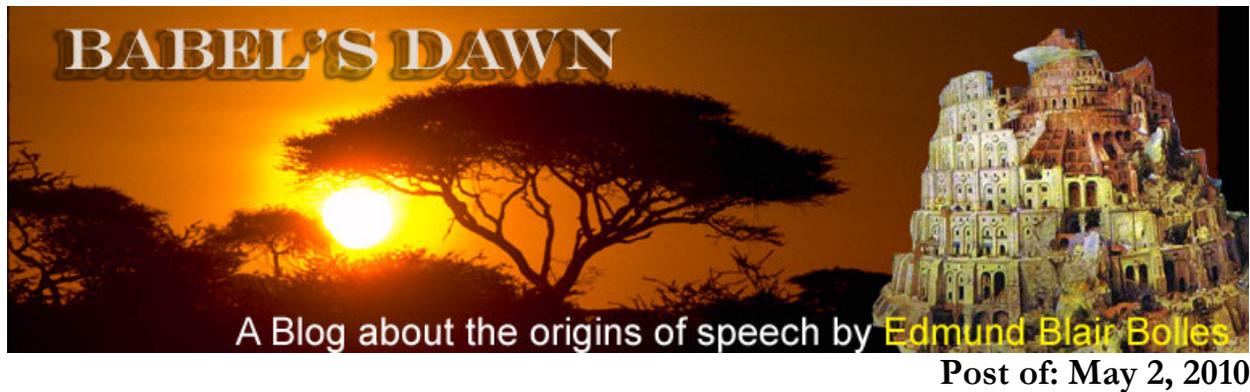


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## Beyond Utrecht



**The universe** has four dimensions. Language is not so big, but perhaps it can boast two dimensions.

Two years from now the next Evolang conference is scheduled to be held in Kyoto, Japan and I'm guessing that by then we will have a clear answer to the close of last week's post on this blog, "We've got to understand how biology and culture are two dimensions shaping every utterance." I'm optimistic because scholars already know what each dimension is about, and it looks like some people have identified the glue that holds the two dimensions together. So let's hop into a time machine and see what understanding is likely to be clear when the Kyoto conference finishes up.

Most linguists and other scientists contributing to this field are primarily concerned with language as we know it today. It is a perfectly reasonable position, and what a strange world we would live in if that focus was not the case, but that interest forces scholars to consider a wide variety of topics that this blog, with its hard focus on evolutionary origins, can ignore. Language's

core topic is the concrete world, present or imagined. Language today has many more topics than that. Metaphors and symbols make abstract and invisible topics discussable. But metaphorical and symbolic language builds on the linguistic tools evolved to talk about the physical world.

## 1 — The Biological Dimension

We talk about the physical world by drawing attention to it and specifying it perceptually. Take the opening sentence of Peter Matthiessen's masterpiece *Shadow Country*, "Sea birds are aloft again, a tattered few." It is a kind of poetry, but it is also physical. The one questionable word there might be *tattered* which we ordinarily associate with clothing, but it is used to describe the physical condition of something physical (birds) and I think it passes as the outer edge of the kind of language I'm talking about. Maybe a *Homo erectus* poet or two pushed language this far, especially when you notice that *a tattered few* has not been woven syntactically into the sentence.

More complex, but still completely physical sentences can be found in the book—e.g., "While his kin said good-bye to their guests, Lucius inspected the framed photos of Billy Collins and his sons."

A sentence like that puts the whole scene directly in front of the reader. Every word is about the physical world. [Jean-Louis Dessalles](#) points out that a complex sentence like this one expresses a complete gestalt, with foreground (Lucius inspected the framed photos of Billy Collins and his sons) and background (While his kin said good-bye to their guests). Matthiessen could have handled it differently, as he did in the first sentence, keeping each part separate and equal. It is the first word, *while*, that organizes the sentence into one, whole perception. Language that expresses only concrete things had come as far as it could when it became able to unite foreground and background into one perception.

Some time back I posted a note that pointed out that the elements of language that generative grammarians call arbitrary can be understood as basic features of perception. (see: [The One Model that Works](#)) These features are:

- **point of view** (aspectual reference): *the kin said good-bye to the guests* could just as easily be *the guests said good-bye to the kin* and the *while* could be moved to the other clause, switching what's in the foreground. As it stands the sentence tells us know what matters to the storyteller, and we see it the same way.
- **perspective** (edge features) works like a zoom lens enabling the teller to move in or out on a scene; the whole dependent clause (*while ...*) could be removed without losing the sentence's core meaning. Also the details of the photos could be removed. The sentence would be much weaker if it merely said *Lucius examined some photos*, but language offers the producer the choice of how far to zoom in or out.
- **focus** (headedness), the language is about something; attention gets directed to many points in this sentence (kin, guests, Lucius, photos), and each word in the sentence relates to one of these foci.

