

Metaphysics and it's Relation with Medicines: A Descriptive Review

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Abstract:- I argue in this paper opposite to the thinking of some philosopher that there is a direct link exist between philosophers and medicines. From the conventional time to the modern era, the basis of medicine is philosophy. This is true especially in case of modern medicine which totally based on the philosophies of two great philosopher, Descartes and Bacon. These two disciplines such as philosophy and science seem to obey the Descartes goals, according to which, philosophy is the quest for truth whereas medicine implies the quest for health. They both try to enhance the human wellbeing in complimentary ways. In one side, where medicines attempt to fight with the diseases of the body that are caused by bacteria and viruses and all other somatic diseases, philosophy on the other side, try to fight against diseases of the mind such as half-truth, prejudices, wooly judgement and uncritical concept of the world health and disease, which may have their direct effect on health and healthy delivery. While using an essential example, I try to explain that there are many questions that raises while during the practice of medicines and these questions are beyond the scope of medicines. These are the question to which only philosophy can give answer because they are under its scope. Physician are daily challenged with question in such philosophical areas such as metaphysics, epistemology, ethics and logic. Moreover, I argue that over-dependence on cartesian ontology is one of the debilities of western medicines, which considers that human bodies are like machines which can be studied by using scientific logic, and the physician is like technician whose job is to repair the function of the body. The result of this modern metaphysical outlooks is that they neglect to consider the patient as a subjective being, and without reviewing the cartesian reductionist world view, this deficiency cannot be overcome. At the end, if medicines achieve happiness by healthy body then metaphysics achieve happiness by healing the soul, and together they both work for human wellbeing. Both disciplines therefore have therapeutic end.

Keywords:- *philosophy, medicines, metaphysics, epistemology, logic.*

I. INTRODUCTION

Metaphysics is a branch of philosophy that deals with the nature of reality. The term metaphysics is coined from the two Greek words “meta” means “after” or “beyond” and physics implies to nature. Therefore, the term metaphysics means after or beyond nature. It is concerned with the things that are neither measurable nor visible, the things which do not occupy space.[1] Metaphysics and epistemology are the two main branches of a great tree which is known as philosophy. Epistemology deals with a question that how we can know about the world?, how do we know what we know?, what is the source of our knowledge? And the metaphysics asks what the world is, and the nature of being? A excellent region to start is with the query of essentialism. An historic philosophical culture relationship again to Plato and Aristotle sought to find out essences, the defining residences of matters – ‘the being of any thing, whereby it is, what it is?’[2] Metaphysics as philosophy has two branches, cosmology and additionally ontology and everyone who research metaphysics is recognized as a metaphysician. Cosmology is a metaphysical study that entails starting place and the nature of the universe. Ontology offers with the existence of classes of beings and how they typically go about and relate to one another. Being in this case, exists impartial of every person who observes; the objects simply exists in the thought of an observer. There are more than a few topics that are associated to metaphysics. These would consist of religion, meditation, yoga, astrology, high-quality thinking, mysticism, transcendentalism, reincarnation, Jungian psychology, parapsychology, existence and death, transpersonal and theocentric, ESP two and many others. Metaphysics explains greater of what there is present in science and physics. In Physics subject, bringing up the existence of system like forces, charges, mass, atoms, and particles is the stop of the concept of science. Metaphysics now move in and explains what these entities imply as a human idea. These entities area query of metaphysics. Examples would be, Do the theories that exist in Physics require area and time, properties, and objects? Is it feasible to categorical them in houses or objects only? Do they keep with time their personal identities or they change at same point? are they the equal objects when they certainly change? Religion, is now not associated to metaphysics, on the different hand, as it is based totally on a set of observed judgement which estimate the world and explains the incidence of more than a few events. There is usually a debate between atheists (non-believer) and theists (believer) over metaphysics when comes to the truth of supernatural existence. They disagree with nature of fact as properly as the existence of a

supernatural being. Metaphysics as a department of philosophy is a topic that has been debated by many. Some of the philosophers favour it, others in part favour it whilst nonetheless others totally reject and push aside it even till today. With all that said, there are lots of things discuss about in metaphysics and nevertheless greater to discover by means of philosophers. You can no longer genuinely pre-empt what is there in metaphysics. The greater the correctness of people's metaphysical worldview, the greater we are capable to apprehend and know the world and act accordingly. A definition is hard to provide given that metaphysics covers lots of area. Here a list of things that metaphysics does and doesn't deals with; Metaphysics deals with (a) **Ontology**, A branch of metaphysics concern with the nature and relations of being. It deals with what exist and what properties they do have? [3] (b) **Modality**, What is possible and what is necessary so.[4] (c) **Identity**, The myth of the self. [5] (d) **Mereology**, theory of parthood relationship.[6] **Time**, in this the two basic metaphysical theories of time will be covered. According to the A-theory of time, the real ontological distinction is reflected by the common-sense distinction between the past, current and future. Furthermore, the time is dynamic and what was held in future, is now our present and can be past. According to the B-theory of time, no ontological distinction between past, present and future.[7] (e) **Cause and Effect**, the effect is being and the cause is anything that constitute the being of things. It deals with what is the nature of causality?[8] (f) **Existence vs Subsistence**: the universal property of individual is existence while the mode of existence that is independent and self-contained of any subject exists in this manner is subsistence.[9] (g) **Materialism vs Idealism**, Materialism means all things are composed of material and all phenomenon are the result of material interactions, with no accounting of spirit or consciousness and Idealists typically believe in the existence of the observable world, just like everyone else.[10] **Metaphysics doesn't deals with** (a) **Ethics and Morality**, The term ethics derived from Greek word **ethos** which implies character. Ethics is related with the goodness of persons, rightness of their actions or the best value in consequences and Morality toward metaphysics put an argument for the existence of God which totally linked with our fundamental moral beliefs. It deals with how should we behave?[11] (b) **Knowledge**, originate a question such as how the theory of knowledge leads us to the path of truth? and how can we predict that it is true?[12] (c) **Justification**: is the reason of properly holds a belief by individual, the concerned explanation as why the belief is a true one and on its base, how individual knows what they knows.[13] (d) **Belief**, the term "belief" implies to the attitude we have while we considered something to be the case and regard it as true. Thus, the metaphysics does not describe the proper reasons of our beliefs.[14] (e) **logic**, metaphysics is the universal science of the real whereas logic is the science of the real. It has question that how should we reason and make valid argument?[15] (f) **Theory of meaning**, Metaphysical statements are neither proper nor false however meaningless since, according to demonstrable theory of meaning, if there can be true proof for a precise declaration or in opposition to that declaration solely then the declaration is stated to be meaningful. it has a query that what is a proper

