

CDD: 128.2

MENTAL CAUSATION: ANATOMY OF A PROBLEM

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Abstract: The origins and development of the problem of mental causation are outlined. The underlying presuppositions which give rise to the problem are identified. Possible strategies for solving, or dissolving the problem are examined.

Key-words: Mental Causation; Supervenience; Functionalism.

I

A problem is a specific question that demands a solution and challenges, somehow, one's ability to provide it. A *problem* is always a problem *for a person or group of persons* (there are no problems in the abstract); it is a question that makes sense out of *a background of assumptions and commitments* (there are no problems in the vacuum); and it is a difficulty that it is supposed to be *solvable* (there are no recondite problems).

The *philosophical problem of mental causation* is no exception to the rule. To be attracted by the mental causation problem, to *feel* it as a problem, one has to reckon an intricate set of assumptions and

commitments that lead, naturally, to pose questions like these (I omit references):

- What is the casual relevance of what we think to what we do?,
- How it is possible for a mind to cause a change in a material body?,
- How it is possible for the mental (the psychological) to exercise causal influence in the physical world?,
- What the causal efficacy of mental (psychological) properties (events, processes) amounts to vis-à-vis the paradigmatic causal efficacy of physical properties?,
- How it is possible for an instantiation of a mental property to cause the instantiation of a physical property, or vice versa?,

more generally,

- How is mental causation possible?

or, more dramatically,

- Can the mind move the world?

These questions “tell about” the mental causation problem; they express the challenge that one is supposed to take up.

II

Some philosophers take up the challenge. *Problem-solving-philosophers* are majority, and the mental causation problem enlivens, in a peculiar way, the philosophical libido of some of them. They take the problem as a basic and inescapable one. No wonder that after several decades of

hard work, *mental-causation-problem-solving-philosophers* have produced a number of impressive conceptual refinements and possible “solutions”.

There is room, however, for a different attitude: to reject the challenge. *Problem-dismantling-philosophers*, as I will dub them, question the legitimacy of (some) philosophical problems, try to show how they supervene on certain presuppositions, and see the failure of so many clever efforts to “solve” them as a symptom of philosophical misunderstanding. There are, of course, different types of dismantlers and dismantlings. *Global* dismantlers (Wittgensteinian souls, say) understand philosophy as the art of dismantling systematically every philosophical problem; *local* dismantlers focus their attention, instead, on a particular philosophical problem or set of philosophical problems. On the other hand, *synchronic* dismantling excludes references to the temporal dimension of a problem, while *diachronic* dismantling takes the temporal succession of putative “solutions” as a revealing clue. Finally, dismantling can be practised with different degrees of virulence. At one extreme, dismantling means *dissolving* the problem; at the other extreme, it means to settle it by *explaining away misunderstandings*.

Concerning the mental causation problem I am on the dismantler’s side. More precisely, I am a local dismantler that goes for the diachronic sort of dismantling. I leave open, for the moment, the degree of virulence I am prepared to commend.

I will address two main questions:

- (1) How did the mental causation problem enter the contemporary philosophical scenario?
- (2) What is at issue in the confrontation between solvers and dismantlers of the mental causation problem?

In answering question 1 (§§ III-VII), I will review some contemporary philosophical proposals about the mental and try to show that the mental causation problem is, in fact, a philosophical newcomer

that supervenes on a peculiar and complex set of assumptions and commitments. In answering question 2 (§§ VIII-X), I will take Kim's "solution" of the mental causation problem as a sort of stalking horse to elaborate my answer.

My discussion will be sketchy. What follows is intended as a set of notes or as a sequence of reminders.

III

Non-mentalistic philosophies of mind are immune to the mental causation problem. Take, as an example, a typical Rylean story. It states that a conceptual investigation of folk mentalistic language discloses an essential reference to dispositions to act, not to internal episodes causally related to overt behaviour. Consequently, it infers that mental (internal, inner, private) episodes (events, states, processes) are not legitimate items of a philosophical theory of the mental. Moreover, statements reporting causal connections are not categorical statements about real bonds (sort of extra entities) between states, but hypotheticals that license inferences from factual statements to factual statements. A typical Rylean story places mentality in the public arena. Hence, no mental causation problem. No awkward questions about, say, how the mind moves the world.

