Meaning

H.P. Grice
Philosophical Review, July 1957

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Focus of this work

- Grice distinguishes meaning as it is used for linguistic assertions from that used for assertions about the world and provides an analysis of its nature.

Why is this interesting to us?

If linguistic meaning is demonstrative and it is build on top of attributive meaning ….

then it is plausible that the same mechanisms used by an agent to derive meaning regarding perception of things in the world and can be extended to linguistic assertions.

Grice's Project

• First: Distinguish two senses for 'meaning'
    - one for reliable association of ideas and things in the world
    - one for communication and language (e.g., telling, asserting).

• Second: Explore the linguistic sense of meaning and explain how it has come about.

Why is this important for meaning machines?

Addresses directly the nature of meaning:

- In attributions about the real world
- The meaning of words and sentences in references within language instances and communication.

First Sense of Meaning: Natural Meaning

Natural Meaning

- Those spots mean measles.
- The price of oil futures means gas prices will increase.

Second Sense of Meaning: Non-natural Meaning

Non-natural Meaning (MeaningNN)

- Those three rings on the bell mean that the bus is full.

- The assertion, 'Robots can't cry' means a robot cannot have emotions.

Distinguishing MeaningN from MeaningNN

Four tests

"x means that p"
 Is this true even if x is true and p is false?
   Yes => MeaningNN
   No => MeaningN

 Can "x means that p" be restated using inverted
   commas?
   Yes => MeaningNN
   No => MeaningN

Grice's Meaning Tests (continued)

Can "x means that p" be true even though nothing was meant by x? i.e., even though nobody meant anything by x?

    Yes => MeaningN

    No => MeaningNN

Can "x means that p" be restated using the phrase "The fact that x means that p"?

    Yes => MeaningN

    No => MeaningNN

    Note: This is a weaker test because of issues with 'The fact that ...'

Comments on these tests

These tests are indicators rather than definitions of the difference between meaningN and meaningNN.

The essential difference between the two:
• MeaningNN is involved when there is communication and a literal telling.
• MeaningN is about reliable co-variation and is usually the result of some causal relationship.

Summary: Tests for Non-natural meaning

x meansNN that p

➢ Does not entail that p
➢ Requires that somebody meant something by x
➢ Can be restated using inverted commas
➢ Cannot be restated using 'The fact that x'

So, the tests amount to detecting meaningN. If it is not meaningN and if a speaker meant something by it (and this is presumably available to the speaker) then it must be meaningNN.

For meaning NN the reference is within the instance of communication and language and not in the world, even if it is about the world

Examples of things which mean_{NN}

- Specific utterances, at a time in a place
  - "That picture over there means 'slippery floor'"
- Expressions in the public language
  - "The word 'elegy' means a song or poem of lamentation"
- Attributions to utterers
  - "What Bush meant was…"

Grice's Second Task: Explicate MeaningNN

This distinct sense of 'meaning' has been discovered. So:
• What exactly is meaningNN?
• Where does meaningNN come from?

MeaningNN cannot be explained causally

Grice criticizes a causal proposal by Stevenson
　　For x to meanNN that p <=>
　　x has a tendency to produce in an audience the belief that p.

Objection: This idea fails both ways
1) x can have a tendency to induce belief without meaningNN
　　- Putting on the tailcoat doesn't *mean* one is going to a party even if that is often the case
　　- That Jones is tall doesn't *mean* Jones is a basketball player

2) one can meanNN that p without having a tendency to induce such a belief

Grice's View of the Nature of MeaningNN

First try this:

"x meansNN that p" <=>

x is intended by its utterer to induce in the audience the belief that p.

Problem: Doesn't distinguish between telling and "getting someone to think".

The Handkerchief at the Scene of the Crime

A criminal decides to implicate someone else by leaving their handkerchief at the scene of the crime.

