A (Very) Brief Introduction to Epistemology
Lecture 2

Palash Sarkar

Applied Statistics Unit
Indian Statistical Institute, Kolkata
India
palash@isical.ac.in



Immanuel Kant (1724–1804)

- The central figure in modern philosophy.
- Credited with synthesizing early modern rationalism and empiricism.
  - But, there are people who strongly disagree.
- Set the agenda for much of later philosophy.
- Major works.
  - The Critique of Pure Reason (1781, 1787).
    - An investigation into the structure of reason.
    - Makes epistemology central to philosophy.
    - Other philosophical problems can be tackled by understanding the sources and limits of knowledge.
  - The Critique of Practical Reason (1788).
    - On ethics.
  - The Critique of the Power of Judgment (1790).
    - On aesthetics and teleology.



Immanuel Kant (1724–1804)

- The central figure in modern philosophy.
- Credited with synthesizing early modern rationalism and empiricism.
  - But, there are people who strongly disagree.
- Set the agenda for much of later philosophy.
- Major works.
  - The Critique of Pure Reason (1781, 1787).
    - An investigation into the structure of reason.
    - Makes epistemology central to philosophy.
    - Other philosophical problems can be tackled by understanding the sources and limits of knowledge.
  - The Critique of Practical Reason (1788).
    - On ethics.
  - The Critique of the Power of Judgment (1790).
    - On aesthetics and teleology.



Immanuel Kant (1724–1804)

- The central figure in modern philosophy.
- Credited with synthesizing early modern rationalism and empiricism.
  - But, there are people who strongly disagree.
- Set the agenda for much of later philosophy.
- Major works.
  - The Critique of Pure Reason (1781, 1787).
    - An investigation into the structure of reason.
    - Makes epistemology central to philosophy.
    - Other philosophical problems can be tackled by understanding the sources and limits of knowledge.
  - The Critique of Practical Reason (1788).
    - On ethics.
  - The Critique of the Power of Judgment (1790).
    - On aesthetics and teleology.



Critique of Pure Reason

- Our understanding of the external world is based on both experience and a priori concepts.
- Two types of propositions.
  - Analytic proposition: a proposition whose predicate concept is contained in its subject concept.
    - All bachelors are unmarried. All bodies take up space.

    These are true by nature of the meaning of the words involved; A grasp of the language is all that is required to understand such propositions.
  - Synthetic proposition: a proposition whose predicate concept is not contained in its subject concept.
    - All bachelors are happy. All bodies have weight.

    Tells us something about the world; Truth or falsehood is based on something outside of their linguistic content.



Critique of Pure Reason

- Our understanding of the external world is based on both experience and a priori concepts.
- Two types of propositions.
  - Analytic proposition: a proposition whose predicate concept is contained in its subject concept.
    - All bachelors are unmarried. All bodies take up space.

    These are true by nature of the meaning of the words involved; A grasp of the language is all that is required to understand such propositions.
  - Synthetic proposition: a proposition whose predicate concept is not contained in its subject concept.
    - All bachelors are happy. All bodies have weight.

    Tells us something about the world; Truth or falsehood is based on something outside of their linguistic content.



Critique of Pure Reason

- Our understanding of the external world is based on both experience and a priori concepts.
- Two types of propositions.
  - Analytic proposition: a proposition whose predicate concept is contained in its subject concept.
    - All bachelors are unmarried. All bodies take up space.

    These are true by nature of the meaning of the words involved; A grasp of the language is all that is required to understand such propositions.
  - Synthetic proposition: a proposition whose predicate concept is not contained in its subject concept.
    - All bachelors are happy. All bodies have weight.

    Tells us something about the world; Truth or falsehood is based on something outside of their linguistic content.



Synthetic Statements

- Synthetic statements can be a priori.
  - Empiricists such as Hume argued that all synthetic statements required experience in order to be known.
- Elementary arithmetic is synthetic and a priori; it provides new knowledge.
  - Consider $5 + 7 = 12$.
  - Nothing in 5 or 7 which tells us about 12.
  - So, $5 + 7 = 12$ tells us something new about the world.
  - It is a priori (not coming from experience), but, at the same time it is synthetic (provides new knowledge).



Experience, Perception and A Priori Knowledge

Experience is based both upon the perception of external objects and a priori knowledge.

- The external world provides those things which we sense.
- It is our mind that processes this information about the world and allows us to comprehend it.
- Our mind supplies the conditions of space and time to experience objects.
- The concepts of the mind (understanding) and the perceptions or intuitions that garner information from phenomena (sensibility) are synthesized by comprehension.

> *"Thoughts without content are empty, intuitions without concepts are blind."*



Experience, Perception and A Priori Knowledge

Experience is based both upon the perception of external objects and a priori knowledge.

