

AFRICAN SOCIAL AND EDUCATIONAL JOURNAL
FACULTY OF BUSINESS ADMINISTRATION
IMO STATE UNIVERSITY
NIGERIA
VOL. 9 NO. 2 JUNE 2020

'TOKEN – REFERENT' MATCHING AS A LOGICAL MODEL FOR EPISTEMOLOGY OF PROPOSITIONS: IMPLICATIONS

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Abstract

This study is concerned with an analysis of the logical structure of an epistemological demonstration of the foundations of knowledge. The purpose of the analysis was to ascertain whether epistemology is conducted within an appropriate logical framework. The project was necessitated by the need to identify the reason for the perennial skepticism in epistemology. The method adopted for the study was content analysis. With the application of the method, it was discovered that epistemology has so far been conducted within the token-referent matching logical model, which is validated by the view that epistemology could be substituted by referential realism. The implications gleaned from the analysis of the framework are: 1. the fallacy of an absolute objective standpoint; 2. the fallacy of ontological convenience; and 3. the emergence of skepticism within epistemology. It was submitted that all these implications would be obviated if epistemic justice is done to the inputs of both the subject and the object.

Keywords: *Token, Matching, Epistemology, Skepticism, Fallacy, Ontology.*

Introduction

The essay below is primarily a diagnostic one. Its purpose is to identify the logical model that underpin all epistemic analysis in the epistemological research programme. Such a project takes into account some of the major systems in epistemology. It would, however, be very cumbersome to mention and discuss some or all of the systems studied here, because of the scope of the essay and the space available to it. Hence, the work will concentrate on the analysis of the structure of the discovered logic used in traditional epistemology for the foundations of propositions.

The research is basically a qualitative study. The matching model used is only graphical without any quantitative input. Every step in the matching network is explained and its relevance to the study clearly stated. The graph adopted for the network analysis is not plotted in the essay, but taken from James Anderson (2001), as an example of what a network matching is all about. The method adopted for the study is that of content analysis, because of the purpose of the essay. The study took into account both primary and secondary works of authors in western epistemology and its related fields.

It is the thesis of the essay that western epistemology of propositions is basically conducted within the *token-referent* matching logical model. The model involves the substitution of representational semantics or referential realism for epistemology. It is the art of seeking out and matching external objects as referents of linguistic tokens found in propositions. The primary implication of this is the act of validating the assumptions of absolute objective standpoint and ontological convenience, with their consequent totalitarianism of the object. The secondary implication is the emergence of skepticism within epistemology itself. These concepts mentioned here are given elaborate explanation later in the essay.

The paper submits that skepticism will disappear from epistemology if epistemic justice is done to both the subject and the object. Epistemic justice implies the interrogation of the inputs of both the subject and the object in the search for the foundations of knowledge. Such an interrogation would be devoid of seeking foundation by exclusively matching linguistic tokens found in propositions with some external object as referents of those tokens.

Theoretical Foundation of *Token – Referent* Matching as an Epistemic Model

The object of epistemology is the discovery of the foundations of science. Foundationalism is, therefore, the metaphysics (ontology) of knowledge. It is "... a view concerning the structure (model) of the system of justified-true-belief possessed by an individual. Such a system is divided into 'foundation' and superstructure; so related that beliefs in the latter depend on the former for justification and not vice versa" (Alston 1993, p.147). As a metaphysics of knowledge, it is an impetus for epistemic investigations. But it is not itself the epistemology. Epistemology is rather founded on the conviction regarding the possibility of the attainment of foundation as its object of investigation. Thus conceived, the attainment of the foundation of knowledge is the primary objective of epistemology.

To attain success in its preoccupation, the subject matter of epistemology must be properly specified. But from the history of philosophy, it could be contended that the failure of traditional epistemology is founded on the improper delimitation of its subject matter. The theoretical climate that birthed western epistemology left influence on the conception of the ontological limits of its subject matter. Bertrand Russell's conception of this climate is as follows:

The conceptions of life and the world which we call 'philosophical' are a product of two factors: one, inherited religious and ethical conception: the other, the sort of investigations which may be called scientific: using this word in its broadest sense... it is the presence of both in some degree that characterizes philosophy, Russell (1967, p.13).

