***Introduction:*** Prof. Putnam begins his landmark paper by remarking that the field of linguistics is the first major field dealing with seemingly animate reasoning and high level phenomenon of the brain that is achieving a reasonably high-level description of its subject matter, i.e. language, and that a "very subtle description" of the workings "of *at least some* human languages" is in the process of being constructed. He states that certain features are shared by all human languages, and goes on to say that, where we find ourselves unable to account for the aforementioned "universal" features based on "general grounds of functional utility" that would apply to any system that can serve as a means of communication, they may shed some light on the workings of the mind. In other words, they are species-specific.

He says that it would be difficult to say to what extent the structure whose understanding we gain from these features will be a universal structure of *language,* as opposed to a universal structure of learning tendencies in the *speaker of the language;* the structure illuminated by the features of language may be how humans perceive and understand language, or it may be how human language, in general, is.

He praises the work and descriptive materials of contemporary linguists, reiterating the fact that inexplicable universal features in language lie at the deep level of the aforementioned structure-whether the structure is language, or it is the learning strategies of the human brain.

He feels that the greatest drawback to all of this analysis is that it does not concern the *meaning* of words. Analysis of linguistic form only provides information on the syntactical structure or form of language. Our knowledge on semantics-*the syntax of the isomorphism between language and the mind*-is still "as much in the dark as it ever was".

According to him, semantics is in much worse condition than syntax because the concept of form and structure on which syntactical theory is based on is itself in much better shape than the concept of meaning on which semantics is based. He states that skeptical speculation on the very existence of the concept of meaning does not help "any more than dogmatic assertions" of any sort.

Prof. Putnam will talk "almost entirely about the meaning of words rather than about the meaning of sentences" because he feels that our concept of the meaning of words is much more defective than our concept of the meaning of sentences, but he will comment briefly on arguments which insist that the concept of sentence-meaning must be primary.

"Since I regard the traditional theories about meaning as myth-eaten, it will be necessary for me to discuss and try to disentangle a number of topics concerning which the received view is, in my opinion, wrong. The reader will give me the greatest aid in the task of trying to make these matters clear if he will kindly assume that *nothing* is clear in advance."

Prof. Putnam adds that "meaning" is the one topic in philosophy in which there is, perhaps due to the very connotations given to it up until then, nothing but 'theory'.

Putnam, Hilary. (1975). The Meaning of "Meaning". University of Minnesota Press, Minneapolis. Retrieved from the University of Minnesota Digital Conservancy, http://hdl.handle.net/11299/185225.

***Meaning and extension:*** Prof. Putnam talks about the division of the concept of meaning in two terms: extension and intension. The extension, of a word, he says, is merely the set of all things it is true of. However, he points out certain ambiguity problems in this notion of extension. The first is what it means to say that a word is *true* of something; there may be degrees of belonging to the set. Additionally, one word may have multiples 'senses' or meanings. This problem may averted by considering the different 'senses' of the same word to be *different words in themselves.* However, in doing so, we must make the severe idealization that the number of senses of a word are fixed once and for all, and that they have a discrete number of senses.

Prof. Putnam shows with the help of an example how two terms may have the same extension but different intensions.

***Intension and extension:*** "Something like the preceding paragraph appears in every standard exposition of the notions 'intension' and 'extension'." However, Prof. Putnam finds it unsatisfactory due to the facts that a) there is no evidence that extension *is* a sense of the word 'meaning' and b) 'intension' is given the rather cyclic and misleading definition 'concept'.

Traditional philosophers considered concepts to be mental, i.e., purely subjective and different for everyone. This implied that meanings (in the sense of intensions) are purely mental entities. Recently, many philosophers rebelled against this point of view, feeling that the same meaning (in the sense of concept or intension) can be grasped by more than one person, and therefore identified concepts with abstract entities that would exist objectively rather than subjective mental entities. However, 'grasping' these abstract entities was still a subjective individual act. All these philosophers felt that 'grasping' a concept was just a matter of being in a certain psychological state.

Previously, Prof. Putnam showed us how two terms can differ in intension and yet have the same extension. However, it was taken to be obvious that two terms cannot differ in extensions and yet have the same intension. Prof. Putnam feels that the fact that no argument for this was ever offered was due to the tradition of ancient and medieval philosophers who assumed that the intension of a term was defined by a group of predicates, and therefore that the concept corresponding to a term must always provide a necessary and sufficient condition for falling into the extension due to and by the very predicates it is constructed of. This left us with two unchallenged assumptions:

1) Grasping a concept was just a matter of being in a certain psychological state.
2) Intension determines extension.