IV

Post-Rylean philosophies of mind did not bring in the mental causation problem, either. They posited the reality of mental (private, internal, inner) states and of causal relations among them, but ruled out questions like: How it is possible for the mind to cause a change in a material body? Identity Theories (Reductive Type Physicalism) are paradigmatic in this respect.

Identity theorists maintained that,

- (1) For each mental kind (predicate, event, state) M there is a unique neurological kind P ;
- (2) P is nomologically coextensive with M ;
- (3) The business of philosophers is to advance conceptual elucidations of M predicates, while neuroscientists are in charge of providing the relevant nomological coextensions;
- (4) given (i)-(iii), a reductionist program of mental kinds to neurological kinds is feasible.

Identity Theories were in tune with the advance of neurosciences, offered a promising reduction program, and gave a clear and simple explanation of statements about mental causation. If mental kinds are identical to neurological ones, statements like 'Mental event M causes neurological event P ' assert a causal relation between two physical, neurological, events. No mental causation problem; no mystery. As Kim points out,

...psychoneural identification is particularly helpful in understanding the possibility of mental causation. It makes mental causation entirely unmysterious: mental causation turns out to be a species of physical causation. (Kim (1996)).

Mental causation *is* physical causation.

V

Identity theorists talk about psychological and neurological kinds was rather loose. They did not set up constraints on the extension of mental kinds, nor on the actual or possible variability of neural correlates across different species. They posited one-to-one correlations among M -kinds and P -kinds and presupposed the existence of a suitable neurological basis. In that scenario, the *Multiple Realization Argument*, famously heralded by Putnam (1967), was a very effective weapon.

To make good his claims, Putnam argued, the brain-state theorist has to identify a brain state such that any organism, O , is in a mental state M iff O has a suitable physical-chemical structure, and O is in state M .

That means that the physical-chemical state in question must be a possible state of a mammalian brain, a reptilian brain, a mollusc's brain... it must *not* be a possible (physically possible) state of the brain of any physically possible creature that cannot feel pain...it will also be a state of the brain of any extraterrestrial that may be found. (Putnam (1967)).

Putnam did not claim that it was impossible to find such a state. He admitted that parallel evolution "might *always* lead to *one and the same* physical correlate of [M]" (his example: the eye of the octopus and the eye of the mammal). But he qualified such hypothesis as "ambitious". He also pointed out that the claim that "*every* mental state is a brain state", is open to empirical refutation, when the same mental predicate is applied to organisms with different neural correlates.

The difficulty of identity theories to accommodate the multiple realizability of mental kinds was also exploited by Putnam to argue in favour of the plausibility of an alternative proposal. Machine Functionalism, he maintained, was a better choice than identity theories.

...if the program of finding psychological laws that are not species-specific -i.e., of finding a normal form for psychological theories of different species – ever succeeds, then it will bring in its wake a delineation of the kind of functional organization that is necessary and sufficient for a given psychological state. As well as a precise definition of 'psychological state'. (Putnam (1967)).

Putnam's proposal was revolutionary. His *functional state identity theory* was an attractive proposal that wiped out identity theories. It replaced the *conceptual / scientific tasks* distinction drawn by identity theorists, by a distinction concerning descriptive levels: *structural, computational and psychological*. It posited one-one identities between mental states and machine states, and one-many correlations between machine states and

the structural states in which they are realized. It urged replacing a species-specific approach by a species-independent one; a reductionist program by a non-reductionist one; structural intertwining by functional organization. Besides, Putnam emphatically rejected the rules implicit “in the practice of most analytical philosophers ... which represent themselves considerable confusion”, and refused, thereby, to take into account *a priori* arguments against identity theories. He took into account “empirical reasons”; and introduced functionalism as a theory to be evaluated in terms of “fruitful predictions” and “fruitful questions”; he even asserted, conditionally, the correction of a “naturalistic view”.

What of causation and, *a fortiori*, of mental causation? In Putnam’s seminal 1967 paper, causation finds no place. There are only references to *transitions between states*, to sequence relations, with the qualification that when the notion of a Turing Machine is used as a model for an organism, “the transitions between states are allowed to be with various probabilities, rather than being ‘deterministic’”. Strictly speaking, the states of a Turing Machine do not cause any of its other states. A physical system satisfies a machine table when the counterfactuals that the table specifies are true of it. No causation; hence, no mental causation problem.

