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Towards a Philosophy of Chess

by

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Although there are fugitive references to chess scattered throughout the philosophical literature (one recalls above all Wittgenstein's question, "Can you play chess without the Queen?"), one is prompted to turn rather to the more theoretical treatises of the chess masters themselves in one's effort to pursue lines of reflection that might be styled, with greater or less propriety, as philosophy of chess. In point of fact there are found to be very few such treatises addressed to the foundations of chess that can be said to merit the title of high theory, understood as involving an extended, systematic treatment of first principles. Not that high theory as such, even when attained, will pass muster for us as philosophy of chess in the narrow sense of the word. In general, I take it that there is philosophy in the narrow as well as in the broad sense of the term where philosophy in the narrow sense (I need characterize it no further) is to be identified with the kind of inquiry practiced by Aristotle, Descartes and Locke--a very rough suggestion indeed when one recalls that each of those thinkers wrote on non-philosophical as well as philosophical topics. My remarks here will suffice if they succeed in fixing the reference of "philosophy" as narrowly construed, granted that any further characterization of it is pretty much left up in the air. Philosophy of chess, then, if first and foremost philosophy itself understood along narrow-gauged lines, it is thus not to be found except perhaps sporadically in any of the treatises of the chess master. Indeed it is probably not to be found anywhere at all (in any systematic form). It must not now be assumed that the more theoretical treatises of chess are to be subsumed at least under philosphy taken along broad-gauged lines. There is one consideration that militates decisively against that suggestion. Philosophy in the broad sense of the term eschews the technical (the omission need not be taken to be a defect) where both philosophy in the narrow sense and the treatises of chess are very much bound up with it. One word about philosophy as broadly construed: it may be said to be intimately associated with (the idea of) wisdom and if if cannot always be said to enshrine wisdom proper it must be seen as at least purporting to provide a reasonable or plausible facsimile of it. It is precisely because wisdom and technicality are felt to lie in opposite quarters that philosophy as narrowly conceived is felt to present a paradox. On the one hand like all philosophy it is taken to be peculiarly oriented toward wisdom while on the other it is felt to be incurably alienated from it by its highly technical character.

Although I have said that philosophy of chess must be first and foremost philosophy in its technical import it would be too cruel to shut the door altogether against any forays into the broader sort of reflective considerations that the game of chess invites. We rule, however, that such forays can only play a secondary role in our inquiry. The technical character of philosophy and a fortiori philosophy of chess lying in the forefront of our attention, it should not be surprising that the chess treatises of the masters should lend themselves peculiarly to our purposes. Thus we do not undertake to philosophize upon the game of chess directly (the light is blinding) but as mediated by chess theory properly so-called, having then something substantial (and available) to build upon. It turns out, however, that the most theoretical and most technical of the chess treatises--featuring surely the

theory of related squares in King and Pawn endgames[1] --proves to be too specialized to satisfy us: thus there is nothing comparable to the theory of related squares even in such neighboring areas as Rook and Pawn or Queen and Pawn endgames. One key mark of high theory being found in generality, one might indeed be puzzled by my saying that it is precisely this most specialized of areas that attracts the most theoretical research. The answer to the puzzle is two-fold. First, generality is only one mark of theory, there are others that can override it. Second, and I tremble lest I be convicted of treason to the chess community, there really is no chess theory at all! Which is not to deny that some modes of chess reflection may not be more theoretical than others: In a village where all men are short, say a pygmy village, some men will still be taller, even much taller than others. If the term 'theory' is used with any kind of stringency, involving at a minimum both technicality and generality, I am prepared to argue that it is no mere contingent fact that there is no chess theory. For there simply cannot be any such thing as a point of principle. I am not saying that there is no theory at all that can do the sort of job (provide the sort of answers) that we demand of an adequate chess theory. Such a theory, though by no means available at the present time even in rudimentary form, will be constructed in the future. Or so I allow myself to believe. At any rate at the present time we are very much in a position to anticipate how this utopian theory must be conceived. Although it will not be describable by any stretch of terminology as being caissic in character (caissic: adjective formed from Caissa, the Muse of chess) this theory will deliver a theoretical (but not philosophical) account of chess. By way of ridding my thesis of any air of obscurantism, the following parallel may be of some use as preliminary clarification. Imagine someone who says that though there is not and cannot be a theory of apples, apples comprising much too limited a domain, a theoretical account of apples can be found, embedded in the theory of fruit. In like manner chess must be seen as a special case of a much more general sort of thing, and it is that general sort of thing that will be taken up by theory and which will finally enable chess itself to be brought under its powerful light. What that general sort of thing might be, I shall later investigate. My analogy regarding apples and fruit having failed for many people to have the kind of direct, clarificatory impact that I expected, an historical comment will serve at least to 'place' my thesis. Apple being a species and fruit a genus, according to Aristotle theory is always of the genus, i.e. the general, and never of the species, i.e. the specific. More precisely, theory _can_ be of the specific but never of the specific as such.

