

Logical Methods and Rules of Reasoning in Descartes: Antidotes to Bias in Judgement

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Abstract

Poverty of critical reasoning is one of the responsible factors for biased judgment and lots of related problems in the society. When reasoning is beclouded and hijacked by bias and prejudice then the inescapable effects include; discrimination, bigotry, chauvinism/feminism, violence, injustice, corruption in politics, religion and culture, etc. Thus, the aim of this paper is to defend methods and rules of reasoning in Descartes as necessary tools against bias in judgment. To deal decisively with this aim as stated, analytic method of research is applied to unveil Descartes's rules of reasoning and to interpret these rules as necessary conditions for unbiased judgment. This study centers on the works of Descartes to expose his stand on foundations of knowledge in the cogito ego sum, 21 rules of reasoning which are summarized as; accept nothing as true that is not self-evident, divide problems into their simplest parts, solve problems by proceeding from simple to complex (logical consistency), recheck reasoning by enumeration. From the study, it is obvious that Descartes' rules of reasoning are sufficient conditions for unbiased judgment. Therefore, the implication of this study is that a good application of these rules of reasoning in Descartes is preventive of bias in judgment.

Keywords: Descartes, Logic, Rules, bias, judgment, reasoning,

Introduction: Understanding Descartes and Foundations of Knowledge

Epistemological skepticism was very prominent in the early Greek philosophy especially about the fifth century B.C when the Eleatics questioned the reality of the

external sensible world and certainty of knowledge. The school of skepticism was championed by Socrates (470-399BC), the Sophists, Pyrrho,¹ etc as they claimed to know nothing and questioned the truth foundation of all knowledge.

The feature of skepticism gained heavier momentum in the modern time, when the French and Jesuit trained philosopher, Rene Descartes (1596) with other modern philosophers championed the course of skepticism.² Descartes occupied a center place in the modern era of philosophy.³ His training in logic, rhetoric, mathematics, astronomy, music and natural philosophy equipped him in his theory of skepticism. Doubting and questioning the existing epistemological foundations, Descartes nursed a novel ambition towards developing a new method or foundation of gaining certainty of knowledge. He doubted every knowledge from the senses making him one of the prominent rationalists of the sixteenth century.

Descartes was driven by his dissatisfaction with the state of his traditional philosophical background. According to him, 'traditional philosophy has been cultivated for many centuries by the most excellent minds and yet there is still no point in it which is not disputed and hence doubtful'.⁴ Following this dissatisfaction, Descartes regarded the traditional philosophy as a shaky foundation.⁵ Thus he exclaimed;

From my childhood I have been nourished upon letters and because I was persuaded that by their means one could acquire a clear and certain knowledge of all that is useful in

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1. W. Lawhead, *The Voyage of Discovery: A Historical Introduction to Philosophy*, (Belmont: Wadsworth, 2002), 32.
 2. Romanus Anosike, *Epistemology with Great Minds and their Theories of Knowledge* (Lagos: Asumpta Press, 2007), 60-64
 3. J. Secada, *Cartesian Metaphysics: The Late Scholastic Origins of Modern Philosophy*, (Cambridge: Cambridge Uni. Press, 2000), 12.
 4. Rene Descartes, *Discourse on Method and the Meditations*, (England: Penguin Publishing Group, 1968), 81.
 5. Descartes, *Discourse on Method and the Meditations*, 81

life, I was extremely eager to learn them. But as soon as I had completed the course of study at the end of which one is normally admitted to the ranks of the learned, I completely changed my opinion. For I found myself beset by so many doubts and errors that I came to think I had gained nothing from my attempts to become educated but increasing recognition of my ignorance.⁶

The dissatisfaction with doubtful and uncertainty of knowledge led Descartes to search for certainty and the dream for universal science.⁷ He sought for a foundation for certain knowledge. Thus, he stated;

Throughout my writings I have made it clear that my method imitates that of the architect. When an architect wants to build a house which is stable on ground where there is a sandy topsoil over underlying rock, or clay, or some other firm base, he begins by digging out a set of trenches from which he removes the sand, and anything resting on or mixed in with the sand, so that he can lay his foundations on firm soil. In the same way, I began by taking everything that was doubtful and throwing it out, like sand.⁸

