

CHESS AND POSSIBILITY

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Professor Max Black has, in a relatively recent paper ⁽¹⁾, approached certain questions regarding the concepts of possibility from the vantage of the chess game. I wish to argue that the use of this model cannot, except by accident, illuminate the modal concept of possibility and, almost inevitably, leads us to conflate two radically different notions of possibility.

Black begins by considering what he would be thinking about, in order to avoid checkmate (his king being in danger). He says he would be considering "*possible moves*" (p. 140). The case at hand is disarmingly simple. For, the least reflection shows that "possible moves", in a context of discussion that included both chess and all the unformalized "games" of life itself, would designate either "permissible" moves — in accord with the rules of some prescribed game — or else moves that some agent *can* or *could* undertake under conditions posited. Black acknowledges the first of these alternatives (p. 140), but I believe he fails to seize its force. For if "possible" is admitted to mean "available" or "permissible" or "legal" or the like, possibility is no longer a *modal* concept at all, reduces instead (altogether acceptably) to some sort of normative or sanctioning or value-laden epithet. If one were, for example, to construe morality as a kind of "game" played according to identifiable rules, murder might be judged an *impossible* move in that game; this is simply to say that a move that *could* be made (ignoring the rules of the game) may be *christened* an impossible move (with respect to the game). Alternatively put, this is to say that impossible moves are *no moves at all within the game*, that what is impossible is whatever playing the game excludes or forbids. Put in another way again, *all* the moves made in a chess game are, in a sense, *possible* moves in chess: *there are no moves to consider that may be impossible*; what is impossible according to the rules is not a *move*. Again, this is to construe possibility in the sense of *consistency* (with respect to a set of given rules).

⁽¹⁾ "Possibility", *Journal of Philosophy*, LVII (1960), 117-126; reprinted in Max BLACK, *Models and Metaphors* (Ithaca, 1962). All references are to *Models and Metaphors*.

When one considers the possibility of *making* a move, one considers whether the move is impossible to *make*; when one considers, on the other hand, *whether* to make one or another of several *possible moves*, questions of impossibility are irrelevant. In the first case, we ask whether someone *can* (or could) make a certain move; in the second case, either we assume he can and address ourselves to the merit of the alternatives, or we address ourselves merely to the merit of those alternatives. In a word, when we construe possibility as a modal concept, we are bound to consider any particular act or event as possible or impossible to occur; and when we construe possibility as a sort of sanctioning epithet, for any relevant act or event, there simply is no contrasting use of «possible» and «impossible» that corresponds. When we speak of what someone *can* do, or of what *may* occur, we must be prepared to speak of the possibility of some E's occurring and also of the impossibility of that E's occurring. But when we speak of possible moves in accord with the rules of a game, questions of the possibility of E's occurring or not occurring or the impossibility of E's occurring are flatly irrelevant.

All of this is obscured by speaking, as Black does, of «trying to choose between ... two possible moves» (p. 140). For, «trying to choose» suggests the modal concept «can», and «possible moves» is not related at all to modal considerations. «Possible» is simply a term that services both notions. Now, Black, as I have admitted, sees that «the possible moves are those not forbidden by the rules — the moves that are permitted» (p. 140). But he does not see that the concept of «possible moves» has nothing to do with the concept of what a man *can do*. The key to this oversight lies in Black's persistent concern with the alleged «metaphysical difficulty ... of finding room in the universe ... for ... unrealized possibilities» (p. 151). Black wishes to hold that «possibilities are not fictitious but in some sense 'real' or 'objective'» (p. 151). He hopes, in this regard, to expose «the basic mistake» of treating the expression «possible move» as *referring* to something — as if «possible move» and «actual move» were «co-ordinate species of a single genus» (p. 151). The curious thing is that the error concerns the use of «possible» in the modal sense and *not* in what I have called the sanctioning sense of the term. That is, the «possible moves» of chess have nothing to do with what any *player* might or might not do, have rather to do only (as we have seen) with what the rules permit or forbid; the «possible moves» in chess (in Black's sense) do not *ever* concern «unrealized possibilities». To speak of what a chess player *can do*, in a particular game of chess, is either

a misleading ellipsis for what moves are «permissible» according to the rules or else a hybrid way of speaking of what is «permissible» together with modal considerations *within* those limits.