One has only to leaf through the pages of the new journal Modem Chess Theory in order to perceive at a glance the debasement of the term 'theory' in the chess literature. When it is said that opening theory frowns on such and such a move what will be meant will usually be no more than that some purely local _ad hoc_ line of analysis shows that the move leads into an inferior game. Maybe we should add that there will also be perhaps some trace of a suggestion that somewhere in the background there is or ought to be a theory properly so-called that lifts the analysis into some measure of generality. The important point, however, is that this promissory note (assuming it to be there) rarely can fall back on any money in the bank. If a vote were taken at the present time as to which of the caissic treatises should be singled out as being most theoretical and most systematic, I am prepared to conjecture that _My System_ by Nimzowltsch would head the list, though it would be unreasonable to expect this work or any work to receive a majority of the votes. There is indeed a certain irony perhaps even a form of self-contradiction enshrined in the title. If the term 'system' evokes the impersonality of high theory, the

personal pronoun by striking a proprietary note might be said to undermine it. One great admirer of Nimzowitsch, Bent Larsen, has gone so far as to deny that My System is a system, preferring to regard it as "a set of highly relevant apercus".[2] That all so-called chess theory might consist solely of more or less instructive apercus I have already intimated, and it may be doubted whether Larsen expects us to believe that there are other chess treatises that by contrast with Nimzowitsch's do succeed as qualifying as systematic.

Like all philosphy philosophy of chess is vulnerable to the charge of failing to get down into the nuts and bolts of its chosen domain of reflection, being often felt to float high above it in a medium of airy abstraction. Preferring to err on the side of specificity, I propose that we take a close look at one technical topic in chess 'theory', namely that of the doubled pawn. Even this fairly narrow topic is, however, too broad for our purposes. Our purposes, being expressly philosophical, do lie in generality but the caissic data to which we now turn are chosen in part for their comparative lack of generality. Only comparative, be it noted. There is no question of our confronting directly the peculiar role of doubled pawns in a particular game between Alekhine and Capabalanca. We are looking for something of a lawlike character which will prove, however, to fall short of the precise generality that we demand of a law proper. Any chess position being itself a universal (it can recur in game after game), if we rule that doubled pawns are bad on move 15 as they arise in this game being played before us we must generalize our result to apply to every token of that position. So we do have here a law (albeit a very low-level one), namely that doubled pawns are bad in every token of position Q where 'Q' denotes that position. That this law is exceptionless can only be understood in theoretical terms. From a practical standpoint, considered in the light of Jones' winning chances against Smith where Jones is seen to be an excellent defensive but only an indifferent attacking player doubled pawns in Q might well constitute a distinct advantage. Laws as such, whether high-level or low-level (I take them all to be exceptionless) do not quite concern us at the moment. I mentioned lawlike principles that lack the full generality (i.e. exceptionlessness) of laws proper, and the term 'maxims' might well be taken to apply to them, bearing in mind especially their action-guiding, normative character. So we have here the maxim, "Doubled pawns are bad" which as a value judgment raises unnecessary complications. It is fairly easy, however, to reformulate the maxim so as to purge it of its normative character, though I do not suppose that the reformulation will carry quite the same meaning as the original. We can say, "Doubled pawns are a factor that makes for losing chess games." If my reformulation is felt to be objectionably vague, please remember that I am merely trying to capture not improve the received import of the maxim with all its built-in vagueness. In particular, it is by no means clear whether our maxim, or indeed any maxim, should be so understood as to allow for exceptions. The following parallel will bring out the difficulty. Suppose that we say with W.D. Ross that we have a prima facie obligation to keep our promises but that this obligation can be overriden by others of greater weight. Should be conclude then that the moral maxim "One ought to keep one's promises" admits of exceptions? That would indeed be the 'naive' reading but on a more 'sophisticated' construal the putative exceptions to the maxim are already accommodated within the maxim itself which is now taken to express the proposition that there is merely a presumptive, defeasible obligation to keep one's promises, and that proposition is seen to be so self-protective as to rule out every exception whatever. On a par with this in its caginess might be the caissic maxim "Doubled pawns are a factor that standardly makes for losing a chess game"

