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# Anomalous Monism and Mental Causality

On the Debate of  
Donald Davidson's Philosophy of the Mental

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*There are no such things as minds, but people have mental properties, which is to say that certain psychological predicates are true of them.*

Donald Davidson

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## Abstract

*Things and events are fundamental entities in Davidson's ontology. Less distinctly are the ontological status of properties, especially mental types. Despite of some eliminative allusions weighty reasons to understand Davidson's philosophy of mind as including intentional realism. With it the problem of mental causality arises. There are two striking solutions: the epiphenomenalism of mental properties and the downward causation of mental events. Davidson cannot accept either. He claims to justify mental as supervenient causality in order to integrate it thus into physicalism (his version of monism). But his argument prove at best the explanatory, not the causal relevance of mental properties. For that and other reasons Davidson fails the aspired synthesis of a sufficient strong physicalism and the autonomy of the mental; a project whose realization is hard to achieve any how.*



## 1. Preliminary Remarks

Davidson's philosophy of the mental, first outlined in his classical article "Mental Events" (1970), is of particular interest because anomalous monism is a challenge for materialism in contemporary philosophy. Anomalous monism indeed denies the existence of spiritual substances and pure mental events but Davidson nevertheless emphasizes that a "complete understanding of the workings of body and brain would not constitute knowledge of thought and action" (1973: 251). No wonder that such a position creates irritation within the mainstream of materialism.

Davidson's writings also initiated a still ongoing debate on mental causality. The main question is if and how can the mental play a causal role within the framework of a materialist ontology. Central aspects of this debate make up the second and third section of this essay. First we present some presuppositions for the problem of mental causality as it emerges with Davidson's philosophy of mind.

The core of Davidson's philosophy of mind can be seen as centered around three principles (*CI*, *NC*, *MA*). From these the thesis of anomalous monism (*AM*) is concluded (Davidson 1970: 208-9, 1974: 231). The principles are:

*The principle of causal interaction (CI):*

Some mental events interact causally with physical events.

*The principle of the nomological character of causality (NC):*

Causal relations between events are necessarily governed by strict laws.

*The principle of mental anomalism (MA):*

Mental events cannot be subsumed under strict laws.

Together with the additional assumption that all mental events stand in causal relations and these causal relations are governed only by strict physical laws *AM* follows: all mental events are physical events.<sup>1</sup>

<sup>1</sup> Davidson tones down *AM* (1970: 224). He intends to show only that mental events which are causally related to physical events are also physical. But usually *AM* is understood without this restriction and even expanded to a general monism, for which all causally connected events are physical events (Davidson 1987: 45; Kim 1998: 93). General monism follows from *NC* and the assumption that *all* strict laws are physical laws.

Yet mental events cannot be explained completely in a physical way because *MA* implies that mental properties or concepts generally cannot be reduced to physical properties or concepts (Davidson 1970: 213-14). *AM* asserts the identity of mental and physical event tokens but *not* an identity of types. It is an *ontological* monism combined with a *conceptual* and *explanatory* dualism (Davidson 1997a: 7)<sup>1</sup>.

To assert token identity and to reject type identity presupposes a coarse grained concept of events. Davidson (1967: 137) characterizes events as particulars, as unrepeatable and dated entities. They are individuals that belong to the ontologically indispensable equipment of the world. The causality of events is “. . . the cement of the universe; the concept of cause is what holds together our picture of the universe, a picture that would otherwise disintegrate into a diptych of the mental and the physical” (Davidson 1980: xi). Davidson’s coarse grained conception of events differs from fine grained notions. Kim (1976), for example, defines fine grained events as exemplifications of a constitutive property by a substance at a certain time. That is, for him events are structured entities consisting of three components: substance, constitutive property and time. If we speak of events in the following pages we assume only a coarse grained conception.<sup>2</sup>

We use the term “physicalism” here in line with the current philosophical trend – and in contrast to a pure linguistic interpretation – primarily as an ontological term. Thus, we see no major difference between „physicalism“ and “materialism”. Kim (1989a, 1993: 373-74, 1997: 185) often uses both terms synonymously. Davidson uses the adjective “physical” often in a wide sense. Whether a vocabulary or a description is physical is to be fixed “relative to the mental . . . so to speak recessive . . .” (Davidson 1970: 211) All statements without intentional terms that are about corporal (spatiotemporal) phenomena are in a broad interpretation physical. Besides that Davidson also uses a narrower concept of the physical inspired by the natural sciences. Physical entities are entities being described in the vocabularies of the natural sciences. We therefore accept with the term “physical” a certain indetermination. This does not irritate, if we assume that the vocabulary of

1 See capt. 3.

2 A Kim-event itself can have various properties and can therefore be described in many ways but this differs from the way Davidson-events allow for several descriptions. Only the constitutive property of events is exemplified by the substance of the event. Events are identical *iff* all their corresponding components are identical. If, for example, a person *x* has a particular pain of type *M* at time *t* that is also correlated at *t* with a neuronal state of type *N*, and *M* and *N* are constitutive properties, then we have one and the same event only in case the condition *M=N* is satisfied. Token identity therefore implies type-identity within fine grained conceptions. A coarse grained Davidson-event in contrast can fall under several different types or concepts even if these are not coextensive. Davidson (1969: 179-80) identifies events *iff* they have the same causes and effects.

specific sciences except for intentional terms can be reduced in principle to physical concepts. It is also to note that the concept of natural law is ambiguous. It can be understood linguistically as a statement of law and also in a non-linguistic way as an objective state of affairs to which such statements refer. The context in which we use the expression will make its meaning transparent enough.

Davidson characterizes a strict law as “a generalization that was not only “law like” and true, but was as deterministic as nature can be found to be, was free from caveats and *ceteris paribus* clauses; that could, therefore, be viewed as treating the universe as a closed system” (Davidson 1993: 8, see also 1970: 219, 1974: 230; on the problem how far our ideal theory is deterministic in nature, see 1970: 219) On the other hand, *ceteris-paribus*-laws (*CP*-laws) are only valid if certain conditions are satisfied that cannot be specified at the moment or in principle.

It follows from Davidson’s realistic interpretation of natural sciences that a true universal and closed physical theory implies the *ontological principal* of the causal closeness of the physical world (*CclW*). Its supposition is of decisive significance for the question whether and how AM can embrace mental causality.

In contrast to *CI* and *NC* Davidson has argued for *MA* by using three strategies: applying the *principle of charity*, insisting upon the *relevance of causal concepts* in sciences with an intentional vocabulary and using the *external individuation* of the content of propositional attitudes. The first strategy embraces arguments aiming at the essential difference between mental and non-mental phenomena based upon different synthetic a priori laws. Via applying the principle of charity the identification and ascription of propositional attitudes is settled by standards of rationality, especially coherence, consistency and truth. Therefore, mental and physical concepts belong to heterogeneous vocabularies. Since Davidson requires the homogeneity of the descriptive terms as a necessary condition for strict lawfulness psycho-physical laws cannot be strict in principle. An approximation of psychology to the natural sciences would therefore mean “changing the subject” (Davidson 1970: 216) The peculiarity of the mental is indicated for Davidson also by two further features: its specific holism and causal nonclosure.

However, most of these theses are contested up to this day. For S. Yalowitz (1998), for example, Davidson’s rationality-arguments are not well suited for the establishment of *MA*, rather they support the indispensability of intentional psychology. Thus he agrees only with Davidson’s second strategy. It rests on the view that concepts of propositional attitudes have to rely on causal concepts and as such

they are dependent on aspects and interests. Therefore generalizations with causal terms can only be *CP*-laws and are suspended in nature science.<sup>1</sup>

The third strategy brings into play that the content of intentional states is at least partially determined by external states and conditions. They do not need to be exclusively determined by neuronal states and processes. “We are therefore free to hold that people can be in all relevant physical respects identical while differing psychologically; this is in fact the position of “anomalous monism” . . .” (Davidson 1986a: 453).

