Proposition: The foundation of logic.

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ABSTRACT:
Proposition are the material of our reasoning. Proposition are the basic building blocks of the world/thought. Proposition have intense relation with the world. World is a series of atomic facts and these facts are valued by the proposition although sentences explain the world of reality but can't have any truth values, only proposition have truth values to describe the world in terms of assertions. Propositions are truth value bearers, the only quality of proposition is truth & falsity, that they are either true or false. Proposition mirrors the world and explains how world is arranged in an orderly manner. It scans the world(object) and are composed of atomic facts experienced and can be analyzed into propositions. Propositions are the basic units of logic. The truth (affirm) and falsity (nego) are the qualities of the propositions and universality (generality) and Particularity are the quantities of the propositions. There are propositions which are neither true nor false, they are called Pseudo-Propositions and their quality are ipso-facto i.e meaningless. Propositions are used in computers with the modifications brought by the modern logicians in the form of statements or logical sentences. The truth table of the logical gates and binary operations (1,s or 0,s are due to the revolution of the modern logic or mathematical logic. It is a fact that proposition cannot change the word but it shows the relation between the object and of the word.
Objectives: The objectives of this research is to explore the importance and need of propositions in logic. It also shows the analysis of propositions and how a philosopher thoughts in terms of propositions or concepts. In this research problem it is shown that propositions had been described in many ways by most of the philosophers and logicians from Aristotle to contemporary philosophers. It also analysis the contribution of the philosophers towards proposition and its relation to the world of reality. This research also describes the definition and nature of proposition.

INTRODUCTION :

Proposition is a logical entity and is defined as an assertion, contains Subject and predicate and a copula which either affirms or denies. Logical propositions are the atomic facts which picture the word in terms of assertions. A logical proposition explain the Atomic world. The relation between the proposition and the reality is like the Aristotle's Matter and form. Ludwig Wittgenstein States in his treatise Tractatus Logico Philosophicus that Language is the Symbolic representation of facts experienced, the facts like Objects, World, Nature, are represented in Symbolic form by Language. Propositions are the assertions which analysis Language, all propositions are further analysed into elementary prepositions like Subject, predicate and Copula. every elementary proposition Wittgenstein holds, is a picture of reality or the picture of some Atomic facts experienced. On the other hand the world is composed of facts and can be completely analysed into propositions. An Atomic fact(World) is a combination of objects. the proposition "this book is blue "can be true only if a book is expressed as blue. logical analysis of the world of experience as pictured by propositions asserting the existence of the world composite of facts (or objects related) as the ultimate constituents of the world.

KEY TERMS

Propositions, atomic propositions, truth value, pseudo – proposition , state of affairs , analytic tradition, linguistic turn.

MEANING OF PROPOSITION

A proposition asserts that something is (or is not) the case. Any proposition may be affirmed or denied. the truth (a falsity) of some propositions for example ,the proposition There is a life on some other planet in our galaxy- may not be known But that proposition ,like every proposition, must be either true or false .

Proposition thus differ from question which can be asked) and from commands (which can be given) and from exclamation, (which can be uttered) none of these can be asserted or denied truth & falsity apply always to propositions, but do not apply to questions, or commands, or exclamations. in Logic the word "statement"is sometimes used instead of proposition. For example "India won the 1983 cricket world cup'' and "the 1983 cricket world cup

was won by india "are plainly two different sentences. That make the same assertion.

1. It is raining [English]
2. Barsaat ho rahi hai [hindi]
3. Mazha peeyyunnu [Malayalam]
4. Bishti porchhe [Bengali]

Are in different languages, but they have a single meaning there is simple proposition and compound proposition while the former is defined as the proposition having only one subject & predicate and the latter is defined as a proposition having more than one or two Subjects and predicates. There are also disjunction or alternative propositions a type of compound proposition; if true at least one of the component proposition must be true. The hypothetical or conditional Proposition is a type of compound proposition; it is false only when the antecedent is true and the consequent is false.[1]

Contribution of Philosphers in description of proposition and its role.

The basic units of argument are terms and proposition. All sentence are not propositions but All propositions are sentences. According to Aristotle Philosophers contributed a lot in description of proposition and its role.

Now the *question* arises here is that what is proposition? How Proposition explains the world(reality)? what is the nature of proposition? How proposition shows the quality and relation between the proposition and of the world? Various classical philosophers from ancient Greek period up to contemporary era discussed on this issue. let us discuss the idea of these logicians as mentioned below.