The root of erroneous specification of the logic of epistemic demonstration of the foundations of propositions is however, one sided. The error is rooted in the mythological tradition within which ancient knowledge claims were founded. Myth-making is a system of truth-narrative, just like science, philosophy, theology etc. Superstitions and folk tales enrich mythology, thus, the possibility of knowledge in the mythological tradition is attained by reference to the existence of some being, in at least some realm, as the object of speech. Myth-making as a form of knowledge is an outright narrative or report concerning the activities of some putative entities. Hence, the justification for a proposition expressing a myth is hinged on the proof of the existence

of its reported ontology. Such a proof is predicated on sheer presentation of evidence for the existence of the mythical domain.

The epistemic import of the mythical tradition is its 'report concept' of knowledge. Truth and justification of knowledge claims, therefore has to be demonstrated within a logic that is satisfied by mere presentation of the referent of linguistic tokens found in such claims. This role gave primacy to the object in language and reduced the subject to a passive dispenser of speech as an instrument. Hence, the subject is not reckoned as the creator of speech but as a mere dispenser of it. The assumption of a dispenser-subject in philosophy of language is the theoretical difficulty created by representational semantics. But proponents of representational semantics, who exclude the subject, feel no guilt for creating these complications, because they are semantic and epistemic exclusivist. Maybe they assume that the task of epistemology is made easier by some form of exclusivist reductionism, which reductionism is consistent with the correspondence theory of truth.

Token – Referent Matching as Representation Semantics

Representational semantics is used in the essay to refer to a set of semantic assumptions, according to which, the meaning of any linguistic token is summarily given in the presentation of its referent. It is a form of picture theory semantics or referential realism, which consists in the contention that words found in significant languages are pictures of or point to external realities. The above theoretical assumption of representational semantics underlies many programmes in the history of epistemology. Representational semantics was properly defined in the project of logical atomism and other schools in analytic philosophy like that of Saul Kripke (1980). Representational semantics, therefore seeks to attain a one – to – one correspondence between words and their referents in all semantic analysis. Hence, the primary methodological structure of representational semantics is the use of '*token – referent*' matching logical model to achieve satisfactory semantic analysis. The method involves a one – to – one mapping of all linguistic tokens in a given assertion onto a corresponding external state of affairs. But such theoretical and methodological orientations have negative implications for the role of the subject in language analysis and is capable of so much difficult theoretical implications.

In representational semantics, the subject is assumed to contribute nothing to experience but assimilation; not even the language with which the experience is expressed is counted as the creative ingenuity of the subject. Language within such semantics is a necessity of the object and epistemic justification is an act of presentation of objects as referents for linguistic tokens that form propositions. Knowledge is therefore, understood in this tradition as the imprinting of being on the mind. Aristotle (1957) calls it the assimilation of being.

The necessity and universality found in language, which is absent in any empirical experience of the object, are often times assigned to an ideal realm by referential realists. Such philosophers include Parmenides and Plato. They achieved necessity and universality by idealization of being as unique and immutable. This realm of the ideal being for epistemic reference was presented in their theories. Parmenides had talked about the foundation of truth as one immutable reality (Ozumba, 2001, p.63). The myth of the argument is the mystery of Parmenides' birth. According to him, he was born on the wings of a goddess that revealed truth to him (Ozumba, 2001, p.68). Plato's ideal world, known qua reminiscence, is another popular instance of exaggerated ontology (Stumpf, 1982, p.56). The implication of this for language is in its autonomy from its speaker in the communication of being. Language could properly be

understood in the above logic as pictures of the entity. Thus, philosophers, operating within the framework, were led often to impute being where they would ordinarily have been content to deny it. The reason for the unfortunate occurrence was due to the misplaced belief, that all aspects of language necessarily communicate or point to some being. Willard Quine refers to the approach as the "Plato's Beard" (Quine, 1971, p.2). According to this riddle: "*nonbeing must in some sense be otherwise what is it that there is not?*" (Quine, 1971, pp.1-2).

