

Behaviorism

The Concept of Mind

Gilbert Ryle

Two Kinds of Behaviorism

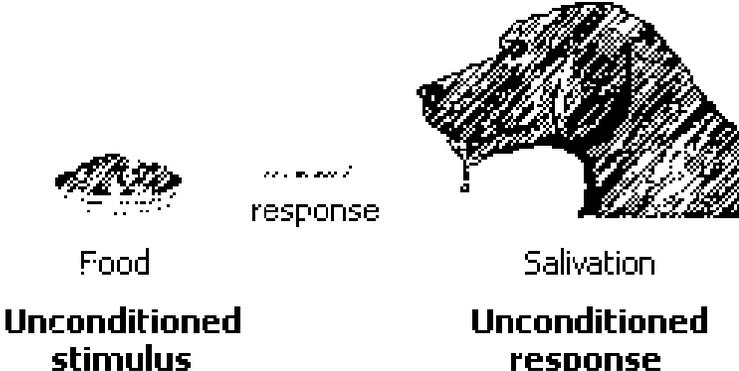
- *Psychological (methodological)* behaviorism: that we study the mind only from observable behavior
- *Philosophical (analytic)* behaviorism: Mental events, e.g. 'pain', mean nothing more than dispositions to behave in certain ways
 - minds and mental events are nothing more than behavior

Historical Timeline of Behaviorism

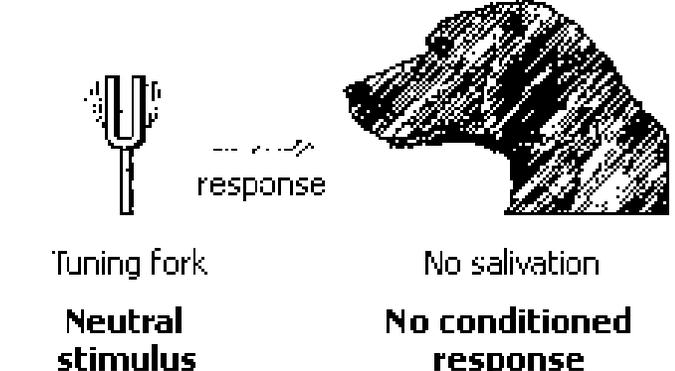
- 1920s – Logical Positivism – the only meaningful statements are those that can be verified [Carnap, Ayer]
 - analyze mental states in terms of behavior, because behavior is verifiable
- 1940 – 60s – Skinner's Psychological Behaviorism
- 1950s – 60s – Ryle's behaviorism

