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Jurnal Pendidikan

SCIENCE, ETHICS AND RELIGION

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Abstrak

Dalam pendidikan kedudukan Ilmu pengetahuan, Moral dan Agama merupakan faktor-faktor yang saling mempengaruhi berhasil atau tidaknya pendidikan. Hal ini disebabkan karena setiap point memiliki kedudukan masing-masing dan nilai-nilai yang tidak dapat dipisahkan satu sama lain.

Keywords: Science, Ethic, Religion

INTRODUCTION

Most people will think of science as being facts, lists of elements and the strata of the Earth's crust. It's true that a lot of what we want students to learn is factual, but to see this as the whole of science is missing the point. These facts include processes, methods for working out chemical equations and techniques for practical tasks. Although these are more challenging, this still isn't what science is really about.

Then, discussion of issues in applied ethics often draws upon a more abstract kind of moral philosophy, which may roughly be called *moral theory*. Questions about whether we should be concerned only with the consequences of our actions, questions about rights, or the nature of justice come under this heading. More abstract still, there is a third area of moral philosophy, sometimes called *metaethics*, which includes notoriously

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intractable questions about the objectivity of moral claims and the nature of moral discourse. Thus, when someone says that morality is ‘all relative’ or ‘all a matter of opinion’ he or she is making a metaethical claim, whether knowingly or not, and however naively. Similarly, when it is said that no moral claim can possibly be true or false, or at least that no one can know any moral claim to be true or false, we are in the area of metaethics.

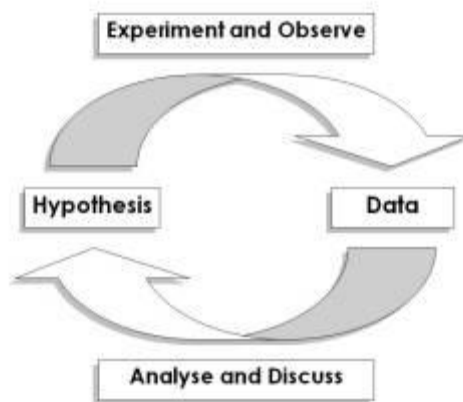
At the last, the Philosophy of Religion is the philosophical study of religious beliefs, religious doctrines, religious arguments and religious history. The line between theology and the philosophy of religion isn't always sharp because they share so much in common, but the primary difference is that theology tends to be apologetically in nature, committed to the defense of particular religious positions, whereas Philosophy of Religion is committed to the investigation of religion itself, rather than the truth of any particular religion.

DISCUSSION

SCIENCE

Science is a way of looking at the world. We have an idea, what we call *ahypothesis*, that applies somehow to the real world (or universe). We examine a situation, perhaps one we've set up ourselves called an *experiment*, and collect *the data*. When we analyze this data, it tells us if our hypothesis truly describes the real world or not. Either way we can now give a better hypothesis, a description of the world that is, in some way, a better match to reality. This process, simple and elegant, has turned into a

separate assessment target where we need to teach our kids ‘how science works as if it’s separate from all the facts we’ve discovered using it.



In order to fully understand the nature of philosophy and science therefore, we have to state their similarities and differences.

1. Similarities between philosophy and science:

- a. Both are concerned with increasing our understanding of the nature of man and the universe;
- b. Both are skeptical, critical and constructive;
- c. Both employ the method of logical, coherent and systematic reasoning;
- d. Both complement each other. For instance, whereas philosophy interprets or explains the conclusions of science, science verifies the speculations of philosophy.

2. Differences between Philosophy and Science:

- a. Science employs empirical means – observation, description and experimentation whereas philosophy employs analytic means – the method of reasoning only. Thus, whereas science is empirical, philosophy is interpretive.

- b. Whereas, Science produces facts, philosophy is abstract because it deals with what we do not know. Science on the other hand is concrete because it deals with what we can feel or see, or what we have some degree of knowledge about;
- c. Science is narrower in scope than philosophy.
- d. Science looks at particular aspects of things. Philosophy is more holistic. By now you have had a clear understanding of what philosophy is, its nature, evolution and characteristics. This now leads us to what philosophy of education is.

Aristotle was the first philosopher of science. He created the discipline by analyzing certain problems that arise in connection with scientific explanation.

