ID Tracking Model Replaces Billiard Ball Model of Conceptualization

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Fig. 1: The relation of \(\{A, B\}\) and \(\{A, B\}\) to \(\{A, B\}\), where A and B denote the memory-traces of A and B’s co-occurrence in \(\{A, B\}\).

ID tracking model (IDTM for short) of conceptualization was designed to replace so-called billiard-ball model (BBM, Langacker 1987, 1991) of it, where conceptualization is (metaphorically) characterized as an interactive network of entities (exchanging energy), thereby providing a basis for so-called action chain model (ACM, Croft 1991).

IDTM characterizes conceptualization not in terms of entities; but in terms of states (of entities). In a nutshell, IDTM models conceptualization (of dynamic events, at least) as an interactive network of states. This enables us to dispense with motion- or force-based metaphors to account for grammatical phenomena, which is one of the prerequisites for the ACM/BBM of conceptualization, for good or bad.

Conceptualizations for (1) and (2) are diagrammed in Fig. 2a, b (Caused-Motion Type), and Fig. 3a, b (Caused-Possesion Type), respectively:

(1) \(x\) GIVE \(y\) TO \(z\): (e.g., John gave the book to her)
(2) \(x\) GIVE \(z\) \(y\): (e.g., John have her the book)

Unlike entities, states exercise no force or motion. So, motion metaphor is no longer “explanatory” in IDTM: states of an entity \(x\) are always differentiated along time \(t\), even if \(x\) is not moving. This is good because it allows us to represent \(x\)’s “sameness” explicitly.

Fig. 2a: Entity-based, ACM/BBM characterization of (1)

Fig. 2b: State-based, IDTM characterization of (1)

Entity-based and state-based characterizations of conceptualization make a difference, given that (1) profiles have different degrees of strength (from 0 to 3 (max), for example); and (2) only the “winner” profiles are lexically realized.

Semantic component corresponding to \(v\) wins over \(u\) in (1), whereas \(u\) wins over \(v\) in (2), resulting in the alternation between (1) and (2). In the diagrams, thickness of lines denotes strength of profile; and coloring indicates profile selection/alteration over competition.

Fig. 3a: Entity-based, ACM/BBM characterization of (2)

Fig. 3b: State-based, IDTM characterization of (2)

Alternation between (1) and (2) stems from the competitive interaction among profiles for lexical realization, a selective process analogous to Darwinian “natural selection” in a sense.