Premised on his skepticism and doubt, Descartes' search for an indubitable truth was founded on the “cogito ergo sum” which means, “I think therefore I am/exist”.⁹ Like Archimedes' search for immovable fulcrum to move the world from its orbits, Descartes found an immovable epistemological fulcrum upon which all knowledge is dependent. Thus, Descartes' search for an epistemological immovable fulcrum was founded upon the “cogito ergo sum”. Descartes realized

6. Descartes, *Discourse on Method and the Meditations*, 47

7. James Watling, *A Critical History of Western Philosophy*, (Cambridge: Harvard University Press, 1964), 171.

8. Descartes, *Discourse on Method and the Meditations*, 366

9. Descartes, *Discourse on Method and the Meditations*, 16

that could he doubt everything, he could not doubt the fact that he exists. Like the Archimedean principle, he could not doubt the fact that he must be in existence in order to doubt. Thus, even to doubt that he exists is already a prove to the fact that he exists in order to doubt that he exists.¹⁰

It is obvious that to doubt therefore is to think and to think is to exist. Since doubting shows that he is thinking and his thinking shows that he exists, Descartes found it impossible to doubt his own existence. For Descartes, even if he is being deceived by evil demon about the existence of the sky, air, earth, colors, shapes, sounds, mathematics, philosophy, sciences, etc; the same demon cannot deceive him about his own existence. This shows that the “cogito ergo sum” made a tremendous wave solving Descartes' absolute skepticism. Thus the “cogito ergo sum” becomes the foundation for attaining certainty of the knowledge of other realities such as God, nature, persons, argumentation, nature, mathematics, etc. The assurance of the “cogito ergo sum” becomes for Descartes, the first absolute, certain and indubitable truth.

Scientific Methods and Rules of Reasoning in Descartes

In his *Meditation on the First Philosophy*, Descartes confessed his epistemological overture. According to him, “some years ago, I was struck by the number of falsehoods that I had accepted as true in my childhood”¹¹. Thus he continued, “I realized that it was necessary once in the course of my life to demolish everything completely and start again right from the foundations”¹². This concern formed foundation to Descartes' epistemological quest for total epistemological reconstruction. In his foundationalism, Descartes aimed at organizing knowledge in a manner of a well-structured architectural edifice anchored on a firm foundation and superstructure of support beams.

10. Lawhead, *The Voyage of Discovery*, 233.

11. Descartes, *Discourse on Method and the Meditations*, 13

12. Descartes, *Discourse on Method and the Meditations*, 13

Having developed a basic foundation and certain knowledge in the 'cogito ergo sum', Descartes shows a model upon which all other truths must qualify before acceptance. That is the model of skepticism till there is no possibility of doubt. He demonstrates this with a metaphor. According to him, suppose we have a basket of apples and suspect that some are rotten. If we start removing the bad ones that happen to catch our eyes, we may risk missing some and they may infect the rest. Thus, the safest approach is to empty the basket completely, then examine the apples carefully one by one and return only the good ones to the basket.

These metaphoric rotten apples are false beliefs and the good apples are true beliefs. The basket for separation is the mind and the selection or separation of good from bad is achieved through methodic doubt. Having established the foundation and fundamental principle upon which all other realities are to be proven in his 'cogito ergo sum', Descartes took a step further to develop a scientific procedure for systematic thought. This critical procedure for systematic thought is analogical to the metaphor of the apples where the mind has the task of separating the good from the bad apples.

In his works, *Rules for the Direction of the Mind* and the *Discourse on Method*, Descartes developed rules and conditions for rational thinking. In *Discourse on Method*, he resolved his total skepticism in the 'cogito ergo sum' while in the *Rules for the Direction of the Mind*, he mapped out logical rules of sound reasoning to defeat falsehood. The *Rules for the Direction of the Mind*, was written in 1628 but was published posthumously in 1701. The rules were originally intended to contain three parts of twelve rules each but Descartes only stopped at the second part and rule 21 before his death. These rules can be summarized as;

1. Accept nothing as true that is not self-evident
2. Divide problems into their simplest parts
3. Solve problems by proceeding from simple to complex (logical consistency)
4. Recheck reasoning by enumeration.¹³

¹³. Alan Camina, Barry Lewis, *An Introduction to Enumeration*, (London: Springer Publishers, 20120), 41.

