The Philosophical Origins of Psychology

History of Psychology and Philosophy
- Focus: key historical figures from philosophy with an emphasis on their impact on psychology.
- Historical Period to be covered: 570BC - 1873AD = 2443yrs!
- From Pythagoras to J.S.Mill.
- Not an exhaustive list of philosophers.
- E.g. Albert Ellis (Rational-Emotive Behaviour Therapy—a mainstay of CBT) was heavily influenced by Stoics (345BC Greece-180AD Roman Empire).

Some Questions
- What are the philosophical origins of psychology?
- What is psychology?
- What is philosophy?
- What is the historical relationship between philosophy and psychology?

What is Psychology?
- “Psychology is the science of behaviour and the mind.”
- Behaviour refers to the observable actions of an individual person or animal.
- Mind refers to an individual’s sensations, perceptions, memories, thoughts…and other subjective experiences.
- As a science, psychology endeavours to answer questions through the systematic collection and logical analysis of objectively observable data.

What is Psychology?
- It is also a set of questions: the set of all questions answerable by scientific means—psychology as a subject matter (the various objects of study).
- It is also a set of procedures for answering questions: psychology as a methodology (the scientific method etc.).
- It is also a product of history.
Philosophical History of Psychology

- Psychology as a science is a relatively recent invention (1879).
- But people have wondered about the nature of mind since some of the earliest days of recorded history.
- Task: to look at influence of philosophers on the development of psychology; i.e. philosophy’s influence on both the subject matter and methodology of psychology.

What is Philosophy?

We can also conceive of philosophy as:
1. a subject matter; and
2. a methodology.

Philosophy as a Subject Matter
- Metaphysics
- Epistemology (Theory of Knowledge)
- Ethics (& Social Political Theory)
- Logic

Philosophy as a Methodology
- One view is that philosophy studies the same things— the same world—as, for example, scientists do, but that they do so in a different, and complementary way.
- Scientists draw conclusions from empirical observations of the world, whereas philosophers emphasize rational arguments (and logic) to justify claims about the world.
- This becomes more evident when we look at pre-scientific philosophy.
- This does not mean that philosophers are not interested in empirical results.

What is Philosophy?

- Metaphysics is the study of what exists.
- Metaphysicians wonder what objects exist in the universe; what their relations are to one another; what they are composed of...
- Some metaphysical questions…
  - What exists?
  - Are things made of one substance or many?
  - What is the nature of mind?
  - What is the place of mind in the natural world? (mind/body problem)
What is Philosophy?

- Epistemology is the study of knowledge.
- Epistemologists wonder what knowledge is; how we go about attaining it; what are the limits of knowledge (i.e. what can we know)…
- Some epistemological questions:
  - What can we know?
  - Are our perceptions a reliable source of knowledge?
  - How ought we go about gaining knowledge?
  - How can we know the nature of mind?
  - How can we scientifically study something (i.e. the mind) that is unobservable?

What is the Relationship Between Psychology and Philosophy?

There are two reasons that the history of philosophy is of interest to psychologists.
1. It has been a source of ideas regarding the mind and behaviour: i.e. it has influenced the subject matter of psychology.
2. It has influenced the methodology of psychology: e.g. the development of empiricist thought and the scientific method.

What is the Relationship Between Psychology and Philosophy?

- Ideas evolve over time, with individual thinkers contributing to this ongoing development.
- While we will focus on individuals, what we are interested in is the intellectual history.
Pythagoras

- Lived 570-495 BC.
- Greek mathematician and philosopher.
- Mathematics as a deductive demonstrative science begins with him.
- Known for his famous theorem.
- Mythic as well as a real character in history.
- Founded a semi-secret society in Italy (the Pythagoreans).
- Russell describes Pythagoras as one of the most intellectually important men that ever lived.

Pythagoras

- Mathematics, Music and Nature
  - Pythagoras is famous for saying that "all things are numbers."
  - According to this view, nature obeys and reflects the laws of numbers: that mathematics is the structure of reality.
  - It is said that Pythagoras first came to this conclusion listening to a blacksmith's hammers: light \(\rightarrow\) high sounds; heavy hammers produced low sounds (though this is disputed).

Pythagoras

- The same correlation exists between the length of the plucked strings and the sound they produce.
- Music is essentially mathematical.
- The discovery of the musical concords (octave, fifth, fourth), which are essentially simple mathematical ratios—1:2, 2:3, 3:4 respectively—is attributed to Pythagoras.

Pythagoras

- Thus, the discovery of the mathematical nature of music provides one source of evidence that nature is mathematical for P.
- Another source is the presence of mathematical shapes, which can be expressed numerically, throughout nature.
- This led P to think that everything is numbers and that mathematics unified all things.

