

Emanuel Lasker

A Reader

**A Compendium of Writings on Chess, Philosophy, Science,
Sociology, Mathematics and Other Subjects by the
Great World Chess Champion, Scholar and Polymath
Emanuel Lasker (1868-1941)**

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Lasker's Manual of Chess on the Theory of Steinitz

No Lasker reader would be complete without something from Lasker's Manual of Chess. First published in German in 1926, then going through many reprintings in English and other languages, the Manual was Lasker's most mature and comprehensive chess work, retaining its high instructive value to this day. Our excerpt here deals with one of its more historical and philosophical sections, in which Lasker discussed the contributions to chess theory of Wilhelm Steinitz (1836-1900), the man who preceded him as World Champion. Lasker believed that Steinitz had been badly misunderstood in his time, and felt a responsibility to rectify this. Lasker supported his main points with various illustrative games, but most of those have been omitted here, to focus on his general exposition of the theory of Steinitz. Such omissions are indicated by ellipses. This excerpt comes from pages 153-183 of the 2008 Russell Enterprises edition.

When Paul Morphy, despairing of life, renounced chess, Caïssa fell into deep mourning and into dreary thoughts. To the masters who had come to ask her for a smile she listened absent-mindedly, as a mother would to her children after her favorite had died. Therefore, the games of the masters of that period are planless; the great models of the past are known, and the masters try to follow them and to equal them, but they do not succeed. The masters give themselves over to reflection. One of them reflects a long time and intensely on Paul Morphy, and gratefully Caïssa encourages him; and the greatest landmark in the history of chess is reached: William Steinitz announces the principles of strategy, the result of inspired thought and imagination.

Principles, though dwelling in the realm of thought, are rooted in life. There are so many thoughts which have no roots and these are more glittering and more seductive than the sound ones. Therefore, in order to distinguish between the true and the false principles, Steinitz had to dig deep to lay bare the roots of the art possessed by Morphy. And when Steinitz after hard work had bared these roots, he said to the world: Here is the idea of chess which has given vitality to the game since its invention in the centuries long past. Listen to me and do not judge rashly, for it is something great, and it overpowers me.

The world did not listen but mocked at him. How should this insignificant-looking person have discovered anything great? He can play chess – but what of that – he has practiced it. But should a player be a teacher for serious ends? In a university classroom you do not find children playing marbles.

So the world spoke and acted accordingly, but the world was entirely mistaken. The world would have benefited if it had given Steinitz a chance. He was a thinker worthy of a seat in the halls of a university. A player, as the world believed he was, he was not; his studious temperament made that impossible; and thus he was conquered by a player, and in the end, little valued by the world, he died. And I who vanquished him must see to it that his great achievement, his theories should find justice, and I must avenge the wrongs he suffered.

The Theory of Steinitz

Steinitz's investigation starts from the principle that a plan must have a reason. That everything must have a reason, a cause, humanity has known for a long time, and great thinkers have written concerning it; for instance, Plato, Aristotle and Leibnitz. And Aristotle's "prima causa," now called the First Cause, has made world history; and many large volumes have been written concerning the principle of causality, a very celebrated one by Schopenhauer "on the fourfold root of the principle of sufficient reason," but in all this extended literature you will find little or nothing on the reason of a plan. The basic reason of a plan is not the cause of a change such as the lighting of a match is the cause of a flame that had not been there before; nor is this reason a logical reason for knowledge, since a plan is not knowledge; nor is this reason a motive for action, because our enquiry is not concerned with some person's plans or actions, but with our desire to know why a given plan is successful in such a position and unsuccessful in another. The reason for a plan is a *raison d'être*; a reason for existence, a *ratio essendi* and in a very particular sense, and before Steinitz nobody had recognized it.

Steinitz felt that a plan, being a prescription or a rule for successful action on the chess board, could not be based on the reason ascribed to it during his time, namely, the genius of the player, the creative fancy of a master, but another reason – a reason residing not in the persons or minds of the players but in the position of the board; yet not to be conceived as being a combination the solution of which depends upon the necessary consequences of moves, but as something wholly different, namely, a valuation. He felt this, and this consciousness led him to formulate his theory.

Whereas the existence of a cause is *a priori* certain, the reason for a plan has no such certainty. If only players had an intellect vast enough they could do without any plan by relying solely on their power of combination, since they would be able to see through the net of millions of variations with mathematical exactitude. For mere man with his limited mental powers this method would not work. That another method suitable to a normal human mind should exist is not *a priori* certain, but is a discovery just as was the dynamo.

