Pragmaticalization and Multidimensional Semantics

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Pragmaticalization

- Pragmaticalization, or subjectification, is a special subtype of grammaticalization (Diewald 2011).

Subjectification (Traugott 1995: 32)

[T]he development of a grammatically identifiable expression of speaker belief or speaker attitude to what is said.

Pragmaticalization (vgl. Auer & Günthner 2005).

Diachronic process by which truth-conditional expressions develop into expressive, use-conditional items.

- Like for grammaticalization, there are observable typical paths of pragmaticalization

Pragmaticalization path (Traugott 2003: 633)

(1) propositional (> textual) > expressive meaning

Examples of pragmaticalization

descriptive nouns > expressives

(2) a. *boor* ›countryman, farmer‹ > ›crude person‹ (Engl.)

b. *wīp* ›woman‹ > *weib* ›woman.PEJ‹ (Germ.)

adverbs/adjectives > modal particles (Germ.)

(3) a. *eben* ›flat‹ > ›just‹

b. *schon* ›already‹ > ›somewhat‹

X > discourse markers

(4) a. adverbs > DM: *jedenfalls* ›anyway‹

b. conjunction > DM: *und* ›and, so‹

c. subjunction > DM: *weil, obwohl* ›although‹

d. matrix clauses > DM: *Ich mein'* ›I mean‹

- The expressions at the end of a pragmaticalization path have »discourse functional« meaning.
- They do not add anything to a sentence's truth conditions.
- They nevertheless have conventional, semantic content.
- This can be called *use-conditional* content (Recanati 2004: 447)
- In the following, I will sketch how such use-conditional meaning can be captured in a formal semantic framework beside ordinary truth-conditional meaning.
- As we will see, the notion of pragmaticalization can receive a natural implementation in such a framework.

Hybrid semantics

For certain expressions of natural language, a correct Semantic Theory would state rules of use rather than something like a concept expressed. (Kaplan 1999: 6)

- Use this perspective to *supplement* truth-conditional semantics, not to replace it.

Truth *and* use conditions

(5) a. »The damn dog howled« is true if the dog howled.
b. »The damn dog howled« is felicitously used if the speaker feels negatively about the dog.

- Expressions with both meaning dimensions are *hybrid* expressions.
- Hybrid semantics: $\langle 1, \checkmark \rangle$ $\langle 1, \lightning \rangle$ $\langle 0, \checkmark \rangle$ $\langle 0, \lightning \rangle$

Denotations for use-conditional meaning

Truth-conditions

(T) $_1$ »Snow is white«
$_2$ is true,
$_3$ iff snow is white.

Use-conditions

(U) $_1$ »Oops!«
$_2$ is felicitously used,
$_3$ iff the speaker observed a minor mishap.

- In both conditions, an expression is connected with a condition that captures its meaning.
- What differs is the kind of connection (»mode of expression«).
- These conditions can be the case or not. → Standard tools available!

Tc-content: set of worlds

(6) $\|\text{Snow is white}\|^t = \{w\text{: snow is white in } w\}$ $\|\text{Snow is white}\|^t = 1$, if $w_@ \in \{w\text{: snow is white in } w\}$

Uc-content: set of contexts

(7) $\|\text{Oops}\|^u = \{c\text{: } c_S \text{ observed a minor mishap in } c_w\}$ $\|\text{Oops}\|^u = \checkmark$, if $c_@ \in \{c\text{: } c_S \text{ observed a minor mishap in } c_w\}$

- The basic ideas of hybrid semantics are rather independent of the actual formalization and can be implemented in a variety of frameworks.
- A very influential approach is the type-driven system $\mathcal{L}_{\text{CI}}$ developed by Potts (2005), which however has been shown to be too restrictive.
- Most importantly, it does not allow for *mixed* use-conditional items, expression that carry both tc- and uc-meaning.
- Therefore, it has been modified and extended (Gutzmann 2011; McCready 2010).
- However, it still has problems regarding quantification constructions and constructions invoking abstraction.
- Therefore, I developed a $\mathcal{L}_{\text{CI}}$-extensions in Gutzmann 2012, called $\mathcal{L}_{\text{TU}}$.

