

Master Profiles: Viktors Pupols' Elusive Style
Games from Chicago, Tilburg, Vrsac

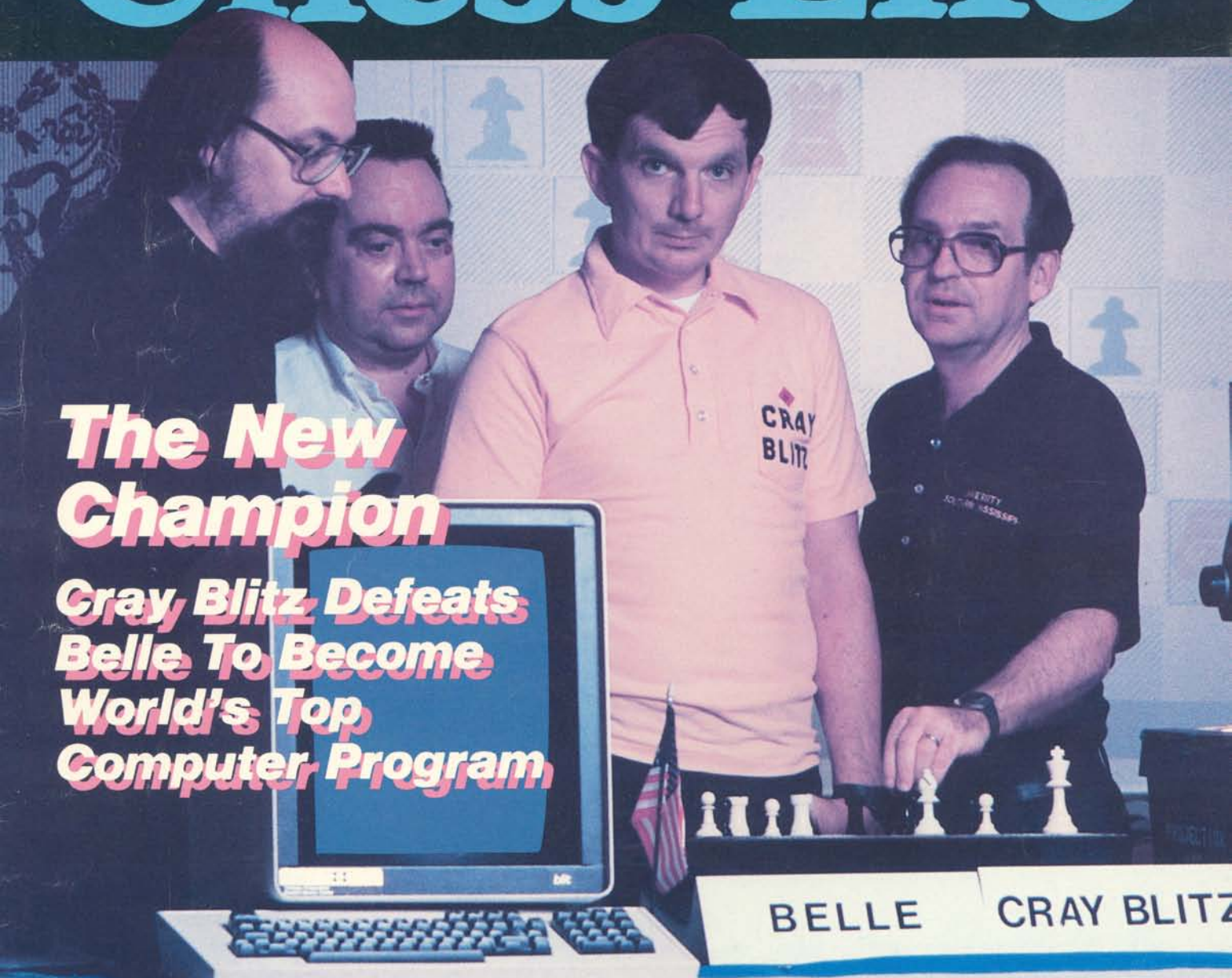


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Chess Life

The New Champion

Cray Blitz Defeats
Belle To Become
World's Top
Computer Program



THE NEW CHAMPION

BY HAROLD BOGNER

The Sheraton Centre was jumping. Runners and revellers from the New York Marathon filled the huge second-floor ballroom, and the din carried into the chess tournament hall. Inside, play continued undisturbed, and international master Michael Valvo openly discussed the 11 games in progress with the throng of spectators, not worried about the players overhearing his advice.

