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UNIVERSITY OF NORTH BENGAL

MASTER OF ARTS -PHILOSOPHY

SEMESTER –I

WESTERN EPISTEMOLOGY

SOFT-CORE-103

BLOCK-1

UNIVERSITY OF NORTH BENGAL

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FOREWORD

The Self Learning Material (SLM) is written with the aim of providing simple and organized study content to all the learners. The SLMs are prepared on the framework of being mutually cohesive, internally consistent and structured as per the university's syllabi. It is a humble attempt to give glimpses of the various approaches and dimensions to the topic of study and to kindle the learner's interest to the subject

We have tried to put together information from various sources into this book that has been written in an engaging style with interesting and relevant examples. It introduces you to the insights of subject concepts and theories and presents them in a way that is easy to understand and comprehend.

We always believe in continuous improvement and would periodically update the content in the very interest of the learners. It may be added that despite enormous efforts and coordination, there is every possibility for some omission or inadequacy in few areas or topics, which would definitely be rectified in future.

We hope you enjoy learning from this book and the experience truly enrich your learning and help you to advance in your career and future endeavors.



WESTERN EPISTEMOLOGY

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BLOCK 1 : WESTERN EPISTEMOLOGY

Introduction to the Block

Unit 1 deals with Epistemology which means knowledge or science of knowledge and is more commonly called theory of knowledge. There are plenty of things we know or at least claim to know and the task of epistemology is to critically reflect upon the truth of such knowledge-claims. This takes us to think about the various concepts involved in epistemology.

Unit 2 deals with the Nature and definition of knowledge; belief and knowledge. We will explore what it means to say that someone knows, or fails to know something and how much do we, or can we know.

Unit 3 deals with the History of Western Epistemology and its chronological significance. It states how the theories of knowledge propounded by the great ancient Greek philosophers, like Socrates, Plato and Aristotle to counteract the skepticism of the time and how it took a turn to empiricism in Epicurus and the Stoics and ended up in a sort of mysticism in the NeoPlatonists.

Unit 4 deals with Gettier problem and responses and its implications. The Gettier problem, in the field of epistemology, is a landmark philosophical problem concerning our understanding of descriptive knowledge

Unit 5 deal with Gettier's Principals like The Justified-True-Belief Analysis of Knowledge, Gettier's Original Challenge, Some other Gettier Cases, The Basic Structure of Gettier Cases, The Generality of Gettier Cases, Attempted Solutions: Infallibility, Attempted Solutions: Eliminating Luck and etc. its importance in philosophy.

Unit 6 deals with Justification of knowledge-claim and epistemic decision. The theory of justification is a part of epistemology that attempts to understand the justification of propositions and beliefs.

Unit 7 deals with the nature and possibility of knowledge. A central problem in epistemology consists in the sceptical challenge which in a generalized manner casts doubt on our justifications for knowledge claims, thereby threatening the very possibility of knowledge.

UNIT 1: SCEPTICISM AND THE POSSIBILITY OF KNOWLEDGE

STRUCTURE

- 1.0 Objectives
- 1.1 Introduction
- 1.2 Skepticism
- 1.3 Justification
- 1.4 Foundationalism
- 1.5 Certainty
- 1.6 Truth
- 1.7 The Fundamental Assumption : The Universality of Truth
- 1.8 Let us sum up
- 1.9 Key Words
- 1.10 Questions for Review
- 1.11 Suggested readings and references
- 1.12 Answers to Check Your Progress

1.0 OBJECTIVES

Epistemology means knowledge or science of knowledge and is more commonly called theory of knowledge. In this unit we can able to know:

- To raises questions like, “What is knowledge?” or “What is it to know?”
- To know the fact “Can we have knowledge?” or “Can we be certain that we know?” Under what conditions can we said to know?
- To know how is it different from mere belief? Epistemology also raises questions such as, what are the sources of knowledge: Only perception and experience or also intellection and thinking? or what role does memory have in it?
- To know the question “Can we have knowledge?” does not mean that we do not know anything.

There are plenty of things we know or at least claim to know and the task of epistemology is to critically reflect upon the truth of such knowledge-claims. This takes us to think about the various concepts involved in epistemology. Some of the basic concepts of epistemology are knowledge, justification, certainty and truth.

1.1 INTRODUCTION

Anything that we come to know becomes knowledge and Epistemology is that branch of philosophy which studies knowledge. Many thinkers, both past and present, have concentrated on and spent all their time and energy reflecting on knowledge, many even tends to identify philosophy with epistemology. We could get an initial understanding of what knowledge is by analyzing the verb ‘to know’. When we analyze it we see that it could mean different things: sometimes it means “to recognize” or “to identify”, sometimes it would mean ‘to be acquainted with’. But there is also something common to them. To be clear to know is “to be aware that such and such is or is not the case”. Let us look at it in more detail. To be aware: means ‘to be conscious of’, ‘to be alert to’. We don’t need to go into any detailed analysis of awareness to see that awareness is ordinarily a bipolar concept. By this we mean that ordinarily awareness has a subject-object structure. It implies a duality of subject and object, of the knower and the known. Ordinarily, we always take an awareness to be an awareness of something. But it may also be noted that there are some who hold that there can also be pure consciousness. Many Indian schools of philosophy maintain this and they call ‘cit’ or ‘Caitanya’. It would be an interesting topic to discuss whether there can be such a state of “pure”, object-less awareness. But for our purpose, we shall take awareness here in its ordinary sense as involving an object, having a subject-object structure. And when so taken, it is to the subject pole of this structure that the term awareness applies. Such and such is (or is not) the case: Since we have taken awareness as a bipolar concept, this phrase indicates the objective pole of awareness. It denotes a fact of state of affairs, anything that one claims to know. We may also say that it is the content of awareness. When we say “Today is Monday”, our awareness that today is Monday is the

subjective pole whereas the content of that awareness is “today is Monday”. This is the objective pole. In the formula “S knows that...” the description that follows after “that” is the state of affairs that forms the object pole of awareness. Is or is not: This indicates a judgment, an affirmation or a negation. We see an object moving in the sky and we judge it as something: bird, an aeroplane, a kite etc. Such judgment is an essential element of what we mean by knowledge. Suppose I am given something in my hand, I can smell it and feel it, I can see its shape and colour, and yet I may not know what it is. It is only when I am able to say, “It’s a mango”, can I be said to know what it is. Of course, in the meantime I have come to know many things: e.g., that I am holding an object in my hand, that it is round in shape, that it is yellowish in colour, etc. But notice that all these involve judgments: it is the case that I am holding an object in my hand, that it is round etc. Thus we can say that knowledge always involves a judgment. On the other hand, the judgment involved in knowledge need not always be explicit. The fact that knowledge implicitly or explicitly involves a judgment (an assertion or denial) leads us to some further considerations about the nature of a judgment. We may make a judgment ‘internally’, to ourselves. This simply means that in the heart of hearts we are convinced that such and such is the case, irrespective of whether we say it to someone or not. When it is not expressed we have an unexpressed judgment. It remains our conviction; others are not likely to know anything about it. But we may choose to express our judgment. In that case our judgment is no longer an inward affair; it is available to others for their scrutiny. And the means by which it becomes available is language. An expressed judgment takes the form of a sentence (either oral or written) in language. This also means that in as much knowledge involves judgments theory of knowledge becomes intimately linked with problems of language and meaning.

1.2 SKEPTICISM

We know our lives are based on knowledge; another factor which adds to the importance of epistemology is the skepticism. The things which we claim could be countered with a question: Is it really so? Do we really

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know that such is the case? And this brings us to the point that no matter what is it that we claim to know it can always be countered with the question: “how do you know?” or “is it really so?” Take some examples: first from the area of perception: ordinarily our sense knowledge is reliable. But we also know of cases where our senses have deceived us and we have misjudged and claimed a piece of rope to be a snake; or other times when we judge against what we perceive, as in the case of a stick in water which I see as bent, but say that it is not really bent, only looks bent and so on... In a sense, it is skepticism regarding knowledge that gives rise to epistemology. Skepticism, in the ordinary sense, is the refusal to grant that there is any knowledge. It may say either that we lack knowledge or that even if we know we cannot be sure that we know. This fundamental doubt (sometimes, an explicit assertion) raised by skeptics regarding the possibility of knowledge forces us to raise such questions as: Is knowledge possible? And what makes knowledge possible? What reasons can be given for claiming that we know? In raising and trying to answer such questions we are already doing epistemology. Throughout the history of philosophy we find some or other form of skepticism raising its head and these can be traced to conflicting views of reality. The pre-Socratic philosophers generally did not pay much attention to problems of knowledge. They took the possibility of knowledge for granted and speculated more on cosmological problems. But they came up with conflicting theories: The Eleatics (PARMENIDES and ZENO) considered reality to be one and immutable whereas the Ionians (HERACLITUS) held the opposite view: that reality is change. The earlier Ionians held reality to be made up of earth or water or fire, whereas the Pythagorians held the essence of things to be numbers and numerical relations. These conflicting theories gave rise to the earliest form of philosophical skepticism propounded by the sophists (Protagoras and Gorgias). In modern philosophy we see Descartes concentrating exclusively on the problem of certain knowledge. He was not a skeptic but his whole philosophy is an attempt to overcome skepticism. We know from the history of philosophy that he begins with the problem: “Can I know anything for sure?” And this is a tradition that has remained with us till today. Descartes is rightly

considered the father of modern philosophy. Skepticism in an explicit form may be self-contradictory, but the difficulty is that skepticism need not always be so explicit. It is more an attitude and the fact is that there is a skeptic in all of us. All of us know that we know a lot of things, much of it that we have learned from others, mainly from our parents, teachers and elders. But there are moments when we begin to ask how much of what I have learned is true. It arises from ordinary facts of life. Sometimes we discover that things we thought we knew but found out that we were mistaken. Is it also the case with what we presently think we know? Therefore, just to assume that we know does not seem sufficient. What about the view that in our age, the age of science, we don't need to bother about epistemology because science tells us the truth? This again is quite a naïve view of science. If we are ardent admirers of modern science we may not want to question the truth of its findings but the fact is that the same sort of problems we find in our ordinary everyday knowledge is also found in science. At one time every one thought that the earth is flat and that the sun goes around it. Now we hear the same science tells us that such is not the case. In our own century we live with the revolution brought about the theories of Einstein's theory of relativity. Much of what we held to be true till now are put into question. Can we be sure that what we hold to be true today will not proved wrong tomorrow? Therefore, a blind reliance on the science of the day is no solution to the problem of knowledge either. Faced with this problem of divergent claims to truth we may take one of the three attitudes of dogmatism, skepticism, or critical acceptance. We may not want to take these divergent claims seriously and dogmatically believe that this and that (my religious view or the present scientific view for example, is the truth). The other extreme is to take these divergent claims very seriously and become skeptics ourselves. If we do not want to take either of these extreme positions, there is a third possibility. These divergent views concerning what is true and what is not true may lead us to take a critical look at knowledge. If we do take a critical attitude to knowledge we are already in the realm of epistemology, we are already doing epistemology.

Check Your Progress I

Note: a) Use the space provided for your answer

b) Check your answers with those provided at the end of the unit

1) What do you mean by knowledge?

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2) How do you explain the concept skepticism?

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1.3 JUSTIFICATION

Whatever we know has to be justified. Knowledge needs to be reasonable or justifiable. Epistemic justification is the process of giving reasons or of gathering evidence for a knowledge claim. To begin with, if we look at epistemic justification as it is traditionally done we can see two of its features. Let us take the case of Descartes, the father of modern epistemology. His demand for justification arose in the context of skepticism. He asked, can I justify or be sure- of this claim? The importance of this way of raising the question lies in the fact that it ties up justification with certainty. Indeed, justification becomes the process or activity of attaining certainty: of assuring oneself that one can be sure of one’s knowledge. And this is done by giving reasons or adducing evidence for our knowledge claim. The second feature relates to the structure of justification and this can also be seen by looking at the Cartesian practice. He begins by doubting all that we ordinarily take to be knowledge and keeps up with his methodic doubt until he comes across something that is indubitable, that which cannot be doubted. Upon

those indubitable truths he sought to build up all knowledge. In other words, in order to attain certainty for the body of knowledge we have, first get hold of those truths that are absolutely certain and then taking these as the firm foundations secure certainty for the rest. For this reason this manner of justification has come to be called foundationalism. Both these features of Cartesian epistemology have been maintained even to the present day; indeed, it has become that standard practice in epistemic justification to look at it in terms of attaining certainty and see the structure of justification in a foundational manner. This makes foundationalism and certainty important issues.

1.4 FOUNDATIONALISM

We saw how Descartes went about the task of justification: find out truths that are indubitable and deduce other truths from these. This is the rationalist procedure of justification. Besides Descartes, there are others like Spinoza and Leibnitz who are clear examples of such rational justification. Rationalists hold that the only source of sure knowledge is reason. We all know that senses sometimes deceive us and we make perceptual errors. In contrast $2+2 = 4$ can never be false. Therefore, they contend that all true and certain knowledge comes from our reason. They take mathematics as the model of knowledge and hold that certain knowledge is a priori. A priori means knowledge which is justified or known to be true independent of experience. On the other extreme we have the Empiricists who hold that all genuine knowledge comes from (genetic empiricism of Locke and Hume) or is justified by (justificatory empiricism of the logical positivists) sense experience. Of course, the difference between rationalists and empiricists consists in whether reason or sense experience is considered as the primary and most reliable source of knowledge. In spite of this difference there is one thing that is common to the empiricists and rationalists: both see knowledge in the manner of a house build upon foundations that are certain. Hence this view of justification is called Foundationalism. And this is the strategy that is traditionally followed in epistemology for the justification of knowledge-claims. The very term 'foundationalism' gives the idea of what is involved in this. It considers all our knowledge like a house. Just

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as a house needs a foundation that is firm and strong so too our knowledge is to be built on some basic truths which function as the foundation for the rest of our justified beliefs. According to foundationalism there are two types of beliefs: the ones that can be classified as certain knowledge and the ones that are less certain. The less certain are justified by the more certain ones. The foundationalist view of justification can be described more formally as follows: (1) There are two types of beliefs or truth: basic and non-basic; and (2) there is an asymmetrical or one-way relationship between them such that it is always the basic beliefs that justify the non-basic ones and not the other way. For Descartes these foundations were indubitable, self-evident truths like “I exist”, “whatever is distinctly and clearly perceived is true”, “nothing can be without a cause” etc. It is from these that he sought to justify our knowledge concerning the existence of God and the world. Descartes was a rationalist who took mathematics as the model for his philosophy and deduces his whole system from some basic principles. Similarly empiricists like Hume are as much foundationalists as Descartes. For them the foundations are our sense experience and not reason. Both the empiricism and rationalism are foundationalist in this sense. They differ only in what they consider to be the foundations: empiricists hold the data of experience to be foundational whereas the rationalist gives that role to innate ideas. The argument for foundationalism is very simple. If knowledge is to be reasonable and our beliefs justified, then those justified beliefs must be based on some other beliefs which are reasonable and they on further beliefs and so on. But ultimately this process of justification must end up in some beliefs that require no justification or are self-justified or self-evident. Or else, our knowledge would be like a house built on sand, beliefs that are themselves built on unjustified beliefs. Hence the view that a foundational structure is indispensable for epistemic justification.

1.5 CERTAINTY

We saw that the very manner in which the question of justification is traditionally raised in epistemology, i.e., in terms of foundations that are certain, ties up justification to the certainty accorded to beliefs. Certainty

or certitude is defined in scholastic philosophy as ‘the firm assent of the mind to the truth, based on evidence’. Assent here is not to be taken to mean as an act performed consciously here and now; it is rather a psychological state. The property of being certain is obviously a psychological property of persons in the sense that a person can be said to be certain with regard to a belief if s/he has no doubt at all about the truth of that proposition. Hence certitude can be defined as ‘the conviction that such and such is the case’. If knowledge is the awareness that such and such is the case, certitude adds to the strength of this awareness. But there is a problem here. Certainty as psychological state is subjective whereas normally we take truth to be objective. A person can be absolutely certain that such and such is the case, but in reality it may just be the opposite. That is to say that we can also be mistaken in our convictions. If so, can it really lead us to truth the objective state of affairs, irrespective of what I think is the case? This has made philosophers – hard headed as they are – feel uneasy with the psychological approach to certainty. Therefore, they have sought to distinguish the psychological sense of certainty from the epistemological sense. In the epistemological sense, certainty is the property of a proposition and not of a person. Such certainty is based on evidence. However, it is not easy to keep the two apart since certainty seems to be primarily a psychological concept. Hence the two are sought to be combined by saying that person has the right to be certain about a proposition just in case that proposition is warranted or is based on evidence. It is same idea that lies at the heart of the scholastic definition where they qualify their definition of certitude with the clause ‘based on evidence’.

Check Your Progress 2

Note: a) Use the space provided for your answer

b) Check your answers with those provided at the end of the unit.

- 1) Clarify the terms epistemic justification and foundationalism.

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2) How do you explain certainty?

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1.6 TRUTH

Truth to be the correspondence of what is asserted (or denied) with what is the case. For example, if I say, “It is raining outside”, the sentence would be true if it corresponds to facts, i.e., if it is indeed raining outside. Or if it is said “There are 100 students in the class”, it would be true if there are indeed 100 students in the class. Truth is a characteristic of knowledge. This can be analysed by taking a concrete example. Suppose I believe that there are 100 students in the class and accordingly I make a judgment to that effect; but after counting I find that there are only 99. I make enquiries to see if there are any absentees and find none. Consider now the judgment I made. Will it be appropriate for me to say that I knew that there are hundred students in the class? Rather will it not be more appropriate to say that I thought there were 100 students in the class, but as a matter of fact I was mistaken and therefore, I did not really know? Strictly speaking, therefore, knowledge is knowledge only if it is true. In other words, truth is ordinarily taken to be a necessary characteristic of knowledge, and we shall take knowledge to be such.

But in Indian Philosophy there is a distinction made between *j na* and *pram*. *j na* may be translated as cognition. We might be true, false or doubtful and may apply even to mere conceptual thinking (*kalpan*). *Pram*, in contrast, applies only to true cognition. Since we have taken

truth to be essential characteristic of knowledge it is only that which can be knowledge in the strict sense. Truth, we saw, is an essential characteristic of knowledge. But what is it for something to be true? The notion of 'truth' seems so obvious as not to require any further analysis. In fact Aristotle who dwells at length on various philosophical problems had been content to deal with it in one sentence: "To say of what is that it is, or of what it is not, is true..." It is this same idea we find in the provisional definition that truth as correspondence with what is the case.

3.7. THE FUNDAMENTAL ASSUMPTION: THE UNIVERSALITY OF TRUTH If epistemology defines itself in the context of skepticism, there is a fundamental assumption that epistemology takes for granted. This assumption is the Universality of Truth. This can be seen by asking ourselves a very simple question: Yes, there are divergent claims to truth, but why bother? Should we not remain content with such divergent truth-claims even if they are contradictory? Can we adopt such an attitude? The answer would seem to be clearly in the negative. And the reason for it lies in the universality assumption regarding truth and knowledge. They are assumed to be universal, not in the impossible sense that everyone possesses or should know all that is true, but in the sense that anyone can come to know it with sufficient effort. In other words, truth is not relative to any person or place though the knowledge of truth may be so relative. My ignorance of the relativity theory, for example does not make it less true or lead me to conclude that it is true only for the physicists and not for others. Similarly, truth is not relative to place or time either. Though this statement needs further qualification for statements about historically dated information, as a general principle this remains valid. (E.g. The Statement "No one has set his foot on moon" for example was true before 1969, but no longer. But here the problem lies in the inaccurate formulation of the statement. "No human has set his foot on moon till today" uttered at time t , would be universally true when t is replaced by the appropriate variable.) It is this universality assumption that demands epistemology. If we were to assume that truth is relative to such factors as persons, place and time there would be no need for epistemology.

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Since it is the task of epistemology to resolve cognitive dispute let us consider what a cognitive dispute is and when such a dispute can be said to be resolved. A cognitive dispute is disagreement that concerns knowledge. It is a situation where there are competing descriptions of what the case is or what exists as a matter of fact. Two descriptions would be competing with each other if both are claimed as descriptions of one and the same subject matter from the same perspective and are mutually incompatible. If someone describes a person as intelligent and another disagrees with the judgment and chooses to describe the same person as an idiot, the two descriptions are in conflict. In such a case, there is a cognitive dispute involved. Put differently, in order to have a cognitive dispute, there must be a cognitive difference, i.e., a difference between two descriptions. The general problem of epistemology then is how to choose rationally between competing descriptions. Such a dispute can be said to be settled when both parties to the dispute come to an agreement in either of the three ways: one, that the subject matter is not the same (the descriptions are not of the same person); two, the perspective is not the same (as when both descriptions are about the same person, but one describes the person as an excellent academician and the other as a poor financial manager or a poor family man; Gandhiji would seem to be an excellent example of a great leader and a poor father to his children). In both these cases there is no real incompatibility between descriptions, and the conflict is only apparent. It would be resolved by demonstrating to the satisfaction of both sides that there is no real conflict between them. The third situation under which the dispute can be said to be settled is when there is a real conflict and at the end of the epistemic process it is recognized by both that one of them has been wrong. The most important factor in all the three cases is that both the contending parties agree either that there was really no conflict between their descriptions and that the conflict was only an apparent one, or that one of them was mistaken. If neither is able to convince the other in either of these ways the dispute remains unsettled.

Check Your Progress 3

Note: a) Use the space provided for your answer

b) Check your answers with those provided at the end of the unit.

1) What is truth?

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2) Explain the fundamental assumption of epistemology.

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1.7 THE FUNDAMENTAL ASSUMPTION: THE UNIVERSALITY OF TRUTH

It is plain that proof-theoretic justification of the third grade is a powerful procedure. It has here been formulated so as to be applicable to any set of logical constants, governed by whatever introduction rules are chosen, provided only that they conform to the mild constraints we laid down. Given the usual introduction rules, it will certainly serve to justify all valid laws of first-order positive logic (the negation-free fragment of intuitionistic logic), a fact that can be verified by confirming that it validates all the standard elimination rules. It is recognisable as a justification procedure, however, only to the extent that the fundamental assumption is plausible: that must therefore be the next topic of our enquiry. Evidently, the plausibility of the fundamental assumption is entirely relative to the logical constant in question and to the set of introduction rules being proposed as governing it. For instance, it would have no plausibility at all if applied to the modal operator ' \diamond ', regarded as subject to the sole introduction rule allowing an inference from A to $\diamond A$. If the fundamental assumption were taken to hold in this case, the

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converse inference could be validated, so that the operator ' \diamond ' would become quite nugatory; for, if a canonical derivation of ' $\diamond A$ ' must end by deriving it by means of the sole introduction rule, we must be able to give a canonical derivation of A whenever we can give one of ' $\diamond A$ '. We can therefore consider the fundamental assumption only on a case by case basis.

Disjunction

The problem is in part one of elucidating the 'could have' that occurs in the statement of the assumption. What does it mean to say that, if we are entitled to assert a statement of the form ' A or B ', we could have arrived at that position by applying one or other of the or-introduction rules? Plainly, this is untrue if applied to individual speakers.

distinguish at all between defined and primitive expressions of natural language, the distinction must lie between those an understanding of which is characteristically mediated by knowing a verbal equivalent and those for which this is not so. On this criterion, 'child', 'boy', and 'girl' must all rank as primitive: they belong to a circle of expressions an understanding of any of which demands, but does not consist in, a knowledge of equivalences between each of them and expressions constructed from the others. This requires an extension of our conception of 'boundary rules'. These were intended to take account of inferential connections between non-logical expressions and were restricted to inferences from atomic premisses to an atomic conclusion. Unless we are prepared to consider deductions as being carried out in a highly regimented version of natural language, in which the primitive predicates have been cut down to a minimum as in an axiomatised mathematical theory, we shall have to extend the notion of a boundary rule to allow the conclusion to be complex. When the conclusion is an open sentence, this will cause no difficulty, since the fundamental assumption will not be applied to it. When it is a closed sentence, however, we are left with an apparent counter-example to the fundamental assumption: if I know that there is a child playing on the lawn, I thereby know that either a boy or a girl is playing there, perhaps without knowing which, even though it is

my own observation that constitutes the source of my knowledge. Likewise, if a boundary rule in the extended sense permits an inference from 'That is a child over there' to 'That is either a boy or a girl over there', the disjunctive conclusion was not arrived at by 'or' -introduction, and may well not have been able to be on the basis of the observation actually made. Manifold other examples are $\text{if}^?$ -dependent of any linguistic question. Hardy may simply not have been able to hear whether Nelson said, 'Kismet, Hardy' or 'Kiss me, Hardy', though he heard him say one or the other: once we have the concept of disjunction, our perceptions themselves may assume an irremediably disjunctive form. To interpret the fundamental assumption, then, we have to invoke the sense of 'could have' which was used earlier to characterise what may be called the minimal undeniable concession to realism demanded by the existence of deductive inference. The proof of the Konigsberg bridge theorem provides an effective means so to carry out simultaneous observations to check whether the traveller crosses every bridge and to check whether he crosses any bridge more than once as to ensure that a positive result for the former will be accompanied by a positive result for the latter. We treat this as warranting us in asserting that some bridge was crossed at least twice, given that he was observed.

1.8 LET US SUM UP

In this unit we have tried to explain the basic concepts and the fundamental assumption of epistemology. While explaining the subject we have clarified some of the terms like knowledge, skepticism, justification, certainty, truth and universal truth. While going through the entire issue we have come to know that epistemology can be understood clearly only when we know the basic concepts and its fundamental goal. Therefore, primarily we should know what is to know; are we certain about what we know; how can we justify our claim; we need to give reasons and that will take us to the final goal of the epistemology that the truth is universal which can be arrived at with sufficient effort. This unit can able to explain the necessity of the epistemology.

1.9 KEY WORDS

Dogmatic: Dogmatic is one who holds that his/her knowledge claim beyond doubt

Cognitive: Cognitive is relating to the knowledge acquired through perception and intuition.

Epistemic: Epistemic is the process of coming to know or knowing the truth.

1.10 QUESTIONS FOR REVIEW

- 1) What do you mean by knowledge?
- 2) How do you explain the concept skepticism?
- 3) Clarify the terms epistemic justification and foundationalism.
- 4) How do you explain certainty?
- 5) What is truth?
- 6) Explain the fundamental assumption of epistemology.

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1.12 ANSWERS TO CHECK YOUR PROGRESS

Answers to Check Your Progress 1

1) Knowledge is to be aware that such and such is or is not the case. Knowledge involves subject–object awareness and a judgement or affirmation or negation of something. It is a conviction that such and such is a case irrespective of whether one says or not. It is the judgement one makes about the case and which can be expressed in language.

2) Skepticism, in the ordinary sense, is the refusal to grant that there is any knowledge. It may say either that we lack knowledge or that even if we know we cannot be sure that we know. A sceptic stance is this fundamental questioning or doubting or having a critical attitude towards knowledge claims. In doubting and trying to answer the questions with regard to knowledge is like doing epistemology. Throughout the history of philosophy we find philosophers raising questions and find an answer to the conflicting views of reality.

Answers to Check Your Progress 2

1) Epistemic justification is the process of giving reasons or of gathering evidence for a knowledge-claim. Justification is a process or an activity

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of attaining certainty of assuring oneself that one can be sure of one's knowledge. And this is done by giving reasons or adducing evidence for our knowledge claim. The second feature relates to the structure of justification can also be seen by looking at the Cartesian practice. He begins by doubting all that we ordinarily take to be knowledge and keeps up with his methodic doubt until he comes across something that is indubitable, that which cannot be doubted. Upon those indubitable truths he sought to build up all knowledge. Foundationalism is a system where one takes up something to be basis or reason for the justification of knowledge. There are rationalists who hold that the only source of sure knowledge is reason. We all know that senses sometimes deceive us and we make perceptual errors. In contrast $2+2 = 4$ can never be false. Therefore, they contend that all true and certain knowledge comes from our reason. They take mathematics as the model of knowledge and hold that certain knowledge is a priori. A priori means knowledge which is justified or known to be true independent of experience. On the other extreme we have the Empiricists who hold that all genuine knowledge comes from (genetic empiricism of Locke and Hume) or is justified by (justificatory empiricism of the logical positivists) sense experience. Of course, the difference between rationalists and empiricists consists in whether reason or sense experience is considered as the primary and most reliable source of knowledge. In spite of this difference there is one thing that is common to the empiricists and rationalists: both see knowledge in the manner of a house built upon foundations that are certain. Hence this view of justification is called foundationalism. And this is the strategy that is traditionally followed in epistemology for the justification of knowledge-claims.

2) Certainty or certitude is defined in scholastic philosophy as 'the firm assent of the mind to the truth, based on evidence'. Assent here is not to be taken to mean as an act performed consciously here and now; it is rather a psychological state. The property of being certain is obviously a psychological property of persons in the sense that a person can be said to be certain with regard to a belief if s/he has no doubt at all about the truth of that proposition. In the epistemological sense, certainty is the

property of a proposition and not of a person. Such certainty is based on evidence. However, it is not easy to keep the two apart since certainty seems to be primarily a psychological concept. Hence the two are sought to be combined by saying that person has the right to be certain about a proposition just in case that proposition is warranted or is based on evidence.

Answers to Check Your Progress 3

1) Truth to be the correspondence of what is asserted (or denied) with what is the case. Truth is a characteristic of knowledge. Strictly speaking, therefore, knowledge is knowledge only if it is true. In other words, truth is ordinarily taken to be a necessary characteristic of knowledge, and we shall take knowledge to be such. But in Indian Philosophy there is a distinction made between *j na* and *pram* . *J na* may be translated as cognition. *Pram* , in contrast, applies only to true cognition. Since we have taken truth to be essential characteristic of knowledge it is only *pram* that can be knowledge in the strict sense.