- Without going into the technical details, the basic idea of $\mathcal{L}_{\mathrm{TU}}$ is that each natural language expression corresponds to a 3-dimensional logical expression in a semantic parsetree.

3-dimensional expressions

$A \rightsquigarrow \alpha_1 \blacklozenge \alpha_2 \bullet \alpha_3$

1. t-dimension: tc-content
2. s-dimension: content relevant for the calculation of uc-content
3. u-dimension: store for saturated uc-content

- Each dimension is represented by an expression of the logic $\mathcal{L}_{\mathrm{TU}}$.
- The distinction between tc- and uc-content is built on a semantic type distinction.

Types for $\mathcal{L}_{\mathrm{TU}}$

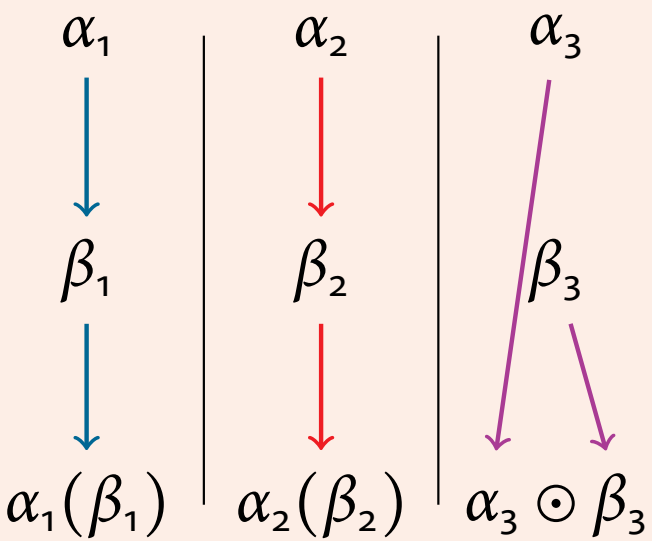
(8)
a. e, t are basic truth-conditional types for $\mathcal{L}_{\mathrm{TU}}$.
b. u is a basic use-conditional type for $\mathcal{L}_{\mathrm{TU}}$.
c. If τ is a truth-conditional type for $\mathcal{L}_{\mathrm{TU}}$, then $\langle s, \tau \rangle$ is a truth-conditional type for $\mathcal{L}_{\mathrm{TU}}$.
d. If σ and τ are truth-conditional types for $\mathcal{L}_{\mathrm{TU}}$, then $\langle \sigma, \tau \rangle$ is a truth-conditional type for $\mathcal{L}_{\mathrm{TU}}$.
e. If σ is a type for $\mathcal{L}_{\mathrm{TU}}$ and τ is a use-conditional type for $\mathcal{L}_{\mathrm{TU}}$, then $\langle \sigma, \tau \rangle$ is a use-conditional type for $\mathcal{L}_{\mathrm{TU}}$.
f. The set of all types for $\mathcal{L}_{\mathrm{TU}}$ is the union of all truth-conditional and use-conditional types.

- Expressions of type u denote set of contexts (»use-conditional propositions«).

- These 3-dimensional expressions are inserted into the compositional system, where they are combined according to two composition rules.