Why? The "players" lacked the ability to hear — they were all computers.

Gathered from eight countries, they were vying for the fourth World Computer Championship. Some, such as the microprocessor-based program by IM David Levy, had been physically transported to the hotel, while others were represented only by a telephone line and a small terminal, linked to some of the world's most advanced machines.

Computer chess has come a long way since March 9, 1949, when Claude Shannon presented a paper entitled "Programming a Digital Computer for Playing Chess." More than three decades later, the defending champion had just established itself as the first certifiable master-level program. In the previous few months, Belle, of Bell Laboratories in New Jersey, had tied for top expert in the U.S. Open and shared first place in the New Jersey Open Championship, scoring well against frequent master competition (as described in the U.S. Open articles in *October's Chess Life*) and finally clearing the magic 2200 barrier.

Two other programs also appeared to be near the master level: Cray Blitz, of the University of Southern Mississippi, which had taken first in its state championship in 1982; and Northwestern University's Nuchess, a descendant of the second World computer champion, Chess 4.6. At speed chess, these programs are monsters, holding up well against 2400-players, and winning some games from IMs.

The giant mainframe computer programs do not represent the only area of progress. A micro program by Novag's David Kittinger won a game from a master at last summer's U.S. Open, and the programs of Fidelity Electronics' Dan and Kathe Spracklen are assaulting the 2000 mark. Fully one-third of this year's entries were running on tiny microprocessors.

Work on these and other experimental chess programs is expected to continue making great progress, and the attendees at this event included two honored guests whose mere presence, let alone participation,

should be sufficient evidence of the field's potential. Former world champion Dr. Mikhail Botvinnik came to the United States for the first time in his life at the invitation of the organizers, both to watch and to discuss. He had also attended the second championship in Toronto in 1977, and vowed to return next time "as a competitor." While he is no longer guaranteeing that his former throne will soon be occupied by a machine (as he did 15 years ago), he is currently working to develop an "artificial grandmaster."

On the other hand, Dr. Hans Berliner, who has held the world correspondence championship, came to play. Although his Patsoc 2.0 (for "plays a terrible sort of chess") managed only 1½-3½, a backgammon program that he wrote defeated the world (human) champion in Monte Carlo in 1981. He gives himself until 1990 to produce the same result at chess.

The tournament was set up as a five-round swiss-system, one more round than in previous events, to make possible a clear winner from among the 22 programs. The games were played in the evenings and on Sunday afternoon, times when computers would be available more readily than during business hours. Some of the programs had as much computer time as they needed; others labored under four- or six-hour "curfews" that left the result up to the judgment of commentator and chief official Mike Valvo. Occasionally, a machine would "crash" or a phone line would get disconnected, so each team (computer and its programmers) was allowed 30 minutes each game when the clock could be stopped for such equipment problems. These brief "time-outs" featured frantic consultation, phone calling, and reprogramming by the operators, while the opposing team would wait, wondering if it might win on time. Fortunately, this never happened, though there were a few close calls.

ROUND ONE

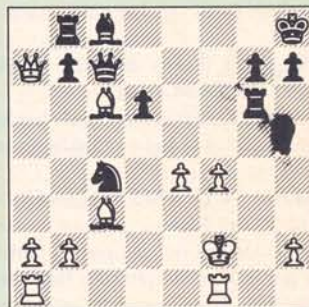
The programs were seeded according to past results, to avoid early meetings by any of the favorites. The main contenders were considered to be Belle, Cray Blitz, and Nuchess, with Chaos (University of Michigan) and Bebe, a specially built "chess engine," expected to be close. The first three all won rather easily. Belle trapped a piece on move six against the Canadian program Phoenix, while Cray Blitz lasted through British BCP's opening gambit (the latter "woke up" after playing a book variation to find itself a pawn down, but had no idea how to carry out its attack). And Nuchess won in 34 moves from Levy's Philidor.