ARISTOTLE

Aristotle defines proposition as such statement which affirms or denies the fact of existence or non-existence of the correspondence content denoted by the proposition. A proposition contain reference to what is believed to be an actual state of affairs either positive or negative. Aristotle describes about propositions that their truth value is inextricably bound with the nature of propositions. Thus in the case of true proposition a true affirmation corresponds to a positive state of affairs e.g. "this thing is white" and a true denial corresponds to a negative state of affairs, e.g. "this thing is not White "in each case there is an actual fact – positive or negative -which must correspond to the assertion this is significant since the correspondence is a constituent of the proposition qua Proposition. If there is no state of affairs to which an affirmation or denial can correspond, the proposition is false and its opposite is true . the important point is that it is constitive of the very nature of proposition that they either correspond or do not correspond to the asserted state of affairs. Every sentence is not a proposition, only such are proposition as have in them either truth or

falsity thus a prayer is a sentence neither true nor false. according to Aristotle proposition make a real factor in the "process" view of the world only subject-predicate form of proposition that describes the world or we can say ultimate truth.

IMMANUAL KANT

Kant as a critical philosopher and a forerunner of analytical tradition defined the term judgments, today generally referred as propositions, as a statement in which there is subject term and a predicate term and which is either true or false. Consider the following list of statements

1. The temperature of the water is 70^0f
2. The grass is green
3. All Bachelors are male.
4. All physical bodies take up space.
5. All physical bodies are heavy
6. Water freezes at 0^0c.

All these statements are of the same type in some the predicate term extends your knowledge; it adds something that is not contained already in the subject, in other statements the predicate does not add anything not already contained in the subject Kant calls the former kind of proposition synthetic , the latter analytic as Hume also noted, since the predicate of an analytic statement adds nothing new to the subject term, an analytic proposition is true by definition and if denied, leads (unlike a synthetic proposition) to a contradiction Kant make distinction again.

1. **Synthetic** : Predicate Adds something and is not contained in the subject.

2. Analytical: predicate adds nothing and is contained in the subject.[2]

Gottlob Frege

Father of analytical philosophy, German logician, professor of mathematics at Jena. He defined proposition as which contain two terms "S is P" Frege uses a unary form ascribing truth to a simple propositional content. Such a simple content or 'thought' has the form Fa, that is, it is treated by him as a Mathematical function/argument structure. Thus for instance, "Socrates is mortal" is analyzed as the function is mortal is applied to the argument Socrates.[3] it was Frege who made proposition base for the mathematical logic. He also state that proposition is a composite name. Frege had devised a "language'' a series of symbols, Frege was concerned not only with the logical foundations of arithmetic but also with the issue of how words have meanings-an issue that was central though out twentieth century philosophy.[4]

Ludwig Wittgenstein

One of founders of analytic tradition. Wittgenstein defined proposition as the pictorial representation of experienced facts. In a proposition a thought finds an expression that can be experienced by the senses and proposition does not actually contain its sense, but does not contain the possibility of expressing it (the content of a proposition means the content of a proposition a proposition that has sense). A proposition contains the form, but not the content of its sense. A proposition is not a blend of words (just as a theme in a music is not a blend of notes). A proposition is articulate. in a proposition a thought can be expressed in such a way that elements of the propositional sign correspond to the object of the thought. A proposition is a description of a state of affairs and constructs a world with the help of a logical scaffolding, so that one can actually see from the proposition how everything stands logically it is true. one can draw inference from a false proposition. According to Wittgenstein proposition can be true or false in virtue of being a picture of reality. Reality is compared with propositions. if an elementary proposition is true, the state of affairs exists; if an elementary proposition is false, the state of affairs does not exists. truth possibilities of elementary propositions are the conditions of the truth and falsity of propositions. looking at facts and things Wittgenstein comes to realize that there are not any fixed atomic and simple elements of reality corresponding to words and elementary proposition. A patch of red colour is simple as colour, but composite as having many parts . An atomic in extension but composite having many properties. Moreover, we cannot ascertain by outer introspection and observation, Whether words mean the same for all persons, e.g, whether what I experience as red or pain and call it so, is exactly what you also experience it as.[5]

Rudolf Carnap

Carnap was a mathematician. He suggests that "To analyse the statements asserted by scientists, study the kinds and relations and analyse terms as components of those statements and theories as ordered systems of those statements". The linguistic analyses of the scientific statements have been called "logic of science" by carnap. According to him only sciences can give us the knowledge about facts.[6]

More importantly Carnap in "A basic system of inductive logic" (1971a, 1980) finally recognised that attributing probabilities to sentences was too restrictive . If a conceptual system uses real numbers and real - valued functions. No language can express all possible using only sentences or classes of sentences. because of this , he now began to attribute probabilities to events or propositions (which are taken to be synonymous). This finally brought some concordance between his formal methods and those of mathematical statisticians interested in epistemological

questions. Propositions are identified with sets of models; however, the field of the sets are defined using the atomic propositions of a formalized language. Thus, though probabilities are defined as measures of sets, they still remain relativized to a particular formalized language. Because of this, and because of the languages considered remain relatively simple (mostly monadic predicate language) much of this work remains similar to the earlier attempts.[7]

