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W.V.O. QUINE'S NATURALISTIC APPROACH TO EPISTEMOLOGY

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ABSTRACT

The purpose of this paper is to make the reader be familiar with the naturalized epistemology of Quine, that is, Quine's scientific approach to epistemology. Quine looks on philosophy mainly as epistemology, which is best seen as an enterprise within natural science. What Quine refutes, by putting forth his conception of natural epistemology against traditional epistemology, is not only Cartesian foundationalism and Carnapian reductionism, but also any epistemological program that puts atomic verificationist semantics at the foundation of its linguistic-factual distinction of individual sentences. In this paper, Quine's naturalistic approach to the theory of knowledge or epistemology is investigated.

Key Words: *'naturalized epistemology', 'scientific approach', 'traditional epistemology', 'foundationalism', 'reductionism'.*

ÖZET

W.V.O. Quine'in Epistemolojiye Doğalcı Yaklaşımı

Bu çalışma, Quine'ın doğallaştırılmış epistemoloji görüşünü; başka deyişle, onun epistemolojiye bilimsel yaklaşımını, okuyucuya tanıtmayı amaçlamaktadır. Quine, felsefenin esas işinin epistemoloji olduğunu savunur ve epistemolojinin de kendine yakışır asıl yeri doğa bilimidir. Quine, doğal epistemoloji anlayışıyla, Kartezyen temellendirmecilik ve Carnapcı indirgemecilik yanında, kaynağını tekil tümcelerin dilsel-olgusal ayrımında bulan atomcu

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doğrulamacı her türden epistemolojik dizgeyi yadsır. İşte bu çalışmada Quine'ın bilgi felsefesi ya da epistemolojiye doğalcı yaklaşımı ele alınıp incelenecektir.

Anahtar Sözcükler: *'doğallaştırılmış epistemoloji', 'bilimsel yaklaşım', 'geleneksel epistemoloji', 'temellendirmecilik', 'indirgemecilik'.*

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Introduction

According to Hamlyn, questions about the status and extent of our knowledge of the world, of ourselves and other people, not to speak of particular branches of knowledge like history and mathematics, have occupied the attention of philosophers for nearly as long as philosophy itself has been in existence. Such questions and the answers that may be given to them form part of that important branch of philosophy known as epistemology or the theory of knowledge (Hamlyn, 1970: 3). That is to say, epistemology or the theory of knowledge, as a rule, deals with problems concerning the nature, scope and methods of human knowledge. In Olson's point of view, typically the epistemologist asks at least three major questions: first, "what are the principle grounds of knowledge?"; second, "how certain can we properly be of what we think we know?"; and third, "are there limits beyond which we cannot reasonably hope to extend knowledge?" Debate on the first of these three questions turns chiefly upon the relative roles of unaided reason and of perception through the physical senses (Olson, 1967: 4.). Depending on which of these two avenues of knowledge is most heavily stressed, a theory of knowledge is classified as rationalist or empiricist. If a philosopher believes that the unaided use of human reason is the principle ground of knowledge, he is called a rationalist. If he emphasizes the role of the physical senses, he is an empiricist. The second and third questions, akin to the degree of certainty and the extent of human knowledge, have both received many different answers. In general, however, rationalists are apt to the view that men may acquire completely certain knowledge of almost anything they care to know. They seem to have been deeply impressed by mathematics and have argued that the mental faculties employed to figure out the truths of mathematics are adequate to discover the truths in other fields of human inquiry. On the contrary, empiricists have claimed that entire certainty is not attainable except for mathematics and formal logic. Many of them have denied the possibility of acquiring any genuine knowledge at all about ultimate reality or about morals. Practically all have insisted that knowledge of natural events and the laws governing them is merely probable. In some cases the probability is so high that for practical purposes doubts may be safely set aside, but future experience may always prove us

wrong (Olson, 1967: 5). Hence, whether one can have reliable or trustworthy knowledge is an age-old question of philosophy. According to Brennan, with the development of modern philosophy after the Renaissance, the problem of what kinds of knowledge are *true* or *certain* became particularly acute. Since the seventeenth century the attention of a distinguished line of philosophers has been concentrated on the question of if one can have trustworthy knowledge about anything. Questions about true or certain knowledge give rise to a bunch of problems not that easy to handle (Brennan, 1967: 77-78). Accordingly, regarding this point Quine offers a naturalistic approach to the theory of knowledge or epistemology to overcome the issues just mentioned above. For him, epistemology is an activity carried on from within the scientific perpective; it is not an attempt to justify the methods of science (Jones, 1997: 500).