- The external world provides those things which we sense.
- It is our mind that processes this information about the world and allows us to comprehend it.
- Our mind supplies the conditions of space and time to experience objects.
- The concepts of the mind (understanding) and the perceptions or intuitions that garner information from phenomena (sensibility) are synthesized by comprehension.

> *"Thoughts without content are empty, intuitions without concepts are blind."*



Pragmatism

Charles Sanders Peirce (1839–1914), William James (1842–1910) and John Dewey (1859–1952).

- An ideology or proposition can be said to be true if and only if it works satisfactorily.
- The meaning of a proposition is to be found in the practical consequences of accepting it.
- Impractical ideas are to be rejected.
- The truth of an idea needed to be tested to prove its validity.

Recall: a formulation of the pragmatic maxim by Peirce:

> *"In order to ascertain the meaning of an intellectual conception one should consider what practical consequences might conceivably result by necessity from the truth of that conception; and the sum of these consequences will constitute the entire meaning of the conception."*



Pragmatism

Charles Sanders Peirce (1839–1914), William James (1842–1910) and John Dewey (1859–1952).

- An ideology or proposition can be said to be true if and only if it works satisfactorily.
- The meaning of a proposition is to be found in the practical consequences of accepting it.
- Impractical ideas are to be rejected.
- The truth of an idea needed to be tested to prove its validity.

Recall: a formulation of the pragmatic maxim by Peirce:

> *"In order to ascertain the meaning of an intellectual conception one should consider what practical consequences might conceivably result by necessity from the truth of that conception; and the sum of these consequences will constitute the entire meaning of the conception."*



Pragmatism

Charles Sanders Peirce (1839–1914), William James (1842–1910) and John Dewey (1859–1952).

- An ideology or proposition can be said to be true if and only if it works satisfactorily.
- The meaning of a proposition is to be found in the practical consequences of accepting it.
- Impractical ideas are to be rejected.
- The truth of an idea needed to be tested to prove its validity.

Recall: a formulation of the pragmatic maxim by Peirce:

> *"In order to ascertain the meaning of an intellectual conception one should consider what practical consequences might conceivably result by necessity from the truth of that conception; and the sum of these consequences will constitute the entire meaning of the conception."*



Epistemology of Pragmatism

- Heavily influenced by Charles Darwin.
  - Schopenhauer had earlier applied evolution to theories of knowledge.
  - What is useful to an organism to believe might differ wildly from what is true.
  - There is an absolute truth beyond any sort of inquiry organisms use to cope with life.
- Pragmatism challenges this idealism.
  - Provides an “ecological” account of knowledge.
  - Inquiry is how organisms can get a grip on their environment.
  - Real and true are functional labels in inquiry and cannot be understood outside of this context.
- Pragmatism and belief.
  - The practical consequences of a belief are relevant to deciding its truth value.
  - A belief only becomes true when it leads an intelligent organism to succeed in the struggle with the surrounding environment.



Epistemology of Pragmatism

- Heavily influenced by Charles Darwin.
  - Schopenhauer had earlier applied evolution to theories of knowledge.
  - What is useful to an organism to believe might differ wildly from what is true.
  - There is an absolute truth beyond any sort of inquiry organisms use to cope with life.
- Pragmatism challenges this idealism.
  - Provides an “ecological” account of knowledge.
  - Inquiry is how organisms can get a grip on their environment.
  - Real and true are functional labels in inquiry and cannot be understood outside of this context.
- Pragmatism and belief.
  - The practical consequences of a belief are relevant to deciding its truth value.
  - A belief only becomes true when it leads an intelligent organism to succeed in the struggle with the surrounding environment.



Epistemology of Pragmatism

- Heavily influenced by Charles Darwin.
  - Schopenhauer had earlier applied evolution to theories of knowledge.
  - What is useful to an organism to believe might differ wildly from what is true.
  - There is an absolute truth beyond any sort of inquiry organisms use to cope with life.
- Pragmatism challenges this idealism.
  - Provides an “ecological” account of knowledge.
  - Inquiry is how organisms can get a grip on their environment.
  - Real and true are functional labels in inquiry and cannot be understood outside of this context.
- Pragmatism and belief.
  - The practical consequences of a belief are relevant to deciding its truth value.
  - A belief only becomes true when it leads an intelligent organism to succeed in the struggle with the surrounding environment.



Ludwig Wittgenstein (1889–1951)

Tractatus. Studies the relationship between language and the world.

- Language has an underlying logical structure.
- This structure provides the limits of what can be said meaningfully.
- This also limits what can be thought.
- As a result, the limits of langauge are also the limits of thoughts.
- Philosophy attempts to say the unsayable and by extension the unthinkable.

