Behaviorism

The Concept of Mind
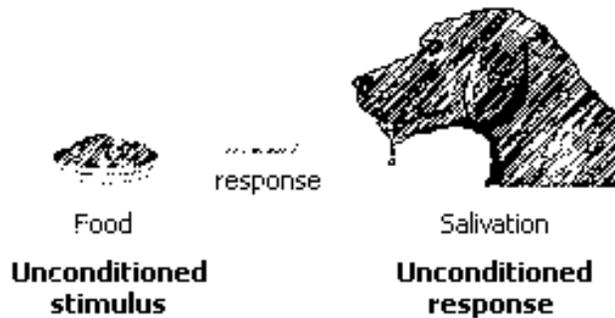
Gilbert Ryle

Two Kinds of Behaviorism

- *Psychological (methodological)* behaviorism: that we study the mind only from observable behavior

- *Philosophical* (*analytic*) behaviorism: Mental events, e.g. 'pain', mean nothing more than dispositions to behave in certain ways
  - minds and mental events are nothing more than behavior
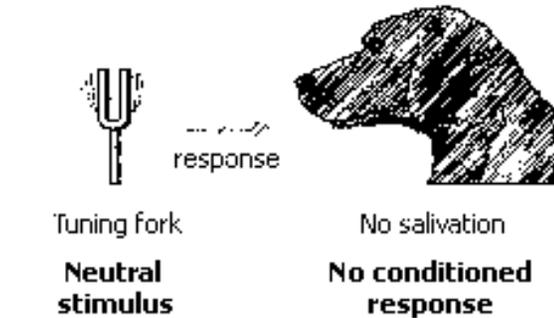
Historical Timeline of Behaviorism

- 1920s – Logical Positivism – the only meaningful statements are those that can be verified [Carnap, Ayer]
  - analyze mental states in terms of behavior, because behavior is verifiable

- 1940 – 60s – Skinner's Psychological Behaviorism

- 1950s – 60s – Ryle's behaviorism
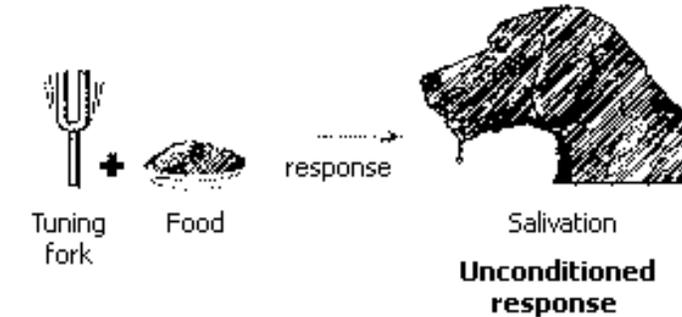
An Illustration of Behaviorism
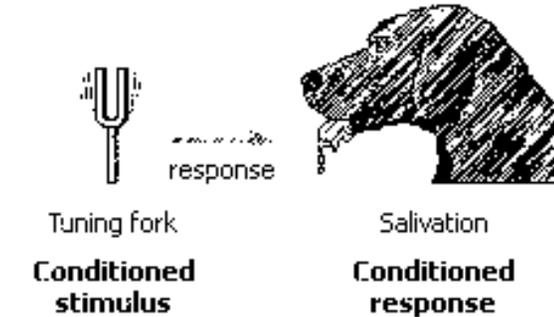

1. Before conditioning

Food
response
Salivation

Unconditioned stimulus
Unconditioned response

2. Before conditioning

Tuning fork
response
No salivation

Neutral stimulus
No conditioned response

3. During conditioning

Tuning fork + Food
response
Salivation

Unconditioned response

4. After conditioning

Tuning fork
response
Salivation

Conditioned stimulus
Conditioned response

What are Dispositions?

- E.g. soluble and fragile are dispositions
  - X is soluble means: if X is put into a liquid, X will dissolve
  - X is fragile means if x is dropped from a certain height, it will break

- The mind is not a thing (an object), but a set of dispositions of people.

- E.g. Pain
  - If one were to pinch someone, they would wince and say 'ow'

- E.g. Belief
  - If one were to go outside, then one would grab an umbrella, and if one were asked "is it raining?", then one would say "yes", and so on.

- Behaviorism does avoid some problems of dualism

1. Mental life becomes observable – no need for mysterious abstract entities

2. No Problem of Other Minds

3. No problem with causal interaction

- Objection 1: Suppressing Behavior
  - Imagine a community of Spartans trained from birth to suppress all voluntary and involuntary signs of their mental life. For instance, the Spartans do not wince, or say 'ow' when experiencing pain
  - *Problem:* the Spartans do have mental states, but they do not behave in the way a person who has the mental state behaves. So, it looks like behavior won't give us an account of mental phenomena

- Objection 2: Pretended Behavior
  - Another problem for behaviorism is that behavior can be pretended. Someone can pretend to wince, and say 'ow' even though they do not experience any pain at all.
 - Again, behavior does not give us an account of the mental

A Definition of Pain

- We could try to improve on a simple behaviorist definition of, for example, pain, by excluding the cases of pretending and suppression

- Person X is in pain $=_{df}$
  - If X is pinched, punched, etc, then x winces, moans, or cries, ….
  - And X is **not pretending**
  - And X is **not suppressing his reactions**

Can a Computer Think?

- **Artificial Intelligence**: an area of computer science that builds and model computer programs that exhibit intelligent behavior

- Turing (1950): "I propose to consider the question, 'Can machines think?'"

