

Larry Kaufman

Chess Board Options

A Memoir of Players, Games and Engines

New In Chess 2021

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Introduction

I was never a great chess player, nor a great shogi (Japanese chess) player, nor a great chess programmer, but somehow I have managed to win many state, national, international, and even world championships in these three chess-related fields over a span of nearly sixty years, and as a result have traveled extensively and gotten to know many of the champions and title contenders in all three arenas. This book is primarily about these great and other outstanding or well-known players (and programmers), although my own life story in relation to these three endeavors (and a few



others) is also included. Others have achieved significant successes in two out of these three fields (for example Hans Berliner in chess and chess programming and Yoshiharu Habu in shogi and chess), but I don't know of anyone else who has achieved significant competitive success in all three. So I hope readers may find my own story interesting along with those of the real champions. There are also plenty of commented games (and game fragments) played by great players, by other featured players, by myself, and by engines against human grandmasters, mostly with suitable handicaps.

Most of this book is about chess players (both human and computer!), with a chapter each for chess programmers and programs, and shogi players. I would actually have nearly as much to say about the shogi world as I do about the chess world, having been very deeply immersed in it for many years, but this book is in English, not in Japanese, so I imagine that most readers will know much more about chess than about shogi. As an American, I naturally know many more of the U.S. chess superstars than the others, but I did get to know a reasonable number of famous chess players from the Soviet Union and other countries, and have quite a few interesting stories to tell. There are quite a few annotated chess games in the book, not in general chosen because they were brilliant but often to illustrate some point I'm

making in the narrative or because of some personal connection to the game. Of course I've included some of my own games, but not just wins and draws – also several losses to famous elite grandmasters. All of the annotations were done with the aid of the strongest available engines in mid- 2020, running on a very powerful computer with a 2080 GPU for the neural net engines.

I wasn't really a chess pro in my peak earning years; I ran a stock options trading firm appropriately named 'Chess Options' in the late 1970s and early 1980s. This also rates a chapter. I can say that whatever success I had with it, I would not have had if I had never played tournament chess.

I was born in Washington D.C. in 1947, but moved to nearby Silver Spring, Maryland as a baby and grew up there. My parents weren't wealthy, but my father had a good job as an attorney for the U.S. Dept. of Agriculture, so there was never any problem with paying for chess tournaments, books, etc. or for college, so at least I had time to pursue chess seriously while studying at M.I.T. My father taught me chess when I was seven, although the only thing I remember about that is that I misunderstood the rule about pawns being allowed to move two squares on their first move; I thought this meant only on the first move of the game! I was very surprised when I learned that this was incorrect. My father was not a strong player (I would estimate 1600 Elo in his best years), and never played in tournaments. He actually learned the game from my mother, although she never played nor showed any interest in chess during my lifetime. I don't remember playing a lot of games with my father or with his circle of chess partners in my youth; I believe they gave me rook or knight odds in some games when I was around ten, and once I got strong enough to win on even terms we rarely played. My father did take a board in one of my simuls when I was already a strong master, and he was the only winner out of 20 players; he earned the victory, I didn't throw the game. In his old age, after all of his chess partners had died, we sometimes played at rook plus knight handicap (queen odds was too much), and the day before he died at age 96 he played chess (at rook odds I think) with my son Ray, who was already a master.

I wasn't really a chess prodigy, but I was a math and science prodigy. At age 8 I was going around to different schools giving lectures on various math and science topics, and I was seriously considered to be on the TV quiz show '\$64,000 Question' in the mid 1950s before the show went off the air due to a cheating scandal. At ten I was studying calculus and other advanced math topics with a university professor. But in chess, although I was the strongest player in my elementary and middle schools, I was still a very weak player by adult standards at age 10 or 11. I had no contact with or even awareness of organized chess until I started high school at 13. Then I joined the chess club, which turned out to be the strongest high

school club in the Washington area, with two active U.S.C.F. tournament players rated about 1900 and 1700. It quickly became apparent that I was midway in strength between them, so presumably 1800 Elo level. The 1900 player, Allen Chauvenet, was the son of a local master, Russell Chauvenet. By a curious coincidence, our respective fathers ended up in the same retirement community in the 1990s, and sometimes played chess together at the chess club there! This would have been a total mismatch around 1960, but unfortunately Mr. Chauvenet had some dementia in old age while my father did not, so it was competitive. Soon after starting high school, I played in my first tournament, the Maryland Junior Championship (which was not then rated by the USCF), and in the second round defeated the defending champion, Herschel Mednick (who died a few years later at only age 20), and went on to score 4.5 out of 5 for clear second place.

Shortly after this, I had an experience that showed me how far I was from the level of the top American players. The D.C. Chess League had an all-stars team from all the high schools, and it was scheduled to play a match with the Tacoma Park chess club, a full-time club managed by Senior Master Larry Gilden, who at only age 19 was already ranked in or near the top dozen players in the U.S. I hadn't yet made enough of a reputation to be on the team for that match, but I was invited to attend the match just to watch our first board play against Gilden. There wasn't any doubt about the result, it was a gross mismatch, but I had never even met such a strong player and wanted to see what the game would be like. When I got there I was told that one of our players couldn't play and so I was drafted to play fifth board against Frank Street, rated around 2000. Frank went on to win the U.S. Amateur Championship a couple years later and to become the second African-American chess master, and the first to achieve a 2300 U.S. rating. Not surprisingly, I lost badly, playing the Dragon and running into the dreaded Yugoslav Attack, which I had just seen for the first time in my first issue of *Chess Life* with a Bobby Fischer crush, but I had no idea how to counter it. Anyway, after losing in about 23 moves I went to look at the Gilden game, but he was playing Scrabble! When I inquired, I was told that our first board had only lasted ten minutes! Then I played some blitz games (which was new to me) with Frank Street, who won all the games. So you can imagine my surprise when he started playing blitz with Gilden for small stakes, with Gilden giving him ten minutes to two time odds! I just had no idea that anyone could be that strong. Yet as strong as Gilden was in blitz, Bobby Fischer beat him by something like 40 to 1 in a blitz match! This is why the top blitz players on the internet sites have ratings like 3200 there; the better player (unless closely matched) just almost always wins, draws are uncommon in human blitz.

After this I played in several more D.C. League matches, won the Eastern Junior Championship, and won the top unrated prize at the Eastern Open, which gave me a USCF rating of 2002, quite high for my age in those days. But I'll admit that I was overrated, and a disastrous initial U.S. Junior Championship brought it down to a more realistic 1942, around which it remained until I recovered my Expert rating shortly after entering M.I.T. in 1964. Two years later I became briefly the youngest American master at age 18 (now the youngest is age 10, has even been 9!), and in late 1966 I won the American Open Championship in a shocking upset ahead of GM Pal Benko and IM Anthony Saidy, which brought my rating to around 2300 and made me briefly America's top rated junior player. I then climbed slowly to pass 2400 in 1972 and qualify for the U.S. Championship (see that chapter), but gradually slid back with no notable achievements until 1979-1980, when after a 3 year layoff during which I only played shogi (and Go), I made three straight IM norms with extra points each time and shot up to over 2500 USCF (see chapter on shogi).

After a ten year absence from tournament play from about 1985 to about 1995, during which time I was active in computer chess, I returned to competition and hit my lifetime peak USCF rating of 2538 just weeks before my fiftieth birthday in 1997! Fifty is quite a late age to peak. I continued to have many strong results for the next decade or so, culminating in winning the U.S. Senior Championship and then the World Senior Championship in 2008 and with it the Grandmaster title. In 2009 I tied for third in the World Senior, and in 2010 again tied for first but was only fourth on tiebreak. So up to age 63 my FIDE rating was still around 2400 and my USCF rating still in the upper 2400s. After that my results finally started to decline, but I have remained at or near the top of the U.S. rating lists for players of my age or older.