We denote the conjunction of the three premisses as *P*, the core of Davidson’s theory as *AM+P* and these together with the thesis of weak supervenience as *AM+P+WS*.

## 2. The Critique of Property-Epiphenomenalism and Counterarguments

Davidson’s view was presumably that *AM+P* gives an adequate explanation of mental causation. Certainly *AM* excludes an epiphenomenalism of mental events. They instantiate by their identity with physical events also physical properties. Thereby mental events also fall under strict physical causal laws and stand in the relation of cause and effect. But some commentators and critics were not satisfied with this answer, for example, T. Honderich 1982, E. Sosa 1984 and J. Kim 1989. The main thesis of their objections and interpretations of Davidson’s philosophy of the mental is: the causal efficiency of mental events does not guarantee that mental events *as mental*, that is, by their mental properties, are causally efficient (relevant). Quite the contrary, because causal relations between two events *c* and *e* are governed by strict physical laws only their physical properties are causally relevant. Only such properties, some authors express it in this way, give instantiating events their causal power.<sup>2</sup>

- 1 Of course, such a strategy can only be upheld if there are strong arguments for the view that all laws in natural sciences, or at least the fundamental ones, are indeed unrestricted universal laws. Although still widely shared by most philosophers there have lately been attempts to paint another picture. See for example N. Cartwright (1999). If she is right, then universality of laws can’t be the dividing line between the natural sciences and the special sciences like psychology. All laws then, even the fundamental ones in the natural science, are *ceteris paribus* laws in her view.
- 2 Causal forces are often identified with dispositions or with their realizers, if we interpret dispositions as functional properties. There are different views on the relation between properties and causal forces: 1. *dispositionalism* identifies (at least some) properties with causal forces. 2. *categorialism* makes a distinction between both, 3. a *synthesis* between both



From *MA* and *NC* it is therefore possible to conclude an epiphenomenalism of mental properties. For the critics just this is not compatible with *CI* and thus the consistence of the *three* principles as the main point of Davidson's theory becomes doubtful. Two alternatives seem possible: on the one hand one could abandon *MA*. Then *CI* and the strengthening of *NC* to *CcIW* would lead back to the older identity theory. J. Hornsby (1993) on the other hand prefers to abandon with *NC* the physicalistic component of *AM + P* and by that the inference to psycho-physical token-identity (*AM*).

Davidson (1970, 1973, 1974) does not dispute the epiphenomenalism of mental properties. Later some authors have challenged the claim that it follows from *MA* and *NC*. Finally Davidson (1993) has a critical look with his critics. In this debate we recognize three strategies to extend *AM+P* in different ways:

1. The range of laws backing causal relations is widened by *CP*-laws, in particular *CP*-laws with mental predicates (Fodor, McLaughlin): *enlargement of nomological reasoning*.

2. Causal relations are analyzed via counterfactuals (T. Horgan, E. Lepore and B. Loewer): *counterfactual analysis*.

3. Mental causality is taken to be an example of *supervenient causality* (Davidson 1993, Kim in his earlier work, par example, 1984).

These strategies to rehabilitate mental causality do not exclude each other. There are also combinations of these strategies. We will discuss *whether* and *how far* these proposals really refute the objection of property-epiphenomenalism and make clear that the mental does some causal work.

#### (a) Enlargement of Nomological Reasoning

A necessary condition for the success of this strategy is the distinction between *real* and *non-real CP*-laws. With the latter we could not justify singular causal relations because such laws do not satisfy necessary conditions of lawfulness, for example, the condition of possible falsification, by referring to missing *CP*-conditions. Fodor

views ascribes to properties a dispositional and a categorial feature (see Armstrong 1997: Capt. 5).

*Empiristic-instrumentalistic* views try to dismiss expressions like "causal forces" if understood literally as misleading. Such forces should be reduced instead to natural laws. A realist view understands a causal force as a real entity that can form the basis of different laws; see, par example, B. Ellis 2002: 47seq., capt. 3, 7.

(1989: 72) emphasizes the *CP*-feature of our best intentional laws. But he believes that in particular universes of application the *CP*-conditions can be satisfied and therefore such conditions together with antecedence conditions and laws are sufficient to explain the corresponding effects especially of behavior. That was objected to with regard to psychological laws and therefore such a proposal motivated different revisions of the truth-conditions of *CP*-laws. But this is not our topic here (see the short sum of Earman and Roberts 1999: 458-59).

We make in our context the simplified assumption that the lawfulness of the relevant *CP*-laws is not disputed. Furthermore we initially presuppose that there are mental and physical properties (universals or tropes) or at least classes. Finally, Davidson itself often speaks of properties or types. We will discuss this in section three of this article.

McLaughlin (1989: 121, 124seq.) reconstructs the objection of property-epiphenomenalism as a conclusion from three premisses:

1. *NC* implies the following principle of exclusion: events stand in causal relations “*only* in virtue of falling under strict laws“ (125). The latter property is understood by Davidson’s critics as the *sole* causal relation-making property. Therefore the exclusion principle can be formulated as a biconditional: events stand in causal relations *iff* they fall under a strict causal law.

2. The principle of exclusion implies that only strict nomological properties are causally efficient.

3. *MA* implies that no mental property is nomological in a strict sense.

From these theses one can conclude:

4. *NC* and *MA* imply that no mental property is causally efficient.

McLaughlin disputes this argument because he does not agree with the first premise. *NC* does not exclude that causal relations between two events are governed by non-strict causal laws or counterfactual dependencies, provided that such events fall in addition also under strict laws. By this he upholds a version of non-reductive physicalism. At the end of his article (131) he emphasizes therefore the causal priority of physical properties together with the thesis of global supervenience. Two causally possible worlds  $W$  and  $W'$  with the same physical properties have also the same causal properties. McLaughlin (1983) analyzes in a model of supervenient causality the dependency of causal non-physical properties on physical properties.

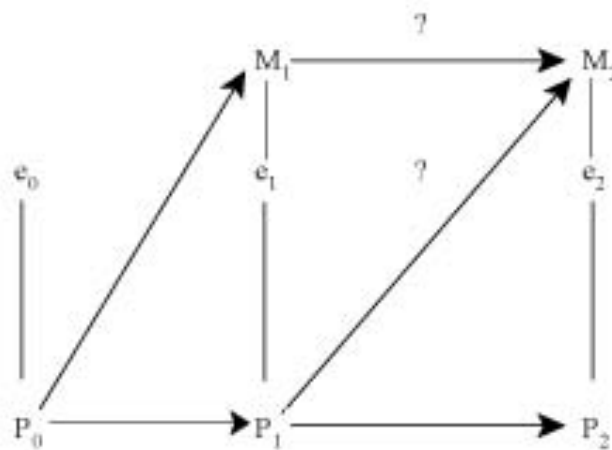
Fodor (1983) also does not accept the mentioned principle of exclusion. He is not satisfied with the mere possibility of mental causality like McLaughlin but he believes in the reality of this causality: “. . . if it isn’t literally true that my wanting is

causally responsible for my reaching . . . , then practically everything I believe about anything is false and it's the end of the world" (77). On the other side laws of special sciences like laws in psychology are not fundamental. Such laws indicate causal mechanisms but they do not articulate them. This is only possible in the development of more basic sciences. *CP*-conditions also refer to such mechanisms. For Fodor the ultimate causally relevant factors are physical mechanisms (in the narrow sense of the word). If this were true then all mental causes would be physical causes. Fodor wants a synthesis between mental causality and physicalism. But he seems to see the logical tension between both. If a synthesis were not possible he would prefer to give up physicalism.