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I do think that we are supposed to be familiar with Quine's ideas on philosophy generally before we set to work on naturalized epistemology in detail. W.V.O. Quine, whose writings are on both formal logic and philosophy, has been the most influential thinker in recent American philosophy. His contributions to philosophy almost always begin from a point or a problem within the area of semantics. Distinguishing meaning from reference, he treats the former under the title of the analytic-synthetic distinction, synonymy and similar problems. With respect to meaning, Quine rejects the distinction between analytic and synthetic statements on the ground that nobody has succeeded in making out a clear ground for the distinction. This point is closely related to his idea of science, which is a weighty linguistic structure fabricated of theoretical terms linked by fabricated hypotheses and keyed to observable events. By way of this superstructure, the scientist predicts future observations on the basis of past ones and he may revise the superstructure when the predictions fail. Hence, the utility of science lies in fulfilled expectation, namely, true prediction. In other words, Quine's own model for a scientific theory is that of an interconnected web, with no part immune to revision in the light of experience. He believes in the light of this that single sentences have no meaning and supported this view by the famous thesis of the "indeterminacy of radical translation", which is the view that a sentence can always properly be regarded as meaning a multitude of different things. Under theory of reference called 'ontology', he deals with the problems of denotation or extension, truth and the like. His point here is simply that there is always a relationship between language and ontic commitments. Speaking of what kinds of entities there are, is always to speak from the point of view of a given language. In Quine's view, knowledge is what one does have of truths if his or her beliefs are solidly enough grounded.

Knowledge in a way is like a good golf score: each of them is the outcome of something else. In order for one to make his or her score higher, he or she works at perfecting the various hits; for knowledge, one works at collecting and sorting evidence as well as being sharp with his or her reasoning skills. His or her immediate concern must be with the comprehensiveness and coherence of his or her belief body (Quine, 1978: 14).

According to Quine, in evaluating or assessing beliefs, we do our best to evaluate some or several in combination. As an aspiration, a very talented car mechanic might be able to utter something akin to the engine of a car by looking into its parts one by one, each in whole isolation from the other ones. But, it would certainly serve his aim much better to apprehend the engine as a whole with all the parts working together. For Quine, it is in the light of the full body of our beliefs which candidates get admission or refusal; any independent merits of a candidate tend to be less decisive. To grasp why this should be, recall the characteristic occasion for questioning beliefs. It was the situation in which a new belief, up for adoption, clashes somehow with the present body of beliefs as a body. Now, when a group of beliefs is not consistent, at least one of the beliefs must be refused or rejected as false; yet, a question remains as to which to reject. Evidence must then be evaluated with a view to rejecting the least firmly powered by the conflicting beliefs (Quine, 1978: 16-17).

Quine argues that when our system of beliefs backs up our expection of some event and if that event does not occur, we have the problem of selecting certain of our interlocking beliefs for revision. This is what happens when an experiment is made to check a scientific theory and the outcome is not what the theory anticipated. Thus, the scientist should revise his theory somehow; that is, he must give up one or more of the beliefs which together implied the false anticipation (Quine, 1978: 20).

For Quine, when an observation turns out against predictions, we might attempt to adjust our theory of that structure at one or another point. When an observation points out that a system of beliefs must be renovated, it is up to us to select which of those interlocking beliefs to revise and this important fact has taken place frequently. To sum up the matter in a word, Quine asserts that our beliefs meet the tribunal of observation not individually but as a body or as a whole (Quine, 1978: 22).

Quine, in his other works, also develops his ideas further regarding the issue mentioned above. First of all, he challenges the two main theses of empiricism, that is to say, the analytic-synthetic distinction and the view that individual observation utterances are the basic units of meaning.