where 'standardly' proves to be as much in need of analysis as 'makes for'. I think it is fair to say that in some informal sense or other, waiving what that sense might precisely be, all such maxims caissic as well as moral do admit of exceptions, particularly when one keeps in mind their action-guiding character. We may style them then as rules of thumb, and it is that characterization above all that takes us straight to the center, at any rate very close to the center, of philosophy of chess itself. The truths of chess having long been recognized as necessary not contingent, the central or nearly central theme of philosophy of chess turns out to be the familiar cluster of questions that are associated with the topic of necessary truth. A puzzle if not quite a paradox has now been generated. How can a proposition be at once a truth of chess and a rule of thumb, seeing that as a truth of chess it may be presumed to be necessary but as a rule of tumb contingent? It might be thought that a comparable question would already have surfaced with regard to ethical propositions, and I am quite sure that it has but the very preoccupation with the prior, more urgent question as to whether there are indeed any ethical truths (or falsehoods) has led to the question at hand being effectively shelved.

Merely sharpening or 'precising' a caissic rule of thumb fails to signify a principled advance. Thus we can say (reverting to the normative idiom) not merely that doubled pawns are (generally?) bad but that they are bad in attack and good or at least less bad in defense. The conceptual difficulties remain unchanged, though we do not doubt that the number of exceptions to the rule has been cut down. According to Nimzowitsch there is "one real strength of the doubled pawns", and he offers the following diagram by way of illustration.

Figure 148

BLACK

WHITE
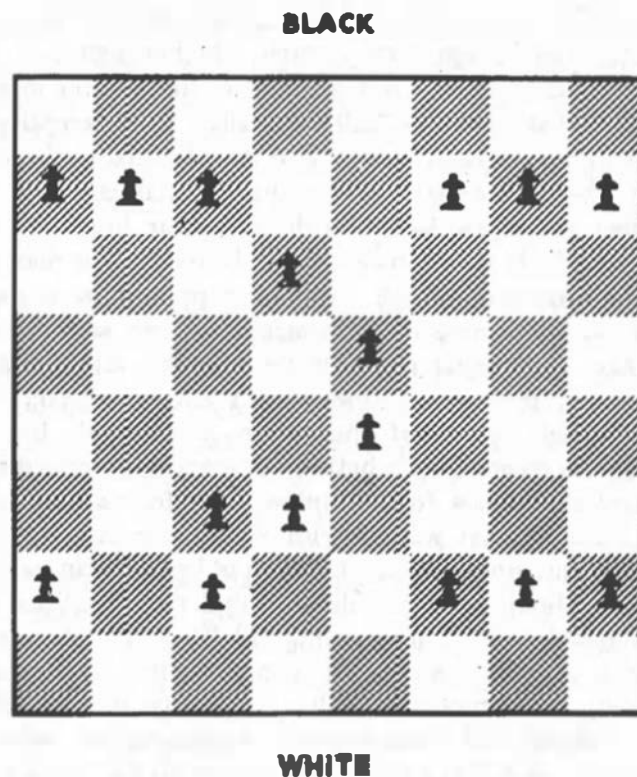
The discussion is worth looking into in some detail, not that we are concerned (here) with whether or not it is true. It is rather as an example of high-grade chess analysis that we prize it, with the aim of subjecting it to philosophical analysis. Again, it is not philosophical analysis in general that engages our attention but philosophical analysis sponsored by our specific preoccupation with the theme of necessary truth. And philosophical analysis even so restricted we take to be merely preliminary to a program of philosophical synthesis whereby the diverse results of small-bore local analyses are integrated into a (philosophical) theory. But any such theory may well lie far in the future. Immediately at hand, then, is Nimzowitsch's account of "the one real strength of doubled pawns".