> *"The book will, therefore, draw a limit to thinking, or rather – not to thinking, but to the expression of thoughts; for, in order to draw a limit to thinking we should have to be able to think both sides of this limit (we should therefore have to be able to think what cannot be thought)."*

> *"What we cannot speak about we must pass over in silence."*



Ludwig Wittgenstein (1889–1951)

Tractatus. Studies the relationship between language and the world.

- Language has an underlying logical structure.
- This structure provides the limits of what can be said meaningfully.
- This also limits what can be thought.
- As a result, the limits of langauge are also the limits of thoughts.
- Philosophy attempts to say the unsayable and by extension the unthinkable.

> *"The book will, therefore, draw a limit to thinking, or rather – not to thinking, but to the expression of thoughts; for, in order to draw a limit to thinking we should have to be able to think both sides of this limit (we should therefore have to be able to think what cannot be thought)."*

> *"What we cannot speak about we must pass over in silence."*



Ludwig Wittgenstein (1889–1951)

Tractatus. Studies the relationship between language and the world.

- Language has an underlying logical structure.
- This structure provides the limits of what can be said meaningfully.
- This also limits what can be thought.
- As a result, the limits of langauge are also the limits of thoughts.
- Philosophy attempts to say the unsayable and by extension the unthinkable.

> *"The book will, therefore, draw a limit to thinking, or rather – not to thinking, but to the expression of thoughts; for, in order to draw a limit to thinking we should have to be able to think both sides of this limit (we should therefore have to be able to think what cannot be thought)."*

> *"What we cannot speak about we must pass over in silence."*



Ludwig Wittgenstein (1889–1951)

Tractatus. Studies the relationship between language and the world.

- Language has an underlying logical structure.
- This structure provides the limits of what can be said meaningfully.
- This also limits what can be thought.
- As a result, the limits of langauge are also the limits of thoughts.
- Philosophy attempts to say the unsayable and by extension the unthinkable.

> *"The book will, therefore, draw a limit to thinking, or rather – not to thinking, but to the expression of thoughts; for, in order to draw a limit to thinking we should have to be able to think both sides of this limit (we should therefore have to be able to think what cannot be thought)."*

> *"What we cannot speak about we must pass over in silence."*



Epistemology in Indian Philosophy

(Some Very Brief Ideas)



Indian Philosophical Systems

- Nāstika: does not accept the infalliblity of the Vedas.
  - Buddhist, Jaina, Cārvāka.
- Āstika. accepts the infallibility of the Vedas.
  - Sāmkhya (Kapila); Yoga (Pãtañjali).
  - (Pũrva) Mímāmsā (Jaimini).
    - Systematized code of principles in accordance with which the Vedic texts are to be interpreted.
  - Vedānta or Uttara Mīmāmsā.
    - Vedānta means “end of the Veda”, i.e, the Upaniṣads.
    - Vedānta sũtras (Bādarāyana): summarized statement of the general views of the Upaniṣads.
    - Bhagavad Gita: not considered to be a purely Vedantic text, but, has played a major role in Vedantic thought.
  - Nyāya (Gautama); Vaiśeṣika (Kanāda or Ulũka).
    - Nyāya: cultivation of logic as an art.
    - Vaiśeṣika: metaphysics and physics.



Indian Philosophical Systems

- Nāstika: does not accept the infalliblity of the Vedas.
  - Buddhist, Jaina, Cārvāka.
- Āstika. accepts the infallibility of the Vedas.
  - Sāmkhya (Kapila); Yoga (Pãtañjali).
  - (Pũrva) Mímāmsā (Jaimini).
    - Systematized code of principles in accordance with which the Vedic texts are to be interpreted.
  - Vedānta or Uttara Mīmāmsā.
    - Vedānta means “end of the Veda”, i.e, the Upaniṣads.
    - Vedānta sũtras (Bādarāyana): summarized statement of the general views of the Upaniṣads.
    - Bhagavad Gita: not considered to be a purely Vedantic text, but, has played a major role in Vedantic thought.
  - Nyāya (Gautama); Vaiśeṣika (Kanāda or Ulũka).
    - Nyāya: cultivation of logic as an art.
    - Vaiśeṣika: metaphysics and physics.



Indian Philosophical Systems

- Nāstika: does not accept the infalliblity of the Vedas.
  - Buddhist, Jaina, Cārvāka.
- Āstika. accepts the infallibility of the Vedas.
  - Sāmkhya (Kapila); Yoga (Pãtañjali).
  - (Pũrva) Mímāmsā (Jaimini).
    - Systematized code of principles in accordance with which the Vedic texts are to be interpreted.
  - Vedānta or Uttara Mīmāmsā.
    - Vedānta means “end of the Veda”, i.e, the Upaniṣads.
    - Vedānta sũtras (Bādarāyana): summarized statement of the general views of the Upaniṣads.
    - Bhagavad Gita: not considered to be a purely Vedantic text, but, has played a major role in Vedantic thought.
  - Nyāya (Gautama); Vaiśeṣika (Kanāda or Ulũka).
    - Nyāya: cultivation of logic as an art.
    - Vaiśeṣika: metaphysics and physics.