2) The fundamental assumption. This assumption is the Universality of Truth. This can be seen when there are divergent claims to truth, should we remain content with such divergent truth-claims even if they are contradictory. And the reason for it lies in the universality assumption regarding truth and knowledge. They are assumed to be 16 universal, not in the impossible sense that everyone possesses or should know all that is true, but in the sense that anyone can come to know it with sufficient effort. In other words, truth is not relative to any person or place though the knowledge of truth may be so relative. When there is disagreement that concerns knowledge such dispute can be said to be settled when both parties to the dispute come to an agreement in either of the three ways: one, that the subject matter is not the same (the descriptions are not of the same person); two, the perspective is not the same (as when both descriptions are about the same person) and third situation under which the dispute can be said to be settled is when there is a real conflict and at the end of the epistemic process it is recognized by both that one of them

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has been wrong. The most important factor in all the three cases is that both the contending parties agree either that there was really no conflict between their descriptions and that the conflict was only an apparent one or that one of them was mistaken. If neither is able to convince the other in either of these ways the dispute remains unsettled.

3) Certainty or certitude is defined in scholastic philosophy as ‘the firm assent of the mind to the truth, based on evidence’. Assent here is not to be taken to mean as an act performed consciously here and now; it is rather a psychological state. The property of being certain is obviously a psychological property of persons in the sense that a person can be said to be certain with regard to a belief if s/he has no doubt at all about the truth of that proposition. In the epistemological sense, certainty is the property of a proposition and not of a person. Such certainty is based on evidence. However, it is not easy to keep the two apart since certainty seems to be primarily a psychological concept. Hence the two are sought to be combined by saying that person has the right to be certain about a proposition just in case that proposition is warranted or is based on evidence.

UNIT 2: NATURE AND DEFINITION OF KNOWLEDGE; BELIEF AND KNOWLEDGE

STRUCTURE

- 2.0 Objectives
- 2.1 Introduction
- 2.2 Explaining the Concept of Knowledge
- 2.3 Traditional Definition of Knowledge
- 2.4 Role of the Intellect and the Senses in Human Knowing
- 2.5 Scope of Epistemology
- 2.6 Importance of Epistemology
- 2.7 Let us sum up
- 2.8 Key Words
- 2.9 Questions for Review
- 2.10 Suggested readings and references
- 2.11 Answers to Check Your Progress

2.0 OBJECTIVES

The main objective of this Unit is to introduce you to epistemology and to determine its nature and scope. We will explore what it means to say that someone knows, or fails to know something and how much do we, or can we know. We will see both an etymological and traditional definition of knowledge, together with a general understanding of the term 'to know'. We shall also briefly cover different attitudes with regard to our ability to know reality. Finally, we will conclude with the importance of epistemology in human life. Thus by the end of this Unit you should be able:

- To give a definition of knowledge;
- To differentiate between knowledge and belief;
- To know the role of scepticism as an adversary to knowledge;
- To know the role of reason and the senses in acquiring knowledge;

- To know the scope of epistemology;
- To know the importance of epistemology in comprehending the world we live in.

2.1 INTRODUCTION

Aristotle begins his work *Metaphysics* with the observation ‘All men by nature desire ‘to know.’ Kant raises the question ‘What can I know?’ The drive to know is fundamental to being human.

Epistemology tries to fulfil this desire. Epistemology is the branch of philosophy that deals with the nature, origin and scope of knowledge.

Epistemology focuses on our means of acquiring

knowledge and how we can differentiate between truth and falsehood.

The term ‘epistemology’

was coined by the Scottish Philosopher James Fredrick Ferrier (1808-64). It comes from the Greek word ‘episteme’ (knowledge) and ‘logos’ (theory or science).

It addresses the following questions:

What is knowledge?

What can we know?

How can we know it?

How is knowledge acquired?

Can knowledge be certain?

Is there a distinction between knowledge and belief?

What is the scope of knowledge?

Why do we believe certain claims and not others?

2.2 EXPLAINING THE CONCEPT OF KNOWLEDGE

Before we go into the traditional definition of knowledge we should know what ‘to know’ means. An analysis of the concept of knowledge has to be done to see how this term is used in everyday language. Expressions such as ‘know that,’ ‘know how,’ ‘know why,’ ‘know him,’ ‘know where,’ and ‘know whether,’ needed to be examined in detail. In

the English language the word 'knowledge' is used in a variety of senses. It is used in the sense of 'being acquainted with' or 'being familiar with'. We commonly speak of 'knowing' a person, place or a thing in this sense. We also use it in the sense of 'being aware' of something. Sometimes it is used as an expression of 'psychological conviction'. Philosophers give multiple senses of knowledge such as: i. 'knowing that,' ii. 'Knowing which,' iii. 'Knowing how,' iv. 'Knowing what,' v. 'knowing what it is like.' Plato, used the term *techne* or skill for 'knowing how' (to do something), and the term *episteme* for a more forceful kind of knowledge in which claims can be true or false. There is a difference between 'knowing that' and 'knowing how'. 'Know how' is used to refer to a kind of skill or ability, such as knowing how to swim. Here even if one knows what it is, he may not be able to explain the rules or laws of a skill. However, the expression, 'know that,' in contrast, seems to denote the possession of a specific piece of information, and the person who has knowledge of this sort generally is able to convey this knowledge to others. Philosophers are mainly concerned with 'knowing that' something is the case and it is in this sense of the word that a claim is either true or false. This meaning of 'to know' is called 'propositional knowledge'. Epistemologists from ancient Greeks to the present have focused on propositional knowledge—that is, the 'knowing that' kind of knowledge. Propositional knowledge encompasses ordinary perceptual knowledge, scientific knowledge, geographical knowledge, ethical knowledge, mathematical knowledge, religious knowledge, self-knowledge, and knowledge about any field of study whatever. A proposition is a declarative sentence which purports to describe a fact or a state of affairs, such as 'Dogs are mammals,' '2+2=7.' A proposition may be true or false; that is, it need not actually express a fact. Propositional knowledge, then, can be called 'knowing-that.' Statements of propositional knowledge are properly expressed using 'that'-clauses, such as 'He knows that Delhi is in India.' Not all sentences are propositions. For example, 'what is the time?' This sentence is not a proposition because one cannot ask whether what the sentence expresses is true. Propositions can be doubted and believed. They are to be either true or false. Hence, they can be asserted or denied and such an assertion

or denial is called a judgment. On this level the question of truth and certitude arises and the question of knowledge is posed.

2.3 TRADITIONAL DEFINITION OF KNOWLEDGE

Plato suggested that to 'know' something is to believe it and to provide an adequate account of its essential features. Knowledge is therefore belief plus understanding. The definition is based on Plato's Theaetetus, and holds that there are three essential components of knowledge. They are: justification, truth and belief. Hence, propositional knowledge is 'justified true belief'. One implication of this definition is that just because one believes something and it turns out to be true, it does not mean that one 'knew' it, because belief lacks justification.

1. BELIEF

Beliefs crowd our minds. We have various types of beliefs like perceptual, scientific, moral, political, and theological beliefs. Belief is defined as a conviction of the truth of a proposition without its verification. There are two different meanings of belief that must be distinguished. In the first sense it is to 'believe in', that is 'to trust'. I might believe in my cousin while lending a loan. That is I trust that he will pay it back. Often, statements of 'belief' in this sense predict that something will prove to be useful or successful in some sense. In the second sense, to believe something means to think that it is true. To believe P is to believe that P is the case. Here the cognitive content is held as true. For example, to believe that the sky is blue is to think that the proposition 'The sky is blue' is true. It is this sort of belief that is discussed with regard to knowledge. However, merely true belief is not sufficient for knowledge. Many true beliefs obviously do not qualify for knowledge. If you believe that your uncle will come to see you this evening and this turns out to be true, it does not become knowledge. The belief turned out to be true coincidentally but lacked supporting reasons. If one has to have knowledge of something one has to have true justified belief about it. Knowledge is distinct from belief and opinion. We can be

mistaken about our beliefs but in knowledge there is no place for falsehood. With regard to opinion there is room for falsehood, as it is a hesitant assent. For something to count as knowledge, it must be true. Hence, mere belief is not sufficient for knowledge, because many beliefs turn out to be false. Hence, a second condition for knowledge is truth, that is, 'We know that P only if P is True.'

2. TRUTH

As we saw above, knowledge requires belief but not all beliefs constitute knowledge because sometimes we are mistaken in what we believe. In short, some of our beliefs are true and some are false. In the process of acquiring knowledge we get rid of false beliefs and increase the number of our true beliefs. The purpose of belief in acquiring knowledge is to describe reality as it is. However, some of our beliefs fail to do this role of representing the world accurately and turn out to be false and those that represent the world accurately are true or factual. Here we are assuming an objective truth. Hence it is possible for beliefs to match or fail to match with reality. Truth is a condition of knowledge and if belief fails to be true then it cannot constitute knowledge. However, merely belief and truth do not as yet constitute knowledge. For that we need one more criterion to be involved, that is, justification.

3. JUSTIFICATION

Merely true belief does not constitute knowledge. The satisfaction of our belief condition has to be appropriately related to the satisfaction of the truth condition. Genuine knowledge requires that a knower has an adequate indication that a believed proposition is true. Hence, only those true beliefs that are arrived in a right way constitute knowledge. The right way is a way of sound reasoning and solid evidence to acquire knowledge. A lucky guess, even if it turns out to be right on certain occasions, cannot constitute knowledge. A belief is justified if it is based on sound reasoning and rock-solid evidence. This kind of justification is called epistemic justification. The justification of belief does not mean

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that knowledge requires absolute certainty. Such a demand would lead to absolute scepticism. The requirement of the condition of justification is to ensure that knowledge is based on solid evidence rather than on luck or misinformation. It is interesting to note that an unjustified belief can be true because of luck, but a justified belief can be false because of human fallibility. For example, the astronomers before Copernicus were justified in holding their geocentric model of the universe even though it was false. The way the world actually is need not agree with what our best evidence indicates. This goes to show that truth and justification are two independent conditions of belief. True belief does not tell us whether it is justified or not, similarly a justified belief does not tell us whether it is true or false. However, a justified belief is more likely to be true than to be false. In summary, what we see in these conditions is that thought passes from belief to knowledge. One first believes and only then arrives at knowledge. So only when belief is confirmed by justification can it become knowledge? Therefore, for a belief to become knowledge it must correspond to reality and must be derived from valid evidence and argumentation. It is appropriate to end this section with a reference to the 'the Gettier problem.' In 1963, Edmund Gettier in a short article criticised Plato's definition of knowledge by pointing out situations in which a believer has a true belief justified to a reasonable degree, but not to a certainty, and yet in the situations in question, everyone would agree that the believer does not have knowledge. After this article some epistemologists revised the traditional definition of knowledge and added a fourth condition. They held that the three conditions are not sufficient for knowledge and a fourth condition needed to be added, namely, 'no false beliefs be essentially involved in the reasoning that led to the belief'. However, for our introductory purposes, we may define knowledge for the most part as 'justified true belief'.

Check Your Progress 1

Note: a) Use the space provided for your answer b) Check your answers with those provided at the end of the unit

- 1) How is an epistemological understanding different from the common understanding of the term ‘to know’?

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- 2) How does belief become knowledge?

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2.4 ROLE OF THE INTELLECT AND THE SENSES IN HUMAN KNOWING

In the previous section we defined what knowledge is etymologically and traditionally. It is not enough to know what knowledge is by merely defining it. One must know how it arises, that is, what are its sources? Knowing the origin of knowledge will help us determine the nature of knowledge. Accordingly, in this section we will study the origin of knowledge. There are various sources of knowledge like perception, memory, inference, testimony, authority, intuition, etc. Some schools in Western philosophy did not believe that knowledge is possible at all. They are the ‘skeptics.’ But the two main schools which believe that knowledge is possible are the ‘rationalists’ [Descartes, Spinoza, and Leibniz] and the ‘empiricists’ [Locke, Berkeley and Hume].

SKEPTICISM

It is not only the question, ‘What is knowledge?’ that disturbed the human mind but also how far human knowledge can be extended. How much do we know or can we know? The very possibility of knowledge confronts every epistemologist. The problem is, ‘Is genuine knowledge

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attainable at all?’ Some philosophers held the position that humans can know everything or every truth about reality, while others held that humans can know nothing. Some rejected the possibility for knowledge on the grounds that humans are finite beings and as they are limited, their knowledge is also limited. Furthermore, conflicting views, arguments and counter arguments in philosophy led some to skepticism. Skepticism is a philosophical position which holds that the possibility of knowledge is limited either because of the limitations of the mind (of understanding reality) or because of the inaccessibility of its objects (e.g., metaphysical realities). Pyrrho founded the Skeptic school and invited people to suspend judgment in order to obtain ‘peace of mind.’ The term ‘skepticism’ is derived from the Greek word ‘skeptomai’ meaning ‘to look carefully,’ ‘to doubt,’ to examine. There are two types of skeptics: absolute skeptics and relative (or methodical) skeptics. Absolute skeptics claim that no knowledge is possible at all. However, this claim itself can be seen to be self-contradictory. For how can one know for sure that one cannot know anything? Furthermore, why should one believe this claim (that knowledge is not possible), if no knowledge claim is to be believed at all? Relative (or methodical) skepticism, however, can play a useful role because it cautions us about the errors that may creep into common sense knowledge. In modern times Descartes used it as a method to arrive at the undeniable truth of cogito ergo sum. Descartes’ methodical or tentative skepticism is based upon the fact that our senses can deceive us, and as a result, some of our beliefs may be false. But to possess justified belief we must be able to distinguish truth from falsity. In doing this he came upon the sure foundation of knowledge that at least, ‘I think, therefore I am’. From this, he went on to establish many more knowledge claims of which he was certain. Later, however, Hume challenged these certain assumptions about the self, substance and causality, showing that there is no self nor substance that exists, and that the laws of causality are based on habitual expectation. Kant’s critical epistemology too shows the limits of knowledge through the distinction between the phenomenal and the noumenal world. The phenomenal world is the knowable world, while the noumenal world is the unknowable world. A similar position is held by logical positivists who

held that what is knowable [verifiable] is meaningful, and that what is unknowable [unverifiable] is meaningless. Skepticism is not to be outrightly rejected. Skepticism should be used as a purificatory process in obtaining knowledge. However, very few philosophers are absolute skeptics. While some are methodological skeptics, they often land into two primary camps, those who believe that knowledge is based more upon what the mind and its faculties give us (the rationalists) and those who believe that knowledge is based more upon what the senses and their powers reveal to us [the empiricists]. We shall briefly outline these two positions as alternatives to skepticism.

RATIONALISM

Rationalism is the theory which maintains that valid knowledge has its origin in reason alone. Etymologically, the word is derived from the Latin noun ratio meaning reason. Philosophers who stress the role of reason as opposed to the senses in the acquisition of knowledge are called rationalists. According to the rationalists our sense experiences are always elusive. They deceive us on many occasions because the objects given to the senses are always changing and fleeting. If we are deceived on some occasion then there is no guarantee that we cannot be deceived on other occasions. Remember the famous example from Indian philosophy of mistaking the rope for the snake. Hence, truth learned from sense perception cannot be relied upon, and is thus open to correction. Consequently, such truths cannot be taken as universal and necessary.

Philosophical knowledge cannot be based on such propositions. Rather, knowledge needs propositions which are universal, necessary and absolutely valid. Thus, one major epistemological debate concerning the sources of knowledge is the role of sense experience in our acquisition of knowledge. Common sense holds that all our knowledge is gained through sense perception. You see things, touch them, smell some of them, you hear about some of them and you say you know the particular thing through these senses. However, all knowledge is not derived from

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sense experience. Some knowledge is derived from reason. Epistemologists call these two types of knowledge a posterior and a priori respectively. The difference between propositions of these two types are, empirical propositions can be knowable but not believable, like the a priori propositions of mathematics, for example, '2+2=4.' Here one need not engage in any factual or empirical inquiry in order to obtain this knowledge. Secondly, there is a difference in our mode of establishing them. With regard to a priori proposition, once we grasp the truth of it, we do not search for further evidence. But with regard to empirical propositions we need more evidence to establish their truth. We learn empirical generalizations and validate them through induction. For example, 'All crows are black'. The more black crows we observe, the more strongly the truth of an empirical proposition will be established. Our confidence in the truth of an empirical generalization is increased by the addition of further instances of it. Here mere understanding of the words is not enough. Rather, knowledge can be obtained only through certain kinds of experience. However, one must not forget that the rationalist does not deny the possibility of getting knowledge from experience. His basic objection is that knowledge obtained a posteriori (that is, from or after experience) is not free from error or doubt. Therefore, it cannot give us valid judgments. In brief, a posteriori knowledge cannot give us true knowledge of reality. As soon as philosophy rejects the common sense view or the popular view of the universe, rationalistic theories of knowledge arise. Some rationalists distrusted, suspected the senses as unreliable and consequently they either diminished or dismissed the role of senses in human knowing. While others conceded that sensory experience is in some sense necessary for the development of knowledge but not sufficient. All rationalists maintained the possibility of a priori knowledge, with reason being superior to the senses in obtaining knowledge. They considered the senses as an occasion for the rise of an innate idea in the consciousness but never the cause of it. Rationalist held that 'ideas' are innate, that is, inborn. Scientific knowledge cannot come from the senses, because universality and necessity are essential to it. Thus, knowledge according to them is the product of understanding. They held that reason is the

faculty of man which evolves certain principles and notions from within, and not from experience. These are products of pure thought and so a priori, that is, given independently of and prior to all external experience. Rationalists considered these principles to be general conditions and concepts of knowledge, and therefore universal. Every human mind is equipped with these general conditions and concepts, and so these are necessarily valid. Their validity cannot be doubted and reasonably contradicted.

EMPIRICISM

This is a doctrine named after Sextus Empiricus [C200 AD], who advocated its main principles. It is a view that all knowledge and all understanding have their roots in experience—particularly in the experience we obtain through the senses. It is in sharp contrast to rationalism. Empiricists reject a priori possibilities of knowledge, such as the knowledge claim that, ‘every event has a cause.’ Instead, they held the view that, ‘there is nothing in the intellect that was not first in the senses.’ Hence, prior to experience, the mind was a blank slate, and whatever ideas we have are obtained from our contact with nature. Thus, obtaining factual knowledge by a priori reasoning is impossible. Experience gives us factual knowledge but not logically certain knowledge. Ideas are received through sensation and reflection. Sensations give us ideas of colours, tastes, smells, etc., whereas reflection gives us information with regard to the inner states of mind. All our knowledge can be traced back to experience. Empiricism as theory became popular with the British philosopher John Locke who is considered the father of empiricism. He began by rejecting the Cartesian theory of innate ideas. He declared that the mind at birth is a ‘tabula rasa’, that is to say a clean slate. He held that if ever there were innate ideas in the mind, then every mind would have been conscious of them. But we find that children, idiots and uneducated people have no idea about such ideas. According to him it makes no sense to say that someone could have a thought without having access to its contents. Hence, it is wrong to say that certain principles are present in the mind

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from birth. After Locke another British empiricist was David Hume for whom all knowledge is constituted by sense impressions. We can go no further than sensations. He distinguished between impressions and ideas and held that ideas are dependent on the former. It is from these impressions that all knowledge is obtained. Hume's theory of impression leads to skepticism which is the direct outcome of Locke's empiricism. This is the reason why the Logical Positivists of the 'Vienna Circle' claimed Hume as one of their forerunners. This is because Hume's extreme empiricism questioned the meaningfulness of concepts which do not have a foundation in experience.

Check Your Progress 2

Note: a) Use the space provided for your answer

b) Check your answers with those provided at the end of the unit

1) What is skepticism?

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2) Explain the controversy between rationalism and empiricism.

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2.5 SCOPE OF EPISTEMOLOGY

Epistemology illustrates all potential domains of knowledge, whether it be religious, political, mathematical, logic, scientific, ethical, or psychological. Here we deal with the scope of epistemology in relation to

metaphysics, logic, ethics, psychology and sociology. Speculative philosophy embraces metaphysics and epistemology as its two branches. Metaphysics studies what entities exist whereas epistemology studies what knowledge is and how it is possible. There has been controversy with regard to the priority of epistemology over metaphysics. Descartes, Locke and Kant held that epistemology is prior to metaphysics because investigation of the nature and limits of knowledge is necessary for metaphysical speculations regarding the nature of ultimate reality. Whereas Spinoza and Hegel have first attacked metaphysical problems and thought of knowledge to be in conformity with their metaphysical conclusions. Whatever the controversy, epistemology and metaphysics are logically interdependent. Secondly, we see scope of epistemology in the field of logic. Logic is the formal science of the principles governing valid reasoning whereas epistemology is a philosophical science of the nature of knowledge. For example, whether a given process of reasoning is valid or not is a logical question, but the inquiry into the nature of validity is an epistemological question. Bertrand Russell wrote, 'the two great engines in the progress of human society are the desire to understand the world and to improve it.' These words of Russell seem very appropriate in today's world. We find that epistemology studies whether a belief is true or false, reasonable or unreasonable, justified or unjustified. In epistemology cognitive acts of human beings are evaluated and general principles are laid down for epistemic evaluations. A similar language is used in ethics. Ethics inquires into the nature of rightness and appropriateness of human conduct and lays down general principles for good human behaviour. Hence, it evaluates moral or immoral, right or wrong actions, etc. There are various areas in which one can explore similarities and differences between ethics and epistemology. Epistemology and ethics help us to understand and improve the world by giving us guiding principles in understanding the world and improving it. When it comes to the relation between epistemology and psychology, a question arises in the mind, 'Where does the first end and the second begin?' However, in modern times psychology is establishing its independence. Psychology is a study of the mind and its processes, and how these work. Hence, psychologists study

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phenomena such as perception, cognition, emotion, etc. The subject matter of psychology is how minds work, whereas epistemology deals with what the mind works on. However, the relation between the two is an intimate one because the subject matter of psychology (that is, the cognitive processes of perception, memory, and imagination) are the very processes involved, although in a different context, in the subject matter of epistemology. Psychology is an investigation into all mental states (including the subconscious), whereas epistemology investigates only cognitive states in relation to their cognitive meaning. In spite of partial differences we find a partial identity of the subject matter, which makes them interdependent sciences. Similarly, epistemology is related to sociology. In fact, there is a special field in sociology called the ‘sociology of knowledge,’ in which the social conditions which lead to knowledge claims are studied. However, while sociology deals with these larger conditions of the social origins of knowledge, epistemology is more concerned with the cognitive status (that is, the validity) of the actual claims themselves.

2.6 IMPORTANCE OF EPISTEMOLOGY

We quoted Aristotle at the beginning of this Unit saying, ‘All men by their nature desire to know.’ This is because people understand the importance and power of knowledge in human life. We know from very ancient times human beings have tried to know themselves and even the many natural and supernatural forces which confront them. Very often, the common person takes for granted that what he or she perceives to be true is true. However, closer examination often shows that it is not so. Epistemology makes us aware of the power of the human mind and the limits of the human mind. It challenges the way we think. Human beings desire to know the world and our place in it. This search for knowledge is not merely for an academic requirement or a drive for formal correctness. Rather this search is carried out of our existential concern to express ourselves. When we ask, ‘What can I know?’, we simultaneously ask, ‘What is real?’ Knowing the reality of the world and ourselves helps to achieve different goals of life and to make life beautiful. In

epistemology our primary aim is to find truth which frees us from falsehood. Therefore, it exhorts us to pursue truth thoughtfully by giving us principles by which we may accept something as true or reject it as false. It assists us to sift between truth and falsehood. In a word, the ‘uncovering of being’ takes place. And such true knowledge is necessary for wisdom. Thus, as Vincent G. Potter says, ‘To be wise does not require that we know everything about everything, but that we know the place of things relative to each other and to ourselves. It is to know what life as a whole is about.’ Accordingly, we can say epistemology assists human beings in realizing the Socratic maxim, ‘Know Thyself.’

Check Your Progress 3

Note: a) Use the space provided for your answer b) Check your answers with those provided at the end of the unit

- 1) What is the scope of epistemology?

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- 2) Write your reflections on the importance of epistemology.

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2.7 LET US SUM UP

In this Unit we have attempted to give a preliminary idea of epistemology by giving etymological and traditional definitions. By discussing the traditional definition at length we have endeavored to

explain how the process of knowing takes place and made ourselves aware that it is not as easy as it ordinarily seems to us. We have concluded that to arrive at true knowledge we need justified true belief. But the definition alone will not give us an adequate idea of knowledge. That is why we have paid a great deal of attention to the two primary sources of knowledge, reason and the senses. It is the belief that we can gain valid knowledge through these two primary sources which have led human beings to resist an entirely skeptical attitude towards the process of knowledge. The field of knowledge is related to various disciplines such as metaphysics, logic, ethics, psychology and sociology. We have seen similarities and differences in approach between epistemology and these allied fields of study. Finally, we examined a few important reasons why the study of epistemology is useful for human life.

2.8 KEY WORDS

Epistemology: from Gk. episteme ‘knowledge,’ from epistanai, ‘to stand upon’, understand: epiupon + histanai, to stand, +logy. Hence, epistemology is the study of the nature, sources and limits of knowledge. ‘Logos’ is the root of all terms ending in ‘-ology’– such as psychology, anthropology – and of ‘logic,’ and has many other related meanings.

Knowledge: knowledge is justified true belief. To know something is to believe it and to justify it or give an adequate account of it to prove that it is true. **Skepticism:** The term ‘skepticism’ is derived from the Greek word ‘skeptomai’ meaning ‘to look carefully’ ‘to doubt,’ ‘to examine’.

A priori: is knowledge gained or justified by reason alone, without the direct or indirect influence of any particular experience. In short, it is a knowledge that does not depend on experience.

A posteriori: knowledge that comes ‘posterior to,’ or ‘after,’ sense experience, although the term does not really refer to ‘before’ or ‘after’. Hence, it is knowledge, the attainment or justification of which requires reference to experience.

Innate idea: inborn ideas which are not product of human experience. This theory is proposed by the rationalists.

2.9 QUESTIONS FOR REVIEW

- 1) How is an epistemological understanding different from the common understanding of the term ‘to know’?
- 2) How does belief become knowledge?
- 3) What is skepticism?
- 4) Explain the controversy between rationalism and empiricism.
- 5) What is the scope of epistemology?
- 6) Write your reflections on the importance of epistemology.

2.10 SUGGESTED READINGS AND REFERENCES

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2.11 ANSWERS TO CHECK YOUR PROGRESS

Check your progress 1

1. In everyday language we use expressions such as ‘know that,’ ‘know how,’ etc. In the English language it is used in the sense of ‘being

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acquainted with' or 'being familiar with'. We commonly speak of 'knowing' a person, place or a thing in this sense. We also use it in the sense of 'being aware' of something. Sometimes it is used as an expression of 'psychological conviction'. There is a difference between 'know that' and 'know how'. 'Know how' is used to refer to a kind of skill or ability, such as knowing how to swim. Here even if one knows what it is he or she may not be able to explain the rules or laws of a skill. Hence, commonly we use the term 'to know' in above mentioned senses. However, the expression, 'know that,' in contrast, seems to denote the possession of specific pieces of information, and the person who has knowledge of this sort generally is able to convey this knowledge to others. Philosophers are concerned with 'knowing that' something is the case and it is in this sense of the word that a claim is held to be either true or false. And this meaning of 'to know' is called propositional knowledge. Epistemologists from ancient Greeks to the present have focused on the validity (or truth function) of propositional knowledge—that is, the 'knowing that' kind of knowledge.

2. Belief is defined as a conviction of the truth of a proposition without its verification. There are two different meanings of belief that must be distinguished. In the first sense it is 'believe in', that is 'to trust'. In the second sense to believe something means to affirm that it is true. That is, to believe P is to believe that P is the case. Here the cognitive content is held as true. However, merely true belief is not sufficient for knowledge. Many true beliefs obviously do not qualify for knowledge. If one has to have knowledge of something, one has to have true justified belief about it. Hence, mere belief is not sufficient for knowledge because many beliefs are false. Hence, a second condition for knowledge is 'truth', that is, 'We know that P only if P is True.' Truth is a condition of knowledge and if a belief fails to be true then it cannot constitute knowledge. Furthermore (besides belief and truth), knowledge needs a third criterion to be fulfilled, namely, justification. Much of epistemology is concerned with how true beliefs might be properly justified or validated. In a nut shell, what we see in these conditions is that thought passes from belief to knowledge. One first believes and only

then can one arrive at knowledge (via truth and justification). Only when a belief is confirmed or justified and found to be true can one say that one knows something for sure. Therefore, for a belief to become knowledge it must correspond to reality (be true) and must be derived from valid evidence (be justified or proved).

Check Your Progress 2

1. The Skepticism is a philosophical position which holds that the possibility of knowledge is limited either because of the limitations of the mind, that is every mind has of understanding reality or because the inaccessibility of its objects, like the metaphysical realities. It is related to questioning attitude of human beings. It held this position because of the diversity of contradictory views held in philosophy. And these diverse views raise serious doubt whether humans have ability to reach an objective universal truth. Secondly, that each mind has its way of understanding reality and hence no one is qualified to prove that my view is better or correct than the view of the other. Thirdly, we make mistakes and yet we think that we are right. However, there is a possibility that we are wrong all the time.