***'Psychological state' and methodological solipsism:*** 'States' are merely two-place predicates whose arguments are an individual and a time; psychological states are merely

states which are relevant to the field of psychology. However, only a certain kind of psychological states are at issue in assumption 1).

Traditional philosophers, when talking about psychological state, make the assumption that nothing exists apart from the subject-not even the subject's body; the subject is merely a disembodied mind. This assumption is referred to as 'methodological solipsism' and is a highly restrictive program; for e.g. being in the state of jealously would have to be reconstructed such that one may be jealous of figments of one's imagination to be a psychological state allowed by methodological solipsism.

There is no point in engaging in this reconstruction if it is found that being in a psychological state in the narrow sense does not have a significant degree of causal closure, i.e. if being in such a psychological state does not have causal events causing the subject to be in a psychological state; for only when we find connections between psychological states and the events causing them can psychological laws be formulated. In the author's opinion, three centuries of failure in extracting causality is more than enough evidence against mentalistic psychology.

Prof. Putnam now embarks to show that, based on the aforementioned assumptions, the psychological states must determine the extension.

If we suppose that there are two intensions and A is a term, then, if a person understands intension 1 to be A's intension and another understands intension 2 to be A's intension, they are in different psychological states. This is under the assumption that knowing the meaning of a term is not only grasping its intension but also knowing that the intension you have grasped is that of the term-a psychological state S is of the form *knowing I and knowing that I is the intension of A.* Therefore, since the intension grasped determines the psychological state of an individual, we may say cyclically that a psychological state S determines the intension grasped. And since, according to our assumption, the intension determines the extension of a term, we may conclude that the psychological state determines the extension of a term.

If this interpretation is sound, then the psychologism/Platonism argument becomes unnecessary and redundant, for even if intensions were Platonic entities, the act of grasping them and being in the correct psychological state is a mental act-however, multiple people can be in the same psychological state due to the fact that intensions are Platonic. (This will be shown later.) Moreover, the psychological state determines the Platonic entity grasped. Therefore, it is just a matter of convention to assume the psychological state to be the meaning or the Platonic entity to be the meaning.

***Are meanings in the head?:*** Suppose there exists a planet which we shall refer to as Twin Earth that is *exactly like Earth in every single aspect.* However, the dialect spoken on Twin Earth differs slightly from the one spoken on Earth. On Twin Earth, the liquid called "Water" is not H2O but a different one with a long chemical formula which shall be abbreviated to XYZ.

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XYZ is indistinguishable from water at normal temperatures and pressures, and quenches thirst, etc. exactly like water does. If an Earthian ever visits Twin Earth, he will suppose that water on Twin Earth is the same as water on Earth. However, when he realizes that water on Twin Earth is actually XYZ, he will report to Earth the following:

'On Twin Earth the word "water" means XYZ.'

Prof. Putnam remarks that we may not use the word 'meaning' in place of 'means', i.e. we may not say 'The meaning of the word water on Twin Earth is XYZ' for the word 'means' implies extension, while the nominalization 'meaning' implies intension, so that the statement containing the nominalization would only be sound if everyone knew the intension of the word "water" to be XYZ-but why that is so comes later.

Similarly, a Twin Earthian spaceship may report:

'On Earth the word water means "H2O".

This indicates that the word water has two senses: the Twin Earthian one, and the Earthian one, each sense having a different extension. However, if an Earthian was to visit Twin Earth at a time during which the equipment for discerning between H2O and XYZ did not exist, both an Earthian and a Twin Earthian would believe that 'water' on Twin Earth was the same as 'water' on Earth; they would be in the same psychological state. However, the extension of 'water' on Twin Earth would still be XYZ, and the extension of 'water' on Earth would still be H2O! Prof. Putnam has construed division of linguistic labor across time. Why so? Why should we accept that the extension of 'water' was the same in 1750 and 1950, despite the fact that the knowledge 'water is XYZ' and 'water is H2O' was not known in 1750?

Prof. Putnam gives what he calls "a sketch of an answer".