Regarding state championships, I won the Massachusetts Championship twice, first in 1965, and won the Maryland Championship nine times from 1971 to 2016. I also won the Florida championship twice, as well as (as a non-resident so not eligible for the state title) Virginia, D.C., Southern California, and Pennsylvania. I don't know whether my 51 year span of winning state championships is a U.S. record or not, but if someone has a longer span I'd like to hear about it.

Well, enough of my chess history. Time to look at the many great players I have known, and to my other activities (shogi, chess programming, options trading). The biographical chapters are ordered roughly chronologically in terms of when the stories and games took place, although in some cases they span several decades so the order is somewhat arbitrary.

Here is one of my earliest games in the database, a win in the U.S. Open over future grandmaster James Tarjan, who defeated ex-World Champion Vladimir Kramnik half a century later! I have often defeated famous grandmasters before they became grandmasters, including Walter Browne, Joel Benjamin (twice), Hikaru Nakamura (in a 'quick' tournament), Ken Rogoff (in a game that lasted only about ten minutes, he fell into an opening trap), Sam Shankland (when I was already in my upper 50s), and others whom I can't even remember right now. It's definitely easier to beat them before they become GMs, or after old age takes its toll! I do have about twenty standard tournament victories against actual GMs, but most of them were not so famous or were past their prime when I beat them.

Game 1 Sicilian Defense

Larry Kaufman

James Tarjan

Aspen Annual Open 1968

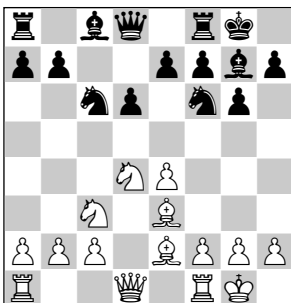
1.e4 c5

My opponent in this game became a grandmaster some years later, but was still quite young when this game was played. I somehow have a 3.5 out of 4 lifetime score vs. Tarjan, but all the games were played before he became a GM!

2.♘f3 d6 3.d4 cxd4 4.♗xd4 ♖f6

5.♗c3 g6 6.♙e2 ♙g7 7.♙e3 ♗c6

8.0-0 0-0



9.♙d2

The move 9.a4 has surprisingly good database statistics, but no one

would have even thought of this move back then.

9...♗g4

9...d5=; 9...♙d7=.

10.♙xg4 ♙xg4 11.♗d5± ♙e6 12.c4

♙d7 13.♞ad1

13.♞fe1!± is better, since Black will soon take on d5 after which the rook is ideally placed on e1.

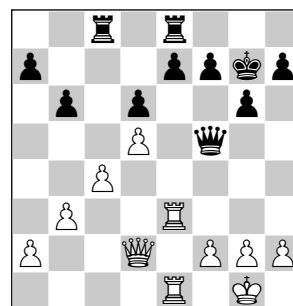
13...♙xd5 14.exd5 ♗xd4 15.♙xd4

♙f5?

15...♙xd4 16.♙xd4 b5=.

16.♙xg7 ♙xg7 17.♞fe1± ♞fe8 18.b3

b6 19.♞e3 ♞ac8 20.♞de1



20...♞c7?

20...b5 21.♞f3 ♙d7 22.♞h3 h5

23.♞xh5 gxh5 24.♙g5+ ♙f8

25.♙h6+ ♙g8 26.♞e3 ♙g4 27.h3

♙g7 28.♞g3 ♙xg3 29.fxg3 bxc4

30. ♖g5+ ♜f8 31. ♖xh5 f6 32. bxc4
 ♜xc4 33. g4±. This is similar to the
 game, but Black has more pawns
 here.

21. ♖f3 ♖d7 22. ♜h3+- ♜h8
 23. ♖h6+ ♜g8 24. ♜he3 f6 25. h4
 ♖e8 26. ♜e6 ♜f7 27. ♜xd6 exd6
 28. ♜xe8 ♜xe8 29. ♖f4 ♜d7 30. ♖xf6
 ♜f8 31. ♖d4 ♜e7 32. ♖d2 ♜d7
 33. f4 ♜c7 34. g3 ♜fe8 35. ♜f2 h5
 36. ♖d3 ♜e1 37. ♜f3 a5 38. a3 ♜b7
 39. b4 axb4 40. axb4 ♜c7 41. ♖a3
 ♜f1+ 42. ♜g2 ♜b1 43. ♖a7+ ♜c8
 44. ♖a8+ ♜d7 45. ♖b7+ ♜d8
 46. ♖xb6+ ♜d7 47. ♖c6+ ♜e7
 48. ♖c7+ ♜f8 49. ♖xd6+ ♜f7 50. f5
 ♜b2+ 51. ♜h3 gxf5 52. ♖d7+ ♜e7
 53. ♖xf5+ ♜e8 54. ♖xh5+ ♜d7
 55. ♖f5+ ♜e8 56. d6

Black resigned.

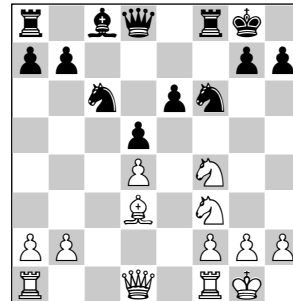
Here is my last round victory over
 a grandmaster that earned me a tie
 for second place in the 2020 U.S.
 Senior Championship of (state)
 Champions tournament, played
 online on chess.com due to the
 pandemic. This is 59 years after
 my first tournament prize, second
 place in the 1961 Maryland Junior
 Championship! As far as I know,
 only Viktor Kortchnoi has a longer
 span (64 years) between his first
 and last significant tournament
 prize.

Game 2 French Defense

Larry Kaufman 2329
Enrico Sevillano 2508

Live Chess – Chess.com 2020 (2)

1. e4 e6 2. d4 d5 3. ♘d2 ♘f6 4. e5
 ♘fd7 5. ♙d3 c5 6. c3 ♘c6 7. ♘e2 cxd4
 8. cxd4 f6 9. exf6 ♘xf6 10. 0-0 ♙d6
 11. ♘f3 0-0 12. ♙f4 ♙xf4 13. ♘xf4



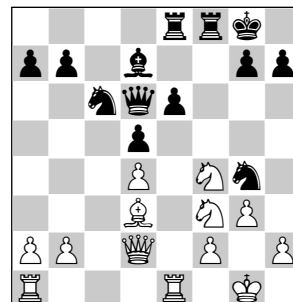
13... ♘g4

13... ♘e4 is the main line, when both
 14. ♖c1 and 14. ♘e2 are a bit better
 for White.

14. ♖d2 ♖d6

14... ♖f6 15. ♘h5 ♖h6 16. ♖xh6
 ♘xh6 17. ♜ac1± is the main line,
 but clearly Black is just hoping for
 a draw here, and we both needed to
 win to get a prize.

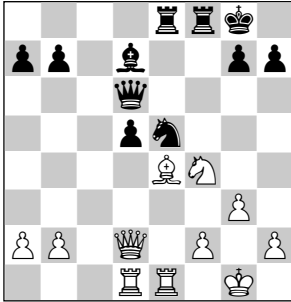
15. g3 ♙d7 16. ♜fe1 ♜ae8



17. ♜ad1

The computers say that the untried novelty 17.♔g2! is best here, taking the sting out of ...e6-e5.

17...e5 18.dxe5 ♘gxe5 19.♘xe5 ♘xe5 20.♙e4



20...d4?

The server crashed here, the game was halted for about an hour and then resumed.

20...♙g4! 21.♙xd5+ ♙xd5 22.♙xd5+ ♙h8 23.♞a1 g5=.

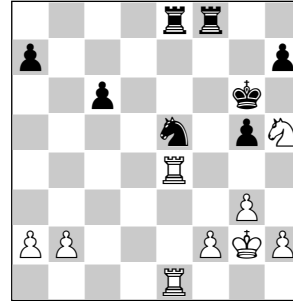
21.♔g2± ♙c6?

21...♘c6 22.f3 ♙h8 23.h4±.

