

Compositionality and Oblique Contexts

1. Jane said that Cicero was a Roman orator.

2. Doug believes that the morning star is Venus.

But: $D('Cicero') = D('Tully')$

$D('the\ morning\ star') = D('the\ evening\ star')$

1a. Jane said that Tully was a Roman orator.

2a. Doug believes that the evening star is Venus.

3. Tom believes that snow is white.

But: $D('Snow\ is\ white') = The\ True = D('Clinton\ was\ the\ 42^{nd}\ president')$

3a. Tom believes that Clinton was the 42nd president.

Frege's Solution

In oblique contexts, a name does not have its “customary” denotation—it has as its denotation its customary **sense**.

In (1), ‘Cicero’ denotes $S('Cicero')$.

In (1a), ‘Tully’ denotes $S('Tully')$.

$S('Cicero') \neq S('Tully')$

Hence, in (1) and (1a), $D('Cicero') \neq D('Tully')$

Problems of multiple embedding

1. The morning star is Venus.

2. Doug believes that the morning star is Venus.

3. Sally believes that Doug believes that the morning star is Venus.

What does ‘Venus’ in (3) denote?

In (1), $D('Venus') = Venus$.

In (2), $D('Venus') = S('Venus')$ in (1).

I.e., in (2), ‘Venus’ denotes its *customary* sense.

So in (3), $D('Venus') = S('Venus')$ in (2).

I.e., in (3), ‘Venus’ denotes what Frege calls its *indirect sense*.

But what is $S('Venus')$ in (2)? How is a name's *indirect* sense related to its *customary* sense? We don't really know, and we don't know how to figure it out.

“The route from sense to denotation is one-way.”