Pythagorean Opposites

- In Pythagoras' metaphysics we see a return to the Ionic (Thales, Anaxiemenes, Hericlitus) principle of opposites.
- The elements basic elements earth, water, air and fire are created by mixtures of the four fundamental opposites: hot, cold, wet and dry (e.g. earth is cold and dry, water cold and wet...)
- The world is made up by mixtures of these elements: by mixing opposites, where opposites are always understood to be in tension.
Pythagoras

• Pythagoras understood the opposites mathematically: *unity* (or order) was one pole while *multiplicity* (or chaos) was the other.
• The objects we see (various forms of life) are the result of these opposing forces achieving a proper proportion or *harmony*, like that found in music.

Pythagoras

The Music of the Spheres

• There were either 7 or 8 notes in a Greek musical scale, depending on which kind (conjunct or disjunct).
• Conveniently, there were either seven or eight heavenly bodies, depending whether you included the fixed stars or not: Moon, Sun, Mars, Mercury, Venus, Jupiter, Saturn and the fixed stars.

Pythagoras

• Carried away by his enthusiasm for having discovered the mathematical basis of musical harmonies, and convinced that all of nature was to be explained by mathematics and music, Pythagoras thought the heavenly bodies produced a kind of music.
• The rotating spheres each emit a note, and these notes collectively form a scale.
• So, the rotation of the planets produced a kind of harmonious music.

Pythagoras

What does any of this have to do with psychology?

• *Harmony* means ‘attunement.’
• The word is a technical term in shipbuilding and it means the right adjustment of timbers to each other to make a vessel watertight and seaworthy.
• From there it is applied to adjusting the tensions of the strings of a lyre: so *harmony* is the right adjustment of the entirely material or physical strings.

Pythagoras

• What the soul or mind is, is nothing other than the proper adjustment (attunement/proportion) of the various elements of animal anatomy—like tuning of a lyre.
• Given P’s mathematical view about nature, the soul, then, is just the numerical harmony of the body.
• This is an interesting forerunner to modern materialist theories of mind.
• Incidentally, only the properly tuned mind can here the music of the spheres.

Pythagoras

More on Mind

• The soul has three parts: reason, intelligence and desire (Baldwin, 1913).
• The first of these, the reason, is peculiar to humans; animals have the other two.
• This is an early attempt at classifying mental powers or faculties; but it goes no further than this.
• Pythagoras also had a theory of metempsychosis (reincarnation), which suggests the separation of soul (mind) and body.
• But this view seems to be contradictory to his view about the nature of the mind.
Pythagoras

**Pythagoras and Methodology**
- In Pythagoras we also find a division between the world of sensible experience (appearance) and the 'real' world, the world of mathematics (reality).
- "Mathematical knowledge appeared to certain, exact, and applicable to the sensible world" (Russell, 1945).
- It was obtained merely by thinking, without observation.
- Thought to supply an ideal from which every-day empirical knowledge fell short.

Pythagoras

- In this way, thought was believed to be superior to sense, and thus a better way to gain knowledge about the world.
- This is an early form of the perennial tension between rationalism and empiricism: the extent to which knowledge is dependent on sense experience (observation).

Pythagoras

- Rationalism: the belief that reason is the source of our concepts and knowledge/justification—that reason our primary means of gaining knowledge about the world.
- Empiricism: the belief that sense experience is the ultimate source of all our concepts and knowledge.
- Theory vs. observation distinction.
- Theoretical vs. Atheoretical Psychology.
- Parallels in the nature vs. culture debate.
- And behaviourism vs. Cognitivism.

Plato

- Lived 427-347 BC.
- Student of Socrates.
- Most of what we know about Socrates comes through Plato and his famous 'Socratic dialogues'.
- Established the first Academy (approx. 385 BC). An institution of higher learning.
- The teacher of Aristotle.
- One of the most famous and most cited philosophers of all time.
- The entirety of Western philosophy is but a footnote to Plato (Whitehead, 1933).

Plato

- The Forms
  - Plato too was beguiled by the perfection found in mathematics.
  - E.g. when we understand the rule that the sum of the angles in a triangle are equal to two right angles, we can apply this to any and all triangles.
  - For Plato, this didn't require knowledge of any particular triangle, rather it is knowledge of the property of triangularity.
  - No actual triangle is exactly triangular, but only approximately so.
Plato

- Triangularity is a universal.
- A universal is a characteristic or property that may be possessed by more than one object (e.g. redness).
- Here we see a distinction between individual things (e.g. the redness of a particular apple) and what they have in common (i.e. the universal).
- This is the ancient forerunner to the notion of a category or concept.

Plato

- Plato gives universals the name *eidos*, usually translated as Forms or Ideas.
- The Forms as a whole make up a distinct realm of existence from the natural world.
- They are changeless eternal entities (like numbers).
- In contrast, the material objects of sense experience are always changing, taking on new characteristics, coming in and out of existence.
- E.g. the beauty of a painting.

Plato

- For Plato, material objects become the kinds of objects they are (e.g. beautiful, round, yellow) by *partaking or resembling* the Forms to some extent.
- They are imperfect resemblances of their corresponding Form.