2. Rationalism is the theory which maintains that valid knowledge has its origin in reason alone. According to rationalists our sense experiences are always elusive. They deceive us on many occasions because the objects given to the senses are always changing and fleeting. Hence, truth learned from sense perception cannot be relied upon and is open to correction. Consequently, such truths cannot be taken as universal and necessary. Philosophical knowledge cannot be based on such propositions and needs propositions which are universal, necessary and absolutely valid. Hence, they believe in a priori knowledge. Rationalist held that 'ideas' are innate, that is, inborn. Thus, knowledge according to them is the product of understanding. Empiricism, on the other hand, is the view that all knowledge and all understanding have their roots in experience— particularly in the experience we obtain through our senses. Empiricists reject the a priori

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possibility of knowledge. They hold the view that, 'there is nothing in the intellect that was not first in the senses.' Hence, prior to experience the mind was like a blank slate and whatever ideas we have are obtained from our contact with nature. Thus, obtaining factual knowledge by a priori reasoning is impossible. Experience gives us factual knowledge which a priori knowledge cannot give us, because a priori knowledge does not refer to anything in reality. This is the conflict between rationalism and empiricism.

Check Your Progress 3

1. Speculative philosophy embraces metaphysics and epistemology as its two branches. Metaphysics studies what entities exist whereas epistemology studies what knowledge is and how it is possible. Despite the controversies with regard to their priority, epistemology and metaphysics are logically interdependent. Similarly, logic sees whether reasoning is valid or not (the formal structure of inquiry) and epistemology inquires into the content of its validity (the matter to be inquired into). The scope of epistemology includes ethics too. In epistemology cognitive acts of human beings are evaluated and general principles are laid down for epistemic evaluations. Similarly ethics inquires into the nature of rightness and the appropriateness of human conduct and lays down general principles for good human behaviour. The relation between psychology and epistemology is an intimate one because the subject matter of psychology (cognitive processes of perception, memory, and imagination) are the very processes, although in a different context, which are central to the subject matter of epistemology. Psychology is an investigation into all mental states, whereas epistemology investigates only cognitive states and tries to establish their cognitive truth and meaning. Finally, while the sociology of knowledge is concerned about the social processes which lead us to believe certain claims ('how' we derive this knowledge), epistemology

is more concerned with the truth value of these claims (whether 'what' we believe is true or false).

2. Epistemology makes us aware of the power and the limits of the human mind. It challenges the way we think. Human beings are able to perform verificationary processes in order to distinguish between true and false claims. Epistemology gives us guidelines (like the guidelines of ethics) on how one should acquire true beliefs and avoid false beliefs. Thus, it helps us to uncover truth which frees us from falsehood. It helps us to know the reality of the world, human reality and transcendental truths. Therefore, it exhorts us to pursue truth thoughtfully by giving us principles about when we ought to accept something as true. Accordingly, we can say epistemology assists human beings in realizing the Socratic maxim, 'Know Thyself.'

UNIT 3: HISTORY OF EPISTEMOLOGY

STRUCTURE

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Period of Ancient Greek Philosophy
- 3.3 Medieval Epistemology
- 3.4 Rationalism, Empiricism and Synthesis in Kant
- 3.5 Post-Kantian Epistemology
- 3.6 Phenomenological Epistemology of late 19th Century
- 3.7 Realism of 20th century
- 3.8 Recent Developments in Epistemology
- 3.9 Let us sum up
- 3.10 Key Words
- 3.11 Questions for Review
- 3.12 Suggested readings and references
- 3.13 Answers to Check Your Progress

3.0 OBJECTIVES

In this unit we study the history of Western Epistemology, divided it into seven periods. Each period is described with its own special contexts and characteristics. Going through these periods, we shall see how Epistemology, this important branch and foundational treatise of philosophy developed from the 5th century BC up to our present day. Thus we learn:

- How the theories of knowledge propounded by the great ancient Greek philosophers, like Socrates, Plato and Aristotle to counteract the skepticism of the time and how it took a turn to empiricism in Epicurus and the Stoics and ended up in a sort of mysticism in the NeoPlatonists.

- Growth and development of epistemology in the medieval period, going into the thought of Augustine, Thomas Aquinas and William Ockam. We also see how during this period the three important theories of the Universals, viz., Realism, Conceptualism and Nominalism, came into existence.
- The progress of epistemology in the 17th century; the opposition between Continental Rationalism and British Empiricism; the great contribution of Emmanuel Kant who made a synthesis of both.
- The Idealist epistemology of Fichte and Hegel, characteristic of the Post-Kantian period.
- Late 19th century Phenomenological epistemology, associated with existentialism - originally a reaction against the idealism of Hegel.
- The 20th century swing from Idealism to Realism in epistemology.
- The recent developments in epistemology, viz., virtue epistemology and post-modernist epistemology that challenges the traditional epistemology.

3.1 INTRODUCTION

Epistemology's beginning in the Western philosophy can be traced back to the 5th century BC when a group of people called Sophists appeared in Athens. They were doubtful about the possibility of any knowledge at all. It is in the context of counteracting to the skepticism of the Sophists and skepticism in general, the ancient Greek philosophers, Socrates, Plato and Aristotle asserted the possibility of knowledge with their different theories of knowledge. This was the beginning of this important branch of philosophy. The emergence of science during renaissance and the disputes that it produced led again to certain skepticism about claims

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to knowledge and to the search for a method, like that of science for epistemology. Thus the Rationalists of the 17th century attempted to show that the primary truths that constituted certainty of knowledge are related to other self-evident truths existing in mind. Empiricists of the time opposed this, saying that all knowledge begins with sensible experience and arises out of it. Emmanuel Kant synthesized these opposing views. Post-Kantian epistemology of Idealism followed, in reaction to which came the phenomenological epistemology in late 19th century leading to the 20th century Realism and Logical Positivism. This survey of the history of epistemology ends with the recent developments of Virtue Epistemology and the Post-Modernist epistemology.

Epistemology, the philosophical study of the nature, origin, and limits of human knowledge. The term is derived from the Greek *epistēmē* (“knowledge”) and *logos* (“reason”), and accordingly the field is sometimes referred to as the theory of knowledge. Epistemology has a long history within Western philosophy, beginning with the ancient Greeks and continuing to the present. Along with metaphysics, logic, and ethics, it is one of the four main branches of philosophy, and nearly every great philosopher has contributed to it.

The Nature Of Epistemology

Epistemology as a discipline

Why should there be a discipline such as epistemology? Aristotle (384–322 BCE) provided the answer when he said that philosophy begins in a kind of wonder or puzzlement. Nearly all human beings wish to comprehend the world they live in, and many of them construct theories of various kinds to help them make sense of it. Because many aspects of the world defy easy explanation, however, most people are likely to cease their efforts at some point and to content themselves with whatever degree of understanding they have managed to achieve.

Unlike most people, philosophers are captivated—some would say obsessed—by the idea of understanding the world in the most general terms possible. Accordingly, they attempt to construct theories that are synoptic, descriptively accurate, explanatorily powerful, and in all other respects rationally defensible. In doing so, they carry the process of inquiry further than other people tend to do, and this is what is meant by saying that they develop a philosophy about such matters.

Like most people, epistemologists often begin their speculations with the assumption that they have a great deal of knowledge. As they reflect upon what they presumably know, however, they discover that it is much less secure than they realized, and indeed they come to think that many of what had been their firmest beliefs are dubious or even false. Such doubts arise from certain anomalies in people's experience of the world. Two of those anomalies will be described in detail here in order to illustrate how they call into question common claims to knowledge about the world.

Two epistemological problems

Knowledge of the external world

Most people have noticed that vision can play tricks. A straight stick submerged in water looks bent, though it is not; railroad tracks seem to converge in the distance, but they do not; and a page of English-language print reflected in a mirror cannot be read from left to right, though in all other circumstances it can. Each of those phenomena is misleading in some way. Anyone who believes that the stick is bent, that the railroad tracks converge, and so on is mistaken about how the world really is.

Although such anomalies may seem simple and unproblematic at first, deeper consideration of them shows that just the opposite is true. How does one know that the stick is not really bent and that the tracks do not really converge? Suppose one says that one knows that the stick is not really bent because when it is removed from the water, one can see that it

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is straight. But does seeing a straight stick out of water provide a good reason for thinking that when it is in water, it is not bent? Suppose one says that the tracks do not really converge because the train passes over them at the point where they seem to converge. But how does one know that the wheels on the train do not converge at that point also? What justifies preferring some of those beliefs to others, especially when all of them are based upon what is seen? What one sees is that the stick in water is bent and that the stick out of water is straight. Why, then, is the stick declared really to be straight? Why, in effect, is priority given to one perception over another?

One possible answer is to say that vision is not sufficient to give knowledge of how things are. Vision needs to be “corrected” with information derived from the other senses. Suppose then that a person asserts that a good reason for believing that the stick in water is straight is that when the stick is in water, one can feel with one’s hands that it is straight. But what justifies the belief that the sense of touch is more reliable than vision? After all, touch gives rise to misperceptions just as vision does. For example, if a person chills one hand and warms the other and then puts both in a tub of lukewarm water, the water will feel warm to the cold hand and cold to the warm hand. Thus, the difficulty cannot be resolved by appealing to input from the other senses.

Another possible response would begin by granting that none of the senses is guaranteed to present things as they really are. The belief that the stick is really straight, therefore, must be justified on the basis of some other form of awareness, perhaps reason. But why should reason be accepted as infallible? It is often used imperfectly, as when one forgets, miscalculates, or jumps to conclusions. Moreover, why should one trust reason if its conclusions run counter to those derived from sensation, considering that sense experience is obviously the basis of much of what is known about the world?

Clearly, there is a network of difficulties here, and one will have to think hard in order to arrive at a compelling defense of the apparently simple

claim that the stick is truly straight. A person who accepts this challenge will, in effect, be addressing the larger philosophical problem of knowledge of the external world. That problem consists of two issues: how one can know whether there is a reality that exists independently of sense experience, given that sense experience is ultimately the only evidence one has for the existence of anything; and how one can know what anything is really like, given that different kinds of sensory evidence often conflict with each other.

The other-minds problem

Suppose a surgeon tells a patient who is about to undergo a knee operation that when he wakes up he will feel a sharp pain. When the patient wakes up, the surgeon hears him groaning and contorting his face in certain ways. Although one is naturally inclined to say that the surgeon knows what the patient is feeling, there is a sense in which she does not know, because she is not feeling that kind of pain herself. Unless she has undergone such an operation in the past, she cannot know what her patient feels. Indeed, the situation is more complicated than that, for even if the surgeon has undergone such an operation, she cannot know that what she felt after her operation is the same sort of sensation as what her patient is feeling now. Because each person's sensations are in a sense "private," for all the surgeon knows, what she understands as pain and what the patient understands as pain could be very different. (Similar remarks apply to the use of colour terms. For all one knows, the colour sensation one associates with "green" could be very different from the sensations other people associate with that term. That possibility is known as the problem of the inverted spectrum.)

It follows from the foregoing analysis that each human being is inevitably and even in principle prevented from having knowledge of the minds of other human beings. Despite the widely held conviction that in principle there is nothing in the world of fact that cannot be known through scientific investigation, the other-minds problem shows to the

contrary that an entire domain of human experience is resistant to any sort of external inquiry. Thus, there can never be a science of the human mind.

3.2 PERIOD OF ANCIENT GREEK PHILOSOPHY

In ancient times the Greek Sophists raised skeptical consideration about the possibility of knowledge: Gorgias claimed that nothing exists; and even if it existed, we could not know it and communicate it; Protagoras asserted complete subjectivism regarding knowledge.

Socrates (c 470 BC -399 BC)

Reacting to the skepticism of the time, Socrates argued that knowledge was attainable by his method, called ‘Socratic irony’ or ‘maieutic method’ helping one to remember what one already knows, the knowledge of Forms or Universals which is already in one’s mind.

Plato (429-348)

Arguing negatively that knowledge cannot be mere sensations, Plato follows his master Socrates’ theory that knowledge is nothing but a remembering of Forms or Universals, we have contemplated before our birth and bringing it to light what was hidden in the recesses of our minds; birth being accompanied by forgetfulness. Reacting to the complete subjectivism of the sophists, Plato came to hold that reality cannot be changing or imperfect and that it must therefore consist in a world of ‘Forms’ or ‘Ideas’ independent of the sensible world. Here knowledge consists in apprehension of Forms or Ideas which never change. Thus Plato also broke with the materialistic theories of knowledge, as developed by some of the Pre-Socratics.

Aristotle (384-322 BC)

Like Plato, Aristotle held that knowledge is concerned with the Universals – with Forms – any knowledge which is expressible in judgment must consist of an apprehension of an essential connection between Forms. To know something about a thing is to be able to subsume it under species and genus and thus to know what is essential to it. Insofar as we can be said to know particular things, we know them as instances of a Universal; we know the Universal in the particular. Aristotle thus rejects the Platonic notions of a world of separate Universals or Forms. Knowledge depends ultimately on the soul's or mind's reception of the Forms of things. The soul itself is not a distinct spiritual entity but the set of faculties possessed by the body. Aristotle's preoccupations with epistemology appear in his theory of science; in his theory of the mind and its faculties. According to him, to know the essence of a thing is to give the cause of it, which involves the demonstration of its essence from first principles, the first principles themselves can be known only by a form of intuition. Principles such as law of contradiction, which are implied in all demonstrations, can be proved by dialectical argument.

Epicurus (341- 270 BC)

He was an empiricist. All knowledge resulted from contact with atoms of which the soul is composed from outside. Mass stimulation of the sense organs results in a presentation or appearance (*phantasma*) to the soul. Sense experience occurs when incoming presentation is fitted to a general conception. This is the nearest thing to judgment, and this is the most usual source of error. Stoics (c 300 BC) Stoics (Zeno - founder of the school, Sextus Empiricus and Chrysippus) were empiricists to a large extent. Like Atomists of the time, Stoics thought things make impression on the soul, although they differed from atomists over which physical process were involved whenever an impression is received in the soul, the soul has to register it by a process of assent, but there cannot be knowledge until there is apprehension, until the soul is gripped by the impression.

Neo-Platonists

In the third century Platonism was revived in its more mystical aspects by Plotinus (205-270 AD). The soul, as opposed to the body, is given prominence, so that perception and knowledge are made a function of the soul, the main function being contemplation of the Forms; the body and its impressions are merely instruments for the soul to use.

3.3 MEDIEVAL EPISTEMOLOGY

Medieval thinkers were primarily concerned with issues in metaphysics, logic and natural theology; less with epistemological topics. However, Augustine, Aquinas and Ockham were three thinkers for whom epistemological questions were of interest and important.

Augustine (354-430 A.D).

Augustine provided the classic refutation of skepticism with his famous ‘Si fallor, sum’ argument. Even a skeptic is bound to admit that he is certain of some truths – his own existence being one of these. After all, ‘even if I am in error, I exist’. If you did not exist, you could not be deceived! Augustine’s epistemology gave prominence to soul by stating that the soul produces impressions when the body is stimulated. Experience involves inference, as the soul subsumes its impressions under concepts. To have concepts is to be aware of Forms. Forms or Universals have real existence in the mind of God, and all knowledge, even sense knowledge involved awareness of God. Augustine then brings in the theory of ‘divine illuminationism’ to solve the problem of how our mind, finite, changing and fallible is able to attain necessary and eternal truths, by God illumining our minds.

Thomas Aquinas (1225-1274)

Aquinas closely followed Aristotle’s account of scientific knowledge. For Thomas, sensation is the act of the total human composite, body and soul and not (as Augustine) an act of the soul using the body. Next, there

are no innate ideas to be found in man: all his ideas come to him through the senses, though he may develop and reason about them until he reaches conclusions that go beyond the immediate evidence of his sense. Sensation gives us knowledge of particulars, not of universals. In and through this particular, material sense impression man apprehends the Universal and the abstract. Obviously the intellect has to actively, in some way, render the sensible species intelligible. The active intellect, which is not a part of the intellect, much less a second intellect in man, does this function. It illumines the phantasm and abstracts the universal element, producing the impressed species on our passive intellect. Thus, Aquinas built a masterly synthesis as regards the Universals by Realism and responded to the age-old objections of Nominalism (Universals were mere names) and Conceptualism (in so far universal concepts are formed by abstraction and through these concepts we conceive what is objectively in the thing, though we do not conceive it as it is in the thing; Universals existed only as concepts in the mind).

William Ockham (c1290/1300-1349) makes an interesting break with Aquinas' conception of knowledge. For him, there is no intermediary such as a phantasma or form, or sensible species of the perceived object in perception of an external physical object. One is knowing the singular rather than the Universal. (Ockham was a Nominalist insofar as Universals were mere 'names' which signify individual things and stand for them in propositions) One intellectually apprehends the individual material existent directly, and not by having to pass by way of the Universal. This is empiricism, but it cannot be put on the same plane as British empiricism.

Check Your Progress 1

Note: a) Use the space provided for your answer.

b) Check your answers with those provided at the end of the unit.

- 1) Explain briefly how the great ancient Greek philosophers counteracted skepticism.

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2) Give a brief analysis of the Medieval Epistemology. Which were the theories of the Universals that developed during this period?

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3.4 RATIONALISM, EMPIRICISM AND SYNTHESIS IN KANT

The emergence of science during renaissance and the disputes that it produced led to certain skepticism about claims to knowledge and to the search for a method, like that of science. Rationalists have generally attempted to show that the primary truths that constitute certain knowledge are related to other truths somewhat as the axioms are related to theorems on geometry. Empiricists on the other hand, have taken the view that the truths which constitute ordinary knowledge can be constructed out of the primary truths, as a building is built up from its foundation. Rationalists looked for them among the deliverances of reason, whereas empiricists looked for them on sensible experience.

Rationalism

Rationalism asserts that by employing certain procedure of reason alone we can discover knowledge in the strictest sense. Theories of knowledge, like those of Leibniz and Spinoza were also called rationalistic in this

sense. But the chief Representative of rationalism was **Rene Descartes (1596-1650)**.

He was seeking an absolutely certain basis for all knowledge. After casting doubts on scientific, mathematical and sense information, Descartes continued his quest for some information which would be indubitable and certain until he found it in: I am, I exist. It has to be true, every time that I utter it or I mentally think about it. 'I think, therefore I am'. Whenever I conceive of any condition under which 'I think, therefore I am' may be false, I am completely assured that I exist. Any attempt to doubt or deny this, is still another thought which confirms me that I must exist in order to think. Thus Descartes built his epistemology on this indubitable and certain truth and other self-evident truths deduced from and related to this self-evident truths existing in mind.

Empiricism

In general, empiricism stands in opposition to rationalism both in its view about the main sources of our ideas and in its views concerning the source of true knowledge. John Locke (1632-1704) was a complete empiricist insofar as he tried to work out an explanation of our knowledge in terms of sense experience. Our knowledge comes to us through our senses. We have two sources of knowledge, one is sensation and the other is reflection.

David Hume (1771-1776), who introduced the experimental method into philosophy following Newton, was a real empiricist. Everything we are aware of can be classified under two headings, impressions and ideas. The difference between the two is the degree of force, liveliness with which they strike upon the mind. Impressions are more forceful and lively than ideas. Hume denied innate ideas.

Immanuel Kant (1724-1804)

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Kant made a synthesis of Rationalism and Empiricism by asserting that although all our knowledge begins with experience, it does not follow that it all arises out of experience. We have certain ideas, concepts and know certain things, which are not derived directly derived from impressions through our senses, as concepts of space and substance as well as propositions of mathematics, proposition: 'Everything which happens, has its cause', whose source must be the mind itself. Thus Kant concludes that synthetic a priori judgments and concepts are possible.

Space and time provide the forms of all experience, sensation provides the content. What is given in this way must be subsumed under concepts in judgment, if knowledge is to result. It should not be of imagination (Hume). Such judgments have to conform to principles of understanding and that principles are derived from the pure, formal concepts which Kant calls categories of understanding. Only insofar as our judgments conform to these principles can judgments that we make about appearance be true for all men.

3.5 POST-KANTIAN EPISTEMOLOGY

Idealism was the characteristic of Post-Kantian epistemology. It was begun by Johan Gottlieb Fichte (1762-1814) who found fault with Kantian view of things-in-themselves that are beyond the reach of knowledge. With rejection of things-in-themselves (Noumena), experience and experienter became only two sides of the same coin. For this reason, the general trend of idealism was toward the coherence theory of truth – the view that experiences and judgments are true to the extent they cohere with one another, forming a coherent system. The sensible world is therefore only appearance, and reality must be something else.

G.W. Friedrich Hegel (1770-1831)

Influenced by Platonist and Neo-Platonist conception of an intelligible world of Forms with a structure of its own, through a dialectic, Hegel charts the notions most central to reason, beginning with the opposition between the categories of Being and Nothing and the synthesis of which

he finds in Becoming. These are notions which reason finds indispensable for any account of the world and upon which logic must depend. Hegel begins by pointing out that consciousness appears to be apprehension of what is immediate, of what is, which is, it appears, a confrontation of the ego with something else (Fichte supposed).

Check Your Progress 2

Note: a) Use the space provided for your answer.

b) Check your answers with those provided at the end of the unit.

- 1) Explain briefly rationalism and empiricism and their synthesis in Kant.

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- 2) Discuss how the Idealism of Hegel was a reaction to Kant's rejection of Noumena.

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**3.6 PHENOMENOLOGICAL
EPISTEMOLOGY OF LATE19TH
CENTURY**

Neo-Kantian philosophy came under empiricist influence from Britain and at the end of the century under the influence of Franz Brentano and Alexius Meinong. This finally led to a return to realism, a movement that

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not only produced phenomenology but also influenced Bertrand Russell and other Realist philosophers.

Brentano (1838-1917)

Brentano was concerned with the psychology of our mental acts. Each mental act had an immanent object. Then the question: how a real act can have an unreal object?

Meinong(1853-1920)

Taking up the question, Meinong postulated non-existent objects to explain the possibility of our thinking, for example, of things that do not or cannot exist. Similarly, false judgments were said to correspond to what he called objectives – non-existent state of affairs which would be facts if only the corresponding judgments were true. Objectives could not be said to exist, for they were not things, but they might subsist. From a linguistic point of view, this doctrine implied a realist theory of meaning, according to which the meaning of any expression was given by a corresponding entity. The fact these entities were not themselves mental entities (although they gave content to what is mental) implied a return to realism in a more general sense. Objects could be real, according to Meinong, without being actual.

Husserl (1859-1938)

He started from Meinong, maintaining that the proper philosophical task was to investigate the essence of mental acts and their object. Philosophy consisted, in his view, in an enquiry into the essences with which they are concerned. To study this, it was necessary to strip off all presuppositions, metaphysical or otherwise. He adopted the method of bracketing (epoche) – the bracketing of presuppositions – in a manner akin to Cartesian method of doubt. This would lead to pure consciousness as the one absolute, the one firm thing, and from this philosophers may turn back to investigate the essence of different

phenomena as they appear to consciousness. Thus, in effect the initial realist point of view led back to one which was more like the idealism.

Henri Bergson (1859-1941)

He is an anti-intellectualist, who emphasized life against thought. Space and time, of which we are conscious, are continuous; the division of it into things and processes is due to the intellect, which carries out the division according to the biological needs. Because of this emphasis on biological utility, there is a relativism in Bergson's point of view, which he has in common with American Pragmatism as instituted by William James (1842- 1910) and C S Pierce (1839-1914): our concept of anything is determined by our concept of the practical bearing of that thing. In sum, meaningfulness is a question of practical utility. William James turned this theory of meaning into a theory of truth. Test of truth is its fruitfulness. John Dewey (1859-1952): knowledge as successful practice.

3.7 REALISM OF 20TH CENTURY

G E Moore (1873-1958)

He insisted that concepts or ideas should be regarded as the objects, the meanings, of our thoughts. Things are merely collection of concepts and as such enter into propositions as their constituents. There seems to be no propositions at all. If there were, there would have to exist something corresponding to false beliefs.

Bertrand Russell (1872-1970)

He was first an idealist but was converted to realism by Moore. From Leibniz, Russell took the view that philosophy consists in the analysis of propositions and his interest in logic also brought him to a concern with language. For Russell, it was important that all knowledge be founded on knowledge by acquaintance, if it was possible at all, for only in knowledge by acquaintance is error absolutely impossible. He gives a list

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of the knowledge by acquaintance – sense data, memory-data, the self, and universals. Of physical objects we have only knowledge by description, because here error is possible.

Ludwig Wittgenstein (1889-1951)

Wittgenstein criticized the attempts implicit in much sense-datum philosophy to construct a private language by arguing that the results of such attempts would lack the essential conditions of a language. He also stressed the importance of bringing back terms to the language game that is their original home – ordinary language. This is perfectly in order as it is; the important thing is to examine the uses to which expressions are put, with the recognition that language is a form of life and must be treated accordingly. Among other things this led to the recognition of truths which are necessary but not analytic. These are truths which express non-analytic connections between concepts. The emphasis upon such truths and the arguments which lead to them on the part of followers of Wittgenstein was in a sense a partial return to Kant.

Logical Positivists

Wittgenstein's *Tractatus* influenced a group of philosophers –Vienna circle. According to them meaningful proposition must be either analytic or empirically verifiable. So metaphysical propositions which belong neither to mathematics and logic nor to science, are meaningless.

Moritz Schlick (1882-1936)

Schlick was the original leader of the group. He felt compelled to interpret scientific laws as rules rather than statements. Regarding the problem of 'empirically verifiable', he held that ultimately there had to be a direct confrontation with experience. His view brought with it the correspondence theory of truth.

Karl Popper (1920-1994)

He was influenced by the movement of Vienna circle. Key to understanding of science is not in verifiability but falsifiability. He put this forward not as a theory of meaning but as a criterion for the demarcation science from metaphysics.

3.8 RECENT DEVELOPMENTS IN EPISTEMOLOGY

Introduction

Ethicists like Alasdair MacIntyre (1929-) and John McDowell (1942-), today talk about Virtue epistemology that focuses on the characteristic of knower than the individual beliefs or collections of beliefs. There are also emerging challenges to traditional epistemology from Postmodernism.

Virtue Epistemology

Roughly, the claim is that when a true belief is the result of the exercise of intellectual virtues, it is knowledge. Such an approach re-introduces some neglected areas of epistemology, for example connection of knowledge to wisdom and understanding.

Post-Modern Epistemology

The emerging challenges from Postmodernism to certain presuppositions of traditional epistemology are, for example, the arguments that there is no set of rules for belief acquisition that are appropriate for all people and all situations; that many of the proposed conditions of good reasoning, for example, 'objectivity' or 'neutrality' are not invoked in the service of gaining truth, as traditional epistemology would hold, but rather they are employed to prolong entrenched power (at least in some cases) and distorts the objects of knowledge (Feminist Epistemology).

Check Your Progress 2

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Note: a) Use the space provided for your answer. b) Check your answers with those provided at the end of the unit.

- 1) Explain the various stages of the phenomenological epistemology which led to the Realism of 20th century

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- 2) What was the criticism of Wittgenstein's Language philosophy to Realism?

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- 3) What is logical positivism? Explain briefly its development in history?

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- 4) Which are the recent developments in epistemology?

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3.9 LET US SUM UP

After going through the various periods of the history of epistemology we see there are two main trends started by Plato and Aristotle running

through the whole history of epistemology, viz., idealism and Realism. Though there were efforts to combine them by philosophers like Kant, they were met by a return to either idealism or Realism. But one thing we can learn from the history of epistemology is depth of that simple question: “What is it to ‘know’ philosophically, the problematic of knowledge, truth and certainty in general and to recognize the baffling mystery of the power of our human mind for growing in the never-ending process of arriving at Truth and wisdom.

3.10 KEY WORDS

Skepticism: The theory which says that there is no possibility of knowledge

Maieutic method: From the Greek verb, meaning to serve as a midwife because Socrates said that his role was but to help the student to give birth to knowledge.

Empiricism: Theory which explains knowledge in terms of sense experience.

Noumena: In opposition to phenomena, which means appearances; noumena means things-inthemselves.

Phenomenology: The science of what is given immediately to our intentional consciousness

Pragmatism: is that doctrine or trend of thought according to which the value of an assertion lies solely in its practical bearing upon human interests

3.11 QUESTIONS FOR REVIEW

- 1) Explain briefly how the great ancient Greek philosophers counteracted skepticism.
- 2) Give a brief analysis of the Medieval Epistemology. Which were the theories of the Universals that developed during this period?
- 3) Explain briefly rationalism and empiricism and their synthesis in Kant.

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- 4) Discuss how the Idealism of Hegel was a reaction to Kant's rejection of Noumena.
- 5) Explain the various stages of the phenomenological epistemology which led to the Realism of 20th century
- 6) What was the criticism of Wittgenstein's Language philosophy to Realism?
- 7) What is logical positivism? Explain briefly its development in history?
- 8) Which are the recent developments in epistemology?

3.12 SUGGESTED READINGS AND REFERENCES

- Copleston, Fredrick. A History of Philosophy. Vol.1. New York: Image Books, 1962.
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3.13 ANSWERS TO CHECK YOUR PROGRESS

Answers to Check Your Progress 1

1. Criticizing the skepticism, Plato tried to construct a theory of knowledge – what knowledge is possible, how we could attain it, and why it was true. He agreed with Socrates that knowledge is nothing but a

remembering of what we have contemplated before our birth and bringing to light what was already in our minds; birth being accompanied by forgetfulness. He came to hold that reality cannot be changing and that it must therefore consist in a world of 'Forms' or 'Ideas' separate from the sensible world. Knowledge consists in the apprehension of these forms or ideas which never change. Like Plato, Aristotle held that knowledge is always knowledge of the Forms or the Universals. But he rejects the Platonic notions of a world of separate Universals or Forms. Knowledge depends ultimately on the soul's reception of the Forms of things. Sense perception is the receiving by the sense organ, the faculty of which is the respective sense, of the sensible form of a thing without its matter. There is then a reception of Form in this case not sensible Form but intelligible Form by the intellect, which is a faculty that depends on the prior exercise of perception.

