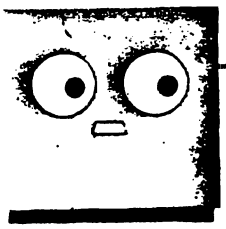
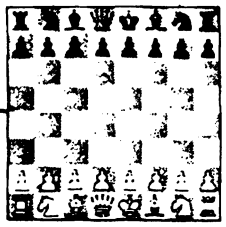


INTERNATIONAL COMPUTER CHESS ASSOCIATION
(ICCA)



ICCA Newsletter

Vol. 3 No. 1
July 1980

Editor: B. Mittman
Editorial Asst.: J. Cesal
Northwestern University

EDITORIAL

ICCA has continued to grow over the past six months. There are currently 325 members. In order to improve membership service, Ken Thompson of Bell Labs has taken over all membership activities. Inquiries about membership and change of address notices should be sent to:

ICCA
c/o Ken Thompson
Bell Telephone Labs
Room 2C423
Murray Hill, New Jersey 07974
USA

The major ICCA activity this year will be the 3rd World Computer Chess Championship to be held in Linz, Austria from September 25 to September 29, 1980. Details about the tournament are found later in this Newsletter. Another essential activity this year is the formalization of the organization. In the December 1979 issue of the Newsletter, the draft Constitution and Bylaws were published for comment. To date, no comments have been received from the membership; therefore, a mail ballot is included in this mailing to approve the Constitution and Bylaws. Several items which were raised as questions at the ICCA meeting in Detroit have been resolved by the Bylaws Committee. Included with the ballot is a copy of the proposed Constitution and Bylaws. Ballots should be returned no later than September 1, 1980.

One final step to complete the organization of ICCA is the election of officers. According to the Bylaws, elections are to be held at each Triennial Meeting. The first Triennial Meeting is scheduled at the 3rd World Computer Chess Championship in September in Linz. A slate of officers has been proposed and three petitions for President, Vice President, and Secretary-Treasurer, with the requisite number of signatures, were received on June 20, 1980. The nominees have agreed to serve as the initial set of officers, if elected. They are:

President:	Benjamin Mittman Northwestern Univ. Evanston, Illinois USA
Vice President:	Monroe Newborn McGill University Montreal, Quebec Canada
Secretary-Treasurer:	Kenneth Thompson Bell Telephone Labs Murray Hill, NJ USA

EDITORIAL (cont'd)

Since the date of the Triennial Meeting was not known in December, when the draft Constitution and Bylaws were published, the ICCA organizers have decided that nominations for candidates for these offices will be left open until August 31, 1980. In this way, other members who might want to serve can have nominating petitions submitted. On September 1, 1980, a final slate of nominees will be mailed to all ICCA members, along with final information about the Linz Tournament and the Triennial Meeting.

Other items included in this issue of the ICCA Newsletter are the announcement of the $100,000 Fredkin prize for the first computer program to win the world chess championship, the results of the entry of a four-program team called "Future-Schach" in the 1980 United States Amateur Team Championship, and a call for papers of the third "Advances in Computer Chess" conference to be held in London next April.

We hope that many of our members can attend the Linz tournament and the Triennial Meeting. We look forward to this exciting international event in a lovely town in Austria. See you there!

B. Mittman
Editor

ICCA FINANCIAL STATEMENT

Included with this Newsletter is the ICCA financial statement dated July 3, 1980. The balance in the treasury on that date was $2,305.97.

TOURNAMENT NOTICES

Come to Linz in September

The International Computer Chess Association is pleased to announce that the 3rd World Computer Chess Championship will be held in the Brucknerhaus in Linz, Austria on September 25-29, 1980, as one of the special events during the annual Bruckner Festival. The Festival runs from September 6 through the 30th in Linz. Sponsored by the Linz Office of Special Events and sanctioned by FIDE, the tournament will be a four-round Swiss-style competition. The rounds will be played at 10:00 A.M. from Thursday, September 25, through Sunday, September 28. Exhibitions, speed matches, and play against the public will be featured on Monday, September 29. The Triennial Meeting of the ICCA will also be held on Monday, September 29.