Traditional philosophical view of language, which is copy theoretic (Quine, 1969, p.27), is founded on the delineation of the scope of the subject matter of semantic and epistemic investigations. From such a purely report oriented tradition, knowledge is investigated outside of the knowing process. Thus, the subject matter of epistemology is taken exclusively to be the by-product of the cognitive act (*propositions*). Such a view of the subject matter of epistemic analysis as sheer sentences, statement, propositions or assertions brought the method of epistemology so close to that of traditional *token-referent matching* (representational) semantics and moved the epistemic research project to the debate over the nature of meaning and truth. Traditional epistemology literarily ended up as traditional semantics. The only difference was, that whereas the latter sought token-referent matching as the ultimate object of its research programme, the former used the matching as a model of justification or demonstration of the foundation of proposition.

In its justification affairs, traditional epistemologists presupposed the copy theory of language and sought, to match statements with state of affairs and beliefs with self-evident truths, which obviously represented the state of affairs. Such matching procedure is founded on the report-oriented conception of knowledge, which gives primacy to the object. It is a form of cognitive autocracy of the object.

Graphical Analysis of Matching as a Logical Model

Matching, as such, is a mathematical concept used in the analysis of networks and flows (Anderson, 2001, p.650). Matching is generally carried out on a bipartite graph with at least two or more edges. In such a procedure, the matching of a certain graph $G = (V, E)$, which as a bipartite graph is possible if V is a disjoint union of non-empty sets, say $V = A \cup B$, such that every edge has the form $\{a, b\}$ where $a \in A$ and $b \in B$ (Anderson, 2001, p.664). The networking of such a matching is as expressed in *FIG.1* below.

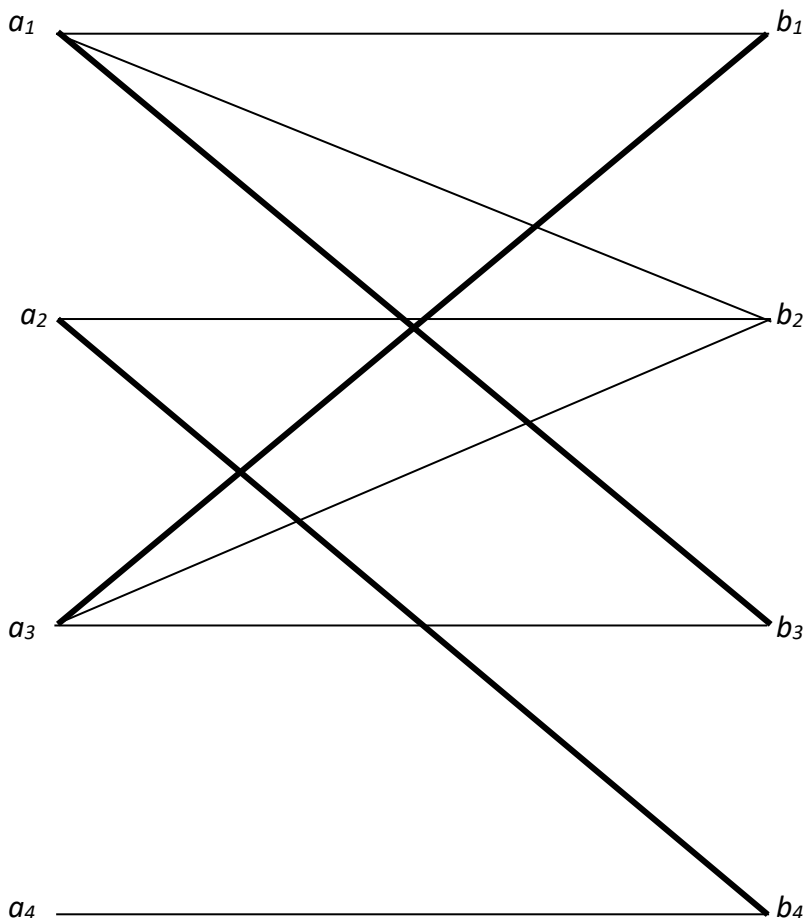


Fig.1: Showing the matching of the network of A and B. (Anderson, 2001, p.664).

The heavy lines in FIG.1 represent the matching M , which is the subset of E representing the possibility of a complete network (or what Quine may wish to refer to as 'web of belief'). Thus, if $\{a, b\}$ is an edge in a matching (M), then both a and b have matching edges (Anderson, 2001, p.664).

