PSYCHOLOGISM, NECESSITY AND INDIAN LOGIC

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It is indeed a matter of great pleasure that Department of Philosophy, North Bengal University has taken up a project to honour the contribution of Professor Raghunath Ghosh. I have the privilege of getting in touch with him since the beginning of my professional career. The most striking feature of his personality that attracts me is his care and concern for the academic flourishing of his younger colleagues and scholars. Anybody who has got in touch with him must have been received with sincere warmth and hospitality. I consider myself fortunate to have the opportunity of receiving Professor Ghosh's care and friendly help. Although the main research area of Professor Ghosh happens to be Nyaya and Buddhism in classical Indian Philosophy, he is equally competent in many other systems of Indian philosophy. He is a prolific writer and his contribution spans over many areas related to philosophy like Aesthetics, Feminism etc. This only shows the intellectual vigour with which the beautiful mind of Professor Ghosh engages itself in the intellectual pursuit. The way Professor Ghosh has given the leadership to the ongoing UGC SAP Programme in Philosophy at the University of North Bengal since its inception is indeed remarkable. Thanks to his stewardship the entire team of philosophers at North Bengal University has successfully turned the philosophy department of North Bengal University into a hub of academic activities. I wish him good health and sound mind so that he can continue enriching us through many more intellectual interventions and insights.

The very term 'Indian logic' is problematic. 'Logic' in the Western context stands for a theory of valid arguments. In this sense 'Indian Logic' could mean Indian theory of inference (*anumāna*). '*Anumāna*', the Sanskrit word for inference, etymologically means some knowledge that follows from some other knowledge ('*anu*' meaning follows and '*māna*' meaning knowledge). Looked at this way, a theory of inference is part of a theory of knowledge. When Frege assigns the task of discovering the laws of thought to logic, he means 1. Laws of logic are descriptive (as opposed to prescriptive) in nature and 2. Laws of logic describe not the mental processes of thinking but something Frege calls 'thought'. Frege argues in detail to show how thought is different both from mental ideas and things in the world. Thought belongs to a third realm, Frege concludes. If we look at the Indian theory of inference, we see that Indian logic is descriptive in nature, i.e. it describes the various steps involved in drawing an inference. But then what Indian logic describes is not Frgean thought that belongs to an ontological category different from mental ideas and things in the external world. Indian logic is characterised by the conspicuous absence of the notion of thought or proposition.

In order to see what Indian theory of inference describes, lets us take a closer look at the Nyāya inferential process. First a person *sees* smoke in the hill. Second, assuming the person has the prior knowledge that wherever there is smoke there is fire (this is exemplified by the presence of fire in the stove in the kitchen), she *remembers* the universal correlation. Then this memory makes her *see* the smoke *as* that with which fire is present. And this leads to the conclusion that the hill possesses fire. Notice, the description of the inferential process is given in terms of mental events like seeing, remembering etc. And these mental events occur at a particular time in a particular person. On this account, there is a chain of metal events where one is the cause of another under suitable condition. There is also a discussion of the conditions that are required to be present for the inferential process to take place. This is discussed under the title *pakṣatā*. Ignoring all the minute details for present, two variables are important for the process of inference to take place viz. 1. the presence or absence of the desire in the person to infer and 2. the presence or absence of prior certainty (about the conclusion of the inference). Of the total four possible combinations of these two conditions, only one precludes the possibility of the inferential process to take place. If there is absence of desire to infer in the person and there is prior certainty in the person about the conclusion, then the person will not infer. So the suitable condition for the inferential process to take place is the absence of the conjunction of the absence of the desire to infer and prior certainty. The point worth noticing in all these is that the whole account of inferential process is given in terms of psychological conditions of the person who is inferring. Description of the mental process involved in drawing an inference is the main aim here.