concept of meaning?[16] (g) **Rationality**, Rationality is the quality of being rational or real which is totally based on or agreeable to the respective reason. Rationality implies the conformity of one's beliefs with their motives to believe on. It deals with what is it to be rational?[17] The distinction between science and philosophy is that science is taken as both empirical science or even as non-empirical science. In this case, one has to come up with explanations that would make predictions which are examined by means of experiments. Philosophical sciences offers an ideas such as being when it is in its easiest form. Metaphysics and science both are attempt to give a statement for what that is already present in the world and how they are related? Conventionally Metaphysics is "a priori" and the science is "a posteriori" implies that metaphysics is non-empiric whereas science is empiric. There are two perspective views related to the nature of metaphysics, first one is the metaphysics is considered as prior to science and to empirical knowledge means metaphysics do not tells us that what is there and what is possible. The job of science is to find out which is the authentic from amongst all the probabilities. Science besides the assist of metaphysics can't inform what is possible unless science turn out to be metaphysics.[18] Metaphysics and the science run together while searching of knowledge. This function states that "metaphysics is feasible" however solely understood as "a posteriori" activity. Metaphysics runs side by side with science. Moreover, if science offers with particular situations then metaphysics offers with normal matters, e.g. while a scientist speak about "nature laws", a metaphysician will learn about what are the particular traits that make a declaration to qualify as a law. In this way metaphysics is the entirety else "a posteriori".[19]

II. HISTORY AND ORIGIN OF METAPHYSICS

The term metaphysics was originate from Aristotle's works. In his work on metaphysics, Aristotle state that "all men suppose what is called as wisdom to deal with first purpose and the precept to things" and for these reason and precept he suggest to learn about in this work. These motives and precept are really the subject of what he calls "first philosophy. Although metaphysics properly initiated with Aristotle's search for the concepts of reality. He appear to be the claims of the pre-Socratics as feasible solutions to important questions such as "what is there?" and what are the reasons behind everything. Many of the pre-Socratic claims of their have been speculations about the cosmos origin and their physical nature. In the other ways, the pre-Socratics would be seen as the conventional natural scientists, with their study interest in physics, chemistry, astronomy, geology, meteorology, and even psychology. By contrast to this, Socrates would also change the subject to issues relate to ethics. It took Aristotle to return to theological, cosmological and metaphysical issues.[20] There are many scientists who provide distinctive theories of metaphysics: (a) **Parmenides and Heraclitus**, give two notable antagonistic view. For Parmenides, "All is One," no such aspect as nothing and change is an.[21] For Heraclitus, with the aid of disparity, "All is Flux." There is nothing which is change. "You can't step in the identical river twice." The one terrific wonderful perception of