The reason for a plan's having no existence *a priori*, is that its existence is merely *asserted*, and to make such an assertion requires the boldness of genius. For this assertion implies that the position on the board must show a sign, a characteristic moment, which tells us what plan to follow and thus relieve us of the necessity of searching through an immense mass of variations. It is not enough, of course, to assert the existence of such signs; they have to be pointed out and proven true. Such marks, evidently, would be for the painfully seeking chess master what the "philosopher's stone" promised to be to the alchemists. These alchemists had passionately searched for that stone many centuries, had consistently failed to find it and had become objects of derision. Steinitz had the colossal boldness to believe in such a stone, available, it is true, not for science, but for the chess master.

Steinitz demonstrated his assertion by the analysis of an enormous number of games played by masters. The analytical work of Steinitz extends over thirty years and is very valuable. In the *Field*, in the *Tribune*, in his publication *International Chess Magazine* and in his book *Modern Chess Instructor*, one may find his penetrating and profound analysis.

The world did not comprehend how much Steinitz had given it; even chess players did not comprehend it. And yet his thought was revolutionary, because, of course, it is not limited to the chess board – the royal game, after all, is of slight importance – but extends to every activity directed towards meaning and purpose. Surely, chess, being a very conventional game, that had undergone many changes, a child, to a large extent, of chance, is no exception to a thousand and one other games that have been or could be invented. What is true of Chess must hold by analogy for other games. And games being, at least in intent, modeled on life – simplified, to be sure, but still resembling it in essentials – there must be some analogy between them. Every

activity, then, directed by rules and having a meaning and purpose, such as, for instance, a dispute between persons taking different sides of a question and applying logical rules in their argument, every such activity, without exception, has to follow the very same fundamental principle which Steinitz discovered as governing the game of chess. And if this principle can simplify our search for combinations, though their number be millions, it must have the power also of guiding our search for suitable and efficient action.

This fundamental and universal principle may be briefly expressed as follows: the basis of a masterly plan is always a valuation.

To value, to evaluate, to judge, to estimate a thing does not pretend to exact knowledge. But knowledge by estimate, by judgment, by valuation, though not exact, according to the principle of Steinitz, is still an efficient guide for the master. And such a master is no exceptional person; you yourself might become a master if you cared to. But even if a player is not wholly a master, he may obtain almost equal advantage by observing the principle. Thus he may confidently follow his own estimates. In a given position you value the rook as being superior to a knight and pawn? Believe it, act on it, play to win!

What now is the reason for my valuation? Valuations again! True, in each instance the reason is simpler, more sure, more trustworthy than its consequence, but the reason of a valuation is always itself yet another valuation. Finally, all my valuations originate from my experiences: my first losses and wins which gave me pain or joy; my first draws that called forth in me a variety of sentiments; my first analysis, which was crude and faulty. From then on I valued and continued to value; and with practice I became capable of more exact valuations. And from this rough material is generated, by continued trial and intelligent criticism, the series of valuations by which the master arrives at his conclusions.

How novel, how surprising, how opposed to every sentiment of his time the conceptions of Steinitz must have been becomes manifest when in play over the games of the greatest match won by him, the one against Zukertort. Zukertort relied on combinations, and in that field he was a discoverer, a creative genius. For all that, in the majority of the games of the match, though he had lost none of his faculty, he was unable to make use of it, the positions yielding no response to his passionate search for combinations. Steinitz seemed to have the mysterious capacity for divining combinations long before they were realizable on the board, to encourage combinations favorable to himself and to forestall those which were unfavorable. Thus Zukertort, the great discoverer, searched in vain, whereas Steinitz, rather a poor hand at combinations, was able to foresee them. Zukertort could not understand how Steinitz was able to prevent combinations nor how he could win by such a method, since up to that time – this seemed to Zukertort indisputable – games, fairly won, had been won by fine combinations. Zukertort tried for four years to solve this riddle, but he never approached its solution by even one step, and he lost the mastery that he possessed into the bargain. He died a comparatively young man.

And thus it is not to be wondered at that the chess world did not understand Steinitz, neither his manner of play nor his written word which treated of his "Modern School." Nor did any patron of chess, in sympathy with his genius and divining his greatness, ever come forward to his support.