Quine puts forward, as an account of the usually accepted class of analytic truths, the thesis that they are truths such that when synonyms are substituted for synonyms they might be turned into logical truths. He distinguishes between analytic truths and logical truths; the former being reducible to the latter by substituting synonyms for synonyms. For example, "a bachelor is an unmarried man" (analytic truth); "a bachelor is a bachelor" (logical truth). Accordingly, Quine takes logical truths to be merely those that are most entrenched in the sense that they are the truths that we are the least willing to give up in the face of apparently falsifying circumstances (Quine, 1993: 396-397). Quine explores the possibility that synonymy might be explained in terms of the idea that two expressions are synonymous when they are interchangeable *salva veritate*[*]. Leaving the statements in which they occur unchanged in truth value, so that they are *salva veritate*. There has to be some restriction on this general thesis since, if, for instance, 'bachelor' is taken to be synonymous with 'unmarried man', we cannot take as a counter-example to the general thesis the fact that you cannot replace *salva veritate* 'unmarried man' with 'bachelor' in some statement about, say, a bachelor of arts. Since 'bachelor of arts' has to be taken as a single expression having a meaning only as a whole, Quine formulates the restriction by speaking of substitutability *salva veritate* in all contexts except within phrases (Quine, 1993: 397-398). But Quine points out that, even with a restricted thesis, there appears to be an objection to equating synonymy with interchangeability *salva veritate*; for the interchangeability (*salva veritate*) might be due to accidental (contingent) factors, as with "creatures with a heart" and "creatures with kidneys", if it happens to be the case that all and only creatures with a heart are creatures with kidneys. Might not this be the case also with 'bachelor' and 'unmarried man'? If we think not, it is because we think that interchangeability *salva veritate* is not a sufficient condition of synonymy. If we try to get around this point by arguing that it is necessarily the case that all and only bachelors are unmarried men, and not a mere accident, we are presupposing the concept of necessary truth in our account of synonymy; whereas the whole point of the appeal to synonymy was to afford a definition of at least one kind of necesary truth, which is involved in analyticity (Quine, 1993: 399-402).

This takes Quine on to the second dogma, namely, reductionism. According to Pojman, Quine rejects the conceptions of radical reductionism which are linked to the verification theory of meaning and which hold that individual observation statements are the fundamental units of meaning. By discarding this view, Quine puts forth that all our beliefs form a holistic

[*] salva veritate means truth preservingly.

web so that individual utterrances are never verified or falsified in isolation but only with reference to the holistic web (Pojman, 1993: 395). For Quine, this second dogma is also a feature of classical empiricism and is in that context matched by the first dogma of the existence of analytic propositions. It is involved in the verificationist theory of meaning, with its assumption that there are basic propositions that can be directly verified. Quine argues that supposing that there are such propositions involves an unjustified dogma of empiricism. He then goes on to assert his main thesis on this issue that there is no sharp boundary between the analytic and the synthetic and the distinction can be drawn at all only within the bounds of a particular system. To sum up the matter in a word, there are no propositions depending for their truth on a direct confrontation with experience (Quine, 1993: 403-406).

In short, for Quine, experiment can only tell us that a system of beliefs has an error in it somewhere; but no experiment can determine once and for all how to adjust the system. That is to say, no observation can single out which theory or set of beliefs to hold on to or to give up, because there is no way for observation to ever contradict a single claim in isolation. Besides, in Quine's view, traditional epistemology sought to reduce the content of any warranted belief to the content of some basic beliefs; however, the notion that there is a determinate, empirical content for each belief is false. In other words, this reductive project is out of the question, because it presupposes that individual beliefs have definite empirical content, but they do not. As a result, the unit of meaning is entire theories, not individual beliefs. Considering Quine's commitment to a strong version of holism, a word gets its significance from the role it plays in a sentence, but sentences, in their turn, gain their significance from the role they play in the total system of science (Jones, 1997: 496).

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Now it is time to elaborate on Quine's ideas regarding naturalized epistemology. As a matter of fact, Quine's main argument to set forth his ideas as regards natural epistemology against traditional theory of knowledge is based on the claim that the Cartesian foundationalist program has failed; to wit, the Cartesian "quest for certainty" is a lost cause. Hence, Quine divides the classic epistemological program into two parts, namely, *conceptual reduction* whereby physical terms including those of theoretical science, are reduced to terms referring to phenomenal features of sensory experience, and *doctrinal reduction* whereby truths regarding the physical world are suitably derived from truths about sensory experience (Pojman, 1993: 395).