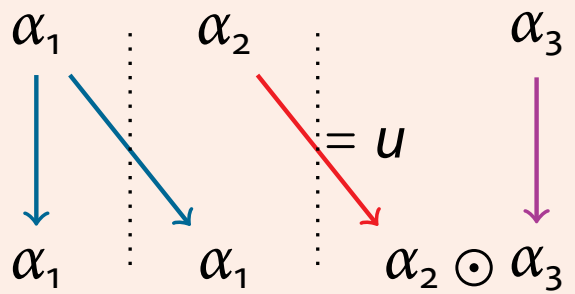
multidimensional application

(9) $$\frac{\alpha_1 \blacklozenge \alpha_2 \blacklozenge \alpha_3 \qquad \beta_1 \blacklozenge \beta_2 \blacklozenge \beta_3}{\alpha_1(\beta_1) \blacklozenge \alpha_2(\beta_2) \bullet \alpha_3 \odot \beta_3}$$



uc-elimination

(10) $$\frac{\alpha_1 \blacklozenge \alpha_2 : u \bullet \alpha_3}{\alpha_1 \blacklozenge \alpha_1 \bullet \alpha_3 \odot \alpha_2}$$



- Even if every expression needs to be 3-dimensional for the compositional system to work, the lexical entries do not need to be.
- It is sufficient to know one or two dimensions, the rest can be derived on a regular basis.
- For this, I make use of so-called *lexical extension rules*, (LERs) that expand the 1- or 2-dimensional lexical entries into 3-dimensional expressions that can be used by the compositional system.

Lexical extension of functional expletive UCIs

(11) $\textbf{bastard} : \langle e, u \rangle \Rightarrow I_e \blacklozenge \textbf{bastard} : \langle e, u \rangle \bullet U$

- This does not only help to keep the lexicon simple, but also allows for the implementation of combinatoric restrictions.
- Since the LERs are assumed to be part of the lexicon(-syntax interface), they may very cross-linguistically (which may be desirable).

Diachronic type shifts

Thesis

Pragmaticalization can be understood as a (diachronic) type-shift from truth-conditional to use-conditional expressions.

Pejoration as a semantic typeshift

(12) **boor** : $\langle e, t \rangle >$ **boor**$_{ex}$: $\langle e, u \rangle$

Most simple pragmaticalization pattern

(13) $\alpha : \langle \sigma, t \rangle > \alpha_{ex} : \langle \sigma, u \rangle$

- Diachronically, such type shifts do not happen suddenly as this might suggest.
- Instead, they evolve during complex processes and in contexts that support such changes (Traugott 2003).

- Typically, pejorations like (12) start as conversational implicatures.
- Given a sufficiently high inference frequency, these may get conventionalized and become part of an expressions lexical content
  → mixed UCIs (*pace* Potts 2005)
- At an (optional) final stage, the original meaning may get lost.
- Only the negative expressive component remains from the originally descriptive predicate. → expletive UCIs

Two-step pragmaticalization

(14) $A > A, B > B$

- This complies with the so-called »overlap model« of grammaticalization (Heine 2003: 590).

Two-step pramaticalization of *boor*

(15) $\textbf{boor} : \langle e, t \rangle > \textbf{boor} : \langle e, t \rangle \blacklozenge \textbf{boor}_{ex} : \langle e, u \rangle > \textbf{boor}_{ex} : \langle e, u \rangle$

Case study: Discourse markers in German

- One source for the pragmaticalization of discourse markers (DMs) in German are subjections.

Pragmaticalization of *obwohl* (vgl. Auer & Günthner 2005; Günthner 1999: 426)

(16) $obwohl_{sub}$ ›although‹ > $obwol_{DM}$ [correction]

- This leads to various syntactic and semantic differences.

Different syntax: verb position

(17) Peter ist im Kino, obwohl er keine Zeit hat.
P. is at.the cinema although he no time has
»Peter is at the cinema, although he has not time.« (VL)

(18) Peter ist im Kino, obwohl – er hat keine Zeit.
P. is at.the cinema although he has no time
»Peter is at the cinema, (correction: but wait,) he as no time.« (V2)

Different syntax: linearization

(19) a. Peter ist im Kino, obwohl$_{sub}$ er keine Zeit hat.
b. Obwohl$_{sub}$ er keine Zeit hat, ist Peter im Kino.