22.♙xd4 ♙xd4 23.♞xd4+- g5?

24.♙d5+! ♔g7 25.♙xc6 bxc6

26.♘h5+ ♔g6 27.♞de4



27...♘g4?

27...♞b8 28.♞xe5 ♞xb2 29.g4 ♞xf2+ 30.♔g3 ♞g2+ 31.♔f3 ♞gf2+ 32.♔e3 ♞xh2 33.a3+-.

28.♞xe8 ♞xf2+ 29.♔g1 ♞xb2

30.♞8e2 ♞xe2 31.♞xe2 ♔h5

32.♞e6 ♘h6 33.♞xc6

Black resigned.

CHAPTER 2

Bobby Fischer

I first met Bobby Fischer in 1964, when he came to Washington D.C. to give a lecture and play a 70+ board simul. According to the Chessmetrics website, Fischer was already the best player in the world for most of that year, whereas I had only about a 2000 rating and was little



Bobby Fischer in 1958

known outside the D.C. area. Several players rated above me played in the simul, and I would have played, but I judged that I would learn more from watching Fischer play 70 games than from playing one myself. This might seem odd now with all games instantly available from every significant event on the internet, but I knew that if I didn't watch those games, I would never see most of them. Also the fee (\$14, I think, about like \$100 now) was a consideration, but if I could have seen the other games later I would have gone for it. I think I made the right decision, because although it would be nice to be able to talk about my game with Fischer (I never did get to play against him), I really did learn a lot from watching and became a master within two years.

Fischer's lecture was on his drawn Olympiad game with Botvinnik, which he insisted he should have won at various points, perhaps not always correctly with computer hindsight. In the simul I observed a few things of interest. In one game he played a high school friend of mine by the name of Danny Collins, which was notable in that after twenty moves or so he managed to put Danny into a rare full-board Zugzwang; with all the pieces and pawns on the board and no direct threats to him, Danny had only suicidal moves available and lost. Fischer asked for the game score, which was published in *Chess Life* several decades later. An unusually large number of games featured the Caro-Kann (probably players thought it was the best chance to draw vs. Fischer). Fischer

always played 3.♖c3 dxe4 4.♗xe4, and if 4...♙f5 replied 5.♗c5!?, a move I had never seen and one that is still played by grandmasters on occasion nowadays. Against 4...♗d7 he played 5.♗f3 ♗gf6 6.♗xf6+ ♗xf6 7.♗e5. From here the game Karpov-Hort, Bugojno 1978, continued 7...♙f5?! 8.c3 e6?! 9.g4 ♙g6 10.h4 h5?! 11.g5 and White is already winning and soon won. The commentary at the time implied that Karpov had made some brilliant discovery with this game to crush Hort (then a top player) so easily (although the database shows the first use of 9.g4 ♙g6 10.h4 was Karpov-Zaitsev 1970), but I already saw Fischer play this in his 1964 simul and used it myself with success in the next few years! Whether Karpov knew about these earlier games or found it himself in 1970 I cannot say.

Not long after this, I was playing in an open tournament in the NY area, and was paired with IM James Sherwin, one of the top American players back then. In those days, since clocks that could use increment or delay weren't invented yet, sudden-death time controls were not allowed in rated tournaments, so when the allotted time for a round was up and it was time to pair the next round, it was common to have a strong player adjudicate games at that point. This seems ridiculous now, but that was the rule. In this case, the adjudicator was none other than Bobby Fischer! When it was time for adjudication, I was down the exchange in an endgame with no real compensation, and so was surely losing, but Fischer did his best to try to hold the position for me vs. Sherwin in analysis. It was impossible to hold though, so soon Fischer properly adjudicated in Sherwin's favor. Curiously I met Sherwin again about 45 years later at the 2009 World Senior, where he generously offered to share the services of a second he had hired for the event (Tibor Karolyi).

I next saw Fischer when I happened to visit the U.S. Championship in New York just in time to witness Fischer's famous ♜f6!! blockading sacrifice vs. Pal Benko. At the time it was considered a real brilliancy, but if it happened today people would just say Benko blundered to allow it! Such is the progress chess has made in half a century. I also saw Fischer play in a couple other U.S. Championships, I recall stopping by when he lost a game to Robert Byrne.

I don't think I ever saw Fischer again in person, but I did have further interactions involving him over the years. Perhaps the most significant was in 1975, when Fischer was scheduled to defend his title vs. Anatoly Karpov, but it never happened due to a dispute over match conditions. The key point is that Fischer wanted the match to be for ten wins (draws not counting), but in the event of a 9 to 9 tie the champion (Fischer) would retain his title with no further play. FIDE reluctantly agreed to the 10 wins

condition, but would not agree to the 9 to 9 tie rule. Fischer reasoned that since Spassky would have retained his title in the event of a 12 to 12 tie (with draws counting), he should also get to retain his title in the event of a drawn match. But FIDE and the Soviets argued that the 12 to 12 draw rule was needed as there was no way to decide the match without an open-ended series of further games (no one would even suggest blitz playoffs or Armageddon then), but if draws weren't going to count anyway, only one more decisive game was needed once a 9 to 9 score was reached. It somehow seemed that asking for the 9 to 9 advantage was asking for more than the 12 to 12 rule that had been in effect, because with the 9 to 9 rule Karpov would have to win by 2 games (10 to 8), while with the previous system Fischer only had to win by one game (12.5 to 11.5).

I was brought into the discussions by grandmaster Lubomir Kavalek, with whom I was good friends and who was representing or assisting Fischer in these discussions. Kavalek knew I had a strong math background with a degree (in Economics, not math) from M.I.T., and he asked me to do an analysis for Fischer to try to establish that Fischer was not really asking for more of an advantage than Spassky had gotten. Well, there are various ways to approach this question. I took the approach of assuming that the players were of equal strength in both cases, and did some calculations on the likelihood of the champion keeping his title under both sets of rules. My conclusion was that with any realistic assumption regarding draw frequency, the champion was more likely to keep his title with Fischer's rule than with the older FIDE rule. This was not the answer Fischer wanted to hear, of course, he was not willing to concede on this point, and so they found another chess master with a good math background, Charles Kalme, and asked him to do the same. Kalme took a different approach, namely asking the question of how much stronger the challenger would have to be than the champion in order to become a favorite to win the match, and his conclusion was that Fischer's proposal would require less of an Elo edge to become the favorite. Without taking sides on which approach was more appropriate, I'll just say that you can usually 'prove' your belief with statistics with enough effort! Anyway, this presumably pleased Fischer, but it didn't convince FIDE or the Soviets, so the match never took place, Karpov becoming champion by default.

In 1978, Fischer played the only games on record between his 1972 and 1992 matches with Boris Spassky, namely a few games with computer program MacHack. I had worked on MacHack in 1967 and 1968, including having written an openings book for it. By 1978 the program had improved significantly, from Class C to Class A, and I had no involvement

with the match, but I believe that little or no further work was done on the opening book after I graduated from M.I.T. in 1968 so I presume that my book was used for the Fischer match, perhaps with modifications by U.S. master Alan Baisley. Well, it's rather moot, as MacHack was by no means strong enough to score even a draw off of Fischer regardless of any opening book, although it missed a likely draw in one game, shown below.

My last involvement with Fischer was in the 1980s. Bobby Fischer is generally regarded as the inventor of the use of increment in chess, and he applied for a patent on a chess clock that allowed for the players to use increment. But it is not widely known that his claim to being the inventor of increment use in chess, and therefore his patent claim to the idea, are invalid. Here is the story.