Every natural language has these features because it rests on the biology of perception. No matter what language a child is destined to speak, these things will be there. This dimension is not syntactical or even semantic. It is more on the level of a governor, the thing that determines the syntax and semantics appropriate to the foci.

## 2 — The Cultural Dimension

The variable rules for expressing the governing perception encompass all the semantics and syntax of a particular language. The elements of perception can be distinguished and categorized in an enormous number of ways, and no one way has claim to superiority over another. It is important, however, that all members of a group be able to share their perceptions, so they must distinguish

and categorize perceptions in a settled way. The rules are arbitrary, but their drift is constrained by the need to retain meaning; the governing perception must be discoverable.

It is a mistake to expect universals in this dimension. The semantics and syntax of any statement reflects the evolution and drift of a particular language and culture. Generalizations about the whole of this dimension—e.g., syntax is structured hierarchically—reflect either the biological dimension or the glue that holds the two dimensions together.

### 3 — The Glue Linking the Dimensions

The basic glue holding the biological and cultural dimensions together is the power of attention, one of the most mysterious functions of the brain. Every utterance that is not just a high-powered animal signal—e.g., *balt*; *sure-sure*—uses attention to link statement and governing perception. The speaker attends something and utters the apt word(s) of a particular language. The listener hears the word(s) and pilots attention appropriately.

A second glue uses another function of perception, the gestalt. That's the ability to bind separate elements of a perception into a coherent whole. Examples of gestalts include the way auditory perception turns musical notes into a melody or the way visual perception constructs motion out of a series of still pictures. A sentence like, "His kin said good-bye to their guests," has two separate foci, kin and guests, but we can imagine the scene as a whole. That's a gestalt; the construction is in our head, not in the sentence structure. Change the word *said* to *inflated* and the gestalt fails. The structure is unchanged, but the sentence has become meaningless. A meaningless remark is one that does not form a gestalt.

The job of an editor is to ensure that the glue in any particular sentence binds the words into a whole. Is attention piloted successfully, or does the reader get lost? Does the complete sentence come together in a gestalt or is it too much to ask of the audience? Sentences may pass syntactical scrutiny but still not be intelligible.

### 4 — Still Unexplained

An obvious problem is that these days we talk about plenty of things that are not perceptible. [Derek Bickerton](#) offers a good sentence to challenge the ideas in this post: *My trust in you has been shattered forever by your unfaithfulness*. We've got both abstract concepts (trust, forever, unfaithfulness) and a metaphor (shattered) in this sentence. Where did they come from? The short answer: I don't know. The long answer: Although I do not know, I am not especially worried because I believe this account gets us through the fixing of language in the species; we began talking about perception and many generations later came imperceptible topics.

I base my confidence on the way abstract sentences are structured as though they were describing perceptions. Bickerton's sentence is written as though it is about something physical: *My house in Alabama has been shattered to pieces by your bomb*. The structure of the sentence organizes the phenomenon as a real world action complete with possession (my, your), subject (unfaithfulness), object (trust), indirect object (you). These relationships are brought together by a metaphorical verb. This kind of expression reflects a language and way of thinking that is much more attached to the concrete than to the abstract symbol processing of a modern computer.

Frankly, I don't know that humans of a hundred thousand or more years ago engaged in any abstract reasoning. Their thinking seems to have been much more mythological, which is concrete or metaphorical or mysterious. Mystery symbols that express an identity or power without providing something concrete beyond the symbol itself seem pretty certain to have existed by a hundred thousand years ago. All of these things constitute more than straight perceptual thinking, but seem to be dependent on them. Maybe we will be able to take up these mysteries after Kyoto.

Links:

Shadow Country: <http://www.amazon.com/gp/product/081298062X?ie=UTF8&tag=tellingitcom-20&linkCode=xm2&camp=1789&creativeASIN=081298062X>

Jean-Louis Dessalles:

<http://www.amazon.com/gp/product/081298062X?ie=UTF8&tag=tellingitcom-20&linkCode=xm2&camp=1789&creativeASIN=081298062X>

The One Model that Works: [http://www.babelsdawn.com/babels\\_dawn/2008/10/the-one-model-that-works.html](http://www.babelsdawn.com/babels_dawn/2008/10/the-one-model-that-works.html)

Derek Bickerton: <http://derekbickertonmore.com/>