation of a structural ambiguity.

So the continuation in (8) is not a cancellation of an implicature (which it would be on a pragmatic account), but a disambiguation of a structural ambiguity: you figure out that it is CP coordination:

- (8) The old king has died of a heart attack and a republic has been formed, **and the latter event has caused the former.**

BUT difficulty with V2: if V2 means CP, then in German and Dutch we never have asymmetrical readings? But this is not so. the following does have asymmetrical *and*:

- (30) De sluipschutter schoot hem neer en hij stierf.
 The sniper shot him down and he died.
 “The sniper shot him and he died (because he was shot OR independently).”

But there is some hope! Subject gap sentences only have asymmetrical readings:

- (32) In den Wald ging der Jäger und fing einen Hasen.
in the wood went the hunter and caught a hare
“The hunter went into the woods and caught a hare.”

It has been argued that these constructions are smaller than CP (Höhle 1990, Heycock and Kroch 1994). So the size of the conjuncts matters again.
--though unclear what's happening in 30.

But why does asymmetric *and* require coordination of constituents smaller than CPs?
....

And DP/NP coordination?

- (40) a. The officer and the lady.
b. The officer and lady.

(40a) must involve two individuals; (40b) can involve one or two.

(Mostly copied and pasted from paper)

Semantic Subordination despite

Syntactic Coordination

Peter W. Culicover Ray Jackendoff

left-subordinating" and (or _{LS}*and*)

- (1) One more can of beer and I'm leaving.

CJ: If you have one more can of beer, I'm leaving

Or, can you think of other examples?

Is (1) coordination or something else?

CJ: syntactically coordination, semantically subordination. So: syntax semantics mismatch.

But.....

Nevertheless, the data are super interesting and unexplained.

- (3) a. You drink another can of beer and I'm leaving.
(= If you drink another can of beer, I'm leaving.)
b. Big Louie sees you with the loot and he puts out a contract on you
(=If Big Louie sees you with the loot, he puts out a contract on you)

To get the LSand reading, the tense has to be just so:

tribution. For instance, if the tense is changed to, say, perfect, the conditional reading is lost.

- (4) a. You've drunk another can of beer and I've left. (≠ If you've drunk another can of beer, I've left.)
b. Big Louie has seen you with the loot and he's put out a contract on you. (≠ If Big Louie has seen you with the loot, he's put out a contract on you.)

No tripartite conjunction:

- (5) a. (*)You drink another can of beer, Bill eats more pretzels, and I'm leaving. (≠ If you drink another can of beer, (and if) Bill eats more pretzels, I'm leaving.)
b. (*)Big Louie sees you with the loot, you look guilty, and he puts out a contract on you. (≠ If Big Louie sees you with the loot, (and if) you look guilty, he puts out a contract on you.)

Only with IP conjunction, not CP conjunction:

- (6) a. You know, of course, that you drink one more beer and you get kicked out. (= . . . that if you drink one more beer you get kicked out.)
b. You know, of course, that you drink one more beer and that you get kicked out. (≠ . . .that if you drink one more beer you get kicked out.)

Or VP conjunction:

- (7) a. Big Louie sees you with the loot and puts out a contract on you. (\neq If Big Louie sees you with the loot, he puts out a contract on you.)
b. Big Louie has seen you with the loot and put out a contract on you. (perfect forces coordinate interpretation only)

No Right Node Raising:

- (8) a. Big Louie found out about _____, and_C Big Louie put out a contract on, that guy who stole some loot from the gang.
b. *Big Louie finds out about _____, _{LS}and Big Louie puts out a contract on, that guy who stole some loot from the gang. (cf. Big Louie finds out about that guy who stole some loot from the gang, _{LS}and Big Louie puts out a contract on him.)
c. *If Big Louie finds out about _____, then Big Louie puts out a contract on, that guy who stole some loot from the gang.

Similarly, whereas *and*_C-constructions can undergo gapping (9a), _{LS}*and*-constructions cannot (9b), paralleling *if*-constructions (9c).