However, Chaos was held to a quiet draw on the Black side of a Queen's Indian Defense by German Schach 2.7, and Bebe was felled by Austrian program Merlin,

which magically won a pawn in an ending of Rook and double Knights. Advance 3.0 of England sprung 10. a4 against Floridian William Fink's Sfinks program's Marshall Gambit, so confusing the latter that it quickly gave up all its compensation and lost.

Fidelity's latest experimental version ground out a win against Dutch entry Pion, while Mephisto's latest micro notched a win on time on move 40 against its opposite number from Conchess, in a slightly better position. Conchess's team took the time forfeit very matter-of-factly — quite unlike a typical human opponent.

In the game between Awit (University of Alberta) and Ostrich (McGill University), the following amusing position was reached:



Awit's Bishop spent several moves on its precarious perch at a6, protected by the unusual influence of the Queen. Awit eventually realized its advantage. The two other games were quiet draws between Novag X (for "experimental") and West Germany entry Bobby, and Shy (Finland), and Patsoc 2.0.

ROUND TWO

As thousands of runners filtered into the hotel from the Marathon, Belle won a c3 Sicilian from Mephisto, Cray Blitz outsat Fidelity X (showing an excellent sense of humor, Fidelity Electronics President Sid Samole offered to sit in as operator in a hopeless endgame position, saying, "Here, I'll pull this out!"), and Merlin reached the following position as White against Nuchess:



Here, Merlin played 38. g4, and the programmers offered Nuchess a draw. Before Nuchess programmer David Slate could decide, TD Valvo said, "Wait a moment —

Harold Bogner, a prominent chess organizer in the Los Angeles area, is a member of USCF's computer chess committee.

only the program can offer a draw. Otherwise, I have to approve the offer."

Ken Thompson, Belle's programmer and one of the senior computer chess people, ran over, crying out, "No GM draws!" Soon, it was discovered that although a pawn up, Merlin had its Rook on a5 trapped. Play continued, and Merlin, probably wishing it were Houdini instead, lost quickly.

Advance 3.0 defeated Awit on the Black side of an English to round out the perfect scores. Moving up to 1½-½ were Chaos, which outlasted Shy's Budapest Defense, Schach 2.7, which won an even Queen-and-opposite-Bishop endgame against Novag when the latter lost its Bishop, and Patsoc 2.0. Patsoc was winning easily when Bobby overstepped on move 37, but Berliner seemed very relieved, revealing that his computer was having problems, and that he feared he would lose through a program failure.

One amusing situation occurred after Bebe had won its game against Philidor. Tony Scherzer, Bebe's designer, and his crew usually sit through "her" games with a bottle of wine, taking Bebe's word for what's happening in the game. Scherzer explained to Levy that he never gets to go over the games his machine plays with "anyone who knows much about chess." He wanted Levy to tell him how Levy's program could have played better!

ROUND THREE

The leaders met, with Nuchess handing Belle her first loss in a computer chess competition since Ken Thompson and Joe Condon designed the special hardware version over five years ago. Cray Blitz easily outplayed Advance 3.0 on the White side of a Najdorf Sicilian. The Nuchess-Belle game has been annotated by Grandmaster Larry Christiansen, who gives us a sharp, objective criticism of the pluses and minuses of the machines' play.

RUY LOPEZ

[C77]

W: Nuchess
B: Belle

Annotated by Larry Christiansen

1. e4 e5 2. Nf3 Nc6 3. Bb5 a6 4. Ba4 Nf6 5. d4 exd4 6. 0-0 Be7 7. e5 Ne4 8. Nxd4 0-0

Also possible is 8. ... Nxd4 9. Qxd4 Nc5 10. Qg4 Kf8, with roughly even chances. The premature development of White's Queen is balanced by the disturbed situation of Black's King.

9. Nf5 d5!

This equalizes easily.

10. exd6 Bxf5 11. dxe7 Nxe7 12. Be3 Nd5 13. Qf3 Nxe3 14. fxe3?

Anti-positional; 14. Qxe3 is correct, with perhaps a slight edge for Black after 14. ... Qh4. Now White's pawn structure is blemished and his development lags.

14. ... Bg6 15. Qf4 b5

Stronger is 15. ... Qe7. Why not leave the Bishop on a4 on its bad square?