The «possible moves» of chess are merely what the rules permit. Ironically, therefore, statements about the «possible moves» in chess are tantamount to what Black elsewhere calls «dummy statements», that is, surrogates of linguistic rules⁽²⁾. I say this is ironic, because Black's defense of «unrealized possibilities» depends on his failure to apply here his views on the relationship between necessary statements and rules of language. So he asks rhetorically: «If the supposed existence of the possible moves *follows from* the rules of chess and the description of the configuration of the pieces (or, in the case of empirical possibilities, from the laws of nature and the 'boundary conditions') could we not manage without talking about 'possibilities' at all?» (p. 149). He concludes that we cannot, *since* we cannot convincingly «reduce the possible to the actual», since we should thereby «do violence to the ways in which we use the words 'possible', 'possibility', and the related modal words, 'can', 'could', 'would', and 'might'» (p. 150). He should rather have held to the view that the statement of the possible moves serves as a surrogate for the rules of chess *and* that the question of the «existence» or «reality» of possible moves does not arise at all.

I can put this another way. What Black says about «possible moves» does not bear at all on the metaphysical status of «possibilities», in the modal sense: chess cannot illuminate this concept of possibility, except accidentally in so far as we attend to someone's *playing* chess. The critical distinction is this: regarding «possible moves», there are no inductive considerations that are relevant at all — the «possible moves» may be construed as surrogates for the rules of chess, identified enumeratively («*This* is a possible move, and *this* is a possible move, and ...»); whereas there *are* inductive considerations crucial to deciding whether some event or act is possible. The rules of chess define the moves of the chessboard and themselves remain altogether unaffected by those moves. Black wishes to construe the laws of nature somehow as the counterpart of the rules of chess (p. 149), but actual events and actions *logically* affect the formulation and re-

(2) «Necessary Statements and Rules», *Philosophical Review*, LXVII (1958), 313-341; reprinted in *Models and Metaphors*.

formulation of the laws of nature. There is no question here that, in determining whether some event or action is possible, we attend both to the laws of nature and to actual «boundary conditions»; but this is not to say that we do so in a way that can be reduced to the way in which we speak of «possible moves» in chess.

Independent of providing a satisfactory account of how we speak of possibility, I think we can see that Black's discussion rests on a conceptual mistake. For, if he were right in his analogy between the rules of chess and the laws of nature, then, contrary to his own thesis, we *could* «manage without talking about 'possibilities' at all». Furthermore, with *changing* formulations of the laws of nature (or, at least, with law-like formulations governing empirical events), what appeared to be impossible (possible) may now appear to be possible (impossible); there is no counterpart regarding the rules of chess. Finally, to suppose that there is a limit at which the laws of nature cannot be altered by new findings regarding what is actual is of course to suggest the analogy with the rules of chess, but it is also incoherent. The reason is quite simple: *if* the laws of nature are, in some sense, discovered by attention to empirical facts, and *if* alleged laws of nature are, in some sense, testable by appeal to empirical facts, there is no conceptually eligible way for holding that it is *impossible* that the given laws be alterable in the light of new empirical facts. (Correspondingly, there are *no* empirical considerations bearing on the rules of chess.) Again, this is ironic for Black's account, since the motive of his discussion is his concern to deny that the possible can be reduced to the actual, that statements about possibility (for example, counterfactuals) can be explained «in terms of deductive relations between selected propositions» (p. 150). I wish to insist here only that he cannot salvage possibility by the chess maneuver, that it is at bottom an alternative version of the reductionism he wishes to resist.

There is a further ambiguity regarding what is possible that infects Black's account. Recall that he began his discussion with a question of *choosing* between two possible moves on the chessboard. Of course, choosing between two moves presupposes that he *can*, in a variety of senses, make certain moves. So speaking may be a redundant way of drawing attention to «possible moves», in the sanctioning sense already discussed. It may be a way of drawing attention to the relative merit of alternative moves, both possible in the sanctioning sense. It may be a way of drawing attention to his grasp of the game and appreciation that *these* are indeed admissible moves or that *these*

moves have this or that strategic significance for the game. And, somewhat more remotely (for the present case at least), it may be a way of drawing attention to the fact that, within the range of admissible moves in chess, physical conditions are not such that it would be impossible for anyone relevantly located to exert the force requisite to move the chess pieces to either square considered. What I wish to draw attention to is that, sometimes, when we speak of what a man *can do*, in the modal sense, we mean to speak of what is merely physically possible, and that, sometimes, we mean to speak of what satisfies further conditions beyond those of mere physical possibility.