Aristotle's Inductive–Deductive Method

Aristotle viewed scientific inquiry as a progression from observations to general principles and back to observations. He maintained that the scientist should induce explanatory principles from the phenomena to be explained, and then deduce statements about the phenomena from premises which include these principles.

The Inductive Stage

According to Aristotle, every particular thing is a union of matter and form. Matter is what makes the particular a unique individual, and form is what makes the particular a member of a class of similar things. To specify the form of a particular is to specify the properties it shares with other

particulars. For example, the form of a particular giraffe includes the property of having a four-chambered stomach.

The Deductive Stage

In the second stage of scientific inquiry, the generalizations reached by induction are used as premises for the deduction of statements about the initial observations. Aristotle placed an important restriction on the kinds of statements that can occur as premises and conclusions of deductive arguments in science.

Empirical Requirements for Scientific Explanation

Aristotle recognized that a statement which predicates an attribute of a class term always can be deduced from more than one set of premises. Different arguments result when different middle terms are selected, and some arguments are more satisfactory than others.

The Structure of a Science

Although Aristotle did not specify a criterion of the “essential” attribution of a predicate to a subject class, he did insist that each particular science has a distinctive subject genus and set of predicates. The subject genus of physics, for example, is the class of cases in which bodies change their locations in space. Among the predicates which are proper to this science are ‘position’, ‘speed’, and ‘resistance’. Aristotle emphasized that a satisfactory explanation of a phenomenon must utilize the predicates of that science to which the phenomenon belongs. It would be inappropriate, for instance, to explain the motion of a projectile in terms of such distinctively biological predicates as ‘growth’ and ‘development’.

The Four Causes

Aristotle did place one additional requirement on scientific interpretations. He demanded that an adequate explanation of a correlation or process should specify all four aspects of causation. The four aspects are the formal cause, the material cause, the efficient cause, and the final cause.

The Demarcation of Empirical Science

Aristotle sought, not only to mark off the subject-matter of each individual science, but also to distinguish empirical science, as a whole, from pure mathematics. He achieved this demarcation by distinguishing between applied mathematics, as practiced in the composite sciences, and pure mathematics, which deals with number and figure in the abstract. Aristotle maintained that, whereas the subject-matter of empirical science is change, the subject-matter of pure mathematics is that which is unchanging. The pure mathematician abstracts from physical situations certain quantitative aspects of bodies and their relations, and deals exclusively with these aspects. Aristotle held that these mathematical forms have no objective existence. Only in the mind of the mathematician do the forms survive the destruction of the bodies from which they are abstracted.

The Necessary Status of First Principles

Aristotle claimed that genuine scientific knowledge has the status of necessary truth. He maintained that the properly formulated first principles of the sciences, and their deductive consequences, could not be other than true. Since first principles predicate attributes of class terms.

ETHICS

Discussion of issues in applied ethics often draws upon a more abstract kind of moral philosophy, which may roughly be called *moral theory*. Questions about whether we should be concerned only with the consequences of our actions, questions about rights, or the nature of justice come under this heading. More abstract still, there is a third area of moral philosophy, sometimes called *metaethics*, which includes notoriously intractable questions about the objectivity of moral claims and the nature of moral discourse.

Thus, when someone says that morality is ‘all relative’ or ‘all a matter of opinion’ he or she is making a metaethical claim, whether knowingly or not, and however naively. Similarly, when it is said that no moral claim can possibly be true or false, or at least that no one can know any moral claim to be true or false, we are in the area of metaethics. Questions of these kinds, as we saw, are asked by many different kinds of people and certainly not only by philosophers. In this respect moral philosophy is unlike, let us say, the higher reaches of theoretical physics, whose problems are explored only by people with the appropriate qualifications.

What then do the techniques of philosophy bring to the ethical questions we have mentioned? This is a complex question, but we can begin by saying that philosophical thinking about any question involves critical thinking about foundational issues. That is to say, it tends to examine the presuppositions and starting points of our thinking, in the hope of understanding them better, or clarifying the concepts involved, or even asking whether they are rationally justified. Thus, in politics, a philosophical approach examines ideas such as justice, rights and equality in the hope of shedding light on what these things are and what value, if any, they might

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possess. The concepts of justice and rights (and many besides) are foundational because they lie at the foundation of positions advanced in politics, such as socialism or liberalism.

