

# The Philosophy of Reason

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## Chapter 1

# The Origins of Reasoning

The history of human logical thinking can be observed to go as far back as human history itself, through various means of empirical study we find that humans would reason in one form or another. Through archaeological means we have the study of “Rock Art”; man-made markings, either scratched, carved or imprinted otherwise, found on natural surfaces within caves, rock shelters, and regions that can only be assumed to have been ancient abodes.

## Chapter 2

# Axioms of Reason

In the endeavour to discover a philosophy of conscious reasoning, it is essential to define the axioms of reason, invariably looking at consciousness itself, so whilst in this publication we may study the philosophy of reason, it is inevitable that we delve into a study of the psychology of consciousness to bring about a formulation of our final theory, albeit to the most minimal extent.

The psychological study of consciousness has been examined at length by men of better understanding of it than myself, and I would refer my readers to the studies of those such as Carl Gustav Jung<sup>1</sup> or Friedrich Wilhelm Nietzsche<sup>2</sup>, without whom this study would most likely have never existed.

It is ironic that for the study of reasoning we must first develop axiomatic foundations, for what are axioms other than a well-established basis of reasoning from which reason follows; that is to say we will reason that all reason comes from that basis of the following postulates of reason, quite a mouthful.

Here we will propose each postulate and formalize a study of them later:

**Postulate 1** *Reasoning is invariant of language*

**Postulate 2** *The limits of reason arise from a lack of reasoning*

**Postulate 3** *Paradoxes of reason are reasonable*

**Postulate 4** *Reasons are not global truths*

The axioms of reason are proposed without hitherto any necessity of explanation and will be accepted as they are, to formulate our theory.

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<sup>1</sup>Jung, *Modern man in search of a soul*.

<sup>2</sup>Nietzsche, *Beyond good and evil*.

## Chapter 3

# Consciousness and Reasoning

Descartes in his meditations<sup>1</sup> is perhaps the first, as far as I am aware, to approach consciousness from an axiomatic basis, his philosophy formalises on the basic statement of “*Cogito, Ergo Sum*”<sup>2</sup> implying the human conscious, in the least if not the being, is merely a collection of thoughts, but what are thoughts if not what we are arguing for in this publication as the reasonings and logic of our cognitive functions.

Whilst many would argue his philosophy is flawed<sup>3</sup>, that in later chapters he proceeds to make assumptions, rather than going through the rigor of developing that foundation for all concepts he proposes, as he did for the philosophy to begin with, it is nevertheless well established that our understanding of consciousness and reasoning, as well as that of modern philosophy has been bought about from the development of his initial work.

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<sup>1</sup>Descartes, *Meditations on first philosophy: with selections from the Objections and Replies*.

<sup>2</sup>Loosely translated: “I think, therefore I am”

<sup>3</sup>A great summary of some retorts can be found in Chapter 1 of Gottlieb, *The dream of enlightenment: the rise of modern philosophy*.

## Chapter 4

# Invariance of Reasoning

In our theory, it is formally accepted as the first postulate that reasoning is invariant, but this brings with it the question, “What is meant when we say that reasoning is invariant of language?”

In the most simple form we argue that reasoning of all kind, whether it be cognitive, verbal, illustrative, written or otherwise, is fundamentally the same, and that they rather take different forms, the subjective perspective of which can be different from one individual to the next, but the underlying mechanisms are all the same.

We shall begin with asking ourselves a simple question, “Where are we?”, my senses would reason that I am in a room, my cognition would reason I am at home, an illustrative map showing my current geolocation via GPS would show my precise address relative to the frame of reference in which its developed, diving deeper I could reason that I am on earth, in the solar system, in the milky way galaxy, within the Orion-Cygnus Arm, in the universe and so forth and so forth.

The language in which all these forms of reasoning exhibit themselves may vary but in essence they portray the same information, whether precisely or ambiguously, does not matter; we leave that study for the scientist and mathematician to figure out, what’s important is regardless of the form of language chosen, the reasoning is the same.

This is a rather difficult supposition to accept, as it implies that whatever I am saying in answering the question, I am necessarily saying the same thing, but how can that possibly be, how can a precise latitude and longitude be equivalent to the vague response of “home”, and the answer is, geographically, mathematically they may not be, but from the perspective of a topological understanding of language it is.

Take for example a map of Paris Metro or London Underground, when it is asked for how we get from point A to point B, assuming A and B exist as locations on our map, we can necessarily formulate a route of travel getting us from our origin through multiple intersections to our destination, all appearing on a straight line, yet if we plot the same route on a top down map or atlas they would appear to be completely different routes, twisting and turning, not at all straight.