Kim (1992a, 1993a, 1996: 226 seqq., 232-33) has emphasized the incompatibility between both assertions also with respect to Fodor. Psycho-physical causation is essentially *downward causation* that is an essential feature (of strong versions) of emergentism. Such causality is not compatible with a respectable physicalism. The location of all causal mechanism on a physical level excludes mental causality in principle, also an independent psychology provided that it aims at autonomous causal explanations. Therefore Kim regards non-reductive physicalism that claims to connect both as an inconsistent proposal.

Can the rejection of the principle of exclusion ensure the possibility of mental causality in the framework of *AM + P*?

It is helpful to discuss this problem within the following model.



$P$ - respectively  $M$ -properties are physical respectively mental properties. The pure physical event  $e_0$  with  $P_0$  causes the psycho-physical event  $e_1$  with  $P_1$  and  $M_1$ ;  $e_1$  causes  $e_2$  with  $P_2$  and  $M_2$ . For a systematic analysis it is advantageous to divide our leading question in two parts: Is (a) psycho-physical causality and (b) is psychic (psycho-psychical) causality possible? We presuppose with  $AM$  that  $P_1 \neq M_1$  und  $P_2 \neq M_2$ .

1. Assume that  $e_1$  as an instance of  $M_1$  is a sufficient cause of  $e_2$  as an instance of  $P_2$ . For that we use the abbreviation “ $M_1$  causes  $P_2$ ”. We use similar abbreviations in analogous cases. This assumption contradicts  $CclW$ . Moreover  $P_1$  would be an overdetermined cause of  $P_2$ .  $CclW$  excludes also the possibility that  $M_1$  is merely a partial cause and that it only together with  $P_1$  is sufficient for  $P_2$ . Nonetheless causal overdetermination of  $P_2$  by  $M_1$  is reconcilable with  $CclW$  in our world.<sup>1</sup> Most authors refuse such overdetermination because it would make psycho-physical causality and explanations superfluous in principle. There are also other versions, for example, identity theories, theories of local reduction or attempts to use the concepts determinant/determinable, but all these versions are not consistent with  $AM+P$  and they exclude autonomous mental causality.

2. The assumption of psychical causal sequences, for example as in “ $M_1$  causes  $M_2$ ”, is coherent with  $CclW$ . Within the nomological model of causality there must be a lawlike connection between  $M_1$  and  $M_2$ . If we assume strong or weak supervenience (on these concepts see (iii), in this article) of  $M$ - on  $P$ -properties the causal-lawlike connection between  $M_1$  and  $M_2$  requires that the basis-properties of  $M_1$  ( $P_1, P'_1, P''_1 \dots$ ) should stand only in causal-lawlike relations to the basic-properties of  $M_2$  ( $P_2, P'_2, P''_2 \dots$ ). Yet this may not be valid in all cases.  $P'_1$  could stand in a causal-lawlike relation, for example, to  $P_3$  that belongs to the basic-properties of  $M_3$ . In this case the  $M_1$  and  $M_2$  connecting hypothesis would be falsified, for example, “ $\wedge x(M_1x \rightarrow \vee y(M_2y))$ ”. There remains only the possibility that  $P_1$  causes  $M_2$ . This epiphenomenalist interpretation is a genuine alternative to the concept of mental causation from a theoretical point of view even in the case where we have psycho-psycho regularities. We could exclude such a proposal only by the causal closeness of the mental like in Spinoza’s concept of attributions. But today this account will find scarcely followers. The epiphenomenalist interpretation has the advantage of a larger unification because at least the antecedence links of the causal  $M$ -sequences must be  $P$ -causes. We would need only one sort of laws to explain  $M$ -

1 This restriction considers Kim’s (1998: 45) remark that given a minimal change of the physical constitution of our world there could be a conflict with  $CclW$ , for example,  $e_1$  has the physical property  $P'_1$  instead  $P_1$  but furthermore the mental property  $M_1$ .  $M_1$  is then under certain circumstances a part of the cause of  $P_2$ .

instances. In contrast to that the concept of psychical causality is more in harmony with commonsense views.

Could propositional attitudes themselves cause behavior that is described in an intentional way? Is, for example, my belief that there are still tickets for a performance of the ninth symphony of Gustav Mahler in the Frankfurt Opera and the desire to hear the symphony the cause that I will go to the box office and buy a ticket? Is this a particular sort of mental causality that is coherent with *AM+P* because such causality is not in conflict with *Cc/W*? First we have presupposed properties – mental and physical – to be real entities that exist independently from our descriptions and interpretations. Yet this is not the case with intentional properties of actions. They are merely results of interpretations and express causal descriptions of behavior in a commonsense fashion. Davidson argues similarly also in this way (1991: 163). If causal relations are real entities then actions cannot be caused as instances of intentional properties.

If we assume emergent non-mental properties then the question is justified: could behavior as instances of such properties be caused by mental events? But this is not a question in any way for *AM+P* because it is not assumed that there are such emergent properties. In fact Davidson (1973: 246) hesitates when it comes to the factual feasibility of reducing biology and neurophysiology to physics.<sup>1</sup> Yet, thereby emergent properties and causal forces obviously are not assumed. For Davidson (1987: 45) emphasizes that he knows no theoretical ground to exclude the reduction of special sciences to physics with the exception of disciplines that ascribe propositional attitudes. This presumably means that a reduction to physics is possible in principle if causal concepts and *CP*-laws are eliminated in the further course of scientific development and replaced by descriptions of causally relevant mechanisms. Therefore, this is not a change in the subject under study in difference to all sciences that use an intentional vocabulary (Davidson 1991: 163). In Davidson's theory mental properties are also not emergent in any case not in strong sense if we assume that their instances have not effects like in the model of downward causation.

The first strategy to rehabilitate mental causality leads us to a meager result. Consistent with *Cc/W* are only particular cases of mental causality. But this possibility is also refuted by Kim (1993a: 351seq., 1996: 229, 1998: 41seq.), if we require the realization of mental by physical properties.

The concept of realization is significant in the contemporary debate on the mind-body problem in particular in connection with non-reductive versions of materialism.

1 Whether properties and theories can be reduced depends essentially on allowing for weaker or stronger concepts of reduction. It depends for example on whether we allow for disjunctive properties or not.

Realization of mental by physical properties replaces their identity. This is also an attempt to distance oneself from emergentism. Yet the concept of realization is an ambiguous one (see J. Heil 1999: 190). We restrict the universe of the relations to properties and interpret the relation of realization – following Heil – in a broad sense as an asymmetrical, simultaneous determination or dependence. The relation can be specified further especially in respect to its modal status giving rise to contingency or lawlike, metaphysical or logical-analytical necessity.<sup>1</sup> The latter is valid also for the relation of supervenience. But this relation is not an asymmetric one.

Kim (1996: 232) nevertheless urges the strong similarity between both and presupposes that they are identical in their philosophical significance. His refutation of mental causality is – in terms of above model – :

\* Assume,  $M_1$  is a sufficient cause for  $M_2$ . Because  $M_2$  is realized by  $P_2$  respectively is supervenient over  $P_2$ ,  $P_2$  is also sufficient for  $M_2$ .