In order to build methodically a coherent system of inquiry, thought patterns ought to obey these rules as necessary conditions for formidable thought system. Thus, accept nothing as true that is not self-evident is actually the anchor of Descartes scientific method and the basics of all other rules. Thus, has established the only certain knowledge in 'cogito ergo sum' such that all other assumptions must be put through scientific rules and then tested to be true or false.

In number six of *Rules for the Direction of the Mind*, Descartes describes simplification as the first rule of reasoning. Simplification means the dismembering or breaking down of complex sets of truth to their smallest units. Besides breaking down of complex truths to simpler units, simplification includes setting truths according to their simpler units in orderly manner to attend to what is simple in each series of things.¹⁴ Furthermore, simplification can be seen as the ability to reduce complex and obscure propositions to simpler units procedurally step by step. Thus, Descartes argues that nothing which is not self-evident is to be accepted as true rather be subjected to doubt first and simplification.

Number thirteen of the *Rules for the Direction of the Mind*, Descartes argues that truth claims ought to be divided or simplified into their various classes and common characteristics for proper assessment. For Descartes, truths of common parts or characteristics ought to be identified as similar families. Upon identification of such common characteristics comes analysis of truth. Thus, the ability to understand truth claims implies the ability to abstract truth, separate every superfluous conception and identify its class placement.

Logical consistency is derived from the basic rules of logic which is concerned about the rules of correct reasoning and sound argumentation. In rule seven of the *Rules for the Direction of the Mind*, Descartes described logical consistency as a necessary condition to attain certainty and clarity of truth claims. Thus, logical consistency relates to uninterrupted and well-ordered sweep of thought. In his

^{14.} Descartes, *Discourse on Method and the Meditations*, 21

words, he stated, “if we wish our science to be complete, those matters which promote the end we have in view must, one and all, be scrutinized by a movement of thought which is continuous and nowhere interrupted”.¹⁵ It is interested in the quality of an argument or set of statements being free from international contradictions or logical errors.¹⁶ In other words, an argument or set of statements is logically consistent if all of its parts fit together without any conflicts or contradictions.

Descartes argues that propositions ought to emerge from step-by-step order and sound argumentation. Thus, proposition must follow already established principles, hence 'if after intuiting a number of simple propositions, we deduce something else from them, it is useful to run through them in a useful and uninterrupted train of thought, to reflect on their relations to one another, and to form a distinct and as far as possible, simultaneous conception of several of them in this way, hence our knowledge becomes more certain.¹⁷

Understanding the Concept of Prejudice/ Bias

Prejudice implies unfavorable opinion or feeling formed before right judgment, knowledge, thought or reason. Also, prejudice can be seen as non-logical but preconceived opinions, feelings or attitudes against an individual or groups' backgrounds such as; ethnic, racial, social, religious, cultural, political backgrounds, etc. Thus, one has prejudice when one is inextricably attached to opinions, assumptions or judgments against others based on any other factor than pure reason.

Prejudice or bias is a result of individual's expressions, mentality, assumptions, attitudes with reference to a particular social group which according to McLeod, is

15. Descartes, *Discourse on Method and the Meditations*, 27

16. W. V. Quine, *Philosophy of Logic*, 2nd edition (Cambridge: Harvard University Press, 1986), 65.

17. Quine, *Philosophy of Logic*, 28

in most cases unjustified or incorrect.¹⁸ The society today has developed vary many parallel terms to describe the manifestations of prejudice. These include; sexism, feminism, chauvinism, fanaticism, socialism, nepotism, cronyism, etc. For instance, one whose relationship with others is premised upon the bias of gender can be said to be a feminist or chauvinist for female and male respectively. One whose decisions/judgment or relationship; acceptance or rejection of another is premised on the other's race or tribe is referred as a racist. One whose lifestyle, mannerism, relationship is determined by religious affiliations is said to be a religious fanatic.

