ENTRENCHMENT & PLASTICITY IN LANGUAGE STRUCTURE AND USE

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Entrenchment: the establishment of a unit through repetition (Langacker 2008:16).

Entrenchment is a domain-general process.

May apply at various levels:
- a phoneme can be entrenched,
- a syllable,
- a word,
- a construction,
- a song or poem,
- an interactional pattern.
Entrenchment

- Langacker relates entrenchment to automatization.
- There are various aspects of a unit that can be automatized.

- The accessibility of the unit is directly related to its token frequency
  - Units with higher token frequency are easier to access, more likely to be accessed.
  - They are also less likely to be reformed on analogy with other patterns.
Entrenchment of links to meaning and context

- The entrenchment of a linguistic unit, such as a word or construction involves the establishment of a link between the form of the word or construction and its meaning and contexts of use.

- This link has to be automated for quick access.

- It can be established in adults in one or two repetitions, as in the learning of a new word or phrase.
Of course, the same form can be linked to more than one meaning and these links have gradient strength (or degrees of entrenchment).
bore
/vor/

v. drill a hole

n. one who bores

v. to tire with dullness
Entrenchment

- The form is entrenched.
- The links to meaning are entrenched.
- The meaning itself is entrenched.

All of these are entrenched or automated to varying degrees.
Meaning can also change by the process of automatization.

Inference:

In grammaticalization, frequently-made inferences can become part of the meaning. Thus the frequent inference of ‘intention’ from movement towards a goal, as in

\[I \text{ am going to see my sister}\]

leads to the establishment of ‘intention’ as one of the meanings of \textit{be going to}. 
As García and van Putte 1989 have proposed, the establishment of an inference as part of the meaning of a form or construction is a process by which the brain creates a short-cut.
Literal meaning -> form -> Inference in context
• Metaphorical meanings can become established in the same way, through repetition or automatization.

• A metaphorical meaning may be accessed at first through the literal meaning, but with increased use, it can be accessed directly.
Literal meaning

form

Metaphorical meaning
Literal meaning

Abstract metaphorical meaning

form
Sequential entrenchment

- The sequential relations within the unit are entrenched or automatized with respect to one another.

- An access or storage unit may have internal structure (Beckner and Bybee 2009).

- A construction or a prefab can be accessed as a unit even though its component parts are analyzable.

- Thus the construction

  \[ \text{drive someone crazy, mad, bonkers...} \]

  is a unit even though all the words in it are also recognizable.
Sequential entrenchment

- Depending upon their frequency of co-occurrence, the words within a construction may be more or less entrenched or predictable from one another.

- In the be going to phrase, be occurs in a range of forms (am, is, are) but going to is constant. The greater phonetic reduction occurs between these two words.
Meanings can be entrenched

- Just as form can be entrenched, so meaning can be entrenched as well.

- Certain frequently-expressed meanings are easy to access and may give rise to alternate forms of expression.

- Examples will follow.
Review of entrenchment

- Forms are entrenched.

- Relations between sequences of forms are entrenched.

- Meanings are entrenched.

- The link between form and meaning is entrenched.

- Entrenchment is a matter of degree, based largely on frequency of use.
• **Plasticity**: The ability to use entrenched units in novel ways.

• Plasticity depends upon entrenchment.

• Novelty arises when links between entrenched units or levels are broken.

• In this presentation, I will illustrate breaks between entrenched aspects of linguistic expressions that give us evidence for both entrenchment and plasticity.
Types of entrenchment/plasticity to be examined

1. Plasticity in the schematic slots of constructions
2. Plasticity in the form – meaning connection
3. Plasticity in form given an entrenched meaning.
1. Plasticity within constructions

- The most familiar type of plasticity is the type that linguists have studied the most—the use of novel words in constructions.

- Our literature is full of studies of what types of words or morphemes can be used in what type of morpho-syntactic contexts.

- I will illustrate this with a rather fixed idiom that nonetheless allows some expansion or novelty.
The Social Media

THE FOUNDING OF FACEBOOK
He doesn’t have three friends to rub together!