It is not, I submit, paradoxical to ask of someone in particular: «I know that the refrigerator can be moved out of the corner, but can he move it?», «I know that four pins can be juggled at the same time, but can he do it?», «I know that the king can be mated, but can he mate the king?» In general, it is not enough know that something is physically possible (or, admissible as in a game) to know that someone can make what is physically possible (or admissible) happen. The capacity of any agent to do something presupposes the physical possibility (or admissibility) of what is to be undertaken; but, normally, there are further considerations relevant. Merely to acknowledge these distinctions is to expose the double conflation of Black's account: he tends to reduce the modal concept of «can» (in the sense of an agent's capacity) to the modal concept of physical possibility, and he tends to reduce the concept of physical possibility to the non-modal concept of possibility relevant to the notion of «possible moves» in a game. This explains at a stroke, I believe, what is the matter with the application of the chess model to the issue of a chessplayer's *choosing* between alternative moves. In this connection, the following remark of Black's is crucial:

...whether a given move is «possible» or not in a given situation is something that can be settled by a strict proof. Given a description of a position of the pieces on the board, and the accepted rules of the game, a conclusion about the legality of a given move follows by deductive inference. That a given *chess* move is possible in a given chess position is an analytic proposition (pp. 140-1).

Now, Black is right, of course, in holding that whether a move is possible («admissible») is «something that can be settled by a strict proof». And *if* the laws of nature were postulated to obtain in a manner corresponding to the rules of chess, the possibility of any particular event could be «settled by a strict proof» from the laws

and «boundary conditions» — except that, in that case, «possible» would no longer (as we have argued) be a modal term.

Black wishes to argue that the possible cannot be reduced to the actual (hence, he notes that «an attempt to make statements about the unplayed move that parallel the contingent statements about the actual move results in an important shift in formulation») (p. 143); but he does not wish to deny (as far as I can see) that the possibility of an «*unplayed* move» can be «settled by a strict proof». He sees that the chess model encourages (falsely, he believes) the reduction of the possible to the actual; but he fails to see that speaking in the chess idiom leads *him* to confuse the modal possibility of «can», regarding a chess player's moves, with the non-modal possibility of «possible moves», in chess. Hence, he declares, characteristically: «I feel that I am choosing between *real* alternatives, each invested with genuine properties beyond my power to alter» (p. 145). And hence also, in rejecting the view that the expression «possible X» has an «objective counterpart», he insists that it does not follow that that expression has «no proper meaning at all» (p. 151).

I may perhaps now put the arguments clearly. One (already advanced) is that, against Black's view, the notion of «real» possibility, in the modal sense, has no bearing on «possible moves» in chess, except accidentally (by being linked to a *player's* behavior). The second (not yet defended) is that, against Black again, the modal concept «can» (relevant to the question of *choosing* between possible alternatives) *does not* figure in arguments in such a way that «whether a given *move* is 'possible' or not in a given situation can be settled by a strict proof». I should put the case this way: we argue *only analogically* from the instances of what an agent actually does and has done, in relevant circumstances, to what that agent *can* do. Grant even that physical possibilities «can be settled by a strict proof», as Black regularly supposes. In that sense in which what an agent *can do* raises questions beyond those of mere physical possibility — questions that may be resolved by consulting laws of nature and boundary conditions — we have passed beyond the appeal to laws of nature (without ignoring such laws), by means of which strict proofs of the sort Black has in mind could be provided. To say that in given circumstances, a man *can* do some particular thing is to say that the action considered is physically possible *and* accords sufficiently closely to what he actually does and has done. The argument is weighted, of course, in terms of changing circumstances and newly relevant physical laws, and *related* predictions of what a man will

do *can* always be assessed by an examination of subsequent facts. But the assessment of what a man *can* do does not depend logically on the value of that related prediction ⁽⁸⁾.

If these arguments hold, the chess model of possibility is doubly faulty: first because it does not provide for a modal concept of possibility; second, because the modal concept of possibility does not allow for a strict proof (in Black's sense) regarding what a man *can* do and allows for it, only conditionally, with respect to physical possibility.

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⁽⁸⁾ Cf. J. C. AUSTIN, «Ifs and Cans», in *Philosophical Papers* (Oxford, 1961).