If I were to point at a glass of water and say, "This is water," I would want my ostensive definition to be accepted only if it bears a certain relation to the stuff other speakers in my linguistic community call water. If I am mistaken, and the liquid in the glass is gin, I do not expect my ostensive definition to be accepted. Thus, if a Twin Earthian points at a glass of H2O and says "This is water," he intends his ostensive definition to be accepted only of the experts in his linguistic community would agree that it is water; and in accordance with out example, in the year 1950, experts on TE would *not* agree that a glass of H2O is water. Therefore, the extension of the word would not change.

Prof. Putnam repeats his point by construing another Twin Earthian example involving aluminum and molybdenum and showing once again that two people may be in the same psychological state with respect to a certain term but may be connoting different extensions.

***A socio-linguistic hypothesis:*** Prof. Putnam now formally states his hypothesis. He states that the extension of any given word is determined by the experts regarding that term in the linguistic

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community, and that whenever a nonexpert uses that term, the extension he implies is the extension determined by the experts. There is an internal cooperation of this sort within a linguistic community. This implies that the extension of a word is a publicly determined aspect. He stresses that words have too long been thought of as a tool used singularly by an individual, and that they are, in fact, a tool jointly utilized by cooperative activity.

***Indexicality and rigidity:*** Prof. Putnam begins by noting that the 'water' example was an example of division of linguistic labor across time, unlike the other two examples he gave.

He states that there are two obvious ways of letting someone know what is meant by a natural-kind word. The first route is by giving him an ostensive definition. The second would be by giving him a description which consists of markers along with a stereotype. A stereotype is a conjunction of predicates that may or may not enable a person to recognize the object. It consists of *standardized* features that are *typical.* Not all the criterion used by the experts need be there. The predicates in the stereotype are determined by the linguistic community as a whole, experts and nonexperts. At times when the stereotype is not sufficient in enabling an individual to recognize the object, the markers that are part of the description help. The predicates that are part of the stereotype are not, however, necessary conditions for having membership in the kind, for they are not analytic in nature. They are, regardless, extremely accurate.

Prof. Putnam has already described some of the empirical suppositions in the act of point to a glass of liquid and saying "This is water."

If there were two worlds W1 and W2, and a man pointed to a glass of liquid and said "This is water," and "water" in W1 was H2O and "water" in W2 was XYZ, there are two theories one may have concerning the meaning of "water":

1. The *concept* associated with "H2O" in W1 *by Earthians* is the same as the concept associated with "XYZ" in W2 *by Twin Earthians*, and so on and so forth in every world, and they are referred to as water in their respective worlds. (However, the concept a Twin Earthian has associated with H2O is different, and vice versa, so on and so forth. Objectively the concepts are different.).
2. The meaning of the word as decided by the linguistic communities are different in W1 and W2, and only the one determined by the linguistic community in the "actual" world W1 is water.

These are distinct due to the fact that in one, water has the same *relative meaning* in every world, while in the other, the notion of relative meaning is scrapped and the word water is made rigid with just one *correct* meaning throughout all worlds, even though W2 had a different meaning for the word water.

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Now, if a person who is not of any particular world pointed to a glass containing a liquid and said "This is water," he will (perhaps even unknowingly) intend his explanation only to be accepted if it bears the relation same liquid to the actual world.

If we were to go forward in accordance with theory 1, then it would be assumption 2 that we would have to dismiss, for we would then be associating 'concept' with 'meaning.' Prof. Putnam chooses to go ahead with theory 2 and then dismisses assumption 1.

He says Saul Kripke calls a designator 'rigid' if it refers to the same item in every possible world. In this case, by theory 2, the term 'water' is rigid.

Prof. Putnam says that Kripke was the first to observer the startling consequences this theory has for the theory of necessary truth.

The notion of a *cross-world relation* is now introduced.

If 'water' in W1 bears the relation same liquid to a certain liquid in W2, then the term in whose extension these two liquids lie is called *cross-world.*

Thus, an entity x in an arbitrary possible world is water if it bears the relation same liquid to water in the actual world.

Now, let us assume that I do not yet know the microstructure of water. In this case, my operational definition of water is lacking. Therefore, even though a liquid in Twin Earth may satisfy the current operational definition of water, if the division of linguistic labor is construed across time, then it is *not* water as it would not bear the relation same liquid with water in Earth. The operations known at that point to identify water cannot be regarded as an analytical specification; all of this is on the basis that my operational definition has improved enough to distinguish between the two.