The application of this mathematical form is displayed by James Anderson as follows:

One example would be matching people with jobs. One set of vertices is a set of people and the other set is a set of jobs. The edges of the graph indicate which people are capable of doing particular jobs. Another example would be matching boys with girls. The boys form one set and the girls the other. An edge would indicate that a pair are compatible (Anderson, 2001, p.664).

It is this comprehensive compatibility between intension and extension that is supposed to be the object of standard epistemology. But the matching programme in epistemology, following the model of representational semantics is not comprehensive. Thus, epistemology fell short of maximal matching and lapsed into skepticism. According to Anderson "a matching M on a bipartite graph $G = (V, E)$, (where E is the set of networks (N) is maximal if no other matching on G contains more edges" (Anderson, 2001, p.664).

Epistemic matching based on a strictly objective domain is bound to be incomplete. The reason is that the realm of investigation on which the matching is done is an incomplete realm.

Knowledge is not the prerogative of the object alone. It is a fact resulting from the cooperation of both the subject and the object. To properly understand the nature of such cooperation and the contribution of the subject is to presuppose them in the epistemic analysis of claims, otherwise matching is bound to be incomplete.

A matching M on bipartite graph $G = (V, E)$ where $V = A \cup B$, is complete if for every $a \in A$, there exist $b \in B$ such that $\{a, b\} \in M$ (Anderson 664). The implication of this definition is that the above matching is a complete and maximal one. This has been the drive of the epistemological research programme in its entire history. But for granting legitimacy to the cognitive autocracy of the object, it will remain a sheer dream, unrealizable.

In its totalitarianism of the object, where knowledge is understood to proceed from the object alone, traditional epistemology condemns itself to incomplete matching and skepticism, in the face of the necessity that characterizes knowledge claim. Such a matching could be represented as in FIG. 2 below:

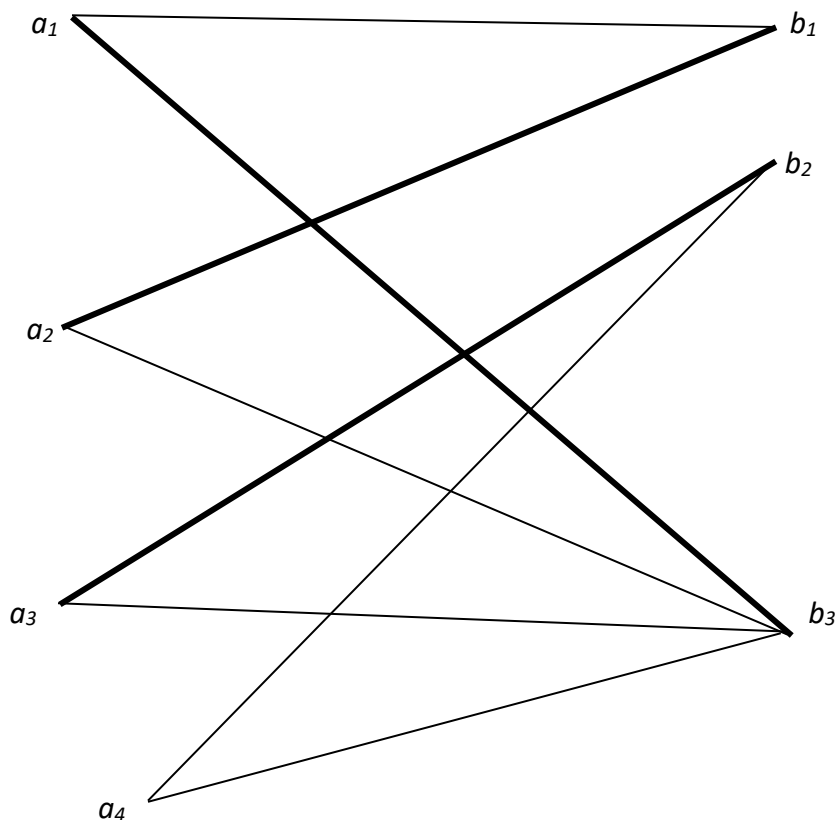


Fig. 2: Showing an incomplete matching (Anderson, 2001, p.664)

Fig. 2 below is incomplete because the edges of $\{a\}$ is greater in capacity than those of $\{b\}$. For instance, it is difficult to explain how edges of a_2 , a_3 and a_4 relate with b_3 alone. Besides, b has only three edges while a has four. It was this kind of mismatch that led to the argument that epistemology must be naturalized because the input is so meager when compared with its torrential output (Quine, 1969, p.82). If $\{b\}$ is taken to represent the object and $\{a\}$, it's linguistic output, then the consequence for matching $\{a\}$ with $\{b\}$ will be skepticism or mismatch. In traditional parlance the context lacks complete evidence for the claim.