Around 1980 a digital chess clock called 'Micromate' was on the market, initially priced at \$300. It was a very sophisticated, complex device, with a huge array of buttons and options, really a computer in a clock. No one, including Fischer, had ever suggested the use of increment for chess, and this clock did not have an option for it or mention it in the manual. However, when I purchased one, I soon realized that it was possible to program this clock to install what we now call increment. Since this was at least loosely related to the way shogi was played (they used a base time plus a small time per move once the base time was exhausted), I started using the clock for shogi games with increment. The clock was too expensive for most people (something like a thousand dollars in today's money), and soon the manufacturer had to drop the price to \$100 (below his cost I believe) to sell his stock. Once a reasonable number of people owned a clock, we started having blitz/rapid chess events using increment on those clocks. I wrote to the manufacturer to explain how to set his clock to play increment chess (I called it 'accumulation' rather than increment, but it was identical), and he updated his manual to explain this to purchasers, giving me credit as the inventor. Unfortunately he could not turn a profit at \$100 and so once his supply was gone, that was it, so very few people actually got a clock with the manual describing 'accumulation' chess.

Bobby Fischer had shown an interest in a new type of chess clock before this; according to David Levy he proposed some version of 'hour-glass' chess in the 1970s, but there is no record of Fischer mentioning what we now call increment for chess until the mid 1980s, well after the Micromate clock had already gone off the market. His clock and patent application were even later, so clearly they were not the first to use what we now call increment for chess. Most likely Fischer was unaware of the

fact that the Micromate chess clock supported the use of increment for chess and described it in the manual, since so few people actually got this manual. I don't mean to imply that Fischer did anything unethical in regard to his clock. As a final footnote to this, around 1990, when I worked part-time for Fidelity Electronics (maker of chess computers), they asked my opinion about whether they might have a problem marketing a chess clock with increment due to Fischer's claims and patent application. I told them that he was clearly not the inventor of the idea, that if necessary I would back them up in court with the Micromate story, and that they should not worry about this. As far as I know, this was sound advice! I don't know whether Fischer ever heard that I disputed his claim to being the inventor of increment chess, and we can't ask him now.

My one other link to Bobby Fischer is that I won the last U.S. Open Championship of Fischerandom chess a decade ago. Although Fischer didn't invent chess with randomized back rank (the older version was 'shufflechess'), he did invent the castling rules now in use, and so does deserve credit as the inventor. I think that the widespread use of the name 'Chess960' in place of Fischerandom is probably due to people not wanting to be associated with his anti-Semitic or anti-American statements, but in my view the use of someone's inventions does not imply agreement with his views, and since he cannot benefit from any popularity his idea might have now after his death, there is no longer much reason to avoid calling the game Fischerandom. Although he did reportedly play Fischerandom games with grandmasters (Susan Polgar being one who mentioned this), it is unfortunate that he never popularized the game by playing any games of it on the public record. He did reportedly propose to play a match of it with Vishy Anand just before his death, but this was not a realistic proposal with his failing health. It is perhaps the ultimate irony that a major boost to the popularity of Fischerandom took place in 2019 when Garry Kasparov agreed to participate in a major Fischerandom tournament at the St. Louis chess club (and did so again in 2020); the irony is that Fischer had called Kasparov a cheater for allegedly pre-arranging draws with Karpov in their initial match. It speaks well for Kasparov that he did not mind honoring Fischer's memory in this way despite that dubious allegation.

Since I never played Fischer, here is one of three recorded games which MacHack, which I worked on a decade earlier, did lose to Fischer. MacHack missed a splendid chance on move 19 to achieve the sunny side of a likely draw after Fischer made one error on move 15. Komodo 14 finds the right move for MacHack with just a one ply search (!), but needs a six

ply search (roughly the depth to which MacHack could search) to see that the move played loses. Although this took some minutes in 1977, now it takes Komodo just a few milliseconds!

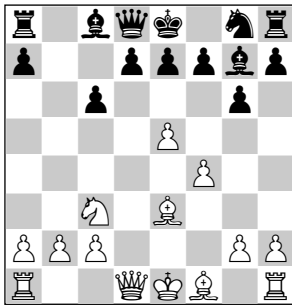
Game 6 Sicilian Defense

Greenblatt Program

Robert James Fischer

Cambridge m 1977

1.e4 c5 2.♘f3 g6 3.d4 ♘g7 4.♗c3
cxd4 5.♗xd4 ♗c6 6.♙e3 ♗f6 7.♗xc6
bxc6 8.e5 ♗g8 9.f4



9...f6

9...♗h6= is generally preferred now.

10.exf6 ♗xf6 11.♙c4

11.♙e2 0-0 12.0-0=.

11...d5 12.♙e2 ♖b8 13.b3?

13.♙d4! =.

13...♗g4 14.♙d4 e5

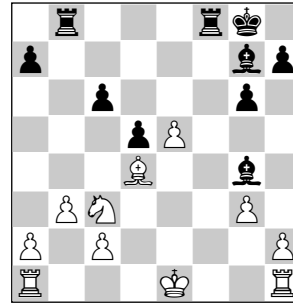
14...♗e3! ♚.

15.fxg4 0-0?!

15...♗h4+ 16.g3 ♗h3 ♚.

16.♙xg4 ♗h4+ 17.g3 ♗xg4

18.♗xg4 ♙xg4



19.♖f1??

After 19.h3! ♙d7 20.0-0-0 ♖be8

21.g4 ♙xe5 22.♗a4 ♙xd4 23.♖xd4

♗g7 24.♗c5 White is for choice,

although a draw is to be expected.

19...♖xf1+ 20.♗xf1 c5 21.♙f2 ♙xe5

22.♙e1 ♖f8+ 23.♗g2 ♖f3 24.h3

♖xc3 25.♙xc3 ♙xc3—+ 26.♖f1 ♙f5

27.♖f2 h5 28.♖e2 ♗f7 29.♖e3 ♙d4

30.♖f3 ♗e6 31.c3 ♙e5 32.♖e3 d4

33.cxd4 cxd4 34.♖e1 d3 35.h4 d2

36.♖d1 ♙c3 37.♗f2 ♙g4 38.♖h1

♙d4+ 39.♗g2 ♗d5 40.a3 ♗e4

41.♖f1 ♗d3 42.♗h2 ♗e2 43.♗g2

♙h3+ 44.♗xh3 ♗xf1 45.b4 d1 ♗

46.♗h2 ♗e2+ 47.♗h3 ♗g2# 0-1

CHAPTER 15

Shogi

Shogi (Japanese chess), has been a huge part of my life since I learned to play in 1977. Although I am objectively not as strong in shogi as in chess, I am (or at least was) probably better known in the shogi world than in the chess world as I was generally considered to be the top non-Asian player of shogi from about 1980 until at least 2000 (by non-Asian players I mean players who never resided in Japan or China and whose parents or grandparents never did; I include China because China and Japan share the Kanji characters, so Chinese people can understand Japanese shogi literature to some extent). Even today at age 72 I am ranked on the Pan-Atlantic 'FESA' rating list (which rates events in Europe and America) as the top U.S. player and the number two non-Japanese player not from Belarus, which subsidizes shogi so their top players are not really amateurs like the rest of us in the West.

Shogi is an amazing version of chess, in my opinion the most interesting version of them all. It has only a 1-2% draw rate, and some clubs and tournaments use rules that eliminate even these few draws. It is similar to 'CrazyHouse Chess' (the two-player version of bughouse chess) in that these games all allow a player to use captured pieces for his own side. Presumably CrazyHouse and BugHouse were inspired by shogi. But it is a much better game than CrazyHouse because that game appears to be a clear win for the first player when strong engines play each other, whereas with shogi going first is just a modest edge even with the strongest engines.



Shogi is played on a 9x9 board, and while the king, rook, and bishop are the same as in chess, the pawns capture as they move (one square straight ahead only), the knights move only two forward and one to the side, and

the queen is replaced by two gold generals that move one square any way but diagonally backward. There are also two silver generals (one square diagonally or forward) and two lances (like a rook but straight forward only) per side. The key feature of shogi that makes draws so rare is that all the pieces other than king and gold general can promote when reaching the 7th rank or beyond. This makes passive play rather hopeless in general and makes the game much more dynamic. One might say that shogi is the game that most people imagine chess to be, in that the goal is to checkmate the king. Both games have this as the nominal goal, but most chess games that aren't drawn are decided when one side resigns because he sees that the other will inevitably queen a pawn, with the actual checkmate after that being a mere formality. Shogi games usually end only when the loser actually sees that he will be checkmated in a few moves. Attacking and defending the king are a bigger part of shogi than they are in chess.