It is obvious that people and events are to us what we think they are regardless of whether our conceptions are factual or erroneous. Little wonder Chimamanda Adichie in her masterpiece *Danger of a Single Story* said, 'tell a story of a people over and over, again and again, that is what they become to the hearer'. Prejudice in most cases sparks off a wave of destructive discrimination in human affairs. However, both are not the same. Prejudice includes affective, behavior, and cognitive attitudes while discrimination involves only behavior such that a prejudiced person may not act on their attitude. Someone may be prejudiced about a certain group or individuals but not discriminate against them. Therefore, discrimination can be said to mean a behavior or action, usually negative towards an individual or group of people, especially on the basis of sex, race, social class, etc.¹⁹ _

No doubt, prejudice induces discrimination and has led to lots of terrible actions in the world such as; genocide, slavery, discriminatory immigration laws, disenfranchisement, and legislative discrimination (such as Apartheid), social exclusion (schools, hospitals and commercial buses), European inversion of independent states into colonization, etc. A master example of this situation is the Hitler anti-semitic prejudice towards the Jews as inferior race who, for him are at the same pedestal with animals leading him to conduct a horrible genocide of about six

18. S. McLeod, "Prejudice and Discrimination in Psychology" *Simple Psychology*, <https://www.simplypsychology.org/prejudice.html> Accessed on May 30, 2023.

19. McLeod, "Prejudice and Discrimination in Psychology".

million Jews.

A contemporary of Descartes, Francis Bacon took up the discussion on bias which he referred as the idols of the mind. In his *Novum Organum*, Francis declared his plan for 'Great Renewal'. This renewal is his scientific target to review all sciences and eschew/purge ourselves and intellects of all bias or idols. These idols include; tribe (*idola tribus*), cave (*idola specus*), market place (*idola fori*) and theater (*idola theatri*). By idol of the tribe, Bacon referred to the bias we acquire from our race and backgrounds. Idol of cave refers to the bias we acquire following our peculiar individual's personal experience of life. Idol of the market place refers to the bias acquired by common sayings and misuse of language in a given environment. Idol of the theatre refers to the bias we acquire from philosophical dogmas we gain.

Prejudice/bias poses a great challenge to the world of logic leading to very many fallacies such as; overgeneralization, *ad populum*, red herring, straw man, *non sequitor*, *ignoratio elenchi*, etc. These and many more fallacies are caused by drawing conclusion from poor judgment of facts and preconceived assumptions already established.

Methods and Rules of Reasoning in Descartes as Tools against Prejudice/ Bias.

It has been a question of high debate whether one can really think, act or make a judgment without bias or prejudice. Little wonder it is a common saying that, 'nobody speaks from nowhere (bias)', hence man has propensity to bias and prejudice. This shows that even prejudice is already an act of judgment such that the judgment made from bias or prejudice cannot be said to be completely unreasonable judgment. Thus, it is obvious that we are always bedeviled by bias in our judgment or decisions about people, places and events. This situation raises higher questions of quality of judgment applied in decision making which informs our attitudes, reactions, relationship, etc. It is upon this quality of judgment that this paper appeals to Descartes' rules of reasoning as models of reasonable judgment to

suppress the degree of bias and prejudice in judgments.

In rule four, Descartes states that there is always need for a method in defending truth claims. In *Rules for the Direction of the Mind*, Descartes defends the rule of simplification thus;

in order to distinguish the simplest things from those that are complicated and to set them out in an orderly manner, we should attend to what is simple in each series of things in which we have directly deduced some truths from others, and should observe how all the rest are more or less, equally removed from the simples.²⁰

Thus, simplification activates decomposition of complex, complicated or ambiguous facts/knowledge to their simplest units. It situates meaning appropriately and individually from their attached contexts, multiple interpretations, ambiguity, etc. This method makes meaning clearer and shared because complex facts create misunderstanding and knowledge gap in communication.

Bias has been defined as non-logical but preconceived opinions, feelings or attitudes against an individual or groups' backgrounds such as; ethnic, racial, social, religious, cultural, political, etc. One is said to have bias/prejudice when one is attached to opinions and assumptions that are informed by fallacious overgeneralization or *ad populum* arguments. Thus, issues of racial discrimination is an instance of the fallacy of overgeneralization or *argumentum ad populum*. For instance, for the reason that people see many extremist Muslims in some countries could make one assume that all Muslims are extremists and fanatics. Thus, this form of assumption can begin already to affect one's relationship with Muslim neighbors. By simplification, it is important that one separates an individual Muslim from the prejudice of extremism until the individual proves otherwise.

²⁰. Descartes, *Discourse on Method and the Meditations*, 21.