This is for Kim “unstable”. Between both theses there is “a real tension”. Kim believes the solution of this problem is the assumption that  $M_1$  can cause  $M_2$  only if  $M_1$  also causes the realizer of  $M_2$ , that is,  $P_2$ . Mental causality is only possible together with psycho-physical causality. This presupposes downward causation and just this is in conflict with *CclW*.

A. Marras (2000: 143seq.) – we think he is right – has objected against Kim that we have in this case *two* different dependencies that are not in any conflict because the relations of realization respectively supervenience are interpreted as a rule not causally. This is also Kim’s view (1998: 44). But in his above argument the causal interpretation of these relations seems to be really at work because it can be understood as a refutation of inadmissible overdetermination. On the other hand Kim has emphasized recently (1998: 9 seq.) that the explanatory power of supervenience should not be overestimated. Supervenience should be explained by

1 Identity then can be seen as a special or limit case of realization. Functional properties refer conceptually (analytically) to any realizer. For materialism such realizers can be only physical properties. In the case of unique realization functional and realizing properties are identical on logical grounds. D. Lewis (1994: 418seq.) defines functional predicates as definite descriptions and for that reason he interprets such predicates as non-rigid designators. Therefore Lewis can state also identity in the case of multi-realization. Some authors interpret realization as a stronger connection than mere dependency on natural laws. E. Lepore and B. Loewer (1989: 179), for example, require in addition that the realized phenomena and the laws governing them are to be explained by basis- and bridge laws. The latter and also the realized properties are nevertheless thought of as “brute facts” provided they cannot be interpreted by logical or methodological reasons as identities of realizing and realized properties.

other more fundamental relations. Here among others causal relations will play a role (see also Heil 1998: 150-51).

We thereby see clearly that causal relations and the relations of realization respectively of supervenience do not compete within explanations. Surely, Kim is right if he, for the justification of his argument, says that a direct causal connection between mental states of different people is not acceptable in common knowledge as well as in science. For it requires physical links. However, this does not contradict the above explanations. In them it was pointed out that the first links of causal  $M$ -sequences must have  $P$ -causes. As for the rest if we make the assumption of  $CclW$ , every mental causation with intermediate physical links is excluded. Yet mental causation between  $M$ -states of the same person, for example, the causation of desires, hopes, fears by beliefs is not disputed and even a component of the functional definition of mental states. The definition includes that mental states do not only stand in causal relations to inputs and outputs but also to other mental states.

### (b) The Couterfactual Analyses

Lepore and Loewer (1987) give an explanation of mental causality that is not discussed in detail in contemporary philosophy. If this account were successful we would have a justification of mental causality within a modified framework of  $AM+P$ . They assume that critics of Davidson do not distinguish two different concepts of causal relevance of properties: *causal relevant<sub>1</sub>* and *causal relevant<sub>2</sub>*. We use symbols in the following way: individual variables: “ $x$ ”, “ $y$ ”; individual constants: “ $a$ ”, “ $b$ ”, “ $c$ ”, “ $e$ ”; predicate variables: “ $f$ ”, “ $f^*$ ”, “ $g$ ”; predicate constants: large Latin letters. “ $K(x, y)$ ” is a dyadic, “ $K^*(x, f, y, g)$ ” is a tetradic causal relation (see definition  $I$  and  $I^*$ ). “ $p$ ” and “ $q$ ” (also with indices) designate propositions. “ $Ox$ ” means “ $x$  occurs”, “ $>$ ” is the counterfactual implication.

The properties  $f$  and  $g$  are *causally relevant<sub>1</sub>* iff it is true that there are  $f$ - and  $g$ -instances and a strict law from which we can conclude that  $f$ -instances cause  $g$ -instances. It is obvious that mental properties cannot be causally relevant<sub>1</sub> within  $AM+P$ .

( $I$ )  $x$ 's being  $f$  is *causally relevant<sub>2</sub>* to  $y$ 's being  $g$  iff

1.  $x$  causes  $y$

( $K(x, y)$ )

2.  $f$  and  $g$

(in Lewis' semantics we conclude from that:  $fx > gy$ )

3. If were not the case that  $fx$ , then it would not be the case that  $gy$

$(\neg fx > \neg gy)$

4.  $fx$  and  $gy$  are logically and metaphysically independent.

T. Horgan (1989: 50, 58-59) refers to a similar defined concept as *quausation*. Lepore and Loewer (1989: 189) modify under this name (*I*):

(*I*<sup>\*</sup>)  $x$ 's being  $f$  is *quausally* related to  $y$ 's being  $g$  iff

1.  $x$  occurs and has the property  $f$ .

$(Ox \wedge fx)$

$y$  occurs and has the property  $g$ .

$(Oy \wedge gy)$

Sometime before  $x$  occurs and we accept the following conditionals:

2. If  $x$  would occur and be  $f$ , then that would cause  $y$  to be  $g$ .

$(Ox \wedge fx > K^*(x, f, y, g))$

3. If  $x$  would occur but not be an  $f$ , then it would not cause an event that is  $g$ .

$(Ox \wedge \neg fx > \neg \forall y K^*(x, \neg f, y, g))$

A precise definition requires some further conditions like

4. in (*I*) – “ $K$ ” is an extensional predicate but not “ $K^*$ ” because in sentences containing it like “ $K^*(a, P, b, Q)$ ” the substitution salva veritate of predicates “ $P$ ” and “ $Q$ ” by co-extensive predicates “ $P'$ ” and “ $Q'$ ” is not guaranteed.

Lepore and Loewer take on Lewis' interpretation of the truth-conditions of counterfactual conditionals, such is, the proposition  $p > q$  is true iff either there are no possible  $p$ -worlds or  $p$ -worlds with  $q$  are more similar to the actual world as  $p$ -worlds without  $q$ . Lewis (1973: 164seq.) analyses a counterfactual concept of causality relying on the concept of counterfactual dependency. We give a little abridged description here.  $c_1, c_2 \dots$  and  $e_1, e_2 \dots$  are two families of events such that any two  $c$ 's and any two  $e$ 's exclude each other mutually. *Counterfactual dependence* of the  $e$ -events on the  $c$ -events exists iff the propositions  $Oc_1 > Oe_1, Oc_2 > Oe_2, \dots$  are true. *Causal dependency* (or *direct causation*) of the event  $e$  from the event  $c$  is defined then as counterfactual dependency of the family  $Oe, \neg Oe$  on the family  $Oc, \neg Oc$ , that is, iff the propositions  $Oc > Oe$  and  $\neg Oc > \neg Oe$  are true. Single causal dependencies can be



combined to form a causal chain. Lewis defines with this concept the predicate “cause”:  $x$  is a *cause* of  $y$  iff a causal chain leads from  $x$  to  $y$ .

The terms *causal relevant*<sub>2</sub> and *quausation* are mainly synthetic constructions from different causal concepts: the causal relations “ $K$ ” respectively “ $K^*$ ” and causal *dependency counterfactually* defined. Yet this still is a controversial concept.<sup>1</sup> Like in the writings of Davidson’s critics these terms are essentially used with reference to properties of events. In any case their introduction is a remarkable modification of  $AM + P$ . Davidson (1967a: 159seq., 1993: 6) accepts only the two-digit causal relation  $K$  and neither a four-digit causal relation with reference to properties nor an intensional causal junctor.