Indian Philosophical Systems

- Nāstika: does not accept the infalliblity of the Vedas.
  - Buddhist, Jaina, Cārvāka.
- Āstika. accepts the infallibility of the Vedas.
  - Sāmkhya (Kapila); Yoga (Pãtañjali).
  - (Pũrva) Mímāmsā (Jaimini).
    - Systematized code of principles in accordance with which the Vedic texts are to be interpreted.
  - Vedānta or Uttara Mīmāmsā.
    - Vedānta means “end of the Veda”, i.e, the Upaniṣads.
    - Vedānta sũtras (Bādarāyana): summarized statement of the general views of the Upaniṣads.
    - Bhagavad Gita: not considered to be a purely Vedantic text, but, has played a major role in Vedantic thought.
  - Nyāya (Gautama); Vaiśeṣika (Kanāda or Ulũka).
    - Nyāya: cultivation of logic as an art.
    - Vaiśeṣika: metaphysics and physics.



Indian Philosophical Systems

- Nāstika: does not accept the infalliblity of the Vedas.
  - Buddhist, Jaina, Cārvāka.
- Āstika. accepts the infallibility of the Vedas.
  - Sāmkhya (Kapila); Yoga (Pãtañjali).
  - (Pũrva) Mímāmsā (Jaimini).
    - Systematized code of principles in accordance with which the Vedic texts are to be interpreted.
  - Vedānta or Uttara Mīmāmsā.
    - Vedānta means “end of the Veda”, i.e, the Upaniṣads.
    - Vedānta sũtras (Bādarāyana): summarized statement of the general views of the Upaniṣads.
    - Bhagavad Gita: not considered to be a purely Vedantic text, but, has played a major role in Vedantic thought.
  - Nyāya (Gautama); Vaiśeṣika (Kanāda or Ulũka).
    - Nyāya: cultivation of logic as an art.
    - Vaiśeṣika: metaphysics and physics.



Inference in Cārvāka

- Did not believe in the validity of inference.
- Nothing is trustworthy other than what can be directly perceived.
- It is impossible to determine whether the reasoning has depended on some extraneous condition, the absence of which might destroy the inference.
- If some inference comes out to be true, then it is only an accidental fact and there is no certitude about it.



Knowledge in Buddhism

Sautrāntika doctrine of Buddhism (Dharmakīrtti and Dharmmottara): the only account of systematic Buddhist logic that is available.

- The main test of true knowledge is that it helps us to attain our purpose.
- Knowledge is not to be valued for its own sake.
- Perception is a presentation, which is generated by the objects alone, unassociated by any names or relations.
- A form of inductive inference is admitted.



Jaina Epistemology

- Reality is multifaceted.
  - No finite set of statements can capture the entire truth about the objects they describe.
- Valid sources of knowledge (pramana): includes sense perception, valid testimony and the state of omniscience of a perfected soul.
- Inference is not included as a valid source of knowledge.
  - Inference is implied in the pramana that provides the premises for inference, e.g., inference from knowledge gained by testimony is itself knowledge gained by testimony.
  - Later Jain thinkers added inference as a separate category.
- Since reality is multi-faceted, none of the pramanas gives absolute or perfect knowledge. Consequently, all knowledge is only tentative and provisional.



Some Aspects of Āstika Epistemology

- Valid sources of knowledge.
- Nature of knowledge.
- Causation.
- Perception and inference.
  - There does not appear to have been a clear-cut distinction between deductive and inductive inferences.



Pramāṇas of Nyāya

Pramāṇas: valid sources of knowledge.

- Perception (admitted by Cārvākas).
- Perception and inference (admitted by Buddhists and Vaiśeṣeka).
- Perception, inference and testimony (admitted by Sāmkhya).
- Perception, inference, testimony and analogy (admitted by Nyāya).



Nature of Knowledge: Mīmāṃsā

- All knowledge involves the knower, the known object and the knowledge at the same identical moment.
  - Goes against the notion of objective knowledge.
- Relation to metaphysics of the “self”.



Entanglement

- Each school of thought has its own views on different issues related to knowledge.
- Arguments are forwarded to justify one's own position and refute opposing positions.
- Knowledge is investigated in connection with investigation of "self".
  - Acquisition of knowledge is not considered to be an end in itself.
- Bhagavad Gita mentions Jnâna Yoga.
  - Jnâna is knowledge as in "knowledge of the absolute".
  - This is different from knowledge as in "scientific knowledge".

