# Loose Talk and the Pragmatics of Anti-Realism

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All forms of anti-realism have some apparent counterexamples.

Antirealism about *Fictional People* (and fictional places, fictional objects, ...)

- 1) Kate (pictured) is wearing the kind of hat that Sherlock Holmes always used to wear.
- 2) We saw the Etna light up like Mount Doom.
- 3) Mary was as nimble as a jedi.

Antirealism about *Numbers* (and functions, sets, geometrical objects, modular forms ...)

- 4) The number of philosophers in the room is greater than the number of linguists.
- 5) The rate of economic recovery has recently increased.
- 6) Times square in New York has the shape of a right-angled triangle.

Antirealism about **Rainbows** (and sundogs, shadows, the sky, mirror images...)

- 7) The rainbow is behind that hill over there.
- 8) The sky is covered in clouds.
- 9) In the morning and evening, the sun casts longer shadows.

Antirealism about the **Past** (Napoleon, yesterday, the Nineteenth century, ...)

- 10) It is warmer today than it was yesterday.
- 11) In 1514, Francisco de Arruda began building the tower of Belém

Antirealism about *Microscopic Objects* (molecules, atoms, electrons, quarks, ...)

- 12) The electron is now traveling from the source to the sensitive screen on the other side.
- 13) If you do not eat any food with protein, you will die of starvation.

Antirealism about the External World (tables, chairs, other people, ...)

- 14) You are taller than me.
- 15) There are some planets that no-one will ever see.

Nihilism

All of the above.





#### Where to draw the line?

"Save the phenomena"? "To be is to be the value of a bound variable"? Explanatory economy? With a little linguistic sophistication, we can get something better and more objective.

*Claim*. The purported counterexamples to true versions of anti-realism are cases of *loose talk*. Their loose readings do not imply the existence of the problematic entities in question.

*Pragmatic Criterion*. If our best theory of loose talk can accommodate the counterexamples, then the corresponding kind of anti-realism is tenable and well-motivated. If it cannot, then the corresponding kind of anti-realism is false.

#### Loose Talk & Conversational Exculpature

Core datum of loose talk:

16) A. The Chrysler Building is three and a half thousand miles from the Eiffel Tower.? B. No, you're wrong! The distance is actually 3,532 miles.

Traditionally, accounts of loose talk have failed to capture the following phenomenon: **Boolean Transparency**. The loose reading of a negation  $\neg p$  is the negation of the loose reading of p. The loose reading of a conjunction  $p \land q$  is the conjunction of the loose reading of the conjuncts.

More recent accounts of loose talk account for (16) in terms of the fact that, in the course of our ordinary linguistic practice, we routinely *absolve* our interlocutors of some of their commitments, and are expected to do so. My name for this is *conversational exculpature*. The idea is that conversational exculpature *forgives* the speaker a commitment, as opposed to conversational *implicature*, which embroils the speaker in further commitments beyond what they literally said.

Roughly speaking, my theory works like this. The loose reading of a statement is determined by its literal content p and two contextual parameters: a salient background supposition q (this is the commitment that is forgiven), and the Question Under Discussion S (this determines what is relevant in the context). Where available, the loose reading is the unique proposition  $\bigcirc p$  such that:

- A) p and  $\bigcirc p$  are conditionally equivalent given q
- B)  $\bigcirc p$  is wholly relevant to *S*.

Boolean Transparency is recovered as a consequence of the following principle:

*Preservation of Validity*. Any entailment that holds when the premises and conclusion are read strictly, still holds when both are read loosely.

(For details see addendum or my paper).

## **Applications**

*Fictional People* (*and fictional places, fictional objects, ...*). For (1), the forgiven background supposition *q* is the Sherlock Holmes story (including the fact that Holmes wears a deerstalker), and *S* the question *What is Kate wearing*. This gives us a loose reading: *Kate is wearing a deerstalker* that does not entail the existence of fictional entities. Similar strategies work for (2-3).