- (9) a. Big Louie stole another car radio and_C Little Louie the hubcaps.
b. *Big Louie steals one more car radio _{LS}and Little Louie the hubcaps. (OK perhaps as generic coordination but not as conditional)
c. *If Big Louie steals one more car radio, then Little Louie the hubcaps.

_{LS}and does not give us just any type of conditional:

Not counterfactuals(or X-marked) conditionals

fact stative clauses (100).

- (10) a. If Bill hadn't come, we would have been sad. (\neq *Bill didn't come, _{LS}and we were sad.)
b. If x is less than y , the derivative of $f(x)$ is positive. (\neq * x is less than y , _{LS}and the derivative of $f(x)$ is positive.)

Not epistemic ones:

x. If his light is on, he is home \neq his light is on and he is home

Unclear why such restrictions hold.

So what is the syntax of _{LS}and?

Syntactic subordination?

(12) [_S₁ _{LS}and] _S₂

CJ: No.

-In English, subordinators are clause-initial (if, because, etc)

-subordinate clauses in English can appear sentence-initially or sentence finally. This one can't:

(14) *[_S Big Louie puts out a contract on you, [_S Big Louie sees you with the loot] _{LS}and]]

CJ: *LS and* is not a subordinator syntactically.

But semantically it is:

Interactions with Binding: evidence for semantic subordination

_{LS}and behaves like an if-clause, and not like andC

- (16) a. Another picture of himself_i appears in the newspaper _{LS} and Susan thinks John_i will definitely go out and get a lawyer.
- b. Another picture of himself_i in the newspaper _{LS} and Susan thinks John_i will definitely go out and get a lawyer.
- c. If another picture of himself_i appears in the newspaper, Susan thinks John_i will definitely go out and get a lawyer.
- d. *Another picture of himself_i has appeared in the newspaper, and_C Susan thinks John_i will definitely go out and get a lawyer.

EXAMPLE, (16) c) (compare with (16) d)).

- (18) a. Another picture of him(*self) (appears) in the paper _{LS} and Susan will think John is famous.
- b. Another picture of him(*self) (comes out) in the paper _{LS} and Susan divorces John.
- c. Another picture of him(*self) (appears) in the paper _{LS} and John will get arrested.
- d. Another picture of him(self) (appears) in the paper _{LS} and John leaves.
- e. Another picture of him(self) (comes out) in the paper _{LS} and Susan thinks John will definitely be offended.
- f. Another unflattering picture of him(self) (appears) in the paper _{LS} and early retirement will begin to appeal to John.

ment will begin to appeal to John.

We are not entirely clear about the conditions that distinguish these examples, but the reflexive seems to be available only roughly when there is a logophoric connection—when the antecedent's attitude or volition is expressed in the second conjunct. Whatever the conditions, they precisely parallel those in paraphrasing *if*-constructions.

- (19) a. If another picture of him(*self) appears in the paper, Susan will think John is famous.
- b. If another picture of him(*self) comes out in the paper, Susan will divorce John.
- c. If another picture of him(*self) appears in the paper, John will get arrested.
- d. If another picture of him(self) appears in the paper, John will leave.
- e. If another picture of him(self) comes out in the paper, Susan thinks John will definitely be offended.
- f. If another unflattering picture of him(self) appears in the paper, early retirement will begin to appeal to John.

And such binding is not permitted in *and*_C:

---, --- is not permitted in *and*_C constructions symmetrically parallel to (19a-f).

- (20) a. Another picture of him(*self) has appeared in the paper and_C John has left (—so let's have a party).
- b. Another picture of him(*self) has come out in the paper and_C (in addition) Susan has decided John will definitely be offended.
- c. Another unflattering picture of him(*self) came out in the paper yesterday, and_C (what's more) early retirement has begun to appeal to John.

CJ: such binding/logophoricity takes place at conceptual structure.

We see similar facts with variable binding. there, c-command is usually thought to be necessary:

again.