Now, if I discover the microstructure of water, I will realize that the stuff on Twin Earth earlier mistaken to be water isn't really water. Once the nature of water has been discovered, nothing counts as a possible world in which water doesn't have that nature. *It isn't logically possible that water isn't H2O.*

However, we can imagine a future situation wherein experimental evidence leads us to believe that water *isn't* H2O. We can imagine such a situation, but it is logically impossible: such a situation will never happen! The fact *water is H2O* is rationally unrevisable.

So now, the fact that water is H2O is *epistemically necessary,* rationally unrevisable: however, if it is actually true that water isn't H2O, then the fact that *water isn't H2O* will turn out to be metaphysically necessary: the actual true in all possible worlds. Therefore, the fact that water isn't H2O may be epistemically contingent/logically impossible, but it may be metaphysically necessary.

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Human intuition may be mistaken about what is metaphysically necessary; something that is epistemically necessary is not necessarily metaphysically necessary. We may be wrong about certain propositions we believe.

There are certain words which are referred to as *indexical:* words like ‘now’, ‘this’, ‘I’, whose extension varies with respect to the context. For these words, the traditional ‘intension determines extension’ doctrine has not been applied, for the extension varies but the (rather abstract) concept associated with the word remains the same.

Similarly, we can say the word ‘water’, too, is indexical, in a way: if an Earthian and a Twin Earthian say ‘water’, the concepts they have associated with the word is the same, but their extensions (with respect to their own distinct linguistic communities) are different. Therefore, the theory that ‘intension’ is the concept associated with a word and that it determines extension cannot be true for words like the above.

So, one may either say that intension does not determine extension, and the words above have different extensions and the same meaning i.e. intension; or, one may say, like Prof. Putnam has chosen to, that the extension determines the meaning (in the sense of intension) of a word (in accordance with theory 2), thereby giving up the doctrine that meaning are mental entities of any kind, for the extension is determined by the linguistic community.

*Kripke’s doctrine that natural-kind words are rigid designators and our doctrine that they are indexical are but two ways of making the same point:*

Even though the concept associated with and the psychological state two people are in when they understand two terms may be the same, the two terms may differ in meaning (in the sense of both intension and extension) and vice versa.

Kripke writes: Let us provide an object with a name, and a certain description. We do not make the name synonymous with a description and use it rigidly to refer to the object so named even if it doesn’t satisfy the initial description.

In other words, the concept we associate with an object may differ, but its meaning, and therefore, reference of a name, will be the same.

***Let’s be realistic:*** Here, then, is the popular view on meaning:

Let us take the world ‘gold’. This word has not changed its extension significantly in two thousand years. Our operational definition has become a lot more accurate, but the extension of ‘gold’ in standard English and that in Archimedes’ dialect has not changed *much*.

It is plausible that there were pieces of metals which could not have been determined to be gold in Archimedes’ day, and pieces of gold which could not have been determined to *not* be gold in Archimedes’ day.

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Let X be such a metal.

Clearly, X does not lie in the extension of ‘gold’ in standard day English.

Prof. Putnam says that his view is that it does not lie in the extension of ‘gold’ in Attic Greek, either, although an ancient Greek may have *mistaken* X to be gold.

The alternative view is that ‘gold’ means whatever satisfies the *contemporary* operational definition of it is, regardless of how sophisticated the definition is. ‘Gold’ in Attic Greek is whatever satisfied the operational definition of gold then.

When Archimedes was asserting that something was gold, he was not merely saying that it had the same superficial characteristics of gold (for in the most extreme cases, something may be gold and not have the superficial characteristics most gold has), but he was also asserting that it had the same *hidden structure* or ‘essence’ as any normal piece of local gold. Archimedes may have called X gold and he would have been wrong.

*But who’s to say he’s wrong?*

X, after all, fell in the operational definition of gold at that time.

The answer, according to Prof. Putnam, is that *we* are to say that he is wrong, using the best available theory today.

*“For most people either the question (who’s to say) has bite, and our answer has no bite, or our answer has bite and the question has not bite. Why is this?”*

Prof. Putnam believes this is because people are either strongly realistic or strongly anti-realistic in their notions.

To be strongly anti-realistic is to be skeptical about convergence in science. An anti-realist does not see Archimedes’ theory and our theory as two approximately correct descriptions of some fixed same entity. The entity itself is not fixed and is determined by the theory. Using our theory to determine if X lies in the extension of Attic Greek ‘gold’ is no different from using Neanderthal theory. It does not make any sense to do so; one can only use Archimedes’ theory to determine that.