Accordingly, Quine's main purpose is to substitute traditional epistemology for the one which has been naturalized. He justifies his opinions on the basis of the failure of other types of theories of knowledge among which the first one is Cartesianism. Quine separates the Cartesian program into two parts, namely, the conceptual part and the doctrinal part. The conceptual side of the Cartesian program amounts to the normative idea of what knowledge is. With different words, the Cartesian seeks to find a set of rules which is to be used to determine if a given belief is justified by reducing the belief in question to foundational beliefs. The second part, i.e., the doctrine, attempts to show that a given belief is in fact justified in that it the satisfies condition that it can be deduced from some foundationally justified beliefs.

Consequently, Quine's argument relies on the fact that the Cartesian program fails in its aim of finding anything of substance which is in fact justified. This is mainly owing to a lack of foundationally justified beliefs and the strength of justification required for inference. Another type of foundational program severely criticized by Quine is that of Carnap, whose program is very similar to that of the Cartesian in that there is a prescriptive element present seeking to find out which beliefs are justified by reducing them to notions of sensory terms. This project also fails in terms of both reduction – not everything can be reduced to sensory terms – and justifying truths of nature, i.e., science.

In a nut shell, Quine claims that because these types of traditional epistemology have failed in their aims regarding justification, epistemology or theory of knowledge itself should be replaced with a naturalized version. In Quine's point of view, the term 'naturalized' is germane to the term 'scientific'. Quine, indeed, wants epistemology to turn into a natural science.

According to Quine, epistemology is concerned with the foundations of science. It also includes the study of the foundations of mathematics as one of its parts. Studies in the foundations of mathematics are to be divided into two kinds, i.e., conceptual and doctrinal. For Quine's part, while the conceptual studies are akin to meaning, the doctrinal ones are concerned with truth. In addition, the conceptual studies are related to clarifying concepts by defining them, some in terms of others. On the other hand, the doctrinal studies are akin to the establishing of laws by proving them, some on the basis of others (Quine, 1993: 320). With the words of Quine,

> … the two ideals are linked. For, if you define all the concepts by use of some favored subset of them, you thereby show how to translate all theorems into these favored terms.

> The clearer these terms are, the likelier it is that the truths couched in them will be obviously true, or derivable from obvious truths. If in particular the concepts of mathematics were all reducible to the clear terms of logic, then all the truths of mathematics would go over into truths of logic; and surely the truths of logic are all obvious or at least potentially obvious, i.e., derivable from obvious truths by individually obvious steps. This particular outcome is in fact denied us, however, since mathematics reduces only to set theory and not to logic proper (Quine, 1993: 321).

Quine goes on to say that reduction in the foundations of mathematics remains mathematically and philosophically fascinating, but it does not do what the epistemologist would like of it: it does not reveal the ground of mathematical knowledge, it does not show how mathematical certainty is possible. Quine states that,

> I refer to the bifurcation into a theory of concepts, or meaning, and a theory of doctrine, or truth; for this applies to the epistemology of natural knowledge no less than to the foundations of mathematics. The parallel is as follows. Just as mathematics is to be reduced to logic, or logic and set theory, so natural knowledge is to be based somehow on sense experience. This means explaining the notion of body in sensory terms; here is the conceptual side. And it means justifying our knowledge of truths of nature in sensory terms; here is the doctrinal side of the bifurcation (Quine, 1993: 321).

According to Quine, the Cartesian quest for certainty had been the remote motivation of epistemology both on its conceptual and its doctrinal side; but that quest was seen as a lost cause. Let us hear what Quine says about it:

> What then could have motivated Carnap's heroic efforts on the conceptual side of epistemology, when hope of certainty on the doctrinal side was abandoned? There were two good reasons still. One was that such constructions could be expected to elicit and clarify the sensory evidence for science, even if the inferential steps between sensory evidence and scientific doctrine must fall short of certainty. The other reason was that such constructions would deepen our understanding of our discourse about the world, even apart from questions of evidence; it would make all

> cognitive discourse as clear as observation terms and logic.… (Quine, 1993: 322).

