

# Proposing “ID Tracking Model” of Conceptualization

—Getting Diagrams to Make (More) Sense Without Making Use of Motion Metaphor—

Kow Kuroda

National Institute for Information and Communications Technology  
kuroda@nict.go.jp

## Abstract

This paper proposes a model of conceptualization, called “ID Tracking Model” (IDTM, henceforth), which assumes: (i) that elements of conceptualization are STATES rather than THINGS, and (ii) that things are “represented,” rather than “construed,” as TRAJECTORIES which one can “keep track of” without a metaphorical basis [2].

My motivation to develop the IDTM is three-fold: (i) IDTM is an attempt to provide diagrams in Cognitive Grammar [3] (CG-style diagrams, henceforth) with more expressive power; (ii) an attempt to constrain the diagramming conventions in Cognitive Grammar (CG-style diagramming conventions, henceforth) to reduce their arbitrariness, thereby providing a rigorous method for the “visualization” of semantic structures; and finally (iii) an attempt to provide an adequate model of conceptualization unbiased from motion-based worldview.

These motivations are related to (at least) three issues about CG-style diagrams. For the first issue, it is shown that on describing the meaning of sentences like *X BREAK Y WITH Z*, CG-style diagrams are unable to specify the binary interaction *R* between *X* and *Y* in a systematic way, though *R* can be lexically realized by USE on certain perspective like in *X USE Z TO BREAK Y*. CG fails to capture this fact, because it can’t describe *R* independently of the relation between *X* and *Z*, and that of *Z* and *Y*. This restriction is shown to be unnatural and undesirable. For one thing, this is exactly what disables CG-style diagrams to distinguish *X BREAK Y WITH Z* from *X USE Z TO BREAK Y*, and it is exactly what makes CG-style diagrams fail to describe semantic structures of case markers

(e.g., *-o*, *-de*, *-ni*) in Japanese.

For the second issue, it is shown that a number of CG-style diagrams suffer from serious indeterminacy as to their interpretation, mainly because CG-style diagramming conventions are inconsistent. Specifically, it is hard to tell which profiles correspond to which lexical units for a given diagram. If one cannot tell which morpheme realizes which part of a profile, diagramming is arbitrary. There is no way to check if a diagram is “correct.” IDTM-based diagrams rescue here.

For the third issue, IDTM embodies a “Gibsonian” approach [1] to conceptualization in that it seeks “invariants” in human cognition, without making use of any kind of “ontological metaphors” [2], thereby making itself a promising alternative to the “billiard-ball model” and the “action chain” view of causation [3]. It is shown that both the billiard model and the action chain view reflect too much a naïve — and inadequate — worldview from which everything is construed in terms of “motion,” literally or metaphorically. By rejecting this kind of “bias,” IDTM-based diagrams get demonstrably more language-neutral, thereby successfully capturing abstract realities of human conceptualization patterns.

## References

- [1] Gibson, J.J. (1986[1979]). *The Ecological Approach to Visual Perception*. Lawrence Erlbaum Associates.
- [2] Lakoff, G., and M. Johnson. (1999). *Philosophy in the Flesh*. Basic Books.
- [3] Langacker, R. W. (1987, 1991). *Foundations of Cognitive Grammar, Vols. 1 and 2*. Stanford University Press.