- (21) a. Every senator_i at the party thought that he_i would have no trouble getting elected.
- b. *Every senator_i was at the party and he_i was worrying about getting elected. (no c-command)

Yet, there are known difficult cases:

- (22) a. Paul Masson will sell no wine before its time.
- b. Who did Susan think that she would dislike t before she met him?

(worried about WCO? Stowell (also repeated in Lasnik and Stowell): no WCO in adjuncts. NOT clear why)

But if binding happens at Conceptual Structure, there are no worries from (22) or the cases below.

And crucially the pattern is exactly the same as with if-then conditionals in the (c)-sentences, and different from *andC* in the (d)-sentences):

-
- (23) a. You give him_i enough opportunity and every senator_i, no matter how honest, will succumb to corruption. (*LSand*)
b. ((You) put) enough pressure on him_i to vote against health care reform and every senator_i, no matter how committed, will side with business interests in the end. (*OM*)
c. If you give him_i enough opportunity, every senator_i, no matter how honest, will succumb to corruption.
d. *We gave him_i enough opportunity and every senator_i, no matter how honest, succumbed to corruption.
- (24) a. ((You) come up with) a few more nice stories about him_i and every senator_i will change his vote in your favor.
b. If you come up with a few more nice stories about him_i, every senator_i will change his vote in your favor.
c. *We came up with a few more nice stories about him_i and sure enough, every senator_i changed his vote in our favor.
- (25) a. You give anyone_i too much money and he_i will go crazy.
b. If you give anyone_i too much money, he_i will go crazy.
c. *You gave anyone_i too much money and he_i went crazy.

Extraction: evidence that there is syntactic coordination

CSC:

- (27) a. This is the senator that I voted for and_C Terry met in Washington. (*ATB extraction*)
b. *This is the senator that I voted for and_C Terry met Bill Clinton in Washington. (*left conjunct extraction*)
c. *This is the senator that I voted for Bill Clinton and_C Terry met in Washington. (*right conjunct extraction*)

However, LSand does not like ATB, and prefers CSC violations:

- (28) a. You just point out the thief _{LS}and we arrest her on the spot.
 b. ??This is the thief that you just point out t and we arrest t on the spot.

Below, (a,b) are LSand, (c,d) are andC

- (29) a. ?This is the loot that you just identify t and we arrest the thief on the spot. (left conjunct extraction)
 b. ?This is the thief that you just identify the loot and we arrest t on the spot. (right conjunct extraction)
 c. *This is the loot that you have identified t and we have arrested the thief on the spot.
 d. *This is the thief that you have identified the loot and we have arrested t on the spot.

CJ: maybe LSand is syntactically coordination, then the CSC is a semantic constraint.
 I.e. CSC requires ATB from a semantic coordination.

Note that extraction from the left conjunct should have been an island violation, if this was syntactically subordinated (ie an adjunct), as an if-clause is:

- (31) a. ??This is the loot that if you identify t(,) we will arrest the thief on the spot.
 b. ??This is the senator that when the Mafia pressured t(,) the senate voted for health care reform.

But there are differences with extraction form if-then conditionals:

- (34) a. ?Who did John say Mary goes out with and her father disinherits her?
 b. *Who did John say her father disinherits her if Mary goes out with?
 *Who did John say(,) if Mary goes out with(,) her father disinherits her?
 c. ??Who_i did John say Mary goes out with him_i and her father disinherits her?
 (≤ (34a))
 d. ?Who_i did John say Mary's father disinherits her if she goes out with him_i?
 ?Who_i did John say, if Mary goes out with him_i, her father disinherits her?
 (≥ (34b))

Judgements are sharper with extraction of adjuncts:

- (35) a. You can just wave your hands like *this* and we arrest the whole gang.
 b. ?This is the way that you can just wave your hands *t* and we arrest the whole gang.
 c. If you just wave your hands like *this*, we arrest the whole gang.
 d. *This is the way that if you just wave your hands *t*, we arrest the whole gang.
 *This is the way that we arrest the whole gang if you just wave your hands *t*.
- (36) a. You blow your nose during this aria and the next day Big Louie goes ballistic.
 b. This is the famous aria during which you blow your nose and the next day Big Louie goes ballistic.
 c. If you blow your nose during this aria, the next day Big Louie goes ballistic.
 d. *This is the famous aria during which if you blow your nose, the next day Big Louie goes ballistic.