I first learned shogi from a chess friend, Mark (he asked that I omit his last name), whom I met while living in South Florida where he then lived (later he lived in Paris for many years). He was not a very strong chess player, probably class A (1800 to 2000), but was a somewhat stronger Go player, and he taught me Go well enough to bring my level up from novice to shodan (maybe 1800 in chess terms). He had learned shogi from a British magazine by that name which was mostly translations of articles in Japanese magazines, and insisted on teaching me to play. I wasn't very interested in learning, with the difficulty of the pieces being identified by Japanese Kanji which were meaningless to me, but after all the time he had devoted to teaching me Go I could hardly refuse. At first he gave me a big handicap (six pieces!), which is normal in shogi when the players are of obviously different levels. It took me a few games to be able to recognize all the pieces without difficulty, and a few more to play sensibly, but soon I no longer needed a handicap. I started to like the game, we played frequently, and after a couple months it became clear that I needed to give Mark a handicap. For a long time my only shogi experience was giving rook handicap (or sometimes rook + lance) to Mark. I subscribed to the magazine, studied it thoroughly, and eventually managed to get one Japanese book on handicap shogi. I couldn't read Japanese, but I could play over the variations and deduce which side was winning or doing well. But I had no one to play against but Mark for nearly two years, when I started to meet some Japanese people who knew the game. Although I was still not a very strong player, it was difficult to find any opponents in South Florida stronger than I was. So I started to travel to meet real shogi players.

First I went to Los Angeles, which had a thriving all-Japanese shogi club. I was somewhere around the middle of the pack there, although I

recall that the strongest player there was still able to give me a two-piece handicap and win (a few years later I defeated him on even terms to win the North American Championship). Then in 1980 I went to London to play in the international championship (effectively the World non-Asian championship), which I won with a perfect score, and did so again the next year. But at the time Western players were not very strong, so it didn't mean that much by Japanese standards.

So I decided that the time had come for me to visit Japan to learn the game properly from strong players there (this was of course before the internet, so there was no other way). Fortunately I had already made enough money from Chess Options to be able to do this comfortably. I visited the shogi clubs in Tokyo every day, initially earning a rank as '2 Dan' (about 1850 on the Pan-Atlantic rating system, supposedly comparable to FIDE ratings). Within a couple days I earned promotion to '3 Dan' (about 2000 Elo), but had to wait until my next trip to Japan a year later to reach '4 Dan' (about 2150 Elo). Altogether I made ten trips to Japan, mostly in the 1980s but some in the 90s and even the 2000s, spending an average of about a month on each trip, of which nearly 90% of the time was spent playing shogi (the rest playing Go, sightseeing, etc.). In addition to playing literally thousands of games with strong amateur players at the clubs, I got the opportunity to play more than a hundred games with professional players, mostly with handicaps, usually a rook or a bishop. The Japanese Shogi Association (Renmei) and some shogi magazines were very helpful to me in arranging for these games at no cost for me. I learned a tremendous amount from them, enough to win the North American Championship in the mid 1980s and with it the '5 Dan' rank (about 2300 Elo), the highest ever awarded to a non-Japanese. We had some discussions about whether I could turn pro if I could reach '6 Dan' level, which would be sufficient if I were a Japanese under age 20. But I was already approaching age 40, and 5 Dan proved to be my peak, so it was a moot question. Initially I had the feeling that I didn't really deserve the 5 Dan rank, but I did once win the weekly handicap tournament of the Osaka Shogi Renmei in the late 1980s despite having to give handicaps as a 5 Dan, and when I later became the finalist in a tournament of the top players from around the world, losing only (of course!) to the Japanese player, I finally felt that I had deserved the promotion. Back home I played regularly in the U.S. Championship, but I rarely won (just twice, a few years ago and the one in the 80s when it was called North American Championship to include Canadian players) because it only required a 1 year residency here, and most years there was some Japanese player of 5 or 6 Dan level temporarily working or studying in the U.S., plus several

Japanese 4 and 5 Dans who were U.S. residents but usually not citizens. I was the top finishing American player more years than I can count. My principal rival for top American (excluding some Japanese players who became U.S. citizens) over the years has been George Fernandez, a Cuban-born player from New York with an Expert level chess rating and a 4 Dan shogi rank. In recent years Alan Baker from Philadelphia and my own son Raymond Kaufman have had their turns at the top American spot, and Raymond even received the 5 Dan diploma for thus qualifying to play in the Amateur Ryu-o championship in Tokyo.

I have had the opportunity to play against a remarkable number of famous shogi champions. First among these is the legendary Yasuharu Oyama (1923 – 1992), whose position in the shogi world can be compared to Botvinnik's in chess. Both dominated in the 1950s (Oyama also in the 1960s), and both were hugely influential. Oyama remained a top level player until well into his sixties, quite an unusual thing in the shogi (or chess) world. He personally awarded me my 5 Dan diploma, and around 1990 I was invited to join a tour group led by him to the Seattle/Vancouver area. We got to play three games, two at rook handicap (split 1 to 1), one at bishop (I lost). Despite his age, his play was still phenomenal. He didn't speak English, and I knew only a bit of Japanese, so we couldn't converse very much, but I could understand some things he said. I also once met, but didn't get to play against, Kozo Masuda, Oyama's main rival in the 1950s. As a child, Masuda not only vowed to become Meijin (World Champion in chess parlance), but to defeat the Meijin giving him a handicap! Sounds ridiculous, but he did it. They had a rule back then that in title matches if either player got a three game lead, in the next game he had to give a lance handicap. Although Masuda and Oyama were in general pretty equal, one year Masuda beat Oyama (the champ) three straight, then gave him lance handicap, and won (and became champ). Incredible!

I don't believe that Oyama played chess, but his predecessor as grand shogi champion, Yoshio Kimura, had a chess game with Alekhine in the latter's game collection, so chess wasn't completely unknown to Japan nearly a century ago. But even today Japan is a very weak chess country, for the simple reason that almost everyone there who plays such games prefers shogi. Curiously, although I never met Yoshio Kimura, I played many games of shogi (mostly at bishop handicap) with his son, who was also a professional shogi player.

Next I should mention Motoji Hanamura, who although never grand champion was one of Oyama's title challengers. Hanamura was considered to be the greatest player of handicap shogi of the 20th century, and it was my rare privilege to have played no less than five handicap games with

him, three at rook, two at rook and lance. Although I usually beat other professional players at rook handicap, and sometimes at bishop handicap, I lost all five of these games to Hanamura. Certainly from my perspective, he was indeed the ‘Wizard of Odds’ (pardon the pun). When I saw him at lunch when he was about age 68, I tried to make a joke in fractured Japanese to the effect that maybe I’ll be able to beat him when he reaches 95, but he signalled that such a game wouldn’t happen. I suppose he knew he was dying, as he only lived a few more months. I also had the opportunity to play six handicap games against Rensho Nada, another former title contender who had become a specialist in giving handicaps. He was famous for successfully giving four piece handicap to amateurs ranked as high as four Dan, which is really quite incredible. I scored 2 out of 3 against him at four piece on my first visit to Japan, and when I played him after becoming a four Dan he still insisted on four piece handicap, but after two easy wins by me he reduced the handicap to rook and lance, and I still won. Unfortunately he died soon after, while still in his fifties.