Machine Functionalism did not stay for long. Trying to specify “a normal form for psychological theories of different species” on the model of the machine table of a Turing Machine (its normal form for functional description), was too abstract a program for a philosophy of mind. Some philosophers thought that Machine Functionalism lacked enough “generality”, and suggested that:

[one] can achieve more generality by characterizing functionalism as the view that what makes a pain a pain (and, generally, what makes any mental state the mental state it is) is its having a certain causal role.
(Block (1980))

Consequently, a “causal reading” was argued for.

[N]othing precludes taking at least some of the transitions specified in a machine table as corresponding to causal relations in the system which the table *describes*. In particular, since [the functional state identity theory] is compatible with token physicalism, there is no reason why it should not acknowledge that token psychological states may enter into causal relations. Thus, any advantages which accrues to causal analysis of the psychological states, or of the relations between psychological states and behaviour, equally accrues to [the functional state identity theory]. (Block & Fodor (1972)).

Be as it may, the point is that neither non-mentalist Rylean proposals (that put the mind outside the body), nor identity theories (that put the mind back into inner realm) nor machine functionalism (that put the function in it), brought in the mental causation problem.

VI

What of the post-Machine Functionalism theories? They share a set of tenets. To wit,

- mental kinds (properties, events, concepts, states) are functional kinds, i.e., properties identified by their roles as causal intermediaries between sensory inputs and behavioural outputs;
- inputs and outputs connect mental kinds to physical reality;
- mental kinds, as functional kinds, are extrinsic or relational,
- mental kinds are multiple realizable;
- the characterization of mental kinds in terms of physical kinds involves quantification over physical realizers (the occupiers of the functional roles);
- a functional account of mental kinds is, thus, compatible with a physicalist view of the world.

That minimal platform is the common share of a number of functionalist versions: a complex lot, indeed. For my purposes, the following additional remarks are in order.

First, some functionalists (the heirs of machine functionalists) perform functional analysis of mental kinds in terms of an empirical computational theory of the mind. Other functionalists (the heirs of identity theorists) prefer non-computational functional analysis of mental concepts, as a preliminary to reduction.

Second, the fabric of causal connections among states, sensory inputs and behavioural outputs (the “matter” to be functionalized), is provided by some sort of theory. Some functionalists single out empirical psychological theories, and the definitions they advanced are supposed to fix the extension of the corresponding empirical psychological terms. Other functionalists highlight folk psychology (conceived of as a theory). Their conceptual definitions are intended to capture the meaning of our ordinary mental concepts to get them ready for reduction.

Third, functional reductionism is a minoritarian position: most functionalists are non-reductionists. Given the multiple realizability of mental kinds, universal bridge laws between *M* and *P* properties, are not available. *M* properties do not have the requisite coextensions in the physical domain because it is not possible to specify the single *P* correlated to *M*, to make up the corresponding bridge law.

Fourth, ontologically speaking, functional reductionists are property monists, Functional non-reductionists, instead, are property dualists that explain the relations between the properties of the physical base and those of the abstract functional mental level, in terms of non-causal relations like supervenience (determination) or realization (implementation).

Fifth, functional non-reductionists claim the autonomy of the psychological, mental, level; consequently, they also claim the autonomy of Psychology *vis-à-vis* other scientific disciplines. Autonomy claims are

grounded on some standard distinctions about natural kinds, methodological levels and/or nomic specialities.

Notice that taking up of a functionalist stance does not lead, by itself, to the mental causation problem. As the old identity theorists, functional reductionists think there is no such problem: they are as immune to it. On the other hand, functional non-reductionists are reluctant to ask about the causal efficacy of the mental. In general, they take it for granted or think that they have good arguments to calm “mental causation” anxieties.

VII

Let us take stock. A quick diachronic review of some main theoretical proposals in contemporary philosophy of mind, shows that the mental causation problem does not exist as such (it is not a possible problem) for non-mentalistic, identity, and machine functional approach. And for the functionalist versions that compromise with property dualism-supervenience-physicalism-token identity, it is not an *actual* problem, an imperative question that *has* to be answered peremptorily.