CJ, p. 14:

the subordinate clauses in (31), (33b), (34b), (35d), and (36d) are genuine syntactic adjuncts, and extraction from a syntactic adjunct is constrained by some form of the CED—a *syntactic* constraint. By contrast, although the initial clauses in (29a), (30a), (33a), (34a), (35b), and (36b) are semantically subordinate, they are syntactically coordinate; hence, the CED does not block extraction from them. At the same time, because they are semantically subordinate, the ATB requirement of the (semantic) CSC does not apply. Hence, it is possible to extract from a single conjunct of a syntactically coordinate construction, just in case its interpretation is asymmetric. This constitutes a clear demonstration of the autonomy of the CED as a syntactic constraint, one that is not reducible to any notion of semantic subordination.

CJ:

(37) *Syntactic structure* *Conceptual structure*

- | | | |
|------|---|--|
| (37) | <i>Syntactic structure</i> | <i>Conceptual structure</i> |
| a. | S_1 and _C S_2
CED permits extraction
from either clause | P_1 AND P_2
CSC requires ATB extraction
from both propositions |
| b. | S_1 _{LS} and S_2
CED permits extraction
from either clause | IF P_1 THEN P_2
CSC does not apply |
| c. | If S_1 , S_2
CED permits extraction
from S_2 but not S_1 | IF P_1 THEN P_2
CSC does not apply |

Extractions from asymmetric *and* have already been observed:

(38) How many counterexamples can the Coordinate Structure Constraint sustain *t* and still be assumed? (Lakoff 1986)

x. How much can he drink and still stay sober

y. What did he go to the store and buy?

- (39) a. They sat around all day in the kitchen and played with the cat.
b. This is the cat that they sat around all day in the kitchen and played with *t*.
c. *This is the cat with which they sat around all day in the kitchen and played *t*.
d. This is the cat that they sat around all day with *t* in the kitchen and played with *t*.

If interested in this topic, read Postal's book *Three investigations for extraction*

Inversion

Subject-AUX inversion and extraction can appear in left or right conjunct:

-
- (40) a. Who does Big Louie visit and the whole gang goes nuts?
b. What does he mention and she kicks him out of her office?
- (41) a. Big Louie sees this mess and who's going to be in trouble?
b. You so much as mention the Minimalist Program and how loud does she scream?

If the left conjunct were syntactically subordinate, we would not expect inversion, as we don't have it with if-clauses:

-
- (42) a. *Who does if Big Louie visit, the whole gang goes nuts?
*Who if does Big Louie visit, ...
*If who does Big Louie visit, ...
b. *What does if he mention, she kicks him out of her office?
*What if does he mention, ...
*If what does he mention, ...

The left conjunct of *LSand* is a matrix, so supports inversion. Inversions stays within first conjunct:

- (44) a. [who does Big Louie visit] and [the whole gang goes nuts]
b. *who [[does Big Louie visit] and [the whole gang goes nuts]]
c. *who does [[Big Louie visit] and [the whole gang goes nuts]]

Moreover *andC* does not permit asymmetric inversion, but does allow it in both conjuncts:

- (43) a. *What has Bill seen and he has heard the bad news?
b. *Bill has seen the broken window and what has he heard?
c. What has Bill seen and what has he heard?
d. Who was at the party and what were they wearing?

(37) can explain.

But difficulties remain:

- (45) a. **What you just walk into his office and does he start blabbing about t?
b. ?*What do you just walk into his office and he starts blabbing about t?
c. ?Which topic do you just walk into his office and he starts blabbing about t?

However, an important point here: “The upshot is that the wh-phrases in (40) are syntactically inside the first conjunct but semantically take scope over the entire sentence-yet another example of the syntax-semantics mismatch in these constructions. “

Not all asymmetric Coordination = Semantic Subordination

temporal asymmetry:

- (48) a. John came home and his kids kissed him.
b. Mary bought the newspaper after work and she read it on the train.