(20) a. Peter ist im Kino, obwohl$_{DM}$ – er hat keine Zeit
b. *Obwohl$_{DM}$ – er hat keine Zeit, Peter ist im Kino.

Different discourse function

(21) [$_p$ I want to go to the cinema on Saturday]
[$_q$ *obwohl*$_{sub}$ it is very expensive.]
$\rightsquigarrow$ assertion: $p \wedge q$; CI: contrast between p and q

(22) [$_p$ I want to go to the cinema on Saturday]
[$_q$ *obwohl*$_{DM}$ it is very expensive.]
$\rightsquigarrow$ assertion of p taken back; q asserted

Different scope regarding the illocution

(23) a. I want to go to the cinema on Saturday
[$_q$ *obwohl*$_{sub}$ it is very expensive.]
$\rightsquigarrow$ *obwohl-q* is part of assertion

b. Who wants to go to the cinema on Saturday
[$_q$ *obwohl*$_{sub}$ it is very expensive]?
$\rightsquigarrow$ *obwohl-q* is part of question

(24) a. [$_p$ I want to go to the cinema on Saturday]
[$_q$ *obwohl*$_{DM}$ it is very expensive.]
$\rightsquigarrow$ *p* asserted, then taken back, then *q* asserted

b. [$_p$ I want to go to the cinema on Saturday]
[$_q$ *obwohl*$_{DM}$ is it very expensive]?
$\rightsquigarrow$ *p* asserted, then taken back, then *q* questioned

- The sub junction *obwohl* connects two propositions into a single complex proposition.
- Instead of connecting propositions, *obwohl* $_{\text{DM}}$ connects a speech act with a previous one (speech acts are also of type *u*).

Type shift for *obwohl*

(25) $\mathbf{obwohl}_{\text{sub}} : \langle \langle s,t \rangle , \langle \langle s,t \rangle , \langle s,t \rangle \rangle \rangle > \mathbf{obwohl}_{\text{DM}} : \langle u, \langle u,u \rangle \rangle$

- The different syntactic and semantic properties of $obwohl_{\text{sub}}$ and $obwohl_{\text{DM}}$ can be derived from this type shift.

Deriving the properties of *obwohl*$_{DM}$

V2

- After the (diachronic) type shift, *obwohl*$_{DM}$ needs two speech act argument.
- The first sentence, a root clause, could be rendered as a speech act without problems.
- The problem, however, is the subordinated clause.
- As shown by various studies (Gärtner 2002; Truckenbrodt 2006, and many others) there is a tight connection between V2 and speech act potential.
- Therefore, in order to provide a suitable type *u* argument, the formerly embedded clause must be rendered as a V2-clause as well.

Assertion of *q*

- Since *obwohl*$_{\text{DM}}$ needs two speech act arguments, it follows that the second conjunct must be also a speech act.
- Since *obwohl*$_{\text{DM}}$ only imposes use-conditions on the relation between the speech acts, the truth-conditions of the two conjuncts are independent from each other.
- However, the use-conditions of *obwohl*$_{\text{DM}}$ ensure that the two speech acts must stand in specific discourse relations (*q* corrects *p*).

Different illocutions

- For the same reason, the second part of a *obwohl*$_{\text{DM}}$ construction can also realize different speech acts.
- The two conjuncts are not connected into a single proposition so that different speech act operators may apply to both parts separately.

Linearization

- Since a corrective speech act has to follow the speech act it corrects, the impossibility of switching the order follows as well.

Some open questions

- What are the contexts that enable and facilitate such a diachronic type shift (for *obwohl* and in general)?
- Is there a relation between the systematic type shifts and the new, more idiosyncratic meaning of the resulting expression?
- Are there constraints on possible pragmaticalization shifts? What are (im)possible pragmaticalization paths?

Thank you, *obwohl*$_{DM}$ – thank you very much!

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