Another important feature of Indian theory of inference could be seen if one looks at the five members in a Nyaya inference. It should, however, be remembered here that if one wants to draw an inference for oneself, she does not need to go through this five membered process of inference. It is only when one wants to persuade another; the most effective strategy is to go through all these five members of an inference. These are as follows:

- The hill possesses fire.
- Because, it possesses smoke.
- Wherever there is smoke, there is fire, for example, the stove in the kitchen.
- The hill is like that (possesses smoke that is universally co-present with fire).
- Therefore, the hill is like that (possesses fire).

Using *modus ponens* of Western logic, one can get the conclusion simply from 2 and 3. But in the context of persuasion other steps are also required. 1 and 5 look same, but the first cognizer herself knows the truth of 1 of which the interlocutor is not sure. After persuasive arguments the interlocutor knows the truth of 1 and 5. So for the interlocutor 1 gets asserted in 5. Also the difference between 2 and 4 is that 4 is an application of the universal principle enunciated in 3. The fourth step claims that the hill possesses smoke not *per se*, but smoke as that with which fire is universally present. On this account, all these five steps are necessary for in this chain one cognitive step facilitates the following cognitive step.

Two points stand out in this theory of inference. First, the entire account is given in terms of mental events that take place in the mind of the interlocutor. The internal consistency of the inferential process is guided by the norms of cognitive psychology. Second, this whole inferential process is taking place against the background of a dialogical context where one person tries to convince the other of the desired conclusion. The inferential process aims at proving something to some other person. This process was often followed in the cases of disputes or debates.

From the above discussion it is quite clear that Indian theory of inference is heavily couched in psychological terms. It is also evident that the account of inference that is found in Indian philosophy is different in significant sense from that one can find in Western logic. Acknowledging this distinctive feature of Indian logic, can one label Indian Logic as psychologistic? Let me say a few words about psychologism and opposition to it in the context of Western philosophy. For the past one hundred years or so the term 'psychologism' has been used to refer to a number of philosophical follies. Accordingly, this term has gained a derogatory connotation. Many philosophers have been accused of advocating psychologism. Some of those alleged psychologistic philosophers tried to prove innocent by showing that they do not entertain psychologism in their philosophies. Nicola Abbagnano[1] tells us that the term 'psychologism' was first used to refer to a philosophical movement that was opposed to Hegelianism, according to which, the only method of philosophical inquiry is introspection and there is no way of establishing a truth other than relating

[1] *The Encyclopedia of Philosophy*, ed. Paul Edwards, Macmillan Publishing Co., New York, 1967, vol.6, p.520

it to the subjective experience of self-observation. Edmund Husserl, while explaining what the term 'psychologism' means in Brentano[2], says that it means a theory which contests the general validity of knowledge, a theory according to which beings other than man could have insights which are precisely the opposite of our own. Accordingly many philosophers think that psychologism gives a subjective, mental explanation of the nature of the concepts of truth, validity and knowledge. A look at the debate between psychologism and anti-psychologism shows that this is actually a debate about the role of subjective, introspective experience in the philosophical analysis of concepts.

Among the many important philosophers of the Western tradition who oppose psychologism Frege is perhaps the most important figure. In the introduction to his *Grundlagen*[3] Frege mentions three guiding ideas that lead him to write the book which are: 1. not to confuse logical with psychological, 2. not to lose sight of the distinction between concept and object and 3. never to ask for the meaning of a word in isolation. From Frege's writing it is possible to construct anti-psychologistic arguments with regard to logic, meaning, mathematics and epistemology. Without going into a detail analysis of all the varieties of psychologism and Frege's opposition to each of them, the main point that Frege seems to be making is that the task of logic is to discover the laws of truth and the laws of truth are not formed out of generalizations of how we come to believe a proposition. Psychological laws may accompany human reasoning, but they are not what we aim at when we discover the laws of logic, for the psychological laws are relative to our present thought scheme and subject to change, whereas logical laws are not relative to time, place or users. Psychological laws are concerned with a person's taking a proposition to be true, while logical laws are concerned with a proposition being true. When we do logic, we do not study a person's subjective history of acquisition of beliefs in certain propositions; what we do is that we discern the laws governing the relation between those propositions. So psychologism in logic simply changes the subject matter of logic. Thus for Frege, logic does not describe the mental process of reasoning and