... (even suggesting the phenomena).

- (49) a. John's kids kissed him and he came home. (\neq (48a))
b. Mary read the newspaper on the train and she bought it after work. (\neq (48b))

But binding facts not as with LSand:

... (even suggesting the phenomena).

- (50) a. (Attempted quantifier binding from left conjunct into right conjunct)
*Everyone_i came home and his_i kids kissed him_i. (cf. Everyone_i went to work after his_i kids kissed him_i.)
b. (Attempted anaphora binding from left conjunct into right conjunct)
*John won the contest and a picture of himself appeared in the paper. (< ??John won the contest because a picture of himself appeared in the paper.)
c. (Attempted quantifier binding from right conjunct into left conjunct)
*He_i came home and everyone_i's kids kissed him_i. (cf. When he_i comes home, everyone_i's kids kiss him_i.)
d. (Attempted anaphora binding from right conjunct into left conjunct)
*A picture of himself_i appeared in the paper and John_i was very proud. (cf. When a picture of himself appeared in the paper, John was very proud.)

CJ's Conclusion:

LSand is coordinating in syntax (where CED applies) but subordinating in semantics (where ATB/CS apply).

Other attempts to capture LSand phenomena: Klinedinst and Rothschild 2012, Keshet 2012.

A modest proposal for the meaning of imperatives

KAI VON FINTEL AND SABINE IATRIDOU

What is the meaning of an imperative verb like (1)?

(1) Read this book!

Most common answer: a command.

Hence also the name:

- Romance *imperative* from Latin *imperare* 'to command'
- Greek *prostaktiki* from *prostazo* 'to command'
- Turkish *emir kipi* 'command' (noun)
- Slovenian *velelnik* from *veleti* 'to command'
- Hebrew *civuy* 'to command'
- Albanian *urdherore* from *me urdheru* 'to command'
- Arabic *fi'l ?amr* 'to command'

Often there is assumed to be a modal somewhere in the extended projection of the verb. Its semantics is that of a universal performative modal. (there are also accompanying presuppositions, eg the speaker believes that hearer should be able to do the action)

It is also assumed that the verb moves to that projection:

- (2) *i Maria to dhiavazi*
the Mary it read-prog
'Mary is reading it'
- (3) *dhiavase to!*
read-imp it!
'Read it!'
- (4) **to dhiavase! (* as an imperative)*
It read-imp

Let's call this the "strong" approach to the meaning of imperatives.

But there are (some well-known, some less well-known) difficulties for the strong approach.

13.2 Weak imperatives: acquiescence and indifference

There are non-command uses of the imperative.

'Acquiescence' (also called permission) and 'indifference' uses:

- (6) A: It's getting warm. Can I open the window?
B: Sure. Go ahead. Open it!
- (7) Go left! Go right! I don't care.

How can a strong semantics for the imperative deal with (6)?

A common answer: contextual weakening. Acquiescence readings come about when the hearer has expressed a desire for the action.

Problem: Such conditions do not permit contextual weakening of overt universal modals:

- (8) A: May I open the door?
B: Sure, go ahead, open it!
B': Sure, go ahead, #you must open it.
B'': Yes, in fact: you must open it!
C: Sure, go ahead, you *should* open it.

The same holds for other "covert" modals.

For example, the German infinitive:

- | | |
|-------------------------|-------------------------|
| B: Na klar, geh raus! | acquiescence reading |
| PRT clear go.IMP out | |
| B': Na klar, rausgehen! | no acquiescence reading |
| PRT clear out-go.INF | |

A similar problem arises as with the acquiescence use: overt universal modals can't do this:

- (16) Go left! Go right! Either way is fine with me.
(17) #You must go left. You must go right. Either way is fine with me.
(18) #I want you to go left. I want you to go right. I don't care.

Note also the difference in possible continuations:

- (19) Sure, open the window! I don't care.
(20) #Sure, you should open the window. I don't care.