Mark Zuckerberg

Cameron Winklevoss
To rub together

- In COCA, COHA, Time and BNC
  - Total occurrences of *to rub together* 55
  - Number with literal meaning 04
  - Number with idiomatic meaning 51
(Not) have **two Xs** to rub together

Indicates impoverishment or the lack of it

Typical example (COCA 2007)

“I always had a place, and Susan and I have taken great care of each other, but I haven't had two nickels **to rub together** for a long, long, long, long, long time.”
## Items in schematic slot: coins

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickels</td>
<td>11</td>
</tr>
<tr>
<td>Coins</td>
<td>04</td>
</tr>
<tr>
<td>Farthings</td>
<td>04</td>
</tr>
<tr>
<td>Pennies</td>
<td>02</td>
</tr>
<tr>
<td>Ha’pennies</td>
<td>01</td>
</tr>
<tr>
<td>Tuppence</td>
<td>01</td>
</tr>
<tr>
<td>Shillings</td>
<td>01</td>
</tr>
<tr>
<td>Sous</td>
<td>01</td>
</tr>
<tr>
<td>Guineas</td>
<td>01</td>
</tr>
<tr>
<td>Cents</td>
<td>01</td>
</tr>
<tr>
<td>Dimes</td>
<td>01</td>
</tr>
<tr>
<td>Dimes</td>
<td>01</td>
</tr>
<tr>
<td>Quarters</td>
<td>01</td>
</tr>
<tr>
<td>Dollars</td>
<td>01</td>
</tr>
<tr>
<td>Food stamps</td>
<td>01</td>
</tr>
<tr>
<td>Total:</td>
<td>36</td>
</tr>
<tr>
<td>Pieces</td>
<td>01</td>
</tr>
<tr>
<td>Beans</td>
<td>03</td>
</tr>
<tr>
<td>Tesseracts</td>
<td>01</td>
</tr>
</tbody>
</table>
The schematic slot in the construction (the noun phrase *two Xs*) can be filled with a number of items, most of which are types of coins or monetary units.

However, the construction has also expanded to indicate intellectual impoverishment as well.
## Items in schematic slot: brain cells

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain cells</td>
<td>04</td>
</tr>
<tr>
<td>Brains</td>
<td>02</td>
</tr>
<tr>
<td>Brain neurons</td>
<td>01</td>
</tr>
<tr>
<td>Grey cells</td>
<td>01</td>
</tr>
<tr>
<td>Original ideas</td>
<td>01</td>
</tr>
<tr>
<td>Sentences</td>
<td>01</td>
</tr>
<tr>
<td>Words</td>
<td>01</td>
</tr>
</tbody>
</table>

Total: 12

More creative:
- Two hits per game 01
Loss of compositionality

Why ‘rub together’? Where did this expression come from?

The corpus data show two examples that match with speakers’ intuitions about the origin of the meaning:

(1) …never found two twigs to rub together to make a small fire… (COCA 2005)
(2) No longer do they search for sticks to rub together to start camp fires. (Time 1942)
I hypothesize these stages:

1. A hyperbolic expression about impoverishment:
   He’s so poor he doesn’t have two sticks to rub together to make a fire.

2. The first sign of loss of compositionality is the use of forms of money instead of ‘sticks’. This fits with the overall meaning of the constructions, but shows that people have lost the sense of why it was ‘sticks’ in the first place. *Rub together* still makes some sense because you can rub coins together.
A way to make a fire

Extreme poverty

(lacks) two + sticks + to + rub + together
3. The extension to intellectual impoverishment is metaphorical. We see evidence of further loss of compositionality in these uses:

(3) convinced as they are that not a single person who'd work as a tech at their company actually has two brains **to rub together**. (2005 COCA)

(4) that way he has of acting as though he doesn't think you have two brains **to rub together** if you disagree with him. (COHA 1966)

(5) we're talking Terry, Terry who hasn't got a brain cell **to rub together** (BNC)
In this case, both the entrenchment and plasticity lead the expression farther and farther away from its compositional meaning.

In terms of entrenchment we see that the tendency to take shortcuts to the intended meaning leads the expression directly to a meaning of impoverishment.

This new meaning leads to extensions to use with forms of currency.

Then to further extensions in which brain/brain cell are the relevant nouns and the idea of two things to rub together is also lost.
This is the usual form of plasticity studied by linguists.

While we usually concentrate on the schematic slot in the construction, it is important to note that plasticity in the link to meaning is also important for the evolution of the construction.

In the following examples, I present other cases of plasticity in the link to meaning.
2. Prefabs

- Prefabs are conventionalized word sequences which may or may not have transparent meanings.
- They include the customary way of saying things, as:
  - *Dark night* vs. *black night, obscure night*
- Not fully compositional sequences: *all of a sudden*
- Idioms that may contain metaphors, metonymy and hyperbole: *turn over a new leaf, give me a hand, raining cats and dogs*
Prefabs as titles

In certain types of journalistic genres, there is a strong tendency to use prefabs as titles of articles or captions of illustrations.