It is almost obvious that our age is suffering from a delusion as to the nature of genius. It is in our blood to think that in the struggle of two evenly matched adversaries, ruse, deception, wit or paradox decide the issue; that what is common, or expected, should carry off the victory seems to us impossible. For instance, we acclaim no scientific theory unless it is startling; we believe in no philosophy based on common sense; what we acclaim, what we believe, is mysterious and unintelligible. Such are we today. The magical power to vanquish one who is as strong as the victor can be vested only in the spirit, and the spirit is creative, dazzling; this feeling is very deeply rooted in us. But in truth the spirit, even though it be creative, is by no means dazzling, witty, paradoxical; and chess may do its little share in spreading this truth.

Let us consider this same question from another point of view. The impression generally prevails that what is strong must also be beautiful. To make a deep aesthetic impression seems to humanity to be an attribute of all genuine power. That Odysseus fools the giant Polyphemus is proof of the power of mind over matter. The Greeks of the time of Homer could not have endured the thought of Polyphemus checkmating Odysseus, and in our hearts we would not believe the defeat of Odysseus possible. But in reality, in the circumstances depicted by Homer, it would have been a thousand to one on Polyphemus winning his game against Odysseus easily and safely. The spirit is creative for all that and sometimes dazzling and surprising and antithetic, but the wit of the spirit is profound and subtle, not artificial and laborious as is the common wit of man.

Now let us turn back to Steinitz and demonstrate his revolutionary achievement from his history and from his writings.

The Youth of Steinitz

Steinitz lived his youth in an age on which two great personalities, Anderssen and Morphy, had left a profound impression. At that time everybody thought that victory in chess was gained by ingenuity alone. Often had the chess world seen Anderssen produce an unexpected combination as if by magic, and Morphy equally undertake a successful attack. Thereby the chess world had come to believe that these combinations, these formidable attacks had been created out of nothing by sudden, inexplicable intuitions. Steinitz, unquestionably, harbored the same belief for many years. The style he displayed in his youth makes this fact manifest. He usually played gambits and had often to torture himself with very bad positions on that account, obviously under the illusion that such situations were the necessary accompaniment of an attack and that one was obliged to attack in order to wait and to hope for the sudden and inexplicable inspiration, no matter how great the cost. In this style he continued to play for a number of years, not differing in this respect from any of his contemporaries.

The style with which Steinitz began his career was strange and narrow, but it was the style predominating in his time. To place one's king in safety, to prepare an attack by slow degrees, to decline a proffered sacrifice were tactics not well understood and even less esteemed. The play was wholly dominated by the feverish desire to make a rush against the hostile king and to this end furiously to assail the obstructions, regardless of the sacrifices required ...

The Evolution of the Theory of Steinitz

The aggressive and inventive style of the Steinitz who had been raised in the German school of combination pleased the English amateurs, for they were able to learn a great deal from him just as, conversely, Steinitz did from their more solid play. From the imaginative, heroic temper of Anderssen's combinative style, the large-visioned, systematic position play of the English school a synthesis arose in the mind of Steinitz, which was destined to make history.

I fancy that one day he reflected how it could have come about that the magician Morphy beat the magician Anderssen. That there should be one magician is quite natural, but it is really absurd to think that there should be two magicians fighting each other. That a magician wins is obvious, but how can a magician lose? Also, how could a magician not lose if two magicians fight? For winning and losing at the same time is a logical contradiction which no witchery can explain. Therefore, I fancy, Steinitz, by slow degrees, was led to believe that chess, after all, must be subject to a reason of its own not to be affected by invention, intuition, inspiration, genius, or anything else of the kind.

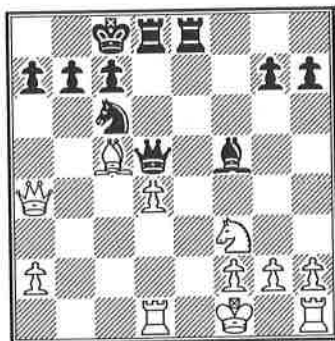
Reason, however, by force of its meaning and power, cannot be subject to mere chance. Consequently, if Steinitz continually took pains to discover combinations, the success or the failure of his diligent search could not be explained by him as due to chance or good or bad luck or any other such term. Hence, he

concluded that some characteristic, a quality of the given position must exist that to a discerning eye would indicate the success or the failure of the search before it was actually undertaken. And this characteristic, if explicable by reason, of what could it possibly consist if not an advantage or a disadvantage. The winning player had chess reason on his side provided the win was forced: this seemed a logical conclusion from the premises. Chess reason gave therefore the win to him who held the advantage. And an advantage, if reasonable, what could that be except the thing that was generally termed so: greater material force, greater mobility, greater effect against the king – in short, things that chess experience had already settled and defined.