16. Bb3 c5 17. c4

Not 17. c3, when 17. ... c4 18. Bc2 Nxc3!, wins.

17. ... Qf6

Black's large advantage in development would be retained by 17. ... b4 or 17. ... Qe7.

18. Qxf6 Nxf6 19. Rc1 b4 20. Nd2 Rfe8 21. Re1 Rad8 22. Nf1 Bd3?!

The positional 22. ... Nd7-e5 is the correct plan, followed by ... f6, and Bf7. With a firmly entrenched Knight on e5, Black would have a strategically won game.

23. Rad1 Ng4 24. Ba4!

The only move. Now White will activate his Knight on f1.

24. ... Rf8 25. Nd2 Ne5 26. Bb3 Rd6??

Black retains an advantage with 26. ... f6, in order to meet 27. Nf3 with ... Bxc4. Now Black is lost!

27. Nf3 Nxf3+ 28. gxf3 f5

Else White would entomb the Bishop with e3-e4. And White wins on 28. ... Rg6+ 29. Kf2 Bf5 30. Rd5.

29. Rd2 Re8! 30. Kf2 f4

Black succeeds in rescuing the poor Bishop. Now 31. e4 Rd4 is quite tenable. But the ensuing King-and-pawn ending is hopeless.

31. exf4 Rxe1 32. Kxe1 Rd4! 33. Kf2 Kf7 34. Ke3 Bxc4 35. Rxd4 cxd4+ 36. Kxd4 Bxb3 37. axb3 Kf6

White wins the race easily if he continues with either (I) 38. Kc4 Kf5 39. Kxb4 Kxf4 40. Ka5 Kxf3 41. Kxa6 g5 42. b4 g4 43. b5 Kg2 44. b6 Kxh2 45. b7 g3 46. b8=Q or (II) 38. Kc4 a5 39. Kb5 Kf5 40. Kxa5 Kxf4, with a similar conclusion.

38. Ke4? g6 39. h4??

White should play 39. Kd4 Kf5 40. Kc4 Kxf4 41. Kxb4 Kxf3 42. Ka5 g5 43. Kxa6 g4 44. b4 h5! 45. b5 h4 46. b6 g3 47. hxg3 hxg3 48. b7. g2 49. b8=Q g1=Q, with a problematical Queen ending.

39. ... Ke6

Safer is 39. ... h6!, to meet 40. f5 with ... 40. g5, with prospects for a draw.

40. f5+ gxf5 41. Kd4 Kd6 42. f4 Ke6??

A simple draw would be 42. ... a5. No progress is possible after 43. h5 h6 44. Kc4 Kc6.

43. Kc5 a5 44. h5 Kf7 45. Kd5! Kf6

Or 45. ... Kg7 46. Ke6 Kh6 47. Kxf5 Kxh5 48. Ke6, and White Queens first.



Tournament director Mike Valvo (left), David Levy, and Hans Berliner

46. Kd6 Kf7 47. Ke5 Ke8 48. Kxf5, Black resigns

In the meantime, Chaos moved up to 2½-½ and sole possession of third with a win over Patsoc 2.0. Playing Black against Novag, Awit's computer failed repeatedly in a piece-up endgame, losing about an hour before finally coming back on line to finish the game.

ROUND 4

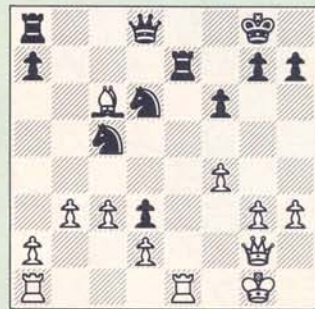
Nuchess and Cray Blitz slugged it out for the lead in a wild game, White giving up a piece for two pawns with 26. Nxc6. Nuchess picked up the d-pawn a while later, but didn't advance its pawns in a very useful manner. Both sides could probably have won at various points:

BIRD'S OPENING

[A03]