Alternative proposals for the weak uses of imperatives:

-The imperative is ambiguous between a strong and a weak reading (Grosz 2009, Kaufmann in some writings; discussed in von Fintel and Iatridou)

-The imperative has at base an existential semantics, which get strengthened under certain conditions (Oikonomou 2016; not discussed in the paper because despite the dates, the 2017 paper was written before 2016)

- A "minimal" approach: Hausser, Portner,

The minimal approach: the semantics of an imperative verb is that of a property. There is a mapping between sentence type and discourse component.

Declaratives ---> Common Ground

Interrogatives ---> Question stack

Imperatives ---> To Do List (alternative names, eg 'Plan set')

TDL: a list of obligations

Portner 2007: How to get the acquiescence reading?

Acquiescence reading arises in particular circumstances: TDL contains p and then the imperative adds q which either is $\sim p$, or entails $\sim p$. Conflicting requirements lead to choice.

However, a choice doesn't always come about:

- (21) It's April 15, tax day. I have to finish my tax return.
- (22) It's April 15. I have to send in my letter of recommendation.

If you can't do both (21) and (22), you will not conclude that you have a choice.

This was also noted by Portner:

- (23) [Party host to guest at 5pm]: Bring beer to the party!
- (24) [Party host to same guest at 6pm]: Bring wine to the party!

If you are the hearer of (23, 24), you will not decide that you have a choice. Possibly you will abide by the most recent request.

Portner: permission imperatives are marked in a way that they lead to choice in a situation of conflicting requirements.

But this undermines the minimal approach.

Alternative hinted at in vFI: different levels of speaker endorsement + the default level of endorsement is the strongest one. (section 13.4.2.1)

Conclusion so far: Imperatives are not obviously universally quantified (or existentially quantified)

And maybe they are not quantified at all?
Let's rejoin our discussion about *and*.

Imperatives and Declaratives (IaD):

- (28) a. Study hard and you will pass the class.
b. Ignore your homework and you will fail this class.
c. Open the paper and you will find five mistakes on every page.

- endorsing IaDs (“e-IaDs”)
- non-endorsing IaDs (“n-IaDs”)

Both types are very common crosslinguistically though there are languages that don't have them. Eg: Turkish, Bangla, Hindi, Persian.

e-IaDs

Two possible analyses

Type I: e-IaDs contain an imperative verb, which is a command, and therefore the speaker endorses the action. Plus Modal subordination.

Modal subordination: a modal raises certain words to salience. The second clause quantifies over that set of worlds.

(37) A wolf might walk in. It would eat us both.

= A wolf might come in. If a wolf came in, it would eat us both

(38) a. You $\left\{ \begin{array}{l} \text{must} \\ \text{have to} \\ \text{should} \end{array} \right\}$ invest in this company! You will become rich.

b. I want you to invest in this company! You will become rich!

Type II: e-IaDs are an instance of *LSand*. Endorsement follows pragmatically.

Schematically:

(35) Type I analysis of e-IaDs
Study hard and you will
Study hard!_{command} and [*if you study hard*]_{silent} you will
pass.
pass]_{modal subordination}

(36) Type II analysis of e-IaDs (works for n-IaDs as well)
Study hard and you will pass.
If you study hard, you will pass.

Note: there is conditionality in both analyses but the difference is in the location of conditionality! In (35) in modal subordination. In (36) in *LSand*.

But do e-IaDs involve a modal and modal subordination?

There are at least 2 ways in which IaDs differ from modal subordination:

A. Modal subordination is not always possible with conjunction. (e-IaDs contain conjunction)

With epistemics it looks like it is:

- (41) [Let me tell you why we shouldn't open the door]
A wolf might walk in and it would eat us both.

but not so with deontics or bouletics:

- (42) ?? You $\left\{ \begin{array}{l} \text{must} \\ \text{have to} \\ \text{should} \end{array} \right\}$ invest in this company and you will become rich.

- (43) ?? I want you to invest in this company and you will become rich.