Surely, Steinitz's heart beat when for the first time the thought came to him that the master should not look for winning combinations, unless he believed, unless he could prove to himself that he held an advantage. That meant making no attempt at winning in the beginning of the game. And since Steinitz lived in a milieu where to play to win right from the start was considered the only honorable course to take, this thought must at first have had a timid reception in his mind and a hard time establishing itself.

But an important thought is not to be intimidated for long. It must have led him to analyze fine combinations commonly ascribed to some form of supernatural ability, and, having become critical, he must have noticed that they were always founded upon an advantage in mobility and efficiency of the pieces. Thus the fine combination that Boden made against MacDonnell in 1869, will hardly have surprised him.

MacDonnell-Boden 1869



Black to play

1...♖xf3 2.gxf3 ♔h3+ 3.♕g1 ♖e6 4.♗c2 ♗xd4 5.♕xd4 ♘xd4 and soon mates.

Steinitz, in looking at the position, would certainly have anticipated the existence of some such forcible conclusion, because Black has a rook more in action than White, and, whereas, some combination winning for Black might conceivably exist, none winning for White could possibly have been expected.

After having come to this point, he had not yet found a new method of play, but had only made some confused notions plain and had disposed of a superstition. His thought became at once fertile when he insisted on knowing wherein an advantage could consist, and hazarded that the answer was not only

in a single important advantage but also in a multitude of insignificant advantages. For instance, if my bishop has four squares to move to, the hostile bishop only three squares, I hold, *ceteris paribus*, an advantage, which, it is true, is minute, but by accumulation of such minute advantages at last a big plus is collected.

The big plus arising by accumulation is discharged in a combination. This fact is upheld by experience. Why this should be so cannot be deduced by mere reasoning, but in chess one may state the law: no combination without a considerable plus, no considerable plus without a combination. This accumulated advantage brings about a tension and this tension, discharging itself like an electric current, produces the conditions for a combination. One cannot deduce that logically, but the fact is far from astonishing. In life a tension within society always leads to a revolutionary political act, a great tension in the sentiments conduces to a revaluation of established values, and it cannot surprise us if in chess a tension brings about a combination. But, whether surprising or not, the fact had to be discovered, and, as soon as it was discovered, it illuminated that which was obscure, and was fertile in suggestions.

For if a great advantage is the necessary and sufficient condition for the existence of a combination, this longed-for but seldom attained goal, the laborious search for it can be methodically made and thereby facilitated. With such a method one possesses a magic wand that is efficient indeed. Steinitz saw this clearly. Therefore, his maxim: In the beginning of the game ignore the search for combinations, abstain from violent moves, aim for small advantages, accumulate them, and only after having attained these ends search for the combination – and then with all the power of will and intellect, because then the combination must exist, however deeply hidden.

That this maxim should have at once reformed the style of Steinitz so as to make it clean and vigorous, the world in which and with which Steinitz lived did not permit. His generation did not comprehend, did not even suspect his trend of thought. The people among whom he lived were willing to reward nonsense and humbug if dressed up magnificently. Alas, truth appears seldom in fine garb.

Another circumstance, a weakness of Steinitz, handicapped his style. He was obstinate. Naturally, he wanted to follow his maxim and to beat those who did not follow it; but thereby, though he was not aware of it, his chess style became provocative. He provoked his antagonists into playing to win, by giving them an excuse or at least a pretext for doing so. To this end he made the most extraordinary, most unusual moves. Then, as a punishment for their presumption, he would beat them. That by his new methods he manifested his desire not to play to win from the start was entirely lost on his opponents, because their experience had taught them to expect just the contrary. This whole process was subconscious with Steinitz, and no logical necessity brought it about, but it was the outcome of Steinitz's psychology.