W: Nuchess
B: Cray Blitz

1. f4 d5 2. Nf3 Nf6 3. e3 Bg4 4. b3 Nbd7 5. Bb2 e6 6. Bd3 Bd6 7. h3 Bxf3 8. Qxf3 e5 9. Be2 0-0 10. 0-0 exf4 11. exf4 Re8 12. Nc3 c6 13. Qd3 Nc5 14. Qf3 d4 15. Nb1 Re4 16. g3 Qb6 17. Qf2 Na4 18. Ba3 Bxa3 19. Nxa3 Nc5 20. Bf3 Re7 21. Nc4 Qd8 22. Rfe1 Nfe4 23. Qg2 d3 24. c3 Nd6 25. Ne5 f6 26. Nxc6 bxc6 27. Bxc6



27. ... Ncb7 28. Qd5+ Rf7 29. Qf3 Kh8 30. Bd5 Rd7 31. Kg2 Rb8 32. b4 f5 33. Be6 Re7 34. Re5 Nf7 35. Re3 Nfd6 36. Bd5 Ne4 37. Rxd3 Rd7 38. c4 Nf6 39. Re1 Nxd5 40. Rxd5 Rxd5 41. Qxd5 Qxd5+ 42. cxd5 Nd6 43. Re6 Ne4 44. Re7 Ra8 45. d3 Nc3 46. d6 Nd5 47. Re5 Nf6 48. Rxf5 Rd8 49. Ra5 Rd7 50. d4 Ne4 51. Kf3 Nxd6 52. g4 Kg8 53. Rd5 Kf8 54. a4 Ke8 55. Rh5 h6 56. Rc5 Re7 57. d5 Ne4 58. Rc6 Kd8 59. d6 Nd2+ 60. Kf2 Re4 61. Rc7 Rxb4 62. Rng7 Rxa4 63. Rh7 Ne4+ 64. Kf3 Nxd6 65. Rxb6 Ke7 66. Rh7+ Ke6 67. f5+ Kd5 68. h4 Nc4 69. Rd7+ Kc5 70. Rg7 Ne5+ 71. Kg3 a5 72. h5 Kd6 73. h6 Ra3+ 74. Kg2 Ra2+ 75. Kg3 Ra3+ 76. Kg2 Ra2+ 77. Kg3 Ra3+, draw

Belle raised its score to 3-1, playing sharply, as Black, a computer version of an old opening favorite.

QUEEN'S GAMBIT DECLINED

[D35]

Exchange Variation

W: Chaos
B: Belle

1. d4 d5 2. c4 e6 3. Nc3 c6 4. cxd5 exd5 5. Nf3 Bd6 6. e4 dxe4 7. Nxe4 Bb4+ 8.

Bd2 Bxd2 + 9. Qxd2 Ne7 10. Bc4 b5 11. Be2 a6 12. 0-0 0-0 13. Rfc1 Be6 14. Nfg5 Bf5 15. Ng3 Bg6 16. Rc3 Ra7 17. Rac1 Re8 18. Bf3 Rd7 19. Rd1 Nf5 20. Nxf5 Bxf5 21. g4 Be6 22. Nxe6 Rxe6 23. Re3 Rxe3 24. fxe3 c5 25. Qc3 cxd4 26. exd4 Rc7 27. Qa5 Qc8 28. d5 Rc2 29. b4 Nd7 30. d6 Qc3 31. Qd8+ Nf8 32. Qa8 Qe3 + 33. Kh1 Qf4 34. Bg2 Qxg4



35. Rf1 Qe6 36. Qxa6 Rxa2 37. Qb7 Rd2 38. Bh3 Qc4 39. Qe7 Qc6 + 40. Kg1 f6 41. d7 Qb6 + 42. Kh1 Qb8 43. Bg2 Rxd7 44. Qe2 Rd4 45. Qa2 + Kh8 46. Qb3 Qd6 47. Rb1 f5 48. Qf3 f4 49. Qb3 Rd3 50. Qc2 f3 51. Bxf3, and White resigns

With Bebe defeating Fidelity, Advance 3.0 winning over Mephisto, and Awit downing Patsoc 2.0, the final round would be Belle (3) — Cray Blitz (3½) Bebe (3) — Nuchess (3½)

ROUND 5

Belle and Cray Blitz played this long and involved game.