Sixteen of the best chess programs in the world, some running on microcomputers, are expected to participate, and a most exciting tournament is anticipated. The current World and North American Champion, CHESS 4.9 of Northwestern University, will return to defend its title. Also expected to participate are the former World Champion, KAISSA, from the Moscow Institute of System Studies, and MASTER, the current European champion. Entries have been received from Austria, France, Canada, Germany, Great Britain, Sweden, the U.S., and the USSR. The final selection of participants will be announced on August 1.

The tournament is being organized by Mr. David Levy, International Master, London, England; Prof. Monroe Newborn of McGill University, Montreal, Canada; and Prof. Benjamin Mittman of Northwestern University, Evanston, Illinois, USA. David Levy will serve as Tournament Director.

Press relations for the event are being handled in Europe by Mr. Frederic Friedel, Hauptstrasse 28B, 2114 Hollenstedt, West Germany; telephone: (041) 658-566.

TOURNAMENT NOTICES (cont'd)

The Eleventh ACM's North American Computer Chess Championship, Nashville, Tennessee, October 26-28, 1980

The 1980 Annual Meeting of the ACM will be the site of the Eleventh ACM's North American Computer Chess Championship. The four-round Swiss-style tournament, with participants restricted to computers, is scheduled to take place on October 26 to the 28th at the Opryland Hotel in Nashville, Tennessee. Two rounds will be played on Sunday, October 26 (1:00 P.M. and 7:30 P.M.), one on Monday, October 27 (7:30 P.M.), and the last round on Tuesday, October 28 (7:30 P.M.). All of the best chess programs in North America are expected to participate, and a most exciting tournament is anticipated.

The Tournament Organizing Committee consists of Robert Hyatt of the University of Southern Mississippi, Monroe Newborn of McGill University, and Benjamin Mittman of Northwestern University. David Levy, International Chess Master, will serve as Tournament Director. Individuals interested in participating should write to Prof. M. M. Newborn, School of Computer Science, McGill University, Montreal, Quebec H3A 2K6, Canada. A maximum of twelve teams will participate. The deadline for entries is September 8, 1980.

Programs are selected by the Tournament Entries Committee. The Committee, consisting of M. Newborn, B. Mittman, and D. Levy, will accept the 12 programs which, in their opinion, are the strongest. They will place on "standby" as many as three others. The standbys will be ordered by their apparent strength. If one or more of the originally accepted teams withdraws, the standbys will be called upon to participate. The strongest standby will be called first, the second next, and the third last. Every effort will be made to maintain exactly 12 participating programs.

An entry will be refused if someone from the team is not able to be present at the tournament. Participants are responsible for all computer arrangements and costs. The cost of communicating to remote computers during the tournament will be paid for by the ACM.

The strength of an entry will be determined by the information provided on the entry form to the Committee. For entries which have not participated in ACM tournaments or other major tournaments, evidence of the program's level of play must be clearly provided. A minimum of two sample games are required, preferably under tournament conditions. Move timing information should be indicated as well as the level of the opposition.

Entries to the ACM's tournament must be received no later than September 8, 1980. The Committee will decide the composition of the field no later than September 15, 1980.

NEWS AND NOTICES

Recent Publications

We have received reprints and copies of several publications which are of interest to our members:

- Prof. Donald Michie of the University of Edinburgh sent us reprints of two articles which appear in Advances in Computer Chess 2, edited by M. R. B. Clarke, Edinburgh University Press, 1980:

  "How Hard is the Play of the King-Rook-King-Knight Ending?" by D. Kopec and T. Niblett

  "A Representation for Pattern Knowledge in Chess Endgames", by I. Bratko and D. Michie

- Dr. Johan Enroth of Vällingby, Sweden sent us copies of a new ICCA Swedish journal called PLY. The editor of PLY is Mr. Roald Berthelsen, Marknadsv. 75, 183 34 Täby, Sweden. (Ed. Note: ICCA/Sweden now has about 40 members!)

NEWS AND NOTICES (cont'd)

- Prof. Monroe Newborn sent us a reprint of his article entitled "Recent Progress in Computer Chess" which appears in Advances in Computers, Vol. No. 18, Academic Press, N.Y., 1979.