> As we have seen, a Pawn-mass which is afflected with doubled Pawns has in it a certain latent weakness, which makes itself felt when the time comes to make use of that mass by advancing it. We characterize this, as we have said, as a dynamic weakness. This mass, if at rest (holding its configuration), may be very strong. Turn back to diagram 148. After White has played P-Q4, a position is reached out of which he can be driven only with the greatest trouble. We mean by this that Black hardly possesses the positional means to be able to force his opponent to a decision to play PxKP or P-Q5. On the other hand this would be much more possible if White's Pawn were at QKt_2 instead of QB_2. The doubled Pawns in fact make holding out easier. Why this should be so it is difficult to explain: perhaps it is due to an equalizing act of justice, an attempt to compensate for dynamic weakness by static strength; it may be that QKt file enters the question; at any rate experience has shown that the doubled QBP does favor holding out.[3]

Often thought to be an ideologue of chess even by his admirers, Nimzowitsch in a state of uncharacteristic diffidence is here seen to be remarkably free of that doctrinaire theorizing to which all theoreticians and he more than most are only too prone. The appeal doubtless only half serious to an "equalizing act of justice" reminds us of some of the early pre-Socratics and suggests that in the absence of a satisfying theory myth is ever liable to be pressed into service. It is striking that Nimzowitsch's discussion is by no means as general as one is led to believe, though even the ostensible generality is limited enough. There is no question of discussing any putative strength of doubled pawns as such. Isolated doubled pawns are tacitly ignored as being beyond the pale. Indeed it is this presupposition that explains why it is that White eschews QPxKP and (less obviously) why he is reluctant to play P-Q5 lest he incur at least quasi-isolated pawns. These considerations being, however, narrowly caissic in character, it is not until we reach the remark that it is experience not theory that assures us that "the doubled QBP does favor holding out" that philosophy itself steps in. For we must now ask not merely how a rule of thumb can be a necessary truth (our First Question) but also how a necessary proposition can be known to be true on the basis of experience (our Second Question). What Nimzowitsch might mean when he says that doubled pawns at any rate embedded in a pawn mass make for holding out, is not as clear as one would wish, though he _does_ ostensibly and surely inadequately undertake to explain "what we mean by this." Is he denying the common view that doubled pawns lend themselves to being picked off one by one as ready booty? Maybe so, but probably

not. Nor can he mean that the pawn mass enjoys a peculiar stability thanks to the fact that White has nothing to gain by advancing it. (No advantage in that!) Indeed Black has available to him one characteristic strategy for protecting one's pawns that White is denied, namely, advancing them. It may well be one of the deeper secrets of chess that one of the resources available to the defense in real life--retreat--is denied the humble pawn by the underlying constraints of chess itself. In its march to the queening square the pawn may be said to invoke the motto Aut Caesar aut Nihil. Less glamorously, it may be said that in chess there is no retreat for the man in the ranks; only the officers can turn tail.

So much has been made and rightly made of the parallels between chess and life (as if the differences were simply too obvious and too uninteresting to be mentioned) that the present divergence between the two may well have the striking effect of explaining at least some of the fascination of chess in terms of certain counterintuitive features of the game. The parallels between chess and life remain, however, the more important, but the mode in which we speak, for example, of attack and defense, sacrifice etc. cannot be taken to be literal. When we say that White is attacking Black we cannot mean that the player of the White pieces is literally attacking the player of the Black ones (Bobby Fischer excepted?), and it is even less true that the set (better: team) of White pieces is attacking the team of Black ones. We are forced then to conclude that these terms can apply to a chess game only in some metaphorical, i.e. non-literal, sense of these words. Accordingly, it comes as a matter of surprise to learn that a metaphorical use of words, no mere adventitious ornament, should be built into the very practice though not perhaps the theory of the game: the terms 'attack', 'defense', 'sacrifice' etc. are scarcely to be dispensed with or replaced by literal equivalents. We can now understand, quite apart from any appeal to psychology, how it can be that the goings-on in a chess game can be said to be symbolic or expressive of various forms of human life, e.g. war, peace (war anyway), attack etc. Nelson Goodman has provided the clue to the expressive powers of chess when he argues, principally in connection with fine art, that a painting will be said to be expressive of sadness (it may indeed feature a happy man) if the term 'sad' applies to the picture but not literally.[4] In general, x is expressive of F-ness if a general term that expresses the property of F-ness is true of x in a non-literal sense of the word.