But if (42) is bad, how can an e-IaD contain a modal and modal subordination?

28a. Study hard and you will pass the class

Why are (42-43) bad?

Recall that conjunction cannot always be inserted between two sentences (Bar Lev & Palacas; Txurruka 2003):

- (44) a. Max fell; he broke his arm.
b. = Max fell and he broke his arm.
- (45) a. Max fell; he slipped on a banana peel.
b. ≠ Max fell, and he slipped on a banana peel.

Txurruka: *and* does not allow a reverse explanation or justification:

- (46) a. You should do the Atkins diet. It comes highly recommended.
b. ≠ You should do the Atkins diet and it comes highly recommended.
- (47) a. You should do the Atkins diet. You will lose a lot of weight.
b. ≠ You should do the Atkins diet and you will lose a lot of weight.

The above explains why (42-43) are bad. But then why is (49) good?

- (49) Do the Atkins diet and you will lose a lot of weight.

In short, it's not clear how a modal + modal subordination account of the e-laD can account for this.

B. Polarity switch is possible with Modal subordination, but not with e-laDs

- (50) a. Don't park there! You will be towed.
b. = Don't park there! If you park there, you will be towed.
- (51) a. Don't park there and you will be towed.
b. \neq Don't park there! If you park there, you will be towed.
c. = Don't park there! If you don't park there, you will be towed.

Conclusion: e-laDs do not involve modal subordination

n-laDs

- (53) a. Open the paper and you will find five mistakes on every page.
b. Ignore your homework and you will fail this class.

n-laDs are a case of *LSand*.

- (67) a. You give him enough opportunity and every senator, no matter how honest, will succumb to corruption. (C&J's (23a))
b. *We gave him enough opportunity and every senator, no matter how honest, succumbed to corruption. (C&J's (23d))
- (68) a. Give him enough opportunity and every senator, no matter how honest, will succumb to corruption.
b. Ignore him and every senator, no matter how senior, will feel insulted.

Moreover, Languages that don't have laDs also do not have *LSand*:

Turkish:

- (65) **kadın-lar-a gülümse-me -si yeter ve hemen*
 woman-pl-dat smile -‘ing’-3.sg.poss sufficient and immediately
kendisin -e tut -ul -ur- lar
 he (logophoric pronoun, 3.sg) -dat capture -(impers.) pass -aor -3.pl.
 int.: ‘It’s enough for him to smile at women and they immediately fall for him’
- (66) ??/**Bir hata daha ve sen -i iş -in -den at*
 one mistake more and you (sg.) -acc work -2.sg.poss -abl. throw
-ar -Im
 -aor. -1.sg
 int.: ‘one more mistake and I’ll fire you from your job’

Important conclusion:

LSand cannot contain a modal in the first conjunct:

- (42) ?? You $\left\{ \begin{array}{l} \text{must} \\ \text{have to} \\ \text{should} \end{array} \right\}$ invest in this company and you will become rich.

- (47) a. You should do the Atkins diet. You will lose a lot of weight.
 b. \neq You should do the Atkins diet and you will lose a lot of weight.

- (82) You should forget to call your mother and you (will) apologize.

\neq If you forget to call your mother, you should apologize

Unless the modal is incorporated in the restrictor of the conditional:

- (83) John has to take out the garbage and he complains endlessly.

= If John has to take out the garbage, he complains endlessly

So *laDs*, which contain *LSand* also cannot contain a modal in the first conjunct. Hence, the imperative is not modalized.

A crosslinguistic observation:

For *laDs* you need an imperative and *LSand*. If a language doesn't have *LSand*, it can't have *laDs*.

What about other bare verbal forms that can convey commands, like infinitives and subjunctives?

- (86) Any form that can be used in IaDs can also be used with an acquiescence reading.

(---or an indifference reading.)

p. 309:

In other words: no directive that can occur in the first conjunct of IaDs is unambiguously strong. We take this to be clear evidence that it is correct to link the appearance of imperatives in IaDs with their possibility of expressing acquiescence meanings. And we conclude that adopting a minimal, non-modal semantics for such forms is the best way to explain the link.