If that is the case, how did the mental causation problem enter the philosophical arena? Some refer to Descartes’ substantial dualism and his interactionist misfortunes as the primal record that contemporary philosophers of mind took over. However, the reference is not a good one. Not only Descartes’ religious, cultural, scientific and philosophical circumstances are alien to us, but it is clear that he dealt unsuccessfully with the problem of *substance interaction*, a canonical problem of the scholastic tradition, far away from us. (By the way, if you find comfort in historical references, Spinoza would be a better choice). In short, Descartes “mental causation problem” is not “our” problem (cf. Kim (2000)).

A widely held opinion has it, instead, that it all started with Davidson’s anomalous monism and some of the arguments raised

against it. Davidson's influential "Mental Events" (1970) aimed at identity theories, and was an alternative to the newborn, naturalistic, empirically oriented, Machine Functionalism. Anomalous monism is a doctrine based on a set of complex aprioristic arguments intended to prove that *there are no strict psychophysical laws* (3), and that its seeming incoherence with principles such as *Mental and physical events interact causally* (1) and *If two events are causally related, there is a strict law under which they may be subsumed* (2), can be "explained away". Davidson draws an essential, categorial, Kantian-like, distinction between the mental and the physical. Normativity, rationality (coherence) and holism are the marks of the mental; necessity and lawfulness, of the physical. Obviously, conceptual heterogeneous realms "not made for each other", are not apt for nomological commerce. However, the truth of (3) does not imply that mental causation does not exist, that causality does not have a nomological character, or that there is no room for a physicalist ontology. The argument, in a nutshell, is this.

Take an arbitrary mental even *M*. By (1) it is causally connected with some physical even *P*. By (2), there must be a strict law connecting *M* and *P*; but, by (3), that law cannot be a psychophysical law. Since only physics aims to provide a closed system governed by strict laws, the law connecting *M* and *P* must be a physical law. But then, *M* must have a physical description – it must be a physical event... (1) – (3) do, however, imply ontological reduction, since they imply that mental entities do not add to the physical furniture of the world. The result is ontological monism coupled with conceptual dualism. (Davidson (1994); also (1993)).

The irreducibility of mental predicates to physical ones, implied by (3), does not cancel the identity of their tokens nor does it prevent the additional thesis that mental characteristics supervene on physical ones, makes them dependent characteristics, not untamed or ethereal ones. It goes without saying that "Mental Events" is not a casual paper, but an important piece in Davidson's philosophical program.

Anomalous monism gave rise to an important critical industry. Its epiphenomenological implications were at the centre of the arena (cf. Sosa (1984); Kim (1989); and Davidson, Kim, McLaughlin and Sosa's discussion, in Heil & Mele (1993)). At the same time, supervenience became a conceptual star that fed the hopes of explaining, at last, how the mental relates to the physical. (Kim was the Master of that admirable sect). As the discussion expanded, every theory that compromised with *property dualism - non-reductionism - token identity - physicalism*, was suspected of carrying with it the virus of mental inertness. The mental causation problem took root.

VIII

There are no problems in the vacuum, nor in the abstract. OK. But, on what sort of conflicts do philosophical problems typically supervene? Are there "legal" moves or operations to honour? What are they? What is the nature of the expected outcomes? What type of assumptions and commitments are involved?

Kim (2000) makes some interesting remarks concerning these questions.

[Philosophical problems]... emerge when we come to see a conflict among the assumptions and presumptions that we explicitly or tacitly accept, or commitments that command our presumptive respect. The seriousness of a philosophical problem therefore depends on two related questions. First, how deep is our attachment to the assumptions and commitments that give rise to the apparent conflict? Second, how easy or difficult is to bring the conflicting assumptions into an acceptable reconciliation? The process of reconciliation may require serious modifications to our original commitments, compromises must be negotiated. There are no free lunches in philosophy any more than in real life. (Kim (2000)).

I like Kim's points about the emergence of philosophical problems and the way to achieve intra-theoretical reconciliation (sort of reflective equilibrium). But he is not explicit about how to identify the

assumptions and *commitments* “that command our presumptive respect” (which are they?), nor about the aim pursued when coping with a problem (to solve it?, to disentangle it?, to dissolve it?, to make it “go away”?), or the criteria to evaluate possible answers (when are we “properly done” with it?). Let me expand on this.

First of all, how does Kim deal with the mental causation problem? A short answer, is this. (I draw from Kim 1996 and 2000, at times verbatim).