Heraclitus used to be that there are legal guidelines in the back of all modifications – the “Logos.” He actually predict the modern idea of the legal guidelines of nature that manage all change.[22](b) **Socrates and Plato**, they both are considered as a metaphysician, Plato gave his best contribution to promote the “Forms” or “Ideas”. Plato derived the Greek word for abstracting an idea from the past tense of the verb “to see.” For Plato, thoughts are something that we have viewed when souls make brilliant circuit with the heavens before coming to Earth.[23](c) **Aristotle**, Metaphysics has add various things in the history of philosophy, however it has not deviated a long way from a exact examining of “beyond the physical.” The word was originated by the 1st-century, BCE head of Aristotle’s nomadic school, Andronicus of Rhodes. Andronicus rewrite and organized Aristotle’s works, and giving to it a title called as metaphysics, actually “the book after the physics,” after studying Aristotle’s books on nature, which he designated as the Physics and hopefully studied. The Greek word for nature is physics thus, metaphysical is also “beyond the nature.” Supporter of current naturalism deny the existence of anything metaphysics, which some consider as “supernatural”. The term metaphysics is never used by the Aristotle. For Plato, (master of Aristotle), the empire of abstract ideas used should be extra “real” than that of physical material or concrete, objects, because the ideas should be more permanent whereas material or objects are continuously changing. Where in one side Plato made his realm of thoughts the “real world,” on the other side Aristotle made the material world in which the source of thoughts as basic abstractions from common properties observed in various concrete objects. Neoplatonists like Porphyry concerned about the existential popularity of the Platonic’s ideas. Does Being exist? What does it mean to say “Being Is”? In current era, metaphysics has emerge as “beyond the material.” Metaphysics has end up with the study of things which are immaterial like mind, that is stated to “supervene” on the material brain. Metaphysics is considered as like as idealism, in contrast to “eliminative” materialism. It has failed in proportion to the remarkable success of naturalism, the concept that the nature laws can alone give an total explanation for universe contents. Aristotle’s book Andronicus viewed “beyond nature” covered Aristotle’s “First Philosophy” which state that ontology is the science of being, cosmology is the essential methods and authentic motives of bodily things and theology is a god required as “first cause?”. Aristotle’s Physics states the 4 “causes” or “explanations” of change and movement of objects that are already present in the universe. Aristotle’s metaphysics is considered as explanations for its existence, What exists? What it is to be? What procedures can convey things into or out from existence? Is there any cause or rationalization for the universe as a whole?[24](d) **The Stoics**: The Stoics philosophy were categorised into three parts: the logic, physics and ethics. The logic of Stoic included rhetoric, epistemology, dialectic, grammar, and a philosophy of language. They made theories of concepts, propositions, thought, perception, and propositions: They described 5 fundamental logical tools:

if p then q; p; consequently q (modus ponens);
 if p then q; not q; consequently not-p (modus tollens);
 either p or q; p; consequently not-q;
 either p or q; not p; consequently q;

not both p and q; p; consequently not-q;[25] Stoic included a wide range of topics in its physics such as ontology, psychology, theology, cosmology and metaphysics. The fundamental precept of the universe are depend and pneuma(soul), a breath or psyche. The two of the 4 crucial elements was combines by pneuma such as fire and air, representing warm and cold respectively. These are the two active principle of pneuma. In passive precept earth and water are combined and regard as the basis for material objects. The Stoics consider matter as “unqualified” and inert. They described that there is generation and destruction can happen when changes occur in the material of object.[26](f) **Academic Sceptics**: Basically, Sceptics attempts to deny knowledge, which includes metaphysics and epistemology. Philosophical arguments which claimed to justify the knowledge were not accepted by Academic Sceptics. Every reasons must themselves be justified which are going to justify something, main to an countless regress. The Sceptics recommended that their followers should suspend all judgments[27](g) **Descartes**: A turn is made by Rene Descartes from “what exists to knowledge of what exists”. He modified the emphasis to a study of the conditions of knowledge or epistemology from a study of being. The beginning of the mind-body problem was Descartes. He favourably divided the world into two, the mind (the best empire of thoughts and creations) and body (the world of clothes). The physical world used to be a deterministic machine for him, however our thoughts and ideas should be free and in the material world they could change the things (through the pineal gland in the brain). Information philosophy restores an immaterial mind by information technology to the impoverished and deflated metaphysics that we had given the dualist philosophy of René Descartes rejected by empiricism and naturalism.[28](h) **The Empiricists**: Empiricists maintain that the source of our knowledge is our experience. There was some Medical empiricists, who maintain that, the sufficient basis for medical knowledge is only experience or observation, and not the “theory”. They maintain that the result of clinical observation and experience is theory. The empiricist view emphasizes experimentation dominates modern and current medicine.[29] **Positivism**: Positivism is the claim that the sensory experience, reinforced by logic and mathematics is the only valid source of information. These furnish the empirical evidence for science together. Some see it as the “naturalizing” of epistemology.[30]

III. DEBATES BETWEEN SCIENCE AND METAPHYSICS

There is one branch of metaphysics which is known as ontology. It examines all the issues that are concerned with the nature and existence of objects or events. Ontology also examined all those forces which are linked with nature and existing of object and these forces are essential while understanding the concepts of disease and health. Disease and health along with their etiology are the two metaphysical concepts which are essential for the philosopher of medications. The medicine's tries to reply the questions: "What is or causes health?" or "What is or causes disease?" [31] The philosopher of medicines distinguish four different concept of disease, first one is the ontological view. The philosopher give their statement that, "disease is an obvious entity whose existence is distinct from that of the diseased patient". For example, disease can also be a condition which is originate by the microbial infection such as viral infection. On the other hand, according to the Supporter of the physiological concept of disease, that "the disease condition is an abstract belief, with a physical entity such as a virus". The supporters further maintain that "disease is a deviation from physiological functioning. "Maladaptive mechanism" is the belief of disease which focuses on the organism's "biological history. Genetic idea is the fourth notion of disease, in accordance to which disease is the "mutation in or absence of a gene". [1] The central concept right here is that if every person who is affected, having different genetic-makeup, then only by using perception of their genetic structure, how physicians can be able to diagnose the disorder and provide a precise treatment plan to him. On this the supporter of the medical sciences further reply that, Physicians have recognized that certain drugs work better in certain patients for centuries. Pharmacogenetics is the science that research how the response of certain medication is effected by genetic variations of a persons. Pharmacogenomics is the broader find out about of how drug development is effected by genetic variation. Researchers and clinicians are making an attempt to discover and record as many genetic variations as possible. When a variation is identified, scientists would possibly be capable to match it up with a response to a precise medicine and then develop a customized approach to medicine. [32] The another debate in metaphysics is **Reductionism vs holism** debate. Reductionism is defined as the reduction of complex objects or events to their constituent parts. The human person, the patient, and the disease are defined as reductionism in the field of biology and medicine. According to Reductionists human beings are only bodies that are built like machines, and the result of a mechanical dysfunction in that machine is disease especially at the genetic and molecular level. According to Descartes, the body supposed to be just like statue or a machine that is made of earth". [33] Holism, is the view which describe that parts of a whole are in intimately related to each other which cannot exist independently of the whole and no one can understand it without the reference to the whole. Holists says that patient are not only a combination of part that can be calculated or measured in strict mathematical terms, patients as an embodied being, who have important human values like emotion, feelings, and have their individual