2. Knowledge of a thing involves knowledge of its general characteristics; therefore, its subsumption under a universal. The main dispute during this time was over theories of Universals. Realists thought that universals had an objective existence. Conceptualists held that universals existed only as concepts in the mind. Nominalists held that the only universal things were words.

Answers to Check Your Progress 2

1. Subscribers to Continental rationalism in the modern period was philosophers like Descartes, who was seeking an absolutely certain basis for all knowledge in some truth which was indubitable and certain, which he found in: Cogito, ergo sum 'I think, therefore I am'. On this fundamental truth he builds his epistemology. Empiricism stands in opposition to rationalism both in its view about the main sources of our ideas and the source of true knowledge, which is sensation and reflection. Kant joins the two views by his Synthetic a priori knowledge which means that not all knowledge about things can be derived from sensible experience alone. Spatio-temporal forms, which are not derived from sense experience, are necessary, a priori characteristic of

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experience, whose content is provided by sensation. Knowledge results when the forms and content are subsumed under concepts in judgment and such judgments have to conform to principles of understanding, which are derived from the pure, formal concepts (categories). Only insofar as our judgments about appearance conform to these principles they are true for all men.

2. Idealism came as a result of Kantian rejection of things-in-themselves (Noumena) that are beyond the reach of knowledge. Sense knowledge proper must involve a subsumption of the immediate consciousness under Universals or concepts, and, moreover, there is no way of grasping the particular which is thus subsumed under concepts except by reference to other concepts. Sense knowledge thus turns out to be a mediated knowledge which is possible only through the medium of Universals and which is not a direct knowledge of reality. The intellect provides with a higher universal which constitutes the basis or condition for applying the lower-order universals in sense perception. The unity of the objects of perception is due to the law-like connections which exist between Universals under which they are subsumed. The opposition between consciousness and self-consciousness requires a synthesis by reason.

Answers to Check Your Progress 3

1. Phenomenological epistemology started with Meinong and Brentano who were influenced by British empiricism. Husserl starting from Meinong, maintained that the proper philosophical task was to investigate the essence of mental acts and their object. Philosophy consisted, in his view, in an enquiry into the essences with which they are concerned. To study this, it was necessary to strip off all presuppositions, metaphysical or otherwise. He adopted the method of bracketing (epoche) – the bracketing of presuppositions – in a manner akin to Cartesian method of doubt. This would lead to pure consciousness as the one absolute, the one firm thing, and from this philosophers may turn back to investigate the essence of different

phenomena as they appear to consciousness. Thus, in effect the initial realist point of view led back to one which was more like the idealism.

2. Wittgenstein appeals to usage and functions of language for knowledge. Language is a form of life and must be treated accordingly. This leads to the recognition of truths which are necessary. The emphasis upon such truths and the arguments which lead to them was in a sense a partial return to Kant.

3. Logical positivism: Meaningful proposition must be either analytic or empirically verifiable. Basic proposition must be about immediate experience. It started with Vienna circle, a group of philosophers who were influenced by Wittgenstein. M.Schlick, the leader of the group interpreted scientific laws as rules rather than statements. He held that ultimately there had to be a direct confrontation with experience for solving the problem of empirically verifiable. This led Karl Popper to state that the Key to understanding is not in verifiability but falsifiability.

4. Virtue epistemology: justification and knowledge arises from the proper functioning of our intellectual virtues or faculties in an appropriate environment. Post-modernist epistemology typically opposes the presuppositions shared by foundationalism, essentialism, and realism. For R. Richard Rorty, Michael Foucault, Jacques Derrida and Lyotard oppose transcendental arguments and transcendental standpoints; reject the picture of knowledge as accurate representation; reject principles, distinctions and categories that are thought to be unconditionally binding for all times, persons and places; reject any complete and closed explanatory system and grand narratives.

UNIT 4: GETTIER PROBLEM AND RESPONSES

STRUCTURE

- 4.0 Objectives
- 4.1 Introduction
- 4.2 History
- 4.3 Knowledge as justified true belief (JTB)
- 4.4 Gettier's two original counterexamples
- 4.5 More general Gettier-style problems
- 4.6 Constructing arbitrary Gettier problems
- 4.7 Responses to Gettier
- 4.8 Let us sum up
- 4.9 Key Words
- 4.10 Questions for Review
- 4.11 Suggested readings and references
- 4.12 Answers to Check Your Progress

4.0 OBJECTIVES

After this unit we can understand:

- To understand Knowledge as justified true belief (JTB)
- To know about Gettier's two original counterexamples
- To discuss More general Gettier-style problems
- To describe Constructing arbitrary Gettier problems
- To discuss the Responses to Gettier

4.1 INTRODUCTION

The Gettier problem, in the field of epistemology, is a landmark philosophical problem concerning our understanding of descriptive knowledge. Attributed to American philosopher Edmund Gettier, Gettier-type counterexamples (called "Gettier-cases") challenge the long-held justified true belief (JTB) account of knowledge. The JTB account

holds that knowledge is equivalent to justified true belief; if all three conditions (justification, truth, and belief) are met of a given claim, then we have knowledge of that claim. In his 1963 three-page paper titled "Is Justified True Belief Knowledge?", Gettier attempts to illustrate by means of two counterexamples that there are cases where individuals can have a justified, true belief regarding a claim but still fail to know it because the reasons for the belief, while justified, turn out to be false. Thus, Gettier claims to have shown that the JTB account is inadequate; that it does not account for all of the necessary and sufficient conditions for knowledge.

The term "Gettier problem", "Gettier case", or even the adjective "Gettiered", is sometimes used to describe any case in the field of epistemology that purports to repudiate the JTB account of knowledge.

Responses to Gettier's paper have been numerous; some reject Gettier's examples, while others seek to adjust the JTB account of knowledge and blunt the force of these counterexamples. Gettier problems have even found their way into sociological experiments, where the intuitive responses from people of varying demographics to Gettier cases have been studied.

4.2 HISTORY

The question of what constitutes "knowledge" is as old as philosophy itself. Early instances are found in Plato's dialogues, notably *Meno* (97a–98b) and *Theaetetus*. Gettier himself was not actually the first to raise the problem named after him; its existence was acknowledged by both Alexius Meinong and Bertrand Russell, the latter of which discussed the problem in his book *Human knowledge: Its scope and limits*. In fact, the problem has been known since the Middle Ages, and both Indian philosopher Dharmottara and scholastic logician Peter of Mantua presented examples of it.

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Russell's case, called the stopped clock case, goes as follows: Alice sees a clock that reads two o'clock and believes that the time is two o'clock. It is, in fact, two o'clock. There's a problem, however: unknown to Alice, the clock she's looking at stopped twelve hours ago. Alice thus has an accidentally true, justified belief. Russell provides an answer of his own to the problem. Edmund Gettier's formulation of the problem was important as it coincided with the rise of the sort of philosophical naturalism promoted by W. V. O. Quine and others, and was used as a justification for a shift towards externalist theories of justification. John L. Pollock and Joseph Cruz have stated that the Gettier problem has "fundamentally altered the character of contemporary epistemology" and has become "a central problem of epistemology since it poses a clear barrier to analyzing knowledge".

Alvin Plantinga rejects the historical analysis:

According to the inherited lore of the epistemological tribe, the JTB [justified true belief] account enjoyed the status of epistemological orthodoxy until 1963, when it was shattered by Edmund Gettier... Of course, there is an interesting historical irony here: it isn't easy to find many really explicit statements of a JTB analysis of knowledge prior to Gettier. It is almost as if a distinguished critic created a tradition in the very act of destroying it.

Despite this, Plantinga does accept that some philosophers before Gettier have advanced a JTB account of knowledge, specifically C. I. Lewis and A. J. Ayer.

4.3 KNOWLEDGE AS JUSTIFIED TRUE BELIEF (JTB)

The JTB account of knowledge is the claim that knowledge can be conceptually analyzed as justified true belief, which is to say that the meaning of sentences such as "Smith knows that it rained today" can be

given with the following set of conditions, which are necessary and sufficient for knowledge to obtain:

A subject S knows that a proposition P is true if and only if:

P is true, and

S believes that P is true, and

S is justified in believing that P is true

The JTB account was first credited to Plato, though Plato argued against this very account of knowledge in the *Theaetetus* (210a). This account of knowledge is what Gettier subjected to criticism.

4.4 GETTIER'S TWO ORIGINAL COUNTER EXAMPLES

Gettier's paper used counterexamples (see also thought experiment) to argue that there are cases of beliefs that are both true and justified—therefore satisfying all three conditions for knowledge on the JTB account—but that do not appear to be genuine cases of knowledge. Therefore, Gettier argued, his counterexamples show that the JTB account of knowledge is false, and thus that a different conceptual analysis is needed to correctly track what we mean by "knowledge".

Gettier's case is based on two counterexamples to the JTB analysis. Each relies on two claims. Firstly, that justification is preserved by entailment, and secondly that this applies coherently to Smith's putative "belief". That is, that if Smith is justified in believing P, and Smith realizes that the truth of P entails the truth of Q, then Smith would also be justified in believing Q. Gettier calls these counterexamples "Case I" and "Case II":

Case I

Suppose that Smith and Jones have applied for a certain job. And suppose that Smith has strong evidence for the following conjunctive proposition: (d) Jones is the man who will get the job, and Jones has ten coins in his pocket.

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Smith's evidence for (d) might be that the president of the company assured him that Jones would, in the end, be selected and that he, Smith, had counted the coins in Jones's pocket ten minutes ago. Proposition (d) entails: (e) The man who will get the job has ten coins in his pocket.

Let us suppose that Smith sees the entailment from (d) to (e), and accepts (e) on the grounds of (d), for which he has strong evidence. In this case, Smith is clearly justified in believing that (e) is true.

But imagine, further, that unknown to Smith, he himself, not Jones, will get the job. And, also, unknown to Smith, he himself has ten coins in his pocket. Proposition (e) is true, though proposition (d), from which Smith inferred (e), is false. In our example, then, all of the following are true: (i) (e) is true, (ii) Smith believes that (e) is true, and (iii) Smith is justified in believing that (e) is true. But it is equally clear that Smith does not know that (e) is true; for (e) is true in virtue of the number of coins in Smith's pocket, while Smith does not know how many coins are in his pocket, and bases his belief in (e) on a count of the coins in Jones's pocket, whom he falsely believes to be the man who will get the job.

Case II

Smith, it is claimed by the hidden interlocutor, has a justified belief that "Jones owns a Ford". Smith therefore (justifiably) concludes (by the rule of disjunction introduction) that "Jones owns a Ford, or Brown is in Barcelona", even though Smith has no information whatsoever about the location of Brown.

In fact, Jones does not own a Ford, but by sheer coincidence, Brown really is in Barcelona. Again, Smith had a belief that was true and justified, but not knowledge.

False premises

In both of Gettier's actual examples (see also counterfactual conditional), the justified true belief came about, if Smith's purported claims are disputable, as the result of entailment (but see also material conditional) from justified false beliefs that "Jones will get the job" (in case I), and

that "Jones owns a Ford" (in case II). This led some early responses to Gettier to conclude that the definition of knowledge could be easily adjusted, so that knowledge was justified true belief that does not depend on false premises. The interesting issue that arises is then of how to know which premises are in reality false or true when deriving a conclusion, because as in the Gettier cases, one sees that premises can be very reasonable to believe and be likely true, but unknown to the believer there are confounding factors and extra information that may have been missed while concluding something. The question that arises is therefore to what extent would one have to be able to go about attempting to "prove" all premises in the argument before solidifying a conclusion.

Check Your Progress 1

Note: Use the space given bellow

1. Discuss the Knowledge as justified true belief (JTB).

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2. What is Gettier's two original counterexamples?

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4.5 MORE GENERAL GETTIER-STYLE PROBLEMS

In a 1966 scenario known as "The sheep in the field", Roderick Chisholm asks us to imagine that someone is standing outside a field looking at something that looks like a sheep (although in fact, it is a dog disguised as a sheep). They believe there is a sheep in the field, and in fact, they are

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right because there is a sheep behind the hill in the middle of the field. Hence, they have a justified true belief that there is a sheep in the field. But is that belief knowledge? A similar problem which seeks to be more plausible called the "Cow in the Field" appears in Martin Cohen's book 101 Philosophy Problems, where it is supposed that a farmer checking up on his favourite cow confuses a piece of black and white paper caught up in a distant bush for his cow. However, since the animal actually is in the field, but hidden in a hollow, again, the farmer has a justified, true belief which seems nonetheless not to qualify as "knowledge".

Another scenario by Brian Skyrms is "The Pyromaniac", in which a struck match lights not for the reasons the pyromaniac imagines but because of some unknown "Q radiation".

A different perspective on the issue is given by Alvin Goldman in the "fake barns" scenario (crediting Carl Ginet with the example). In this one, a man is driving in the countryside, and sees what looks exactly like a barn. Accordingly, he thinks that he is seeing a barn. In fact, that is what he is doing. But what he does not know is that the neighborhood generally consists of many fake barns — barn facades designed to look exactly like real barns when viewed from the road, as in the case of a visit in the countryside by Catherine II of Russia, just to please her. Since if he had been looking at one of them, he would have been unable to tell the difference, his "knowledge" that he was looking at a barn would seem to be poorly founded. A similar process appears in Robert A. Heinlein's *Stranger in a Strange Land* as an example of Fair Witness behavior.

The "no false premises" (or "no false lemmas") solution which was proposed early in the discussion proved to be somewhat problematic, as more general Gettier-style problems were then constructed or contrived in which the justified true belief does not seem to be the result of a chain of reasoning from a justified false belief.

For example:

After arranging to meet with Mark for help with homework, Luke arrives at the appointed time and place. Walking into Mark's office Luke clearly sees Mark at his desk; Luke immediately forms the belief "Mark is in the room. He can help me with my logic homework". Luke is justified in his belief; he clearly sees Mark at his desk. In fact, it's not Mark that Luke saw; it was a marvelous hologram, perfect in every respect, giving the appearance of Mark diligently grading papers at his desk. Nevertheless, Mark is in the room; he is crouched under his desk reading Frege. Luke's belief that Mark is in the room is true (he is in the room, under his desk) and justified (Mark's hologram is giving the appearance of Mark hard at work).

Again, it seems as though Luke does not "know" that Mark is in the room, even though it is claimed he has a justified true belief that Mark is in the room, but it is not nearly so clear that the perceptual belief that "Mark is in the room" was inferred from any premises at all, let alone any false ones, nor led to significant conclusions on its own; Luke did not seem to be reasoning about anything; "Mark is in the room" seems to have been part of what he seemed to see.

To save the "no false lemmas" solution, one must logically say that Luke's inference from sensory data does not count as a justified belief unless he consciously or unconsciously considers the possibilities of deception and self-deception. A justified version of Luke's thought process, by that logic, might go like this:

That looks to me like Mark in the room.

No factor, right now, could deceive me on this point.

Therefore, I can safely ignore that possibility.

"Mark is in the room" (or, "I can safely treat that as Mark").

The second line counts as a false premise. However, by the previous argument, this suggests we have fewer justified beliefs than we think we do.

4.6 CONSTRUCTING ARBITRARY GETTIER PROBLEMS

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The main idea behind Gettier's examples is that the justification for the belief is flawed or incorrect, but the belief turns out to be true by sheer luck. Thus, a general scenario can be constructed as such:

Bob believes A is true because of B. Argument B is flawed, but A turns out to be true by a different argument C. Since A is true, Bob believes A is true, and Bob has justification for B, all of the conditions (JTB) are satisfied. However, Bob had no knowledge of A.

4.7 RESPONSES TO GETTIER

The Gettier problem is formally a problem in first-order logic, but the introduction by Gettier of terms such as believes and knows moves the discussion into the field of epistemology. Here, the sound (true) arguments ascribed to Smith then need also to be valid (believed) and convincing (justified) if they are to issue in the real-world discussion about justified true belief.

Responses to Gettier problems have fallen into one of three categories:

Affirmations of the JTB account: This response affirms the JTB account of knowledge, but rejects Gettier cases. Typically, the proponent of this response rejects Gettier cases because, they say, Gettier cases involve insufficient levels of justification. Knowledge actually requires higher levels of justification than Gettier cases involve.

Fourth condition responses: This response accepts the problem raised by Gettier cases, and affirms that JTB is necessary (but not sufficient) for knowledge. A proper account of knowledge, according to this type of view, will contain some fourth condition (JTB + ?). With the fourth condition in place, Gettier counterexamples (and other similar counterexamples) will not work, and we will have an adequate set of criteria that are both necessary and sufficient for knowledge.

Justification replacement response: This response also accepts the problem raised by Gettier cases. However, instead of invoking a fourth condition, it seeks to replace Justification itself for some other third condition (?TB) (or remove it entirely) that will make counterexamples obsolete.

One response, therefore, is that in none of the above cases was the belief justified because it is impossible to justify anything that is not true. Conversely, the fact that a proposition turns out to be untrue is proof that it was not sufficiently justified in the first place. Under this interpretation, the JTB definition of knowledge survives. This shifts the problem to a definition of justification, rather than knowledge. Another view is that justification and non-justification are not in binary opposition. Instead, justification is a matter of degree, with an idea being more or less justified. This account of justification is supported by mainstream philosophers such as Paul Boghossian and Stephen Hicks. In common sense usage, an idea can not only be more justified or less justified, but it can also be partially justified (Smith's boss told him X) and partially unjustified (Smith's boss is a liar). Gettier's cases involve propositions that were true, believed, but which had weak justification. In case 1, the premise that the testimony of Smith's boss is "strong evidence" is rejected. The case itself depends on the boss being either wrong or deceitful (Jones did not get the job) and therefore unreliable. In case 2, Smith again has accepted a questionable idea (Jones owns a Ford) with unspecified justification. Without justification, both cases do not undermine the JTB account of knowledge.

Other epistemologists accept Gettier's conclusion. Their responses to the Gettier problem, therefore, consist of trying to find alternative analyses of knowledge. They have struggled to discover and agree upon as a beginning any single notion of truth, or belief, or justifying which is wholly and obviously accepted. Truth, belief, and justifying have not yet been satisfactorily defined, so that JTB (justified true belief) may be defined satisfactorily is still problematical, on account or otherwise of Gettier's examples. Gettier, for many years a professor at University of

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Massachusetts Amherst later also was interested in the epistemic logic of Hintikka, a Finnish philosopher at Boston University, who published *Knowledge and Belief* in 1962.

Fourth condition (JTB+G) approaches

The most common direction for this sort of response to take is what might be called a "JTB+G" analysis: that is, an analysis based on finding some fourth condition—a "no-Gettier-problem" condition—which, when added to the conditions of justification, truth, and belief, will yield a set of necessary and jointly sufficient conditions.

Goldman's causal theory

One such response is that of Alvin Goldman (1967), who suggested the addition of a causal condition: a subject's belief is justified, for Goldman, only if the truth of a belief has caused the subject to have that belief (in the appropriate way); and for a justified true belief to count as knowledge, the subject must also be able to "correctly reconstruct" (mentally) that causal chain. Goldman's analysis would rule out Gettier cases in that Smith's beliefs are not caused by the truths of those beliefs; it is merely accidental that Smith's beliefs in the Gettier cases happen to be true, or that the prediction made by Smith: "The winner of the job will have 10 coins", on the basis of his putative belief, (see also bundling) came true in this one case. This theory is challenged by the difficulty of giving a principled explanation of how an appropriate causal relationship differs from an inappropriate one (without the circular response of saying that the appropriate sort of causal relationship is the knowledge-producing one); or retreating to a position in which justified true belief is weakly defined as the consensus of learned opinion. The latter would be useful, but not as useful nor desirable as the unchanging definitions of scientific concepts such as momentum. Thus, adopting a causal response to the Gettier problem usually requires one to adopt (as Goldman gladly does) some form of reliabilism about justification. See Goldman's Theory of justification.

Lehrer–Paxson's defeasibility condition

Keith Lehrer and Thomas Paxson (1969) proposed another response, by adding a defeasibility condition to the JTB analysis. On their account, knowledge is undefeated justified true belief — which is to say that a justified true belief counts as knowledge if and only if it is also the case that there is no further truth that, had the subject known it, would have defeated her present justification for the belief. (Thus, for example, Smith's justification for believing that the person who will get the job has ten coins in his pocket is his justified belief that Jones will get the job, combined with his justified belief that Jones has ten coins in his pocket. But if Smith had known the truth that Jones will not get the job that would have defeated the justification for his belief.)

Pragmatism

Pragmatism was developed as a philosophical doctrine by C.S. Peirce and William James (1842–1910). In Peirce's view, the truth is nominally defined as a sign's correspondence to its object and pragmatically defined as the ideal final opinion to which sufficient investigation would lead sooner or later. James' epistemological model of truth was that which works in the way of belief, and a belief was true if in the long run it worked for all of us, and guided us expeditiously through our semihospitable world. Peirce argued that metaphysics could be cleaned up by a pragmatic approach.

Consider what effects that might conceivably have practical bearings you conceive the objects of your conception to have. Then, your conception of those effects is the whole of your conception of the object.

From a pragmatic viewpoint of the kind often ascribed to James, defining on a particular occasion whether a particular belief can rightly be said to be both true and justified is seen as no more than an exercise in pedantry, but being able to discern whether that belief led to fruitful outcomes is a

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fruitful enterprise. Peirce emphasized fallibilism, considered the assertion of absolute certainty a barrier to inquiry, and in 1901 defined truth as follows: "Truth is that concordance of an abstract statement with the ideal limit towards which endless investigation would tend to bring scientific belief, which concordance the abstract statement may possess by virtue of the confession of its inaccuracy and one-sidedness, and this confession is an essential ingredient of truth." In other words, any unqualified assertion is likely to be at least a little wrong or, if right, still right for not entirely the right reasons. Therefore one is more veracious by being Socratic, including a recognition of one's own ignorance and knowing one may be proved wrong. This is the case, even though in practical matters one sometimes must act, if one is to act at all, with decision and complete confidence.

Revisions of JTB approaches

The difficulties involved in producing a viable fourth condition have led to claims that attempting to repair the JTB account is a deficient strategy. For example, one might argue that what the Gettier problem shows is not the need for a fourth independent condition in addition to the original three, but rather that the attempt to build up an account of knowledging by conjoining a set of independent conditions was misguided from the outset. Those who have adopted this approach generally argue that epistemological terms like justification, evidence, certainty, etc. should be analyzed in terms of a primitive notion of knowledge, rather than vice versa. Knowledge is understood as factive, that is, as embodying a sort of epistemological "tie" between a truth and a belief. The JTB account is then criticized for trying to get and encapsulate the factivity of knowledge "on the cheap," as it were, or via a circular argument, by replacing an irreducible notion of factivity with the conjunction of some of the properties that accompany it (in particular, truth and justification). Of course, the introduction of irreducible primitives into a philosophical theory is always problematical (some would say a sign of desperation), and such anti-reductionist accounts are unlikely to please those who have other reasons to hold fast to the method behind JTB+G accounts.

Fred Dretske's conclusive reasons and Robert Nozick's truth-tracking
Fred Dretske (1971) developed an account of knowledge which he called "conclusive reasons", revived by Robert Nozick as what he called the subjunctive or truth-tracking account (1981). Nozick's formulation posits that proposition p is an instance of knowledge when:

p is true

S believes that p

if p were true, S would believe that p

if p weren't true, S wouldn't believe that p

Nozick's definition is intended to preserve Goldman's intuition that Gettier cases should be ruled out by disacknowledging "accidentally" true justified beliefs, but without risking the potentially onerous consequences of building a causal requirement into the analysis. This tactic though, invites the riposte that Nozick's account merely hides the problem and does not solve it, for it leaves open the question of why Smith would not have had his belief if it had been false. The most promising answer seems to be that it is because Smith's belief was caused by the truth of what he believes; but that puts us back in the causalist camp.

Criticisms and counter examples (notably the Grandma case) prompted a revision, which resulted in the alteration of (3) and (4) to limit themselves to the same method (i.e. vision):

p is true

S believes that p

if p were true, S (using M) would believe that p

if p weren't true, S (using method M) wouldn't believe that p

Saul Kripke has pointed out that this view remains problematic and uses a counterexample called the Fake Barn Country example, which describes a certain locality containing a number of fake barns or facades of barns. In the midst of these fake barns is one real barn, which is

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painted red. There is one more piece of crucial information for this example: the fake barns cannot be painted red.

Jones is driving along the highway, looks up and happens to see the real barn, and so forms the belief

I see a barn

Though Jones has gotten lucky, he could have just as easily been deceived and not have known it. Therefore it doesn't fulfill premise 4, for if Jones saw a fake barn he wouldn't have any idea it was a fake barn. So this is not knowledge.

An alternate example is if Jones looks up and forms the belief

I see a red barn.

According to Nozick's view this fulfills all four premises. Therefore this is knowledge, since Jones couldn't have been wrong, since the fake barns cannot be painted red. This is a troubling account however, since it seems the first statement I see a barn can be inferred from I see a red barn; however by Nozick's view the first belief is not knowledge and the second is knowledge.

Robert Fogelin's perspectival account

In the first chapter of his book *Pyrronian Reflexions on Truth and Justification*, Robert Fogelin gives a diagnosis that leads to a dialogical solution to Gettier's problem. The problem always arises when the given justification has nothing to do with what really makes the proposition true. Now, he notes that in such cases there is always a mismatch between the information disponible to the person who makes the knowledge-claim of some proposition p and the information disponible to the evaluator of this knowledge-claim (even if the evaluator is the same person in a later time). A Gettierian counterexample arises when the justification given by the person who makes the knowledge-claim cannot be accepted by the knowledge evaluator because it does not fit with his wider informational setting. For instance, in the case of the fake

barn the evaluator knows that a superficial inspection from someone who does not know the peculiar circumstances involved isn't a justification acceptable as making the proposition p (that it is a real barn) true.

Richard Kirkham's skepticism

Richard Kirkham has proposed that it is best to start with a definition of knowledge so strong that giving a counterexample to it is logically impossible. Whether it can be weakened without becoming subject to a counterexample should then be checked. He concludes that there will always be a counterexample to any definition of knowledge in which the believer's evidence does not logically necessitate the belief. Since in most cases the believer's evidence does not necessitate a belief, Kirkham embraces skepticism about knowledge. He notes that a belief can still be rational even if it is not an item of knowledge. (see also: fallibilism)

Attempts to dissolve the problem

One might respond to Gettier by finding a way to avoid his conclusion(s) in the first place. However, it can hardly be argued that knowledge is justified true belief if there are cases that are justified true belief without being knowledge; thus, those who want to avoid Gettier's conclusions have to find some way to defuse Gettier's counterexamples. In order to do so, within the parameters of the particular counter-example or exemplar, they must then either accept that

Gettier's cases are not really cases of justified true belief, or
 Gettier's cases really are cases of knowledge after all,
 or, demonstrate a case in which it is possible to circumvent surrender to the exemplar by eliminating any necessity for it to be considered that JTB apply in just those areas that Gettier has rendered obscure, without thereby lessening the force of JTB to apply in those cases where it actually is crucial. Then, though Gettier's cases stipulate that Smith has a certain belief and that his belief is true, it seems that in order to propose (1), one must argue that Gettier, (or, that is, the writer responsible for the

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particular form of words on this present occasion known as case (1), and who makes assertion's about Smith's "putative" beliefs), goes wrong because he has the wrong notion of justification. Such an argument often depends on an externalist account on which "justification" is understood in such a way that whether or not a belief is "justified" depends not just on the internal state of the believer, but also on how that internal state is related to the outside world. Externalist accounts typically are constructed such that Smith's putative beliefs in Case I and Case II are not really justified (even though it seems to Smith that they are), because his beliefs are not lined up with the world in the right way, or that it is possible to show that it is invalid to assert that "Smith" has any significant "particular" belief at all, in terms of JTB or otherwise. Such accounts, of course, face the same burden as causalist responses to Gettier: they have to explain what sort of relationship between the world and the believer counts as a justificatory relationship.

Those who accept (2) are by far in the minority in analytic philosophy; generally those who are willing to accept it are those who have independent reasons to say that more things count as knowledge than the intuitions that led to the JTB account would acknowledge. Chief among these are epistemic minimalists such as Crispin Sartwell, who hold that all true belief, including both Gettier's cases and lucky guesses, counts as knowledge.

Experimental research

Some early work in the field of experimental philosophy suggested that traditional intuitions about Gettier cases might vary cross-culturally. However, subsequent studies have consistently failed to replicate these results, instead finding that participants from different cultures do share the traditional intuition. Indeed, more recent studies have actually been providing evidence for the opposite hypothesis, that people from a variety of different cultures have surprisingly similar intuitions in these cases.

Check Your Progress 2

Note: Use the space given bellow

3. Discuss More general Gettier-style problems.

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4. Write about Constructing arbitrary Gettier problems

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5. What is Responses to Gettier?

