CHAPTER II

FROM REFERENCE TO REALISM

2.0 Introduction

The central argument of this thesis seeks to establish that reference remains central throughout Putnam’s entire philosophical writings. In this direction, our previous chapter delineates the semantic centrality of reference as derived from Putnam’s direct or new theory of reference which is proposed in the first phase of his writings. The present chapter concerns itself with the second phase of Putnam’s writings. This phase, as mentioned in the introduction of this thesis, is marked by a change of focus. Instead of adopting a direct approach to reference as exemplified in the first phase, Putnam in his second phase adopts an indirect approach to reference. Realism, as would be evident from the title of this chapter, comes to the forefront at this stage of Putnam’s writings. Reference is considered here through its contribution to the empirical hypothesis of realism. The centrality of reference is likewise explained here in terms of its contributive function; that is to say, from its interplay with realism or with realist hypothesis.

This distinction between realism and realist hypothesis is crucial as the former functions as a metaphysical notion whereas the latter has an empirical nature.
It is in the light of this feature of Putnam's writings the interplay between realism and reference that this chapter assumes relevance for the entire thesis. This interplay which remains dormant in his first phase, is explicitly worked out in this second phase. The force of this interplay and especially the dependence of the nature of such interplay on the concept of reference are fully explicated in the internal realism of Putnam's final phase. This chapter, thus provides the link; it takes the reference of first phase to the final stage of internal realism. This chapter, therefore, devotes itself to a critical discussion of the precise nature of this realist hypothesis and its relation to reference and truth.

To delineate the nature of this realism of Putnam and its complex relation to the notions of reference and truth, this chapter has been divided into three sections. The first section makes explicit the precise nature of Putnam's realist hypothesis, viz., the empirical hypothesis of realism. In the second section, the relation of this hypothesis of realism to the notions of truth and reference will be critically examined. The third section explicates the interest-relativity of this realist hypothesis by explaining the interest-relativity of explanation as such and that of its constitutive notions of truth and reference. In so doing we will also bring out the nature of centrality that is ascribed to reference in this phase of Putnam.
2.1 The Empirical Hypothesis of Realism

One of the objectives of this chapter, as has been mentioned earlier, is to present realism in the fashion of Putnam as an empirical hypothesis. But we will start with a brief general discussion of realism which would help us see the empirical hypothesis of realism as against the background of realism as traditionally conceived.

The history of realism goes back to antiquity. It is 'as old as philosophy' itself. This maturity in age, however, has not given realism any specific form nor has it provided our talk of realism with any generally agreed direction. Realism is traditionally conceived as a system, as a world-view. In a nutshell, this thesis of realism holds that things exist independently of our minds. This thesis proposes to answer the main problems of epistemology as well as metaphysics, the two fields considered to be the principal components of philosophy in those days. Realism, epistemically construed, holds that the subject of our knowledge is the external world that exists independently of the human mind and more importantly, the validity of our knowledge ultimately depends on its correspondence with this external world. Metaphysically construed, this thesis maintains that the world exists independently of any human conception and therefore is not a product of human mind. A. Fine (1991, 80) calls this traditional thesis of realism 'epistemological-cum-metaphysical'.
This traditional way of conceiving realism, however, is not totally out of fashion in present day philosophy. One of its principal exponents in contemporary philosophical writings, viz., Michael Devitt, holds a view which is very similar to the traditional conception of realism. In our discussion we will specially focus on Devitt’s arguments directed against the second stage of Putnam's realism. We take this special note of Devitt because of several reasons. First, Putnam himself has not paid much attention to this particular phase of his realism due to its transitory nature. The only work devoted to this phase in his work, *Meaning and The Moral Sciences*, (1978). So we feel that the discussion of Devitt and the objection raised by him against Putnam can certainly bring out the various aspects and implications of Putnam's realism as advocated by him in his second phase. In this connection it may be further noted that there are other philosophical works which do recognize this aspect but in all these works this phase of Putnam's realism has been mostly discussed along with his internal realism. As a result the distinctive nature of this phase has never been adequately recognized. In this respect Devitt’s work is perhaps the only notable exception inspite of its utterly critical and negative stand.

For Devitt (1991, 44), realism is a metaphysical thesis which is composed of two dimensions, viz., the existence dimension and the independence dimension. The existence
From Reference to Realism

dimension answers the question, what are the things that exist? and the independence dimension refers to the question, how do they exist, that is, dependently or independently of any mind (human or superhuman)? The metaphysical thesis needs to be separated from semantic as well as epistemic issues as Devitt ascribes the ‘sad state’ of present day realism to the failure of drawing such a distinction. This is the reason for Devitt’s attack on Putnam’s general construal of realism, as a faith in the correspondence theory of truth, which obviously is a semantic concept. Putnam, thus, Devitt (1991, 57) maintains, puts the semantic cart before the metaphysical horse of realism. But is any such sharp distinction between metaphysical and epistemo-semantic issues of realism available to Devitt? In the course of my argument, I shall show that Devitt has failed to preserve this distinction. In this respect, my argument against Devitt’s position is twofold. In the first place, I shall reconstruct the metaphysical/epistemological distinction of Devitt in terms of another pair of distinctions. This new pair of distinctions will make explicit the untenability of Devitt’s claim, namely, that the metaphysical thesis of realism expresses realism in its entirety. It will further argue that any adequate formulation of realism must incorporate both metaphysical and epistemological distinctions. Secondly, I shall argue how Devitt’s own position on the metaphysical thesis of realism is not free from epistemological underpinnings.