On one of my many visits to the Shinjuku Shogi Center in Tokyo, in 1986 or 1987, I was introduced to a very young (age 16) shogi professional, Yoshiharu Habu, who was said to be very strong although not yet highly ranked as a Pro, and given the opportunity to play him a game at bishop handicap, which I lost. Little did I know that he would go on to become the most dominant shogi champion in modern history, at one point holding all seven of the major titles! In fact I didn’t even realize it after he had become incredibly famous, because I had forgotten his name and didn’t know he was the same person I had played. I only found this out when he reminded me of our



Yoshiharu Habu

game in person years later! He is the first shogi pro to have taken to chess in a big way. His current FIDE rating is 2399, number 2 in Japan (he was number 1 for years), and he peaked at 2415, enough for the IM title, but he didn’t play enough to get the required norms. How incredible, to have been the best player in Japan in both chess and shogi for many years!

This, my second win over a grandmaster, features a positional pawn sacrifice that ultimately led to a decisive attack. I'm pretty certain that I would not have played this sacrifice three years earlier, before I got into shogi and shed my too-materialistic outlook on chess.

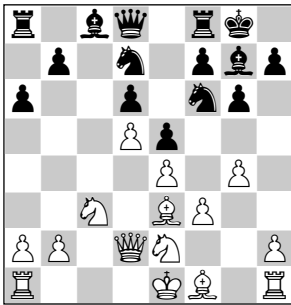
Game 28 King's Indian Defense

Larry Kaufman

Peter Biyiasas

New York 1979 (9)

1.d4 ♘f6 2.c4 g6 3.♗c3 ♖g7 4.e4 d6
5.f3 0-0 6.♙e3 e5 7.♗ge2 c6 8.♚d2
♘bd7 9.d5 cxd5 10.cxd5 a6 11.g4



11... ♗e8?!

11...h5 12.g5 ♗e8 13.♗c1 a5 14.♗d3
b6 15.♙e2±.

12.♗g3

After 12.h4! f5 13.gxf5 gxf5 14.exf5
♙xf5 15.h5 ♙xf3 16.♙g2 ♖f7

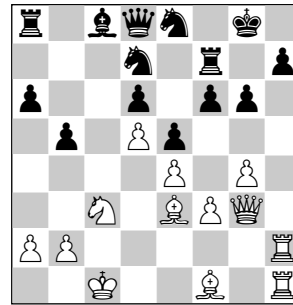
17.0-0-0± White has more than
enough attacking chances, develop-
ment, and space for the pawn.

12... ♙f6 13.h4!?

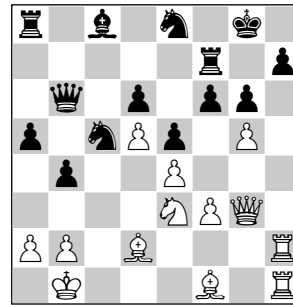
This true pawn sacrifice, though not
the only way to play for advantage,
certainly gives White more than
enough for the pawn. Probably my

involvement with shogi, in which
pawn sacrifices are routine, led me
to take the chance.

13... ♙xh4 14.♚h2 ♙xg3+ 15.♚xg3
f6 16.0-0-0 ♖f7 17.♞d2 b5 18.♞dh2



18... ♚a5?! 19.♙b1± b4 20.♗d1 ♗c5
21.♙d2 ♚b6?! 22.♗e3 a5 23.g5



23... ♙a6? 24.gxf6 ♗xf6 25.♗f5+-
♙f8 26.♙xh7 ♗xh7 27.♚xg6 ♙xf1

28.♙h6+ ♙e8 29.♗xd6+ ♚xd6
30.♚xd6 ♙d3+ 31.♙a1 ♗d7 32.♚e6+
♙e7 33.♚g6+ ♖f7 34.♙g7 ♗df6 1-0

The following win over the
renowned chess teacher and
stepfather of Hikaru Nakamura was
among the earliest to feature the
now-standard move 10.♙e1 in the
Bayonet King's Indian, and shows
what White is aiming for in this
queenside vs. kingside battle.

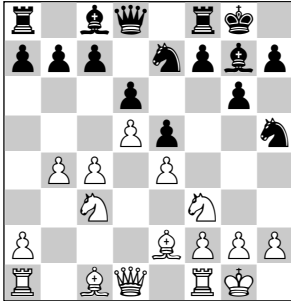
Game 29 King's Indian Defense

Larry Kaufman 2425

Sunil Weeramantry 2295

New York 1996 (5)

1.d4 ♟f6 2.c4 g6 3.♘c3 ♙g7 4.e4 d6
5.♟f3 0-0 6.♙e2 e5 7.0-0 ♘c6 8.d5
♟e7 9.b4 ♟h5



10.♖e1

This was introduced shortly before this game, I was an 'early adopter'. Now it is a main line of the King's Indian.

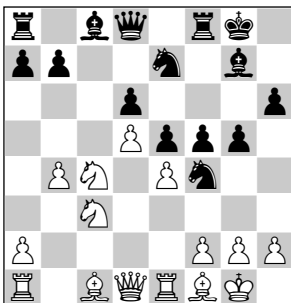
10...h6

Now this is considered too slow, normal is 10...f5 allowing 11.♟g5, but it was natural to avoid this before theory was developed.

11.♟d2 ♟f4 12.♙f1 g5?!

12...a5 and 12...f5 are more common and probably better.

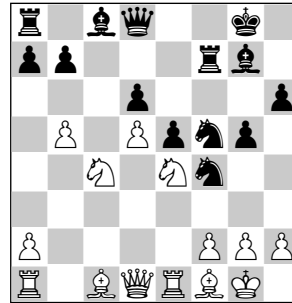
13.c5 f5 14.cxd6 cxd6 15.♟c4



15...fxe4?!

15...g4 16.a4 ♟eg6 17.♖a3!± and the rook will help defend the king.

16.♟xe4 ♟f5 17.b5 ♖f7



18.a4

18.g3! ♟g6 19.♙h5 ♟h8 20.♙b2+–.

18...♙f8 19.♙b2 g4 20.♟h1?! h5

21.g3 ♟g6 22.♙d2 ♙e7 23.♟g1 h4

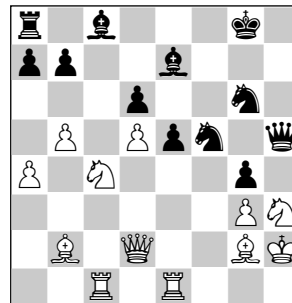
24.♙g2

24.a5!±.

24...♖h7 25.♖ad1?! ♙f8 26.♟g5

hxg3 27.fxg3 ♖xh2 28.♟xh2 ♙h6+

29.♟h3 ♙h5 30.♖c1



30...gxh3? 31.♙e4+– ♙d7 32.♙e2

♙h7 33.♙g4 ♟g7 34.♙xf5 ♙xf5

35.♙xf5 ♖f8 36.♙g4 ♖f2+ 37.♟h1

♟h8 38.♖f1 1-0

The next game was my only victory over a (former) top five player; Ehlvest was World #5 on the FIDE

CHAPTER 24

NNUE

This book was originally due to be completed in June 2020, but due to the pandemic it was delayed. As it happens, in June there was a tremendous development in computer chess, so the delay gives me a chance to write about it. Curiously, there is a close tie-in to my other main game, shogi!