- Examples are newspapers, especially sports pages and certain types of magazines.

Out of 20 articles in United Airlines spring issue of *Hemispheres*, 16 used prefabs as titles.
Horsing around is an article about an exhibit on horses at Chicago’s Field Museum.
Prefabs in titles

- The remarkable fact is that it is not usually the prefab meaning that is intended, but some other meaning.

- Apparently a ‘wittiness’ effect (Brône and Coulson 2010) is achieved by this double grounding of the meaning of the prefab vs. the meaning intended for the article.
Brône and Coulson 2010 studied the use of metaphors in newspaper titles, such as

(5) Boeing shares are going sky-high.

They show in an experiment that subjects take longer to process a double-grounded sentence such as (5) than a single-grounded one such as (6):

(6) Intel shares are going sky-high.

In a second experiment they found that subjects rated stimuli such as (5) as wittier than stimuli such as (6).
The United Airlines magazine I studied used metaphor in only two article titles.
New Boeing 737 Reaches for the Sky
• This metaphor is comparable to the ones studied by Brône and Coulson: the metaphorical meaning is the one most likely to be accessed first (as it is the more common meaning) and if the reader accesses the more concrete meaning—that the 737 really does reach for the sky—a wittiness effect is obtained.

• However, no other examples I found were exactly like this.
A NEW LEAF

THE BAEL DISCOVERED YOUR VEGETABLES A REAL FRESH

BY LIPA ROUGH

The plant that was not real, on the_...
A new leaf accesses the metaphor *Turn over a new leaf*.

The metaphorical meaning is accessed because this is the most frequent meaning associated with *new leaf*.

In the Corpus of Historical American English there were 177 tokens of *a new leaf* and 161 involved a person *turning over a new leaf*.

Six tokens had the meaning ‘turn a new page’ and the other 10 were actual leaves.
The article is about Thai basil. That’s the ‘new leaf’.

It’s not clear that the usual metaphor is invoked. One could say that the reader should turn over a new leaf and try Thai basil, but that is a stretch.

It seems rather that just using part of the prefab rather than some non-conventionalized phrase such as ‘A new kind of basil’ or simply ‘Thai basil’ was more satisfying to the author or editor.
The most common examples of prefabs in titles were cases where no metaphor was invoked; rather, one or two words of the title were relevant to the story, but the original and most common meaning of the prefab was not.
Horsing around is an article about an exhibit on horses at Chicago’s Field Museum.
• The only link between the article and prefab is the word *horse*!

• In the next example, the connection is even more remote.
This is a story about an advertising campaign for Domino’s Pizza. There is nothing in the article to suggest a domino effect.
This title accesses the expression *have one for the road*, which refers to having a drink before leaving. Nothing in the article refers to this sense.
Lose association

- In these three examples (out of five in the magazine) a word or two in the prefab is relevant to the article, but the meaning of the prefab is not.

- In fact, after accessing the meaning of the prefab, the reader has to break that link to meaning and establish another meaning for the familiar expression.

- Presumably this type of word play is considered witty rather than annoying!
Getting Fit

VIRTUAL DRESSING ROOMS GIVE YOU THE FULL SHOPPING EXPERIENCE MINUS THE UNFLATTERING LIGHTING. BY SARA ALVIN
ILLUSTRATION BY JENNIFER BUCKMAN

SHOPPING FOR A STREET LOOK

Ever shopped in your pajamas? Those piece may seem pretty, but they,
The case of *Getting Fit* is interesting.

This phrase is polysemous and the most usual meaning of ‘getting into good physical condition’ is not the one intended by the article.

The article is about ordering clothing over the internet and getting clothes that fit.

So the title of the article is purposely misleading.
Speed freak is also polysemous. This is an article about a motorcross champion.
Polysemy

- About half of the uses I found in COCA referred to a person who used a type of cocaine, the other half to a person who loves to go fast.
- So this title is descriptive of the content of the article.
Extension of the meaning of prefab

- *The Big Ten* for a list of ten books, movies and CDs.

- *City of Lights* referring to Buenos Aires.

- *Parting the Sea*: an article about the flood gates protecting Venice, Italy.