experience. [34] Another debate that occur between metaphysics and science is **Realistic vs Antirealistic** debate. Realists says that disease conditions are real and it has been exist independently without the investigation of medical researchers, while the reality and existence of disease condition is denied by antirealistic. [35] For example: When one who see a football arc that is made through the air into the hand of the receiver, then according to realisms, a mathematical trajectory is followed there called a parabola. But the Idealists would say that the abstract idea of a parabola "manifesting" the path of ball, the thing that is really "real" is not the ball/air/stadium, but the ideas which represents all these things. Depression is the another example of a medical condition where this debate is visible. The realists says that the, "the neurotransmitter known as serotonin is a real entity that exists in a brain which maintain the expression of depression. the low level of that transmitter is a real condition for the expression of this disease. [36] but anti-realists says that, serotonin is only a laboratory or clinical establishment, which is based on experimental or clinical conditions. If someone changes this idea for disease it will lead to changes in understanding the disease". [37] Clinical realists reported that, if a physician needs to cure depression, he have to restore the serotonin levels in brain of the patient. [36] But the clinical anti-realists argues that it is not possible to diagnose and treat the depression only by calculating and balancing the serotonin levels. [37] An ontological issues are there in this debate. Another debate is **Rationalism vs Empiricism** debate. The theory of rationalism is based on the claim that the source of our knowledge, is reason. On another side, Empiricism believe that the core source of our knowledge is based on experiences. [38] At the heart of this debate there is the question: "What is the real origin of our knowledge?" the another question is that "can we assume or conclude knowledge from first fundamental concept or premises?" "Or, the result of our knowledge is our careful experiences and observation?". [39] A Rationalists like Descartes says that, knowledge is exclusively the product of human mind and inborn in nature. For him, we cannot rely on experience obtained by senses due to their instability and unreliability. Furthermore, sense experiences can lead us off track. [40] Empiricists argues that experience is the source of our knowledge. **Causality** is another central concept of philosophy in medicine. Aristotle is the first person who give a forceful account of causality. He says that there are four known causes: the first one is material, which indicate, what something is made of? ; second is formal, it indicate, how something is made? ; third is efficient, it indicates all the forces which are plays a role in designing something; and last cause is, the purpose or end of something which is made [8]. During 17th century, Francis Bacon cut the four causes into two, the material and efficient [41]. In his empiricism, a careful examination of causation is subjected by David Hume. Hume says that, causality is the constant events and objects association, for connecting the cause with the effect without the implication of any ontological. For Hume, we are trained by the society to believe that there is something has been really exists between the cause and effect. [42] In medicines, the cause of a disease and drug's therapeutic efficiency can be analysed by causality. Disease can be operates at the physical, molecular and chemical

levels in medical domain. For example, some disease conditions can be caused by life-style of the patient and environmental factors (smoking associated lung cancer). "The relationship between cigarette smoking and lung cancer entails the strength of the association between smoking and lung cancer, as well as the consistency of that association for the biological mechanisms". [43] The conflict is occur here which again argues that this is only a probability because it is totally based on epidemiological evidence. It is not a sufficient condition because lung cancer is not occur only in those who smoke the cigarette, non-smokers are also suffered with the problem. Modern mechanistic worldview considerably influence the modern interpretation of causality in medicines, the view of Descartes especially. Descartes says that, disease is a biological phenomenon, which is considered as the malfunctioning of the physiology at cellular and molecular levels. [44] It failed to apprehend the truth that a disease is not an objective entity that exist independently throughout the patient's life. It does not submit the reality that a person can be unwell without actually suffering from a biological/bodily disease. So, the end of this debate is that, the philosophy is the search for truth and medicine is the quest for health. Although the two disciplines seem to unrelated with each other but in reality they relate. In one side, where philosophy provides the methodological, theoretical and analytical tools for the concept analysis related to medicine such as disease, health, and care. On the other side, medicines provides philosophy for critical reflection with issues.