*Numbers* (*and functions, sets, geometrical objects, modular forms* ...). In the case of (4), the forgiven background supposition might be something like this:

17) Beyond the outer reaches of our physical universe, there are the Natural Numbers, arranged on a Natural Number Line. On the left sits the number Zero. To the right of every natural number sits another number. Every number numbers the class of numbers to its left and all classes equinumerous to that. The further to the right, the bigger a number.

The nominalist reading we get for (4) is something like *There is a philosopher in the room for every linguist, and then some more philosophers*. A similar treatment of (5-6) is possible.

*Rainbows* (*and sundogs, shadows, the sky, mirror images, waves...*) For (7), the question *S* may be *What does it look like from this angle,* and

18) Rainbows are physical arcs with a determinate spatial location that are made out of coloured fairy dust which can appear and disappear out of nothing.

The loose reading we get is *It looks as though there is an arc of coloured fairy dust behind that hill*. Again, something similar may be done for (8-9).

*Past* (*Napoleon, yesterday, the Nineteenth century, ...*) By analogy to previous cases, the natural strategy for the antirealist about the past would be to appeal to a background story like this:

19) The present is merely a temporal slice of a fourdimensional (block) universe. The slices on one side of the present are the past and those on the other side the future.

And then you would try to extract messages about *What the present is like* from (10) and (11). The problem is that (10) and (11) are not equivalent to any statements about the present conditional on (19). In particular, neither entails much of substance about what the present is like.

*Microscopic Particles* (*molecules, atoms, electrons, quarks, ...*) Again, one may try something like the following background myth:

20) Macroscopic objects are composed of atoms, ...

But it is not clear what, even given (20), a statement like (12) tells us about the macroscopic world.

Consideration of *Preservation of Validity* confirms that nothing of the kind is likely to succeed for antirealists about the past or microscopic particles.

### Conclusion

Given the Conversational Exculpature theory, sentences (1-9) can be accounted for as cases of loose talk, but (10-15) cannot. So applying the Pragmatist Criterion, nihilism, antirealism about the past, microscopic objects and the external world are all false. On the other hand, antirealism about fictional entities, mathematical objects and rainbows *is* feasible. What is more, the availability of these loose readings undermines many arguments for realism about those entities.

#### **Addendum: Formal Details**

(For a proper explanation, see my "Conversational Exculpature", Philosophical Review 127(2), 2018)

A *partial proposition* is an ordered pair of disjoint sets of worlds.  $\langle t, f \rangle$  is true at w just in case  $w \in t$  and false at w just in case  $w \in f$ . It has no truth-value at worlds outside of  $t \cup f$ . (We'll treat the partial proposition  $\langle p, \neg p \rangle$  as identical to the full proposition p).

The *restriction* of proposition *p* to *q*, written  $p \restriction q$ , is the partial proposition  $\langle p \cap q, \neg p \cap q \rangle$ .

A *question* or *subject matter* is a partition of logical space  $\Omega$ . Two worlds w and v agree about S, written  $w \sim_S v$ , just in case w and v are contained in the same partition cell of S. (Thus  $\sim_S$  is an equivalence relation on  $\Omega$ ).

A proposition p is *wholly about* (or simply *about*) S just in case p is a union of S-cells. (Equivalently, p is about S iff p is closed under the relation  $\sim_S$ ). A partial proposition is about S just in case it is a restriction of some full proposition about S.

A proposition *p* has *no bearing on S* just in case  $\top$  is the only proposition about *S* that *p* entails.

The *completion* of a partial proposition  $\langle t, f \rangle$  by the subject matter *S*, written *S*( $\langle t, f \rangle$ ), is defined just in case  $\langle t, f \rangle$  is about *S*. Then *S*( $\langle t, f \rangle$ ) is this, possibly partial, proposition:

 $S(\langle t, f \rangle) =_{df} \langle \{w : w \sim_S v \text{ for some } v \in t\}, \{w : w \sim_S v \text{ for some } v \in f\} \rangle$ 