I heard in London, that a London master, Mr. Potter, who loved unusual and strange moves, had influenced Steinitz greatly. The two were friends, and Steinitz somehow began to copy Potter's style. However that may have been, I can well believe that a strange style would rise, almost of necessity, at a time so romantic, so superstitious as that time was. Potter probably saw through the emptiness and the presumption of the style then dominating and with his style of play he seemed to call out to his contemporaries: "You want to beat me right from the start by force of your greater genius? Look! I make ridiculous moves, and yet you cannot beat me. Become, I pray you, more modest and more reasonable" ...

Steinitz's Maxims for Practical play

Steinitz, possessed by the above ideas, strove to transform small advantages that rapidly disappear into small advantages that endure, and thus to accumulate them. Such lasting advantages were to him isolation of a hostile pawn, majority of pawns on the queenside far away from the hostile king, weakening of the phalanx of hostile pawns, especially in the vicinity of the hostile king, a securely placed advance post, the domination of open lines. To this end he cultivated play in the center, the play of pieces and pawns, leaving the king, at least to begin with, out of the reckoning, thus following in the steps of Morphy and La Bourdonnais. He cultivated also the assault by a chain of pawns on the queenside which has the effect of cramping the opponent and of threatening him, thus going beyond Philidor who directed such attacks mainly against the king

In defense, conversely, Steinitz carefully avoided creating lasting weaknesses of the above type unless forced to do so by his opponent ...

Steinitz Advances his Theory beyond the Needs of Practical Chess and thus Enters the Domain of Science and Philosophy

The practical maxims of Steinitz: the accumulation of small advantages, their change into lasting advantages, his teaching concerning weak pawns and points, his counsels referring to attack and defense – in short, everything that has been touched upon thus far, constitute a system sufficient to explain the play of Steinitz and to make master-players. But Steinitz went far beyond this point. He was a profound thinker, he had a

passion for thought, he felt and saw its power and he was not minded to stop at maxims of merely practical value.

Hence, he attacked problems far surpassing in importance and in breadth the tasks set for the master who confines himself to his game. To what end? There seems to be in man a mysterious power to foresee the needs of the future and to sacrifice himself to them. In the animal world we see this power at work – sacrifice in the interests of the future is there the common rule; in the life of the thinker, we may assume, the course of nature is no different. Certainly, Steinitz derived from his profound investigations nothing but disappointment. Nobody understood even his practical maxims, far less his more extended researches. He simply followed his conscience, which commanded him to go on. Thus he spoke of the “balance of position.” A wonderful conception, but beyond practical chess. A true, genuine balance does not exist in our game, noble and most human though it is. A true balance exists in the infinite domain of life and it has a logical existence in philosophy, but one must not demand it of chess which after all is finite and therefore has its limits.

For the practical needs of chess the concept “compensation” suffices. If the advantages held by my opponent are compensated for by my advantages, the position is balanced. Then no attack, the intent of which is to win – so argues Steinitz – must be undertaken. The idea of balance is enough to convince us that *balanced positions with best play on either side must lead again and again to balanced positions*. Only after the balance of the positions has been disturbed, so that one player holds an uncompensated advantage, may this player attack with intent to win. And here Steinitz elevates himself to the level of a genuine philosopher in demanding that that player *must* attack with intent to win or else be punished by being deprived of his advantage.

This “must” connotes an ethical power. To obey the command is hard and irksome. Not to obey – well he who obeys may become an artist, if he does not he will never do so. He who obeys will often fail and lose; he who does not obey will often enough win by the mistakes of his opponent, and will run no risk. For all that, only he who obeys the command will grow to be an artist. An artist is one who is observed by the world gladly and attentively and without regrets; a man who has personality, who can mold plastic things into varied shapes so that they express essential truths and realities, bringing joy and edification to a multitude. Would you become one of this type? Then you must obey the ethical command of your struggle, in chess or elsewhere – at school, in the garden, in dispute, in negotiation or wherever you may contend. That is a fundamental law in the world and Steinitz felt it, and in a mysterious way had understood that it operated also on the chess board.

The Principle of Attack

In chess the ethical command means: Search for the combination which brings home your advantage. Believe in the existence of that combination and seek to discover it. And if you have searched in vain a hundred times, continue. Possibly the advantage that you think you hold is only an illusion; your valuations may be at fault: prove them and improve them. But, first of all, search diligently; work, for such work is rewarded.