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4.8 LET US SUM UP

Gettier problems or cases arose as a challenge to our understanding of the nature of knowledge. Initially, that challenge appeared in an article by Edmund Gettier, published in 1963. But his article had a striking impact among epistemologists, so much so that hundreds of subsequent articles and sections of books have generalized Gettier's original idea into a more wide-ranging concept of *a* Gettier case or problem, where instances of this concept might differ in many ways from Gettier's own cases. Philosophers swiftly became adept at thinking of variations on Gettier's own particular cases; and, over the years, this fecundity has been taken to render his challenge even more significant. This is

especially so, given that there has been no general agreement on how to solve the challenge posed by Gettier cases as a group — Gettier's own ones or those that other epistemologists have observed or imagined. (Note that sometimes this general challenge is called *the* Gettier problem.) What, then, is the nature of knowledge? And can we rigorously define what it is to know? Gettier's article gave to these questions a precision and urgency that they had formerly lacked. The questions are still being debated — more or less fervently at different times — within post-Gettier epistemology.

4.9 KEY WORDS

Belief: Belief is the attitude that something is the case or true. In epistemology, philosophers use the term "belief" to refer to personal attitudes associated with true or false ideas and concepts. However, "belief" does not require active introspection and circumspection.

Arbitrary: Arbitrariness is the quality of being "determined by chance, whim, or impulse, and not by necessity, reason, or principle". Arbitrary decisions are not necessarily the same as random decisions.

Reponses: a reaction to something.

4.10 QUESTIONS FOR REVIEW

6. Discuss the Knowledge as justified true belief (JTB)
7. What is Gettier's two original counterexamples?
8. Discuss More general Gettier-style problems
9. Write about Constructing arbitrary Gettier problems
10. What is Responses to Gettier?

4.11 SUGGESTED READINGS AND REFERENCES

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- Robert Nozick: *Philosophical Explanations*. Harvard University Press. 1981.

4.12 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- 1) See Section 4.3

Notes

- 2) See Section 4.4

Check Your Progress 2

- 1) See Section 4.5
- 2) See Section 4.6
- 3) See Section 4.7

UNIT 5: GETTIER'S PRINCIPALS

STRUCTURE

- 5.0 Objectives
- 5.1 Introduction
- 5.2 The Justified-True-Belief Analysis of Knowledge
- 5.3 Gettier's Original Challenge
- 5.4 Some other Gettier Cases
- 5.5 The Basic Structure of Gettier Cases
- 5.6 The Generality of Gettier Cases
- 5.7 Attempted Solutions: Infallibility
- 5.8 Attempted Solutions: Eliminating Luck
- 5.9 Attempted Solutions: Eliminating False Evidence
- 5.10 Attempted Solutions: Eliminating Defeat
- 5.11 Attempted Solutions: Eliminating Inappropriate Causality
- 5.12 Attempted Dissolutions: Competing Intuitions
- 5.13 Attempted Dissolutions: Knowing Luckily
- 5.14 Gettier Cases and Analytic Epistemology
- 5.15 Let us sum up
- 5.16 Key Words
- 5.17 Questions for Review
- 5.18 Suggested readings and references
- 5.19 Answers to Check Your Progress

5.0 OBJECTIVES

After this unit students can able to know:

- To know the Justified-True-Belief Analysis of Knowledge
- To discuss the Gettier's Original Challenge
- To know Some other Gettier Cases
- To discuss the Basic Structure of Gettier Cases
- To know the Generality of Gettier Cases
- Attempted Solutions: Infallibility

- Attempted Solutions: Eliminating Luck
- Attempted Solutions: Eliminating False Evidence
- Attempted Solutions: Eliminating Defeat
- Attempted Solutions: Eliminating Inappropriate Causality
- Attempted Dissolutions: Competing Intuitions
- Attempted Dissolutions: Knowing Luckily
- Gettier Cases and Analytic Epistemology

5.1 INTRODUCTION

Gettier problems or cases arose as a challenge to our understanding of the nature of knowledge. Initially, that challenge appeared in an article by Edmund Gettier, published in 1963. But his article had a striking impact among epistemologists, so much so that hundreds of subsequent articles and sections of books have generalized Gettier's original idea into a more wide-ranging concept of a Gettier case or problem, where instances of this concept might differ in many ways from Gettier's own cases. Philosophers swiftly became adept at thinking of variations on Gettier's own particular cases; and, over the years, this fecundity has been taken to render his challenge even more significant. This is especially so, given that there has been no general agreement on how to solve the challenge posed by Gettier cases as a group — Gettier's own ones or those that other epistemologists have observed or imagined. (Note that sometimes this general challenge is called the Gettier problem.) What, then, is the nature of knowledge? And can we rigorously define what it is to know? Gettier's article gave to these questions a precision and urgency that they had formerly lacked. The questions are still being debated — more or less fervently at different times — within post-Gettier epistemology.

Gettier problems or cases are named in honor of the American philosopher Edmund Gettier, who discovered them in 1963. They function as challenges to the philosophical tradition of defining knowledge of a proposition as justified true belief in that proposition. The problems are actual or possible situations in which someone has a belief that is both true and well supported by evidence, yet which —

according to almost all epistemologists — fails to be knowledge. Gettier's original article had a dramatic impact, as epistemologists began trying to ascertain afresh what knowledge is, with almost all agreeing that Gettier had refuted the traditional definition of knowledge. They have made many attempts to repair or replace that traditional definition of knowledge, resulting in several new conceptions of knowledge and of justificatory support. In this respect, Gettier sparked a period of pronounced epistemological energy and innovation — all with a single two-and-a-half page article. There is no consensus, however, that any one of the attempts to solve the Gettier challenge has succeeded in fully defining what it is to have knowledge of a truth or fact. So, the force of that challenge continues to be felt in various ways, and to various extents, within epistemology. Sometimes, the challenge is ignored in frustration at the existence of so many possibly failed efforts to solve it. Often, the assumption is made that *somehow* it can — and will, one of these days — be solved. Usually, it is agreed to show *something* about knowledge, even if not all epistemologists concur as to exactly what it shows.

5.2 THE JUSTIFIED-TRUE-BELIEF ANALYSIS OF KNOWLEDGE

Gettier cases are meant to challenge our understanding of *propositional* knowledge. This is knowledge which is described by phrases of the form “knowledge that p,” with “p” being replaced by some indicative sentence (such as “Kangaroos have no wings”). It is knowledge of a truth or fact — knowledge of how the world is in whatever respect is being described by a given occurrence of “p”. Usually, when epistemologists talk simply of knowledge they are referring to propositional knowledge. It is a kind of knowledge which we attribute to ourselves routinely and fundamentally.

Hence, it is philosophically important to ask what, more fully, such knowledge *is*. If we do not fully understand what it is, will we not fully understand ourselves either? That is a possibility, as philosophers have long realized. Those questions are ancient ones; in his own way, Plato asked them.

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And, prior to Gettier's challenge, different epistemologists would routinely have offered in reply some more or less detailed and precise version of the following generic three-part analysis of what it is for a person to have knowledge that *p* (for any particular "p"):

1. *Belief*. The person *believes* that *p*. This belief might be more or less confident. And it might — but it need not — be manifested in the person's speech, such as by her saying that *p* or by her saying that she believes that *p*. All that is needed, strictly speaking, is for her belief to *exist* (while possessing at least the two further properties that are about to be listed).
2. *Truth*. The person's belief that *p* needs to be *true*. If it is incorrect instead, then — no matter what else is good or useful about it — it is not knowledge. It would only be something else, something lesser. Admittedly, even when a belief is mistaken it can feel to the believer as if it is true. But in that circumstance the feeling would be mistaken; and so the belief would not be knowledge, no matter how much it might feel to the believer like knowledge.
3. *Justification*. The person's belief that *p* needs to be well *supported*, such as by being based upon some good evidence or reasoning, or perhaps some other kind of rational justification. Otherwise, the belief, even if it is true, may as well be a lucky guess. It would be correct without being knowledge. It would only be something else, something lesser.

Supposedly (on standard pre-Gettier epistemology), each of those three conditions needs to be satisfied, if there is to be knowledge; and, equally, if all are satisfied together, the result is an instance of knowledge. In other words, the analysis presents what it regards as being three individually necessary, and jointly sufficient, kinds of condition for having an instance of knowledge that *p*.

The analysis is generally called the *justified-true-belief* form of analysis of knowledge (or, for short, JTB). For instance, your knowing that you are a person would be your believing (as you do) that you are one, along with this belief's being true (as it is) and its resting (as it does) upon much good evidence. That evidence will probably include such matters

as your having been told that you are a person, your having reflected upon what it is to be a person, your seeing relevant similarities between yourself and other persons, and so on.

It is important to bear in mind that JTB, as presented here, is a *generic* analysis. It is intended to describe a general structuring which can absorb or generate comparatively specific analyses that might be suggested, either of all knowledge at once or of particular kinds of knowledge. It provides a basic outline — a *form* — of a theory. In practice, epistemologists would suggest further details, while respecting that general form. So, even when particular analyses suggested by particular philosophers at first glance seem different to JTB, these analyses can simply be more specific instances or versions of that more general form of theory.

Probably the most common way for this to occur involves the specific analyses incorporating, in turn, further analyses of some or all of belief, truth, and justification. For example, some of the later sections in this article may be interpreted as discussing attempts to understand justification more precisely, along with how it functions as part of knowledge. In general, the goal of such attempts can be that of ascertaining aspects of knowledge's microstructure, thereby rendering the general theory JTB as precise and full as it needs to be in order genuinely to constitute an understanding of particular instances of knowing and of not knowing. Steps in that direction by various epistemologists have tended to be more detailed and complicated after Gettier's 1963 challenge than had previously been the case. Roderick Chisholm (1966/1977/1989) was an influential exemplar of the post-1963 tendency; A. J. Ayer (1956) famously exemplified the pre-1963 approach.

5.3. GETTIER'S ORIGINAL CHALLENGE

Gettier's article described two possible situations. This section presents his Case I. (It is perhaps the more widely discussed of the two. The second will be mentioned in the next section.) Subsequent sections will use this Case I of Gettier's as a focal point for analysis.

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The case's protagonist is Smith. He and Jones have applied for a particular job. But Smith has been told by the company president that Jones will win the job. Smith combines that testimony with his observational evidence of there being ten coins in Jones's pocket. (He had counted them himself — an odd but imaginable circumstance.) And he proceeds to infer that whoever will get the job has ten coins in their pocket. (As the present article proceeds, we will refer to this belief several times more. For convenience, therefore, let us call it belief b.) Notice that Smith is not thereby guessing. On the contrary; his belief b enjoys a reasonable amount of justificatory support. There is the company president's testimony; there is Smith's observation of the coins in Jones's pocket; and there is Smith's proceeding to infer belief b carefully and sensibly from that other evidence. Belief b is thereby at least fairly well justified — supported by evidence which is good in a reasonably normal way. As it happens, too, belief b is true — although not in the way in which Smith was expecting it to be true. For it is *Smith* who will get the job, and Smith *himself* has ten coins in his pocket. These two facts combine to make his belief b true. Nevertheless, neither of those facts is something that, on its own, was known by Smith. Is his belief b therefore not knowledge? In other words, does Smith fail to know that the person who will get the job has ten coins in his pocket? Surely so (thought Gettier).

That is Gettier's Case I, as it was interpreted by him, and as it has subsequently been regarded by almost all other epistemologists. The immediately pertinent aspects of it are standardly claimed to be as follows. It contains a belief which is true and justified — but which is not knowledge. And if that is an accurate reading of the case, then JTB is false. Case I would show that it is possible for a belief to be true and justified without being knowledge. Case I would have established that the combination of truth, belief, and justification does not entail the presence of knowledge. In that sense, a belief's being true and justified would not be *sufficient* for its being knowledge.

5.4 SOME OTHER GETTIER CASES

Having posed those questions, though, we should realize that they are merely representative of a more general epistemological line of inquiry. The epistemological challenge is not just to discover the minimal repair that we could make to Gettier's Case I, say, so that knowledge would then be present. Rather, it is to find a failing — a reason for a lack of knowledge — that is common to *all* Gettier cases that have been, or could be, thought of (that is, all actual or possible cases relevantly like Gettier's own ones). Only thus will we be understanding knowledge in general — all instances of knowledge, everyone's knowledge. And this is our goal when responding to Gettier cases.

Sections 7 through 11 will present some attempted diagnoses of such cases. In order to evaluate them, therefore, it would be advantageous to have some sense of the apparent potential range of the concept of a Gettier case. I will mention four notable cases.

The lucky disjunction (Gettier's second case: 1963). Again, Smith is the protagonist. This time, he possesses good evidence in favor of the proposition that Jones owns a Ford. Smith also has a friend, Brown. Where is Brown to be found at the moment? Smith does not know. Nonetheless, on the basis of his accepting that Jones owns a Ford, he infers — and accepts — each of these three disjunctive propositions:

- Either Jones owns a Ford, or Brown is in Boston.
- Either Jones owns a Ford, or Brown is in Barcelona.
- Either Jones owns a Ford, or Brown is in Brest-Litovsk.

No insight into Brown's location guides Smith in any of this reasoning. He realizes that he has good evidence for the first disjunct (regarding Jones) in each of those three disjunctions, and he sees this evidence as thereby supporting each disjunction as a whole. Seemingly, he is right about that. (These are inclusive disjunctions, not exclusive. That is, each can, if need be, accommodate the truth of *both* of its disjuncts. Each is true if even one — let alone both — of its disjuncts is true.) Moreover, in fact one of the three disjunctions is true (albeit in a way that would surprise Smith if he were to be told of how it is true). The second disjunction is true because, as good luck would have it, Brown *is* in Barcelona — even though, as bad luck would have it, Jones does not own a Ford. (As it happened, the evidence for his doing so, although

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good, was misleading.) Accordingly, Smith's belief that either Jones owns a Ford or Brown is in Barcelona is true. And there is good evidence supporting — justifying — it. But is it knowledge?

The sheep in the field (Chisholm 1966/1977/1989). Imagine that you are standing outside a field. You see, within it, what looks exactly like a sheep. What belief instantly occurs to you? Among the many that could have done so, it happens to be the belief that there is a sheep in the field. And in fact you are right, because there is a sheep behind the hill in the middle of the field. You cannot see that sheep, though, and you have no direct evidence of its existence. Moreover, what you are seeing is a dog, disguised as a sheep. Hence, you have a well justified true belief that there is a sheep in the field. But is that belief knowledge?

The pyromaniac (Skrms 1967). A pyromaniac reaches eagerly for his box of Sure-Fire matches. He has excellent evidence of the past reliability of such matches, as well as of the present conditions — the clear air and dry matches — being as they should be, if his aim of lighting one of the matches is to be satisfied. He thus has good justification for believing, of the particular match he proceeds to pluck from the box, that it will light. This is what occurs, too: the match does light. However, what the pyromaniac did not realize is that there were impurities in this specific match, and that it would not have lit if not for the sudden (and rare) jolt of Q-radiation it receives exactly when he is striking it. His belief is therefore true and well justified. But is it knowledge?

The fake barns (Goldman 1976). Henry is driving in the countryside, looking at objects in fields. He sees what looks exactly like a barn. Accordingly, he thinks that he is seeing a barn. Now, that is indeed what he is doing. But what he does not realize is that the neighborhood contains many fake barns — mere barn facades that look like real barns when viewed from the road. And if he had been looking at one of them, he would have been deceived into believing that he was seeing a barn. Luckily, he was not doing this. Consequently, his belief is justified and true. But is it knowledge?

5.5 THE BASIC STRUCTURE OF GETTIER CASES

Although the multitude of actual and possible Gettier cases differ in their details, some characteristics unite them. For a start, each Gettier case contains a belief which is true and well justified without — according to epistemologists as a whole — being knowledge. The following two generic features also help to constitute Gettier cases:

1. *Fallibility*. The justification that is present within each case is *fallible*. Although it provides good support for the truth of the belief in question, that support is not perfect, strictly speaking. This means that the justification leaves open at least the possibility of the belief's being false. The justification indicates strongly that the belief is true — without proving conclusively that it is.
2. *Luck*. What is most distinctive of Gettier cases is the *luck* they contain. Within any Gettier case, in fact the well-but-fallibly justified belief in question is true. Nevertheless, there is significant luck in how the belief manages to combine being true with being justified. Some abnormal or odd circumstance is present in the case, a circumstance which makes the existence of that justified and true belief quite fortuitous.

Here is how those two features, (1) and (2), are instantiated in Gettier's Case I. Smith's evidence for his belief *b* was good but fallible. This left open the possibility of belief *b* being mistaken, even given that supporting evidence. As it happened, that possibility was not realized: Smith's belief *b* was actually true. Yet this was due to the intervention of some good luck. Belief *b* could easily have been false; it was made true only by circumstances which were hidden from Smith. That is, belief *b* was in fact made true by circumstances (namely, *Smith's* getting the job and there being ten coins in *his* pocket) other than those which Smith's evidence noticed and which his evidence indicated as being a good enough reason for holding *b* to be true. What Smith *thought* were the circumstances (concerning Jones) making his belief *b* true were nothing

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of the sort. Luckily, though, some facts of which he had no inkling were making his belief true.

Check Your Progress 1

Note: Use the space given bellow

1. What is the Justified-True-Belief Analysis of Knowledge?

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2. What is the Gettier's Original Challenge?

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3. Discuss Some other Gettier Cases?

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4. What is The Basic Structure of Gettier Cases?

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5.6 THE GENERALITY OF GETTIER CASES

JTB says that *any* actual or possible case of knowledge that p is an actual or possible instance of some kind of well justified true belief that p — and that *any* actual or possible instance of some kind of well justified true belief that p is an actual or possible instance of knowledge that p. Hence, JTB is false if there is even one actual or possible Gettier situation (in which some justified true belief fails to be knowledge). Accordingly, since 1963 epistemologists have tried — again and again and again — to revise or repair or replace JTB in response to Gettier cases. The main aim has been to modify JTB so as to gain a ‘Gettier-proof’ definition of knowledge.

How extensive would such repairs need to be? After all, even if some justified true beliefs arise within Gettier situations, not all do so. In practise, such situations are rare, with few of our actual justified true beliefs ever being “Gettiered.” Has Gettier therefore shown only that *not all* justified true beliefs are knowledge? Correlatively, might JTB be *almost* correct as it is — in the sense of being accurate about almost all actual or possible cases of knowledge?

On the face of it, Gettier cases do indeed show only that not all actual or possible justified true beliefs are knowledge — rather than that a belief’s being justified and true is never enough for its being knowledge. Nevertheless, epistemologists generally report the impact of Gettier cases in the latter way, describing them as showing that being justified and true is *never* enough to make a belief knowledge. Why do epistemologists interpret the Gettier challenge in that stronger way?

The reason is that they wish — by way of some universally applicable definition or formula or analysis — to understand knowledge in all of its actual or possible instances and manifestations, not only in some of them. Hence, epistemologists strive to understand how to avoid ever being in a Gettier situation (from which knowledge will be absent, regardless of whether such situations are uncommon). But that goal is, equally, the aim of understanding what it is about most situations that constitutes their not being Gettier situations. If we do not know what, exactly, makes a situation a Gettier case and what changes to it would suffice for its no longer being a Gettier case, then we do not know how,

exactly, to describe the *boundary* between Gettier cases and other situations.

5.7 ATTEMPTED SOLUTIONS: INFALLIBILITY

To the extent that we understand what makes something a Gettier case, we understand what would suffice for that situation not to be a Gettier case. Section 5 outlined two key components — fallibility and luck — of Gettier situations. In this section and the next, we will consider whether removing one of those two components — the removal of which will suffice for a situation's no longer being a Gettier case — would solve Gettier's epistemological challenge. That is, we will be asking whether we may come to understand the nature of knowledge by recognizing its being incompatible with the presence of at least one of those two components (fallibility and luck).

There is a *prima facie* case, at any rate, for regarding justificatory fallibility with concern in this setting. So, let us examine the *Infallibility Proposal* for solving Gettier's challenge. There have long been philosophers who doubt (independently of encountering Gettier cases) that allowing fallible justification is all that it would take to convert a true belief into knowledge. ("If you know that p, there must have been no possibility of your being mistaken about p," they might say.) The classic philosophical expression of that sort of doubt was by René Descartes, most famously in his *Meditations on First Philosophy* (1641). Contemporary epistemologists who have voiced similar doubts include Keith Lehrer (1971) and Peter Unger (1971). In the opinion of epistemologists who embrace the Infallibility Proposal, we can eliminate Gettier cases as challenges to our understanding of knowledge, simply by refusing to allow that one's having *fallible* justification for a belief that p could ever adequately satisfy JTB's justification condition. Stronger justification than that is required within knowledge (they will claim); *infallibilist* justificatory support is needed. (They might even say that there is no justification present at all, let alone an insufficient amount of it, given the fallibility within the cases.)

Thus, for instance, an infallibilist about knowledge might claim that because (in Case I) Smith's justification provided only fallible support for his belief *b*, this justification was always leaving open the possibility of that belief being mistaken — and that this is why the belief is not knowledge. The infallibilist might also say something similar — as follows — about the sheep-in-the-field case. Because you were relying on your fallible senses in the first place, you were bound not to gain knowledge of there being a sheep in the field. (“It could never be real knowledge, given the inherent possibility of error in using one's senses.”) And the infallibilist will regard the fake-barns case in the same way, claiming that the potential for mistake (that is, the existence of fallibility) was particularly real, due to the existence of the fake barns. And that is why (infers the infallibilist) there is a lack of knowledge within the case — as indeed there would be within any situation where fallible justification is being used.

5.8 ATTEMPTED SOLUTIONS: ELIMINATING LUCK

The other feature of Gettier cases that was highlighted in section 5 is the *lucky* way in which such a case's protagonist has a belief which is both justified and true. Is it this luck that needs to be eliminated if the situation is to become one in which the belief in question is knowledge? In general, must any instance of knowledge include no accidentalness in how its combination of truth, belief, and justification is effected? The *Eliminate Luck Proposal* claims so.

Almost all epistemologists, when analyzing Gettier cases, reach for some version of this idea, at least in their initial or intuitive explanations of why knowledge is absent from the cases. Unger (1968) is one who has also sought to make this a fuller and more considered part of an explanation for the lack of knowledge. He says that a belief is not knowledge if it is true only courtesy of some relevant *accident*. That description is meant to allow for some flexibility. Even so, further care will still be needed if the Eliminate Luck Proposal is to provide real insight and understanding. After all, if we seek to eliminate all luck whatsoever from the production of the justified true belief (if knowledge

is thereby to be present), then we are again endorsing a version of infallibilism (as described in section 7). If no luck is involved in the justificatory situation, the justification renders the belief's truth wholly predictable or inescapable; in which case, the belief is being infallibly justified. And this would be a requirement which (as section 7 explained) few epistemologists will find illuminating, certainly not as a response to Gettier cases.

5.9 ATTEMPTED SOLUTIONS: ELIMINATING FALSE EVIDENCE

A lot of epistemologists have been attracted to the idea that the failing within Gettier cases is the person's including something *false* in her evidence. This would be a problem for her, because she is relying upon that evidence in her attempt to gain knowledge, and because knowledge is itself always true. To the extent that falsity is guiding the person's thinking in forming the belief that *p*, she will be lucky to derive a belief that *p* which is true. And (as section 8 indicated) there are epistemologists who think that a lucky derivation of a true belief is not a way to know that truth. Let us therefore consider the *No False Evidence Proposal*.

In Gettier's Case I, for example, Smith includes in his evidence the false belief that Jones will get the job. If Smith had lacked that evidence (and if nothing else were to change within the case), presumably he would not have inferred belief *b*. He would probably have had no belief at all as to who would get the job (because he would have had no evidence at all on the matter). If so, he would thereby not have had a justified and true belief *b* which failed to be knowledge. Should JTB therefore be modified so as to say that no belief is knowledge if the person's justificatory support for it includes something false? JTB would then tell us that one's knowing that *p* is one's having a justified true belief which is well supported by evidence, none of which is false.

That is the No False Evidence Proposal. But epistemologists have noticed a few possible problems with it.

First, as Richard Feldman (1974) saw, there seem to be some Gettier cases in which *no* false evidence is used. Imagine that (contrary to Gettier's own version of Case I) Smith does not believe, falsely, "Jones will get the job." Imagine instead that he believes, "The company president told me that Jones will get the job." (He *could* have continued to form the first belief. But suppose that, as it happens, he does not form it.) This alternative belief would be true. It would also provide belief *b* with as much justification as the false belief provided. So, if all else is held constant within the case (with belief *b* still being formed), again Smith has a true belief which is well-although-fallibly justified, yet which might well not be knowledge.

Second, it will be difficult for the No False Evidence Proposal not to imply an unwelcome skepticism. Quite possibly, there is always some false evidence being relied upon, at least implicitly, as we form beliefs. Is there nothing false at all — not even a single falsity — in your thinking, as you move through the world, enlarging your stock of beliefs in various ways (not all of which ways are completely reliable and clearly under your control)? If there is even some falsity among the beliefs you use, but if you do not wholly remove it or if you do not isolate it from the other beliefs you are using, then — on the No False Evidence Proposal — there is a danger of its preventing those other beliefs from ever being knowledge. This is a worry to be taken seriously, if a belief's being knowledge is to depend upon the total absence of falsity from one's thinking in support of that belief.

Check Your Progress 2

Note: Use the space given bellow

1. Write about the Generality of Gettier Cases.

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2. Discuss the Attempted Solutions: Infallibility.

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3. Describe Attempted Solutions: Eliminating Luck.

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4. What is Attempted Solutions: Eliminating False Evidence?

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5.10 ATTEMPTED SOLUTIONS: ELIMINATING DEFEAT

Section 9 explored the suggestion that the failing within any Gettier case is a matter of what is *included* within a given person’s evidence: specifically, some core falsehood is accepted within her evidence. A converse idea has also received epistemological attention — the thought that the failing within any Gettier case is a matter of what is *not* included in the person’s evidence: specifically, some notable truth or fact is absent from her evidence. This proposal would not simply be that the evidence overlooks at least one fact or truth. Like the unmodified No False Evidence Proposal (with which section 9 began), that would be far too demanding, undoubtedly leading to skepticism. Because there are always *some* facts or truths not noticed by anyone’s evidence for a particular belief, there would be no knowledge either. No one’s evidence

for p would ever be good enough to satisfy the justification requirement that is generally held to be necessary to a belief that p's being knowledge.

Epistemologists therefore restrict the proposal, turning it into what is often called a *defeasibility* analysis of knowledge. It can also be termed the *No Defeat Proposal*. The thought behind it is that JTB should be modified so as to say that what is needed in knowing that p is an absence from the inquirer's context of any defeaters of her evidence for p. And what is a defeater? A particular fact or truth t defeats a body of justification j (as support for a belief that p) if adding t to j, thereby producing a new body of justification j*, would seriously weaken the justificatory support being provided for that belief that p — so much so that j* does not provide strong enough support to make even the true belief that p knowledge. This means that t is relevant to justifying p (because otherwise adding it to j would produce neither a weakened nor a strengthened j*) as support for p — but damagingly so. In effect, insofar as one wishes to have beliefs which are knowledge, one should only have beliefs which are supported by evidence that is not *overlooking* any facts or truths which — if left overlooked — function as defeaters of whatever support is being provided by that evidence for those beliefs.

In Case I, for instance, we might think that the reason why Smith's belief b fails to be knowledge is that his evidence includes no awareness of the facts that he will get the job himself and that his own pocket contains ten coins. Thus, imagine a variation on Gettier's case, in which Smith's evidence does include a recognition of these facts about himself. Then either

- (i) he would have conflicting evidence (by having this evidence supporting his, plus the original evidence supporting Jones's, being about to get the job), or
- (ii) he would not have conflicting evidence (if his original evidence about Jones had been discarded, leaving him with only the evidence about himself). But in either of those circumstances Smith would be justified in having belief b — concerning “the person,” whoever it would be, who will get

the job. Moreover, in that circumstance he would not obviously be in a Gettier situation — with his belief *b* still failing to be knowledge. For, on either (i) or (ii), there would be no defeaters of his evidence — no facts which are being overlooked by his evidence, and which would seriously weaken his evidence if he were not overlooking them.

5.11 ATTEMPTED SOLUTIONS: ELIMINATING INAPPROPRIATE CAUSALITY

It has also been suggested that the failing within Gettier situations is one of causality, with the justified true belief being caused — generated, brought about — in too odd or abnormal a way for it to be knowledge. This *Appropriate Causality Proposal* — initially advocated by Alvin Goldman (1967) — will ask us to consider, by way of contrast, any case of observational knowledge. Seemingly, a necessary part of such knowledge's being produced is a stable and normal causal pattern's generating the belief in question. You use your eyes in a standard way, for example. A belief might then form in a standard way, reporting what you observed. That belief will be justified in a standard way, too, partly by that use of your eyes. And it will be true in a standard way, reporting how the world actually is in a specific respect. All of this reflects the causal stability of normal visually-based belief-forming processes. In particular, we realize that the object of the knowledge — that perceived aspect of the world which most immediately makes the belief true — is playing an appropriate role in bringing the belief into existence.

Within Gettier's Case I, however, that pattern of normality is absent. The aspects of the world which make Smith's belief *b* true are the facts of his getting the job and of there being ten coins in his own pocket. But these do not help to cause the existence of belief *b*. (That belief is caused by Smith's awareness of other facts — his conversation with the company president and his observation of the contents of Jones's pocket.) Should JTB be modified accordingly, so as to tell us that a justified true belief is

knowledge only if those aspects of the world which make it true are appropriately involved in causing it to exist?

Epistemologists have noticed problems with that Appropriate Causality Proposal, though.