An Illustration of Behaviorism

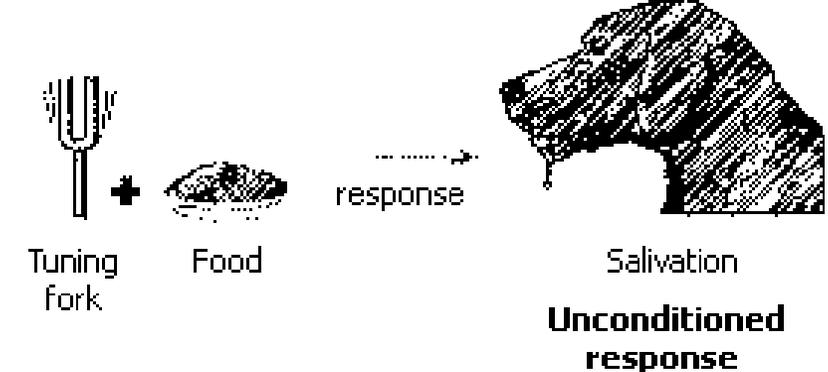
1. Before conditioning



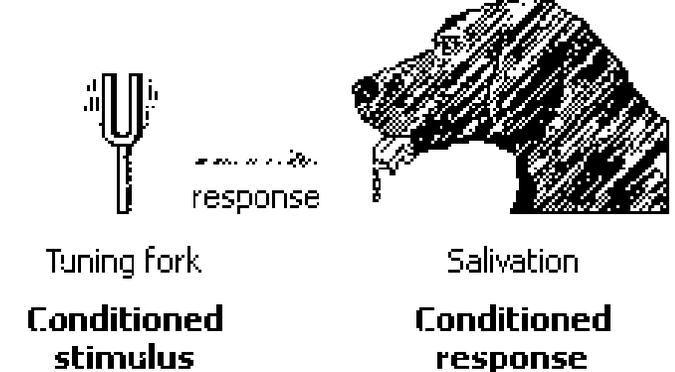
2. Before conditioning



3. During conditioning



4. After conditioning



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

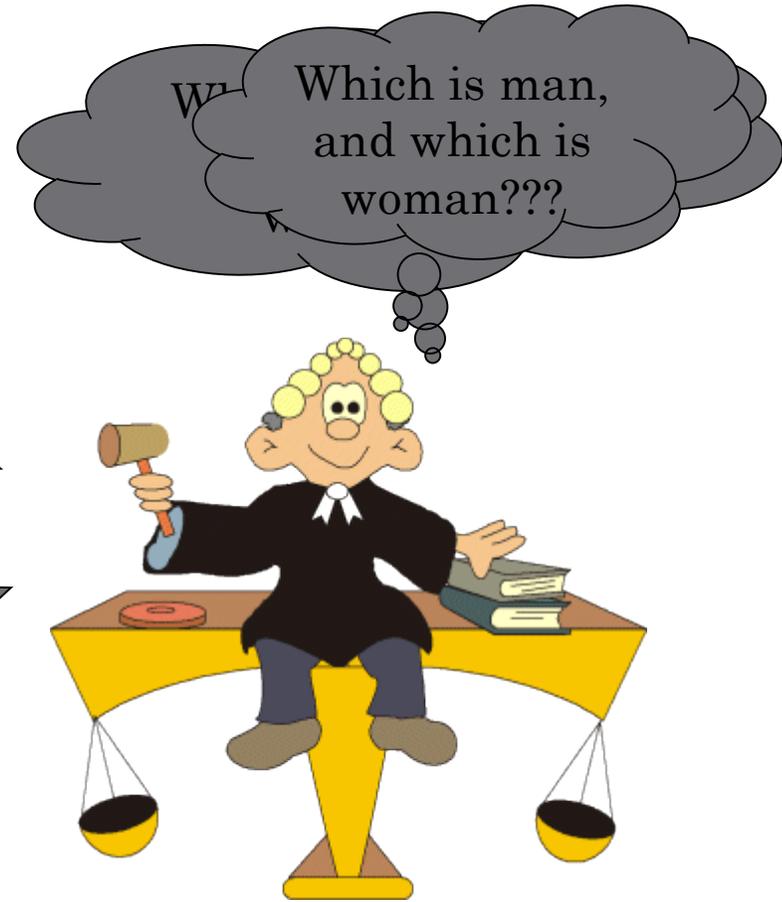
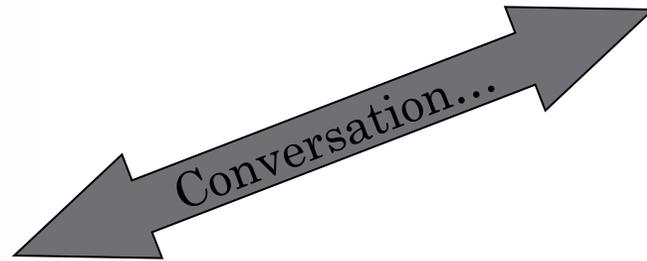
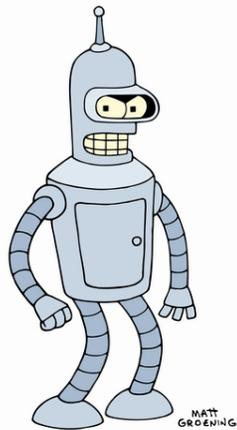
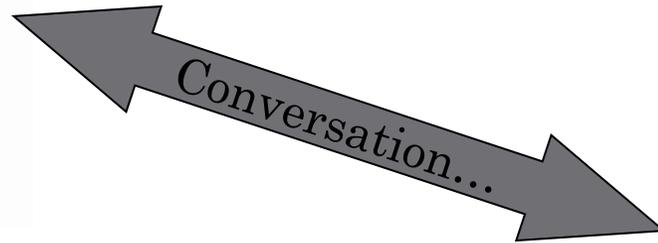
A Definition of Pain

- 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 beats 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.