It is of course known that the first map is what is mathematically called a topological map, where the presented distances do not represent true distances from the real world, but the two different forms of information, or reasoning, presented of routes from origin to destination, necessarily portray the same. This is what is meant by the invariance of reasoning, and what is postulated by our first axiom, the maps “speak” different languages, but reason the same information.

## Chapter 5

# Logical Methods of Reasoning

In this chapter we shall discuss the different methods of reasoning as depicted and defined by our contemporaries, we shall try to understand them and see of which we understand intuitively and which we do not.

### 5.1 Deductive Reasoning

The most commonplace of reasoning; next to inductive reasoning, that can be found, from my observation and experience, is deductive reasoning, this type of reasoning appears in almost every conversation, debate, or discussion. It is so familiar that a child appears to exhibit this cognitive ability naturally, as so when one were to place their hand on a candle and feel pain from the burning sensation, they would naturally keep a distance as aware that the candle caused the pain.

In such, deductive reasoning from the above example, from the perspective of the child, can be broken down:

- i I placed my hand above the lit candle
- ii I felt a burning sensation or pain
- iii Therefore, placing my hand on a lit candle will cause me pain

And thus, following this form of reasoning a child does not place their hand atop a lit candle, the underlying biological and physical mechanism may be unknown, but the reasoning followed through a deductive process, brings about a logical understanding. Some children even showing the astute ability to extend this deductive reasoning, understanding the pain was caused by the flame, and thus assumes any source of fire or extreme heat will also cause the same pain.



More formally written, the logical reasoning draws a syllogistic conclusion through deduction such that (as described by Aristotle):

- i All men are mortal
- ii Socrates is a man
- iii Therefore, Socrates is mortal

## **5.2 Inductive Reasoning**

## **5.3 Analogical Reasoning**

## **5.4 Abductive Reasoning**

## **5.5 Fallacious Reasoning**

## Chapter 6

# Reasoning vs Logic

## Chapter 7

# Time and Causality

This undertaking will not discuss the current understandings of time and events from a scientific perspective; the work of Roger Penrose in *Cycles of Time*<sup>1</sup> would suffice as a basic introduction to the scientific concepts, whilst for those seeking a more rigorous understanding, I would recommend the works of Albert Einstein on his theories of relativity<sup>2</sup>, both General and Special cases, and the studies on thermodynamics, entropy and the arrow of time by Stephen Hawking<sup>3</sup>.

We shall begin by looking at the intuitive and implicit understanding, and thus the logical reasoning and conclusions, we as humans draw on the concepts of time, events, connectedness of events and causality. Consequence of action is the first form of causal reasoning we are taught, in the form of parental disciplining, but I would argue that it is inherent, for a child that was not “disciplined” would still reason causally of action to consequence.

If I knock this table, the vase atop it will topple, fall, and break, and thus we causally link and reason the knocking with the consequential action of the vase breaking. Although we do possess a rigorous mechanical understanding of such events, such as the table supports the vase, if a force is exerted upon the table, and the table is moved, this force translates to the vase, the vase preceding in a stable equilibrium position proceeds to tilt due to this jolt, if the force was large enough this moves the centre of mass and its subsequent line of action out of its supportive base, and the object, the vase, then seeks a new state of equilibrium causing it to topple, and consequentially break when hitting the surface of the floor.

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<sup>1</sup>Penrose, *Cycles of Time: an extraordinary new view of the universe*.

<sup>2</sup>Einstein, *Relativity: the special and general theory*.

<sup>3</sup>Hawking, *A brief history of time: from the big bang to black holes*.

It must be noted that regardless of the rigorous mathematical and mechanical models, it can be said that all humans possess the ability to reason thus, regardless of the knowledge of these models, if they are only willing to do so. It can also further be argued that the mechanical and mathematical models are born from that reasoning, and the desire to understand our world with objectivity. And although any human is capable of reasoning in the same manner, for the notion of causality, or otherwise, it can hence be shown that the limit of reasoning is attributed only by as much as the lack of knowledge that said being possesses<sup>4</sup>. Therefore, from reasoning is born knowledge, and with knowledge our reasoning becomes deeper and more intricate; reasoning is thus self-perpetuating in its understanding and growth.

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<sup>4</sup>Postulate 2 as defined in chapter 2

## Chapter 8

# Actionable Reasoning

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