First, some objects of knowledge might be aspects of the world which are unable ever to have causal influences. In knowing that $2 + 2 = 4$ (this being a *prima facie* instance of what epistemologists term *a priori* knowledge), you know a truth — perhaps a fact — about numbers. And do they have causal effects? Most epistemologists do not believe so. (Maybe instances of numerals, such as marks on paper being interpreted on particular occasions in specific minds, can have causal effects. Yet — it is usually said — such numerals are merely representations of numbers. They are not the actual numbers.) Consequently, it is quite possible that the scope of the Appropriate Causality Proposal is more restricted than is epistemologically desirable. The proposal would apply only to empirical or *a posteriori* knowledge, knowledge of the observable world — which is to say that it might not apply to all of the knowledge that is actually or possibly available to people. And (as section 6 explained) epistemologists seek to understand all actual or possible knowledge, not just some of it.

Second, to what extent will the Appropriate Causality Proposal help us to understand even empirical knowledge? The problem is that epistemologists have not agreed on any formula for exactly how (if there is to be knowledge that p) the fact that p is to contribute to bringing about the existence of the justified true belief that p. Inevitably (and especially when reasoning is involved), there will be indirectness in the causal process resulting in the formation of the belief that p. But how much indirectness is too much? That is, are there degrees of indirectness that are incompatible with there being knowledge that p? And if so, how are we to specify those critical degrees?

Check Your Progress 3

Notes

Note: Use the space given bellow

1. Discuss the “Attempted Solutions: Eliminating Defeat”.

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2. Write about Attempted Solutions: Eliminating Inappropriate Causality.

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5.12 ATTEMPTED DISSOLUTIONS: COMPETING INTUITIONS

Sections 9 through 11 described some of the main proposals that epistemologists have made for solving the Gettier challenge directly. Those proposals accept the usual interpretation of each Gettier case as containing a justified true belief which fails to be knowledge. Each proposal then attempts to modify JTB, the traditional epistemological suggestion for what it is to know that p. What is sought by those proposals, therefore, is an analysis of knowledge which accords with the usual interpretation of Gettier cases. That analysis would be intended to cohere with the claim that knowledge is not present within Gettier cases. And why is it so important to cohere with the latter claim? The standard answer offered by epistemologists' points to what they believe is their strong *intuition* that, within any Gettier case, knowledge is absent. Almost all epistemologists claim to have this intuition about Gettier cases. They treat this intuition with much respect. (It seems that most do so as part of a more general methodology, one which involves the respectful use of intuitions within many areas of philosophy. Frank

Jackson [1998] is a prominent proponent of that methodology's ability to aid our philosophical understanding of key concepts.)

Nonetheless, a few epistemological voices dissent from that approach (as this section and the next will indicate). These seek to *dissolve* the Gettier challenge. Instead of accepting the standard interpretation of Gettier cases, and instead of trying to find a direct solution to the challenge that the cases are thereby taken to ground, dissolution of the cases denies that they ground any such challenge in the first place. And one way of developing such dissolution is to deny or weaken the usual intuition by which almost all epistemologists claim to be guided in interpreting Gettier cases.

One such attempt has involved a few epistemologists — Jonathan Weinberg, Shaun Nichols, and Stephen Stich (2001) — conducting empirical research which (they argue) casts doubt upon the evidential force of the usual epistemological intuition about the cases. When epistemologists claim to have a strong intuition that knowledge is missing from Gettier cases, they take themselves to be representative of people in general (specifically, in how they use the word “knowledge” and its cognates such as “know,” “knower,” and the like). That intuition is therefore taken to reflect how “we” — people in general — conceive of knowledge. It is thereby assumed to be an accurate indicator of pertinent details of the concept of knowledge — which is to say, “our” concept of knowledge. Yet what is it that gives epistemologists such confidence in their being representative of how people in general use the word “knowledge”? Mostly, epistemologists test this view of themselves upon their students and upon other epistemologists. The empirical research by Weinberg, Nichols, and Stich asked a wider variety of people — including ones from outside of university or college settings — about Gettier cases. And that research has reported encountering a wider variety of reactions to the cases. When people who lack much, or even any, prior epistemological awareness are presented with descriptions of Gettier cases, will they unhesitatingly say (as epistemologists do) that the justified true beliefs within those cases fail to be knowledge? The

empirical evidence gathered so far suggests some intriguing disparities in this regard — including ones that might reflect varying ethnic ancestries or backgrounds. In particular, respondents of east Asian or Indian sub-continental descent were found to be more open than were European Americans (of “Western” descent) to classifying Gettier cases as situations in which knowledge is *present*. A similar disparity seemed to be correlated with respondents’ socio-economic status.

Those data are preliminary. (And other epistemologists have not sought to replicate those surveys.) Nonetheless, the data are suggestive. At the very least, they constitute some empirical evidence that does not simply accord with epistemologists’ usual interpretation of Gettier cases. Hence, a real possibility has been raised that epistemologists, in how they interpret Gettier cases, are not so accurately representative of people in general. Their shared, supposedly intuitive, interpretation of the cases might be due to something distinctive in how they, as a group, think about knowledge, rather than being merely how people as a whole regard knowledge. In other words, perhaps the apparent intuition about knowledge (as it pertains to Gettier situations) that epistemologists share with each other is not universally shared. Maybe it is at least not shared with as many other people as epistemologists assume is the case. And if so, then the epistemologists’ intuition might not merit the significance they have accorded it when seeking a solution to the Gettier challenge. (Indeed, that challenge itself might not be as distinctively significant as epistemologists have assumed it to be. This possibility arises once we recognize that the prevalence of that usual putative intuition among epistemologists has been important to their deeming, in the first place, that Gettier cases constitute a decisive challenge to our understanding of what it is to know that p.)

5.13 ATTEMPTED DISSOLUTIONS: KNOWING LUCKILY

Section 12 posed the question of whether supposedly intuitive assessments of Gettier situations support the usual interpretation of the cases as strongly — or even as intuitively — as epistemologists generally believe is the case. How best might that question be answered? Sections

5 and 8 explained that when epistemologists seek to support that usual interpretation in a way that is meant to remain intuitive, they typically begin by pointing to the *luck* that is present within the cases. That luck is standardly thought to be a powerful — yet still intuitive — reason why the justified true beliefs inside Gettier cases fail to be knowledge.

Nevertheless, a contrary interpretation of the luck's role has also been proposed, by Stephen Hetherington (1998; 2001). It means to reinstate the sufficiency of JTB, thereby dissolving Gettier's challenge. That contrary interpretation could be called the *Knowing Luckily Proposal*. And it analyses Gettier's Case I along the following lines.

This alternative interpretation concedes (in accord with the usual interpretation) that, in forming his belief *b*, Smith is lucky to be gaining a belief which is true. More fully: He is lucky to do so, given the evidence by which he is being guided in forming that belief, and given the surrounding facts of his situation. In that sense (we might say), Smith came *close* to definitely lacking knowledge. (For in that sense he came close to forming a false belief; and a belief which is false is definitely not knowledge.) But to come close to definitely lacking knowledge need not be to lack knowledge. It might merely be to almost lack knowledge. So (as we might also say), it could be to know, *albeit luckily so*. Smith would have knowledge, in virtue of having a justified true belief. (We would thus continue to regard JTB as being true.) However, because Smith would only luckily have that justified true belief, he would only luckily have that knowledge.

Most epistemologists will object that this sounds like too puzzling a way to talk about knowing. Their reaction is natural. Even this Knowing Luckily Proposal would probably concede that there is very little (if any) knowledge which is lucky in so marked or dramatic a way. And because there is so little (if any) such knowledge, our everyday lives leave us quite unused to thinking of some knowledge as being present within ourselves or others quite so luckily: we would actually encounter little (if any) such knowledge. To the extent that the kind of luck involved in such cases reflects the statistical unlikelihood of such circumstances occurring, therefore, we should *expect* at least most knowledge not to be present in that lucky way. (Otherwise, this would be the *normal* way for

knowledge to be present. It would not in fact be an unusual way. Hence, strictly speaking, the knowledge would not be present only luckily.)

But even if the Knowing Luckily Proposal agrees that, inevitably, at least *most* knowledge will be present in comparatively normal ways, the proposal will deny that this entails the impossibility of there ever being at least *some* knowledge which is present more luckily. Ordinarily, when good evidence for a belief that *p* accompanies the belief's being true (as it does in Case I), this combination of good evidence and true belief occurs (unlike in Case I) without any notable luck being needed. Ordinary knowledge is thereby constituted, with that absence of notable luck being part of what makes instances of ordinary knowledge ordinary in our eyes. What is ordinary to us will not strike us as being present only luckily. Again, though, is it therefore impossible for knowledge *ever* to be constituted luckily? The Knowing Luckily Proposal claims that such knowledge is possible even if uncommon. The proposal will grant that there would be a difference between knowing that *p* in a comparatively ordinary way and knowing that *p* in a comparatively lucky way. Knowing comparatively luckily that *p* would be

- (i) knowing that *p* (where this might remain one's having a justified true belief that *p*), even while also
- (ii) running, or having run, a greater risk of not having that knowledge that *p*. In that sense, it would be to know that *p* less securely or stably or dependably, more fleetingly or unpredictably.

5.14 GETTIER CASES AND ANALYTIC EPISTEMOLOGY

Since the initial philosophical description in 1963 of Gettier cases, the project of responding to them (so as to understand what it is to know that *p*) has often been central to the practice of analytic epistemology. Partly this recurrent centrality has been due to epistemologists' taking the opportunity to think in detail about the nature of justification — about what justification is like in itself, and about how it is constitutively related to knowledge. But partly, too, that recurrent centrality reflects the

way in which, epistemologists have often assumed, responding adequately to Gettier cases requires the use of a paradigm example of a method that has long been central to analytic philosophy. That method involves the considered manipulation and modification of definitional models or theories, in reaction to clear counterexamples to those models or theories.

Thus (we saw in section 2), JTB purported to provide a definitional analysis of what it is to know that *p*. JTB aimed to describe, at least in general terms, the separable-yet-combinable components of such knowledge. Then Gettier cases emerged, functioning as apparently successful counterexamples to one aspect — the sufficiency — of JTB's generic analysis. That interpretation of the cases' impact rested upon epistemologists' claims to have reflective-yet-intuitive insight into the absence of knowledge from those actual or possible Gettier circumstances. These claims of intuitive insight were treated by epistemologists as decisive data, somewhat akin to favored observations. The claims were to be respected accordingly; and, it was assumed, any modification of the theory encapsulated in JTB would need to be evaluated for how well it accommodated them. So, the entrenchment of the Gettier challenge at the core of analytic epistemology hinged upon epistemologists' confident assumptions that (i) JTB failed to accommodate the data provided by those intuitions — and that (ii) any analytical modification of JTB would need (and would be able) to be assessed for whether it accommodated such intuitions. That was the analytical method which epistemologists proceeded to apply, vigorously and repeatedly.

Nevertheless, the history of post-1963 analytic epistemology has also contained repeated expressions of frustration at the seemingly insoluble difficulties that have accompanied the many attempts to respond to Gettier's disarmingly simple paper. Precisely how should the theory JTB be revised, in accord with the relevant data? Exactly which data are relevant anyway? We have seen in the foregoing sections that there is much room for dispute and uncertainty about all of this. For example, we have found a persistent problem of vagueness confronting various

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attempts to revise JTB. This might have us wondering whether a complete analytical definition of knowledge that p is even possible.

That is especially so, given that vagueness itself is a phenomenon, the proper understanding of which is yet to be agreed upon by philosophers. There is much contemporary discussion of what it even *is* (see Keefe and Smith 1996). On one suggested interpretation, vagueness is a matter of people in general not *knowing* where to draw a precise and clearly accurate line between instances of X and instances of non-X (for some supposedly vague phenomenon of being X, such as being bald or being tall). On that interpretation of vagueness, such a dividing line would exist; we would just be ignorant of its location. To many philosophers, that idea sounds regrettably odd when the vague phenomenon in question is baldness, say. (“You claim that there is an exact dividing line, in terms of the number of hairs on a person’s head, between being bald and not being bald? I find that claim extremely hard to believe.”) But should philosophers react with such incredulity when the phenomenon in question is that of knowing, and when the possibility of vagueness is being prompted by discussions of the Gettier problem? For most epistemologists remain convinced that their standard reaction to Gettier cases reflects, in part, the existence of a definite difference between knowing and not knowing. But where, exactly, is that dividing line to be found? As we have observed, the usual epistemological answers to this question seek to locate and to understand the dividing line in terms of degrees and kinds of justification or something similar. Accordingly, the threats of vagueness we have noticed in some earlier sections of this article might be a problem for many epistemologists. Possibly, those forms of vagueness afflict epistemologists’ *knowing* that a difference between knowledge and non-knowledge is revealed by Gettier cases. Epistemologists continue regarding the cases in that way. Are they right to do so? *Do* they have that supposed knowledge of what Gettier cases show about knowledge?

The Gettier challenge has therefore become a test case for analytically inclined philosophers. The following questions have become progressively more pressing with each failed attempt to convince

epistemologists as a group that, in a given article or talk or book, the correct analysis of knowledge has finally been reached. Will an adequate understanding of knowledge ever emerge from an analytical balancing of various theories of knowledge against relevant data such as intuitions? Must any theory of the nature of knowledge be answerable to intuitions prompted by Gettier cases in particular? And must epistemologists' intuitions about the cases be supplemented by other people's intuitions, too? What kind of theory of knowledge is at stake? What general form should the theory take? And what degree of precision should it have? If we are seeking an understanding of knowledge, must this be a logically or conceptually exhaustive understanding? (The methodological model of theory-being-tested-against-data suggests a scientific parallel. Yet need scientific understanding always be logically or conceptually exhaustive if it is to be real understanding?)

Check Your Progress 4

Note: Use the space given bellow

1. What is Attempted Dissolutions: Competing Intuitions?

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2. Write about Attempted Dissolutions: Knowing Luckily.

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3. What is meant by Gettier Cases and Analytic Epistemology?

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5.15 LET US SUM UP

In this unit we came to know that the issues involved are complex and subtle. No analysis has received general assent from epistemologists, and the methodological questions remain puzzling. Debate therefore continues. There is uncertainty as to whether Gettier cases — and thereby knowledge — can ever be fully understood. There is also uncertainty as to whether the Gettier challenge can be dissolved. Have we fully understood the challenge itself? What exactly is Gettier’s legacy? As epistemologists continue to ponder these questions, it is not wholly clear where their efforts will lead us. Conceptual possibilities still abound.

5.16 KEY WORDS

Knowledge: Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject.

Challenges: a call to someone to participate in a competitive situation or fight to decide who is superior in terms of ability or strength.

Justify: show or prove to be right or reasonable.

5.17 QUESTIONS FOR REVIEW

1. What is the Justified-True-Belief Analysis of Knowledge?
2. What is the Gettier’s Original Challenge?
3. Discuss Some other Gettier Cases?
4. What is The Basic Structure of Gettier Cases?
5. What is Attempted Dissolutions: Competing Intuitions?

6. Write about Attempted Dissolutions: Knowing Luckily.
7. What is meant by Gettier Cases and Analytic Epistemology?

5.18 SUGGESTED READINGS AND REFERENCES

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- Goldman, A. I. (1967). "A Causal Theory of Knowing." *Journal of Philosophy* 64: 357-72. Reprinted, with revisions, in Roth and Galis (1970).

5.19 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- 1) See Section 5.2
- 2) See Section 5.3
- 3) See Section 5.4
- 4) See Section 5.5

Check Your Progress 2

Notes

- 1) See Section 5.6
- 2) See Section 5.7
- 3) See Section 5.8
- 4) See Section 5.9

Check Your Progress 3

- 1) See Section 5.10
- 2) See Section 5.11

Check Your Progress 4

- 1) See Section 5.12
- 2) See Section 5.13
- 3) See Section 5.14

UNIT 6: JUSTIFICATION OF KNOWLEDGE-CLAIM AND EPISTEMIC DECISION

STRUCTURE

- 6.0 Objectives
- 6.1 Introduction
- 6.2 Knowledge, Justification, and Critical Thinking
 - 6.2.1 Knowledge and Beliefs
 - 6.2.2 Knowledge and Knowledge Claims
 - 6.2.3 Justification: Defending and Refuting Knowledge Claims
 - 6.2.4 Critical Thinking
- 6.3 Observations, Generalizations, and Theories
- 6.4 Justifying Claims of Observation
- 6.5 Knowledge as Provisional Truth
- 6.6 Logic and Mathematics: Justification through Proof
- 6.7 Explicit and Intuitive Justification
- 6.8 Socially Constructed Pool of Knowledge
 - 6.8.1 Personal and Socially Transmitted Knowledge
 - 6.8.2 Reported Sensory Experience and Measurements
 - 6.8.3. Credibility of the Source Suppose
- 6.9 Incommensurability: Debates that cannot be settled through argumentation
- 6.10 Let us sum up
- 6.11 Key Words
- 6.12 Questions for Review
- 6.13 Suggested readings and references
- 6.14 Answers to Check Your Progress

6.0 OBJECTIVES

After this unit we can able to know:

- To discuss the Observations, Generalizations, and Theories
- To know the Justifying Claims of Observation

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- To discuss Knowledge as Provisional Truth
- To know the Logic and Mathematics: Justification through Proof
- To discuss the Explicit and Intuitive Justification
- To know about the Socially Constructed Pool of Knowledge
- To describe the Incommensurability: Debates that cannot be settled through argumentation.

6.1 INTRODUCTION

The theory of justification is a part of epistemology that attempts to understand the justification of propositions and beliefs. Epistemologists are concerned with various epistemic features of belief, which include the ideas of justification, warrant, rationality, and probability. Loosely speaking, justification is the reason that someone (properly) holds a belief.

When a claim is in doubt, justification can be used to support the claim and reduce or remove the doubt. Justification can use empiricism (the evidence of the senses), authoritative testimony (the appeal to criteria and authority), or reason. Justification focuses on beliefs. This is in part because of the influence of the definition of knowledge as "justified true belief" often associated with a theory discussed near the end of the Plato's dialogues Meno and Theaetetus. More generally, theories of justification focus on the justification of statements or propositions.

The subject of justification has played a major role in the value of knowledge as "justified true belief". Some contemporary epistemologists, such as Jonathan Kvanvig assert that justification isn't necessary in getting to the truth and avoiding errors. Kvanvig attempts to show that knowledge is no more valuable than true belief, and in the process dismissed the necessity of justification due to justification not being connected to the truth.

6.2 KNOWLEDGE, JUSTIFICATION, AND CRITICAL THINKING

Justification is the reason why someone properly holds a belief, the explanation as to why the belief is a true one, or an account of how one knows what one knows. In much the same way arguments and explanations may be confused with each other, so may explanations and justifications. Statements that are justifications of some action take the form of arguments. For example, attempts to justify a theft usually explain the motives (e.g., to feed a starving family).

It is important to be aware when an explanation is not a justification. A criminal profiler may offer an explanation of a suspect's behavior (e.g.; the person lost his or her job, the person got evicted, etc.), and such statements may help us understand why the person committed the crime. An uncritical listener may believe the speaker is trying to gain sympathy for the person and his or her actions, but it does not follow that a person proposing an explanation has any sympathy for the views or actions being explained. This is an important distinction because we need to be able to understand and explain terrible events and behavior in attempting to discourage it.

There are several different views as to what entails justification, mostly focusing on the question "How sure do we need to be that our beliefs correspond to the actual world?" Different theories of justification require different amounts and types of evidence before a belief can be considered justified. Theories of justification generally include other aspects of epistemology, such as knowledge.

Popular theories of justification include:

- Epistemic coherentism – Beliefs are justified if they cohere with other beliefs a person holds, each belief is justified if it coheres with the overall system of beliefs.
- Externalism – Outside sources of knowledge can be used to justify a belief.
- Foundationalism – Basic beliefs justify other, non-basic beliefs.

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- Foundherentism – A combination of foundationalism and epistemic coherentism, proposed by Susan Haack
- Infinitism – Beliefs are justified by infinite chains of reasons.
- Internalism – The believer must be able to justify a belief through internal knowledge.
- Reformed epistemology – Beliefs are warranted by proper cognitive function, proposed by Alvin Plantinga.
- Skepticism – A variety of viewpoints questioning the possibility of knowledge
- truth skepticism – Questions the possibility of true knowledge, but not of justified knowledge
- epistemological skepticism – Questions the possibility of justified knowledge, but not true knowledge
- Evidentialism – Beliefs depend solely on the evidence for them.

6.2.1 Knowledge and Beliefs

Human beings entertain many types of beliefs. I believe, for instance, that the Earth goes around the Sun, that telling lies is bad, and that W.B. Yeats is a greater poet than Alfred Tennyson. Some of these beliefs are beliefs about the truth or falsity of propositions, while others are about the moral right and wrong of actions or behaviour, the beauty, significance, value etc. of ideas, things, or people, and so on. When I assert that the Earth goes around the Sun, what I mean is “I believe that the proposition ‘The Earth goes around the Sun’ is true.” When I assert that it is wrong to tell lies, what I mean is “I believe that the action of telling lies is morally wrong.” We will refer to beliefs about the truth or falsity of propositions as epistemic beliefs because they are tied up with what we consider to be knowledge. Epistemic beliefs are to be distinguished from ethical beliefs (beliefs about the moral right and wrong of actions or behaviour), aesthetic beliefs (beauty of ideas, things or people) and so on. In what follows, we will be concerned only with epistemic beliefs. The only reason for mentioning other types of beliefs is to place our inquiry in a broad context, and make clear what we are going to explore.

6.2.2 Knowledge and Knowledge Claims

What we call knowledge is collection of propositions that we believe to be true. For instance, if we say, “Pat knows that Bill stole the diamond.”, it is necessary that we believe that Bill is five feet tall. It is logically contradictory to say, “Pat knows that Bill stole the diamond, but I don’t believe it.” In contrast, it is acceptable to say “Pat thinks that Bill stole the diamond, but I don’t believe it.” or “Pat believes that Bill stole the diamond, but I know that Bill didn’t.” When a speaker says “X knows Y.” where Y is a sentence, it carries the speaker’s presupposition that Y is true. A knowledge claim is a proposition that is alleged to be true. “Small pox is caused by a virus.”, “Men are taller than women.”, “Small pox is caused by goddess Kali.”, “Blacks are inferior to whites.”, are knowledge claims. A knowledge claim becomes part of the knowledge for an individual or community when the claim is accepted as true. The knowledge of an individual/community is a body of propositions which are believed to be true. true. For the community of western educated individuals, the propositions “Small pox is caused by a virus.” and “Men are taller than women.” are part of knowledge, but “Small pox is caused by goddess Kali.” is a superstition, and “Blacks are inferior to the whites.” is racial prejudice.

6.2.3 Justification: Defending and Refuting Knowledge Claims

Why do we believe that the propositions “Small pox is caused by a virus.” and “Men are taller than women.” are true, while the proposition “Small pox is caused by goddess Kali.” is a superstition, and “Blacks are inferior to the whites.” is a prejudice false? Why do we believe that the proposition “The Sun goes revolves around the Earth.” is false? Responding questions calls for providing justification for our beliefs. Justification involves providing reasons for accepting the propositions that we regard as knowledge, that is, for considering them to be true. It also involves providing reasons for rejecting the propositions that we regard as non-knowledge, that is, for considering them to be false. In

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other words, justification involves the defense of what we regard as true, and the refutation of what we regard as false. The former justifies our acceptance, while the latter justifies our acceptance. Suppose a believer believes that a claim P is true, and a skeptic wishes to know why the believer believes that P is true. We may think of justification as the response of the believer to the following questions from the skeptic: Why do you believe that P is true? Why should I believe that P as true? These are questions that demand that the believer defend the claim. Let us now take the scenario of a disbeliever who believes that claim P is false, and the skeptic who wishes to know why the disbeliever believes that P is false. The skeptic's questions would be: Why do you believe that P is false? Why should I believe that P as false? These are questions that demand that the disbeliever refute the claim.

6.2.4 Critical Thinking

Considerations of the justification of knowledge claims, involving defense and refutation, come under rubric of critical thinking. What is critical thinking? Let us offer the following answer: Critical thinking is the mental process of reflecting upon something to assess its credibility, truth, significance, usefulness, value, or goodness on the basis of the information available to us and a mode of justification that we consider legitimate. This is a broad characterization of critical thinking that applies not only to critical thinking with respect to knowledge claims, but also its application in making moral judgements, choosing a policy or action, judging the usefulness of a machine, estimating importance of a work of art, and so on. We are concerned here only with a specific form of critical thinking, namely, the one relevant for assessing what is claimed as true or false. We may therefore narrow the broad concept to the specific domain of knowledge as follows: In the area of knowledge, critical thinking is the mental process of reflecting upon knowledge claims to assess their credibility, on the basis of the information available to us, and a mode of justification that we consider legitimate. Each of us has a skeptic inside us. Critical thinking is responding internally to the

skeptic's demands of defense and refutation, providing sufficient justification for accepting or rejecting knowledge claims.

Direct Sensory Experience The most common justification for both academic knowledge and commonsense knowledge is sensory experience. Thus, if I see a table in front of me, I am justified in believing that there is a table in front of me. Imagine the following conversation between a believer and a skeptic. Believer: There is a table in front of me. Skeptic: Why do you believe that there is a table in front of you? Believer: Because I see a table in front of me. At this point, the skeptic may ask: Skeptic: Ah, but you can't believe everything that your eyes tell you. How do you know that what you see is not a hallucination, induced by a drug someone has secretly put into coffee you had a while ago? How do you know that what is you see is not an illusion, say, the hologram of a table? Believer: There is no evidence yet to believe that what I see is a hallucination or illusion. In the absence of legitimate reasons to believe that my sensory perception is mistaken, I would take the perception to be correct. The skeptic's question illustrates the fallibility of sensory perception, while the response to the question illustrates the idea of what we may call provisional knowledge, that is, a belief that we consider to be true until we find evidence to the contrary. The first step in the acquisition of knowledge of the world is sensory perception, which is the brain's interpretation of the sensory information from the outside world, and yet sensory perceptions are subject to error. If we take "knowledge" to be infallible truth, that is, something whose claim to truth is totally certain, we are not justified concluding that there is a table in front of us on the basis of our sensory perception. That is, the following reasoning is illegitimate from the point of infallible truth: I see a table in front of me. Therefore it is reasonable to conclude that there is a table in front of me. In contrast, if we take "knowledge" to be provisional truth, that is, something for which there is reliable evidence but lacks total certainty, then speaker X's response is quite legitimate: I see a table in front of me. I am not aware of any evidence to conclude that my sensory perception is an illusion or hallucination. Therefore it is reasonable to conclude that there is a table in front of me. I will use the

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term projection of sensory experience to refer to assertions about the world made on the basis of sensory experience. Thus, “I see a table in front of me.” is a statement about my internal sensory experience, while “There is a table in front of me.” is a projection of my internal state to the external world. The principle of justification that connects the inner state to the external world can be stated as:

Justification based on evidence from direct sensory experience If P is a projection of X’s sensory experience, then X is justified in believing that P is true, unless there is evidence to the contrary. An extreme skeptic need not stop at this point. Suppose the skeptic asks: The above principle of justification assumes that our sensory perception is triggered by some reality there, and that the perception corresponds to this reality in most cases. What is the evidence to believe that this is true?” We will return to this question at a later point. A word of warning though. Carried to an extreme, we will discover that the skeptic’s demands for the justification of the principles of justification cannot be met. For instance, most forms of justification must assume that reality is not logically contradictory. What is the justification for believing that reality is not logically contradictory? I do not know of any satisfactory answer to this question. When we dig down to the ultimate roots of rational justification, we discover a small set of beliefs which themselves cannot be justified on the basis of more fundamental beliefs.

Mediated Sensory Perception: Manmade Sensing Instruments When we pick up an apple and a grape, we experience different degrees of muscular strain. We interpret the sensation of muscular strain as weight, and conclude that the apple is heavier than the grape. When we pick up two grapes, however, the differences on the muscular strain are so subtle, that it is very hard if not impossible to arrive at a conclusion on their relative weight. And comparing the relative weights of two grains of rice on the basis of sensor perception is simply impossible. Similarly, there is no way we can try to determine the relative weights of two elephants by lifting them. In this case, the weight is too large for the biological sensors to cope with. When the biological instruments of perception such as the

muscles, the eyes, and the ear are insufficient or less reliable, we use manmade instruments of perception. Thus, we can arrive at a reliable conclusion on the weights of rice grains or elephants by using an appropriate weighing machine. A weighing machine, therefore, can be thought of as an extension of the biological sensors. Similarly, when the distance between two things either too small or too large for the human eye to cope with, we use a ruler as an extension. When the biologically based perception of time is inadequate, we use clocks. A certain range of heat can be measured by the sensation on the skin, but thermometers can measure heat far more accurately and in a wider range. Both commonsense knowledge and scientific knowledge are thus supplemented by the manmade extensions of sensory perception. The use of manmade instruments provides another channel of both acquiring and justifying our knowledge of the world. Take for instance, the following scenario: Believer: (touching the forehead of a child and declaring that she has a fever) this child has a fever.

Sceptic: Why should I believe that the child has a fever? Believer: You can find out for yourself by touching the child's forehead, and comparing it with your forehead. The child's forehead is hotter. Sceptic: (touching the child's forehead and his own forehead) I don't perceive any difference. I can't accept your claim that that child's forehead is any hotter. Believer: Okay, let us use a thermometer. Do you agree that the thermometer measures temperature more accurately than our touch? Sceptic: Yes. Believer: (Measuring the temperature) You can see for yourself that the reading on the thermometer is 100.2 for the child, and 98.4 for you. So we are justified in concluding that the child has a fever. Do you agree? Sceptic: Yes. An important aspect of this dialogue is the agreement that thermometers measure temperature accurately and reliably. As in the case of the reliability of direct sensory perception, one can take scepticism a step further and question the credibility of the claim of instrumentation itself. What is the evidence to believe that a mercury thermometer measures temperature reliably and accurately? What is the evidence to believe that what we see through a microscope or telescope is reality rather than illusion? The questioning of the reliability

and accuracy of information is applicable to all forms of simple and complicated instrumentation, and is an integral part of critical thinking, but we will not deal with this issue at this point. Let us state the rationale of instrumental measurements as follows: Justification based on evidence from instrumentally mediated sensory experience. If X perceives measurement M on an instrument, P is an inference that follows from M, and the inference of P from M is justified, then X is justified in believing that P is true, unless there is evidence to the contrary.