The distinction between the metaphysical and the
epistemological theses of realism may be recast in the light of the suggestion offered by J. Bigelow and R. Pargetter in their article, "From Extroverted Realism to Correspondence: A Modest Proposal" (1990). In their work, they make a major distinction between what they call the extroverted and the introverted realism. These distinctions come close to the distinctions made by Devitt between metaphysical and epistemological theses of realism. Extroverted realism makes the claim that objects of our common sense as well as objects posited in different scientific theories exist. In this way it is reminiscent of the old-fashioned realism of traditional philosophy or of the metaphysical Realism of Devitt. Introverted realism, as the name suggests, is a result of an introverted or reflective mind where realism gets related to the semantic issues of truth and reference and the epistemological issue of knowledge. Even if we accept that extroverted realism precedes introverted realism, it does not by itself prove that extroverted realism can serve the philosophical purpose required to be served by any viable realist hypothesis on its own, without taking any help from its introverted cousin. One of the major objectives of any realist hypothesis is to quiten the anti-realist rival. Any attempt in this direction will seriously involve the correspondence theory of truth and reference. Devitt accuses the anti-realist of ‘blurring’ the distinction between metaphysical and epistemological issues. But does this distinction help to save realism? As against Devitt my point is: the mere pointing out of this distinction between metaphysical and epistemological issues
will not serve the realist purpose fully. For that, the realist hypothesis needs to show what is wrong with anti-realist epistemology. A proper reply to the anti-realist should not only refer to the distinction but should also include the problems for the anti-realist even in the blurred state. This can be done only with the help of a discussion of the realist semantics, viz., its correspondence theory of truth. So with the imposition of this distinction, Devitt’s Realist hypothesis not only becomes ‘boring’, as most of the exciting issues are kept out of this hypothesis, but also becomes incomplete for the purpose of realism.

Secondly, there is a further problem with Devitt’s distinction. As B. Taylor (1987) remarks, Devitt’s independence dimension (‘independently of the mental’) ‘smacks’ of epistemology. This independence dimension comes closer to Putnam’s allegedly ‘epistemic’ characterization of traditional realism as a theory that maintains that, "even an ‘ideal theory’ could be false" (Bigelow and Pargetter, 1990, 442). Bigelow’s preference for keeping this independence dimension of Devitt’s metaphysical Realism out of the domain of extroverted realism further confirms the epistemic bearing of Devitt’s formulation of metaphysical Realism. Thus Devitt’s Realism is not as ‘innocent’ as it appears to be.

Quite contrary to Devitt and traditional philosophers, Putnam has never conceived of realism as an ‘impersonal’
world-view. We have already noted that realism has never been a purely metaphysical doctrine for him. Throughout Putnam’s writings, realism is conceived of as an empirical hypothesis with explanatory purposes. The empirical nature of this hypothesis is a result of the revisability that is accepted in this scheme. Realism, construed in this fashion, is always called upon to explain certain facts. At the initial phase of Putnam's writings, the fact to be explained is taken to be the ‘phenomena we observe’ (Putnam, 1975c). At the later stages, it is taken to be the success of science and that of total human behaviour and the realist hypothesis is constructed to explain this fact. The empirical hypothesis of realism is conceived of as causal-explanatory in this phase of Putnam. The significance of the term ‘causal-explanatory’ will be made explicit later in this chapter.

The empirical realist hypothesis can be shown to depend on two separable but interdependent principles: viz.,
(i) the explanatory principle: this hypothesis tries to explain the success of sciences and total human behaviour;
(ii) the convergent principle: this second principle, which is subsumable under the wide purview of the first principle maintains that knowledge (scientific or otherwise) is ‘cumulative’ in character and that this cumulative knowledge is explained by the empirical realist hypothesis.

The reason for making this distinction is to bring out the significance of two crucial notions, viz., that of ‘success’ and
From Reference to Realism

'convergence' in Putnam's empirical realist hypothesis. These two principles, viz., the explanatory and the convergent, make it clear that the empirical hypothesis of Putnam has the nature of a method rather than of an 'ism'. In fact, it is this nature of method which makes room for revisability and in turn attributes the empirical character to it. Following Enfield (1991), we may call it, the 'methodological realism' which concerns itself with the explanation of the success of total human behaviour and that of science also.

It must be evident from our previous discussion that the concept which plays a crucial role in an empirical realist hypothesis is the concept of 'success'. 'Success' having an appearance of an evaluative term stands in need of clarification. Laudan (ed. J. T. Cushing et al, 1984) observes that the logical positivists' rejection of any talk about success of science is due to their misconception that success is an evaluative term. But this is not the case. As Laudan rightly points out that there can be 'successful robbers', 'military campaigns' etc. By calling an action or event successful, we do not 'imply' any "endorsement of that activity" (ed. J. T. Cushing et al, 1984, 87). Success conceived in this way is a value-free descriptive concept.