The socialist might see ‘social justice’ as the proper aim of political action, just as the liberal might emphasize rights. But these concepts are far from simple, and invite philosophical theorizing. Similarly, in ethics there are myriad foundational concepts that invite philosophical enquiry – the idea of reasons for action, virtue and vice, good and evil, human flourishing, the notion of objective value, the possibility of moral knowledge, to name but a few. There is also much scope for examining the moral attitudes and emotions that are inseparable from the moral life: esteem, admiration, guilt, shame, resentment and forgiveness, and it is to the credit of much recent moral philosophy that these things have been given the attention they deserve, helping to dispel the image of moral philosophy as something dry and detached from the ethical concerns of people who have no interest in philosophy. Although moral philosophy is theoretical and unavoidably concerned with precision and rigour, this is a *formal* feature of any good philosophical enquiry.

Relativism

Perhaps the best place to start is with the stance, less popular among philosophers than others, known as *moral relativism*. People use this term with a variety of meanings, some very loose and vague. Opinion-formers of a conservative bent often use the term pejoratively to mean a ‘permissive’ or ‘anything goes’ stance on particular moral issues, to be contrasted with something they call ‘moral absolutism’. Sowing further confusion, the phrase ‘moral absolutism’ is employed to mean at least two very different

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things. Sometimes it turns out to refer to the opinion that morality is *objective*, that there are moral requirements and values that are independent of human opinion, and perhaps even involve the existence of special entities or properties; at other times it turns out to refer to the view that there are specific moral requirements that are binding *without exception*.

Egoism

Relativism is sometimes perceived, whether with relief or anxiety, as a threat to serious moral engagement. Another such supposed threat is in various theories described as egoist. All who teach ethics come across people who profess a theoretical egoism.

Consequentialism

A popular theory with a venerable history is consequentialism. An important consequentialist theory is utilitarianism – indeed, the two terms are often used interchangeably. However, consequentialism, strictly speaking, is the view that actions should be judged entirely by their consequences; it does not itself specify what kinds of consequences are desirable. Classical utilitarianism specifies that the only thing ultimately valuable is pleasure or happiness, and all actions are to be judged in terms of their conduciveness to this.

Deontology

Another dominant moral theory, or cluster of theories, goes under the heading ‘deontology’, after the Greek word for duty. The deontological approach has a flavor lacking to consequentialism, and probably appeals to a different moral temperament. The stress on absolute or nearly absolute specific obligations, rather than the general obligation to promote the overall

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good, is quite distinctive. It is characteristic of deontological ethical theories that they regard certain types of action as required or forbidden in themselves, simply because of the kinds of deed they are, and not because of their consequences.

It is important to remember that merely adhering to a deontological moral framework does not in itself tell us what to do or avoid. The theory does not determine the normative content of ethics. However, it is probably no accident, psychologically speaking, that traditional deontological theory has been more emphatic about what we should *not* do rather than our positive obligations, and has included in its list of prohibitions a familiar range of actions, such as lying, theft, promise-breaking, various sexual misdemeanours, and killing the innocent.

Virtue

There is a well-established movement in moral philosophy that goes under the heading of ‘virtue ethics’. There is, in fact, nothing new in this: Aristotle (384–322 BC) is seen as the main progenitor of this way of thinking. But the revival of this general approach over the past thirty years or so arose from dissatisfaction with utilitarian and Kantian theories of ethics – widely seen as the two main rivals to virtue ethics.

We should be wary of artificial distinctions between these theories. There is no reason, for example, why utilitarian should not help themselves to the idea of virtue – in fact, they tend to emphasize the importance of the virtue of benevolence and sympathy, as they are what motivates us to the impartial promotion of well-being. But there is at least a difference of emphasis between the different theories. Very loosely, we can say that whereas utilitarian and Kantian theories take the concept of right action to

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be fundamental to ethics, virtue ethics place great importance on individual character. ‘What sort of person should I be?’ rather than ‘What is the right thing to do?’ becomes the central question of ethics.

The Aristotelian doctrine holds that virtue is a stable state of character that predisposes us to seek the good for Man, or human flourishing. We flourish if we live according to our nature. This flourishing he calls *eudemonia*, often translated as happiness, but consisting in objective well-being rather than any psychological state. We find out what sort of life makes for our flourishing by discovering what function Man uniquely performs. This turns out to be rational activity, or ‘an activity of soul exhibiting excellence’.

