Type-Token Dichotomy in the Identity Theory of Mind

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Abstract
Identity theory of mind occupies an important place in the history of philosophy of mind. According to his theory mental events are nothing but physical events in the brain. This theory came into existence as a reaction of behaviourism and developed by U. T. Place, J. J. C. Smart, H. Feigl and others. But there is a debate among the profounder of the theory and this is- whether it is said about concrete particulars, (e.g., individual instances of occurring in particular subject at particular times), or about a kind to which such concrete particulars belong. With this question two answers are found and they are called Type identity and Token identity. According to token identity theory, every concrete particular that falls under a mental kind can be identified with some physical happenings. Type identity theory, on the other hand, holds that mental kinds themselves are physical kinds. Thus in this article I shall try to delineate the different arguments given by the profounder of this theory in favour of both the theories and finally show that which one is stronger than the others.
Keywords: Consciousness, Event, Pain, Token Identity, Type Identity

Introduction
In the twentieth century the Identity Theory of mind occupies an important place in the philosophy of mind. Philosophers like U. T. Place, J. J. C. Smart, H. Feigl and others developed this theory. The central theme of this theory is that mental events and physical events are identical. This theory is of two forms - Type and Token identity. But before going to these different types of this theory it is important to have a clear conception of the term "events" which is standardly used in identity theory while talking about mind that mental events are physical events in the brain. Naturally an obvious question arises about the meaning of the term 'event'. Kim (2006) points out two alternative approaches and he says that the identity theory can be understood by making the difference between these two alternatives. Of these two views of events, one takes events as basic concrete particulars that are available in this world. These concrete particulars also include the material objects around us. These concrete particulars are of different kinds and possess different kinds of properties as we find in material things. In this sense an explosion or the collapse of a bridge may be called events. Similarly, a swift, violent and unexpected earthquake can be called events. This view also asserts that a particular occurrence of pain is an event because it belongs to a category of events called pain and all the properties of pain event are also present in this particular occurrence of pain. This particular pain event can have other properties also if it falls under other event kinds. If it is said that pain is dull or pounding pain or that it is caused by a decayed tooth or that pain wakes up a person from sleep in the middle of the night and it continues more than three hours then pain possesses the properties of these different events. Kim claims that pain must be brain event and the event falls under the neural event kind C-fibre excitation. All this is true on condition that the identity theory is correct.

In the explanation given above it is found that an event is taken as basic particular. Thus to say an assertion that a pain event, e, is a C-fibre excitation is to say that e belongs to two different kinds of events, such as, pain and C-fibre excitation. It means that e is a pain and at the same time it is C-fibre excitation. There is another way in which it is said that both the properties of pain and C-fibre excitation are present in e.

There is another sense in which the term 'event' is used by Kim. According to this sense, at a particular point of time when an object exemplifies or instantiates a property, it is called event. Thus 'I am now in pain' is an event. Similarly,' you are now in pain' is also an event. But these two events are distinct. Kim says that two events *e* and *f* are said to be same event on condition that they exemplify or instantiate the same property possessed by one and the same object at the same time.

Type and Token Identity Theory
The difference between type-token identity is implicitly contained in various mind-brain identity theses. Among many thinkers Nagel is one who distinguishes between 'general' and 'particular' identities in connection with mind-body problem. Charles Taylor (1967) accepted this distinction of Nagel and says that "the failure of (general) correlation would still allow us to look for particular identities, holding not between, say, a yellow afterimage and a certain type of brain process in general, but between a particular occurrence of this yellow afterimage and a particular occurrence of a brain process".

When it is said that mental things are the same as physical things or both are distinct, a question naturally springs up: whether it is said about concrete particulars, (e.g., individual instances of occurring in particular subject at particular times), or about a *kind* to which such concrete particulars belong.

According to token identity theory, every concrete particular that falls under a mental kind can be identified with some physical happenings. In this connection this theory refers the instance of 'pain' which is not only an instance of mental state (e.g., pain) but also an instance of physical state (say, C-fibre excitation).