N. Goodman (1955) has shown that counterfactual conditionals and their negations do not follow from strict laws and further non-counterfactual statements. From this one can conclude – like Lepore and Loewer emphasize – that *causal relevance*<sub>2</sub> of mental properties is compatible with  $AM+P$ . But it is not shown thereby whether such properties are factually causal relevant<sub>2</sub>. Lepore and Loewer (1987: 640-41) mainly refer to Lewis’ (1973) nomological foundation of counterfactual conditionals ( $p_i > q_i$ ).<sup>2</sup> The reasoning of statements containing mental ( $M$ -) and behavioral ( $B$ -) respectively neuronal ( $N$ -) predicates, for example, “ $M_i c > B_i e$ ”, “ $\neg M_i c > \neg B_i e$ ”, requires psychophysical  $CP$ -laws. For Lepore and Loewer the discovery and systematization of psycho-behavioral laws is the task of psychology within the framework of  $AM+P$ .

These authors accept the principle of global supervenience: “If two nomologically possible worlds are exactly alike with respect to fundamental physical facts (the facts expressible in terms of the vocabularies of fundamental physical theories) then they are exactly alike with respect to all other facts” (1989: 177-78). But global supervenience does not guarantee that mental properties are supervenient over

1 For critical examination of the counterfactual analysis of causality see, for example, F. von Kutschera (1993: 43 seq.)

2  $p_1, p_2 \dots$  and  $q_1, q_2 \dots$  are two families of alternative propositions.  $L$  is a set of true statements of law-propositions,  $F$  a set of true propositions of singular facts or conditions of application. For Lewis *nomical dependency* of  $q$ -propositions from  $p$ -propositions in virtue of  $L$  and  $F$  holds iff  $L$  and  $F$  imply all material implications  $p_1 \supset q_1, p_2 \supset q_2 \dots$ . He calls a proposition  $r$  *counterfactually independent* of a family  $p_1, p_2 \dots$  iff  $r$  is true independent of the truth-value of the  $p$ -propositions so that the conditionals  $p_1 \supset r, p_2 \supset r \dots$  are true. From both premisses (a) “the  $q$ -propositions are nomically dependent on the  $p$ -propositions” in virtue of  $L$  and  $F$  and (b) “all elements of  $L$  and  $F$  are counterfactually independent from the  $p$ -propositions” the counterfactual dependency of the  $q$ - on the  $p$ -propositions ( $p_1 > q_1, p_2 > q_2 \dots$ ) can be explained. Because of (b) this is in harmony with Goodman’s result above mentioned.

neuronal properties (178, 189). Therefore it is possible that  $M$ -instances are not connected with  $N$ -instances and therefore also not with  $B$ -instances by a causal laws. In such cases we have the problem again: *what is the foundation of the correspondent counterfactual conditionals?*

Kim (1989a: 277) has emphasized that global supervenience is to *weak* to express in an adequate way the dependence of the mental on the physical demanded by physicalism. It does not exclude that two worlds differ physically only in a minimal way, for example, by a small displacement of a particular hydrogen atom, but could be psychologically different at all. What possibilities exist is dependent essentially on the definition of the universe of possible worlds. It is dependent on, for example, whether the definition includes all logical or nomological possible worlds or all worlds corresponding to the natural laws of our world. We can eliminate strange cases, like Kim has described, if we approximate the concept of global to that of strong supervenience. R. C. Pauli and T. Sider (1992), for example, add subsets of individuals of possible worlds and also unit sets to the universe of possible worlds. Yet these authors also emphasize that strong supervenience itself does not exclude bizarre psycho-neuronal dependencies. Their possibility again depends on how the universe of possible worlds is framed. A world with a creature that differs physically only in a minimal way from James Miller but “has no mind” (842) is not nomologically possible from our point of view, if we interpret the known dependencies between mental and neuronal states as laws of nature.

Let us make the assumption that the conditions 1 - 4 in (I) are satisfied for  $c$  and  $e$  and the predicates  $M_i$  and  $B_j$  so that  $M_i c$  is causally *relevant*<sub>2</sub> to  $B_j e$ . Is this a real refutation of the objection of property-epiphenomenalism? Or is it a mere pseudo-refutation and consistent with that objection? E. Sosa (1984: 277-78) states it counterfactually: if the psychophysical event  $c$  with the properties  $M_i$  and  $N_r$  would be replaced by the pure physical (neuronal) event  $c^*$  with  $N_r$  but without  $M_i$ , then in both cases the same behavior  $B_j e$  would be caused .. In accordance with that Kim has written : “. . . anomalous monism entails this: *the very same network of causal relations would obtain in Davidson’s world if you were to redistribute mental properties over its events any way you like; you would not disturb a single causal relation if you randomly and arbitrarily reassigned mental properties to events, or even removed mentality entirely from the world*” (1989a: 269).<sup>1</sup>

1 Lepore and Loewer (1987: 638) try to satisfy Kim’s and Sosa’s formulations by the following sufficient condition of causal *irrelevance*<sub>2</sub>: (II) If  $x$  has the property  $f^*$  and „( $f^*x \wedge \neg fx$ )  $>$   $gy$ “ is non-empty true, then  $x$ ’s being  $f$  is *causally irrelevant*<sub>2</sub> to  $y$ ’s being  $g$ . By contraposition and adding it to (I) a stronger concept of causal *relevance*<sub>2</sub> is defined: (III)  $x$ ’ being  $f$  is *causally relevant*<sub>2</sub> to  $y$ ’ being  $g$  iff the conditions in (I) are satisfied and  $x$  has no property  $f^*$  so that “( $f^*x \wedge \neg fx$ )  $>$   $gy$ ” is non-empty true. If we substitute for the variables  $x$ ,

For Lepore and Loewer (1987: 638) both statements are consistent: “ $\neg M_i c \supset \neg B_j e$ ” and “ $N_i c \wedge \neg M_i c \supset B_j e$ ”. This is also true for the other conditions (1, 2, 4) of (I). Therefore  $M_i c$  is causally relevant<sub>2</sub> to  $B_j e$ . Obviously the concept of causal relevance<sub>2</sub> is too weak to refute the epiphenomenalism of mental properties. Nevertheless for Lepore and Loewer (1987) the counterfactual dependency of certain  $P$ -( $N$ - or  $B$ -) events on  $M$ -events offends  $Cc/W$  when it comes to properties. With it they assume tacitly a stronger concept of mental causality than causal relevance<sub>2</sub> that is used in ordinary language and also presupposed by Davidson’s critics. “ $\neg M_i c \supset \neg B_j e$ ” does not imply “ $N_i c \wedge \neg M_i c \supset \neg B_j e$ ”. Both sentences are likewise merely logically consistent.

Yet Lepore and Loewer (1989: 178) are also physicalists. They accept therefore the priority and lawfulness of physical causality, such is, Davidson’s  $NC$ , and emphasize against Fodor: “As far as we can see an event’s causal powers are completely determined by their basic causal properties. Content properties are not needed for that. However, if  $\langle c, F \rangle$  is causally related to  $\langle e, G \rangle$  then there is a perfectly good sense in that  $c$ ’s having  $F$  makes a difference to  $c$ ’s causal powers” (190). But this difference cannot stem from causal forces that are identical with the mental property  $F$  or are an aspect of this property (see p. 5, Fn 1) because the causal forces of events are only determined by their physical properties. The difference can only exist on the basis of lawlike connections, for example, of laws of supervenience between  $F$  and subvenient physical properties ( $P_1, P_2 \dots$ ). If  $F$  is replaced by the mental property  $F$  a change to the subvenient physical properties ( $P_1', P_2' \dots$ ) and their causal forces takes place. Psycho-physical laws with  $M$ -concepts in their *if*-component which connect beliefs and pro attitudes with behavior are therefore no causal laws. But in most cases we have no other explanations of behavior. In Lepore’s and Loewer’s physicalism mental properties could not be *causally relevant* in the ordinary