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[2] See Franz Brentano's *Psychology from an Empirical Standpoint*, Humanities Press, New York, 1973, p.306

[3] G. Frege, *The Foundations of Arithmetic*, trans. J.L.Austin, North Western University Press, ILL., 1980, p.x

psychological laws are of no relevance to the discovery of logical laws. It is evident in Frege's thinking that Frege's opposition to psychologism leads him to a Platonic view of thought that belongs to a third world, neither mental nor material. But then, on the other hand, Frege's description of logic seems to be quite in tune with the way logic has historically developed. Is there any middle path where one is not forced to subscribe to some kind of Platonism and at the same time one does not lapse into vulgar subjectivism?

A reconstruction of Indian theory of inference a la J.N.Mohanty[4] could be of help here. In this interpretation we are talking about inference in terms of mental events, but here a mental event exemplifies a universal structure in the sense that two mental events can illustrate the same structure. When we talk of mental event or act, there is always a reference to a self where that metal act or event occurs. And of course it has a temporal reference. There is a particular point in time when that mental event/act takes place. We can also talk about the act nature and by 'act nature' I mean the act could be perception or memory etc. And last but not least there is the content of the act. This content is clearly not the object lying there outside in the world. It is best understood as the intended object of the mental act. Now the structure of the content may change according to how the external object is presented in the act. In the example '*nila ghatah'* (This is a blue jar) the primary object is jar and blue colour is the qualifier. In the example '*ghatasya nilam'* (The blue (is) of the jar) the primary object is the blue colour which is perceived as belonging to jar. The epistemic entities like qualifier, qualified etc do not belong to the objects in the world *per se*. They float in the structure of the content of the knowledge. These entities and their structures are universal in the sense that many cognitive acts or events may illustrate the same structure. In Indian theory of inference we can be said to deal with this structure of a cognitive act that is universal. On this account two cognitive acts can be said to be identical if they have the same act nature and exemplify the same content-structure. Viewed is this way, the references to the owner of the mental act and the time when the act takes place are irrelevant. Here we are giving an account of knowledge in terms of mental act but it does not land us in the realm of the subjective

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[4] J.N.Mohanty, *Reason and Tradition in Indian Thought*, Clarendon Press, Oxford, 1992, p.108

that the anti-psychologistic philosophers thought it would. Thus one can very well argue that Indian logic (Indian theory of inference) does involve the idea of the mental, but nonetheless it does not lead to psychologism in the sense in which it has been used in Western philosophy.

In the light of the above brief account of Indian theory of inference we can now look at the ideas of necessary and contingent truths in Indian logic. Usually logical truths are treated as necessary truths. They are true by virtue of their forms. They are analytic. Factual truths are contingent. They are true by virtue of what happens in the world. Setting aside the question whether this distinction between necessary and contingent truth is ultimately tenable, in the present context the more significant query concerns the presence or absence of the idea of necessity in Indian logic. If Indian theory of inference is formulated in terms of mental acts, then can we talk of logical necessity, in Western philosophical sense, playing any role in such a theory? One can talk of different kinds of necessity: 1. logical necessity, 2. essential necessity and 3. causal necessity. Logical necessity is the necessity that could be said to hold between sentence-forms. This is the kind of necessity that we find obtaining among different propositions in logic in Western philosophy. One must note however that not all necessary truths are logical ones, though certainly the reverse is true. Essential necessity is expressed in the laws that are grounded on the essences of the things concerned. If one accepts this kind of necessity, then these laws are, though necessary, not analytic. One could also talk of causal necessity where the relation holds between cause and effect.