Steinitz desires to aid the searcher. He orders the attack, but he also gives advice as to how this order can be successfully carried out. He asks which direction the attack has to take, and he answers: the target for the attack has to be a weakness in the hostile position. He therefore compares the position of your opponent to a chain of many links and yourself, the assailant, to one who wants to break the chain. He advises you to look for the point where the connection is weakest and against that to direct your efforts. Of course, if the chain offers the same resistance in every link, one cannot see a motive for selecting by chance one of these points but the chain is never equally strong in all of its links, and the master chooses after conscientious consideration, the point of least resistance as the target for his efforts.

One has no need to follow this rule in chess accurately – from a practical point of view one is not punished for it; and if one tries to obey the rule, one will hardly be the better for it as far as winning games at chess is concerned – this rule goes far beyond chess. Chess is too limited for such a rule. The rule is founded on the old and celebrated idea of the “*linea minoris resistentiae*.” The stroke of lightning, the train drawn by the locomotive, a defeated army all pursue the line of least resistance. On the chess board there are no lines, only points; hence Steinitz speaks of weak points. The most successful, the most effective combination as well as the widest-visioned and deepest plan of attack – thus his idea – proceed, as if by a miracle, in the direction of the weak points, for the same reason which governs the world governs also the chess board ...

The Principle of Defense

As the reverse side of his theory of attack Steinitz enunciated a principle of defense. He who is at a disadvantage must be willing to defend himself, he must be willing to make a *concession*. But his guiding star must be the *principle of economy*. Hence, he must seek to make the least concession that just suffices, not an ounce more, not the dot of an “i” too much. That comprises, as it were, the ethical command given to a defender.

Steinitz also points the way to the defender who asks himself *how* to achieve this end. He advises: improve the worst weakness voluntarily. The ideal of a position for defense is that it have *no linea minoris resistentiae*, that all of its lines of resistance be equally strong, that the chain contain only joints of equal strength. But this ideal can never be attained. Approach it, as far as you are able! That is the test of how you do your duty as a defender. Thus, in this manner you serve your cause well, even if you lose the game. This train of thought is manifestly a logical conclusion from the principle of attack. The effort which the aggressor has to make varies inversely as the degree of the weakness, the defender accordingly forces the assailant to make the greatest possible effort when the attack will exact only a minimum toll. In other words, *as the stability of a position is gauged by its least stable point, attempt to achieve at every point the same degree of stability ...*

The Declining Years of Steinitz

The demonstration and evaluation of the above principles was a task which gave Steinitz enough to do during a long life rich in labor. To announce an established principle, as a historian does, is a simple thing, but to discover a new principle, to give it a structure and to make it heard and felt by unresponsive contemporaries requires a diligent and virile man. Besides, the first discoverer of a great thought is more intimate with it than any one of his adherents and pupils. The pupil learns only what can be said and written, the discoverer has the thought in his very blood; the former acquires the thought through his mind and understanding, to the latter it is part of his being.

That Steinitz at the age of fifty-nine years was defeated by me and later also by others is due to no defect in his theory. His theory is and forever remains the classical expression of the idea of chess. But in his play over the board no man rises beyond the height attained by his own time. In the creative years of a man's youth he will try hard to rise to the top; as soon as he has arrived there, he will rest on his laurels, for the future, which calls the discoverer, has no interest in the passing glories to be won in over-the-board play. A very old and profound truth proclaims that nature does nothing in vain. The laws of Hammurabi are still alive, the philosophy of Plato still exerts its influence – the struggles of Hammurabi, the cares and deeds of Plato are forgotten. The practice of life is of account for one generation only. Had nature endowed Plato with a talent for practical matters, say agriculture or the local politics of Athens, the philosopher in him would have been a loser to just that extent. And so it was with Steinitz. His talent for over-the-board play was not considerable. Blackburne and Zukertort in that respect were easily superior to him although he beat them decisively because he was a profound thinker and his adversaries were not.

When chess masters arose who were trained for systematic thinking, who therefore understood at least the abstract portions of Steinitz's theory and who besides had natural talent for over-the-board play, Steinitz was confronted with a task that in his old age he could not perform. Had Steinitz lived in our period of improved chess technique he would have played better chess than he did, and fought also today with honor. For he had all the qualities of a great fighter: force, discernment, conscientiousness, undaunted courage. But his claim on posterity is that he was a great discoverer.

Criticism of and Additions to Steinitz's Theory

I now come to the gaps which Steinitz left in his theory, for the problem to be solved was not pointed out to him until too late in his life, if at all.