Another masterpiece example of the application of simplification in reasoning is Martin Luther King Jr's speech on "I have a dream" delivered in 1963 in Washington. He said, "I have a dream that one day, my children will not be judged by the color of their skin but by the content of their character"²¹. This speech is an appeal to judgment by an individual worth not tied to the prejudice of color or race. Thus, an individual ought not to be judged from the bias of color or race but by the content and abilities of different individuals. Thus, by simplification, errors, misunderstandings and inconsistencies are highly minimized. By simplification, trust and confidence can be strengthened. This is possible because when complex wholes are broken into pieces, there is better understanding and learning confidence increases while prejudice is confronted.

Classification in Descartes is a process of organizing and categorizing information for better understanding. Thus, classification brings order the chaotic content of complex information and experience in order to allow us make sense of our surroundings and draw meaningful conclusions. By classification, information are organized and categorized following their identified similarities and differences in objects, concepts and relationships. It aids adequate judgment as concepts are clarified and associated with proper theories. Thus, classification dismisses poor judgment and prejudice.

In rule seven of the *Rules for the Direction of the Mind*, Descartes declared that 'in order to make our knowledge complete, every single thing relating to our undertaking must be surveyed in a continuous and wholly uninterrupted sweep of thought, and be included in a sufficient and well-ordered manner'²². By this claim, it

21. Martin Luther King Jr, "I Have a Dream", An Address Presented against Black Discrimination presented in Lincoln Washington, August 28, 1963. <https://www.npr.org/2010/01/18/122701268/i-have-a-dream-speech-in-its-entirety> accessed on May 31, 2023.

22. Descartes, *Discourse on Method and the Meditations*, 25

is obvious that a chain of logical deductions that are internally consistent is a necessity in building up truths and dismantling prejudice. For instance, on gender discrimination, the fact that one is a female does not qualify for her subjugation and alienation as it is in some cultures especially in Africa and Asia such as; denial of fundamental rights, political positions, social interactions, family rights, etc.

There is no logical consistency relating the ontology of women with such denigrations. Good enough, so many women have developed themselves even to do better than men counterparts in various professions. If logical consistency refers to the quality of an argument or set of statements being free of internal contradictions or logical errors²³, then the denigration of women or racial discrimination will mean exclusion exercise against the victims (women) from the class of humans. This form of logical inconsistency can be compared to the following phrase; “*All dogs are mammals*” “*Some dogs are not mammals*”. This form of statement is fallacious because the conclusion denies the premise already established.

The acceptance of bias is already a contradiction to the first scientific method and foundation of Descartes. Thus, Descartes claimed that we accept nothing as true that is not self-evident. This is because the only certain knowledge is the 'cogito ergo sum', hence all other assumptions must be put through scientific test. It becomes a contradiction admitting bias of any sort; tribe, cave, marketplace, theatre without subjecting the content of bias to the rules of reasoning to test its validity. This test would involve the application of Descartes' rules of reasoning in order to simplify, assess, classify and evaluate our bias. At successful completion of this process, our judgment becomes a product of reason than a product of bias.

Conclusion

The primary aim of this study as declared from the beginning is an attempt to defend methods and rules of reasoning in Descartes as necessary tools against bias in judgment. It is obvious that poor or unskilled reasoning is responsible for bias in

²³. Quine, *Philosophy of Logic*, 65.

judgment leading to fallacies, hitches in relationships discrimination, bigotry, chauvinism/feminism, violence, injustice, genocide, corruption in politics, religion and culture, etc. This aim has been adequately attended to by the exposition of Descartes' methods and rules of reasoning, challenges of bias/prejudice in human society and from the perspectives of Francis Bacon. Most importantly, this study used analytic method to show how these rules of reasoning can be applied to dismantle the odds of bias.

Following Descartes' dissatisfaction with traditional philosophy and disappointed that all his learnings still left him with doubts, he sought and found a new foundation upon which there is no doubt- 'cogito ergo sum'. Building upon this new foundation, Descartes developed the rules of reasoning upon which a critical application of these rules leads to certain knowledge that is indubitable. This study shows that a careful application of these rules of reasoning saves one from baseless assumptions and leads to clarity of thought, hence making our judgments become a product of reason than a product of bias. Therefore, the application of these logical rules of reasoning are sufficient conditions against bias in judgment.

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