Again, success is relational in nature. Without going into the detailed discussion involving the aims, needs and ends, of success we may define it in general terms as involving the
relation between a proposed set of outcomes and the actual outcome. This proposed set need not be conceived of in restrictive terms. It does not depend on any particular aim of the scientist concern, nor does it depend strictly on any common aim of the existing scientific community. This is because in scientific research it is a common phenomenon that many of the scientific discoveries (i.e., actual outcome) are not the fulfilled aims of the concerned scientific community. The proposed set of outcomes are projected by us as we reconstruct the process of scientific change to judge whether it is successful or not. It is 'we' who "typically impute certain goals to a highly idealized caricature of the scientist (or, even more abstractly, to science as an institution) and then ascertain whether science has achieved those goals" (ed. J. T. Cushing et al, 1984, 88). In determining the set of outcome, we take into account certain "cognitive attributes which we find specially interesting" (ed. J. T. Cushing et al, 1984, 88). Our concept of success thus becomes a highly interest-relative one. This interest-relativity is projected in the explanation of this success. Putnam is therefore right when he observes that explanation by itself is interest-relative and subsequently that our causal-explanatory realist hypothesis is also

2 This kind of success which is involved in the reconstructed theorizing is different from the mere predictive success that the instrumentalists speak of. The aim of the realist hypothesis is to explain the success of behaviour and science and not merely to predict the future events. Thus the charge that Putnam's convergent realism is a form of instrumental ism is far from being a proper charge.
interest-relative. So inspite of Laudan’s charge that Putnam has taken the concept of success as ‘primitive’ in nature, much of Laudan’s observations regarding ‘success’ can easily be accommodated in Putnam’s empirical realist framework.

The second principle of our empirical realist hypothesis, as already mentioned, takes realism as convergent in nature. Convergence here refers to the convergence of scientific knowledge. Convergence of knowledge makes the preceding scientific theories ‘the limiting cases’ for the subsequent theories. It maintains that our different theories of science talk about the same phenomena or aspects of nature. Thus convergence of knowledge intimately depends on our regulative principle of benefit of doubt. PBD speaks of the possibility of identifying same reference across different theories. Such an identification, in turn, makes convergence of knowledge possible. This aspect of convergence is referred to as ‘progressive success’ by Devitt where he takes it to be an evidence for realism and not a constituent of it. For Putnam, however, convergent aspect becomes a constituent of his realist hypothesis. This is evident from his "Three Kinds of Scientific Realism" (1982) where he endorses ‘convergent realism’ against ‘metaphysical realism’ and ‘scientific realism’. This convergence, as mentioned earlier, can be taken as a fact about scientific practice and therefore evidentially related to realism. It can also be taken as something implied by the success of our science. Putnam's criticism of anti-realism that
From Reference to Realism

it leaves the success of science as a ‘miracle’ assumes relevance here. Thus it becomes constitutive of realistic hypothesis. Convergent realism of Putnam (1978, 20–22) operates on two Boydean principles, viz.,

(i) laws of mature sciences are approximately true,
(ii) most of entities of mature science ‘typically’ refer.

Putnam, following Boyd (1978), maintains that scientists behave the way they do because they believe in these two principles and their process succeeds because these two principles are true.

Related to this notion of convergence is the concept of causal-explanation, which also calls for our attention. At the outset, it should be remarked that for Putnam the explanation involved in the empirical hypothesis of realism is ultimately interest-relative in nature. But we will postpone our discussion of the interest-relativity of explanation to the last section of this chapter. Instead, we shall now focus on the concept of causal-explanation as it has been conceived in the philosophers’ attempts to construe realism as providing an explanatory hypothesis.

The association of the concept of causal-explanation with the realist-anti-realist debate gained prominence in the twentieth century with the rise of logical positivists or empiricists, though this association dates back to the beginning
of these debates. Logical empiricists tried to explain causal-explanation solely with the help of the deductive model. According to them,

To give a *Causal explanation* of an event means to deduce a statement which describes *it*, using as premises of the deduction one or more universal laws, together with certain singular statements, the initial conditions (Popper, 1959, 59).

But later logical empiricists (Hempel, for example,) realized the limitations of this maneuvers as explanation does not always warrant deduction. Deduction is not always the only relation between *explanandum* and *explanans*.

Then there is the problem with the insistence on observational data. This can be seen as a corollary of the *positivists' verificationist* theory of meaning that equates meaning of a sentence with the verifiability status of the sentence. This deductive model at best points to the fact that, as Putnam puts it, if theories of science "... are to be better than the theories they succeed, [they] must imply many of the observation sentences of the earlier theories (especially the true observation sentences implied by the earlier theories)" (Putnam, 1978, 20). Convergence that is available to a positivist is very minimal, as it does not include acceptance of the unobservable terms and likewise the scientific laws involving those terms. Thus this model fails to depict 'conservation' as involved in scientific practice.
The other attempt at explaining the notion of causal-explanation involved in scientific progress comes from Kuhn who takes causal-explanation as 'crisis followed by revolution'. Such revolution consists of the 'overthrow' of the existing model which is 'replaced' by a totally new paradigm or model. Kuhn thus rejects convergent realism and also the cumulative nature of knowledge.