From the above presentation of Indian theory of inference it is natural to conclude that this theory involves the idea of causal necessity. In Indian formulation of inferential process causal necessity can be said to hold between the sequences of mental episodes leading to the conclusion of the inference. In Indian formulation the structure of inference for other (*parārthānumāna*) is presented in such a manner that the cognitive episodes expressed in the corresponding sentences do exhibit a causal structure where each mental act is bound to produce the following mental act provided the required conditions are fulfilled. The important question that we face here is: Can we ascribe non-causal necessity to Indian theory of inference? One problem that arises immediately following ascription of logical necessity to Indian

theory of inference is that logical necessity is said to hold between propositions and Indian logic lacks any such concept. Instead what we find in Indian theory of inference is the division between inference for one self (*svārthānumāna*) and inference for other (*parārthānumāna*). In inference for one self, inferential process involves internal mechanism where one cognitive episode is necessarily followed by another. In the case of inference for another the external mechanism is expressed in terms of sentences or utterances of them where each of these sentences/utterances is necessarily followed by another. This leads Bimal Krishna Matilal to suggest that in the internal case "logic appears to be psychologized while in the second it is linguisticized"[5]. And he further claims that in either case causal necessity is superimposed on what is called logical necessity. Matilal's argument for ascribing logical necessity to Indian theory of inference is that when it is said that if A is a sign (*linga*) of B and if we assert A of something, we must assert B of it. Internally it is viewed as a causal sequence of mental cognitive events like seeing A in a particular case combined with another cognitive episode of remembering that A is the sign of B etc. The combination of these episodes is called *parāmarśa* and it is said that if there is *parāmarśa*, then the conclusion will necessarily follow.

This causally necessary consequence is also a logically necessary consequence, according to Matilal, for to the question what would happen if the person gets distracted or falls asleep immediately after the appearance of *parāmarśa*, the answer would be that though the concluding cognitive episode would not follow, this psychological contingency would not undermine the logical necessity of the conclusion that follows from the prior cognitive episodes. The failure of the conclusion to appear is due to some non-logical factors. Even in the external mechanism of inference when it is said that if the sign (pervaded or *vyāpya*) is there, the signified (pervader or *vyāpaka*) is necessarily there, the principle is couched in non-psychologistic terms. It is true that we identify a sign as a logical sign, i.e., sign that warrants inference through empirical method, but then a sign is thus identified only if its presence necessarily signifies the presence of the signified, thus concludes Matilal.

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[5] Bimal Krishna Matilal, *Logical and Ethical Issues of Religious Belief*, University of Calcutta, Kolkata, 1982, p.134

There could be several responses to Matilal's attempt to discover logical necessity in Indian logic. First, one could suggest that there is hardly any opposition between causal and logical necessity. In inference for one self we find causally necessary connection and in the inference for other we find logically necessary connection and these are just two sides of the same coin. Viewed in is way, the charge against psychologism gets rather weak because there remains no unbridgeable gap between the psychological and logical. One could move further and claim that the idea of logical necessity can be derived from that of psychological necessity. Psychological necessity is the fundamental one on which other kinds of necessities rest, one might go on claiming. If one makes a distinction between source and justification of necessity, one can very well claim that if we think of the source of necessity then we will fall back on psychological necessity. But if we are interested in the justification of necessity, then we can think in terms of logical necessity for it is in logic that we take up justificatory questions regarding our inferential knowledge. Matilal, seems to me, is siding with the claim that logical necessity gives rise to psychological necessity and Matilal cites evidence for this claim from Indian theory of inference especially those of Nyaya and Buddhist.

Let me toy with a rather radical idea viz., psychological necessity is all that this there. If this is acceptable, then the very motive behind Matilal's attempt to find logical necessity behind the talk of psychological necessity in Indian theory of inference might seem to be wrong headed. Let us take a close look at the use of the word 'necessarily' in our language, preferably English[6]. If people thought that almost everything that happened in the world happened by necessity or if people thought almost nothing in the world happened by necessity, then we would have very little occasion to use the word 'necessarily'. Often we use 'necessarily' to talk about future events, like 'If a polluting industry is built here, then the local inhabitants are bound to be hostile' meaning thereby that they will necessarily be hostile. We use words like 'bound to', 'surely' and 'must' as synonymous with 'necessarily'. We use these necessity idioms also to talk about the past and present, like 'As a chief minister he