In this formulation where the stem 'express' occurs twice over I am adopting a current idiom that is somewhat foreign to Goodman's terminology. Goodman himself is prepared to allow that the general term 'white' denotes the property whiteness (better: the set of white things, though even that is not quite right seeing that for him there are no sets) whereas following Quine the standard view today is that it is the abstract singular term 'whiteness' that denotes whiteness not the concrete general term 'white', and when it is said that 'white' expresses rather than denotes whiteness 'express' is taken to have no independent content of its own. We may be said simply to stipulate that a general term expresses F-ness if the corresponding singular term denotes it. This purely stipulative approach to semantic 'expressiveness' does seem, however, to clash with the evident propiety with which our double use of the term accords with Goodman's account of the aesthetically expressive. The important point for us is that for the first time we have available a convincing account of the expressive or symbolic powers of chess that is free of any psychologistic emphasis. There is not question here of a chess game causing in us certain emotions, though of course it does do just that.

Of all those who have written extensively in the general area of philosophy of chess broadly construed, none has perhaps been better qualified from the

standpoint of narrow-gauged philosophy than Emmanuel Lasker whose qualifications as a player of the game I put to one side. It has, however, long been recognized that Lasker's contribution to philosophy of chess lies precisely in his recognition of the psychological component in over-the-board play, and if one recalls that contemporary philosophy is characterized above all by its rejection of psychological considerations (the hard-won success of psychology in liberating itself from philosophy is matched by the effort no less strenuous of philosophy to tear itself away from psychology) one can scarcely resist the conclusion that philosophy of chess was denied its fairest opportunity to launch itself.

Perhaps the most significant feature of Goodman's theory of expression is to be found in its reliance on the metaphorical as irreducible. This is not to say that a literal equivalent of "This is a sad painting" or "This is a highly defensive chess position" cannot be provided. But in the present case, by a startling about-face, it is the literal statements that needs to be explained (analyzed) in terms of the metaphorical rather than vice versa. The literal equivalents here are "This painting is expressive of sadness" and "This chess position is expressive of defensiveness", but the two-place predicate "x is expressive of y" simply has no independent content of its own, apart from the antecedent metaphorical locutions that go toward defining it.

Understanding chess as symbolic of certain forms of human life can never play more than a secondary role in the philosophy of chess, for underlying the human element in chess is its formal structure, and it is rather chess taken to be a formal system that lies at the center of our studies. Thus our Second Question--how can a necessary proposition be known to be true on the basis of experience?--while not exactly formal in character, being indeed explicitly epistemological and hence a matter of how our caissic themes are externally related to the knowing subject, takes us at any rate closer to the center of our inquiry. Closer still is our First Question--how can a rule of thumb be necessarily true?--for the distinction between the necessary and the contingent bears on the internal nature of a proposition, whether it is the one or the other, whereas the distinction between a priori and a posteriori is rather of external import. Modern philosophy indeed at least since Hume and Kant has always been prone to conflate the two, equating if not quite identifying the necesary with the a priori and the contingent with the a posteriori. Although it is to be assumed that some sort of at least minimal contrast between the two, the modal and the epistemic, never went altogether unrecognized, the prevailing view has been to regard the two as being in effect all of a piece. So deep-seated was this conviction that one simply preferred to ignore the fact that at least one major philosopher--Aristotle--took the very propositions of natural science to be at once necessary in modality and a posteriori in epistemic status. Aristotle was felt, however, to be so removed from the modern problematic regarding necessary truth that his position was seen as a source of embarrassment if not positive mystification. In surveys of the problem of necessary truth Aristotle's name and position were quite simply omitted as being of only antiquarian interest.