6.3 OBSERVATIONS, GENERALIZATIONS, AND THEORIES

Consider the following propositions: Clint Eastwood is taller than Jane Fonda. Men are taller than women. The reason for men being taller than women is the greater physical activity of men. The first statement is an observation. An observation is a statement about one or more particular individuals or entities at a particular time and place. Our observation about Eastwood and Fonda exactly to one pair of individuals, namely, Clint Eastwood and Jane Fonda. The second statement above is a generalization: it holds on all men and women. While an observation covers only the individuals or entities that we have actually observed, a generalization covers individuals or entities that we may not have observed yet. The third statement above is a theory that speculates a probable cause or reason for the generalization in the second statement. The generalization that men are taller than women can be true and yet the alleged cause may be false: perhaps the cause is to be sought in the genetic makeup of the male and female members of the species, rather than their physical habits. Let us take an example from the natural sciences: On January 14 1998, I placed a vertical rod on a horizontal plane under the Sun, and measured the length of the shadow every half hour. I found that the shadow of the rod was long at sunrise, became increasingly short, and became shortest at noon, after which the length of the shadow kept increasing to a maximum at sunset. The length of the shadow of a vertical rod on a horizontal plane under the Sun is longest during sunrise and sunset and shortest during noon. The shadow of a

vertical rod on a horizontal plane under the Sun first shortens and then lengthens because of the daily rotation of the Earth around its axis. The first statement is an observation. The second statement is a generalization of a number of singular observations of the first type. The third statement provides an explanation for the generalization in the second statement. It is part of the heliocentric theory of solar system which assumes that the Earth spins around itself and revolves around the Sun. An alternative explanation for the generalization in the second statement is that it changes in the length of the shadow are the result of the Sun's revolution around the Earth. This is part of the Geocentric theory which assumes that the Earth remains still, and the Sun goes round the Earth. In what follows, we will explore the ways of justifying observations, generalizations, and theories.

Check Your Progress 1

Note: Use the space given bellow

- 1. What is Knowledge, Justification, and Critical Thinking?

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- 2. Discuss about the Observations, Generalizations, and Theories.

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6.4 JUSTIFYING CLAIMS OF OBSERVATION

Inductive Generalization Let us imagine that Jen visits the island of Balgonia. She stays there for a month, and sees hundreds of people.

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Every adult male that she sees on the island has a beard. She would now be justified in believing that every adult Balgonian has a beard. The principle that permits this inference can be stated as follows: Justification based on observation and induction If X has evidence to believe that P is true many observed instances, and has not found it to be false in any of the observed instances, then X is justified in believing that P is true unless there is evidence to the contrary.

As pointed out earlier, statements such as “The Sun rises in the east every day.” and “All crows are black”, are generalizations. Now, a legitimate inductive generalization is guaranteed to be true. For instance, our generalization about adult Balgonians could be wrong. It may be the case that Balgonia has ten thousand adult males of whom nine thousand eight hundred have beards, Jen has seen only two hundred seventy two adult male Balgonians, and just by chance she did not bump into any of the unbearded ones. Or it may have been the case that all the unbearded bolgonians stay indoors and do not meet foreigners. Again, in spite of such possibilities of error, Jen’s conclusion that every adult Bolgonian sports a beard is perfectly reasonable. While the statement “All Balgonians have beards.” makes an absolute assertion, statements such as “Most adult Balgonians have beards.” makes a statistical generalization. Statistics offers a way of arriving at inductive generalizations, with built in qualifications about possible error. Thus, to the conclusion that adult Balgonians have beards, a statistician would add the qualification about the confidence level of the generalization, depending upon the size of the sample.

Generalization through anecdotal evidence There are two important properties that are crucial for inductive generalizations of the kind illustrated above. They are: The basis must have a large number of observations that match the generalization. There must not be any contrary observations that violate the generalization. A form of justification that does not strictly adhere to the above requirement relies on anecdotal evidence, which involves the use of one or to examples to make a generalization. Consider the following reasoning. You know,

Indians are very rude people. I went to India last summer, and I stayed in a five star hotel. The receptionist was so rude to me. There was also this immigration officer who was just awfully rude.

6.5 KNOWLEDGE AS PROVISIONAL TRUTH

In the preceding sections, we pointed to the following strategies of justification found in commonsense knowledge, many of them found in academic knowledge as well. Observations Direct sensory perception Instrumentally mediated sensory perception Generalizations Inductive generalization Anecdotal evidence Theories Fit with observations Internal consistency Generality Convergence of Evidence Taking sensory perceptions as the basis of observations, the relationships among the above types of claims can be diagrammatically expressed as follows:

sensory perception --> observation --> generalization --> theory

You must have noticed that these principles crucially involve the qualification “unless there is evidence to the contrary” all the way. This is an explicit acknowledgment that what we consider to be truth at the present moment can turn out to be false when novel evidence is available. We will refer to such a belief as provisional truth. In contrast, the remaining three (namely, infallibility of the source, tradition, and anecdotal evidence) do not contain this qualification. Without the acknowledgment of possible error, these principles claim absolute truth.

Provisional truth: I believe that P is true, but my belief could be wrong.
 Absolute truth: I believe that P is true, and P is really true. Therefore my belief can never be wrong. Thus, our principles of justification yield only provisional knowledge: knowledge that is uncertain and fallible. If so, we must conclude that nothing that we can say about the world can be established to be really true, without any possibility of error. This applies even to the most “objective” forms of knowledge in the physical sciences. We are therefore faced with two choices. One of the choices is to insist on the concept of knowledge as infallible totally certain truth

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built into the verb know. This position would force us to the conclusion that we have no knowledge of anything about the world. Even what is considered scientific knowledge is not knowledge by definition.

The other choice is to relax our demand, and change our definition of knowledge to include provisional truth. This position would allow us to retain a considerable body of what we currently consider to be knowledge as knowledge. Needless to say, the latter alternative is preferable unless we are willing to accept the conclusion that humans have no knowledge of the world. If we adopt the idea of knowledge as beliefs that can be justified as provisional truth, we do not need to repeat the qualification “unless there is evidence to the contrary”, because this qualification is built into the notion of provisional truth. The substance of the general principles of justification which incorporate provisional truth can be summarized as follows: We are justified in believing that a knowledge claim P is provisionally true if:

A) Direct sensory experience: P is a projection of our sensory experience.

B) Instrumentally mediated sensory experience: P is an inference that follows from measurement M on an instrument, and the inference of P from M is justified.

C) Inductive generalization: P is a generalization, and we have evidence to believe that P holds true in many observed instances.

D) Fit with observations: P is an interpretation, and we have evidence to believe that a set of observable clues O is true, and P fits with O. When evidence against such a knowledge claim becomes available, the justification for taking the claim to be provisionally true disappears.

Check Your Progress 2

Note: Use the space given bellow

1. Discuss the Justifying Claims of Observation

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2. Knowledge as Provisional Truth

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6.6 LOGIC AND MATHEMATICS: JUSTIFICATION THROUGH PROOF

The preceding sections discussed the modes of justifying knowledge claims on a provisional basis. The conclusion in the modes of justification we have discussed crucially involved the acknowledgement of tentativeness in the phrase “until we find evidence to the contrary.” This is because these forms of justification are based on limited information: on the basis of available information, we conclude that P is true, but when more information becomes available, we may have to conclude that P is false. Now, a form of justification to which the above character of tentativeness does not apply is that of proof in mathematics and logic. Justification through proof has the following property: Proof: A knowledge claim P is true if P is proved to be true. An important characteristic of proof is that it does not refer to provisional truths. Once a belief is proved to be true, no new evidence can cast doubts on its truth. In this respect, proof is different from all other forms of justification. Proofs are typically found in logic and mathematics. It is typically not found in commonsense knowledge, but it is important that we understand the nature of proofs as a reference point if we wish to understand other the nature of other forms of justification. Let us take an example. When school children are taught mathematics, they are told that the product of two negative numbers is a positive number. Thus, when we multiply (-3)

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with (-5) , the result is $(+15)$, not (-15) . How do we prove that this is true? If we can demonstrate that for any numbers a and b , the product $(-a)(-b)$ is equal to $(a)(b)$, we have a proof for this knowledge claim. In his book *The Art of Mathematics* (1992:75-76), Jerry P. King gives the following proof:

“Let a and b be any two real numbers. Consider the number x defined by:

$$x = ab + (-a)(b) + (-a)(-b)$$

We can write

$$\begin{aligned}x &= ab + (-a)[(b) + (-b)] \\ &= ab + (-a)(0) \\ &= ab + 0 \\ &= ab.\end{aligned}$$

Also

$$\begin{aligned}x &= [a + (-a)]b + (-a)(-b) \\ &= 0 \cdot b + (-a)(-b) \\ &= 0 + (-a)(-b) \\ &= (-a)(-b)\end{aligned}$$

So we have

$$\begin{aligned}x &= ab \\ x &= (-a)(-b) \\ ab &= (-a)(-b) \quad \text{(claim proved)}\end{aligned}$$

The above example uses algebraic symbols to prove the result. Proofs can also be done in ordinary English. Take for instance, the proposition that the set of prime numbers is infinite. A prime number is one that cannot be divided by anything other than itself and 1. 1 and 2 are prime numbers, so is 3. 4 is not a prime number because $4 = (2)(2)$. 5 is a prime number. 6 is not a prime number because $6 = (2)(3)$. 7 is a prime number. 8 is not a prime number because $8 = (2)(4)$. 9 is not a prime number because $9 = (3)(3)$. 10 is not a prime number because $10 = (2)(5)$. Euclid proved in 300 BC that there are infinitely many prime numbers. The proof, summarized in by King (1982), is as follows:

“Suppose there are only finitely many prime numbers. Let n be the number of primes. Denote this finite set of primes by $p_1, p_2, p_3, \dots, p_n$. Look at the number x given by

$$x = p_1 p_2 p_3 \dots p_n + 1.$$

Now x is clearly a positive integer and is clearly not a prime. (It is larger than the product of all the primes, and therefore, is larger than any single prime.) So x must be divisible by some prime. (Since x is not a prime, it has proper divisors. So $x = a \cdot b$ where a and b are integers larger than 1. If a or b is a prime, then we have a prime that divides x . Otherwise a and b have factors which are either prime or themselves have factors. Thus, $a = a_1 a_2$ and $b = b_1 b_2$, say. Then $x = a_1 a_2 b_1 b_2$. Continuing in this manner we conclude that x is actually a product of primes by $p_1, p_2, p_3, \dots, p_n$ because each of these, upon division into x , will clearly leave a remainder of 1. (For example, if 2, 3, 5 were *all* the primes, then $x = 2 \cdot 3 \cdot 5 + 1 = 31$ and dividing 31 by either 2, 3 or 5 leaves a remainder of 1.) Consequently, there must exist some other prime other than those in our list. This is a contradiction since our list contains all the prime numbers. Thus, there are infinitely many prime numbers.” (p.84)

Recall that we characterized justification as the believer’s response to the skeptic’s question “Why do you believe claim P?”. Each of the types of justification discussed above involves i) the basis, or a set of premises on which the justification is built. ii) the demonstration, that given the basis, the claim can be derived as a logical consequence of the premises in the basis. In all domains of knowledge except logic and mathematics, it is important that the believer and the skeptic accept the premises of the basis as true (or provisionally true, in the sense described earlier). The credibility of the basis is irrelevant in logico-mathematical proofs. All that the believer demonstrates is that one set of propositions follows from another set of propositions. That is, if we accept X , we must also accept Y . Whether or not X is true is irrelevant. For instance, the basic premises in the proof of the proposition that the sum of angles in a triangle 180 degrees are the postulates of Euclidean geometry. These postulates are not claimed to be either true or false. All that the proof tells is that if the postulates are true, then the proposition “The sum of angles in a triangle 180 degrees.” is necessarily true. If we change the postulates, the result does not follow. We may refer to this type of justification as justification through pure reasoning. Nearly a century ago, Bertrand Russell pointed out in an article entitled Recent Work on the Principles of Mathematics (1901) that pure mathematics does not make any claims about the world:

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all it does is demonstrate that given a set of premises, certain conclusions necessarily follow: “Pure mathematics consists entirely of such assertions as that, if such and such proposition is true of anything, then such and such another proposition is true of that thing. It is essential not to discuss whether the first proposition is really true, and not to mention what the anything is of which it is supposed to be true. .. If our hypothesis is about anything and not about one or more particular things, then our deductions constitute mathematics. Thus mathematics may be defined as the subject in which we never know what we are talking about, nor whether what we are saying is true.” Another important characteristic of logico-mathematical proofs is that if a set of premises is true, a conclusion that has been proved on the basis of these premises is necessarily true. In other words, given a valid proof, it cannot be the case that the premises are true and the conclusion is false. This property is missing in the other modes of justification. As I said earlier, classical logic equates “valid argument” with “valid proof”, taking mathematics as the ideal form of knowledge. As a result, introductory logic courses teach the doctrine that only classical deductive reasoning, is valid. Other modes of reasoning, such as inductive reasoning, analogical reasoning, and non- monotonic deductive reasoning are considered invalid by the criterion of proof. Now, there is no harm in using words the way we want, but the term “invalid” has an implication of defect, and therefore creates the mistaken impression that non-deductive reasoning or non-monotonic deductive reasoning are somehow defective. It would be more fruitful, therefore, to use the term “valid” to mean “permissible within a given system of logic”. If so, we can talk about “deductively valid”, “inductively valid”, “abductively valid” and so on, without implying that nothing other than Aristotle’s logic is valid. It might be useful to bear in mind that we often use the word “proof” in ordinary language without requiring the rigour demanded by logico-mathematical proofs. For instance, a judge in the law court may say that the prosecution lawyer has proved that the defendant is guilty. The use of the word “prove” in law does not have either of the two properties characteristic of the logico-mathematical proofs. A theoretical scientist would rephrase the judge’s statement as “The prosecution lawyer has provided evidence that justifies

the belief that the defendant is guilty.” In the preceding sections, we took the position that what we call knowledge of the world is what we take to be provisional truth on the basis of available evidence. We acknowledge that no basis of evidence is infallible, which means that human knowledge of the world cannot have a totally certain infallible foundation. What we said here amounts to saying that we reject what is called “strong foundationalism” in philosophy.

6.7 EXPLICIT AND INTUITIVE JUSTIFICATION

The forms of justification that we have enumerated so far are all explicit in the sense when challenged by a skeptic, the believer can make an explicit statement of the basis of the belief, as well as the path that connects the basis to the belief being questioned. When either the basis or the path is unavailable for conscious scrutiny, but remains hidden in the unconscious part of the mind, we say that the justification is intuitive, and not explicit. The forms of justification discussed so far are all explicit. When I look at Rembrandt’s painting of a man wearing a golden helmet, I am struck by its closeness to reality. With its colour, highlights and shadows, the picture of golden helmet seems so much like a real golden helmet. Similarly, when I read a few pages from Vikram Seth’s novel *Suitable Boy*, I am struck by the feeling that Vikram Seth has captured the reality of life in India so faithfully.

I believe that Rembrandt’s painting of a man with a golden helmet is true to life. I believe that Vikram Seth’s novel *Suitable Boy* is true to life. The basis of my judgment is what one may call intuitive resonance. In my life as a person, I have stored a large collection of experiences in my memory. When I look at a painting or read a novel, I match the pattern provided by the painting or novel against this store of experiences in an unconscious manner. If the details of the unconscious pattern match the details of what I see or read, the two are in harmony, and my mind resonates, saying, yes, how true! Intuitive resonance is this “How true!” feeling. The crucial feature of intuitive resonance is that the pieces and the connections that lead to the resonance is unavailable for conscious

scrutiny. Intuitive resonance leads to remarks like “It makes sense to me, but I can’t tell you why.”, “I have this intuition that I am right, but I can’t defend it.”, “I don’t agree with you, but I can’t tell you why you are wrong.” How would others evaluate my claims of the verisimilitude of Rembrandt’s painting and Seth’s novel? The answer is that they will have to experience the same resonance. They will have to look at Rembrandt’s painting, and read Vikram Seth’s novel. If their unconscious storage of experiences match what they see and read, they too will say, yes, how true. If not, they will reject my claims. Suppose I wish to make the claim that there is more meaningless violence in Hindi movies than in Malayalam movies. It is unlikely that I will be able to establish the claim in terms of any of the rigorous means of justification discussed earlier. The only justification that I have for believing that I am right is my intuitive perception, which is a pattern that arises out of a number of stored experiences. You will agree with me if my claim creates a resonance in your store of experiences, and reject it if it does not.

6.8 SOCIALLY CONSTRUCTED POOL OF KNOWLEDGE

6.8.1 Personal and Socially Transmitted Knowledge

Some of our knowledge of the world is based on our direct first hand experience. For instance, we know that ice cream is sweet because we have eaten ice-cream ourselves and have found it to be sweet. We will refer to the beliefs based solely on personal direct experience as personal knowledge. Now, one of the important characteristics of the human species is that a human being can acquire knowledge from the other human beings in the community. For instance, we all know that cobra bite is lethal, but very few of us have had first hand experience of the effect of cobra poison. We believe that the proposition about cobra bite is true because others have observed its effect and reported it to us. We will refer to the beliefs based on the reports of other human beings as socially transmitted knowledge. An important prerequisite for socially transmitted knowledge is the existence of a system of communication

through which beliefs can be transmitted. The human species is able to amass a pool of socially transmitted knowledge because of the system of communication called language. In contrast, chicks possess no comparable system of communication, and hence the knowledge acquired by one chick disappears with the death of the chick. When chicks are given different coloured beads to peck, and one of them are coated with a poison that makes them sick, they learn to associate colour with the sickness, and avoid pecking at the harmful beads. Because they have no system of conveying this knowledge to the other members of the community, the experience of one chick does not benefit another. As a result, chicks, unlike humans, have no way of constructing a social pool of knowledge that gets passed on from one individual to another, and one generation to the next. In what follows, we will explore some of the patterns of justification in the transmission of knowledge across individuals in a community.

6.8.2 Reported Sensory Experience and Measurements

In section 2, we talked about the direct sensory experience of a human being as one of the sources of knowledge. Another common source of human knowledge is someone else's sensory experience. Suppose Pat tells Jen that Pat saw Clint Eastwood in a restaurant the day before. Jen is justified in believing that Pat saw Clint Eastwood the day before, even though this belief is subject to two levels of error. First, it may be the case that Pat was simply mistaken. The person that she saw was not Clint Eastwood, but someone who looked like Clint Eastwood. Second, Pat may be deliberately telling a lie, perhaps to impress Jen. She may not have seen someone who even looks like Clint Eastwood. In spite of such possibilities of error, we take human reports to reflect truth.

6.8.3. Credibility of the Source Suppose

Jen goes to a doctor for an annual check up. At the end of the examination, the doctor tells Jen that she has a weak heart and should

therefore be careful. Jen is justified in concluding that she has a weak heart. Once again, there are many sources of error. First, the doctor may be telling a lie. Second, the statement that Jen has a weak heart is not a matter of neither observation nor generalization, because he cannot look directly at the heart and observe the weakness. What the doctor does is to observe a few clues such as the rhythm of the heartbeat, and make an inference on the basis of such clues. That is to say, the statement that Jen has a weak heart is an interpretation of clues based on sensory perception, it is not a sensory perception by itself. If someone at the bus stop initiated a conversation with Jen, and told her that she had a weak heart, she would not probably take the statement seriously. “How do you know? Are you a doctor?” would be the immediate response to such a scenario. The reason why Jen is willing to accept the doctor’s statement as knowledge is because her doctor is a specialist. She has reason to believe that a specialist knows more than non-specialists, and her past experience with her doctor corroborates her trust.

6.9 INCOMMENSURABILITY: DEBATES THAT CANNOT BE SETTLED THROUGH ARGUMENTATION

In the preceding sections we discussed various strategies of responding to the skeptic’s demand for justification of knowledge claims, differing in their degree of reliability. Most of us would probably consider justification through proof as maximally reliable. Chances are that we would also consider justification based on tradition and anecdotal evidence less reliable than others. As for justification through the infallibility of the source, those who subscribe to it would consider it to be perfectly reliable, while those who do not subscribe to it would consider it to be totally unreliable. Let us use the term epistemological value system to refer to a set of commitments to the strategies of justification in the pursuit of knowledge. These commitments involve:

- accepting a set of strategies as reliable while rejecting others as unreliable

- considering some strategies to be more reliable than others Individuals and communities may differ in their epistemological value system.

When this happens, we have the situation that philosopher Thomas Kuhn called incommensurability. Consider a debate between the following individuals Sam and Tom. Sam is committed to the infallibility of scriptures, and believes that the evolutionary hypothesis in biology is false, while Tom rejects the infallibility of scriptures, and believes that the evolutionary hypothesis in biology is provisionally true. A rational debate between Sam and Tom is meaningless, because their value systems are incommensurable. Argumentation in this case would be like two people engaged in game, one person playing football and the other playing basketball.

Similar instances of incommensurability arise between epistemological value systems that subscribe to the infallibility of two different sets of scriptures. If one set of scriptures assert that the only true God is the God of the Jewish scriptures, and the other set of scriptures assert that the only true God is the God of the Christian scriptures, it is meaningless for the individuals or communities that subscribe to their respective scriptures to engage in a rational argument. Here, then, is the source of real conflict between science and religion. Science accepts direct sensory perception, reported sensory perception, inductive generalization, fit with observations, prohibition of logical contradictions, generality, and convergence of evidence as legitimate criteria of public justification. In scientific debates, credibility of the source, infallibility of the source, and tradition are treated as unreliable. In contrast, the extreme form of orthodox religion takes the infallibility of scriptures as the primary consideration that outweighs all other considerations. The conflict is not between knowledge claims, but between the epistemological value systems.

Check Your Progress 3

Note: Use the space given bellow

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1. Discuss the Logic and Mathematics: Justification through Proof.

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2. What is the Explicit and Intuitive Justification?

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3. Discuss the Socially Constructed Pool of Knowledge.

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4. Write the Incommensurability: Debates that cannot be settled through argumentation.

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6.10 LET US SUM UP

The major opposition against the theory of justification (also called justificationism in this context) is non-justificational criticism (a synthesis of skepticism and absolutism), which is most notably held by some of the proponents of critical rationalism: W. W. Bartley, David Miller and Karl Popper.[2] (But not all proponents of critical rationalism

oppose justificationism; it is supported most prominently by John W. N. Watkins.)

In justificationism, criticism consists of trying to show that a claim cannot be reduced to the authority or criteria that it appeals to. That is, it regards the justification of a claim as primary, while the claim itself is secondary. By contrast, non-justificational criticism works towards attacking claims themselves.

Bartley also refers to a third position, which he calls critical rationalism in a more specific sense, claimed to have been Popper's view in his *Open Society*. It has given up justification, but not yet adopted non-justificational criticism. Instead of appealing to criteria and authorities, it attempts to describe and explicate them.

Fogelin claims to detect a suspicious resemblance between the Theories of Justification and Agrippa's five modes leading to the suspension of belief. He concludes that the modern proponents have made no significant progress in responding to the ancient modes of pyrrhonic skepticism.

6.11 KEY WORDS

Faith: Confidence or trust in a person or thing, belief which is not based on proof.

Belief: Something believed; an opinion or conviction, confidence in the truth or existence of something but not immediately susceptible to rigorous proof (believe: to have confidence in the truth, the existence, or the reliability of something, although without absolute proof that one is right in doing so.)

Dogma: A specific tenet or doctrine authoritatively laid down, as by a church

Doctrine: A particular principle, position, or policy, taught or advocated, as of a religion

Tenet :Any opinion, principle, doctrine, dogma etc. held as true.

Opinion: A belief or judgment that rests on grounds insufficient to produce certainty; a personal view, attitude, or appraisal

Superstition: A belief or notion, not based on reason or knowledge

Prejudice: An unfavorable opinion, or feeling, formed beforehand or without knowledge
Illusion Something that deceives by producing a false impression;

Hallucination : An apparent sensory experience of something that does not exist outside the mind, sense perception not caused by external stimuli

Knowledge: Acquaintance with facts, truths, or principles, as from study, or investigation (know perceive, or understand as fact or truth; to apprehend clearly and with certainty)

6.12 QUESTIONS FOR REVIEW

1. What is Knowledge, Justification, and Critical Thinking?
2. Discuss about the Observations, Generalizations, and Theories.
3. Discuss the Logic and Mathematics: Justification through Proof
4. What is the Explicit and Intuitive Justification?
5. Discuss the Socially Constructed Pool of Knowledge
6. Write the Incommensurability: Debates that cannot be settled through argumentation.

6.13 SUGGESTED READINGS AND REFERENCES

- William W. Bartley: Rationality versus the theory of rationality. In Mario Bunge (Ed.): The Critical Approach to Science and Philosophy (The Free Press of Glencoe, 1964)
- David Miller: A critique of good reasons. Critical rationalism (1994)
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- Karl Popper: On the sources of knowledge and ignorance. Conjectures and Refutations (1963).
- David Stove. Popper and After: Four Modern Irrationalists at the Wayback Machine (archived October 27, 2009). Oxford: Pergamon Press, 1982.
- Swinburne, R: Epistemic justification (2001)
- Robert J. Fogelin, Pyrrhonian Reflections on Knowledge and Justification, Oxford University Press, 1994, ISBN 978-0-19-508987-5

6.14 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- 1) See Section 6.2
- 2) See Section 6.3

Check Your Progress 2

- 1) See Section 6.4
- 2) See Section 6.5

Check Your Progress 3

- 1) See Section 6.6
- 2) See Section 6.7
- 3) See Section 6.8
- 4) See Section 6.9

UNIT 7: FOUNDATIONALISM AND COHERENTISM

STRUCTURE

- 7.0 Objectives
- 7.1 Introduction
- 7.2 Definition of Foundationalism and Coherentism
- 7.3 Foundationalism
- 7.4 Coherentism
- 7.5 Significance of Foundationalism
- 7.6 Significance of Coherentism
- 7.7 Let us sum up
- 7.8 Key Words
- 7.9 Questions for Review
- 7.10 Suggested readings and references
- 7.11 Answers to Check Your Progress

7.0 OBJECTIVES

The main objective of this Unit - Epistemology deals with the nature and possibility of knowledge. A central problem in epistemology consists in the sceptical challenge which in a generalized manner casts doubt on our justifications for knowledge claims, thereby threatening the very possibility of knowledge. In order to defend the possibility of justification, and hence of knowledge, against that challenge, there are two possibilities. First position is called (epistemological) foundationalism. We analyse the sceptic challenge by identifying a set of beliefs with some special epistemic property (like self-evidence, or infallibility), such that all other beliefs can be said to rest on that ultimate foundation of justification. Second, we investigate a coherentist view on which there are no ultimately privileged beliefs, but justification is still possible because it is provided by coherence within a set of beliefs. Which option is more reliable to account for epistemic justification has

been one of the central issues in modern epistemology and the discussion still goes on.

Let us also discuss about foundationalism and coherentism in this unit. Thus by the end of this Unit you should be able:

- to have a basic understanding of foundationalism and coherentism;
- to distinguish foundationalism and coherentism;
- to relate it with epistemic justification;
- to explore the argument between foundationalism and coherentism
- to have a holistic understanding of justification of knowledge through foundationalism and coherentism;
- to apply this justification of knowledge especially foundationalism and coherentism in our day-to-day life.

7.1 INTRODUCTION

The justification of beliefs about epistemic principles is the pivotal problem in epistemology i.e., principles stating which kinds of beliefs are justified and which are not. It is in general regarded as circular to justify such beliefs empirically. However, foundationalism claims that our empirical beliefs are rationally constrained by our non-verbal experience. Non-verbal experience is caused by events in the world. Some recent defenders of foundationalism have argued that, within a foundationalist framework, one can justify beliefs about epistemic principles empirically without incurring the charge of vicious circularity. Coherentism suggests that empirical beliefs are rationally constrained only by other, further empirical beliefs. And beliefs are caused by sensations and worldly events. The debate over the structure of knowledge and justification is primarily one among those who hold that knowledge requires justification. From this point of view, the structure of knowledge derives

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from the structure of justification. With this introduction now let us proceed to see some of the definitions that explain about foundationalism and coherentism.

Epistemological coherentism (or simply "coherentism") needs to be distinguished from several other theses. Because it is not a theory of truth, coherentism is not the coherence theory of truth. That theory says that a proposition is true just in case it coheres with a set of propositions. This theory of truth has fallen out of favor in large part because it is thought to be too permissive – an obviously false proposition such as I am a coffee cup coheres with this set of propositions: I am not a human, I am in the kitchen cupboard, I weigh 7 ounces. Even contemporary defenders of coherentism are usually quick to distance themselves from this theory of truth.

Coherentism is also distinct from a thesis about concepts that sometimes goes under the name "concept holism." Roughly, this thesis says that possessing a particular concept requires possessing a number of other concepts: for example, possessing the concept of assassination requires also having the concepts of killing and death. Concepts, according to the thesis of holism, do not come individually, but in packages. What is crucial here is that neither concept holism nor the coherence theory of truth say anything about the conditions under which a belief is justified.