For Kim, causal relations involving mental events (physical - mental, mental mental, mental-physical) are among the familiar facts of everyday experience. Our mental events are intricately woven into the complex mosaic of causal relation to the world. Moreover, agency and knowledge are possible only if mental causation is possible. Mental causation is real and has to be saved.

Antireductionism was fuelled by anomalous monism and functionalism. Non-reductive materialism became the received view. Basically, it champions property dualism, non-reductionism, token identity and physicalism, and appeal to supervenience or realization to explain how mental and physical properties are related.

Supervenience does not offer an explanatory theory of how mentality is related to physical nature: it states property covariation and suggests property dependence. The interesting idea is *physical realizationism*, a conjunction of physicalism and the functional conception of psychological properties, that entails the supervenience thesis. The psychological supervenes on the physical because *M* properties are second-order functional properties with *physical realizers* (first-order properties). Physical realizationism is the first step in Kim’s *constructive proposal*. (More on this later).

Kim’s addresses his *critical strategy* to the philosophical souls that love being physicalists and mental realists, but are under the spell of non-reductionism, property dualism and token identity. When the *Causal Exclusion Problem* (Given that every physical event that has a cause, has a

physical cause [Closure Principle of the Physical], how is a mental cause possible?) is associated to supervenience, it yields the *Supervenience Argument*. Its dilemmatic conclusion is that mental causation is unintelligible, both if mind-body supervenience fails or if it holds. Notice that non-reductionism is what gets the Supervenience Argument going.

Let us go back to realizationism. It has it that whenever P is realized in a system s , it instantiates a mental property M . But, why? By definition, having M is having a property with causal specification D , and in systems like s , P is the property (or some of the properties) meeting specification D . In plain language: M is nothing “over and above” having P . The next step is, naturally, the reduction of psychological properties. Kim rejects Nagel’s model of intertheoretical reduction and advances a *functional model of reduction*. To reduce a property one has to construe it functionally (relationally) in terms of its causal/nomic relations to other properties. Consequently, M is construed as a second order property (the property of having a property with such -and-such causal role) and it is the case that P is the property that satisfies the causal specification. The identity of M and P is thus grounded. Intentional phenomena are, in principle, amenable to functionalization; qualia are not.

How it is possible to identify properties that are of so different (second order/first order, extrinsic/intrinsic)? Kim advocates a *sparse conception of properties*, according to which difference in properties must reflect differences in causal powers. He proposes to speak of *second-order descriptions, designators or concepts* that carry information and pick up first-order properties disjunctively. Strictly speaking, there are no mental *properties*. No surprise. After all, the problem of mental causation does not concern the causal efficacy of *psychological concepts*.

This coarse summary leaves out several important themes and a number of subtle points made by Kim. But it serves my purposes. It draws attention to the twofold character of Kim’s strategy. The critical set (exclusion problem-supervenience argument) is heavy stuff. It is

intended to play, for non-reductive materialism, the same knock down effect that the multiple realization argument played on identity theories. The constructive set (functional model of reduction-identity-sparse conception of properties) is Kim's positive proposal about the mental causation problem. Both sides of the strategy presuppose the assumptions and commitments that play a role in setting up the mental causation problem: they are the "conflicting" elements to be "reconciled" through changes and compromises. What are they?

IX

Here is a tentative list.

(A) *A mundane fact, an obvious truth.*

- the causal efficacy of the mental-mental and the mental-physical causal interaction is pervasively presupposed and appealed to in folk psychological practice.

(B) *Substantive thesis* like,

- reasons are causes;
- causal relations are real;
- mental properties are multiple realizable. (the Multiple Realizability Thesis),
- mental properties are different from physical properties. (Property dualism).
- mental properties are non-reducible to physical properties. (Antireductionism),
- mental properties are related, somehow, to physical properties (Supervenientism / Realizationism),
- psychological predicates denote mental properties (Property latitudinarianism),

- basic natural properties, processes and laws are physical (Physicalism),
- everything that happens is determined by what happens at the physical micro-level.
- the physical realm is closed (Closure Principle).

(C) *Underlying principles* like,

- metaphysics has a common domain associated to realism about our cognitive activities.
- metaphysical and epistemological issues are different,
- metaphysical questions have priority on questions about explanatory practices and evidential support,
- properties are individuated in terms of their causal powers,
- *a priori* reasoning is the appropriate strategy to produce perspicuous ontological explanations.