For Putnam, causal-explanation, as has been mentioned already, points to the success of science and also to the convergent nature of scientific knowledge as well as progress. Such explanation is called 'causal' as it involves reference to the ontological existence of the things taken to be explanatory. As McGinn (1979) maintains, it points to a distinction between the explicandum (success) and explanans (ontological existence of things). Realism is called causal-explanatory as it gives explanation of the success of science and convergence of knowledge by positing existent objects (observable and unobservable). The two Boydean principles, viz., that of reference and truth constitute this causal-explanatory thesis of realism.

But it is argued that this 'explanationist defense' of realism is "a paradigm case of begging the question" (Fine, 1991, 82). To elaborate in the fashion of Fine,
For the issue under discussion in judging realism in this debate is precisely whether explanatory success provides grounds for belief in the truth of the explanatory story. To use explanatory success to ground belief in realism, as the explanationist defense does, is to employ the very type of argument whose cogency is the question under discussion (Fine, 1991, 82).

But the case for the causal-explanatory hypothesis of realism is not as grave as Fine takes it to be. Fine’s total argument is based on a misconstrual of the causal-explanatory hypothesis of realism. To see what is wrong with Fine's argument, we start with the rephrasing of the whole concept. Let us call the attempt of an empirical realist a ‘retroductive’ one. ‘Retroduction’ here simply means a process of reasoning that "allows the scientist to infer from effect to unobserved cause" (McMullin, 1991, 100). What Fine argues, to put the argument in terms of ‘retroduction’, is that "a retroductive form of argument cannot properly be used by the philosopher at the metalevel to validate the use of retroduction by the scientist at the first level" (McMullin, 1991, 104). McMullin feels that Fine is correct to some extent as the Putnam-Boyd formulation of causal-explanation does give the appearance that there are really two levels, viz., that of scientists and that of philosophers. But he goes on to argue that causal-explanation need not embrace this two-level division and can very well be carried out at the level of scientists, i.e., the first level. My suggestion is that even Putnam's empirical hypothesis can be construed at the

This retrodiction has come to be known as the transcendental argument for realism in Putnam's later stage of philosophizing.
level of scientists. McMullin’s objection that what is arguable at the level of philosophers cannot be argued at the level of scientists in this Putnam-Boyd hypothesis is not valid. Putnam's empirical hypothesis is an attempt to explain the success of scientists' behaviour and the appearance of the metalevel of philosophers is only a methodological one. The explanatory hypothesis is given at the level of scientists.

After this brief exposition of what we mean by causal-explanation we now turn our attention to the two constitutive Boydean principles of the empirical realist hypothesis: they point to two constitutive pillars of this empirical realism, viz., reference and truth. It is on these two concepts that we focus in the next section.

2.2 Two Pillars of Empirical Realism: Causal-Explanatory Notions of Reference and Truth

We have mentioned in our discussion of the previous section that truth and reference play causal-explanatory roles in the empirical hypothesis of realism. This section devotes itself to the unpacking of these two concepts. In our discussion here, following Putnam, we will focus on truth. However, it is not hard to see the intimate relation of truth to reference as the concept of reference serves as the basis of any theory of truth. Thus our discussion of truth will naturally make the related notion of reference clear. So we start with the impending
question, what sort of truth is it? It is well accepted in contemporary literature that this causal-explanatory role of the concept of truth cannot be performed by one of the 'deflationary' theories of truth as they do not say anything about the nature of truth beyond accepting merely the T Schema of Tarski, "'Snow is white' is true if and only if snow is white".

Truth needs to have a 'substantive' (D. Grover, 1990, 673) nature to play the causal-explanatory role. That is to say, our theory of truth should include a theory that connects our language to the world in order to be an explanatory factor in our process of explaining the success of human interaction with the world. Substantiality of truth is needed, as Putnam observes in his "On Truth", because only such a notion assumes philosophical importance by serving the purpose of philosophical explanation. Thus truth has to have a 'distinctive', 'relational' nature to be a pillar of the causal-explanatory hypothesis of empirical realism. 'Deflationary' theories, as they fail to provide truth with the typical 'relational' nature, lack the causal-explanatory force.

Keeping the 'deflationary' theories aside, we can note that there have been two different ways of conceiving truth as causal-explanatory in literature. Both try to project truth as a 'substantial' 'relational' property. The first claim is made popular by Devitt. He maintains that a correspondence theory, which is a combination of Tarski's theory of truth and a
'causal-historical theory of reference', presents truth as a substantial and hence as a causal-explanatory notion. This type of truth and reference is physicalistic for Devitt. The other claim is less strong and is made popular by Putnam where he maintains that Tarski's theory of truth along with a realist background, regarding our interaction with the world, which is subsumed under the concept of interest-relativity, succeeds in presenting truth and also reference as causal-explanatory notions.