Type identity theory, on the other hand, holds that mental kinds *themselves* are physical kinds and in that sense token identity is weaker than type identity. In explaining the relation between type identity and token identity Jerry Fodor (1974) says that the former entails the latter but not vice versa. Because if mental kinds themselves are physical kinds, then a particular instance of mental kind will also be a particular instance of a physical kind. But in no way the former is identical by the latter because a concrete particular that belongs to both mental kind and a physical kind is a contingent fact. As such it cannot guarantee that mental kinds and physical kinds are identical. Thus the type identity theory claims that there is a contingent relation between mental states, such as, pain and physical states (events), such as, C-fibre excitation. Similarly, mental states (events) are theoretically reducible to physical states (events) .

It is to be mentioned here that originally the concept 'type' and 'token' are applied to words and analogically used in the identity theory. Let a sentence be taken 'love and love and love'. Here found only two types of words such as, 'love' and 'and'. But in another sense there are five words. Each of these words is called a 'token word'.

Explaining the token identity Place says,
"For both 'His table is an old packing case' and 'The morning star is the same object as the Evening star' are cases of token identity, cases where two descriptions with different senses *just happen* to apply to one and the same particular object. Such cases are extremely common. Indeed, any non-analytic proposition that asserts the co-application of two conceptually unconnected predicates of the same object is of this kind".[1]

But Place asserts that the statement 'consciousness is a process in the brain' is not a token identity. Because in that case two types of things are found – one is consciousness and another is a certain brain activity although the brain activity is yet not a specified type. These two types not only just describe the thing rather we can apply the features in two descriptions equally. But if the same feature is found absent then it leads us to withdraw the both in old cases. This kind of identity, according to Place, is a typical case of type identity. He further says that the typical token identity statement like "His table is an old packing case" is a contingent and synthetic one, on condition that it is found true and empirical verified. But a typical type identity statement like "Water is H_2O" is a necessary and analytic one as because their denial leads to self-contradiction. It is to be mentioned here that in his paper "Is Consciousness a Brain Process" Place did not introduce the terms 'token' and 'type' and thereby he did not use the word 'is' in the sense of identity. In the passage of his 1956 paper he introduced the statement "His table is an old packing case" as an example and attempted to answer this question. But he admits that the passage which he wrote in 1956 was not clearly expressed. But in 1997 he presented a paper in a conference at the University of Leeds in connection with forty years celebration of Australian Materialism in which he fulfilled the deficiency of his 1956 paper. Since then his revised version was incorporated in his 1956 paper that we find in the revised edition of W.G. Lycan's *Mind and Cognition* (1999).

Thus the new addition which Place claims in his (1997) were that token-identity statement is typically synthetic. But type-identity statements are typically analytic. Moreover, token identity statements are contingent but type-identity statements are necessarily true. Place further mentions the reason for this claim. He says

"The reason for this is that in the case of predicates that are co-existence, or where the extension of the one includes the extension of the other, a conceptual connection develops between the two. The only exceptions to this rule are cases where the extensional equivalence or overlap is not a matter of common observation, where the observations on the basis of which the predicates are assigned are widely separated in time and space"[2]

In support of the above passage Place cited the example of water and H_2O. He says that two terms 'water' and 'H_2O' are co-extensive. On observation a sample is described as 'water' and the same thing discovered later we describe as 'H_2O'. separated. It is well established that both the predicates for water have the same extension and that is why it is widely known that 'water is H_2O'. This statement, according to Place, is analytic and necessary truth. A liquid thing is in fact water, and chemical test shows that the same sample has the chemical composition H_2O. From this observation a conceptual connection is developed between water and H_2O.

Place says that in the case of consciousness and a particular pattern of brain activity, a similar outcome can be expected. Though this is yet to be identified but can be presumed. It is by future neurological research that a hypothesis of the existence of such a pattern of brain activity will be confirmed or disconfirmed. Place hopes that if both the existence and the nature of the pattern of the brain activity in which consciousness consists of are established by the neurological research; and if these results are reached to the people widely that, then we can expect a development of a similar analytic and necessary

connection between the two. This probability is increasing day by day.