We would appreciate receiving reviews of articles or books on computer chess for publication in the ICCA Newsletter.

Comparing Chess Programs

Dr. W. W. Foster writes that he has begun a project to compare chess computers by using the first six problems in Reinfeld's 1001 Brilliant Ways to Checkmate (1979 Edition, Wilshire Book Company, Hollywood, California). He sent us an article which is to be published in Chessman Magazine with results of the "Foster" Test for Boris, Challenger-7, Sargon-2.5, Duchess, and Belle. He concluded:

> "Duchess solved problems 1, 2, 3, 4 and 6 in less than one second each! Also, Duchess found the unusual Move 2....Kd7 for Black in problem 5 which was not considered by Reinfeld and which delays mate for several moves!
>
> Similarly, Belle solved them all in about the same time and also in problem 5 discovered the "cook" 2....Kd7 for Black.
>
> Clearly, Challenger-7 was stronger than Boris, but Sargon-2.5 was significantly stronger than the "7"...
>
> Any readers who own or have access to any chess computers are invited to present Reinfeld's problems to their machine and to communicate the results or any other pertinent information or inquiries to me:
>
> Dr. W. W. Foster
> 3617 Lubbock Drive
> Raleigh, N. C. 27612
>
> for a follow-up article."

KAISSA Receives "Second Category" in Soviet Chess

We received a letter from Dr. M. V. Donskoy of the Institute for System Studies in Moscow, one of the authors of KAISSA. Dr. Donskoy writes:

> "I wish to inform you that KAISSA has just received the Second category in Soviet chess after playing successfully in the human chess tournament organized by the Moscow Central Pioneer Palace's Chess Club. The time limit was one and a half hours for forty moves. The players were boys from eight to thirteen who are seriously involved in chess. Some of them will be grandmasters."

Dr. Donskoy also sent us copies of the game scores. (Ed. Note: "Second Category" in the Soviet classification system is roughly equivalent to a "B" rating in the U. S. Chess Federation system.)

Computer Chess Conference

The following Call for Papers was received from M. R. B. Clarke of Queen Mary College, London:

A two-day meeting on computer chess (the third in the "Advances in Computer Chess" series) will be held in London next Easter. Probable dates: 9th and 10th of April 1981.

Papers reporting new progress on any topic within computer chess are invited, including: chess hardware, search algorithm theory, chess knowledge systems, chess reasoning systems, conventional Shannon-style programs, special purpose end-game or problem-solving programs.

Contact: Mr. M. R. B. Clarke
Dept. of Computer Science
and Statistics
Queen Mary College
Mile End Road
London E1 4NS, England

Othello* Tournament

Several members of the ICCA participated in the First International Man-Machine Othello Tournament held at Northwestern University on June 19, 1980. The round-robin tournament matched the current world champion Hiroshi Inoue of Japan and the current U. S. champion Jonathan Cerf against six computer programs running on microcomputers located at the site and on larger computers over telephone lines. The outcome showed surprising strength by the machines. Inoue was defeated by David Levy's program and Cerf was defeated by the Spracklens' program. The results of the tournament follow:

		W-L-T
1.	Hiroshi Inoue	6-1-0
2.	Dan & Kathy Spracklen San Diego, California APPLE microcomputer	5-1-1
3.	Jonathan Cerf	5-2-0
4.	Peter Frey Northwestern University Radio Shack TRS-80 microcomputer	4-3-0
5.	David Levy, Michael Reeve, and Michael Stean London, England IBM 370/168	3-4-0
6.	Paul Rosenbloom and Hans Berliner Carnegie-Mellon University DEC-10	2-4-1
7.	Peter Nachtwey U. S. Navy, Newfoundland S-100 microcomputer	1-6-0
8.	Tom Truscott and Dennis Rockwell Duke University DEC 11/70	0-7-0

Further information can be obtained from Prof. Peter Frey, the tournament organizer, Dept. of Psychology, Northwestern University, Evanston, Illinois 60201, USA.

*Othello is a trademark of Gabriel Industries.

$100,000 Prize Established

The following release was received from the Carnegie-Mellon University News Service. Additional details about this year's competitions were provided by Dr. Hans Berliner of Carnegie-Mellon.