IV. EPISTEMOLOGICAL ISSUES IN MEDICINE

Epistemology is another branch of philosophy that is concerned with human knowledge, its nature, origin, scope, and the reliability of claims to knowledge. The study of knowledge and justified belief is defined as epistemology. Epistemology tries to answer questions such as: "what is the source of our knowledge?" "What is its structure and its limits?" "How do we know that we know?" "What are the necessary and sufficient conditions for knowledge?" What distinguishes justified beliefs from those that aren't. "Does our thinking justify itself or does it justify itself?" [1] Medical epistemology is the classification and prioritisation of a patient's biological and psychosocial data by a physician. Medical epistemology's defining feature is "its a priori assumptions about knowledge that govern which forms of clinical data are relevant and which ones are not." [45]. Medical doubt is a major epistemological issue that affects doctors at all levels. Medical knowledge is constantly speculative, flawed, and lacking. Medical information is always susceptible to tampering for this simple reason. [46] Complete mastery of existing knowledge, limitations in current medical knowledge, and the challenge of "distinguishing between personal ignorance or ineptitude (lack of competence or ability) and the limitations of contemporary medical knowledge," according to Renee Fox. [47] Furthermore, every piece of information or data from a diagnostic that a doctor employs in a patient's treatment is theoretically susceptible to a variety of diagnoses. "Every laboratory test has a false positive and a false negative rate associated with it". Physicians are not

always able to pinpoint exactly what is wrong with a patient. They are only allowed to make conditional or provisional statements about a patient's health. Under medical practise, uncertainty is fairly widespread, and "...physicians still work in conditions of inevitable ambiguity." [48] Christopher Dowrick contends that the physician is always in uncertainty about: "What problems are going to be presented to us by the next patient who comes through the door of the consulting room? We may not be sure whether his fatigue, headache or abdominal pain is the start of a serious and life-threatening condition or will prove to be caused by a straightforward and self-limiting viral infection. It is also often unclear what our patient's perceptions of their problems may be, what ideas they have about, how their problems should be managed and what other hidden or complicating psychosocial agendas they may have". For this reason, the physician does not limit him/herself to "the observation of certain phenomena and their relations in order to explain their structures and regularities. The physician does not only know, but also knows what to do". In such situations of uncertainty, the physician is divided as to what kind of medication to prescribe—"antibiotics for otitis media or antidepressants for mild or moderate depression? Should we refer patients with prostatic symptoms to an urologist early or indeed at all?". Furthermore, persons with the same illness do not respond to all treatment options in the same way. As a result, we can never be positive if a particular treatment would, in fact, enhance the health of the patient in question. [49] Most physicians today operate in small groups of three or four, with each member acquiring a special interest and specialising in a specific condition such as diabetes, asthma, HIV/AIDS, depression, and so on, to lessen the ambiguity that arises in medical practise. Patients who consult with partner physicians are referred to the specialised partners for treatment and care, and each partner launches a clinic focusing on diseases in his or her field of interest. In other circumstances, some doctors may be able to lessen uncertainty by focusing on ailments that pay well (profitable). However, this is a dubious (uncertain) means of addressing the issue of medical ambiguity because it may lead to the neglect of diseases that are less profitable and disproportionately afflict the poor [50]. Another fundamental epistemological difficulty in medicine is the dependability of medical knowledge. It's never easy to determine diagnostic and therapeutic expertise. The medical method is to gather information by observation of bodily symptoms and indicators, as well as laboratory tests, to carefully consider that evidence, and to reach a conclusion on the patient's disease status. The problem with this approach, according to medical philosophers, is that symptoms and signs differ, and determining how to quantify the indicators in order to identify diseases is challenging [51]. However, "the discussion among philosophers of science over the strategy by which natural scientists investigate the natural world guides much of the debate. Thus, a clinician generates hypotheses about a patient's disease condition, which s/he then assesses by conducting further medical tests". It can be difficult to gain absolute understanding about some situations at times. Pain, for example, is a tough concept to grasp. He or she can only imagine being in the patient's shoes; he or she cannot know how the patient feels. Only

what the patient says can be understood by the physician. For example, the doctor can take your pulse rate and blood pressure, both of which may be normal; he or she can observe you and perform a complete physical examination, as well as a series of laboratory tests and imaging studies, none of which will allow him or her to determine the exact cause of your pain or whether you are truly in pain[1].As a result, we can't discern if a patient is in agony unless we feel sympathy for him or her and/or believe what he or she says. When a physician is unable to explain the source of a patient's discomfort, he or she often treats the patient as a liar or mentally ill. This method generally aggravates the patient's predicament because it causes dissatisfaction because the person (physician) who is supposed to not only aid ease the pain, but also to show compassion for his or her suffering is rejecting him or her. Furthermore, epistemologists are fascinated by the character of hypotheses, particularly the explanatory power of those that justify accurate beliefs. To really comprehend and explain something, one must first comprehend and explain its underlying causes. Explanations work on a number of levels. Neuroscientific explanations, for example, explain human behaviour in terms of neurological activity, whereas astrological explanations explain such behaviour in terms of astronomical activity. Several types of explanations are distinguished by philosophers, particularly philosophers of science, including the covering law explanation, causal explanation, and inference to the best explanation. Explanations are critical in twenty-first-century medicine for understanding illness mechanisms and, as a result of that understanding, devising treatment modalities to treat the patient's ailment. To explain for medical phenomena, twenty-first-century philosophers of medicine use the explanatory schemes created by philosophers of science. Each of these explanatory systems and their importance for medical explanations will be briefly examined in the next