It is to be mentioned here that token identity theory is favoured by philosophers, theologians and the peddlers of superstition. Type identity theory is committed to prediction as to what future empirical research will reveal. But token identity is not committed to any prediction. It does not rest on the outcome of future psycho-physiological research it is rather rest on an apriori argument. This view is originally formulated by Davidson (1970).

But in spite of all these merits that are found in favour of token identity theory, Place favoured the type identity theory. His conclusion regarding type-token distinction is that-

"I conclude that, apart from the dubious advantage that it is less susceptible than is the type identity variety to empirical disconfirmation, token- identity physicalism has nothing to recommend it over its more robust type-identity rival. Moreover, so far from protecting physicalism from empirical disconfirmation, the token-identity version is itself in serious danger of being side lined, if not actually falsified, by the emergence in the light of current and future research of the kind of 'perfect correlation' between psychological and physiological measures that according to originator of the identity theory, psychologist E.G. Boring (1933, p. 16) constitutes identity".[3]

He further says that if by using the recently described techniques of brain imaging, it is possible to have a perfect correlation between mentally and physically specified variables then in that case we can confidently assert that at least *some* specifiable type-identity statements are known to be true. When this will happen, token-identity physicalism will not be favoured by anybody. This expectation, according to him, is more than likely to be true.

Putnam holds the view that identity between mental and physical events that is asserted by the token-physicalism is mysterious and unexplained. Because this theory does not provide any means by which it can be determined that which physical tokens are identical with which mental states. That is why we cannot identify someone's psychological and perceptual states in physical terms. Putnam thinks that this problem is something which an identity theorist should be aware of.

Davidson (1980) formulated an interesting form of token identity which is known as anomalous monism. According to this theory, under the neural descriptions causal relations occur. It does not occur under the description of psychological language. It is an intentional predicate which is used by the descriptions of psychological language but these predicates do not occur in law statements due to indeterminacy of translation and of interpretation. Thus it is only on the level of individual events that mind-brain identities can occur. If it is found that two events share the same causes and effects then characterized under different descriptions, they must be the same event. Hence, in identifying a token mental event with a token physical event we need to determine whether they share the same causes and effects or not.

Quine has observations on Davidson's principle of individuation and says that the principle is viciously circular. Because this principle individuates events by quantifying over causes and effects which are, themselves, events. Putnam draws our attention on this issue in the following way. According to him, someone may imagine to come to the conclusion whether the firing of a small group of neurons with an "experience of blue" is or is not token identical. There will have a host of effect in the firing of the group of neurons, for example, excitation of other neurons. Ordinarily, we would not think or speak of this host of effects as the effects of our experiencing blue. If it is true that experience of blue and the firing of the group of neurons are identical then it is also true that those other excitations are effects of the experience of blue. Again, if it is true that experience of blue and the activity of a larger part of the brain, including the other neurons in question are identical, then those other excitation events will not be the effect of event rather these will be part of the event, that is, the experience of blue. Here, by employing Davidson's criterion one cannot decide which group of excitation events is identical with the experience of blue. There is no criterion to decide the identity. It is a unique sort of identity.

Putnam observes that there is a problem of circularity in the above discussion. Because, before determining the neural event which is identical with sensation of blue one will have to decide the relevant event. But here one has already decided on the identity in question. Putnam says that as there is no non-circular way by which we can determine the specific mental events and the specific neural events which are identical for the supposed identity so there is no possibility of objective evidence. From this it is evident that to individuate mental events there are no physical means and thereby, to produce sensations in normal observers, there is no account of the causal mechanisms. Thus Putnam believes that anomalous monism fails to have explanation for one of the basic facts of perception.

Quine's formulation of objection and the force of his criticisms were gladly accepted by Davidson. When Quine says that the suggested criterion for individuating event is radically unsatisfactory, Davidson does not deny.