Truth in ethics

We are now in the realm of metaethics, which enquires into such things as the nature of moral claims, their objectivity and meaning, and what distinguishes them from other concerns. A perennially important topic, although formulated differently at different times, is that of whether, or how, moral claims can be objectively true. But of course, that very notion is obscure in the present context.

Some philosophers interpret the issue as one of whether there are moral facts. Is there a ‘way things are’, morally speaking, independently of human opinions and conventions? (and what does ‘independently’ amount to here?). *Moral realism* says there is, that it is no more problematic to speak of moral facts than of any other kind of fact (which is not to say that the idea of a ‘fact’, at least construed as an entity, is without its difficulties). Various opponents of realism deny this. In theory, an opponent of realism could be a nihilist, believing that morality is literally an illusion and that

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there is no reason to have any moral concerns. Significantly, very few philosophical opponents of moral realism actually take that view. They maintain that morality should matter to us, that there are better and worse ways to live. However, they try to understand these claims while eschewing the metaethical doctrine of realism.

RELIGION

What is God?

Because of the fundamental importance of this one issue to all general discussions between atheists and theists, it is critical that those who participate in such discussions have a better understanding of just what it is they are talking about and why. After all, what's the point of debating the possible existence of "God" if no one has tried to come to some sort of agreement as to what they mean by "God"?

What is Religion?

A system of human beliefs, ideals and practices which is harder to define than it may at first appears.

What is theism?

What is the difference between monotheism and monolatry? Between pantheism and panentheism? How about between animism and shamanism? Or theism and deism? What the heck is henotheism?

Existence of God

There are several main positions with regard to the existence of God that one might take:

1. Theism - the belief in the existence of one or more divinities or deities.

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- a. Pantheism - the belief that God exists *as* all things of the cosmos, that God is one and all is God; God is immanent.
 - b. Panentheism - the belief that God encompasses all things of the cosmos but that God is greater than the cosmos; God is both immanent and transcendent.
 - c. Deism - the belief that God does exist but does not interfere with human life and the laws of the universe; God is transcendent.
 - d. Monotheism - the belief that a single deity exists which rules the universe as a separate and individual entity.
 - e. Polytheism - the belief that multiple deities exist which rule the universe as separate and individual entities.
 - f. Henotheism - the belief that multiple deities may or may not exist, though there is a single supreme deity.
 - g. Henology - believing that multiple avatars of a deity exist, which represent unique aspects of the ultimate deity.
2. Agnosticism - the belief that the existence or non-existence of deities or God is currently unknown or unknowable and cannot be proven. A weaker form of this might be defined as simply a lack of certainty about gods' existence or nonexistence.
 3. Atheism - the rejection of belief in the existence of deities.
 - a. Strong atheism is specifically the position that there are no deities.
 - b. Weak atheism is simply the absence of belief that any deities exist.
 4. Apatheism - the lack of caring whether any supreme being exists, or lack thereof

5. Possibilianism

These are not mutually exclusive positions. For example, agnostic theists choose to believe God exists while asserting that knowledge of God's existence is inherently unknowable. Similarly, agnostic atheists reject belief in the existence of all deities, while asserting that whether any such entities exist or not is inherently unknowable.

Natural theology

The attempt to provide proofs or arguments for the existence of God is one aspect of what is known as natural theology or the natural theistic project. This strand of natural theology attempts to justify belief in God by independent grounds. There is plenty of philosophical literature on faith (especially fideism) and other subjects generally considered to be outside the realm of natural theology. Perhaps most of philosophy of religion is predicated on natural theology's assumption that the existence of God can be justified or warranted on rational grounds. There has been considerable philosophical and theological debate about the kinds of proofs, justifications and arguments that are appropriate for this discourse.

The philosopher Alvin Plantinga has shifted his focus to justifying belief in God (that is, those who believe in God, for whatever reasons, are rational in doing so) through Reformed epistemology, in the context of a theory of warrant and proper cognitive function.

