

Semantics and pragmatics of a general spatial term: The case of Indonesian *di*

Influences on spatial meaning, as evidenced by examinations of specific spatial terms:

- **Geometry** (e.g., Feist & Gentner, 2003; Herskovits, 1986; Talmy, 1983)
- **Function** (e.g., Coventry, Carmichael, & Garrod 1994; Coventry & Prat-Sala, 2001; Feist & Gentner, 2003; Vandeloise, 1991, 1994)
- **Qualitative Physics** (Bowerman & Choi, 2001; Bowerman & Pederson, 1992, 1996; Feist & Gentner, 2003; Forbus, 1983, 1984; Talmy, 1988)

But not all spatial terms are specific spatial terms!

General Spatial Terms:

- Used in all spatial descriptions
- Can occur either alone or along with a more specific term
- Examples: Turkish *-da*; Ewe *le*; Indonesian *di*

Some data:

Buku itu *di* (*atas*) meja.
The book is on the table.

Permen itu *di* (*dalam*) kotak.
The candy is in the box.

Meja itu *di* *bawah* lampu.
The table is under the lamp.
⇒ *di* may not occur alone

What does *di* mean?

A proposal: semantic and pragmatic elements of meaning:

Semantic – holds for all uses of *di*:

(1) Figure located in the region of interaction of the Ground

Pragmatic – cancelable, but assumed to be true when *di* appears alone:

- (2) (a) Figure in contact with Ground
- (b) Figure-Ground relation is canonical

Testing the proposal: Two kinds of evidence Sentences in Isolation

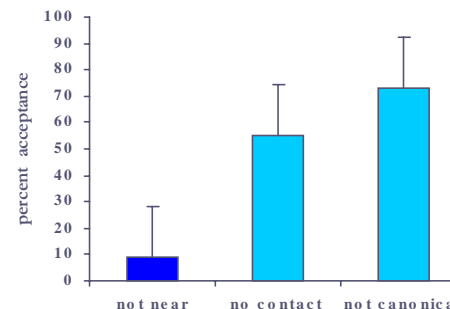
Semantic violation:

- (3) Buku itu *di* meja, tapi bukan dekatnya.
Book that *LOC* table but not near-possessive
The book is *di* the table but not near it.

Pragmatic violations:

- (4) Buku itu *di* meja tapi tidak menyentuh.
Book that *LOC* table but not touching
The book is *di* the table but it's not touching it.
- (5) Buku itu *di* meja tapi menempel dengan aneh.
Book that *LOC* table but stuck manner weird
The book is *di* the table but it's attached in a weird manner.

Results:

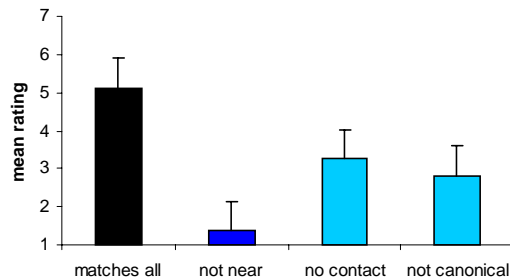


$F(2,32) = 6.09, p < .01$

Sentences Describing Pictures: Is *di* acceptable in descriptions of pictures which:

- Match all elements
- Depict Figure not near Ground (violation of (1))
- Depict lack of contact between Figure and Ground (violation of (2a))
- Depict non-canonical Figure-Ground relation (violation of (2b))

Results:

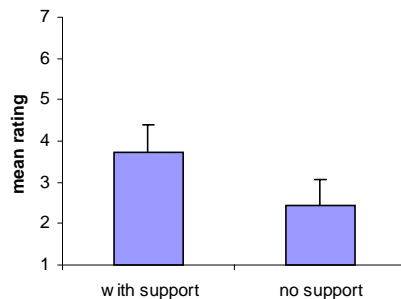


$F(3,59) = 26.65, p < .0001$

What about qualitative physics?

Is *di* more acceptable for pictures in which the Ground supports the Figure than in pictures in which it doesn't?

Results:



$t(29) = 5.36, p < .0001$

Conclusions:

The meaning of Indonesian *di* has both semantic elements – applicable to all uses – and pragmatic elements – which predict when *di* may occur alone. Further, like specific spatial terms, use of *di* is influenced by geometry, function, and qualitative physics.

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