So exactly what does coherentism have to say regarding when our beliefs are justified? The strongest form of coherentism says that belonging to a coherent system of beliefs is

necessary for a belief to be justified and
by itself sufficient for a belief to be justified.

This view—call it strong coherentism—can be contrasted with two weaker varieties of coherentism. Necessity coherentism just makes the necessity claim at (1). It imposes coherence as what is often called "a structural condition" on justification. Structural conditions just tell us how beliefs must be related to one another if they are to be justified.

However, being related to one another in the required way may not suffice for justification, since there might be additional non-structural conditions on justified belief. A particularly lucid statement of necessity coherentism can be found in the 1992 paper by Kvanvig and Riggs. By contrast, strong coherentism can be thought of as denying that there are any non-structural conditions.

When thinking about strong coherentism, it is important to appreciate the by itself qualification in (2). This qualification sets coherentism off from one of its most important rivals. The rival view is typically classified as non-coherentist, but it still gives coherence a supplemental role in justifying beliefs. This view claims that coherence can boost the justification of a belief as long as that belief is already independently justified in some way that is not due to coherence. On this sort of view, coherence is sufficient to boost beliefs that are independently justified. This, however, is not thought to be strong enough to deserve the "coherentist" label. To make coherence sufficient for justification in a way that deserves the label, one must claim that coherence is sufficient, by itself, to generate justification – in other words, coherence must generate justification from scratch. Call this sufficiency coherentism. Notice, also, that sufficiency coherentism allows other factors besides coherence to be sufficient for justification.

Another role that non-coherentists sometimes give to coherence comes in a negative condition on epistemic justification. This condition says that incoherent beliefs fail to be justified. It might seem that on this view, coherence is necessary for justification. But this only follows if coherence and incoherence are contradictories. Below, we will see reasons to think that they are not contradictories, but instead contraries. This explains why a view that says that incoherence disqualifies beliefs from being justified is not classified as a coherentist view. More is required to get the claim that coherence is necessary for justification.

There are real difficulties for circumscribing self-styled coherentists. Not every self-styled coherentist subscribes to either (1) or (2). For example,

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BonJour, in his 1985 book, held that meeting the coherence condition is not sufficient for justification, since he claimed that, in addition, justified beliefs must meet a distinctive internalist condition. Moreover, since BonJour also held (and still holds) that coherence is not necessary for the justification of a priori beliefs, strictly speaking he did not hold that coherence is necessary for epistemic justification either. Still his early view should be classified as coherentist, since he claimed that coherence is a necessary condition on a wide class of beliefs' being justified, namely empirical beliefs.

In what follows, each argument for coherentism will be classified according to whether it aims to show necessity coherentism, or sufficiency coherentism (this will also cover arguments for strong coherentism, since it is simply the conjunction of necessity coherentism and sufficiency coherentism). Similarly, each argument against coherentism will be classified according to whether it targets necessity coherentism, or sufficiency coherentism (since an argument that targets either of these views is also an argument against strong coherentism, this will cover arguments against strong coherentism). Following BonJour and much of the recent literature, the focus will be on our empirical beliefs and whether there is a coherence condition on the justification of these beliefs.

One more preliminary point is in order. Since necessity coherentism just makes a claim about the structure that our justified beliefs must take, it is neutral on whether coherence must be introspectively accessible if it is to function as a justifier. In other words, it is neutral on the debate between epistemic internalism and epistemic externalism. So while the most important recent coherentists – namely Laurence BonJour (1985) and Keith Lehrer (1974 and 1990) – have also espoused epistemological internalism, this commitment is over and above that of structural coherentism. This makes their views incompatible with strong coherentism, since the internalist commitment is an additional condition over and above that of structural coherentism.

7.2 DEFINITION OF FOUNDATIONALISM AND COHERENTISM

The term foundationalism is often understood with derogatory connotations and without any clear definition both in literary and religious circles to refer to various positions that stand in contrast to relativism, such as the belief that there is absolute truth or a real world that we do not construct or the belief that it is possible to know anything rationally. Philosophers understood foundationalism as a position regarding the structure of justified belief or of knowledge. Foundationalism is a position regarding the structure of justified belief or of knowledge. A foundationalist holds that all inferred beliefs must, to meet the requirements of rationality, be supported by a finite chain or tree of supporting beliefs, rather than by loops or circles of inference or by an infinite regress of reasons. According to foundationalism all knowledge and justified belief rest ultimately on a foundation of noninferential knowledge or justified belief. Foundationalism is any theory in epistemology that holds that beliefs are justified based on what are called basic beliefs.

Coherentism is a theory of epistemic justification. The view about the structure of justification or knowledge is coherentism. The thesis of coherentist's is normally formulated in terms of a denial of its contrary foundationalism. Coherentism thus claims, minimally, that not all knowledge and justified belief rest ultimately on a foundation of noninferential knowledge or justified belief. The Rutledge encyclopaedia of philosophy defines coherentism is a matter of how the beliefs in a system of beliefs fit together or dovetail with each other, so as to constitute one unified, organized, and tightly structured whole. And it is clear that this fitting together depends on a wide variety of logical, inferential and explanatory relations among the components of the system. Coherentism is not the coherence theory of truth.

Coherence theory of truth holds that a proposition is true just in case it coheres with a set of propositions. This theory of truth is said to be too

permissive. The reason is that this theory of truth does not tell anything about the conditions under which a belief is justified.

Coherentist insists that there is no way to appeal for justification to anything outside of one's system of beliefs because any such supposed source of justification would have to be apprehended by the person in question in a belief or belief-like state before it could play any justificatory role, and then it would be the belief rather than the external item that was the immediate source of justification. With this basic understanding let us move on to the next section where we explore foundationalism.

7.3 FOUNDATIONALISM

The basic idea of Rationalism is that the only source of sure knowledge is reason. We all know that senses sometimes deceive us and we make perceptual errors. In contrast $2+2=4$ can never be false. Therefore, they contend that all true and certain knowledge comes from our reason. Rationalists take mathematics as the model of knowledge and hold that certain knowledge is a priori. A priori means knowledge which is justified or known to be true independent of experience. We have the Empiricists, on the other extreme, who hold that all genuine knowledge comes from or is justified by sense experience. Of course, the difference between rationalists and empiricists consists in whether reason or sense experience is considered as the primary and most reliable source of knowledge. The empiricists and rationalists are foundationalists. They differ only in what they consider to be the foundations. Empiricists hold the data of experience to be foundational whereas the rationalists give that role to innate ideas.

Traditional Foundationalism

The foundations of knowledge have been seen as infallible (which cannot be wrong), incorrigible (which cannot be refuted), and indubitable (which cannot be doubted). For empiricists these foundations consist in our beliefs about our own experience. Our beliefs are basic and non-

basic. Our basic beliefs comprise such belief as that we are now seeing a blue shape in our visual field. In order to justify our non-basic belief we must be able to infer it from other beliefs. The claim of the traditional foundationalists is that inferential justifications are not required for our basic beliefs. There may not actually be a blue object in the world because we may be hallucinating, but, on the other hand, we cannot be wrong about the fact that we now believe that we are seeing something blue. Justifications for such beliefs is provided by experiential status that are not themselves beliefs, that is, by our immediate apprehension of the content of our sensory, perceptual experience, or what is sometimes termed 'the Given'. We may call it traditional foundationalism.

Modest Foundationalism

Some foundationalists hold that the Given is in some ways problematic. Yet they maintain a 'moderate' foundationalism. This view was promoted by Alvin Plantinga and Audi. Our perceptual beliefs about the world and our experience are not seen as infallible. We can believe that we see blue or we seem to see blue, yet either belief can turn out to be unjustified. Nonconceptual perceptual experience does not play a justificatory role. Perceptual beliefs are simply self-justified. Such a view of perception remains foundationalist in nature because we still have basic beliefs, beliefs that are non-inferentially justified. Modest foundationalism avoids the dilemma that faces traditional foundationalism. It does not have to be infallible for a perceptual belief to be justified. We may call this a modest view of foundationalism or modest foundationalism. Foundationalism holds that our justified beliefs are structured like a building. They are divided into a foundation and a superstructure, the latter resting upon the former. Beliefs belonging to the foundation are 'basic'. Beliefs belonging to the superstructure are 'nonbasic' and receive justification from the justified beliefs in the foundation. The claim of the foundationalism is that the superstructure of our belief system inherits its justification from a certain subset of perceptual beliefs upon which the rest sits. These beliefs are called 'Basic Beliefs'. There are two types of arguments in foundationalism. On

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the one hand, they argue that nonfoundational inference structures are rationally defective. These arguments include explanations of the vitiating nature of both circular reasoning and infinite regresses of reasons. On the other hand, foundationalists argue that there are foundational beliefs i.e. beliefs that it is rational to hold without inferring them from anything else and that these differ clearly from beliefs that do require support. To prove the foundationalist account of justification it has to solve two problems. The first problem is by virtue of what exactly are basic beliefs justified? And the second problem is how do basic beliefs justify nonbasic beliefs? It would be better if we first consider the question of what it is that makes a justified belief basic in the first place. Then we can move on to the other questions.

Doxastic Basicity (DoBa)

Doxastic Basicity is that which makes basicity a function of how our doxastic system (belief system) is structured. R's justified belief that *s* is basic if and only if R's belief that *s* is justified without owing its justification to any of R's other beliefs. For our understanding let us consider DoBa as Doxastic Basicity. Let us now analyse what would, according to Doxastic Basicity, qualify as an example of a basic belief. Suppose we notice someone's T-shirt, and you also notice that that T-shirt looks yellow to us and so we believe. Ba It appears to me that that T-shirt is yellow. Ba is an example of a justified belief. DoBa tells us that Ba is basic if and only if it does not owe its justification to any other beliefs of ours. So if Ba is indeed basic, there might be some item or other to which Ba owes its justification, but that item would not be another belief of ours. We call this kind of basicity 'doxastic' because it makes basicity a function of how our doxastic system is structured. Now let us get back to the question of where the justification that attaches to Ba might come from. Note that DoBa merely tells us how Ba is 'not' justified. It says nothing about 'how' Ba is justified. Therefore DoBa does not answer that question. What we need, in addition to DoBa, is an account of 'what it is' that justifies a belief such as Ba. According to one strand of foundationalist thought, Ba is justified because it can't be

false, doubted, or corrected by others. So Ba is justified because Ba carries with it an “epistemic privilege” such as infallibility, indubitability, or incorrigibility. Here Ba is justified by virtue of its intrinsic nature, which makes it possess some kind of an epistemic privilege. This is called Privileged Foundationalism.

Here we must notice that Ba is not a belief about the T-shirt. Instead, it's a belief about how the T-shirt ‘appears’ to us. So Ba is an introspective belief about a perceptual experience of us. According to the thought we are considering here, a subject's basic beliefs are made up of introspective beliefs about the subject's own mental states, of which perceptual experiences make up one subset.

According to another version of foundationalism, Ba is justified not by virtue of possessing some kind of privileged status, but by some further mental state. That mental state, however, is not a further belief. Rather, it is the very ‘perceptual experience’ that Ba is about: the T-shirts's looking yellow. Let E represent that experience. According to this alternative proposal, Ba and E are distinct mental states. The idea is that what justifies Ba is E. Since E is an experience, not a belief of ours, Ba is, according to DoBa, basic. This is called Experiential Foundationalism. Privileged foundationalism restricts basic beliefs to beliefs about one's own mental states. Experiential foundationalism is less restrictive. According to it, beliefs about external objects can be basic as well. Experiential Foundationalism combines to two crucial ideas: 1 when a justified belief is basic, its justification is not owed to any other belief; 2 what in fact justifies basic beliefs are experiences. Let us briefly analyse how justification is supposed to be transferred from basic to nonbasic beliefs. There are two options: the justificatory relation between basic and nonbasic beliefs could be deductive or non-deductive. If we take the relation to be deductive, each of one's nonbasic beliefs would have to be such that it can be deduced from one's basic beliefs. This seems excessively demanding. If we consider a random selection of typical beliefs we hold, it is not easy to see from which basic beliefs they could be deduced. Therefore, foundationalists, typically conceive of the link

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between the foundation and the superstructure in non-deductive terms. They would say that, for a basic belief, B, to justify a nonbasic belief, B, it isn't necessary that B entails B. Rather, it is sufficient that, given B, it is likely that B is true. Now we are half between the two rivals in the epistemic justification or justification of knowledge let us proceed to explore more about coherentism the arch rival of foundationalism.

Check Your Progress 1

Note: a) Use the space provided for your answer

1) What is your general understanding of Foundationalism?

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2) How do you understand Doxastic Basicity?

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7.4 COHERENTISM

In the history of philosophy coherentism is a relatively recent innovation. We can interpret Spinoza and Kant as advocating versions of coherentism. We can trace out the coherentist positions in nineteenth century through the absolute idealists. The title holders of coherentism are the British Idealists F.H. Bradley (1846-1924), Bernard Bosanquet (1848-1923) and the Philosophers of Science Otto Neurath (1882-1945), Carl Hempel (1905-1997), and W.V. Quine (1908-2000). Unfortunately they were not able to distinguish epistemological and metaphysical issues. Notwithstanding it was developed and defended by a group of contemporary epistemologists and the noted personality here is Laurence Bonjour and Keith Lehrer and they were accompanied by Gilbert Harman, William Lycan, Nicholas Rescher, and Wilfrid Sellars. One

should not judge by seeing this long list of name that coherentism is very popular among epistemologists. In spite of these many people developing and defending coherentism it has got only a minority position among the epistemologists. Coherentism is the main alternative to foundationalism. Coherentism implies that for a belief to be justified it must belong to a coherent system of beliefs. For a system of beliefs to be coherent, the beliefs that make up that system must “cohere” with one another. Usually, coherence is taken to imply something stronger than mere consistency. Coherentism adopts a subjective viewpoint regarding the items that need to cohere. It maintains that the system on which coherence is defined is the person's system of beliefs. Coherentism holds that knowledge and justification are structured like a web where the strength of any given area depends on the strength of the surrounding areas. Coherentists deny that there are any basic beliefs. The strongest form of coherentism says that belonging to a coherent system of beliefs is A. necessary for a belief to be justified and B. by itself sufficient for a belief to be justified. This view is called Strong Coherentism. This view can be differentiated with two weaker varieties of coherentism. Necessity Coherentism just makes the necessity claim at (A). It imposes coherence as what is often called “a structural condition” on justification. Structural conditions tell us how beliefs must be related to one another if they are to be justified. However, since there might be additional non-structural conditions on justified belief, being related to one another in the required way may not be sufficient for justification. The other view is called non-coherentist view which holds that coherence can boost the justification of a belief as long as that belief is already independently justified in some way that is not due to coherence. According to this view coherence is sufficient to boost beliefs that are independently justified. This, however, is not thought to be strong enough to be called a coherentist view. To make coherence sufficient for justification we must claim that coherence is sufficient, by itself, to generate justification, in other words, coherence must generate justification from scratch. This view is called Sufficiency Coherentism.

Doxastic Coherentism (DoCo)

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According to doxastic coherentism every justified belief receives its justification from other beliefs in its epistemic vicinity. Let us take for an example H) That T-shirt is yellow. Here H is justified. According to coherentism, H receives its justification from other beliefs in the epistemic vicinity of H. They constitute our evidence or our reasons for taking H to be true. Now the question is which beliefs might make up this set of justification-conferring neighborhood beliefs? We have two approaches to answer this question. One is Explanatory Coherentism and the other is Reliability Coherentism.

Explanatory Coherentism

Explanatory coherentism is known as inference to the best explanation. In this approach, we form a belief about the way the T-shirt appears to us in our perceptual experiences, and a second belief to the effect that our perceptual experience, the T-shirt's looking yellow to us, is best explained by the assumption that H is true. Hence we believe that

- 1) we are having a visual experience E: the T-shirt looks yellow to us.
- 2) Our having E is best explained by assuming that H is true. Here Explanatory coherentism strongly believes in the T-shirts's actual yellowness is a superior explanation. That's why we are justified in believing H. Explanatory coherentism finds difficult in make us understand in nonepistemic terms, why the favored explanation is really better than the competing explanations. Explanatory coherentism is supposed to make us understand where justification comes from. It doesn't do that if it accounts for the difference between better and worse explanations by making use of the difference between justified and unjustified belief. If explanatory coherentism were to proceed in this way, it would be a circular, and thus uninformative, account of justification. Reliability Coherentism Keep in mind what a subject's justification for believing s is all about: possessing a link between the belief that s and s's truth. Presume the subject knows that the origin of her belief that s is reliable. So she knows that beliefs coming from this

source tend to be true. Such knowledge would give her an excellent link between the belief and its truth. So we might say that the neighborhood beliefs which confer justification on H are the following:

1) We are having a visual experience E: the T-shirt looks yellow to us.
 2) Experiences like (E) are reliable. This kind of coherentism is called reliability coherentism. If we believe 1 and 3, we are in possession of a good reason for thinking that the T-shirt is indeed yellow. So we are in possession of a good reason for thinking that the belief in question, H, is true. In this way we are justified in believing H according to reliability coherentism. Reliability coherentism also faces a circularity problem. If H receives its justification in part because we also believe 3, 3 itself must be justified. But where would our justification for 3 come from? One answer would be: from our memory of perceptual success in the past. Our visual experiences have had a good track record. We can't justifiably attribute a good track record to our perceptual faculties without using our perceptual faculties. Hence it would have to be legitimate to use a faculty for the very purpose of establishing the reliability of that faculty itself. We have seen that explanatory coherentism and reliability coherentism each face its own distinctive circularity problem. Since both are versions of doxastic coherentism. Both are facing another difficulty i.e. they make excessive intellectual demands of ordinary subjects who are unlikely to have the background beliefs that are needed for justification. This can be avoided by another type.

Dependence Coherentism

Whenever we are justified in believing a proposition s_1 , our justification for believing s_1 depends on justification we have for believing some further propositions, s_1, s_2, \dots, s_n . According to explanatory coherentist to be justified in believing H, it's not necessary that we actually believe 1 and 2. However, it is necessary that we have justification for believing 1 and 2. It is having justification for 1 and 2 that gives you justification for believing H. A reliability coherentist might make an equivalent point. According to them to be justified in believing H, we need not believe

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anything about the reliability of our belief's origin. However, we must have justification for believing that our belief's origin is reliable i.e. we must have justification for 1 and 3. Both versions of dependence coherentism rest on the supposition that it is possible to have justification for a proposition without actually believing that proposition. Dependence coherentism holds that justification need not come in the form of beliefs. It can come in the form of introspective and memorial evidence that gives a subject justification for beliefs about either reliability or explanatory coherence. In fact, dependence coherentism allows for the possibility that a belief is justified, not by receiving any of its justification from other beliefs, but solely by suitable perceptual experiences and memory content and this is called compromise position. Having explored the foundationalism and coherentism let us go ahead to see the significance of foundationalism and coherentism.

Check Your Progress 2

Note: a) Use the space provided for your answer

1) Illustrate Coherentism.

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2) How is Dependence coherentism solve the problem that is in explanatory coherentism and reliability coherentism?

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7.5 SIGNIFICANCE OF FOUNDATIONALISM

In this section I would like to introduce to you the regress argument. Regress argument is the main argument for foundationalism. It's an argument from elimination. Regarding every justified belief B1, the question arises of where B1's justification comes from. If B1 is not basic, it would have to come from another belief, B2. But B2 can justify B1 only if B2 is justified itself. If B2 is basic, the justificatory chain would end with B2. But if B2 is not basic, we need a further belief, B3. If B3 is not basic, we need a fourth belief, and so on. Here we get two possibilities unless the consequent regress terminates in a basic belief i.e. the regress will either loop back to B1 or continue ad infinitum. According to the regress argument, both of these possibilities are unacceptable. Therefore, if there are justified beliefs, there must be basic beliefs. From this regress argument we can understand foundationalism in two descriptions. The first description is an asymmetry condition on the justification of beliefs i.e. that inferential beliefs are justified in a way different from the way in which non-inferential beliefs are justified. The second description is an account of intrinsic or self-warrant for the beliefs which are foundationally warranted and which support the entire structure of justified beliefs. Foundationalism relies on the claim that it is not necessary to ask for justification of certain propositions, or that they are self-justifying. If someone makes an observational statement, such as 'the climate is very chill', it does seem reasonable to ask how they know - did they look out the window? Did someone else tell them? Did they just come in shivering? The regress argument merely defends experiential foundationalism against doxastic coherentism. Experiential foundationalism can be supported by citing cases like the yellow T-shirt example. Such examples make it credible to assume that perceptual experiences are a source of justification.

7.6 SIGNIFICANCE OF COHERENTISM

Coherentism is a theory of epistemic justification. It implies that for a belief to be justified it must belong to a coherent system of beliefs. For a system of beliefs to be coherent, the beliefs that make up that system must "cohere" with one another. Typically, this coherence is taken to involve three components: logical consistency, explanatory relations, and

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various inductive (non-explanatory) relations. Rival versions of coherentism spell out these relations in different ways. They also differ on the exact role of coherence in justifying beliefs: in some versions, coherence is necessary and sufficient for justification, but in others it is only necessary.

The coherentism's history beginning in the last quarter of the twentieth century, and it marks off coherentism from other theses. The regress argument is the dominant anti-coherentist argument, and it bears on whether coherentism or its chief rival, foundationalism, is correct. Several coherentist responses to this argument will be examined. A taxonomy of the many versions of coherentism is presented and followed by the main arguments for and against coherentism. After these arguments, which make up the main body of the article, a final section considers the future prospects of coherentism.

The coherence thinker rejects the foundationalist's presupposition that justification is linear. The coherentist response to the argument for foundationalism is only as plausible as the coherence theory of justification. Coherentism denies the soundness of the regression argument. The regression argument makes the assumption that the justification for a proposition takes the form of another proposition: P2 justifies P1, which in turn justifies P. According to coherentism, justification is a holistic process. P is not justified as a part of some inferential chain of reasoning, but because it coheres with some system of which it forms a part. Here it is necessary for coherentism to explain in some detail what it means for a system to be coherent. Another significant idea that we have to notice is the distinction between subjective and objective approaches. The most popular objective approach is explanatory coherentism, which defines coherence in terms of that which makes for a good explanation. On such a view, hypotheses are justified by explaining the data, and the data are justified by being explained by our hypotheses. The central task for such a theory is to state conditions under which such explanation occurs. A different objective

account of the coherence relation has been presented by Bonjour. He has mentioned the following five features in his account

- 1) logical consistency,
- 2) the extent to which the system in question is probabilistically consistent,
- 3) the extent to which inferential connections exist between beliefs, both in terms of the number of such connections and their strength,
- 4) the inverse of the degree to which the system is divided into unrelated, unconnected subsystems of belief, and 5) the inverse of the degree to which the system of belief contains unexplained anomalies.

These factors are a good beginning toward an account of objective coherence, but by themselves they are not enough. We need to be informed what function on these five factors is the correct one by which to define coherence. That is, we need to know how to weigh each of these factors to provide an assessment of the overall coherence of the system. Coherentism insists that it is always reasonable to ask for a justification for any statement. Coherentism challenges that foundationalism provides an arbitrary spot to stop asking for justification so that it does not provide reasons to think that certain beliefs do not need justification. Coherentism typically holds that justification is solely a function of some relationship between beliefs. They attack foundationalism by arguing that no plausible version of the view will be able to supply enough in the way of foundational beliefs to support the entire structure of belief. Coherentists have gone beyond negative philosophy to provide a positive characterization of their view. Coherentists typically adopt a subjective viewpoint regarding the items that need to cohere, maintaining that the system on which coherence is defined is the person's system of beliefs. Social versions of coherentism may define coherence relative to the system of common knowledge in a given society. Thus we come to the end of this unit.

Check Your Progress 3

Note: a) Use the space provided for your answer

1) What is the significance of foundationalism?

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2) Reflect on the importance of coherentism.

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7.7 LET US SUM UP

In this unit we have tried to give a brief notion of foundationalism and coherentism. The argument of foundationalism is very simple. If knowledge is to be reasonable and our beliefs are justified, then those justified beliefs must be based on some other beliefs which are reasonable and they on further beliefs and so on. But ultimately this process of justification must end up in some beliefs that require no justification or are self-justified or self-evident. Foundationalists insist that there must be some beliefs that are directly or immediately justified, as opposed to being justified by inferences from other beliefs. They maintain that these special noninferentially justified beliefs form the foundation of all knowledge and that all the rest of our beliefs are ultimately justified in relation to the foundational beliefs. To establish this understanding we have analysed various kinds of foundationalism. Then we moved on to explore coherentism, the rival of foundationalism. It is obvious that logical coherence is important in any system of beliefs if it is to be accepted as true; otherwise we would lapse into meaninglessness. Coherentism clearly showed us that the better a belief system hanging together the more coherent it is. Here it stressed the importance of logical consistency in the justification of knowledge. To establish this conception we have analysed different kinds of

coherentism. Finally we concluded with the significance of foundationalism and coherentism.

7.8 KEY WORDS

Doxastic Basicity: it is that which makes basicity a function of how our doxastic system (belief system) is structured.

Basic beliefs: beliefs that give justificatory support to other beliefs, and more derivative beliefs are based on those more basic beliefs that are self-justifying or self-evident. **Non-basic beliefs:** beliefs that receive justification from the justified beliefs in the foundation.

Doxastic Coherentism: it is the idea that every justified belief receives its justification from other beliefs in its epistemic vicinity **A priori:** knowledge which is justified or known to be true independent of experience.

Compromise position: the possibility that a belief is justified, not by receiving any of its justification from other beliefs, but solely by suitable perceptual experiences and memory content.

7.9 QUESTIONS FOR REVIEW

- 1) What is your general understanding of Foundationalism?
- 2) How do you understand Doxastic Basicity?
- 3) Illustrate Coherentism.
- 4) How is Dependence coherentism solve the problem that is in explanatory coherentism and reliability coherentism?
- 5) What is the significance of foundationalism?
- 6) Reflect on the importance of coherentism.

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7.11 ANSWERS TO CHECK YOUR PROGRESS

Answers to Check Your Progress 1

1) Foundationalism is any theory in epistemology that holds that beliefs are justified based on what are called basic beliefs. Foundationalism is a position regarding the structure of justified belief or of knowledge. It holds that all inferred beliefs must, to meet the requirements of rationality, be supported by a finite chain or tree of supporting beliefs, rather than by loops or circles of inference or by an infinite regress of reasons. Here we have traditional foundationalism which holds that knowledge is infallible and modest foundationalism which holds that our perceptual beliefs about the world and our experience are not seen as infallible. There are two kinds of arguments one is that non-foundational inference structures are rationally defective and the other is that there are foundational beliefs; beliefs that it is rational to hold without inferring them from anything else and that these differ clearly from beliefs that do require support.

2) Doxastic Basicity is that which makes basicity a function of how our doxastic system (belief system) is structured. R's justified belief that s is basic if and only if R's belief that s is justified without owing its justification to any of R's other beliefs. We call a basicity 'doxastic' because it makes basicity a function of how our doxastic system is structured.

Answers to Check Your Progress 2

1) Coherentism is a theory of epistemic justification. The view about the structure of justification or knowledge is coherentism. The thesis of coherentist's is normally formulated in terms of a denial of its contrary foundationalism. Coherentism thus claims, minimally, that not all knowledge and justified belief rest ultimately on a foundation of noninferential knowledge or justified belief. Coherentist insists that there is no way to appeal for justification to anything out side of one's system of beliefs because any such supposed source of justification would have

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to be apprehended by the person in question in a belief or belief-like state before it could play any justificatory role, and then it would be the belief rather than the external item that was the immediate source of justification. Strong Coherentism, Necessity Coherentism, Sufficiency Coherentism, Doxastic Coherentism which holds that every justified belief receives its justification from other beliefs in its epistemic vicinity. Further we have Explanatory Coherentism and Reliability Coherentism and the important one is Dependence Coherentism.

2) The explanatory coherentism and the reliability coherentism each face its own distinctive circularity problem. Since both are versions of doxastic coherentism. Both face another difficulty i.e. they make excessive intellectual demands of ordinary subjects who are unlikely to have the background beliefs that are needed for justification. This can be solved by dependence coherentism which holds that justification need not come in the form of beliefs. It can come in the form of introspective and memorial evidence that gives a subject justification for beliefs about either reliability or explanatory coherence. Dependence coherentism allows for the possibility that a belief is justified, not by receiving any of its justification from other beliefs, but solely by suitable perceptual experiences and memory content and this is called compromise position. Thus Dependence coherentism solves the problem in explanatory coherentism and reliability coherentism.

Answers to Check Your Progress 3

1) First and foremost it is the regress argument. If there are justified beliefs, there must be basic beliefs. From this regress argument we can understand foundationalism in two descriptions. The first description is an asymmetry condition on the justification of beliefs i.e. that inferential beliefs are justified in a way different from the way in which non-inferential beliefs are justified. The second description is an account of intrinsic or self-warrant for the beliefs which are foundationally warranted and which support the entire structure of justified beliefs.

2) The coherentist response to the argument for foundationalism is only as plausible as the coherence theory of justification. Coherentism denies the soundness of the regression argument. Another significant idea that we have to notice is the distinction between subjective and objective approaches. The most popular objective approach is explanatory coherentism, which defines coherence in terms of that which makes for a good explanation. Coherentism insists that it is always reasonable to ask for a justification for any statement. Coherentism challenges that foundationalism provides an arbitrary spot to stop asking for justification and so that it does not provide reasons to think that certain beliefs do not need justification. Coherentism typically holds that justification is solely a function of some relationship between beliefs.