Implications of *Token – Referent Matching Logic Model for the Epistemology of Propositions*

The first implication of the above methodological framework for the epistemology of propositions is the assumption of the validity of absolute objective standpoint as the only legitimate approach to the satisfaction of the foundations of knowledge. Absolute objective standpoint is the fallacious assumption that the foundations of knowledge could be exclusively satisfied by objects or entities external to the subject. The attendant ontological implication of the fallacy of absolute objective standpoint is the fallacy of ontological convenience. Ontological convenience is the fallacious assumption that the external objective requirements of an exclusively object-oriented epistemology could be satisfied by positing fictitious objects or external domains as referents for linguistic tokens and their underlying attitude of universality and necessity in propositions; typical examples of this epistemological approach is Platonism, referential realism of Kant's mentalism and that of logical positivism etc.

The second implication of *token-referent* matching as a logical model for the epistemology of propositions is the emergence of skepticism concerning the legitimacy of all knowledge claims. Skepticism is understood in the essay as doubt regarding the justification of knowledge claims. Skepticism is founded on the belief that knowledge claims are factually unfounded, contrary to the arguments of epistemologists. Some epistemologists argue as though skepticism is an external aggression meant to question the viability of the epistemic project. But the truth is that it is the consequence of an unsatisfactory justification framework for knowledge claim in the epistemic programme. Epistemologically, it is internal or systemic; a symptom of a defective and an unsatisfactory epistemological framework. It is a revolt against the structures of the epistemic project. The implication of this revolt is the fact that there are actually more to justification than provided by absolute objective standpoint or that an exclusive grasp of the object as foundation of knowledge is inadequate.

Elimination of Cognitive Autocracy of the Object and Skepticism

Cognitive autocracy of the object is a concept used in this essay to designate a political relationship that is promoted between the subject and the object in the epistemic research programmes. It refers to an attitude according to which the object is not only given primacy in foundational analysis but is made a sole dictator that exclusively determines and defines the internal and external architecture of what constitutes foundation. It is a form of cognitive totalitarianism of the object. But it the conviction of the essay that this attitude is epistemologically inappropriate, because it is a form of unfounded segregation against the subject.

The epistemic insufficiency of facts or the objective realm alone is also mentioned by Meeham in his *The theory And Method of Political Analysis* (1965, p.44), where he argues that "facts alone have no meaning; a point too often overlooked by those enamored with the accumulation of facts or absorbed in the 'pack rat' conception of research. A fact must be part of some relational structure before it has any meaning..." Refusal to acknowledge this relational necessity, which is not objectively given, causes confusion beside its skeptical consequences. The above position finds support in the works of David Easton, who argued that: "a major source of shortcoming in . . . science lies in the failure to clarify the true relationship between facts and . . . theory and the vital role of theory in such relationship" (Ejimofor, 1987, p.4).

The view that knowledge is the cooperation of the subject and the object is not new to philosophy. Some philosophers have even tended to champion the opposite of absolute objective stand point by arguing for absolute subjectivism. One of such extremes is gleaned in Protagoras'

absolutism of the epistemic subject (Stumpf, 1982, p.31). Kant came so close to the demonstration of the true nature of this cooperation. But the Kantian Copernican revolution was not an act of the subject, but of concepts (Stumpf, 1982, p.298). This provided grounds for the Hegelian socio-metaphysical fantasies. In the 20th century, Quine emphasized the need for the subject in the pursuit of foundations, but never actually carried out the demonstration of the foundation of science in naturalistic perspective (framework). Quine rejected the traditional epistemic framework, but he did not protect himself against its influence, and thus got infected by it. Its consequences can be located in his linguistic holism. Ontological relativity is again a manifestation of the skepticism of the object and autonomy of language.