section[52]. In the late 1940s, Carl Hempel and Paul Oppenheim proposed the concept of covering legal explanation. Explanations, according to Hempel and Oppenheim (1948), are arguments in which the conclusion or explanandum—that which is explained—is derived or generated from premises or explanans—that which explains. A scientific law, which can be mechanical or statistical, must be one of the explanans. Although covering law explanations are beneficial for medical phenomena that can be reduced to mechanical or statistical laws, such as cardiac output in terms of heart rate and stroke volume, not all medical phenomena can be explained in this way. The next explanatory scheme is causal explanation, which tries to resolve the issue. Causal explanation focuses on the temporal or geographical regularity of occurrences and events to explain them, as well as antecedent causes. The explanations can be simple, with only a few antecedent causes ordered in a linear fashion, or quite complicated, with several antecedent causes functioning in a matrix of interconnected and integrated interactions. For example, at least six different sets of genetic variables influence biological processes such as cell proliferation and death, immune response, and angiogenesis in cancer causative explanations. [53] Finally, in the 1960s, Gilbert Harman described the modern version of inference to the best explanation, or IBE. Harman (1965) stated that one should choose the explanation that best accounts for or infers the evidence and reject its rivals based on the totality of evidence. The "bestness" criteria range from the explanation's simplicity to its generality or consilience in explaining similar phenomena. Ignaz Semmelweis' explanation of greater mortality of women giving birth in one ward compared to another is used by Peter Lipton (2004) as an example of IBE. [54] Donald Gillies (2005) examines it in detail in term of Kuhnian paradigm.[55] various aspects of epistemology are illustrated on Fig: 1