All this has of course changed in recent years with the work of Saul Kripke on the crest of which the Aristotelian position is once again very much in favor, and it might readily be thought that under the new Kripkean dispensation our Second Question, "How can a truth of chess be at once necessary and a posteriorl in character?" (this formulation is to be preferred before earlier ones) proves to be answered even before it is raised. Actually, it turns out that the Aristotle/Kripke route issues in a blind alley, and I can perhaps briefly indicate why this route can only lead us up the garden path (into a brick wall). In the light of the now revived

medieval distinction between de re and de dicto modality, the Aristotle/Kripke route may be said to involve a return to the notion of de re necessity where modem philosophy had been exclusively preoccupied with the de dicto kind. It is not accidental that Kripke should launch his inquiry into de re modality with an account of proper names cut loose from any descriptive backing. By contrast, de dicto modality can thus be viewed as being above all the kind of necessity and possibility that attaches to a description and its logical consequences. Against the background of Frege's distinction between sense and reference, it is de dicto modality that connects with sense and de re modality with reference. All of the caissic positions, however, if only because of their 'conventional' (I use the word with the gravest misgivings) of rulebound character, are precisely characterized by their descriptions.

To the more traditional framework of de dicto modality we must then tum if an answer to our Second Question is to be forthcoming. However unpromising that framework might seem for the task at hand, it is not difficult to show that necessary a posteriori propositions can be readily accommodated within it. One example should suffice. Consider first a typical contingent proposition, say "Either it is raining or the name of Columbus' great grandfather (on his mother's side) was Pablo." Why such an admittedly factitious proposition should be taken as typical, from a logical standpoint, rather than simply "It is raining" which philosophers generally prefer as paradigmatic, can be explained by the fact that the truth-functional character of propositions is perfectly evident in the one case but quite invisible in the other. We have now only to consider the necessary proposition, "Either it is raining or there is no greatest prime number." Both propositions admit of being empirically verified by precisely the same method: one has only to determine that it is raining. Although this one example is quite decisive in establishing the point at issue, I fear that it is not likely to carry conviction to one who views it in isolation as some unmotivated oddity in no way representative of the kind of necessary proposition that can be of any concern to the philosopher.

Fortunately, there is no need for me to scotch that specious subterfuge. Once again the proposed solution while cogent enough in itself simply fails to apply to the game of chess. Although Nimzowitsch's maxim is necessarily true if true at all--assuming of course that we can succeed in accommodating its rule of thumb character--it turns out that our knowledge of its truth cannot be said to rest on experience at all, even grating that our knowledge rests on the crudest sort of Humean induction, case after case of doubled pawns passing before us in review. Less paradoxically, I am content to insist that the term 'experience' as it figures in modem epistemology (it has more of a specialized character than one might suppose) is alien to the present case. 'Experience' in its ordinary, everyday signification does, however, fit the case quite as fully as anyone might wish.

When I insist that even in the traditional framework of de dicto modality there are to be found necessary a posteriori propositions it must be admitted that my definitions of a priori and a posteriori may be slightly deviant. By defining an a posteriori proposition as any proposition that can be known to be true on the basis of experience and an a priori proposition as one that can be known to be true in some fashion independent of experience I am tacitly allowing that an a priori proposition might be identical with an a posteriori one, and I have in fact exhibited a proposition that has just this double character. I have no wish to insist on my definitions as being in any decisive way superior to the standard kind where, for example, an a posteriori proposition is (probably) seen to be any proposition that can be known to be true only on the basis of experience. My definition remains free

from a difficulty which besets the standard one though the difficulty has rarely been recognized in any but the dimmest sort of way. Let us establish that some proposition can be known to be true on the basis of experience. Let us even establish that fact in the most convincing way, namely by coming ourselves to know that the proposition is true on the basis of experience. Can we now conclude that the proposition is of the a posteriori sort? Yes, if my definition is adopted; no, if we cleave to the standard one which requires of us a consistency proof of the proposition's denial before it entitles us to affix to the proposition the label 'a posteriori'. After Godel and Church this demand for a consistency proof can only be regarded as very formidable indeed. If I might exaggerate the point, a posteriori propositions prove to be almost impossible to identify on the standard view.