- *All in the (United Family)* about pilots joining United Airlines who are twin Brothers.
This prefab usually refers to situations where information or behavior is best kept within the family. This use covers more ground than that.
Puns rely on (near) homophony

- Puns also disrupt the form / meaning correspondence by suggesting more than one meaning for a form.
- Two occur in the same section.
This fellow cooks Thai food. The pun is based on sound, not spelling. The meaning of *tie score* is not relevant to the story.
This is also the story about Thai food. The title *Far Eats* is also a pun and this time *Far East* is relevant to the story.
Some ‘straight’ prefabs in titles

- Two titles were prefabs that did not have any double grounding.
This is a letter about the merger of United and Continental Airlines. The title *Coming Together* is a prefab, but one of its usual meanings is intended here.
Another straightforward use of a prefab. *Story Telling* for a short piece about Joyce Carol Oates.
Prefabs as titles

- In this journalistic style, there is a strong tendency to prefer the entrenched prefabs as titles of articles.

- Four articles did not have prefabs as titles. Two were proper names of people and one of a city. The other was entitled *The places I go*. I did not count that as a prefab.

- What is the function of the entrenched phrases? We have seen that they are usually not descriptive of the content of the article and thus they place an extra burden on the reader.
The allure of prefabs as titles:

- Wittiness of word play engages the reader
- Familiarity: the entrenched phrases make the content of the magazine seem more familiar and perhaps draw the reader in.
Plasticity and entrenchment

- The wittiness factor depends upon entrenchment and ease of access of the phrase.

- It also depends upon the reader’s plasticity or ability to break the usual link between form and meaning. In most cases, the intended meaning is NOT the most accessible one.

- These cases illustrate the power of entrenchment of form and entrenchment of the link between meaning and form.
3. Entrenchment of meaning

• Linguistic meanings can also be entrenched independently of the forms that express them.
• Slobin’s work on ‘thinking for speaking’ provides evidence that speakers have entrenched patterns of conceptualization for the purpose of speaking.
• The linguistic description of a situation (event or state) is necessarily schematized—only certain aspects of the situation are coded linguistically.
• Languages have distinct patterns of schematization that can be habitually accessed in speaking.
English: assert trajectory imply end-state.

*The boy climbed the tree.*

Spanish: assert end-state, imply trajectory.

*El niño está subido en el árbol.*

‘The boy is up in the tree’
Further evidence for entrenched meaning

- Lexical and grammatical layering and renewal

- Obligation markers:
  Most languages have one or two lexical verbs to express obligation. E.g. Spanish *deber, tener que*
  English has three modal auxiliaries, *shall, should* and *must* but also newer formations:

  *Ought to, have to, have got to, got to*

In English we use obligation markers where other languages would use simple predicates.

Once obligation meaning becomes entrenched, we develop multiple ways to express it.
Smith 2006 argues that in grammaticalization, renewal is more common than innovation. It is much more common to find renewal of expression for meanings already grammaticalized than innovation of a new grammatical category. (young) anterior > perfective / past

Using the database assembled for *The evolution of grammar* (Bybee, Perkins and Pagliuca 1994), Smith finds that of the 39 languages that have a gram at the beginning of this path, 34 (87%) occur in languages that already have a gram later on this path.
Renewal in grammaticalization

- Expression of future is similar.
- Old English had no grammatical marker of future.
- Present Day English has three—will, shall and gonna.
- In the database for *The evolution of grammar*, we find of the 70 languages that have a future gram, 49 have two or more. Of these, 26 have three or more.
Renewal according to Gabelentz 1891

Hopper and Traugott 1993 write:

- Gabelentz invites his readers to visualize linguistic forms as employees of state, who are hired, promoted, put on half-pay and finally retired, while outside new applicants queue up for jobs!
Lexical renewal and layering
From Day One, I will .....
from Day One
right from the beginning
from the very beginning
from the very first day (moment, night, season…)
from the start
from the very start
from the outset
from the get-go
Why do we need so many ways to say the same thing?

• The meaning is entrenched and we want to express it. If one means of expression doesn’t seem strong enough, we come up with another.
Entrenchment

- We have evidence for entrenchment of form, including sequential entrenchment, of meaning and of the form-meaning connection.
- Note that most of the evidence for entrenchment invokes plasticity.
- Entrenchment and plasticity aren’t just opposite ends of a scale, rather they describe two cognitive processes: entrenchment builds up representations in memory and plasticity manipulates them.
- Together that interact to produce conventional but productive language use.