The incriminating handkerchief doesn't tell the detective what is meant by the person who deliberately left it there with the intention of fingering a particular innocent person. Instead, it is a calculation by the deceiver that the detective will deduce the intended result. So any meaning can only be due to fact of the handkerchief being at the scene of the crime (and is therefore meaningN).

It is not an instance of meaningNN because it doesn't involve communication (a literal telling)

Grice's Positive View (continued)

So one needs to require a speaker and audience:
"x meansNN that p" <=>
- – i) The speaker intended x to induce the belief that p in an audience;
- – ii) Speaker intended the audience to recognize intention (i).

Problem: The problem here is it doesn't distinguishing telling from "deliberately and openly letting someone know".

The Photograph vs. Picture Example

Recognition of the **intention** by the audience must be the grounds for believing p

- "Mr. X would be led by the photograph at least to suspect Mrs. X even if instead of showing it to him I had left it in his room by accident... But it will make a difference to the effect of my [drawing] on Mr. X whether or not he takes me to be intending to inform him (make him believe something) about Mrs. X, and not to be just doodling or trying to produce a work of art" (p. 383)

If one shows Mr. X the picture, with or without comment, he forms his belief on the basis of perceiving some fact in the world. But in the case of the hand drawn picture, Mr. X forms his belief because he recognizes the intention of the picture drawer.

Grice's Proposal for MeaningNN

"x meansNN that p" <=>

i) The speaker S intended x to induce the belief that p in audience A;
ii) S intended A to recognize intention (i);
iii) S intended A's recognition of intentions (i)+(ii) to serve as A's grounds for believing that p

The Nature of MeaningNN

(1) We know what meaningNN is not:
 – meaningN (i.e. reliable co-variance)
 – simply a tendency to induce a belief (i.e. causal)

(2) We know what meaningN is

(3) We know meaningNN must derive from:
    - Speaker's mental states
        - intentions

Implications for Meaning Machines?

First:

The problem of meaning has been separated into two domains: meaningN and meaningNN

=> meaning machines need not implement every type of meaning to make the claim of being a meaning machine

Implementing meaningN alone is substantial, but leaves out the most interesting possibilities.

Implications for Meaning Machines? (continued)

Second:

Implementing meaningNN depends on meaningN
=> The project of putting the meaning into meaning machines is to first do meaningN

Third:

Human knowledge of audiences and belief and intention all depend on experience (and so perception).

    => It is reasonable to think that the perceptual mechanisms that support assertions of meaningN will be necessarily involved in assertions with meaningNN for humans.

Generalizing this to agents using a parallel construction seems reasonable.

Implications for Meaning Machines? (continued)

Fourth: Agents as audience and recognition of intent

Agent offering meaningNN:
- Must have intentions.
- Convey intentions through actions (linguistic or nonlinguistic).
- Must have beliefs.

Agent as audience for meaningNN:
- Must have beliefs
- At least enough intentional capability to ground the consequences of having that belief as a result of the intention of the other agent
- Must be able to recognize the intention of the other agent.

Some Questions for Meaning Machines

If the foregoing is correct, agents must have intentions and beliefs to implement meaningNN.

Are intentions themselves meaningful?
• If so, need to resolve meaning of intentions as meaningN to avoid regress.

Do complex intentions require linguistic expressions that involve meaningNN?

Recognition of intention ≠ perception of intention

- Recognition would seem to go beyond perception and require a direct connection between the agent-as-audience's perception and beliefs about the agent's intention.
  Does this require agents to *perceive* meaningNN?

(This may be resolved by noting that one can perceive there is intention behind some utterance or gesture without necessarily perceiving the intention itself. We may ask 'What did you mean by that?' M. Stone 29 September 2004)

A Puzzle

Consider an indexical expression within a video game, (in Pengi for example):

"The-bee-that-is-chasing-me"

Is this meaningN or meaningNN?

References

Grice, H. P. (1957). Meaning. *Philosophical Review*, (66) 3 377-388