When I say that the truths of chess are of the a priori variety one might well be puzzled as to which of the two definitions of the a priori is relevant here, and one might even suspect that by adopting a deviant definition I might be lending to a fairly trivial thesis a purely verbal air of challenging heterodoxy. Not so. There is no difference whatever in the two definitions: on either account any proposition that can be known to be true independently of experience qualifies as a priori. How there can be agreement in the one case (the a priori) but not in the other (the a posteriori) is to be explained by a crucial asymmetry in the standard version that is absent from my own. What can be known only on the basis of experience is not contrasted, on the standard account, with what can be known only on some basis independent of experience (for then there might be some proposition that was known to be true even though it had neither an a priori nor an a posteriori character) but rather with what can be known on some basis independent of experience. Whatever its merits, this lopsided contrast is always liable to make for confusion.

The thesis that the truths of chess have an a priori character (the First Thesis) must now be recognized to be distinct from the further thesis (the Second Thesis) that they can never be known to be true on the basis of experience, though any argument establishing the Second Thesis must be allowed to establish the First Thesis as well (pace the caissic sceptic). At one blow, then, I can establish both theses simply by attending to the second alone. Two qualifications must be made at the outset. Taken at face value, certain truths of chess, e.g. "Gambits, once popular in 19th century master chess, are rarely to be found in 20th century play except on the amateur level," not only can be known on the basis of experience but can be known in no other way. A distinction must be drawn between external and internal truths of chess, and our First Thesis must be viewed as applying only to those of the internal kind. How these might be defined is by no means as simple as one might suppose. Let us but define a truth of chess as any proposition that can be logically derived from the rules of chess taken to comprise an axiom system and we are still vexed by such questions as, "Is it a truth of chess that there exists a set whose only member is the initial position in any standard chess game before any piece or pawn has been moved?" Asked to commit ourselves to the existence of two sorts of abstract entities, sets and positions, one may well doubt whether the laws of logic (let alone the rules of chess) make any such metaphysical demands on us.

The second qualification to our Second Thesis arises in connection with a claim that on first hearing at any rate can only strike one as being nothing less than demented. This is the claim that every true proposition can be known to be true on the basis of experience. The arguments in support of this claim will be seen to involve a certain passing of the epistemological buck. The Old Man of the

Mountains having in the past always answered our questions correctly, e.g. "Is it raining outside the cave?", "Is there a greatest prime number?" "What was the name of George Washington's wife?", each of his answers being verified by us independently, we now ask "Is Cantor's Continuum Hypothesis true?" And when he answers no in accordance with Godel's intuitions in this perplexing matter we come to know (so runs the argument) a necessary, mathematical truth on the basis of crude empirical induction. Waiving sceptical doubts regarding induction itself, this qualification of the thesis that mathematical knowledge is exclusively a priori in character has (I presume) long been recognized even while rightly being ignored as fairly uninteresting. One cannot, however, quite ignore it at the present time when it has been speciously revived in connection with the Four Color Theorem. The internal truths of chess being in my account more closely related to those of mathematics than to any others (ultimately, they will be shown to be identical with some of them), consideration of the Four Color Theorem is altogether appropriate. On the grounds that no human being can be expected to reproduce the recent proof of the theorem in the usual pencil-and-paper fashion owing to the fact that an electronic computer had to be employed in order to fill in certain lengthy steps of the proof, it is argued that a (significant) counter-example to the aprioricity thesis regarding mathematical knowledge has been constructed by Appel, Haken and Koch.[5] That the electronic computer in the present case can be no more than a somewhat subtle variant on the Old Man of the Mountains in our fable, inductive grounds playing an important role in both cases though doubtless much cruder in the one than in the other, should be clear enough for our purposes. The computer being, however, no mere Black Box like the Old Man of the Mountains, we do presume to understand its internal mechanism (or is it, like the proof itself, too complicated to be understood in pencil-and-paper fashion?) which we take to be producing tokens of proofs in English (it might as well be English) of mathematical truths.