SICILIAN DEFENSE

[B22]

2. c3 variation

W: Belle

B: Cray Blitz

Annotated by Larry Christiansen

1. e4 c5 2. c3 d5 3. exd5 Qxd5 4. Nf3 e6



International Computer Chess Association officials Ben Mittman (left) and Monroe Newborn flank former world champion Mikhail Botvinnik.

FOURTH WORLD COMPUTER CHESS CHAMPIONSHIP

New York, New York • October 22-26, 1983

PLAYER	RATING	PERFORMANCE	1	2	3	4	5	POINTS
1. Cray Blitz		2418	W16	W10	W8	D4	W6	4½
2. Bebe	1900	2072	L11	W18	W7	W10	W4	4
3. Awit		1854	W14	L8	W12	W17	W13	4
4. Nuchess	2150	2192	W18	W11	W6	D1	L2	3½
5. Chaos	1850	1957	D7	W21	W17	L6	W8	3½
6. Belle	2203	2087	W13	W9	L4	W5	L1	3
7. Schach 2.7		1860	D5	W12	L2	W11	D10	3
8. Advance 3.0		1920	W22	W3	L1	W9	L5	3
9. Mephisto X		1712	W19	L6	W15	L8	W14	3
10. Fidelity X	1850	1775	W15	L1	W19	L2	D7	2½
11. Merlin		1791	W2	L4	D13	L7	W17	2½
12. Novag X		1419	D20	L7	L3	W21	W16	2½
13. Phoenix		1652	L6	W22	D11	W20	L3	2½
14. Ostrich		1348	L3	L15	W18	W19	L9	2
15. Pion		1349	L10	W14	L9	L16	W20	2
16. BCP		1291	L1	L19	W22	W15	L12	2
17. Patsoc 2.0		1291	D21	W20	L5	L3	L11	1½
18. Philidor X		1196	L4	L2	L14	W22	D19	1½
19. Conchess X		1247	L9	W16	L10	L14	D18	1½
20. Bobby		1186	D12	L17	W21	L13	L15	1½
21. Shy		1118	D17	L5	L20	L12	W22	1½
22. Sfinks X	1000	776	L8	L13	L16	L18	L21	0

5. d4 Nf6 6. Bd3

Also popular is 6. Be2, to discourage a future ... Qh5.

6. ... Nc6 7. 0-0 Be7 8. Be3 0-0!

Correct is 8. ... cxd4 9. cxd4 Bd7 10. Nc3 Qd6, with a very solid position.

9. dxc5! Rd8

Of course, 9. ... Bxc5 10. Bxh7+ leads to the loss of a pawn.

10. Nd4

Simply 10. Be2 Qf5 11. Nbd2 Bxc5 12. Bxc5 Qxc5 13. Qc2 leads to a comfortable edge for White. This strange move creates dangerous possibilities on the d-line and costs time.

10. ... Bxc5

I would prefer something like 10. ... Ne5 11. Be2 Nc4 12. Bxc4 Qxc4 Nbd2 Qd5, with active play for the pawn.

11. c4! Qd6 12. Nxc6 bxc6

Black loses the Exchange with 12. ... Qxc6? 13. Bxc5 Qxc5 14. Bxh7+

13. Bxc5 Qxd3 14. Qa4?!

It would seem clearer with 14. Na3, with a slight positional advantage. But 14. Nc3?! Ba6 loses a pawn.

14. ... Ne4! 15. Bb6! Rd7 16. Ba5?

A time-waster that misplaces the Bishop to boot. Right is 16. Na3, when 16. ... Nd2 17. Rfd1 is harmless, and 16. ... Rb8 17. Rad1 rebounds to White's favor.

16. ... Bb7 17. Nc3 Nc5

Probably better is 17. ... Nxc3 18. Bxc3 c5 19. Rad1 Qg6 20. f3 Rxd1 21. Qxd1 Qg5, with only a minute edge for White.

18. Qb4 Qd4 19. Rad1?

Better is 19. Ne2!

19. ... Nd3 20. Qa4

The Queenside is not a happy hunting ground.

20. ... Qg4

Here 20. ... c5! seems very strong as well, activating the Bishop. Also, 20. ... e5, to support the advanced Knight with ... e5-e4, is ok.

21. c5

Keeping the Bishop at b7 locked up, but exposing another weakness.

21. ... Qf5 22. b4?