Carnegie-Mellon University, Pittsburgh, Pennsylvania, has announced the establishment of a $100,000 prize for the first computer program to become World Chess Champion and the beginning of annual computer-versus-human competition. The prize, called the Fredkin Prize, has been established by the Fredkin Foundation of Cambridge, Massachusetts.

The competition will be monitored by the International Joint Conference on Artificial Intelligence (IJCAI) of Menlo Park, California. The IJCAI is a non-profit technical organization devoted to the advancement of the science of computer program construction with the end result of achieving intelligent action by computers. CMU will act as a trustee for the prize until it is awarded.

Dr. Hans Berliner of the CMU Computer Science Department, himself a former World Correspondence Chess Champion and author of the computer backgammon program that last year defeated the World Backgammon Champion in Monte Carlo, has been selected to head a committee that will formulate the precise rules under which the competition will be held. "We want to ensure that any human competitor who is playing against a computer can have the right to place a qualified observer at some point to guarantee that the computer is actually making the moves and not a group of consulting chess experts at the end of the wire," he explains.

There is no chance that a computer will become World Chess Champion in the next five years, Berliner believes. "It will take more than five years and probably

much longer," he says. "By 1990, I think there is a 50-50 chance that it will happen. From that point the odds will gradually get better and twenty years from now it is almost a certainty."

Winning the championship is a long process that takes four years for a human, and the computer likewise will have to work its way up the ladder in tournament play. "Even getting to the first rung of that ladder is three or four years away," Berliner continues, "but I think a computer will be playing in the U. S. Invitational Championship within the next five years."

In the interim, a set of incentive prizes will be offered each year for computer-versus-human competition. "Two human players of a specified skill level will be selected randomly from among chess players at that level," Berliner explains. "These players will engage the best and second best computer programs as determined by that year's competition. Each contest will consist of a pair of games with the players, human or machine, with the best score in the two games receiving the prize. In case of a tie, the prize money will be split evenly."

In each succeeding year, the skill level of the human players will be increased as will the amount of the prize. The first competition will be held during a conference sponsored by the newly organized American Association for Artificial Intelligence in Palo Alto, California on August 18th and 19th. Northwestern University's CHESS 4.9 will compete against a still-to-be-named player with an expert rating. The prize at this competition will be $1,500. A second competition is planned for November at Carnegie-Mellon University matching BELLE of Bell Labs against another expert-rated player for $1,000 in prize money.

The first major progress in computer chess dates back to 1965, when Richard Greenblatt of MIT developed a program which became the first ever to win a game against a tournament level player. Within a year, Greenblatt had improved the program to a point where it was able to achieve a rating of Class C in human competition. The best program available today is one at Northwestern University which plays at low expert level.

Dr. Berliner has also set up a committee consisting of Dr. Max Euwe, David Slate, and Hans Berliner to develop a system whereby computer chess programs could enter the normal FIDE competitive channels to move toward a challenge for the world chess championship. Progress on these efforts will be reported in future ICCA Newsletters.

ICCA/Sweden Runs a Microchess Tournament

A three-round microchess tournament was held in December 1979 in Stockholm, sponsored by ICCA/Sweden. The Swedish ICCA Newsletter PLY (1/1980) reported all of the game scores. Ten chess computers competed, with the Voice Challenger coming in first, Challenger 7 second, and Challenger 10 third. The other computers were Compu Chess I, Sargon, Boris Diplomat, Compu Chess II, Boris Master, and Chess Champion MK II. More information can be obtained from:

Johan Enroth
Box 96
162 12 Vällingby, Sweden

National ICCA Reports Needed

ICCA has begun to develop active national groups. We would appreciate receiving short periodic reports from ICCA groups all over the world. The next Newsletter will be published shortly after the Linz tournament. Therefore, we would like these reports to be sent to the Editor by October 1, 1980: Editor, ICCA Newsletter, Northwestern University, Vogelback Computing Center, Evanston, Illinois 60201, USA.