Steinitz, after his advice to both the attacking and defending parties, does not speak of the strategy that a player should follow who feels that he is neither the attacker nor the defender. What plan has the player to follow in a balanced position? Of course, none with the immediate intention of winning, none which embodies the fear of losing, none that would not develop the pieces – these answers to the query may be anticipated, but they are not decisive. I should say that besides all of the above he must play – and this is the essential point – to maintain the *cooperation* of his pieces.

In Steinitz's writings the concept of cooperation is not made clear. There was a reason for this. Firstly, because in the games of his contemporaries he hardly ever saw a balanced position; secondly, because the grand simplicity of his theory would have been impaired by this extension of his fundamental concepts. His very basis, the principle of accumulation of advantages, would have had to be broadened. Let us consider this question attentively; it is of importance to the positional player who has to prepare for attacks and defenses long before they become actual.

The idea of the accumulation of small advantages is based on the concept that an advantage is the equivalent of a weight. If you accumulate small weights, their mass grows consistently and the sum total may finally be large. For instance, two or more weights make a certain sum; if you replace that sum total of weights by a single weight equal to it in mass, the value of the sum remains the same.

But clearly it is not quite so in chess. For instance, two pawns have a very different value according to their mutual position – this is even one of the basic considerations of Steinitz – we cannot substitute for one of the pawns another equal in value to it and leave the value of the sum of the two original pawns unchanged. This value, at least, cannot be compared to a sum of weights.

The simplification effected by Steinitz is ingenious and very practical, but this must not blind us to the fact that it is a short-cut to truth which does not quite reach it. It is close to the mark but not a bull's-eye.

The alternative to this conception of weight is that of a cooperation – say, a group value. Thus, two or more advantages will form a group and there will be interaction between its members.

Hence there is cooperation and interaction between any two chess values, and *this interaction has a certain typical character* which always manifests itself whenever two values come into cooperation. That must be so, or cooperation would not be subject to reason and chess would be a game of chance.

The result of cooperation in attacking positions is to strengthen each element of the group; in positions of defense, to protect each other; in positions of balance, to complement each other. Let us, as an instance, consider two pawns. For the attack they are better separated so that both may attack the same point, thus doubling their aggressive action. They complement each other best in the phalanx, each pawn guarding the square where a hostile piece would block his neighbor; in this position their cooperation is at its climax. In defense they are driven into a position where one of them protects the other – one of them sacrifices himself

to save the other and for the common good, provided, of course, the enemy has taken pains to enforce such a sacrifice. That pawn will be saved which is first attacked, unless there should happen to be a tangible difference in the value of the two pawns.

It is not very different with pieces.

Two bishops always complement each other, the action of one never doubles nor obstructs that of the other. Their cooperative value is perceptible to such a degree that two bishops are commonly preferred to two knights or to bishop and knight. Two knights which stand alongside each other or are in other ways posted so that they divide their effectiveness equally on a multitude of important points, complement each other better than two knights protecting each other; the latter attitude is one of defense enforced by perils threatening one or other of them. A bishop and a pawn complement each other when the pawn is not on the same color square as the bishop, they take up a position of defense when bishop and pawn attack the same object. And thus the idea originally exhibited in the phalanx recurs in a multitude of ways which it would seem almost impossible to enumerate in detail.

Of course, one may be forced to give up the position of strongest cooperation, for instance, in following a plan of attack requiring the doubling of pressure on certain important points. According to the ideas of Steinitz, one should make concessions in such emergencies; but again according to the same principle, one should be parsimonious with such concessions. The stronger cooperation in the above sense is always a position of greater mobility than the weaker cooperation would allow. Or, to use another term, say flexibility, or adaptability or elasticity. The main idea of this cooperation is to increase the range of possible plans to follow, without specifying too early which road you would prefer to travel. By cooperation you aim to keep the position plastic, alive; by lack of cooperation you take the life out of your position, and to infuse it with new life you will need outside aid ...

The Principle of Justice

Not willing to increase the number of above examples beyond proportion, I now attempt to describe in words the principle upon which all cooperation hinges. But it is difficult to express chess ideas in words, because the spoken language has sprung from a social intercourse which is devoted to tasks entirely different from the incidental tasks undertaken here. The language is pregnant with life, and how should our poor little game, even in the smallest detail, bear comparison to infinite life?