It strikes me that in Quine's point of view, two main tenets of empiricism remained unassailable and so remain to this day. One is that whatever evidence there is for science is sensory evidence. The other one is that all inculcation of meanings of words must rest ultimately on sensory evidence. However, Quine goes on to state that, as has been recalled, the Vienna Circle maintained a verification theory of meaning. But, if we recognize with Pierre Duhem* that theoretical sentences have their evidence not as single sentences but only as larger blocks of theory, then the indeterminacy of translation of theoretical sentences is the natural conclusion. Quine clarifies the points he has made as follows:

> The crucial consideration behind my argument for the indeterminacy of translation was that a statement about the world does not always or usually have a separable fund of empirical consequences that it can call its own. That consideration served also to account for the impossibility of an epistemological reduction of the sort where every sentence is equated to a sentence in observational and logico-mathematical terms. And the impossibility of that sort of epistemological reduction dissipated the last advantage that rational reconstruction seemed to have over psychology (Quine, 1993: 325).

Thus, for Quine, epistemology goes on in a new setting and a clarified status. Theory of knowledge or epistemology falls into place as a chapter of psychology and accordingly of natural science, because it investigates a natural phenomenon, i.e., a physical human subject, who is accorded a certain experimentally controlled input and in the fullness of time the subject delivers as output a description of the three-dimensional external world and its history. The relation between the weak input and the strong output is a connection that we are induced to study for somewhat the same reasons that always motivated the study of epistemology; that is, in order to see how evidence relates to theory.

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In conclusion, as figured out, Quine points out that the idea of analyticity rests on the idea of synonymy, that is, if it is analytic that "a bachelor is an unmarried male", this is because "bachelor" and "unmarried male" are synonymous terms. But, to say that these terms are cognitively

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* For more about Duhem's ideas see especially chapters IV and VI in DUHEM, Pierre. The Aim and Structure of Physical Theory, Princeton: Princeton University Press, 1954.

synonymous is to say that our original sentence is analytic. Thus, to invoke synonymy does not save analiticity; but, demonstrates that the former term faces the same problem as the latter. Quine traces the difficulty in this matter to the verification theory of meaning that supposes the individual synthetic statement to be the unit of empirical significance. Such statements, when meaningful, are capable of confirmation and the analytic statement is simply the limiting case, since it is confirmed no matter what else may be the case. Against the verification theory, Quine holds that the unit of empirical significance is not the individual statement but the whole of science. And, the difference between "synthetic" and "analytic" statements is simply the measure of their proximity to the experiential periphery of science, or their remoteness from this periphery. The conceptual scheme of science, indeed, is underdetermined by experience and contrary experience at the periphery can be handled by many sorts of adjustment within the scheme itself. In his view, our situation is like that of rebuilding a ship on an open sea; namely, the changes must take place little by little. Factors of convenience and conservatism, simplicity and elegance or conceptual economy enter while the ultimate criterion is the achievement of a pragmatically acceptable conceptual scheme. In short, Quine holds that it is science that makes up the largest part of the conceptual scheme appropriate for individual belief and that there are always multiple ways of dealing with the evidence that runs counter to a given scientific theory. Hence, the statements jointly are falsifiable or verifiable, but not individually.

In the final analysis, according to Quine, we cannot reduce all beliefs to sensory beliefs. Still, we do produce a picture of the world based on sensory inputs. As mentioned above, the relation between the weak input and the strong output is a relation we are prompted to study; hence, epistemology becomes a part of psychology. That is to say, it becomes the empirical, the study of how human beings form beliefs on the basis of sensory stimulations; and thus, epistemology is integrated into natural science. Accordingly, we should view human beings as physical creatures whose sense organs are stimulated by their environment. To sum up the matter in a few words, as set forth above, Quine puts forward his ideas on epistemology naturalized by looking into the twofold purpose of the old epistemology or traditional epistemology, namely, a doctrinal reduction, whereby truths regarding the physical world are correctly derived from sensory experience, and a conceptual reduction, whereby physical terms are reduced by the terms referring to phenomenal features of sensory experience. As a result, as a part of psychology, epistemology, the theory of knowledge, in its new setting is contained in natural science.

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