Before elaborating on the substantial notion of truth as envisaged by Devitt, the relevance of truth to any realist hypothesis should be made precise. We have seen in our previous section that the empirical hypothesis of realism as conceived by Putnam, is intimately related to the concept of success. And the story of success of our total behaviour (including that of scientists) is a story of the involvement of concepts of truth and reference in our explanation of it. But Devitt questions this intimate relation between truth and the empirical thesis of realism (success). While distinguishing between four kinds of success, he (1984, 88) tries to show that none of them needs truth for their explanation. To enumerate the four kinds of success of Devitt: (i) Individual success; (ii) Species success; (iii) Theoretical success and (iv) Progressive success. Without going into details we can say that while the first two focus on the success of behaviour (individual or species) the last two take the success involved in scientific theories into
However, although Devitt is quite sceptical about the existence of any intimate relation between a theory of truth and a realistic hypothesis, he nevertheless accepts that truth has a causal-explanatory role to play in any explanation of the success of science. But unlike Putnam, he maintains that such causal-explanatory role can only be played by a physicalistic conception of truth and *reference*. What is this physicalistic notion of truth? Devitt maintains that Tarski’s theory of truth falls short of the correspondence needed for the explanation of the success of science. This is because Tarski takes the list of primitive reference *arbitrarily* defined by the list of primitive predicates. Thus it fails to make this notion of truth ‘relational’ which uniquely connects our language with the world. Truth thus loses its force to be a causal-explanatory property. So he proposes to bring in the component of ‘distinctive’ substantiality by adding some sort of a ‘causal-historical’ theory of reference to it. But following Grover (1990, 679), we can say that even this inclusion fails to give truth the needed boost to function as a proper substantial notion required for explaining success. This is because the explanatory notion of truth calls for different causal connections with the world for true and false sentences. But the ‘causal-historical’ chain of

---

4 Devitt acknowledges this view to Field (1972). Field was the first philosopher to comment that Tarski’s theory needed supplementation.
reference provided by the reference theory of Devitt does not make any such distinction. The causal chain that determines the reference of, say, 'water' remains the same notwithstanding the occurrence of 'water' in a true or a false sentence. So 'causal-historical' theory falls short of the duty of providing a substantial boost to Tarski's theory.

One striking feature of Devitt's formulation of the causal-explanatory notion of truth is his addition of the causal theory of reference to Tarski's theory of truth and his resultant derivation of physicalism from them. Both of these theories are equally available to Putnam. But Putnam denies any such derivation of physicalism. This distinction in their results, inspite of having the same theories available to them, calls for a closer examination of their views. This difference between the views of Putnam and Devitt can be drawn at two levels. One at the level of foundation which concerns the precise nature of explanations and another at the level of their understanding of Tarski's theory of truth and also the causal-historical theory of reference.

The disagreement at the level of foundation refers to the ways in which these two philosophers define explanation. Devitt understands explanation in purely physicalistic terms. Physicalism coupled with the strong independent thesis of realism serves as the basis for Devitt's conception of explanation. Explanation, on the other hand, for Putnam is interest-relative
in nature. Explanation, like other concepts of Putnam, is not a part of a highly impersonal world-view as it is for Devitt. According to Putnam, explanation presupposes some of our interests as it is we who explain and it therefore cannot be merely physicalistic as Devitt contends. We will postpone a discussion of this topic till the next section and concentrate on the second difference between the views of Putnam and Devitt, viz., their ways of understanding Tarski and the causal theory of reference.

As mentioned earlier, Devitt’s realism has two dimensions: independence dimension and existence dimension. A ‘natural corollary’ (McGinn, 1979) of the independence dimension is a causal theory of perception, action, and also of reference. The independence thesis holds that our behaviour, perception, action, referring, etc., are caused by something which is ontologically ‘distinct’ from such behaviour, perceptions, actions and referring. This, while construed ‘introvertedly’ (Biglow and Pargetter, 1990) means that truth-conditions should be differentiated from assertibility (verifiability) conditions. This independence thesis is important not only for a realist hypothesis, conceived as purely metaphysical in nature, but it assumes utmost importance even in the explanatory realist hypothesis. Explanation as a process requires a distinction between the explanandum and explanans. Anti-realism, our explanatory realist hypothesis holds, cannot differentiate between truth-conditions and assertibility-conditions. An
anti-realist therefore fails to avail himself of any explanation of the assertibility-conditions in terms of the truth-conditions. Such an explanation will require a distinction between the *explicandum* and *explanans* which his anti-realism does not provide him.

But the question before us is how sharp the difference between truth-conditions and assertibility-conditions should be to provide a realist with his explanatory hypothesis. Devitt conceives it the strongest way. He speaks for a very strong distinction between truth-conditions and assertibility-conditions where truth-conditions are totally dissociated from assertibility-conditions. His correspondence theory, as we have already noted, is a combination of Tarski’s theory of truth and the causal-historical theory of reference. Devitt takes Tarski’s theory of truth as a formalization of the correspondence theory of truth. It, however, fails to provide the ‘relational’ substantial component to the theory of truth which has to serve as causal-explanatory. Tarski’s theory of truth misses the ‘relational’ component of truth as it defines the concept of primitive reference by means of a list, which fails to furnish truth with the unique ‘relational’ property it ought to have in order to play the causal-explanatory role. This property can be provided by the supplementation of Tarski’s theory of truth with some kind of causal-historical theory of reference.