Our two qualifications having been acknowledged, they can now be simply ignored. Precisely why it is that the truths of chess can never be known on the basis of experience, can be brought out most vividly by means of 'the hallucination argument'. At the outset one thing is clear: the a priori character of caissic truth has no bearing whatever on the point at issue, though there is by contrast an empirical fact that is not without relevance to it. It has never been denied that in playing blindfold chess one is indeed playing chess (someone certainly **might** deny this on the ground that blindfoldness being merely a deviant form of chess must not be confused with chess properly so-called, granted that chess addicts with their perverse tastes might find it to be an adequate substitute for the genuine article), and one could then argue that just as standard chess might be styled as a posteriori chess and blindfold chess as a priori chess (no material objects being involved), the two forms of chess being on a par, it can only be accidental if one comes to learn the truths of chess on an a posteriori basis. Although we have here no more than the merest sketch of an argument, seeing that in blindfold chess one confronts an opponent who is firmly planted in the external world, it should not be difficult to refine these materials so as to generate a philosophical argument with some bite to it. Thus we can now posit still another form of chess, call it chess solitaire, whereby in an entirely autistic mood one plays game after game of chess solely within the imagination, now taking the side of White, now that of Black. In playing this solipsistic sort of chess is one indeed playing chess or is one merely (and here I invoke an obscure idiom that is doubtless much in need of clarification) engaged in an activity that is logically equivalent to chess? The answer to this question

interests us not at all. Free to concede that chess solitaire may not be chess, we are content to observe that anyone 'playing' this game or pseudo-game can be readily understood to acquire all that knowledge of the truths of chess that ordinarily comes our way across the board.

The hallucination argument is merely another way of making the same point. We are concerned to show above all that the concept of experience is employed with a radically different epistemological import (why insist that the word 'experience' is being used in different senses?) when it is seen to figure in the open sentence "Smith is learning the truths of x from experience", depending on whether the free variable x is replaced by 'physics' or by 'chess'. In the one case it is imperative (imperative, epistemologically speaking) that the experience be verdical, in the other not. One cannot learn, i.e. come to know, the truths of physics merely by hallucinating one physical experiment after another, no matter how faithful these hallucinations might be to actual laboratory conditions. Although one may well believe, and even reasonably believe, that he is decomposing water into its basic constituents, the hallucinatory character of his experiences must shut him out from any prospect of acquiring physical knowledge. How different with chess! The man who merely fancies that he is playing a chess game, let him but be hallucinating in vivid detail all the moves that might be featured in an actual game, need be in no way epistemologically deprived when it comes to learning that a rook on the seventh rank is devoutly to be wished, as a rule of thumb. Although standard chess is very much an in-the-world affair, in playing standard chess one must be epistemologically viewed as roaming the fields of the a priori.

One objection to philosophy of chess as a serious discipline may be at least mentioned in closing. The rules of chess being obviously stipulative or conventional in character the truths of chess must be equally so. The philosopher in general and the epistemologist in particular cannot then accord the truths of chess anything more than a kind of secondary attention. I know of only one answer that has in effect been given to this argument. No one dare deny that the truths of mathematics demand the primary, concentrated study of the philosopher but seeing that they are also merely conventional in character (so runs the rejoinder) philosophy of chess is free from all embarrassment on at least this one charge. Suppose, however, that one does deny, as I do deny, that the truths of mathematics can themselves be regarded as conventional, what then? So reformulated, the argument must be refuted if philosophy of chess is expected to be securely launched.

FOOTNOTES

[1] See, for example, Y. Averbakh and I. Maizelis, Pawn Endings (Dallas: 1974), ch. 5, "Development of the theory of Co-ordinate Squares."

[2] Raymond Keene, Aron Nimzowitsch: A Reappraisal (New York: 1974), p. 34.

[3] A. Nimzowitsch, My System (New York: 1930), p. 189.

[4] Nelson Goodman, Languages of Art (Indianapolis: 1976), ch. 2.

[5] Thomas Tymoczko, "The Four-Color Problem and its Philosophical Significance". The Journal of Philosphy, Feb. 1979.