The losing move. White must play 22. Qe4, giving up a pawn to stop Black's threats. Then 22. ... Qxc5 23. Rxd3 Rxd3 24. Qxd3 Qxa5 25. Qd7 gives White just enough play for the pawn.

22. ... Nb2 23. Rxd7 Nxa4 24. Nxa4 Qc2! 25. Rxb7 Qxa4

The unfortunate position of White's Bishop makes the game hopeless.

26. Ra1 e5! 27. f3 Qc2 28. Rc7 Qd3 29. Rf1 Qd5 30. a3 g5

Black's technique is rather bizarre; 30. ... a6, followed by ... f6, ... Re8, ... e5-e4, should win very easily.

31. Re7 f6 32. Rc7 h5 33. h3 Kh8 34. Kh2 a6 35. Re1 Re8 36. Re4

Better chances are offered by 36. a4, in order to play b4-b5 at some point.

36. ... f5 37. Re2 g4 38. hxg4 fvg4 39. fvg4 hxg4 40. Rf2 e4 41. Rff7 Qe5 +! 42. g3 e3 43. Rh7 + Kg8 44. b5 cxb5 45. Be1 Qb2 + 46. Kg1 Qa1 47. Kg2 Qf6! 48. Kh2

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PHOTOGRAPH BY JULIAN ADLER

WORLD COMPUTER

CONTINUED FROM 34

Rd8 49. Rhd7 Rf8

Black can win quickly with 49. ... Rxd7 50. Rxd7 Qf1, but "he" (?) prefers mate.

50. Rd6 Qb2+ 51. Kg1 Qb1 52. Kh2 Qc2+ 53. Kg1 Qf5!, White resigns

However, before that game was very far along, it became clear that Bebe was going to upset Nuchess. After a very drawish opening, Nuchess blundered with 16. ... Kh6?, whereas 16. ... f6 maintains equality. The game was soon hopelessly lost.

PETROFF'S DEFENSE

[C43]

W: Bebe

B: Nuchess

1. e4 e5 2. Nf3 Nf6 3. d4 Nxe4 4. Bd3 d5 5. Nxe5 Bd6 6. 0-0 0-0 7. Bxe4 dxe4 8. Nc3 Qe7 9. Qh5 g6 10. Qe2 Bxe5 11. dxe5 Qxe5 12. Qxe4 Qxe4 13. Nxe4 Bf5 14. Re1 Kg7 15. Bf4 Na6 16. Be5+



16. ...Kh6 17. Re2 Rac8 18. Nf6 Re6 19. g4 Bxc2 20. g5+ Kg7 21. Nd7+ Rxe5 22. Nxe5 Bf5 23. Rac1 Nb4 24. a3 Nd5 25. Rd2 c6 26. Nc4 f6 27. Nd6 fxe5 28. Nxb7 Bg4 29. b3 h5 30. Na5 Bd7 31. Nc4 Bc8 32. b4 Bb7 33. Na5 Ba8 34. Rc2 Rf3 35. Re8 Nb6 36. Nc4 Rf8 37. Rxf8 Kxf8 38. Ne5 Kg7 39. Nxc6 a6 40. Nb8 a5 41. Rc7+ Kh6 42. bxa5 Na4 43. Nd7 Bf3 44. a6 g4 45. a7 Kg5 46. Rc8 Kh6 47. Ne5 Bd5 48. Rd8 Bb7 49. Nf7+ Kg7 50. Nd6 Bf3 51. Rd7+ Kg8 52. Nc4 Bc6 53. Ne5 Be4 54. Rd4 Nb6 55. Rxe4 Na8 56. Rc4 Kg7 57. Rc8 Nb6 58. Rb8 Na8 59. Rxa8 Kf6 60. Re8 Kg5 61. a8=Q Kf5 62. Qa6 Kg5 63. Qxg6+ Kh4 64. Nxe4 hxg4 65. Rh8 mate

With that result obvious, Cray Blitz's programming team of Robert Hyatt, Bert Gower (both from the University of Southern Mississippi), and Harry Nelson (of Lawrence Livermore Laboratories) found themselves presiding over another portion of this year's breakup of AT&T — Cray Blitz was winning! Being humans, they became exceedingly nervous as they got closer to clinching the world championship. They even went off to call Cray Research in Minnesota, the site of their computer, to have a backup computer available in case of any machine failure.