But the reverse of (86) is not true. It is not the case that any acquiescence (or indifference) verbal form can be used to form IaDs. An interesting case in this regard is Catalan, whose subjunctive can be used as acquiescence:

- (92) *No dormis!*
Not sleep-subj
'Don't sleep!'

However, the subjunctive can be used only in e-IaDs, not n-IaDs:

- (93) *No vagis a fisioteràpia i t'estalviaràs diners*
'Don't go to physiotherapy and you will save money'
(94) ??/**No vagis a fisioteràpia i et quedaràs coix*
'Don't go to physiotherapy and you will stay crippled'

And in (95), the speaker must want Peter to win:

- (95) *No treguis la reina de cors i guanyarà en Pere*
'Don't throw the queen of hearts and Pere will win'

No idea how this works.

Open Ends

-intrinsic consequence:

- (100) a. Like her and her friends will love you.
b. *Like her and I'll introduce her to you.
- (101) a. Own a piece of property and you get taxed mercilessly.
b. *Own this property and I'll buy it from you
- (102) a. Understand Chinese and you can get any of these jobs.
b. *Understand Chinese and I need you for a teacher.

-The one counterexample to *modal in first conjunct of LSand

- (103) a. You $\left\{ \begin{array}{c} \text{only} \\ \text{just} \end{array} \right\}$ have to look at him and he shies away in fear.
b. = If you $\left\{ \begin{array}{c} \text{only} \\ \text{just} \end{array} \right\}$ look at him, he shies away in fear.
c. \neq If you $\left\{ \begin{array}{c} \text{only} \\ \text{just} \end{array} \right\}$ have to look at him, he shies away in fear.

-Problems for a unified account of IaDs

-Catalan above

-Greek: V-subject order

- (104) e-IaD
Esi kane ta mathimata su ke ola tha pane kale
You do the lessons your and all will go well
- (105) n-IaD
a. ??*Esi fae ena apo afta ke tha pethanis mesa se 24 ores*
You Eat.IMP one from these and FUT die within 24 hours
b. *fae esi ena apo afta ke tha pethanis mesa se 24 ores*
Eat.IMP you one from these and FUT die within 24 hours

-English: do support and overt subject (Russell, Gibson&Scontras)

- w. Do tithe and you will go to heaven (e-IaD)
x. #Do steal form the church and you'll go to hell (n-IaD)
- y. Nobody steal and you'll all go to heaven (e-IaD)
z. #Nobody tithe and you'll all go to hell (n-IaD)

-Embeddability of IaDs: only where imperatives are embeddable:

LSand is embeddable, but IaDs are not:

(107) He doesn't believe that you look at him and he shies under the table.

(108) a. *He doesn't believe that ignore your homework and you will fail.

b. *He doesn't believe that study and you will succeed.

Unless where imperatives can embed:

(109) a. John said call him.

b. John said ignore him and you will regret it.

c. John said talk to him and everything will be fine.

Selection of first conjunct:

(110) a. You can depend on my assistant

b. *You can depend on that he will be on time.

c. You can depend on my assistant and that he will be on time.

d. *You can depend on that my assistant will be on time and his intelligence.

But how does that work?

See Bruening 2019 in LI.

-Imperatives and negation: Some languages can't combine negation and Imperatives

(113) a. **mi dhiavase to*
NEG read.IMP it

b. *mi to dhiavasis!*
NEG it read.SUBJ
'Don't read it!'

-Conditional Imperatives:

(114) If he calls, tell him I'm not here!

Under the minimal approach to imperatives, where is the modal (of the antecedent needs to restrict a quantifier over worlds?)

-The weak readings of imperatives

(levels of endorsement? conflicting instructions? Contextual weakening)

Challenges for this approach:

Despoina Oikonomou's thesis and a paper resulting from there: the interaction with *only* distinguishes strong from weak imperatives

Naomi Francis's SALT paper: the interaction with *even* distinguishes strong from weak imperatives