Meaning and logic

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1 Outline

The concerns addressed in chapter 5 can be divided into three groups:

- Minimalist truth and meaning
- Minimalist truth and logic
- Minimalist truth and truth-value gaps

2 Minimalist truth and meaning

Objection Truth-conditionals semantics dictate that knowing the meaning of a sentence is knowing its truth conditions.
This is a challenge to the minimalist account: if all there is to truth is the T schema, then each instance is trying to define the meaning of a proposition *and* what it means for it to be true. Circular.

Answer We should use truth conditions to understand truth, and use to understand meaning.

Reasoning Suppose we use truth conditions to understand the meaning of 'snow is white' instead. Then we need a definition of the type " 'snow is white' has the same meaning as R", where R is a mental event representing a possible state of affairs. But then we need "R has the same meaning as R' ", "R' has the same meaning as R''"...

- either this leads to infinite regress,
- or we must admit that some entities gain their meaning through means other than truth conditions.

But then, 'snow is white' can be one of them. Self-defeating argument.
How to avoid the problem? Defining meaning based on use: understanding a sentence means understanding its structure and its constituent words (which, in turn, means knowing the regularities in their use).

3 Minimalist truth and logic

3.1 Falsity and negation

The simplest way to define falsity is as the absence of truth.

(2) $\langle p \rangle$ is false $\leftrightarrow$ $\langle p \rangle$ is not true.

But how do we define that "not"?
Idea: "<u>not</u>", i.e., logical not, i.e., "it is not the case that". Substituting:

(2*) $\langle p \rangle$ is false $\leftrightarrow$ <u>not</u> [$\langle p \rangle$ is true].

(2**) $\langle p \rangle$ is false $\leftrightarrow$ <u>not</u> p.

Problem: how do we define <u>not</u>? Truth tables require falsity. Circular.
Idea: use previous definitions to convert truth table lines into axioms not involving falsity. ' From:

p	<u>not</u> p
T	F
F	T

to:

(N*) (i*) p → <u>not</u> <u>not</u> p

(ii*) <u>not</u> p → <u>not</u> p

(iii*) p or <u>not</u> p

(K) '<u>not</u> p' is acceptable to the degree 'p' is unacceptable.

where:

- (i*) is derived from (2**) and the first line of the truth table,
- (ii*) is derived from (2**) and the second line of the truth table,
- (iii*) comes from the fact that there are only two lines, and
- (K) is an additional constraint necessary to characterize <u>not</u>.

Falsity and negation have now been defined avoiding circularity.
Note: this notion of falsity is natural but does not follow necessarily from a minimalist view.

3.2 Logic and truth

Objection Accounts of truth and logic should be closely connected, but the minimalist theory has nothing to say about logic. Moreover, minimalism cannot even justify our choice of logic.

Answer Those are good things!

Reasoning Horwich rejects Frege's notion that logic is the science of truth.

- Logic can make deductions based on premises that might be true, but it has nothing to say about the truth of such premises.
- On the other hand, we can't expect the theory of truth to say anything about logical principles.

As in previous chapters, Horwich mantains that divorcing the theory of truth from other theories is the correct approach. In the case of logic, it means that the minimalist theory is compatible with different logics.

A theory of truth could in principle justify the choice of a specific logic by informing the meaning of logical constants, via truth tables. But the rules of inference in need of justification are just reformulations of the meanings of the constants. It would again be circular.

4 Minimalist truth and truth-value gaps

Minimalist truth and falsity as previously defined cannot admit propositions without truth value. To see this:

$\langle p \rangle$ is not true and not false $\rightarrow$ <u>not</u> [$\langle p \rangle$ is true] and <u>not</u> [$\langle p \rangle$ is false] $\rightarrow$

<u>not</u> p & <u>not</u> <u>not</u> p, a contradiction.

Solution: show that truth-value gaps are not necessary. Horwich analyzes three cases.

4.1 Non-referring names

Non-referring names are involved in sentences such as: "the present king of France is bald".

Horwich argues (following Russell) that a sentence of the type "a is F" entails that a exists.

Therefore, "the present king of France is bald" is equivalent to "the present king of France exists and is bald", which is uncontroversially false. No truth-value gaps needed.

4.2 Vagueness

Some predicates ('blue', 'tall', 'heap'...) are vague, i.e., do not have definite extensions. Are propositions that attribute vague properties to borderline cases neither true nor false?

No: we can introduce a distinction between *truth* and *determinate truth*.
Let X be a number of grains of sand that is borderline for predicate 'heap'. Then:

- $\langle$ X is a heap $\rangle$ is true or false, but
- $\langle$ X is a heap $\rangle$ is not determinately true and not determinately false.

But what predicates allow for this distinction? I.e., which predicates are vague?
F is vague if:

- 'F' is applied to things which have a property to a degree greater than m,
- 'not F' is applied to things which have the same property to a degree less than n, with $n < m$, and
- neither is applied to things which have the property to a degree between n and m, and this interval is non-empty.

Finally, what does this account of vagueness have to say about the *sorites paradox*?

Sor:
- 0 grains cannot make a heap,
- for any n, if n grains cannot make a heap, then $n + 1$ grains cannot make a heap.
- Therefore: for any n, n grains cannot make a heap.

We deny the second premise: there is a number of grains h (unknowable, since 'heap' is vague) such that h grains are not a heap but $h + 1$ are.
The unknowable nature of h precludes verificationism, but the alternative treatment of vagueness would preclude classical logic (via rejection of excluded middle).
Accepting the latter would be rather strange, since classical logic has been extracted from ordinary language, which is predominantly vague.

4.3 Ethical sentences

Ethical emotivists claim that ethical sentences do not admit a truth value. Sentences such as "stealing her car was wrong" are neither true nor false, they instead express an emotional attitude. Again, this is incompatible with minimalism.

Whether emotivism is correct or not, it can be articulated in a way that is compatible with minimalism: the unique character of ethical sentences should be encapsulated by their meaning. E.g., the meaning of "X is good" consists in the fact that it is asserted by someone iff they want X.