Kant proposed an orientation and Quine a sound methodology, in order to successfully carry out epistemic investigations. In order to properly incorporate the cognitive subjective contributions into the demonstration of foundations, knowledge must be studied in knowing. It represents a form of revolution or restructuring, when viewed from the standpoint of traditional epistemology. There is, however, bound to be revolution, otherwise progress would not be possible. Consequently, revolution is necessary here. The revolution here is the provision of solution to the constant revolt of the epistemic subject, against the cognitive autocracy of the object, in traditional epistemological framework. Revolts reveal the truth, regarding the autocratic structures of the oppressor. Cognitive autocracy, like every other autocracy, ancient and modern must face revolts from the oppressed.

Revolution is everywhere, from politics to market and to religion, there is bound to be revolution. Political history is punctuated with many kinds of revolutions. The very prominent ones in western political history are the English and American revolutions of 1688 and 1776, respectively. Here in Southern Nigeria, there have been revolutions in many forms. Such include the Aba women riot of 1929 and the continuous uprising in the Niger Delta, which is a revolt against governmental and corporate organizational exploitations. Revolt are not against people or social fact; they are against structures. The 18th and 19th centuries experienced change in economic structure through the industrial revolution (Laure, 1978, p.505). Marx preached economic revolt of the proletariat. Martin Luther revolted against the church. Christianity has however named this landmark experience in human history, reformation. Anyhow, so long as it involved change of structure, it was a revolution.

Revolution is the act of the oppressed against the oppressor. It is a rejection of suspected injustice by the one that feels cheated. When understating was cheated, Nicolaus Copernicus revolted. Galileo proved him right and died for the truth. But since then, the view that the earth as the center of the universe, perpetuated by self-centered man died a natural death. Truth is the vindicator of the revolutionary. Traditional epistemology has experienced the constant revolt of the subject in its framework, because of imbalance in the demonstration of foundations. The structure of this project gives autocracy to the object and drives its activities to fallacies.

Justification, which is a central problem of the investigation, is assigned a sole objective determination. Viewed, however, from the foregone arguments, justification is a psychological state (Bonjour, 1996, p.377). As such, it is not evidence. The establishment of grounds for justification is impetus for epistemic research. Properly understood, the grounds for justification is the truth of the claim. Thus, the establishment of the truth of a knowledge claim is necessary for the foundations of knowledge. Such truth are taken within traditional context of absolute

objectivity to be either directly or indirectly a total objective business. That, however, sounds curious. But it is note-worthy, that if the idea of truth is properly understood, there is in some way a subjective contribution to its determination.

The search for the foundations of knowledge within the justified-true-belief criterion actually seeks to establish reason or grounds for the truth predicate, which in turn is the grounds for the search for justification, previously misunderstood in traditional epistemology. The search for the grounds for confidence, in the truth of a statement or judgment, is identical with the need for the determination of its truth-value. Yet such determination is difficult to attain except the standard for being true or false is known and understood. Different epistemological programmes have set different standards for the determination of the truth-value of propositions. But each standard set, faces its own skeptical challenges. Each skeptical challenge gives rise to yet new standards as refutations to the skepticism. By so doing, it has appeared in the history of traditional epistemology of propositions as though the object of epistemology is the refutation of skepticism; that would amount to a misplaced priority.

Although traditional epistemological structures do not identify with skepticism, skepticism itself is an epistemic activity operating recursively with assumptions found within the framework from which it results, to query and challenge or revolt against the framework. In traditional epistemology, it uses its internal epistemic assumptions to carry out its evaluation of demonstrated foundations and to justify its objections within the same system. So, the refutation of skepticism cannot become the object of epistemology, because skepticism is just a symptom of a faulty model for the epistemology of propositions. If the model is set right, skepticism would disappear. But it is unfortunate that traditional epistemologists think, that the only way to overcome skepticism is by refutation. Rather, it should be by the rejection of oppressive epistemic practice against the subject. When epistemic justice is done to both the subject and the object skepticism will disappear.

Conclusion

Token-referent matching logical model, which mathematically describes the framework used in the practice of epistemic analysis in traditional epistemology, is an inappropriate model for the programme. It falls short of a comprehensive approach to the enquiry concerning how knowledge in general is possible, but focuses on a programme that should properly belong to the domain of representational semantics. The consequences, as stated above, are fallacies and lastly skepticism. But it is a frontline argument of the essay that if epistemic justice is done to both the subject and the object in the project, then skepticism will disappear.

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