One can only call a proposition true within a certain theory, and not extra-theoretically, and extension is tied to the notion of truth, for extension is just what the term is true of. Therefore, the assertion that ‘X does not fall under the extension of gold in Attic Greek’ will be rejected as meaningless if X did satisfy its operational definition in Archimedes’ theory. One may say that X is gold was warrant ably assertible in Archimedes’ time and not now.

This, Prof. Putnam feels, is preferable to retaining the concept of extra-theoretic extensions by using operational definitions.

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Scientists do not use operational definitions as if they are necessary and sufficient conditions, but rather approximately correct characterizations. They speak as if later theories in a mature science of the same terms are better characterizations. Truth is essentially an extra-theoretic and realist notion.

*"A second motive for adopting an extreme operationalist account is a dislike of unverifiable hypotheses."*

Another point of view is that even if Archimedes though X is gold, Archimedes could not in principle have known that it was false. This is not exactly the case. There are probably a host of situations in which X would not behave like normal gold, and Archimedes would have the ability to perform all these experiments and then conclude that X may not be gold.

To conclude, no operational definition provides a sufficient and necessary condition.

***Other senses:*** Demigod Hilary Putnam talks about how the meaning and extension associated with a certain term may differ from context to context.

We cannot comment on what the predominant stereotypic criterion is, and cannot know the degree of deviancy from what the actual meaning of the word is, because metaphysical meanings are unknown to us, and we are subscribing to a theory of convergence.

Often, the superficial characteristics may be more telling than the microstructure. This is elucidated and backed up by an example.

***Other words:*** Our points apply to words apart from natural kind words as well-words such as 'pencil', 'chair', 'bottle' etc. The traditional view, Prof. Putnam says, is that these words are defined by conjunctions of properties, and that some of these properties are *necessary,* for e.g. *pencils are artifacts.* This is held to be *epistemic* necessity-in fact, analyticity-as opposed to *metaphysical.*

However, it is Prof. Putnam and Robert Albritton agree that it is conceivable that we may one day discover that pencils are really organisms. It follows that *pencils are artifacts* is not epistemically necessary: it is rationally revisable.

We have not shown that there is a possible world in which pencils are organisms. Pencils are what pencils are in our world. But we have shown that there is a possible world in which certain organisms are the *epistemic counterparts* of pencils in our world. If it had turned out that what Twin Earthians believed to be pencils were organisms, we would not say that some pencils are organisms. We would say, "The things on Twin Earth that pass for pencils aren't pencils but organisms."

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*'Pencils are artifacts'* is rationally revisable. The epistemical meaning of pencils may change. It is an indexical word: when we say 'pencil', we refer to that which has the same nature as pencils in our world.

However, 'Pencils are artifacts' is metaphysically necessary. This is because pencils are artifacts by definition, unlike water, which merely had the microstructure H2O. Saying 'pencils are artifacts' is rather like saying 'bachelors are unmarried'. They are both analytic and metaphysically necessary.

Katz gives the example of us finding out that cats are robots controlled from Mars. He says that we would then conclude, 'There are no cats in the world.' However, he is confusing metaphysical necessity with epistemical necessity. 'Cats are animals' is rationally revisable. Our epistemical meaning of cats would change. However, we would not, in this case, say, 'There are no cats in the world.'

Hilary roasts Katz by calling what he did bad linguistics and bad rational reconstruction.

We don't use 'cat' as synonymous with a description because we know enough about cats to know that they have a microstructure, and even though we don't know that microstructure, will use the name rigidly to refer to things with that microstructure. This shows that we may know that some things have a common hidden structure, but don't have the knowledge to describe all those hidden structures.

However, *it is more likely* that we use pencils as a one-criterion word and say 'There are no pencils in the world' if we find out they are organisms, because we (think we) know a more concrete necessary and sufficient condition for being a pencil than a cat, and may make it synonymous with a loose description.

Most words, even though they may be introduced as one-criterion words, tend to develop a natural-kind sense. If one were asked if it was possible that pediatricians aren't doctors but Martian spies, the first answer that comes to one's mind is 'yes', thus robbing the word 'pediatrician' of its one-criterion nature.

Some pure one-criterion words are 'whole' and 'hunter'.

One-criterion words can be called rationally unrevisable as well.

(This does not make their descriptions analytic.)

***Meaning:*** To recap: the meaning of a word in the sense of 'extension' is socially determined, and may differ from context to context, and the speaker may or may not know the extension; the contribution of society and the real world is thus included in this theory of meaning.