Computer shogi lagged behind computer chess by more than a decade until recently. The top engines reached the level of the top pros about a decade later, after finally adopting the key ideas of computer chess. But about two years ago, this changed radically. When neural networks (NNs) entered the chess world first with AlphaZero and then with LeelaZero (Lc0), they played quite differently from standard ('Alpha-Beta') engines. The NNs were vastly superior positionally, but due to looking at very few nodes per second were generally weaker tactically, with the result that the two methods were closely balanced on the best hardware. Many people wondered if it would some day be possible to combine the best of both, getting the speed of standard engines with some of the 'smarts' of NNs. No one found a way to do this in the chess world, but Japanese interested in shogi found a way to do this for their game. The idea is called 'NNUE', an abbreviation for Neural Network Updateable Efficiently, by Yu Nasu and Yaneuraō. This isn't a technical book, so the simple explanation is that they found a way to use a small neural network very quickly with an ordinary CPU (= central processing unit) instead of the expensive GPU (= graphics processing unit) needed for efficient processing of a larger network. The small network can't be as 'smart' as a big one, but it can be hundreds of times faster, so it can be used in normal chess engines that search millions of positions per second. So not only do you save the cost of a GPU, which is useless with NNUE, but you get most of the tactical power of a normal engine with vastly improved positional play. This was put into some free shogi programs, notably 'Dolphin', and since it used code from Stockfish the author helped make it available for Stockfish to test for chess, predicting that it would add a hundred Elo points. I got the shogi program in January, and I was amazed at how strong it was, vastly beyond anything I'd seen before, so I believed the forecast and said so publicly. By July it was already proving to be much stronger than Stockfish in chess, and on August 6 Stockfish absorbed NNUE and made it standard, and at the end of the month they released Stockfish 12 with NNUE built in. The hundred Elo forecast proved to be right on the money, at least for fast play

on ordinary hardware. It has already pretty much made Lc0 and the other standard NN programs that require GPUs obsolete, although they will still be useful for providing alternate ideas and will still be superior in some positions and for displaying multiple lines of play at the same time. They say ‘You can’t have your cake and eat it too’, but in the case of NNUE we have an exception! With powerful hardware and long time limits, this Stockfish NNUE may be almost unbeatable in chess unless forced to play inferior openings, even against a similar engine. Chess may not be ‘solved’, but this may kill correspondence chess, if anyone can draw almost every game just by playing NNUE moves. I imagine correspondence chess will deal with it by suitable reforms, either rule changes or thematic tournaments with bad but not quite losing openings.

This was confirmed in a 2021 TCEC FRC (Chess960) championship match between the latest Stockfish and Komodo Dragon engines, both using NNUE and both running on very powerful hardware. Despite the fact that Chess960 is less drawish than standard chess, Komodo Dragon won by just two wins to one, with 47 draws! So I have to say that although I am a fan of Chess960 for human play, the engines with NNUE have now reached such a high level that neither normal chess nor 960 is really playable between the best engines unless one side is forced to play bad openings or unless new rules (such as banning repetitions) are introduced. The advantage of the first move, either in normal chess or Chess960, is apparently not enough to give significant winning chances at this incredibly high level of play.

In November we released our NNUE version of KomodoChess which we call Dragon. The Elo gain from normal Komodo was even larger than Stockfish achieved, roughly 150 Elo. Stockfish 12 is still rated somewhat higher (typically 20 to 30 Elo) than the Komodo Dragon on the rating lists, although Dragon is rated higher in Chess960, and is probably also better in handicap play. To test just how strongly it plays against humans, we contested an eight game online rapid handicap match with GM Hikaru Nakamura (rated World number 1 in blitz and generally considered to be second only to World Champion Magnus Carlsen in online rapid play). The time limit was 15’ + 10”, which has now become the standard time limit for most top level online rapid events. In human events Nakamura had shown dominance over everyone but Carlsen at this time control, and scored nearly or fully even with Carlsen over a large number of games in 2020. The handicap was two pawns, one from each wing but no edge pawns, so b2 + f2, b2 + g2, c2 + f2, and c2 + g2, Dragon always playing White as the odds-giver. So not only is White two pawns down, but he (it?) will have problems getting his king safely castled on either wing. Note that the

conditions are similar to the Stockfish (pre-NNUE) vs. Van Foreest match given in the previous chapter, except that the time limit was 30' + 10" in that match but Van Foreest is rated far below Nakamura in blitz and rapid play. So I think it's a fair comparison. Stockfish lost that match by 2 to 1.

The Dragon vs. Nakamura match started off with three straight draws, one of which looked like an almost certain Nakamura victory which he let slip. Dragon won the fourth game, completing the first day's play. For the second day, since the four openings would be repeated, we switched to 'MCTS' mode in Dragon so that the games would be different from the first day to maximize spectator interest. MCTS mode is objectively a bit weaker, but it may be a bit better vs. humans as it doesn't assume perfect play by the opponent. At least that was our experience in our Komodo vs. Lenderman match, but that was pre-NNUE, so we didn't know whether the same would apply to Dragon or not. The result the second day was an astonishing 4 to 0 shutout by Dragon! Everyone concluded that this was due to the MCTS switch, but based on the actual moves played I'm not so sure; I'm more inclined to believe that Nakamura went on 'tilt' as they say in poker. The most spectacular game was game number 7 below, which looks like a game Morphy might have played (although he never gave a two pawns handicap). As you'll see, Dragon missed a spectacular sacrificial win due to being in MCTS mode, although Nakamura missed chances for equality and lost anyway. The main lesson is that it's too difficult for humans to fight against engines in open, tactical positions, especially in rapid. We humans have to find ways to keep the game somewhat simple to have a good chance. The final score of 6.5 to 1.5 for Dragon was really too good; Nakamura just blundered a piece in the final game and was perhaps distracted by talking to his viewers while playing, although he does this all the time. But even allowing for luck, tilt, and distraction, it's clear that the handicap was just not enough. If we were to have a rematch against Nakamura or another top player, I would propose alternating colors at the same handicaps. Playing Black with two 'big' (non-edge) pawns missing is a huge handicap; even I have some chances against the top engines this



Hikaru Nakamura

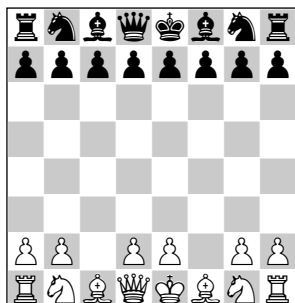
way. With alternating colors a top pro should score well enough with white to offset a minus score with black.

Game 59

Komodo Dragon

Hikaru Nakamura

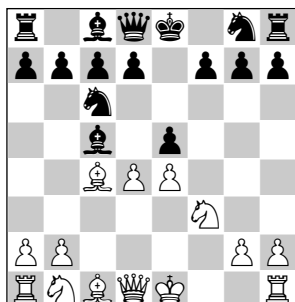
c2 + f2 odds, 15' + 10" Chess.com (7), Nov 19, 2020



1.e4 e5

On the first day he played 1...e6 here accidentally, calling it a mistake, but he drew. 1...e5 is perhaps objectively better, but against an engine maybe keeping things closed by 1...e6 is not a bad idea.

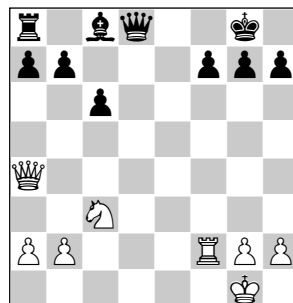
2.♘f3 ♘c6 3.♙c4 ♙c5 4.d4



4...♘xd4?!

Objectively fine if he finds 6...♙e7!, but 4...d5 is much simpler.

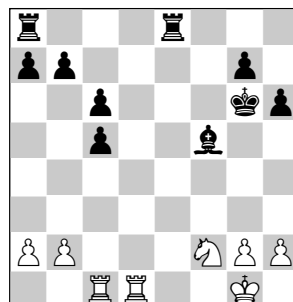
4...d5! 5.♙xd5 ♘xd4 6.♙e3 ♘f6
7.♙xd4 ♙xd4 8.♘xd4 exd4 9.0-0
♘xd5 10.exd5 ♖xd5 11.♘c3 ♗d8
12.♗a4+ c6 13.♗ad1 0-0 14.♗xd4
♗b6-- 15.♗f2 ♗d8 16.♗xd8+
♗xd8.



Black has kept his two extra pawns and has the safer king and better minor piece.

5.♙xf7+! ♙xf7 6.♘xe5+ ♙f8?

6...♙e7! 7.♘c3 ♘f6 8.♘d3 d6 9.♙g5
c6 10.e5 h6 11.exf6+ ♙f7 12.♘xc5
dxc5 13.♙e3 ♖xf6 14.♘e4 ♗e5
15.0-0+ ♙g6 16.♙xd4 ♖xd4+ 17.♘f2
♗e8 18.♗c1 ♖xd1 19.♗fxd1 ♙f5--.