The Forms

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Plato’s Cave

- Our senses only inform us of the material world around us and thereby give us only fleeting glimpses of the Forms.
- Only the intellect or the soul can acquire genuine knowledge of what is eternal and unchanging by coming to know the Forms directly.
- This is achieved through reason and reflection as in mathematics and philosophical debate.

Plato’s Cave

- This distinction between the appearances of the material world and the reality of the realm of the forms is given most clearly by Plato’s Allegory of the Cave (Republic 514A-520A).
- Plato likens people untutored in the Theory of Forms to prisoners chained in a cave, unable to turn their heads.
The Cave

When the prisoners are released, they can turn their heads and see the real objects. Then they realize their error. We are in the same situation with regards to the Forms. The material world is the shadows and the real world is that of the Forms. The way to break free of our bonds is through the light of reason: using reflective understanding (the intellect) to grasp the Forms with our minds.

Plato

Here again we see the early tensions between rationalism and empiricism. Plato was clearly a rationalist. Experience is not enough to account for our knowledge of the world. The intellect is the true guide. This view is echoed in contemporary psychology in the cognitive science revolution.

Plato’s Problem

One of the principle arguments Chomsky uses to justify the existence of a language faculty and universal grammar is essentially Platonic. Poverty of Stimulus Argument: the linguistic inputs a child receives seem insufficient to account for the child’s ability to acquire and use language. Chomsky refers to this as Plato’s Problem. In order to explain linguistic behaviour we have to suppose innate knowledge of language (universal grammar). In this sense, Chomsky is a rationalist.

Plato’s Conception of the Mind/Soul

Plato was the first to articulate a detailed theory of mind and its relation to the body. In the Phaedo, he defends a version of mind/body dualism. This is the view that the mind is in some way nonphysical or immaterial, and hence a different kind of substance than the body—that mind and body are distinct. Also believed that the soul was an animating principle (psyche)—that which brings life.

Innate Knowledge

Plato also believed knowledge to be largely innate. To understand this view we must first get clear about three things:

- Plato’s conception of the soul/mind
- the immortality of the soul, and
- the doctrine of recollection
Plato

• This view is developed in more detail in the *Republic*, where the soul is divided into three faculties.
• The soul and the body are held to be in a kind of opposition with one another.
• Cultivating the body hinders one's well being.
• One should pursue a life of understanding.
• The soul is the 'real' person, in contrast to the material body and the senses.

Plato

• For Plato, the soul is the seat of reason: it is the rational part of us, with irrationality stemming from the body.
• The soul experiences different states of consciousness due to the influence of the body on the soul: the senses produce their corresponding sensations and bodily injury produces pain.
• For Plato the soul can only be seat of reason and knowledge if it is distinct from the body—recall the Allegory of the Cave.

Plato

**Immortality of the Soul**

• Plato believed that the soul was immortal.
• This becomes part of the foundation for his belief that knowledge is innate.
• For if the soul was not immortal then knowledge might be acquired.
• *The cyclical argument*: opposites come only to be from their opposites.

Plato

• What comes to be larger only comes from being smaller...colder from hotter.
• Since being dead is the opposite of being alive, it follows that life and death come from one another—living things come from dead things and vice versa.
• But if this is true, and the soul is the source of life, then the soul must always exist somewhere.

Plato

**The Doctrine of Recollection**

• The Doctrine of Recollection and the immortality of the soul are interdependent thesis.
• One argument for the immortality of the soul is based on the doctrine of recollection.
• What is the Doctrine of Recollection?

Plato

• For Plato, learning was nothing but recollection: that knowledge of the universals is born within us and that we have merely forgotten it.
• This is the innate knowledge thesis.
• The best demonstration of this idea comes from the example of the slave-boy in the *Meno*.
• In this dialogue, Socrates aims to show Meno that a slave-boy, ignorant of geometry, already knows the Pythagorean theorem.
Plato

• Socrates poses a geometric problem to the slave boy that requires the Pythagorean theorem to solve.
• By engaging in a *dialectic* with the slave-boy, Socrates leads the boy to the appropriate solution, supposedly without teaching him.
• This is taken as a demonstration that the knowledge was already in the slave-boy and that by engaging in a dialectic he was able to coax the knowledge out.

Plato

• Moreover, this knowledge must have come from before birth, since the slave-boy could not have learned it!
• Hence, the soul must be immortal.
• The idea was that before birth soul is in contact with the Forms (exists in the realm of the Forms).
• This is how it comes to attain its knowledge.
• It is in this sense that knowledge is innate.

Plato

• We see in Plato the beginnings of many modern ideas about the mind.
• Mind/body dualism.
• A theory of learning.
• A theory of memory.
• A theory of cognition.
• Anticipation of the nature/nurture debate.
• An early view of concepts/categorization.
• An early version of the tension between rationalism and empiricism—a view about the proper methodology for investigation.

Next Class

• Aristotle and Aquinas.
• The beginning of the scientific revolution.