(D) *Basic rules* like,

In dealing with the mental causation problem,

- (1) Vindicate the causal efficacy of mental properties (vindicate intuition A), by inferring it from the substantive thesis (B), with the help of underlying principles (C). No accurate solution states or implies the causal inertness of mental properties.
- (2) (To that effect) Alter (to some degree) some (only some) of the assumptions and commitments B or C.

Let us assume that the list includes the relevant items. Kim's critical strategy consists, then, in arguing that it is not possible to vindicate A from B and C, because there is in B an insurmountable tension among property dualism, antireductionism, and supervenience,

on the one hand, and a well-understood physicalism, on the other. The constructive proposal is built upon the ruins left by the critical strategy. Kim primes reductionism, property monism, realizationism, and a sparse conception of properties, as new B items. He does not negotiate C items, and leaves A in a problematic condition.

The reductionist option “relinquish mentality as a distinct reality”: Does it relinquish the commonsense conviction that, say, our thoughts and desires have powers to move our limbs? Kim says no. Mental causation is possible, and familiar intentional explanations are true. Kim’s worries are not “evidential or epistemological”. The question is about the very *possibility* of mental causation (*how* it is possible, not *whether* it is possible). To answer it one has to choose between *metaphysical* alternatives, and make “our metaphysics consistent with mental causation”. Metaphysics is unavoidable, but also supreme: “what happens with the how-question may in the end induce us to reconsider our stance on the whether-question”. (I would say that it *actually* induces such reconsideration).

Be that as it may,

...all roads branching out of physicalism may in the end seem to converge at the same point, the irreality of the mental. This should come as no surprise: we should remember that physicalism, as an overarching metaphysical doctrine about all of reality, exacts a steep price...it seems to me clear that preserving the mental as part of the physical world is far better than epiphenomenism or eliminativism. (Kim (2000))

Consequently, Kim is convinced that,

...an all-encompassing reductionism about the mental ... will solve the problem of mental causation. (Kim (2000)).

Is that so? Does an all-encompassing reductionism *solve* the mental causation problem, or it just *dissolves* it. To personalize the question. Is Kim (the reductionist) a problem-solver or a undercover radical disentangler?

Obviously, it all depends on what you mean by ‘solving the mental causation problem’. One might argue that D is crucial in that respect because D1 and D2 state constraints on the content of the expected answer and the character of the permissible changes. If so, Kim dissolves the problem: he is a radical disentangler.

Nothing wrong with that. After all. If a normal reading of A -D, leads to the conclusion that the mental causation problem is unintelligible, the sensible move is to ignore D and produce radical changes in B, to expel property dualism out of the philosophical realm. A legal move, indeed,...*if* metaphysics is unavoidable, ...*if* physicalism is an overarching metaphysical doctrine, ... *if* the stance on the whether question is negotiable...

XI

Let me go back to § II and the diachronic strategy. The sequence of philosophical doctrines concerned with mental causation, uncover s the peculiar phenomenon of *doctrine recurrence*. The evolutionary pattern I have sketched reminds me of the “array of portions staked out and variously occupied” that Colin McGinn (1993) has called DIME. Remember: D stands for degrade (reduce); I for irre ducible; M for mystical; and E for elimination.

...there is a pattern to this dance – as D yields reluctantly to I, as I encourages a flirtation with M, as M propels one to E, D seems like the place to try again. Plainly too, E and D make natural partner s, as do I and M.

McGinn’s point is that philosophical doctrines turn without end around a fixed set of possible options. My point is that the doctrinal sequence I have outlined fits (with some provisos) into the DIME pattern. (Actually, McGinn plays with the pattern concerning doctrines about Consciousness).

I do not share McGinn's argument to explain the phenomenon of doctrine recurrence. I do not think that doctrinal recurrence is the consequence of some "inherent limitations on our epistemic faculties", nor that there are philo-mysteries instead of philo-problems. But his point about the "dancing pattern" is a good one. It downgrades the philosophical pretentiousness of dealing with problems amenable to specific and definitive solutions, and tells us something about the cognitive expectations of philosophy and philosophers. In this respect, it encourages theoretical modesty; an admirable epistemic value.

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