United States Amateur Team Championship

Somerset, New Jersey
February 16-18, 1980

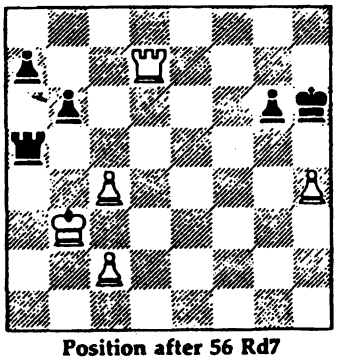
Introduction

The U. S. Team competition is a yearly phenomenon where teams of four (with possibly one alternate) compete in a six round swiss tournament. This year, the team *Future Schach*, composed of four computers entered. Boards are assigned according to USCF rating. The team members were 1. Chess 4.9 (2040) 2. Duchess (1849/11) 3. Belle (1747) 4. Chaos (unr) and Sargon (unr) served as standby alternate in case any of the regular computers could not make a game.

The tournament site only had one phone. To get all four computers running, an exquisitely complicated micro-processor CRT-display relay was set up at Bell Labs. Each move was delivered to the Labs and there entered in the micro-processor. The move was then relayed and displayed at the tournament. At the tournament the move was executed on the playing board and the clock punched. Moves by the opponent were sent back to the computers in a similar way. The total round trip delay was about twenty seconds.

Round 1

Chess 4.9 — Larry Miller (1740) 1 e4 e5 2 Nf3 Nf6 3 d4 e×d4 4 e5 Ne4 5 Q×d4 d5 6 e×d6 N×d6 7 Bd3 Nc6 8 Qf4 Be7 9 O-O O-O 10 Nc3 Be6 11 Be3 h6 12 Qg3 Kh8 13 Nd4 N×d4 14 B×d4 Bf6 15 Bc5 B×c3 16 b×c3 b6 17 Bd4 Qg5 18 Q×g5 h×g5 19 Rfe1 Rfe8 20 Be3 f6 21 Bg6 Bf7 22 B×f7 N×f7 23 Rad1 Rad8 24 R×d8 R×d8 25 f4 g×f4 26 B×f4 Rd7 27 h4 Nd6 28 Kh2 Kg8 29 Kg3 Kf7 30 Kf3 g6 31 Rd1 f5 32 g4 f×g4† 33 K×g4 Re7 34 B×d6 c×d6 35 R×d6 Re4† 36 Kg5 Re5† 37 Kf4 Ra5 38 Rd7† Kf6 39 Ke4 R×a2 40 Rd6† Kf7 41 Kd3 Ra5 42 c4 Kg7 43 Rc6 Kh6 44 Rc7 Kh5 45 Rh7† Kg4 46 Rg7 Kh5 47 Kc3 Kh6 48 Rf7 Kh5 49 Rh7† Kg4 50 Kb3 Kf4 51 Rd7 Ke5 52 Rc7 Kf5 53 Kc3 Kg4 54 Rg7 Kh5 55 Kb3 Kh6 56 Rd7



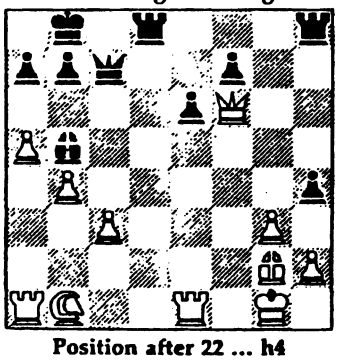
Position after 56 Rd7

56 ... g5 57 h×g5† K×g5 58 Rd5† R×d5 59 c×d5 Kf6 60 Kb4 Ke7 61 Kb5 Kd6 62 c4 a5 63 K×b6 a4 64 c5† K×d5 65 c6 a3 66 c7 ½-½