Yet, since we have to speak in words, our task must be accomplished as best we can. Leave this task undone? But it has value. You learn no art by anxiously restricting yourselves to it; you have to seek its association, and its logical connections and analogies with the rest of things. Otherwise, you will learn no more than the craft, the technique of your art and never attain to a full comprehension or easy mastery of it.

If one thinks of the cooperation of chess pieces one is led to think, by analogy, of social cooperation: friendship, a life of many in unison, enmity, contest, of antagonistic parties. A chess piece is supported by some comrades, it antagonizes some enemies, and thus it has tasks and functions to fulfill. How shall the chess player determine the functions of his various pieces and to what extent shall he support them?

The reply of the chess master is, that the pieces ought to be supported according to their usefulness, according to their value. Well understood, this value changes according to the degree of activity exhibited by the piece. If a piece has succeeded in drawing upon itself a great deal of the enemy's fire, it has gained just that much in value, in importance, in utility, and so far it deserves more support than its average value would justify – at least the support which threatens a counter-attack. On the other hand, if a piece is not sufficiently active, it has to be given a chance to do its share of the work, whether to relieve other pieces or to undertake new tasks. Certainly, the master will not assign to it work already done; it has to complement the work of others; by no means double it. In return for the labor which a piece is required to do for the common cause, it enjoys

safety and support, and the more valuable the piece, the greater the task assigned to it and the greater the obligation to safeguard it.

What is the equivalent to this practical rule of the chess master, who measures thereby the work to be done by his queen and rooks and minor officers and pawns and even by the king, in the infinite game of social intercourse? Surely a social principle. But whereas the game of chess is rather well understood by half a dozen masters and fairly comprehended by a few dozen lesser masters and – say – a thousand amateurs, our social intercourse is, alas! not conducted by masters, not even by near-masters, not even by any comparable in skill and insight to those thousand amateurs. Let us not be conceited about our statesmanship. Is it necessary to whisper that our life is directed by mediocre people, with the exception of a few men of talent and very rare men of genius? But no, we are not so ill advised, as has been stated frankly by many good men. Unfortunately, the men who lead us, though not egotistical, are not disinterested. The attitude of a man of science, guided by his passion for truth and knowledge, is beyond them. Some particular interests, party or national interests at the very least, which certainly are not the clean-cut interests of humanity or of the future, have a share in determining our politicians and our politics. That will change, since everything in the long run changes for the better. In the meanwhile, a word is needed to distinguish the peculiar attitude of the chess master who, in dealing with his pieces of wood, is not led astray by any outside interests. The word I refer to is, alas! soiled by our history, and its significance is thereby covered up as is the sparkle of a diamond that has fallen into the dust. With this reservation let us use the word *justice*.

Principle of justice! Thou art a power effective in history in spite of all that has been done to thee by the army of liars, that want to hurt thee, yet have to play the hypocrite, for the people instinctively love thee. Hypocrisy is tribute paid to thee by thine enemies. It is a tacit admission that the true statesman would at all risks uphold thee.

On the chess board lies and hypocrisy do not survive long. The creative combination lays bare the presumption of a lie; the merciless fact, culminating in a checkmate, contradicts the hypocrite. Our little chess is one of the sanctuaries, where this principle of justice has occasionally had to hide to gain sustenance and a respite, after the army of mediocrities had driven it from the marketplace. And many a man, struck by injustice as, say, Socrates and Shakespeare were struck, has found justice realized on the chess board and has thereby recovered his courage and his vitality to continue to play the game of life. Later generations, not so narrow-minded as ours, will recognize and appreciate this merit of our noble game.

As a counterpoint to the Manual excerpt, we also present a very interesting article published in 1978 by the Australian IM and World Correspondence Chess Champion, C.J.S. Purdy. His page number references are to the 1947 David McKay edition of the Manual; we have added the corresponding 2008 edition page numbers.

The Great Steinitz Hoax

A gigantic delusion has beset the chess world for almost half a century – not only the rank and file of the chess world but its leading writers, who have spread the delusion further and further.

When I say half a century I mean 52 years for readers of German (because Emanuel Lasker's *Lehrbuch* appeared in 1926), and 46 years for readers of English, because the translated *Manual* first appeared in 1932.

The delusion is that William Steinitz formulated certain chess principles, which have become known as the Steinitz principles or the Steinitz theory.

The truth is that these principles were indeed formulated, but solely by Emanuel Lasker. It may seem to many quite incredible that a man should give the chess world the vital principles of position play and at the