Pragmaticalization and Multidimensional Semantics

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**Pragmaticalization**

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

Subjectification (Traugott 1995: 32)

The development of a grammatically identifiable expression of speaker belief or speaker attitude to what is said.


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

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<td>(5) a. »The damn dog howled« is true if the dog howled.</td>
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<td>b. »The damn dog howled« is felicitously used if the speaker feels negatively about the dog.</td>
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- Expressions with both meaning dimensions are hybrid expressions.
- Hybrid semantics: $\langle 1, \checkmark \rangle \quad \langle 1, \checkmark \checkmark \rangle \quad \langle 0, \checkmark \rangle \quad \langle 0, \checkmark \checkmark \rangle$
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) \( \| \text{Oops} \|^{u} = \{ c : c_S \text{ observed a minor mishap in } c_w \} \) \( \| \text{Oops} \|^{u} = \checkmark, \) if \( c_@ \in \{ c : c_S \text{ observed a minor mishap in } c_w \} \)
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 $\mathcal{L}_{\text{Cl}}$ 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 $\mathcal{L}_{\text{Cl}}$-extensions in Gutzmann 2012, called $\mathcal{L}_{\text{TU}}$. 
Without going into the technical details, the basic idea of $\mathcal{L}_{TU}$ is that each natural language expression corresponds to a 3-dimensional logical expression in a semantic parsetree.

### 3-dimensional expressions

$$A \sim \alpha_1 \bullet \alpha_2 \bullet \alpha_3$$

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 $\mathcal{L}_{TU}$.

The distinction between tc- and uc-content is built on a semantic type distinction.

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

1. $e, t$ are basic truth-conditional types for $\mathcal{L}_{TU}$.
2. $u$ is a basic use-conditional type for $\mathcal{L}_{TU}$.
3. If $\tau$ is a truth-conditional type for $\mathcal{L}_{TU}$, then $\langle s, \tau \rangle$ is a truth-conditional type for $\mathcal{L}_{TU}$.
4. If $\sigma$ and $\tau$ are truth-conditional types for $\mathcal{L}_{TU}$, then $\langle \sigma, \tau \rangle$ is a truth-conditional type for $\mathcal{L}_{TU}$.
5. If $\sigma$ is a type for $\mathcal{L}_{TU}$ and $\tau$ is a use-conditional type for $\mathcal{L}_{TU}$, then $\langle \sigma, \tau \rangle$ is a use-conditional type for $\mathcal{L}_{TU}$.
6. The set of all types for $\mathcal{L}_{TU}$ 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.

\[
\begin{align*}
\text{multidimensional application} & : \\
\frac{\alpha_1 \circ \alpha_2 \circ \alpha_3 \quad \beta_1 \circ \beta_2 \circ \beta_3}{\alpha_1(\beta_1) \circ \alpha_2(\beta_2) \circ \alpha_3 \circ \beta_3}
\end{align*}
\]

\[
\begin{align*}
\text{uc-elimination} & : \\
\frac{\alpha_1 \circ \alpha_2 : u \circ \alpha_3}{\alpha_1 \circ \alpha_1 \circ \alpha_3 \circ \alpha_2}
\end{align*}
\]
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

\[
(11) \text{bastard} : \langle e, u \rangle \Rightarrow l_e \bullet \text{bastard} : \langle e, u \rangle \bullet U
\]

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

\[(12) \quad \text{boor} : \langle e, t \rangle > \text{boor}_{\text{ex}} : \langle e, u \rangle\]

Most simple pragmaticalization pattern

\[(13) \quad \alpha : \langle \sigma, t \rangle > \alpha_{\text{ex}} : \langle \sigma, u \rangle\]

- 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 expression's 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 pragmaticalization of *boor*

(15) \( \text{boor} : \langle e, t \rangle \succ \text{boor} : \langle e, t \rangle \uparrow \text{boor}_{ex} : \langle e, u \rangle \succ \text{boor}_{ex} : \langle e, u \rangle \)
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)  \( \text{obwohl}_{\text{sub}} \rightarrow \text{although} > \text{obwol}_{\text{DM}} \) [correction]

This leads to various syntactic and semantic differences.

Different syntax: verb position

(17) Peter ist im Kino, *obwohl* er keine Zeit *hat*.

\( P. \text{ is at the cinema although he no time has} \)

»Peter is at the cinema, although he has not time.«  (VL)

(18) Peter ist im Kino, *obwohl* – er *hat* keine Zeit.

\( P. \text{ is at the cinema although he has no time} \)

»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)  \[\[p \ I want to go to the cinema on Saturday\]
     \[q \ obwohl\sub it is very expensive.\]
     \[\sim\] assertion: \(p \land q\); CI: contrast between \(p\) and \(q\)

(22)  \[\[p \ I want to go to the cinema on Saturday\]
     \[q \ obwohl\DM it is very expensive.\]
     \[\sim\] assertion of \(p\) taken back; \(q\) asserted
Different scope regarding the illocution

(23)  

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

b. Who wants to go to the cinema on Saturday
   \([q \text{obwohl}_{sub} \text{ it is very expensive}]?\]
   \(\sim \text{obwohl-q is part of question}\)

(24)  

a. \(p \text{ I want to go to the cinema on Saturday}\)
   \(q \text{obwohl}_{DM} \text{ it is very expensive}.\]
   \(\sim p \text{ asserted, then taken back, then } q \text{ asserted}\)

b. \(p \text{ I want to go to the cinema on Saturday}\)
   \(q \text{obwohl}_{DM} \text{ is it very expensive}?\]
   \(\sim p \text{ asserted, then taken back, then } q \text{ questioned}\)
The sub junction *obwohl* connects two propositions into a single complex proposition.

Instead of connecting propositions, *obwohl* \(_{DM}\) connects a speech act with a previous one (speech acts are also of type \(u\)).

The different syntactic and semantic properties of *obwohl\(_{sub}\)* and *obwohl\(_{DM}\)* can be derived from this type shift.

Type shift for *obwohl*

\[(25) \quad \text{obwohl}_{sub} : \langle\langle s, t\rangle, \langle\langle s, t\rangle, \langle s, t\rangle\rangle \rangle > \text{obwohl}_{DM} : \langle u, \langle u, u\rangle\rangle\]
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 $obwohl_{DM}$ needs two speech act arguments, it follows that the second conjunct must be also a speech act.
- Since $obwohl_{DM}$ 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 $obwohl_{DM}$ 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 $obwohl_{DM}$ 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!


