

No news is good news: The quantifier/State-of-Affairs ambiguity in English

Neal Whitman
The Ohio State University

Since Barwise and Cooper (1981), the study of generalized quantifiers (GQs) in natural language has made possible many generalizations about the semantics of NPs and determiners, and today, GQ theory has become standard semantics for quantified NPs. However, sentences like the following have meanings not generated by ordinary GQ semantics.

- (1) a. No news is good news.
b. All work and no play makes Jack a dull boy.
c. Too many chefs spoil(s) the soup.

Semantics of SOA readings

Under the usual GQ semantics, the meanings for (1) would be:

- (2) a. $[[news]] \cap [[is\ good\ news]] = \emptyset$
(There is no such thing as good news.)
b. $[[work]] \subset [[makes\ Jack\ a\ dull\ boy]] \wedge [[play]] \cap [[makes\ Jack\ a\ dull\ boy]] = \emptyset$
(Every kind of work endullens Jack; no kind of play does.)
c. $[[chefs]] \cap [[spoil\ the\ soup]] > N$,
where N is the maximum allowable number of soup-spoiling chefs.
(There are too many chefs who spoil the soup.)

The intended meanings interpret the quantified NPs as states of affairs (SOAs):

- (3) a. The situation in which there is no news is itself good news.
b. The situation in which everything is work and nothing is play makes Jack a dull boy.
c. The situation in which there are too many chefs leads to the soup getting spoiled.

Easy and hard SOA readings to identify

The easiest SOA readings to identify are negatives: It's the difference between something not happening (quantifier reading) and something happening (SOA reading). Examples in addition to *No news is good news*:

- (4) a. Half a loaf is better than no loaf.
Quant. reading: There is no loaf that is better than half a loaf.
SOA reading: Having half a loaf is better than having no loaf.
b. Oatmeal is better than nothing.
Quant. reading: There is nothing that oatmeal is better than. It's the worst.
SOA reading: Having oatmeal is better than having nothing. It's not the worst.
c. No one would be better for your department than this candidate.
Quant. reading: There is no candidate better than this one.
SOA reading: Having no one would be better than having this candidate.
d. As your governor, I promise no new taxes.
Quant. reading: There might be new taxes, but I don't promise any.
SOA reading: I promise that there will be no new taxes.

The hardest SOA readings to identify are bare plural, mass nouns: It's the difference between something talking about an NP and talking about the SOA in which the NP exists—often a negligible distinction:

- (4) a. I'm against higher taxes.
Quant. reading: I oppose higher taxes.
SOA reading: I oppose the existence of higher taxes.
- b. I'm against more taxes.
Quant. reading: There are more taxes that I oppose than (my opponent opposes).
SOA reading: I oppose the existence of more taxes than exist currently .
- c. More taxes means higher unemployment.
Quant. reading: [too complicated to paraphrase here].
SOA reading: The existence of more taxes than currently exist will cause the existence of higher unemployment levels than currently exist..

SOA readings limited to existential NPs...

SOA readings occur only:

- in syntactic NP positions where a state of affairs makes semantic sense. Especially common as subjects and objects of the verb *mean*.
- with weak/existential/indefinite NPs (Milsark 1977, Keenan 1987, 1996; Keenan and Stavi 1986); not with determiners such as *every*, *each*, *most*, *a*. Notice that most SOA meanings can be paraphrased with an existential sentence: "The SOA in which there is/are ..."

...and often:

- with comparative determiners: *more*, *less*, *fewer*.
- with negative quantifiers: *no*+NP, *nothing*, *no one*
- with determiners of value judgment: *too many*, *too few*, *too much*.

...with one exception: *All work*

All is not an existential, so we would not predict it to have an SOA reading. In one common idiom, though, it does: *All work and no play makes Jack a dull boy.*

Standard GQ semantics:

$[[work]] \subset [[makes\ Jack\ a\ dull\ boy]] \wedge [[play]] \cap [[makes\ Jack\ a\ dull\ boy]] = \emptyset$
"Every kind of work endullens Jack; no kind of play does."

Intended meaning:

"When everything is work and nothing is play, that makes Jack a dull boy."

An attempted lexical-rule solution undergenerates

A uniform SOA semantics is possible for *all* and other quantifiers, with this lexical rule:

Lexical rule for GQ determiners: $\lambda D_{(et)(ett)}\lambda Q.\text{SOA}(D(\text{exist}')(Q))$

all work: $\text{SOA}(\text{all}(\text{exist}')(\text{work}'))$

no play: $\text{SOA}(\text{no}(\text{exist}')(\text{play}'))$

However, lexical GQs such as *nothing*, *no one* are left unaccounted for, as are existential bare plural NPs. In light of the non-productivity of *all* in SOA semantics for NPs, I am inclined to leave *All work and no play...* as a separately learned idiom.

Quantifier-to-SOA semantic shift

I propose two semantic type-shifting operations along the lines of those proposed in Partee (1986) and Winter (2001):

SOA function: $\lambda\phi.\text{SOA}_{(te)}(\phi) =_{\text{def}}$ the state of affairs in which ϕ is true

Quantifier-to-SOA shifting mechanism: $\lambda P_{(ett)}.\text{SOA}(P(\text{exist}'))$

Derivation for *No news is good news*:

no news: $\text{no}'(\text{news}') \Rightarrow \lambda P_{(ett)}.\text{SOA}(P(\text{exist}'))(\text{no}'(\text{news}')) = \text{SOA}(\text{no}'(\text{news}')(\text{exist}'))$

No news is good news: $(\text{good-news}')(\text{SOA}(\text{no}'(\text{news}')(\text{exist}')))$

Derivation for *No news is good news*:

too many cooks: $\text{too-many}'(\text{cook}') \Rightarrow$

$\lambda P_{(ett)}.\text{SOA}(P(\text{exist}'))(\text{too-many}'(\text{cook}')) = \text{SOA}(\text{too-many}'(\text{cook}')(\text{exist}'))$

Too many cooks spoil the broth: $\text{spoil-broth}'(\text{SOA}(\text{too-many}'(\text{cook}')(\text{exist}')))$

Derivation for *More money means more problems*:

more money: $\text{more}'(\text{money}') \Rightarrow$

$\lambda P_{(ett)}.\text{SOA}(P(\text{exist}'))(\text{more}'(\text{money}')) = \text{SOA}(\text{more}'(\text{money}')(\text{exist}'))$

more problems: $\text{more}'(\text{problem}') \Rightarrow$

$\lambda P_{(ett)}.\text{SOA}(P(\text{exist}'))(\text{more}'(\text{problem}')) = \text{SOA}(\text{more}'(\text{problem}')(\text{exist}'))$

More money means more problems:

$\text{mean}'(\text{SOA}(\text{more}'(\text{problem}')(\text{exist}')))(\text{SOA}(\text{more}'(\text{money}')(\text{exist}')))$

Further directions

- How can the quantifier-to-SOA shift to be formally restricted to weak/indefinite NPs?
- Do other languages exhibit quantifier/SOA ambiguity, or disambiguate the meanings overtly in their syntax or morphology?
- How do SOA NPs fit into the bigger picture with “amount” semantics, small clauses, and collective predication?

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