Putnam, however, does not accept the idea that Tarski's
theory of truth is a formulation of the correspondence theory of truth. Putnam, in Haack's (1987) opinion, rightly, points out that Tarski's theory of truth is quite neutral to any realistic (correspondence theory of truth) or idealistic formulation; what it does is to present a formal definition of truth and reference which can be interpreted either realistically or idealistically depending on the background theory, i.e., the total theory of knowledge (our knowledge of nature, of our interaction with nature, our overall idea of our subject of knowledge) that one adopts. Putnam, quite contrary to the contention of Field and Devitt, maintains that primitive reference is not as arbitrary as these philosophers take it to be. In the Lecture II of his John Locke Lectures, Putnam shows that the list of primitive reference "has a very special structure" (Putnam, 1978, 31), viz., 'electron' refers to electron or 'gene' refers to gene, etc. These definitions have close 'similarity' to the famous criterion T, viz., "'Snow is white' is true if and only if snow is white". This 'similarity', as Putnam contends, "is not coincidental: 'true' is the 0-adic case of satisfaction" (Putnam, 1978, 31). Thus the list of primitive reference can be shown to be determined by the criterion S (S for satisfaction) and the criterion S is a generalized form of the criterion of adequacy or

Even Tarski seemed to have this idea, at least regarding empirical truth. As he says, "the semantic conception [of truth] is completely neutral towards all these issues" (Tarski, 1944, 246).

The idea of Tarski's theory of truth being neutral and a formal definition of truth is endorsed in Sen (1988).
criterion T. Criterion T expresses the formal character of truth as it serves as the criterion for the acceptibility of any definition of truth. Thus, Putnam, unlike Field and Devitt, does not think that Tarski's theory of truth needs supplementation by any theory that provides the much sought after "relational" component required for an explanatory notion of truth (and also of reference). Devitt's failure to realize the full implication of Tarski's theory of truth forces him to look for the relational property in some form of causal-historical theory of reference.

Putnam and Devitt differ also in their ways of conceiving the causal theory of reference. While Putnam has well-developed causal theory of reference to offer, Devitt does not talk at length about any particular formulation of such a theory. He accepts Kripke's formulation of it, which at this level is fully compatible with Putnam's causal theory of reference. But what exactly distinguishes Putnam from Devitt in this respect is their purpose of conceiving a causal theory of reference. For Devitt such a theory is conceived in order to provide the definition of reference, which it does in a physicalistic manner. This is evident from Devitt's aim of providing the "relational" component of truth by the addition of this theory of reference. It thus defines it in physicalistic terms, i.e., in terms of the underlying physical traits of different things, the unique relation of our words with the objects outside, irrespective of any particular language. For Putnam, on the other hand, the causal theory of reference does
not define the concept of reference. It rather ‘presupposes’ it. His causal theory of reference is "the social co-operation plus contribution of the environment theory of the specification of reference" (Putnam, 1978, 58). It thus specifies how the reference of a term is determined within any language. Truth as well as reference is defined within ‘our realist conceptual scheme’ with the help of a ‘transcendental deduction’ which maintains that the definition of truth should fulfil the criterion T. These definitions thus are part of our ‘home’ language and are to be translated to other languages. No physicalism of the Devitt kind is warranted here. Apart from being unnecessary, physicalism has its own problems which will be dealt with in the next section.

We have already spoken about the relation between truth-conditions and assertibility-conditions and the importance of such a distinction in an explanatory scheme. We have also noticed that, Devitt, due to his adherence to strong physicalism, wants to draw the distinction in the strongest possible way.

The question that will be pursued now is whether Devitt’s way is the only way to draw such a distinction. As against Devitt we have views of Dummett who does not make any distinction and equates truth-conditions with assertibility-conditions. My reply to the above mentioned question, following Putnam, is that there does exist a way to differentiate between truth-conditions and
assertibility-conditions which is, on the one hand, not as sharp as Devitt’s, nor on the other hand, as inexistent as Dummett’s. This question of distinction is linked by Devitt and others to the correspondence theory of truth. Devitt maintains that only the correspondence theory of truth supplies the required distinction between truth-conditions and assertibility-conditions. If we couple this contention of Devitt with Putnam's observation that any realism is intimately related to some sort of correspondence theory of truth, we are forced to draw the conclusion that only correspondence can provide the required distinction. But what sort of correspondence is it? Obviously Devitt can think of only one kind of correspondence theory of truth: which serves as the basis of his physicalism and which takes correspondence to be a unique relation between our world and objects. But this need not be the only way of conceiving correspondence. In this respect, it is worth noting the two kinds of correspondences that S. Haack (1987) refers to in her illuminating article, "Realism". She talks about 'correspondence-with-teeth' and 'correspondence-without-teeth' (Haack, 1987, 288-9). Haack writes:

Consider what one might call 'the correspondence formula': A sentence (proposition, statement, belief) is true just in case it corresponds to (agrees with, copies, mirrors) the facts (reality). This formula can be interpreted either with or without teeth. Without teeth, it is taken idiomatically, as no more than a variation on 'S is true just in case really, in fact, p'. With teeth, the formula is taken to involve a commitment to an ontology of facts, and to an explanation of truth as a structural isomorphism of truth-bearer to fact— (Haack, 1987, 288-9)
She points out that both these formulations are quite compatible with Tarski's theory of truth. So, Devitt cannot expect to get any help from Tarski's theory of truth. While 'correspondence-with-teeth' does commit oneself to a particular kind of 'structural isomorphism' (unique, physicalist, for Devitt) 'of sentences to facts' (Haack, 1987, 289), 'correspondence-without-teeth' does not restrict one to any such 'structural isomorphism' beyond the mere contention that truth relates "something linguistic to something non-linguistic" (Haack, 1987, 289). Thus 'correspondence-without-teeth' also preserves the 'relational' property of truth needed for the causal-explanatory conception of truth. So, unless Devitt provides some other arguments for accepting 'correspondence-with-teeth' over 'correspondence-without-teeth', the mere need for having relational property incorporated within one's conception of truth does not bring him closer to either of these two conceptions. Besides, this argument also shows that even the 'correspondence-without-teeth' includes the relational property of truth needed for explanation. So, Tarski's theory of truth, which is quite compatible with 'correspondence-without-teeth', need not be supplemented on the ground that it misses the 'relational' component. Tarski's theory of truth involves this 'relational' property. It, therefore, can serve as one of the pillars of the causal-explanatory hypothesis of realism when supplemented by a 'personal' theory of human interaction with his environment.
A note of clarification. In our discussion of the causal-explanatory notions of truth and reference we have mainly focused on truth. One may wonder if such a detailed discussion of truth is really warranted since reference is claimed to be central here. A discussion of reference is therefore more relevant, it may be argued. However, a detailed analysis of truth assumes significance for the following reasons. Firstly, truth, when taken as relational property, depends on a reference relation that exists between our language and the world outside. Truth here presupposes a reference relation. Secondly, the nature of truth, viz., 'correspondence-with-teeth' and 'correspondence-without-teeth' is also dependent on the kind of reference relation accepted. This point forms the central feature in Putnam's critique of metaphysical realism advanced in his final phase of internal realism. A detailed discussion of truth here thus serves as a perfect stage setter.

2.3 Interest-Relativity of the Empirical Realist Hypothesis

Explanation becomes very important in any discussion of an empirical hypothesis of realism as it serves as the pivot around which the whole empirical hypothesis revolves. It is to explain certain facts that the empirical realist hypothesis is conceived. But what is the nature of this explanation? Explanation has been conceived differently by the physicalists
(e.g. Devitt) and non-physicalists as mentioned already. We have even attributed the difference in their views about truth to their different ways of conceiving explanation, but how do they conceive explanation?

Both these views accept that explanation is a reply to a 'why' question or a process which starts with a 'why' question. It consists of two components, viz., **explanandum** and **explanans** - the fact to be explained and that which explains that fact. Physicalists, due to their reliance on strict correspondence to reality and the ensuing physicalistic theory of reference, are led to believe in the possibility of an 'absolute' explanation, i.e., the possibility of an explanation being objectively correct as opposed to other explanations. Non-physicalists like Putnam, on the other hand, do not have faith in any possibility of an absolute explanation. Explanation is interest-relative for them. Before proceeding we should elaborate on the concepts of absolute explanation and interest-relative explanation.

Physicalists hold that there is a unique determinate relation between terms of any language and the objects referred by such terms. Such determinate relation consists in reducing

I am using this distinction on the basis of Putnam's *John Locke Lecture* where the term 'physicalist' has been explicitly mentioned. However, the term 'non-physicalist' does not figure in any existing literature on this subject. I have used this term mainly to designate Putnam's stand which accepts truth and reference as casual-explanatory, but does not define them in physicalistic terms.
the object to physical particles and their determinate relation holds irrespective of any language we talk about. An explanation, therefore, becomes absolute when it hits upon this unique determinate relation. No other explanation can be as correct and objective as this. There is no room for any sort of interest-relativity here.

Putnam, on the other hand, is of the opinion that no explanation is possible without taking into account the interest of the people seeking such explanation. Explanation for him forms a part of man's interactive dealing with the world. Philosophy, for him is (at least 'in part') a "... normative description of our institutions; a theory of knowledge seeks to explain and describe our practice that contributes to the success of inquiry" (Putnam, 1978, 47). The 'usefulness' of explanation thus assumes importance; now the question is: 'useful' for what and to whom? Both these questions define the inherent interest-relative nature of explanation. They refer either to the interests of the person asking for the explanation in the restrictive sense, or to the community interest from the point of view of its capacity to promote successful behaviour in the wider sense.

In this connection it should be mentioned that the explanation involved in an empirical realist hypothesis as the explicandum, viz., the success itself, is an interest-relative concept. This point was made in the first section of this
chapter while maintaining that success means the fulfilment of the proposed set of outcomes projected from the point of view of the practitioners i.e., from our point of view. Thus the natural corollary of such a process of explaining success is its relativity to our interests.

The question arises, whose interest is it after all? This is a very crucial question which applies, like in success, even in the case of explanation. As brilliantly observed by Laudan (1984), every action can be shown to be successful or explanatory by taking into account particular interest. Interest thereby reduces to a mere *psychological* interest. So the impending question before Putnam is what kind of interest are we supposed to refer to in our discussion of interest-relativity? Or is it the indiscriminate interest of any individual? Putnam's reply to the latter question will be a resounding *no*. The reasons are not hard to see once we take note of his observation that philosophy is a *normative* activity which through the process of explanation tries to maximize the possibility of the success of total human behaviour. We have to differentiate between *useful* and *useless* explanations. *Useless* explanations are ones that are totally *uninteresting* for our purposes. Interest is *useful* or *interesting* if it is

---

8 Uninteresting here is not used in the psychological sense which means boring. *Uninteresting* is used in a *pragmatic* sense where it means useless for our purpose of maximizing the possible success of total human behaviour.
conducive to the success of total human behaviour. So the interests we are interested in are methodological not merely psychological. As Putnam observes,

... given our normative outlook, we are only interested in explanations which are compatible with such aims of inquiry as stating truths, uncovering errors, stating laws (in the case of scientific inquiry), finding out what can possibly happen and what is impossible, describing various important kinds of processes, aiding technology and control of nature in general, etc. (1978, 47).