$y, f^*, f, g$  the constants  $c, e, N, M, B$ , we obtain (S) “ $(Nc \wedge \neg Mc) \supset Be$ ”. The truth of (S) is – according to (II) – a sufficient condition of causal irrelevance<sub>2</sub> of  $Mc$  with regard to  $Be$ . This seems to correspond with the meaning of Sosa’s and Kim’s formulations. By substitution we have as well (T) “ $(\neg Nc \wedge Mc) \supset Be$ ”. Lepore and Loewer urge that (T) is in harmony not only with  $AM + P$  and (S) but is also true in the case of multirealization. Assuming a strict law between  $N$  and  $B$  we have following Lepore and Loewer a non-desirable consequence: “It (that is (II), the authors) renders even properties connected by strict laws causally irrelevant<sub>2</sub>” (639). Factually we have only in *certain situations* in which  $M$  is not realized by  $N$  but by other neuronal properties  $N^*, N^{**} \dots$  causal irrelevance<sub>2</sub> of  $Nc$  with regard to  $Be$ . As a possible realizer of  $M$   $N$  is not causally irrelevant<sub>2</sub> in all nomological possible situations (according to (II)). Besides that we can prevent results of substitution like (T) if we substitute for “ $f$ ”, “ $f^*$ ” and “ $g$ ” only mental, neuronal and behavioral predicates. This is justified because the conditions of causal irrelevance of mental, not of neuronal, properties are to be analyzed. It might be emphasized that all these considerations do not refute Kim’s and Sosa’s objections.

sense but in an explanatory way. If we mix both it seems that mental causality fits in the framework of non-reductive physicalism. Mental properties have in psycho-behavioral laws also a heuristic function. Such properties indicate often non-discovered physical properties which do the whole causal work (Kim 1993a: 354).

Lepore and Loewer try to reconcile commonsense views of mental causality and Davidson's physicalism (comprehensiveness of physics, event-monism, supervenience, *NC*). But the problem is whether such a synthesis is possible in principle. No doubt notions like *causal relevance*<sub>2</sub> are consistent with physicalism but the question is whether they can express the ordinary views of mental causality in an adequate way. Such causality implies downward causation and just this is not in harmony with *Cc/W*.

### (c) Supervenient Causality

Davidson's doctrine is: "Supervenience in any form implies monism; but it does not imply either definitional or nomological reduction." (1993: 5)<sup>1</sup> He believes thus reductions of mental to physical concepts by explicit definitions or biconditional bridge laws can be rejected in harmony with the supervenience thesis; supervenience "does not imply the existence of psycho-physical laws" (7). *AM* is in opposition to a Cartesian substance and an event dualism. This is made possible by a coarse grained concept of events. Usually *AM* is primarily understood as a negative thesis, too weak and underdetermined to yield positive descriptions of the psychophysical relationship we would expect from a solution of the mind-body problem (see, for example, Kim 1998: 5-6). For Lepore and Loewer (1989) *AM* is also only a "fairly tepid physicalism", that is even consistent with emergent causality and does not itself imply the supervenience of the mental. The hint to it in Davidson (1970: 214) is presumably an approach to give a positive description required by physicalism. All relations of supervenience are not asymmetrical, therefore in addition the possibility of a reverse supervenience of the physical over the mental must be excluded.

Aside from the already mentioned global supervenience (*GS*) we find in the philosophical writings in particular the concepts of *weak* and *strong* supervenience (*WS*, *SS*) that are defined for properties and other entities like Kim-events and propositions. The definitions for properties start out from two families of properties, the subvenient or basic-*(B-)* properties ( $B_1, B_2 . . .$ ) and the supervenient (*A-*)

1 On the concept of supervenience see, for example, Kutschera 1992; on the concept of Humean supervenience Preyer, Siebelt 2000a.

properties ( $A_1, A_2, \dots$ ). The operator of necessity  $N$  can be interpreted as logical-analytical, metaphysical, or nomological. It is useful for many purposes to define  $WS$  and  $SS$  in the following way:

( $WS$ )  $A$  weakly supervenes on  $B$  iff

$$N \wedge \forall f \in A \wedge x (fx \rightarrow \forall g \in B (gx \wedge \wedge y (gy \rightarrow fy)))$$

( $SS$ )  $A$  supervenes *strongly* on  $B$  iff

$$N \wedge \forall f \in A \wedge x (fx \rightarrow \forall g \in B (gx \wedge N \wedge y (gy \rightarrow fy)))$$

Davidson gives the following characterization: “. . . a predicate  $p$  is supervenient on a set of predicates  $S$  if and only if  $p$  does not distinguish any entities that cannot be distinguished by  $S$ ” (1993: 4). If we interpret this as necessary thesis, the characterization is equivalent to another often used definition of  $WS$ :

$$(WS^*) N \wedge \forall x y (\wedge g \in B (gx \leftrightarrow gy) \rightarrow \wedge f \in A (fx \leftrightarrow fy))$$

From  $WS$  follows  $WS^*$ , from  $WS^*$  follows  $WS$  only if we make the additional assumption that  $B$  is a complete Boolean algebra, that is, it contains to every property its negation and to every plurality of properties its conjunction.

$SS$  differs from  $WS$  by a second necessity operator  $N$  before the last implication. This implies a stronger modal connection between the  $A$ - and the  $B$ -properties within  $SS$ . The relation between them holds not only like in  $WS$  restricted to *our* world, but, for example, in all nomologically possible worlds. Therefore regularities of the form  $\wedge y (By \rightarrow Ay)$  are laws of nature. This may be the reason why Davidson (1993: 4, Fn 4) opts for  $WS$ . He believes that it is not in conflict with  $MA$ . Yet this collides with his externalism that individuates propositional attitudes partially by external factors. Therefore, propositional attitudes must not supervene over brain states – even if they could vary – like in  $WS$  – from world to world. Externalism is coherent only with  $GS$  except we expand in  $WS$  and  $SS$  the basis of supervenience by relational properties that concern relationships between organisms and their environment and history (see Kim 1987: 87).

For Davidson (1993) the second task of supervenience is the justification of mental causality. The epiphenomenality of mental properties is in fact in harmony with  $AM+P$ , but following Davidson not with  $WS$  that takes the role of a further premise. From  $AM+P+WS$  he concludes the causal efficiency of mental properties. This proposal underlies also his answer to Kim’s counterfactual objection of property-epiphenomenalism (see (ii)). If Kim were right – Davidson has answered –, then  $AM+P$  would not be in harmony with every sort of mental supervenience. But for  $WS$  this is not the case. The critical point in Davidson’s response is the asserted

incompatibility of the causal irrelevance of mental properties and their supervenience. *WS* would be therefore the guarantee of mental causality.

Davidson reasoning is: the weak supervenience of mental properties implies that two different mental events are to be distinguished also in their physical properties. He presupposes such properties to be causally effective. Then he concludes: “psychological properties make a difference to the causal relations of an event, for they matter to the physical properties, and the physical properties matter to causal relations” (Davidson 1993: 14). Yet mental causality cannot be justified in this way. To show this one must assume not only that the physical but also that the supervenient mental properties “matter to causal relations”. But this point is not dealt with in his discussion. Davidson’s argument therefore does not in the end refute his critics. It shows merely the *explanatory and* not the *causal* relevance of mental properties in respect to physical events; provided we interpret the relation of supervenience as a simultaneous, non-causal relation. Kim (1989: 270, Fn 8) is right to emphasize the harmony between property-epiphenomenalism and *WS*. The same is true also for *SS*. A physical duplicate of our world without the mental is nomologically possible from our point of view given *WS*. It is also nomologically possible in light of *SS* but not from *our* point of view because no psychophysical regularities that are laws of nature in our world are included. Davidson (1993) therefore overestimates the explanatory power of supervenience relations. They are in harmony with different views of mental causality like in the approaches of type-identity, epiphenomenality and emergentism.