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[6] For the ideas expressed in the following paragraphs I draw heavily on W.V.Quine's 'Necessary Truth' in his *The Ways of Paradox and other Essays*, Harvard University Press, Cambridge, Mass., 1976

must have enriched himself'- meaning necessarily did - 'for look at his earlier record as an M.L.A.'. Notice that we use the word 'necessarily' or its synonyms where we are less than sure of the facts. When we are sure, we just affirm without any intensive. This is indeed paradoxical. But then 'necessarily' is not always a rhetorical device to cover up our uncertainty. When somebody is told while looking for a leopard in a jungle 'Necessarily it will have spots', other than viewing it as a prediction this utterance could also be viewed as a conditional sentence of the form 'If it is a leopard, it has spots'. Here there is no rhetoric involved. All these examples show that necessity is a matter of connection between facts and it is not concerned with facts taken separately.

Now what does make connection a necessary one? To take the example of leopard, when the arrival of some leopard is announced, we expect an animal with spots. What is the connection? We have the knowledge of general truth that all leopards have spots. The only answer to the question why the newly arrived leopard should have spots is that all leopards have spots. One can take some more complicated examples, but I guess the answer would be the same. One must not interpret it claiming that a person is entitled to apply 'necessarily' as long as she thinks that there is *some* general truth that subsumes the present one. This would make it possible to use 'necessarily' to everything and the term would lose its significance. What is important is that the person has some one actual generalization in her mind that she thinks subsumes the present one and whose truth is independent of the particular case in hand. Two points stand out here. First, the adverb 'necessarily' applies not to particular events or states, rather to whole conditional connections. Second, the application of 'necessarily' requires an allusion to some generality that subsumes the present case.

One of the cases where the term 'necessity' comes under close scrutiny is the case where we explain the dispositional terms like 'soluble'. To claim of a particular lump of stuff that it is soluble is to claim more than that whenever it is in water; it dissolves, for the particular lump could never be in water. For a lump to be soluble we must be able to claim that if it *were* in water, then it would dissolve. Clearly what we need here is an 'if-then' formulation guided by necessity. With the knowledge gained from chemistry that gives us the details of the sub-microscopic structure of the

lump concerned we equate these explanatory traits with solubility. What is true of the dispositional terms like 'solubility' could very well be true of subjunctive conditionals like 'If x were treated like this, then it would do so and so'. One could always come up with a set of explanatory traits, sometimes with the help on an expert, to explain the conditional. These conditional sentences may or may not contain the adverb 'necessarily' explicitly; nonetheless the subjunctive form connotes it. The point worth noticing is that the necessity constructions rest on generality and the generality can be explained in terms of certain traits that the relevant theory can tell us.

How is one going to explain what is called 'logical' or 'mathematical necessity'? These varieties of truths are called necessary because they are true by definition. Imagine a physicist is confronted with an experimental finding that goes against her professed theory. She has to change her theory at some point to inactivate the false prediction. And the normal practice in scientific community is to modify or change the relevant concepts in such a manner that the apparently false prediction can well be accommodated within the theory. Definitions are not something sacrosanct that they can never be altered. They are also susceptible to changes like other sentences. As theoretical and experimental physics have the same content but differ in motivation and application, so also pure mathematics (dealing with logico-mathematical truths) and physics differ only in motivation, but not in their content. If this is true, then logical necessity is stripped of its privileged status and the only necessity that one can talk about is the necessity resting on generalization which in its turn is explicable in terms of empirical traits. So the real burden that the idea of necessity is to bear is shouldered by empirical necessity. Empirical necessity is all that we need in order to have science including Indian theory of inference. When this empirical necessity gets floated in knowledge, what we get is necessity among the different cognitive episodes. And this is precisely what we have in Indian formulation of inferential knowledge. Let us not split our hair in trying to find out the idea of logical necessity in Indian Logic.