Interests that take into account all these above mentioned features are to be taken seriously while explaining. Those are what Putnam calls 'genuine' interests. But Devitt, in his "Critical Notice" on Putnam's *Meaning and the Moral Sciences*, observes that by ascribing a privileged position to certain interests (viz., "interest in understanding and controlling nature" Devitt, 1980, 401) as opposed to others, Putnam submits to an 'absolutist' position regarding explanation. The problem of absolutism does not arise for Putnam as absolutism is a corollary of physicalistic notions of reference and truth. Thus, even though Putnam restricts the range of interest to be taken into account, as he does not adhere to any kind of physicalism, the problem of absolutism does not arise for him. Moreover, absolutism is an offshoot of an impersonal world-view. Putnam's empirical realist hypothesis, by taking our interests into account, forms part of 'human' world view and thus does not leave any room for absolutism.
In his attempt to save the absolute explanation, Devitt wants to push the problem of interest-relativity back to the level of our request for explanation, thereby "leaving explanation as absolute as ever" (Devitt, 1980, 400). He, therefore, maintains that explanation need not be interest-relative. But it is hard to see how exactly this maneuver saves the absoluteness of explanation, since, for Putnam also, interest-relativity cropped into the picture through the same route. What Putnam states is that our request for explanation is usually laden with our different kinds of interests, viz., 'our interest to prevent or control' some situation or our 'methodological interest' etc. Devitt (1980) seems to think that interest-relativity at the level of request for explanation does not affect the absolute nature of explanation once we have the same set of 'background knowledge'. What we are interested in, Devitt would argue, even accepting the wide range of varying interests, is what causes an action in a certain background.

But Putnam's second example, where W. Sutton, the famous bank robber, replies to the question 'why do you rob bank?' by saying that 'That's where the money is' shows the problem with Devitt's solution to interest-relativity of explanation. This answer, Putnam goes on to note, though satisfies (at least particularly) another robber's query, does not satisfy a priest who would have liked to know the reasons or whatever it is that causes Sutton to rob at all and not only why
he robs banks as against gas stations. So even if we try to see explanation purely in terms of causation, the interest-relativity of our request for such an explanation will definitely force us to look for different causes for different requests (i.e., different interests).

No one can fail to notice the intimate relation between Putnam's interest-relative explanation and Quine's indeterminacy of translation. Indeterminacy of translation can be shown to be diametrically opposed to the absolute explanation of Devitt. The thesis of absolutism maintains that an objectively correct reply is possible to all our queries regarding reference, truth and explanation. Indeterminacy, on the other hand, holds that no such objectively correct reply is possible. Indeterminacy with the related thesis of inscrutability of reference holds that our theories (scientific or otherwise) remain underdeterminate by observational data and thus reference and truth of our terms remain indeterminate.

Putnam, with the help of notion of his interest-relativity of explanation, offers a position which stands at a middle spot against this dichotomy between absolutism and indeterminacy-cum-inscrutability. Putnam accepts Quine's

9 Talk of translation assumes importance in our discussion about explanation since following Putnam we can define translation as rationalizing the speaker of target language's behaviour and any such rationalizing therefore definitely involves explaining.
worries as genuine. The problem of absolutism becomes clear once we realize the problems of physicalism. In the absence of a unique determining relation of correspondence relating our terms to objects, absolutism cannot hold its fort at all. But the question before us is, whether giving up absolutism brings us to indeterminacy. Putnam rightly replies that Quine was led to indeterminacy as he did not take the concept of interest-relativity into account. The interest-relativity of our explanation is a unique concept which shows that the underdetermination of theories by observable data is possible when we move to the impersonal level of theorizing. But the moment we look at it from the point of view of our 'normative' purposes, such indeterminacy vanishes. We will therefore be led to accept one reply which is compatible with our interest. Thus, though we do not fall into the trap of absolutism, we avoid the hopelessness of indeterminacy as well. It is in this concept of the interest-relativity of our whole enterprise that we should look for the germ of the internal realism of Putnam's later stage. It is to a detailed discussion of this internal realism that we turn in our next chapter.

Before moving onto the next chapter, it is worth noting how reference remains central to Putnam's writings in this phase. Reference along with truth is conceived here as a causal-explanatory notion. Together they contribute to the causal-explanatory hypothesis of realism. This explanatory hypothesis of realism draws heavily on its principle of
convergence. What makes convergent or cumulative knowledge possible is the PBD or the principle of charity. This is also because the causal-explanatory hypothesis of realism here derives its force from retrodiction which involves ‘retrospective reference assignment’ (Putnam, 1978). PBD thus assumes relevance in the functioning of this causal-explanatory hypothesis of realism. This relevance of PBD ultimately speaks for the centrality of reference at this level of Putnam. The centrality of reference here is distinct from that of the first phase, as unlike the first phase, this centrality has a derived nature. A detailed discussion of how PBD makes room for the centrality of reference at this phase will be given in the fifth chapter on the unity in Putnam.