'Extension' was but one sense of meaning. However, we gave up the doctrine that intension is something like a speaker's concept. What, then, is intension?

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*“The traditional problem of meaning splits into two problems”:*

The first is the determination of extension. Prof. Putnam says that since it is determined socially, it is more properly a problem for socio-linguistics to spell out how exactly the division of linguistic labor works, as well as the workings behind the reference of a name.

The second is *individual competence.*

Let us return to this problem.

Prof. Putnam also briefly comments on how proper nouns are different from natural-kind words, because one may use the proper noun ‘Sanders’ correctly without knowing anything about the referent except that he is called ‘Sanders’. However, one uses natural-kind words correctly only when one knows a good deal about the referent.

***Stereotypes and communication:*** We would say that a person has *acquired* the word tiger if his use passes muster and its extension in his idiolect is the same as the socially determined extension.

One may say that the word ‘tiger’ has been acquired if the speaker knows a minimum level of its stereotype.

This level, however, depends heavily upon both the culture and the topic.

Suppose that there is a tribe in which it is necessary to know the different between ‘elm’ and ‘beech’ to have acquired the word. In our culture, however, suppose that one only needs to know that both are trees to have acquired the words. Suppose that this culture’s word for ‘elm’ was ‘uhaba’’. Then, ‘elm’ would only be an *approximate* translation of uhaba’. This is one of the many problems of radical translation, although not the abstract one Prof. Quine talks about.

***What stereotypes are:*** A stereotype is a conjunction of predicates that may or may not enable a person to recognize the object. It consists of *standardized* features that are *typical.* Not all the criterion used by the experts need be there. The predicates in the stereotype are determined by the linguistic community as a whole, experts and nonexperts. Stereotypes are not analytical, and are based on normal members that fall into the extension of X. There may yet be nonnormal members that do not agree with the stereotype and yet fall into the extension of X.

Stereotypes may be incorrect, too. However, most of them are-*have* to be-pretty accurate.

***The ‘operational meaning’ of stereotypes:*** One may idealize an operational definition for stereotypes and fix a set of predicates included in the stereotype to be considered obligatory to convey when one asks the meaning of a word. However, this is merely an idealization. The information regarded as obligatory to convey differs with respect to context, culture and person.

***Quine’s ‘Two dogmas’ revisited:*** A sentence is called analytic on two basis:

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1) If it is seen as unrevisable by some community. However, Quine argues that sentences which are not analytic enjoy a high degree of unrevisability as well. Therefore, immunity from revision becomes a matter of degree. Quine coins the ‘erm ‘centrality’ for this.
2) The second is being *called* analytic. A sentence is taken as analytic if experts call it analytic, or if it is deducible by substituting synonyms for synonyms from a ‘Meaning Postulate.’ However, the sentence asserting synonymity then needs to be analytic, and this leads us back in a circle. Similarly, the sentencing asserting that what the experts call analytic is analytic needs to be analytic. This leads us back in another circle. Therefore, the word ‘analytic’ remains unexplicated.

This leads us to the conclusion that analyticity is either centrality misconceived or it is nothing. Continuing to identify analyticity with centrality will lead to classifying obviously synthetic-looking sentences like ‘space has three dimensions’ as analytic due to its high degree of centrality.

One may argue that there does exist a highest degree of centrality, i.e. absolute unrevisability. However, there is a convincing argument against this as well.

Reichenbach showed that there exist a set of principles whose conjunction is incompatible with the principles of special relativity and general covariance. These were regarded as synthetic a priori by Kant. Therefore, one has to either revise them, or give up on normal induction-induction being yet another a priori principle.

Philosophers nowadays were trying to classify that which Kant called synthetic a priori as analytic and identifying a prioricity with analyticity.

So one comes to the conclusion that analyticity can either not be identified with centrality, or that analytic sentences cannot conjunct, or that analytic sentences may turn out to be empirically and operationally false.

Identifying analyticity with truth has also been devastatingly criticized by Quine but this is irrelevant.

Some have tried arguing by distinguishing between sentences and statements: sentences are all revisable but some statements are not. Revising a sentence with a new sentence which is not synonymous to the previous sentence is not necessarily the same as revising the statement expressed. It is a change in meaning and not a change in theory, they say. This is similar to what we previously talked on concepts changing but meaning remaining invariant.

But this reduces once again to explicating analyticity in terms of synonymity. And additionally, meaning change and theory change cannot be separated. Theory is a function of meaning.