#### The theory

The diagram above displays four maps of logical space. Each depicts a different (partial) proposition: the region where the proposition is true is coloured light grey, the region where it is false dark grey. Meanwhile, the thick black lines represent the boundary lines between six cells of some subject matter *S*. The diagrams on top represent two propositions *p* and *q* without any bearing on *S*, compatible with every *S*-cell. The diagram at the bottom represents a proposition *r* about *S*: i.e. a union of cells of *S*. The diagram shows how, under appropriate conditions (specified below), the irrelevant literal message *p* can be transformed into the relevant message *S*(*p*†*q*), written  $\bigcirc p$  for short. The core claim of the theory is that wherever this message *S*(*p*†*q*) is defined, it is available as a loose reading of the speaker's literal claim *p*.

#### Useful Result

Let *p*, *r* and *q* be full propositions, and let *S* be a subject matter. Then we have  $r = S(p \upharpoonright q)$  if and only if the following three conditions are met:

•	<i>r</i> is about <i>S</i> .	(Aboutness)
•	$p \uparrow q = r \restriction q.$	(Equivalence)
•	<i>q</i> has no bearing on <i>S</i> .	(Independence)

If only the final condition fails,  $S(p \uparrow q) = r \restriction s$ , where *s* is the strongest proposition *q* entails about *S*.

*Proof:* Aboutness holds iff *r* has one truth value per *S*-cell. Given *Aboutness, Equivalence* holds iff  $p \uparrow q$  matches that one truth value *within* each *q*-compatible cell and  $S(p \restriction q)$  matches *q throughout* each *q*-compatible cell, that is throughout the region  $s = \{w : w \sim_S v \text{ for some } v \in q\}$ . Thus *Aboutness* and *Equivalence* hold iff  $S(p \restriction q) = r \restriction s$ . Finally, *s* is equal to  $\Omega$  iff *q* is compatible with every *S*-cell, that is iff *Independence* holds.

#### Preservation of Validity

Let " $\cup$ " denote the map  $p \mapsto S(p \restriction q)$ . For any  $p_i$ ,  $i \in I$  and  $c_j$ ,  $j \in J$  s.t.  $\cup p_i$  and  $\cup c_j$  are defined,

If 
$$\{p_i\}_{i \in I} \models \{c_j\}_{j \in J}$$
, then  $\{\bigcirc p_i\}_{i \in I} \models \{\bigcirc c_j\}_{j \in J}$ 

*Proof.* For simplicity, take the set of all worlds to be  $\{w : w \sim_S v \text{ for some } v \in q\}$ , so that  $\bigcirc p_i = S(p_i!q)$  and  $\bigcirc c_j = S(c_j!q)$  are total. We need to show that  $\{S(p_i!q) : i \in I\} \models \{S(c_j!q) : j \in J\}$ , i.e. that  $\cap_i S(p_i!q) \subseteq \cup_j S(c_j!q)$ . As a preliminary result, note that this inclusion holds as restricted to *q*-worlds:

(given: this is the assumption that $\{p_i\}_{i \in I} \models \{c_j\}_{j \in J}$ )
(from A, intersecting both sides with $q$ )
(from B)
(from <i>C</i> , using the fact that $S(x \upharpoonright q)$ and $x$ match in $q$ -worlds)
(from D)

Now, let w be any world in  $\cap_i S(p_i!q)$ . Then for any i, w is in  $S(p_i!q)$ . Pick a  $v \in q$  so that  $w \sim_S v$  (thanks to our simplifying assumption, we can always do this). Since  $S(p_i!q)$  is about S and  $w \in S(p_i!q)$ , we have  $v \in S(p_i!q)$ . Hence  $v \in S(p_i!q) \cap q$ . Thus  $v \in (\cap_i S(p_i!q)) \cap q$ . So by (E),  $v \in (\cup_j S(c_j!q)) \cap q$ . Therefore  $v \in S(c_j!q)$  for some specific  $j \in J$ , whence also  $w \in \cup_j S(c_j!q)$ . So  $\cap_i S(p_i!q) \subseteq \cup_j S(c_j!q)$ , which is what we set out to show.

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