BETRAND RUSSELL

Russell was one of the eminent figures in the contemporary time he argued that the basic entities of Mathematics are numbers and that the absolutely fundamental propositions are propositions of Arithmetic such as 2+2=4. Russell, hence believed that proposition about numbers are only apparently or grammatically about numbers (just as the proposition are presented was only apparently or grammatically about square circles) and that Arithmetical propositions are logically derivable from even more basic propositions.[8] Proposition is primarily a form of words which expresses what is either true or false. proposition should be limited to what may , in some sense be called symbols and further to such symbols as give expressions to truth or falsehood. A proposition is something which may be said in any language "Socrates is mortal'' and "Socrates est mortal" expresses the same proposition. A form of words which must be either true or false, I Shall call a proposition. Proposition according to Russell had been also taken to be the objects of judgement, false as well as true, Russell needed a new theory of judgement ; which facts alone could not supply . His new theory , the multiple - relation theory , was that what had previously been conceived of as the constituents of a proposition that is the object of judgement should now be conceived of as terms of a new multiple - term relation conception of judgement; that is , instead of thinking of the Moorean proposition expressed by the sentence "Tom judges that A is larger than B" as having logical form.

Judges (Tom) the proposition A is larger than B). Where this proposition is itself a complex entity somehow composed of A, B and the relation of being larger than, we are to think of the same sentence (non regarded as a proposition itself, because it is to be the primary vehicle of truth and falsehood) ad being such that if true, it would correspond to a fact of the form.

Judges (Tom , A, B, being larger than)

Where "judges" is the multiple - term relation that relates the subject of judgement (Tom) with certain objective terms (A, B, being larger than) in such a way that, together, they constitute a judgement that is true if and only if the objective terms constitute a fact ,the fact that A is larger than B. A

proposition, infact, is essentially a unity , and when analysis has destroyed the unity, no enumeration of constituents will restore the proposition.[9]

1. PROPOSITION FUNCTIONS:- A propositional function "is an expression containing one or more undetermined constituents x, y, and such that , if we settle what these are to be , the result is a proposition. Thus x is a man is a proposition function, because if you decide on a value for x, the result is a proposition- a true proposition if you define that x is to be Socrates or Plato, a false proposition if x is to be Cerberus a Pegasus. The values for which it is true constitute the class of man. Every propositional function determines a class namely the class of values of the variables for which it is true.[10]

G. E. MOORE

According to Moore, propositions are constituents of its parts that are subject, copula and predicate. The meaning of the proposition lies in its analyzed parts. G.E.Moore analyzed the propositions "Esse is Percipi" to discuss his analytic method in linguistic turn the copula of the proposition is admits at least three different meanings namely

1. Complete identify of the meaning of subjects and predicate

2. Partial identify , the connotation of the predicate being a part of that of the subject.

3. The mere inferability of the presence of the predicate from presence of the Subject (i.e. what ever has S has P also). Thus according to Moore proposition is in the form of S is P. proposition is composed not of words, nor yet of thoughts but of concepts, concepts are possible objects of thought, but this is no definition of them. It is indifferent to their nature whether any body thinks them or not. They are incapable of change and the relation into which they enter with the knowing subject implies no action or reaction (on the part of the proposition). A proposition is a synthesis of concepts, and just as concepts are themselves immutably what they are so they stand in infinite relation to one another equally immutable & proposition is constituted by any number of concepts, together with a specific relation between them and according to the nature of this relation the proposition may be either true or false what kind of relation makes a proposition true, what false, cannot be further defined but must be immediately recognized. Thus proposition analysis the sense data and makes distinction between awareness and content of awareness.[11]

Concluding remarks

A proposition is an assertion in which something is said of something. Proposition has a value in philosophy just like as time has an importance in history and numbers in mathematics. Proposition is factual, assertive, having truth values, containing subject, predicate and Copula. Proposition mirrors the world and explains how world is ordered in its symmetry. It scans the world and the world is composed of atomic facts which are experienced and analyzed into propositions. The propositions of the world can be proved to be true or false. It will be illustrated with example like "this table is hard" can be true only if we experience the table by touch and it occupies space and its contradiction is false. If a proposition "this mobile phone is black" is true only when we perceive the quality of mobile phone as black and must be perceived, its shape like mobile phone, its functions and its contains Simcard. Proposition is objective and public and pictures the world, shows the relation between the world and the thought. Only those sentences are propositions which grammar regards as assertive. Propositions are always either true or false. So, world is an atomic fact i.e made of different realities like external objects , Universals , particulars , existence etc. Thus the purpose of proposition is the clarification of the concepts.

Notes

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