Let us return to the notion of meaning we are trying to explicate.

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Stereotypes are not analytic. Meanings are, as we have seen, revisable, and so are stereotypes. Linguistic obligation is not an assurance of truth. Therefore, Quine's arguments are not applicable here.

***Radical translation:*** To translate a word from one language to the other, one not only needs to know the stereotypes of the words in both the languages but also their socially determined extensions from the experts.

To elicit stereotypes, one needs to translate the basic vocabulary of the other language.

***A critique of Davidsonian semantic theory:*** Donald Davidson suggested that a theory of meaning may be modeled on truth definitions. He divides it cleanly in two sects, similar to our 'extension' and 'intension':

1) One has a set of rules specifying under what conditions a certain word is true of something
2) For sentences, a set of rules specifying the conditions under which the sentence is true as a function of the shorter sentences it is built up of.

Words may be treated as one-word sentences, e.g. 'snow' as 'that's snow'.

What 2) intends is not that there be a rule for each sentence not handled under 1)-for that would require an infinite number of rules-but a rule for each sentence *type.* For example, one rule may be: if S is (S1&S2), S is true only if S1, S2 are both true.

In this way, the meaning of 'and' and the structure '-&-' is specified. Davidson feels that an *entire* theory of meaning of words and structures can be constructed like this.

However, there are some difficulties.

For all words, an extensionally correct truth definition is in no sense a theory of its *meaning.* It merely specifies what the term is true of.

According to Davidson, what we need to do is develop a theory of *translation.* Then, if we had definition for a good translation, we could rule out the meaning *x is H20* as bad on the grounds that it is not an acceptable translation of *x is water.*

This comes very close to saying a theory of meaning is a truth definition plus a theory of meaning.

Davidson says that the theory of translation's basic units must be sentences and not words because our evidence in linguistics consists of assent and dissent from sentences.

Putnam, Hilary. (1975). The Meaning of "Meaning". University of Minnesota Press, Minneapolis. Retrieved from the University of Minnesota Digital Conservancy, http://hdl.handle.net/11299/185225.

The word ‘and’ is a special case and can have a meaning specified in the above manner only because the stereotype associated with it is strong enough to be a sufficient and necessary condition.

Moreover, what Davidson is saying is that, in the sentence **W is true of x if and only if ____,** where ___ is the truth definition or meaning of x, the ____ can only be filled by a word or a phrase which a) is extensionally correct, b) which is not W or a syntactic variant of W and c) is a translation of W. If W is ‘elm’, it seems highly unlikely to fulfill all three criterions simultaneously.

Even where the language contains two exact synonyms, the situation will not be better because their definitions will be cyclic on each other.

Additionally, the claim that the theory of translation’s basic units must be sentences said by the speaker and not words is either vacuous on one interpretation or plainly false on the other.

If the speaker replies in a sentence when questioned about individual words or morphemes or syntactic structures, and these sentences can be included as the basic units, then the restriction to use merely sentences seems to rule out nothing whatsoever.

On the other interpretation, Davidson is saying that such sentences cannot be used. There is no reason to believe this, and no reason to believe that the linguist cannot have access to such data.

Prof. Putnam notes that the procedure Quine and Davidson claim is the only possible one-going from whole sentences to words-is the opposite of the procedure upon which every success ever attained in the study of natural language has been based.

***Critique of California semantics:*** Let f be a function such that the value f(x) in any possible world x is always a subset of the set of entities *e* in x. Then, f(x) is called the *intension.* A term T has meaning for a speaker X if X associates T with an intension f. The term T is *true* of an entity e in the possible world x only if e exists in the world x and belongs to the set f(x)- in other words, if it belongs to the intension of the term T. By ‘associated’, we mean grasping the intension *and* knowing it is the intension of T. In his book *Meaning and Necessity,* Carnap describes extension as a function of intension.

This theory has some problems.

Firstly, there is the totally unexplained notion of *grasping* an intension. Identifying it with mathematical set-theoretical relations results in us not being able to explain the notion of grasping an intension. We cannot say that thinking of an intension is using a word or substitute for a word which *refers* to the intension in question, since *reference,* i.e. being in the extension has just been defined in terms of intension.

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Therefore, California semantics accounts for what intensions *are,* but not of how we can 'grasp' them, etc.