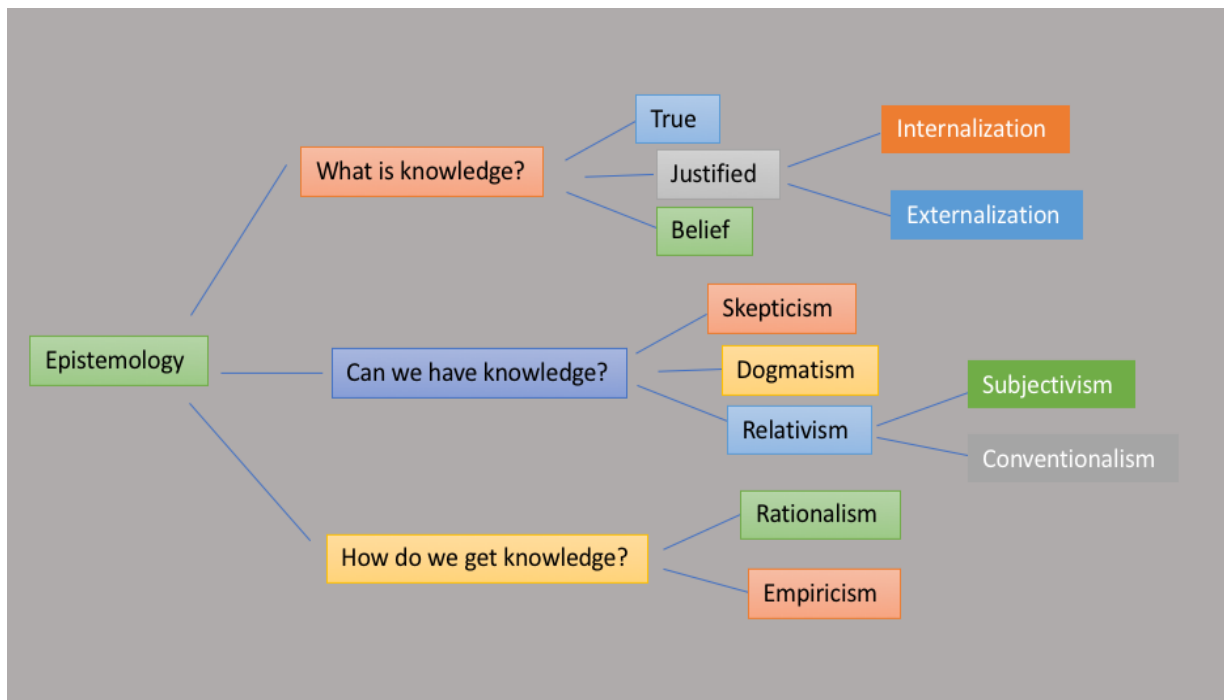


Fig. 1: Various aspects of epistemology

V. WHY SCIENCE NEED METAPHYSICS

Physics' theoretical predictions about subatomic reality are too fast for technology to keep up with. The same can be said for our ability to observe the universe's furthest reaches. [56] Theory outstrips data, allowing it to be more extravagant in its assertions about the nature of reality. Theories are more underpinned by empirical findings than ever before, yet scientists are hesitant to recognise that their arguments are philosophical and metaphysical in nature. Their theories provide a framework within which they can operate, but it is difficult to see them as anything other than the product of speculation when they are removed not only from actual observation but also from what is theoretically accessible to us, our descendants, or even any possible observer in our universe. The use of such reasoning by scientists does not imply that it is scientific. What must be the situation in order for genuine science to be possible? This is a non-scientific subject that is, by definition, philosophical, if not metaphysical. Those who claim that science can answer all questions are making the assertion from outside of science. That's why naturalism—the modern version of materialism that sees reality as defined by what science can achieve—becomes a metaphysical theory when it goes beyond methodology to discuss what is possible. Denying metaphysics and defending materialism must be a metaphysical move in and of itself. It entails taking a step back from the practise of science and discussing its scope. The claim that science can explain everything can never be made by scientists themselves. It is always a scientific statement. We can't stand outside of all human thinking, conceptual systems, and discussion of what is or could be. Similarly, in philosophy, the verificationist—who believes that a claim is significant only if it can be proven true or false—must be questioned in order to rule out the possibility of metaphysics. The quandary is sometimes encapsulated in the recurrent question of how the verification theory thesis can be verified. By its own standards, it appears strangely metaphysical in the sense that testing it through scientific methods begs every issue. The verification principle is a "axiom," according to one explanation. That does not, however, answer the question of why we choose such an axiom. It appears to be fairly arbitrary, and it leaves the door open for others to just choose a new beginning point without risk of rational criticism. Nothing has been resolved since then. Some philosophers, notably those of the pragmatic school, have argued that a "God's eye view" is impossible. We can't stand outside of all human thinking, conceptual systems, and discussion of what is or could be. We're all firmly planted in our current positions. Although this is a truism, it can soon lead to doubts about the feasibility of any detached thinking. It swiftly leads us to a philosophical relativism as a destination, according to which we are time and place creatures. This does not, however, rule out the possibility of philosophy and metaphysics. It casts doubt on empirical science's entire self-understanding. The latter is based on the concept of a neutral, objective reason that can be shared by all persons on the planet. Above all, it is concerned with truth, which is the ultimate value governing scientific practise and must be honoured by all scientists. That is why fabricating or exaggerating experimental results goes against the grain of science. Scientific truth is not

tolerant of people or cultures, and it is not reliant on them. Science has a global impact. Notional experts in far-off galaxies should be able to discuss a scientific discovery regarding the nature of the cosmos. At least in our own universe, the physical rules stay constant and are understandable from any location within it. This hints at a basic reality about science that many professional scientists take for granted. Science looks into an objective reality that is open to all and unaffected by the mind. Mathematics, on the other hand, might be considered a tool produced by the human mind. Why should we believe it can reflect the workings of physical reality in a compressible form? Those who believe that the nature of reality is mathematical, such as Max Tegmark, are jumping from symbols that appear to be the product of the mind to a reality that not only exists irrespective of our understanding of it, but also far outstrips all imaginable knowledge. "A logical consequence of the fact that the latter is a mathematical structure, and we're simply finding this bit by bit," Tegmark says of mathematics' utility in describing the physical world [57]. This, on the other hand, is a philosophical statement about the nature of reality, which logically precedes the behaviour of physics. Before broad assertions concerning the nature of reality can be made, significant philosophical study must be done. When writing about science, Jim Baggott makes claims that many scientists would dismiss. "Reality is a metaphysical term, and as such outside the reach of science," he says, adding that "scientific realists assume that reality (and its things) exist objectively and independently of perception or measurement." [58] "Reality is rational, predictable, and accessible to human reason," he adds. These descriptions can be questioned (and have been), but the assumptions are necessary for science to be practised. Science has a goal and a purpose because of reality. Participating in research without any understanding of a truth that is sometimes beyond our reach is analogous to playing soccer without a goal to shoot for. Science, like the game, will become useless. Science must be in the discovery business. Even if humans are present in reality, it is not focused on them, any more than the earth is the centre of the cosmos. It frequently goes beyond both actual and potential human knowledge. Even the brightest scientists have recognised that the world's intelligibility is a mystery. Science's point is based on the logical independence of physical reality from mind and cognition. The problem, as philosophers have pointed out throughout history, is that this can lead to scepticism. How can we hope to gain any information if we are immersed in a reality that may be beyond our grasp? Perhaps Kant was correct, and what we think we know is only a reflection of the human mind's categories. We may be able to cope with things only in the way that they appear to us. It's possible that how things are in and of themselves will always be beyond our grasp. Alternatively, the reality we want to comprehend could not even be rationally understandable. It could be so chaotic and disorderly that it's unintelligible. We are back to a pragmatic justification rather than a metaphysical one if we are told that this is impossible because science works. It may appear convincing, but it is no defence against the fear that we might be living in an unintentional harbour of order on the outskirts of a vast ocean of chaos. How can we generalise from here to there in science, when "there" may be far

beyond our grasp, or from now to then, when the origins of the universe, or the far-off future, may pose a similar challenge? This is the age-old problem of induction in philosophy. As an empiricist philosopher in the 18th century, David Hume attempted to eliminate the necessity for metaphysics by claiming that our reasoning about the uniformity of nature is not anchored in reality's character. "Not reason, which is the guide of life," he argues, "but custom." [59] For example, we just anticipate the future to mimic the past. Such a position, which acknowledges the limitations of what can be proven by human experience, might lead to a high level of scepticism. It cannot provide science with any rational foundation. Science becomes less of a quest for knowledge and more of a reflection of human nature and our inclination for the familiar. We report what occurs and abandon our search for a deeper explanation as to why it occurs. Scientific advancement is possible, and it occurs through methodical trial and error, or, in Karl Popper's terms, conjecture and rebuttal. However, a "scientific realist" must be cautious about how realism is defined. A realism that makes reality what contemporary

science says it is rationally connects reality to today's human minds. Science is then merely a human creation, established in space and time. Introducing future science or ideal science may sound more credible, but there is still a distinction to be made between science reflecting (or conforming to) the nature of reality and science being only a human invention. After accepting reality's logical independence from science, the question becomes why reality has a character that allows it to be comprehended scientifically. Reality's comprehensibility and inherent logic cannot be taken for granted. Even the finest scientists, such as Albert Einstein, have recognised that the world's intelligibility is a mystery. "The perennially inexplicable thing about the world is its comprehensibility," he famously said. [60] This, like the way mathematics appears to map the physical world's fundamental rational structure, is presupposed inside science and cannot be explained scientifically. It appears to be a metaphysical reality for which an explanation, if one can be found, must come from somewhere other than sciences. A comparison between medical science and metaphysics are stated in Fig:2