Davidson sets himself two goals: the proof of mental causality and a theory of non-reductive physicalism. The first road we find in his causal explanation by primary reasons: “. . . beliefs and desires have causal powers, and that is why they explain actions” (Davidson 1987: 44). The second is expressed among other things in the thesis that in his view mental properties must supervene only over such physical properties that are required “for a complete causal account of the universe” (Davidson 1993: 17, Fn. 12). Yet if we make just this assumption, the causal role of mental properties becomes dubious. We cannot ascribe causal forces to such properties without allowing systematic overdetermination except they could be reduced to forces of subvenient physical properties. This would be a considerable restriction of *MA* because only the categorical features of mental properties would be non-reducible.<sup>1</sup> But what should they be if in Davidson’s philosophy internal experiences, for example, volitions, play no role?

1 See on the distinction between categorial and dispositional aspects of properties page 5 Fn 1.

Complete physical explanations do not wipe away our interest for mental concepts: “But if mental concepts are not reducible to physical concepts, there is *no* reason to suppose we would lose *interest* in explanations in *mental terms* just because we had a *complete* physical explanation. What is true, of course, is that psychological explanations are never *full* and *sufficient*; like most explanations, they are *interest-sensitive*, and simply assume that a vast number of (unspecified and unspecifiable) factors that might have *intervened* between cause and effect did not.” (Davidson 1993: 16, our italics) We agree with this because explanations of actions by primary reasons are simpler and more comprehensible as neuronal explanations. Making behavior intelligible such explanations work well in most cases. Yet we do not see that under physicalistic premisses explanations by primary reasons are causal explanations. Summing up it follows from these considerations that also Davidson failed in outlining a consistent synthesis of mental causality with non-reductive physicalism.

Davidson deems  $AM+P+WS$  to be a consistent set of sentences. But this is questionable under specific conditions. Let us make the following assumptions:  $e$  is a mental event of a person  $a$  with the mental property  $M$ . It is caused at time  $t$  by the physical event  $c$  with the physical property  $P$ . The whole physical state  $e^*$  of  $a$  is caused at  $t$  by the complex physical cause  $c^*$ . The course of the physical happenings is governed by strict deterministic laws. The properties  $P$  and  $M$  are governed by a non strict law that only allows probabilistic predictions. At a later time  $t'$  there is the same constellation of causes like that at  $t$ . Then it is possible that  $P$  causes a property  $M'$  different from  $M$  (we use the abridged manner of speaking in (i)). If we assume  $WS$  then the mental difference must correlate with a physical difference in the organism of  $a$ . The mental anomalism generates a physiological anomalism. But this contradicts the assumption of deterministic physical laws. The objection is obvious that the constellation of causes at  $t$  and  $t'$  can not be the same.  $M$  is itself not caused by  $P$  but by a different property  $P'$  and in correspondence the physical state of  $a$  changed by a different pattern of causes. But in this case psychophysical generalizations would be strict and only for a limited human mind be  $CP$ -laws. This resembles Fodor's view but is in conflict with  $MA$ , if we interpret the principle of charity ontologically, that is, if we assume that there is an essential difference between mental and physical phenomena. Fodor believes intentional laws can be approximated to strict laws in the progress of science by successive explication of  $CP$ -conditions. But for  $MA$  such laws are even in the long run only “rude rules of thumb” (Davidson 1970: 219).

Davidson has answered his critics (1993: 9, 14) that they do not take into account the distinction between strict and  $CP$ -laws. For him this distinction is essential. He refers to his theory of action wherein  $CP$ -laws play a significant role.

Therefore we assume, following Kim (1993c: 24), that in Davidson (1993) also the strategy of the enlarged nomological reasoning is applied. Moreover this is suggested by him pretending the compatibility of Fodor's views concerning intentional *CP*-laws and even Kim's local reduction of mental properties (1996: 233seqq.) with *AM + P* in this article.<sup>1</sup> In view of Fodor this contrasts with the considerations above. The same is true with regard to Kim. Furthermore for Kim (1998: 97seq.) the functionalization of properties or concepts is a necessary condition of their reduction. Then the question arises whether and in what way intentional properties (concepts) can be functionalized within *AM + P*. As far as we know Davidson does not discuss this question. Besides these difficulties and problems *Cc/W* cannot be harmonized with mental causation of physical events as shown in 2 (a).

### 3. Are Mental Properties *real* or *unreal* (fictive)?

In our analyses we have presupposed the reality of mental properties. Yet Davidson (1993: 4, Fn. 4) does not distinguish between properties and predicates respectively concepts without offering a new solution for the problem of universals beyond well-known views. Rather it is a matter of apparent leveling of realist, nominalist or conceptualist interpretations of predicates. This has crucial consequences for the problem of mental causation because the problem does not emerge in the second alternative. Davidson's wavering usage of the terms seems to give him advantages in his roll out of arguments. He accepts properties in case it is plausible, in particular to give us reasons for mental causality (see in this part 2.). On the other hand he can easily reject that objection of property-epiphenomenalism by its reformulation using the expressions "concept" and "description". This means events are only governed by causal relations if we describe them with physical concepts. Of course, this linguistic creation of causal relations is not in harmony with Davidson's ontological understanding of causality. But the reformulation is a thorough misunderstanding of the objection which concerns properties that are really in the world independent of our thinking and conceptualization and not concepts or predicates built in our languages. Kim clearly distinguishes both (1998: 103seq.).

The objection of property-epiphenomenalism would be unjustified if Davidson rejects properties (universals or tropes) and classes (in Armstrong's terminology such a position is called predicate or concept nominalism, 1978: 12seq.). Some authors

1 Davidson speaks in this article of a graduation of *AM*: "The extent to which mental concepts fall short of being reducible to physical concepts measures the degree of anomaly." (1993: 11).



interpret Davidson's views along these lines. This seems also coherent with some of Davidson's remarks on the subject. Therefore his view on the ontological status of properties is for McLaughlin (1989: 122) "far from certain". Sosa (1993: 48-9) considers a realist and nominalist interpretation. S. Neale (1999: 84, 2001: 39 seq., 66 seq.) presupposes in Davidson's philosophy a sparse ontology of things and events without properties and states of affairs that is sufficient for his interpretive theory of truth.<sup>1</sup> Davidson himself (1994: 231) has characterized *AM + P* as "ontological monism coupled with conceptual dualism": "The mental and the physical share *ontologies*, but not, if I am right, classificatory *concepts*" (1990: 18). The same events seem to be therefore only physical or mental when classified and described within different linguistic frameworks. Such a view is not based on an ontological dualism of properties. It is governed – in the interpretation of N. Melchert (1986: 271) – by specifying a priori principles of the physical and mental system of descriptions. They also determine what is "real": ". . . if by "*really*" you mean "apart from all descriptions", there is not and cannot be any answer . . ." (271).

To understand Davidson in such a way resembles R. Carnap's entrenchment of different ontologies in linguistic frameworks. Only within frameworks the content of experiences (208) can be described and only within these we can ask what is real and what is not. Such frameworks are underdetermined by the content of experience. Therefore the same content can be interpreted within several frameworks and choosing between them for different purposes is determined especially by pragmatical features of simplicity, usefulness and fruitfulness. Consequently different ontologies do not exclude one another.