Finally, after much worry, it was over.

At the awards luncheon, a fourth world computer champion was crowned. International Computer Chess Association Presi-

dent Monroe Newborn presented the programming team with a beautiful piece of Steuben glass, and Dr. Botvinnik presented a gift to the victors — two Soviet Georgian drinking horns. (He explained that in Georgia, drinks are consumed in their entirety before they are put back down — hence the use of the horn instead of a glass.)

Although he did not retain Belle's title, Ken Thompson was presented the 1983 Tur-



PHOTOGRAPH BY JULIAN ADLER

Belle programmer Ken Thompson

ing Award and Software System Award for his outstanding accomplishments in the field of computer science, including the development of the UNIX Operating System and the programming language C.

The championship was sponsored by the Association for Computing Machinery, which holds the North American Computer Chess Championship at its conference each year. Assistance was provided by Texas Instruments, Control Data Corporation, SciSys, Hayden Software, Fidelity Electronics, Ralph Wagner, Myron Szold, and the Baruch College Chess Club. Mike Valvo did his usual outstanding job as commentator (spelled occasionally by Boris Baczynskyj and Danny Kopec) and as tournament director (with assistance from Harold Bogner). Outgoing ICCA President Ben Mittman led the organization. ♣

IMPROVE YOUR CHESS

CONTINUED FROM 40

gerous initiative as compensation. Joe returned the piece, bringing about a Rook-and-pawn ending that the computer misplayed badly and lost.

Before the next game, Joe thought about the computer's strengths and weaknesses and cooked up the following opening experiment.

HYPER HEDGEHOG

W: Sensory Challenger 9

Level 5, 2 minutes per move

B: Joseph Donath

20 years out of practice

1. d4 b6 2. e4 c6

Joe wants to see what the computer will do when given a free hand in the center.

3. Bf4

All things being equal, most computer chess programs will chose the most mobile move. Here the Bishop attacks 11 squares (not including the one it is on), while 3. Bc4 would attack 10.

3. ... d6 4. Nc3 e6 5. Nf3

Taken out of its opening library early, the Challenger 9 continues to play classically. For beginners, this is instructive. The computer develops Knights to c3 and f3, and brings its Bishops out to c4 and f4 or b5 and g5. If it continues this classical development, it will castle early, link up its Rooks, and then look to develop some plan based on expanding its space in the center or the wings.

This general plan of opening playing will serve beginners well. But, of course, there's more. Good development is fine, but good development *with a plan in mind* is essential. The computer lacks the ability to formulate long-range plans, and that's what leads to its downfall — and to the downfall of many beginners as well.

5. ... Be7

Joe finally develops a piece, and he even has a "Basmanian" attacking idea with ... g7-g5. (Michael Basman, an international master from England, regularly plays 1. ... g5 in international competition, but Joe didn't know this.)

6. Bc4 g5 7. Bc3 g4 8. Nd2 d5 9. Bd3 f5

Joe would like to see how Challenger 9 will respond to this "naive" aggression. A human 1770 player, recognizing that these unrestrained Kingside pawn advances have weakened Black's position, would play 10. exf5 exf5 11. Ne2, with the plan of blocking the position and infiltrating via the dark squares.

10. exf5 exf5 11. 0-0?! Bd6!

Moving his only developed piece again, but a good move for its "psychological effect" — that is, Black will learn more about his opponent.

12. f3??

This highly weakening move on the Kingside allows Black to get away with his opening experiment. Instead, 12. Ne2 is still indicated.

12. ... Qh4

After 12. ... f4!?, the computer is unlikely to consider the piece sacrifice 13. fxe4!?. Also worth considering is 12. ... Bxh2+.

For the purpose of this article, our opening experiment ends here. Black went on to win the game.

Of course, you should never play this way against a human opponent. Black got away with his experiment because he understood the peculiarities of his machine. The point to be learned here is that routinely following the rules of good opening play won't automatically win any games for you, although they are a good foundation to build upon.

There are differences between quantitative and qualitative development. That is, it's not important how many pieces you have developed, but how you have developed them. ♣