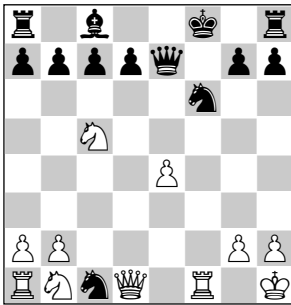
Black is up two pawns in the endgame with the better minor piece.

7.0-0+ ♘f6 8. ♘d3 ♘e2+?

After 8...d6 9. ♘xc5 dxc5 10.e5 h5
11.exf6 ♙g4 12. ♖d2 ♘e2+ 13. ♖h1
♙xd2 14. ♙xd2 gxf6 15. ♘c3 ♖g7
16. ♘xe2 ♙xe2 17. ♖f5 Black's two
extra pawns are weak, and the
bishops of opposite color should
allow White to draw.

9. ♖h1 ♘xc1 10. ♘xc5± ♖e7?

After 10...♖e8 11. ♘c3 d6 12. ♖xc1
dxc5 13. ♘d5 ♖e5 14. ♖xc5+ ♖f7
15. ♖xc7+ ♖xc7 16. ♘xc7 ♖b8 17.e5
White regains his material but a
draw is likely.

**11. ♖xc1?**

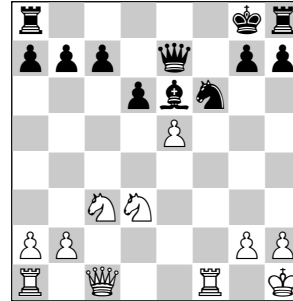
White missed a spectacular two
piece sacrifice because it was
in MCTS mode, which goes for
practical chances at the expense of
missing occasional deep tactics like
this line. Normal Dragon would
have found it: 11. ♘c3!! ♖xc5 12. ♘d5
and although two pieces down,
White has a winning attack!

11...d6?

11...b6 12. ♘d3 ♖xe4=.

12. ♘d3 ♖g8

If 12...♖xe4 13. ♘f4 ♙f5 14. ♘c3
♖c2 15. ♖e3 White has more than
enough development, threats, and
king safety edge for the two pawns.

13. ♘c3 ♙e6 14.e5**14...dxe5?**

After 14...♘g4 15. ♖f4 h5 16.h3 dxe5
17. ♘xe5 ♘xe5 18. ♖xe5 ♖h6 White
has full compensation for the pawn,
but not much more than that.

15. ♘xe5 ♖c5?

After 15...♖e8 16. ♖f4 ♘d7 17. ♘f3
Black can't get his king's rook out
without paying some price.

16. ♖e1 ♖f8 17. ♖g3 ♘h5 18. ♖xf8+ ♖xf8 19. ♖e3 ♖f4? 20. ♖c5

Black resigned since avoiding back
rank mates by ...h7-h6 allows the
♘g6 fork.

CHAPTER 26

Openings

This chapter is about how openings in high level play have changed during my nearly sixty years of participation in tournament play. There have been many changes, mostly a narrowing of acceptable openings, but the favorite initial moves for each side haven't changed that much. The two favorite initial moves for White have remained 1.e4 and 1.d4, and the two favorite replies have been 1...c5 and 1...e5 against 1.e4 and 1...♘f6 and 1...d5 against 1.d4. But beyond that much is different.

In the 1800s it was considered obvious that 1.e4 was the best move and 1...e5 was the best reply. But by about 1900 that view changed. The French Defense 1...e6 became respectable and may even have led to 1.d4 passing 1.e4 in popularity among masters in the first half on the 20th century. But eventually the French went out of favor, and the Sicilian 1...c5 overtook it. I learned my openings primarily from Bobby Fischer's games and writings, and he almost always played the Sicilian. I think that his reasoning was something like this: after 1...e5 2.♘f3 ♘c6 White is obviously better, with the attacking vs. defending knight, being closer to castling, and having the next move. After single-square pawn moves like 1...e6, 1...c6, and 1...d6 White has an obvious space advantage. But after 1...c5 space is equal, there is no symmetry, and the central break d4 means trading a more valuable center pawn for a slightly less valuable c-pawn. So at least with the Sicilian you could argue about who is better, and Black should have more chances to play for the win due to the asymmetry. Fischer almost always chose the Najdorf Variation of the Sicilian (2.♘f3 d6 3.d4 cxd4 4.♗xd4 ♗f6 5.♘c3 a6) when given the chance, and so I along with most of my generation came to accept that this was the best way to meet 1.e4. Against 1.d4 Fischer's view seemed to be that the Grünfeld (1.d4 ♗f6 2.c4 g6 3.♘c3 d5) and the Nimzo-Indian (1.d4 ♗f6 2.c4 e6 3.♘c3 ♗b4) were the two best defenses, especially if Black wanted a fighting game, with no clear preference for what Black's best choice is against 3.♘f3 after 2...e6.

Now jump ahead sixty years to 2020. Remarkably, much of Fischer's repertoire is still in vogue at the top level. The Najdorf remains the favorite Sicilian of the elite, perhaps even more so than in Fischer's day, although the Sveshnikov (which was called the Pelikan then, without ...b7-b5) is now a serious alternative whereas it was just an obscure sideline in 1960. The Grünfeld and Nimzo are still top favorites among the elite, although the Slav/Semi-Slav has joined them. But the sea change has been that against

1.e4 the old reply 1...e5 has now replaced the Sicilian as the top choice in elite tournaments. There are multiple reasons for this. Perhaps the main one is that the Berlin Defense to the Spanish (1.e4 e5 2.♘f3 ♘c6 3.♙b5 ♗f6), which was considered a dubious sideline in Fischer's day, is now considered to be very close to equal. Also the Marshall Gambit in the Spanish is now considered to be close to a draw, and good counters have been found to the various ways by which White used to avoid the Marshall. Due to the success of these two defenses, many strong players have switched from the Spanish to the Italian (3.♙c4 instead of 3.♙b5), which was considered to be a harmless sideline last century. While White is certainly still for choice after playing the Italian, his edge is clearly less than what White used to get with the Spanish before the Berlin and Marshall really caught on. The main point is that in the Spanish White used to be able to prepare d2-d4 successfully (which the Berlin and the Marshall avoid), while in the Italian playing d2-d4 without an earlier d2-d3 allows Black decent counterplay. On the other side of the coin, it is now generally agreed that White gets a real advantage against all Sicilians other than the Najdorf and Sveshnikov, and that even with the Najdorf Black needs to know a huge amount to get a decent middlegame against many dangerous white tries. Moreover, against both the Najdorf and the Sveshnikov, the reply 3.♙b5 is a reasonably promising try for a small edge. To put it simply, general arguments in favor of the Sicilian have given way to concrete analytical reasons for preferring the traditional reply 1...e5.

In a general sense, what I think has changed the most is a greater appreciation of space. Strong players were much more likely to concede a space advantage in return for vague attacking chances or some small positional or developmental factor. The King's Indian was a major top level defense, now it is rarely seen. I think this is primarily a result of the engines loving space. They will often say that a significant space advantage is worth a pawn, a judgment which few grandmasters would have made in my youth. Now the computers have convinced them that space is a big deal. To be a bit more precise, the old view was that space is only important when most of the pieces remain on the board, since a shortage of space means that the pieces will get in each other's way. While that remains true, the engines generally insist that space matters even with fewer pieces, perhaps because more advanced pawns are simply closer to queening. There may be no passed pawns now, but in an endgame pawns get captured, and if the remaining ones are closer to queening that side has an advantage. Of course that's been known for centuries, it's just that the computers have shown how important it is.

The consequence of this is that many defenses formerly considered to be playable, if slightly worse for Black, are now viewed as practically, if not theoretically, losing to a well prepared opponent. For example, you'll very