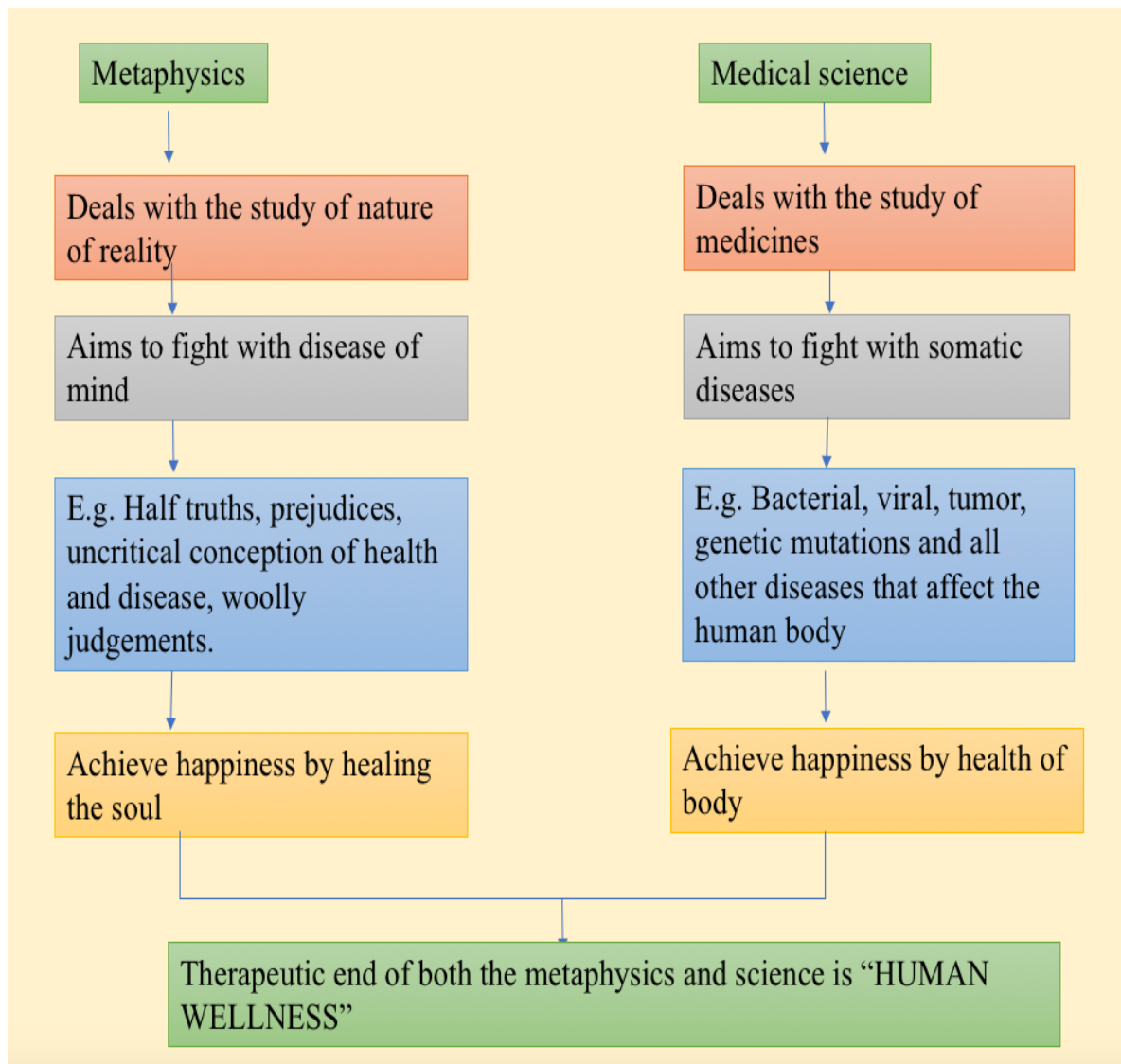


Fig. 2: A comparison between medical science and metaphysics

VI. CONCLUSION

Although philosophy and medicine appear to be independent fields, they are in fact intertwined. Between the two fields, there is a "overlapping division of labour." If philosophy gives analytical and methodological tools for investigating concerns in medicine, medicine provides issues for philosophical contemplation on the other hand. Philosophical difficulties in fields like metaphysics, epistemology, logic, and ethics arise in the day-to-day practise of medicinediagnosing and treating patients. In addition, there is a sense in which philosophy and medicine share the same goals in that they both seek to improve human well-being. Half-truths, prejudices, naive notions of health and sickness, and fuzzy judgments are all disorders of the mind that can have a direct impact on health and health care delivery. Medicine, on the other hand, aims to combat somatic disorders, which include germs, viruses, cancers, genetic abnormalities, and any diseases that impact the human body. Philosophy's pursuit of truth and understanding is to achieve happiness to heal the soul. In addition, the goal of medicine is to achieve happiness through physical health. As a result, both disciplines have therapeutic goals.

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