Other reactions to natural theology are those of Wittgenstein and philosophers of religion, most notably D. Z. Phillips. Phillips rejects "natural theology" and its evidentialist approach as confused, in favor of a grammatical approach which investigates the meaning of belief in God. For Phillips, belief in God is not a proposition with a particular truth value, but a

form of life. Consequently, the question of whether God exists confuses the logical categories which govern theistic language with those that govern other forms of discourse (most notably, scientific discourse). According to Phillips, the question of whether or not God exists cannot be "objectively" answered by philosophy because the categories of truth and falsity, which are necessary for asking the question, have no application in the religious contexts wherein religious belief has its sense and meaning. In other words, the question cannot be answered because it cannot be asked without entering into confusion. As Phillips sees things, the job of the philosopher is not to investigate the "rationality" of belief in God but to elucidate its meaning.

Analytic philosophy of religion

As with the study of ethics, early analytic philosophy tended to avoid the study of philosophy of religion, largely dismissing (as per the logical positivists view) the subject as part of metaphysics and therefore meaningless. The collapse of logical positivism renewed interest in philosophy of religion, prompting philosophers like William Alston, John Mackie, Alvin Plantinga, Robert Merrihew Adams, Richard Swinburne, and Antony Flew not only to introduce new problems, but to re-open classical topics such as the nature of miracles, theistic arguments, the problem of evil, (see existence of God) the rationality of belief in God, concepts of the nature of God, and many more.

Plantinga, Mackie and Flew debated the logical validity of the *free will defense* as a way to solve the problem of evil. Alston, grappling with the consequences of analytic philosophy of language, worked on the nature of religious language. Adams worked on the relationship of faith and morality. Analytic epistemology and metaphysics has formed the basis for a

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number of philosophically-sophisticated theistic arguments, like those of the reformed epistemologists like Plantinga.

Analytic philosophy of religion has also been preoccupied with Ludwig Wittgenstein, as well as his interpretation of Søren Kierkegaard's philosophy of religion. Using first-hand remarks (which would later be published in *Philosophical Investigations*, *Culture and Value*, and other works), philosophers such as Peter Winch and Norman Malcolm developed what has come to be known as *contemplative philosophy*, a Wittgensteinian school of thought rooted in the "Swansea tradition" and which includes Wittgensteinians such as Rush Rhees, Peter Winch and D. Z. Phillips, among others. The name "contemplative philosophy" was first coined by D. Z. Phillips in *Philosophy's Cool Place*, which rests on an interpretation of a passage from Wittgenstein's "Culture and Value." This interpretation was first labeled, "Wittgensteinian Fideism," by Kai Nielsen but those who consider themselves Wittgensteinians in the Swansea tradition have relentlessly and repeatedly rejected this construal as a caricature of Wittgenstein's considered position; this is especially true of D. Z. Phillips. Responding to this interpretation, Kai Nielsen and D.Z. Phillips became two of the most prominent philosophers on Wittgenstein's philosophy of religion.

CONCLUSION

The Similarities between philosophy and science: both are concerned with increasing our understanding of the nature of man and the universe; both are skeptical, critical and constructive; both employ the method of logical, coherent and systematic reasoning; both complement each other.

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For instance, whereas philosophy interprets or explains the conclusions of science, science verifies the speculations of philosophy.

The differences between Philosophy and Science: Science employs empirical means – observation, description and experimentation whereas philosophy employs analytic means – the method of reasoning only. Thus, whereas science is empirical, philosophy is interpretive. Whereas, Science produces facts, philosophy is abstract because it deals with what we do not know. Science on the other hand is concrete because it deals with what we can feel or see, or what we have some degree of knowledge about; science is narrower in scope than philosophy. Science looks at particular aspects of things. Philosophy is more holistic. By now you have had a clear understanding of what philosophy is, its nature, evolution and characteristics. This now leads us to what philosophy of education is. Then, ethics often draws upon a more abstract kind of moral philosophy, which may roughly be called *moral theory*. And religion is a system of human beliefs; ideals and a practice which is harder to define than it may at first appear. There are several main positions with regard to the existence of God that one might take:

1. Theism - the belief in the existence of one or more divinities or deities.
2. Agnosticism - the belief that the existence or non-existence of deities or God is currently unknown or unknowable and cannot be proven. A weaker form of this might be defined as simply a lack of certainty about gods' existence or nonexistence.
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6. Apatheism - the lack of caring whether any supreme being exists, or lack thereof
7. Possibilianism.

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