Carnap (1963: 885-86) takes advantage of this possibility in some remarks on the mind-body problem. He prefers a physicalist language/ontology, but a dualist language/ontology is not excluded. Such a language would surely be helpful to satisfy the mentioned features for our commonsense communication. An ontological non-reductive physicalism cannot solve the problem of psychophysical causality as downward causation because it is not in harmony with *CclW*. This difficulty can be eliminated with the help of linguistic frameworks in an elegant manner. The problem does not arise in linguistic physicalism because the identification of mental and physical properties which is based on empirical correlations. In a dualist ontology we could entrench the possibility of psychophysical interaction by giving specific principles for the underlying framework even in the presence of the same content of

1 In his view Davidson's proposal here can be characterized in the following manner: "Davidson certainly does not hold the semantic view (of predicates, the authors): the semantic role of a predicate, on his account, is exhausted by its contribution to the T-theorems flowing from an acceptable T-theory for a language to which the predicate belongs." (Neale 2001: 67; on Davidson and realism 64-71)

experience. Then *Cc/W* could be interpreted as an idealization, like, for example, the concept of mass points which in our world can be realized only approximately.

However, such a linguistic-pluralistic solution of the psychophysical problem and the problem of mental causality is not consistent with the whole context of Davidson's philosophy. It conflicts with the myth of the third dogma of empiricism, that is, the dualism between conceptual schemes and empirical content (Davidson 1974a). Moreover Davidson understands causality and identity as relations independent of our descriptions, as part of the furniture of the world (Davidson 1970: 215, 1974: 243). The same is true for place-time-determinations. If all other physical concepts would merely result from our interpretations without any foundation in re we could characterize Davidson's concept of events like A. Skillen (1984: 523) as "hopelessly minimal". This also would contrast with the critique of the third empiristic dogma. Merely things and events governed by causal relations would take the place of an uninterpreted content of experience. Yet this view is hardly compatible with Davidson's realist understanding of physics. We could not say like he does: "that things in themselves are physical" (523).

Therefore one can ask, is it reasonable to assume in Davidson's ontology besides things and events also physical and mathematical but not mental attributes or classes?

Like in a nominalist ontology of neutral particulars the difficulties with mental causality would be eliminated. We could also stick to the characterization of "ontological monism and conceptual dualism". In this version of a conceptual dualism only particular physical predicates were grounded ontologically. Yet, these do not refer to properties, relations or classes *uniquely* which would be incompatible with the inscrutability of reference which Davidson (1979) accepts essentially. Some remarks point to the view that he accepts the physicalist ontology under consideration, for example, when he states "the mental is not an ontological but a conceptual category" (Davidson 1987: 46). And this conceptual idiom, that is, our intentional vocabulary, is merely built from *us* without any objective foundation. If not, Davidson could not write: "The limit thus placed on the social science is set not by nature, but by us when we decide to view men as rational agents with goals and purposes, and as subject to moral evaluation." (1974: 239). In contrast physical predicates would refer to properties, relations or classes as constituents of structures in the world.

Also some interpreters of Davidson favor a physicalist ontology that is purified from all mentality. Melchert (1986: 272seq.), for example, writes in his further considerations: "So also one event can be a thought and a brain process, without supposing that there is "really" a thought-property distinct from a brain-process-property, each of them properties of some third (what?) thing. There are no mental properties in the world distinct from the physical properties there" (273). Skillen

(1984: 523) interprets the mental phenomena in *AM+P* as a teleological construct we built on a physical basis. For him “Davidson is an empirical idealist but a transcendental physicalist.” Yet if the mental is an interpretative superstructure this would result in an ontological fiction because our recognition of reality is exclusively the task of natural science. We could call this position a moderate ontological eliminativism; “moderate” because it does not deny the mental phenomena plainly, for example, like the reality of phlogiston or demons, but it conceives them as mere results of interpretations without any value for theoretical knowledge.

Yet an eliminative or fictional interpretation of the mental is not in harmony with other parts of Davidson’s philosophy.

1. Davidson (1997: 72-73) agrees with Quine’s thesis of the indetermination of translation, but he turns against D. Dennett and also Quine himself who have therefore doubts as to the reality of propositional attitudes. He also objects against Dennett’s identification of intentional states with abstract patterns of behavior which reduces the very complex physical situation to a comprehensible set of properties. Between abstract entities there are no causal relations but between beliefs, desires and the like. Dennett complains about the full reality of intentional states within Davidson’s position, yet this is something he welcomes (81).

2. We have to mention again explaining actions means for Davidson that primary reasons have a causal power. He connects the ideas of cause and rationality: “A reason is a rational cause” (1974: 233). It cannot mean that such reasons are merely fictions. Mental properties are a part of the world. They cannot be eliminated and cannot be localized in a superstructure of fictive constructs. This is obvious because it is claimed that in *AM* the mental events are no less real as physical events (1997: 72). In contrast, within a fictional understanding of the mental even Davidson’s theory of action would be a commonsense fiction without truth. Instead of the problem of psychophysical causation other problems would then emerge, for example, the problem to explain mental fictions and their illusionary realistic interpretation by commonsense.

3. A further evidence for the assumption of mental properties are Davidson’s analyses (1991) of self knowledge, the knowledge of others and the triangulation of both in a shared world. The ascription of propositional attitudes to other persons in the triangle is not a projection of fictions to them that constitute other intentional beings in this way. It is presupposed that other persons must have such attitudes already which correspond mostly with my own ascriptions. Therefore, these are true in most cases. Self ascription is not based on empirical evidence. The origin of self ascription is also not fictive intentionality or authority: I know my attitudes because I have them. Mental properties are no less real than physical properties and are

therefore not only components of a merely fictive superstructure. Therefore Davidson says that “all three varieties of knowledge are concerned with aspects of the same reality . . .” (1991: 153). These varieties of knowledge cannot be reduced to one another but condition each other mutually. Because self knowledge and knowledge of other minds presuppose the reality of mental properties their denial would mean an annihilation of all knowledge and communication.

We have convincing reasons for the acceptance of mental properties in Davidson’s theory of the mental. Its usual characterization as an ontological monism and a conceptual (ideological) dualism is therefore at least misleading. It would be conclusive to characterize his theory as *an ontological monism of events (respectively things) and a psychophysical dualism of properties that corresponds epistemologically to a dualism of concepts- and descriptions*. But such an interpretation is confronted with the problem of mental causality. There seem to be only two consistent versions to solve this problem within *AM+P*. We could uphold physicalism with *CdW*. But this is not in harmony with psychophysical downward causation. Thereby it is not excluded that mental properties could be explanatory relevant, if we assume special laws of supervenience. The second option would be to accept such a form of causality. But this would require a revision of other theses, for example, a weakening of *NC*. Davidson’s philosophy of the mental would then be a version of emergentism. Presumably this is not his intention. His solution of that dilemma by assuming supervenient causality of the mental turned out to be not convincing. Summing up: we see the main problem for Davidson’s philosophy of the mental in the proposal to construct a consistent synthesis between a sufficiently strong physicalism and his wish to keep the autonomy of the mental, a synthesis which is hard to achieve.<sup>1</sup>

1 The article is a shorter english version of the chapter “Anomaler Monismus und mentale Kausalität. Ein Beitrag zur Debatte über Donald Davidsons Philosophie des Mentalen” of the book: E. Rogler, G. Preyer, *Materialismus, anomaler Monismus und mentale Kausalität. Zur gegenwärtigen Philosophie des Geistes bei D. Davidson und D. Lewis*. Frankfurt am Main: Verlag Humanities-Online 2001 [www.humanities-online.de](http://www.humanities-online.de) The German version includes a broader discussion of the principles of anomalous monism and it contains an additional part on singular causal statements. We are indebted to Frank Siebelt for his very helpful comments on earlier drafts of the article.

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