Report #2 – Naming and Necessity

CMSC 828D – Human Level AI and Computational Cognitive Neuroscience

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Saul Aaron Kripke is a philosopher and logician who have made significant contributions to language study, mathematical logic, metaphysics, set theory and other areas. He is a center philosophy figure who has restructured the philosophy of language; his theories were considered groundbreaking back then in 20th century and are still highly influential today. Interestingly, much of Kripke’s work is not published, parts of them still exist as somewhat informal manuscripts, for example, his most famous book, *Naming and Necessity*, is largely a direct transcription of his three lectures. [6, 8]

In 1970, a 29-year-old young man, without bringing any lecture notes, went to Princeton University and showed several exciting discoveries. In his lectures, he discussed his findings on naming, epistemology, intensionality, metaphysics, philosophy of mind and others. *Naming and Necessity* reveals the informal style of these lectures: friendly, casual and engaging, although in some places a little vague to understand. This book is one of the most important philosophical works of 20th century. [4,6] Several interesting discoveries that Kripke revealed in this book are shown below.

A. Kripke’s View of Names

Kripke refutes descriptivist theories about the meaning and reference of proper names, and develops a new account in their place. His theories are very different from those popular descriptivist theories [2], which are developed by several famous philosophers, including Frege, Russell, Ludwig Wittgenstein and John Searle. And as Kripke recalled, his first lecture had several hundred of students attending, while his second and last lectures only had around twenty students, this fact could on one side show that his new idea may not be very highly preferred, at least on its very first appearance.

According to the traditional descriptivist theories, proper names have one of two following explanations (in the name of descriptivism) [3]:

1) *They are simply synonymous with descriptions*, for example, according to Frege-Russell, the sense of a term is equal to the term’s meaning, which then shows how its reference is determined. Or,

2) *They have their reference determined by virtue of the name's being associated with a description or cluster of descriptions (Cluster’s theory by Searle) that an object uniquely satisfies*. For example, a proper name *a* is associated with a cluster of properties, *F1, F2, …, Fn*, and the reference of *a* is fixed as whatever object satisfies most of *F1x, F2x, …, Fnx*.

Kripke argues against both kinds of descriptivism and meaning-giving versions as shown above. In addition, he proposed that ordinary proper names are rigid designator. The distinction between rigid designators and descriptions according to Kripke is that, rigid designators refer to their objects without any epistemic mediation, without relying on any meanings. Such distinction Kripke shows between the meaning-giving and reference-fixing is important. [1,4,5]

To show why a name is a rigid designator several examples are presented below, a simple test is
whether we can ask a could have been a different individual than a actually is. If the answer is ‘yes’ then a is not a rigid designator; if the answer is ‘no’ then it is. [1,2,9]

1) ‘Nixon’ refers to the same person in every possible world in which Nixon exists. In certain possible world, ‘Nixon’ might not be the president of US, in others ‘Nixon’ could be the president. But the exact individual is still called ‘Nixon’ and we could still identify a particular person.

2) If ‘Hitler’ had been accepted in Art school then he might not be needed to be responsible for genocide, we would know him to be, possibly, an artist. But he will still be ‘Hitler’.

3) ‘The person who won the United States presidential election of 1968’ could refer to Nixon, or Humphrey in different possible worlds, so someone other than the actual winner of the election could have won the 1970 election, thus this example is not rigid.

Descriptions or other names/references are used to point out something or someone in the above cases. Once such referent is fixed, the essence of those names/designator takes control of the thing, then descriptions become not useful, otherwise based on different descriptions we could have different objects. Kripke argues that the rigid designator fixedly refers to one single thing and this remains the same in every possible world, no matter what language, culture or convention we have. This view on naming is different from what Frege-Russell proposed, and is highly interesting.

B. Kripke’s Revision on Relationships of Concepts

There are three pairs of concepts, which form a system of classification and play important roles in the area of philosophical theorizing. They are ‘a priori’ and ‘a posteriori’, ‘necessity’ and ‘contingency’, ‘analytic’ and ‘synthetic’. [1]

Those pairs of concepts are considered to be closely related and sometimes they are even treated as equivalent things, for example, relations between ‘a priori’ and ‘necessary’, or between ‘a posteriori’ and ‘contingent’. However, Kripke’s Naming and Necessity shows its revision of those previous assumptions. According to Kripke these definitions are not equivalent, and such distinctions can be shown below,

a. On the ways of acquiring knowledge, a priori means a statement is a priori if and only if it can be known independently of any experience. On the other hand, when a fact can only be established by empirical investigations [1,7], then it is known a posteriori. This is an epistemological distinction. For example,

1) \(1+2=3\), this fact is known a priori because once we have understood several arithmetical concepts, such as addition and equality, then we can know this statement by pure reflection, without doing any empirical investigations or gathering evidences to see whether this calculation is correct or not.

2) ‘Not all tablets are black’, for this statement we need to do empirical investigations to determine its value, and we need to go out collecting evidences. Thus, this is known a posteriori.

b. On the ways of how the truth-values are determined, we have analytic statement and synthetic statement. We can view them to contain two components, a linguistic component and a factual
component. Analytic statements are statements in which the factual component does not exist, and its truth value only depend on the linguistic meanings of the statement. Synthetic statements combine both components together. This is a logical/semantical distinction. For example,

1) ‘All iPhones are white’, whether this statement is true or not depends upon what the real situation is, we need both the linguistic component and the factual component. Therefore, such statements are known as synthetic statements.

2) ‘All doctors are unmarried men’, this is analytic because once we know its linguistic meaning we know in advance what its truth value is without searching out for more evidences.

c. About necessity and contingency, there is a metaphysical distinction. Something is contingently true if it is true but could have been false. ‘Necessary’ according to Kripke, means truth in every possible world.

Kripke also distinguishes necessity from a priori, he provides examples to show that certain statements are a priori but contingent, and others are necessary but a posteriori.[1] For example,

1) Some necessary truths are only discoverable a posteriori: \( \text{Water is } H_2O \). Only by using empirical evidences, we can discover the above statement is true because no a priori cognition can help us know this fact. On the other hand, this is a necessary fact too.

2) Contingent and a priori: \( \text{Stick } S \text{ is one meter long at time } t_0 \). This statement is contingent metaphysically because the stick’s length might have been different at \( t_0 \). Epistemologically, it is an a priori truth. According to Kripke, fixing the reference of a term is not always the same as giving its meaning, so the ‘one meter’ here is simply fixed as the length of a certain stick. Anyone who says this sentence could already know what a meter is. So we can’t claim that we have learned via empirical investigation that the stick is one meter long, thus it is a priori.

Bibliography

2. 2000, Kripke and Rigid Designators: A Descriptivist in Disguise, Wesley Hansen.