Carnap may not have noticed this difficulty because he was a verificationist: he believed that if one had the ability to verify if a given entity falls under the extension of a term, one knew the intension of a term. In other words, if one could know whether or not an entity *e* was part of the set f(x), one had grasped f(x). However, he later modified his view when he realized the decision of whether or not *e* was a part of f(x) was taken collectively. Additionally, Prof. Putnam feels the verifiability theory of meaning is false, but shall not discuss this here. At any rate, if one is not a verificationist, one cannot see California semantics as a theory at all, since the notion of *grasping* an intension has been left totally unexplained.

If we assume that 'grasping an intension' is supposed to be a *psychological state,* then California semantics is committed to both the principles we criticized. It identifies grasping the intension as a psychological state, and it says that intension determines extension. Additionally, it says that intension is something in the mind of the individual, and hence that extension is in the mind of the individual, which again goes against our doctrine.

Another reason we do not subscribe to the Californian theory of semantics is that all the terms T are rigid. If the meaning of the entity *e* that falls under the set f(x) associated with T changes (maybe when the entity *e* is referred to in a difference context), then, according to the Californian theory of semantics, it would start being referred to by another term T. Prof. Putnam does not subscribe to this and holds the reference of a name rigid.

It may be argued that an indexical word has a fixed set of intensions.

However, this mode of representations is not possible. The word 'I', for example, is indexical, but not vague-which is to say, it cannot be represented as a family of non-indexical words.

Similarly, the reason my individual grasp of 'elm' does not fix the extension of elm is not because the word is vague, but because it is fixed by the community via a division of linguistic labor.

But, one might reply, couldn't actual language be replaced by one in which all indexical terms were replaced by coextensive terms which were not indexical and 2) the division of linguistic labor was eliminated by making every speaker an expert on every topic?

The answer is no.

Suppose, however, that the answer were 'yes.' What would this mean?

This language would be in no sense similar to our actual language, and not just due to the vagueness of words it would have.

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*Every single word,* except perhaps some very few sense data and other select words are indexical. There is simply no reason to believe we can reduce our language to nonindexical language in principle.

The elimination of linguistic labor would be carried out in principle, but such a society where everybody is considered an expert would be so radically different from our human society that there is no motivation for taking such a world with such a language as a model for the analysis of human language.

Philosophers have been modifying Californian semantics and have suggested that the intension be a function of not just possible worlds but of possible worlds, a speaker, and a nonlinguistic context of utterance, thus making it possible to introduce some kind of division of linguistic labor in the model.

David Lewis is developing these ideas, and 'water', for example, would have the same *intension* on Earth and Twin Earth but different extensions. In essence, Lewis retains assumption 1) in our paper and discards assumption 2), while we did the opposite.

There is no reason as to why these formal models wouldn't work or probe valuable after having undergone such modifications.

***Semantic markers:*** We now have a great deal of work ahead of us to consolidate our theory. We must work on what sort of items can appear in stereotypes and work out a convenient system for representing stereotypes. This is the province of psycholinguistics. Prof. Putnam has, however, one idea that he believes can be of value. He calls it the *semantic marker.*

Consider the stereotype of 'tiger'-striped, big-cat-like, animal, etc. However, it is clearly evident that the condition 'animal' has a very high degree of centrality or unrevisability, relative to the other conditions. Similarly, 'living thing' to clam, 'day of the week' to Tuesday, all are a part of the stereotype with a very high degree of unrevisability and also form part of a widely used *system of classification.*

Prof. Putnam feels that these category-indicators with a high degree of centrality should be used as markers and be part of the word's stereotype.

He finds it interesting that when Katz and Fodor originally introduced the idea, they wanted to exhaust the meaning of the word with both a list of such markers and the remaining features, which they simply called 'distinguishers.'

They wanted these two to always give a necessary and sufficient condition for membership in the extension of a term. However, we hold that the extension is decided by the community, and this hence implies that everyone knows the necessary and sufficient condition for membership in the extension of, say, 'gold', 'elm', etc-which we know is not the case. Later, Katz demanded that all the features constitute an *analytically* necessary and sufficient condition for membership

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in the extension and dropped the distinction between markers and distinguishers, for then they would all have an infinitely high degree of centrality.

Prof. Putnam feels the original distinction between the two was sound, provided one drop the idea that the distinguisher along with the marker provides a necessary and sufficient condition and that any of this is a theory of analyticity. Semantic markers cannot provide a necessary and sufficient condition for membership in the extension, though, because although they are highly unrevisable, they are not analytic.

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