In describing the nature of token physicalism Kim says that it is a form of non reductivism because this theory says nothing about the relation between mental properties and physical properties. But for the reduction of mental to physical, such relationships are generally taken to be necessary. But all this does not mean that mind-body reduction is denied by token physicalism; rather this theory has commitment on this issue. The philosophers who support token physicalism believe that reductionism is false. They also claim that token physicalism is sufficiently physicalism.

In contrast to token physicalism, Kim says that, type physicalism is a form of 'reductionist' or 'reductive' physicalism. Because this theory claims that over and above physical properties there are no mental properties. This theory holds that mental properties are just physical properties and therefore these are identical. This theory thus entails that over and above physical facts there are no mental facts. It is true that there are mentalistic expressions which we continue to find out as because these are useful and practically indispensable. But type physicalism believes that in principle physical language is sufficient to describe all the facts and therefore expulsion of mentalistic expressions will not affect the total descriptive power of our language.

While contrasting the type physicalism with token physicalism, Kim says that as a materialistic doctrine the former is a strong and robust one and that is why this form of physicalism is classic identity theory. Token physicalism is a weak doctrine. It only says that by the same type of entities the mental properties and physical properties are instantiated. An event or occurrence that has mental properties also has some physical properties or other. But about the relationship between mental properties, such as, pains, itches, thoughts, consciousness, and physical properties, such as, neural events, this theory has no comment.

From the above analysis it is clear that Kim extends his strong support in favour of type physicalism. But in the end he says,

"Perhaps it is too strong to be true." [4]

Conclusion

In between these two forms of identity it is type identity which has sufficient ground to be acceptable than that of the token identity theory. Because the former deals with general problem while the latter with particular event. This point is very reasonably cited by Fodor (1974) when he says that type identity entails token identity but not vice versa.

Type identity theory claims that mental states, such as 'pain' is identical with physical states such as c-fibre excitation. Identity, according to this theory, is contingent and theoretically mental states are reducible to physical states. It is true that there are drawbacks of type identity theory. But type identity theory is more acceptable than token identity.

References

[1.] Quoted from Identifying the Mind, Selected Papers of U. T. Place, p-82

[2.] Ibid. pp-83-84.

[3.] Ibid. pp-89

[4.] J. Kim*: Philosophy of Mind*, p-105

[5.] Armstrong, D.M.: *Bodily Sensations*, London, Routledge, 1961.

[6.] Armstrong, D.M. 1968a: *A Materialist Theory of the Mind*, London, Routledge. Second Edition with new preface 1993.

[7.] Beakley, B. and Ludlow, P. (ed):: The Philosophy of Mind, Classical Problems/ Contemporary Issues, New Delhi, 2007.

[8.] Chalmers, D.M.: *The Conscious Mind*, New York, Oxford University Press, 1996.

[9.] Chalmers, D.M.: Philosophy of Mind: Classical and contemporary Readings, Oxford University Press, USA, 2002.

[10.] Fodor, Jerry A "Special sciences." *Synthese* 28:97-115, . (1974).

[11.] Jackson, F., Pargetter, R. and Prior, E.: 'Functionalism and Type-Type Identity Theories', *Philosophical Studies*, 42, 209-225, 1982.

[12.] Kim, J.: *Philosophy of Mind*, Westview Press, 2006.

[13.] Lewis, D.: *Philosophical Papers*, 1983.

[14.] Nagel,ThomasPhysicalism." *Philosophical Review* 74 (July):339-56, (1965).

[15.] Place, U.T.: *Identifying the Mind*, New York, Oxford University Press, 2004.

[16.] Putnam, H.: 'Minds and Machines'. In Hook, S. (ed.) *Dimensions of Mind*, New York, New York University Press, 1960.

[17.] Putnam, H.: 'The Meaning of "Meaning" '. In Putnam, H. *Mind, Language and Reality*, Cambridge, Cambridge University Press, 1975.

[18.] Quine, W.V.: *Word and Object*, Cambridge, Mass., MIT Press, 1960.

[19.] Searle, J.: *Mind, A Brief Introduction*, New York, Oxford University Press, 2004.

[20.] Shaffer, J.A.: *Philosophy of Mind*, New Delhi, 1949