The Imitation Game
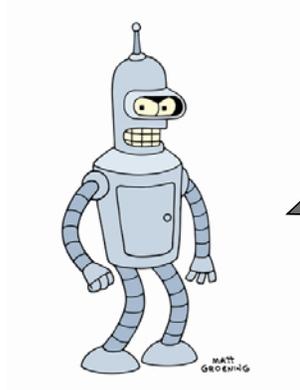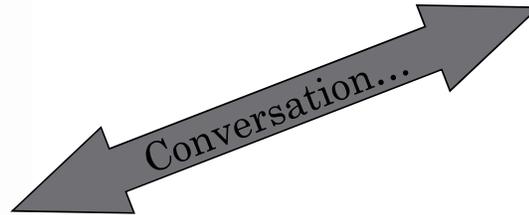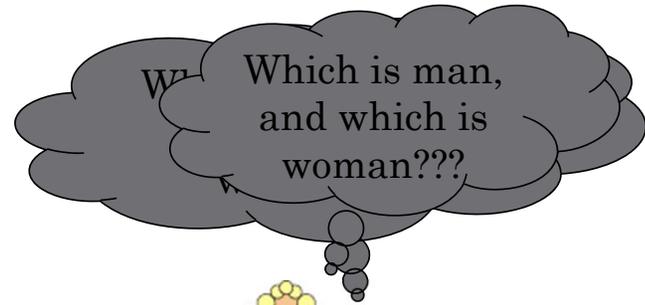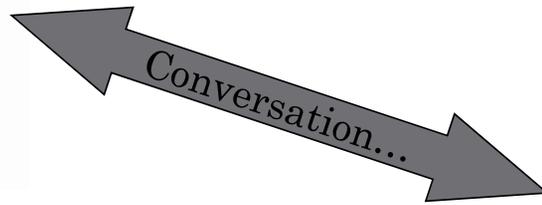
Turing Prediction

- "I believe that in about fifty years' time it will be possible to programme computers … to make them play the imitation game so well that an average interrogator will not have more than 70 percent chance of making the right identification after five minutes of questioning. … I believe that at the end of the century the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted."

- Deep Blue beets Gary Kasparov, all-time great chess grand-master

- No computer has passed TT to date.

- Loebner Prize: annual TT competition. No winner yet.

Consciousness Objection

- "Not until a machine can write a sonnet or compose a concerto because of thoughts and emotions felt, and not by the chance fall of symbols, could we agree that machine equals brain—that is, not only write it but know that it had written it. No mechanism could feel (and not merely artificially signal, an easy contrivance) pleasure at its successes, grief when its valves fuse, be warmed by flattery, be made miserable by its mistakes, be charmed by sex, be angry or depressed when it cannot get what it wants."

- **Reply**: Given the right kinds of responses from the machine, we would naturally interpret its utterances as evidence of pleasure, grief, warmth, misery, anger, depression, etc. --- a machine with a digital "brain" can have the full range of mental states that can be enjoyed by adult human beings.

Lady Lovelace Objection

- **Lady Lovelace:** Machine can not *originate* anything, they are only programmed

- Reply (Turing):
  - What about learning machines?
  - Humans often are surprised by machines.

Extra

The Ghost in the Machine

1. Human beings have both minds and bodies, which are distinct substances or kinds of things; bodies are physical, minds are non-physical

2. Being parts of the physical world, our bodies are subject to all normal physical laws. Minds are not parts of the physical world, they are not subject to these laws. Body can influence the mind and vice versa

3. Each person has direct awareness of the contests of his own mind, his beliefs, emotions, etc. On the other hand, no person has direct awareness of someone else's mind. When we describe someone as believing, desiring or remembering something, I am making a claim about the content's of that persons' mind that he can directly verify, but I can only infer from his behavior

Category Mistakes

1. **John** is bald

2. **A Bird** flies

3. **A pig** flies

4. **Time** Flies

- Grammatically, the word in bold is in the subject, and the regular face word is the predicate; typically, subject expressions refer to objects in the word, and predicates refer to properties.

- Sometimes the way we use language is misleading; the suggestion in (4) is that Time is an object, because 'time' is in the subject position.

- But, time is not an object, and if one thinks that time is an object, one is making a category mistake

- E.g. to say that time flies is to make a category mistake; it is impossible for time to fly because time is not an object
- E.g. to say that a pig flies is not to make a category mistake, even though it is false, because pigs are objects
- More examples of misleading language
  - E.g. I have seen all the buildings on campus, but where is the university? The question is demanding the wrong kind of thing, namely a building on campus, and universities are not the kinds of things one can point to, they are not buildings, they are not objects
  - E.g. I have seen battalions and squadrons, but where is the division?

Category Mistake

- A category mistake is a mistake where a thing is ascribed a logical type or property when it cannot possibly be of that type.

- Ryle's point is that Dualists, who think that minds are abstract objects, are ascribing the wrong kinds of logical type to minds.

- Just as Time is not an object, minds also are not objects; we are simply mislead by our language use

- Notice that we can't demand that a mind be shown is like demanding that someone shows you the university – it's to demand the wrong kind of thing

Problem with Revised Definition

- Mental notions are still part of definition i.e. pretending and suppression. Behaviorists have to explain all mental events in terms of behavior, so, if the behaviorist definition is going to work, pretending and suppression have to be stated behaviorally

- How can we do that?

- *Pretending:* X does not respond well to questioning, or X's heart beat goes up, when examined under a lie detector, etc.

- But, we can raise the same two objections as before. It could be that the person is pretending to pretend, or suppressing behavior that would indicate that they are pretending.
  - If we added a clause to the definition of 'pretending' that said, pretending must be such that the person was not pretending to pretend, then we have to start the process over – define pretending to pretend in terms of behavior and the same problem would reappear.

- So, the revised definition doesn't get away from the two objections.

- The conclusion from this exercise is that mental events are difficult, if not impossible, to define in terms of behavior.

- That means, analytical behaviorism is dead.