Richard Di Sciascio (1582) — Duchess 1 e4 e5 2 Nf3 Nc6 3 d4 e×d4 4 N×d4 Bc5 5 N×c6 Qf6 6 Qe2 Q×c6 7 Nc3 Nf6 8 Bg5 Bd4 9 Bd2 O-O 10 f3 d5 11 e×d5 N×d5 12 N×d5 Q×d5 13 c3 Bc5 14 Qe4 Q×e4† 15 f×e4 Re8 16 Bd3 Bf5 17 O-O-O B×e4 18 B×e4 R×e4 19 g3 Rae8 20 Bf4 c6 21 Rd7 b5 22 Rhd1 f5 23 Rc7 R4e6 24 h4 a5 25 a3 a4 26 Rdd7 Be7 27 Bg5 Bf8 28 Bf4 R8e7 29 R×e7 B×e7 30 Kd2 Bd6 31 B×d6 R×d6† 32 Ke3 g6 33 Kf4 Re6 (Somewhere here, Black declines a draw offer, even though he is in time trouble due to machine failures.) 34 h5 Kh8 35 h6 Re4† 36 Kg5 Kg8 37 Kf6 Re8 38 R×c6 Black lost on time. 1-0

Belle — Jamie Soto (1582) 1 e4 c5 2 c3 d6 3 d4 c×d4 4 c×d4 e6 5 Nc3 Nf6 6 Nf3 Be7 7 Bg5 h6 8 B×f6 B×f6 9 e5 d×e5 10 d×e5 Q×d1† 11 R×d1 Bd8 12 Bb5† Bd7 13 O-O a6 14 B×d7† N×d7 15 Ne4 Bc7 16 Rc1 B×e5 17 N×e5 N×e5 18 Nd6† Ke7 19 N×b7 Rac8 20 Nc5 Rc6 21 Rfe1 f6 22 Red1 Rhc8 23 b4 R8c7 24 Rc3 Nf7 25 Ra3 Ra7 26 Rdd3 Nd6 27 f4 Nc4 28 Rac3 Nb6 29 Rg3 Kf7 30 Rcd3 Nd5 31 f5 Nf4 32 f×e6† N×e6 33 N×e6 R×e6 34 h3 Rae7 35 Kh2 Rb7 36 Rd8 f5 37 a3 g5 38 Rgd3 f4 39 R3d5 Kg6 40 Ra8 Kh5 41 Ra5 Rbb6 42 Ra4 Red6 43 Ra5 Re6 44 Ra7 Red6 45 Re7 ½-½

James Kennedy (1330) — Chaos 1 Nf3 Nf6 2 g3 d5 3 Bg2 c5 4 b3 e6 5 O-O Nc6 6 Bb2 Bd7 7 d4 c×d4 8 N×d4 N×d4 9 B×d4 Qc7 10 B×f6 g×f6 11 e4 Bb5 12 Re1 d×e4 13 B×e4 Bb4 14 c3 Ba5 15 Qf3 O-O-O 16 Q×f6 Kb8? 17 b4 Bb6 18 a4 Bc6 19 a5 B×f2† 20 K×f2 Bb5 21 Kg1 h5 22 Bg2 h4

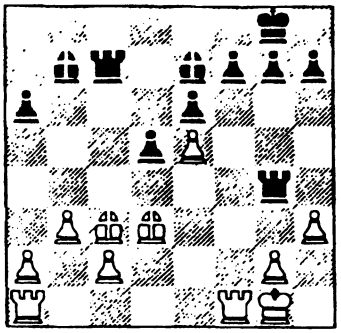


Position after 22 ... h4

23 g×h4? Rdg8 24 Kf2?? Rh5 25 Na3 Q×h2 26 N×b5 Q×g2† 27 Ke3 Rg3† 28 Kd4 Qd5# 0-1

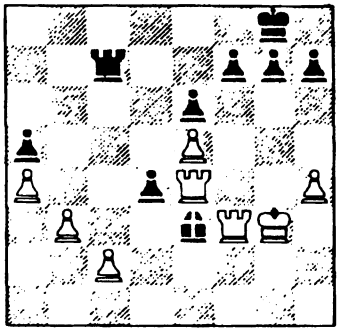
Round 2

Chess 4.9 — Larry D. Evans (2393) 1 e4 c5 2 Nf3 d6 3 d4 c×d4 4 N×d4 Nf6 5 Nc3 a6 6 Be2 e6 7 O-O Be7 8 Be3 O-O 9 f4 Nc6 10 e5 d×e5 11 N×c6 b×c6 12 Q×d8 R×d8 13 f×e5 Nd5 14 N×d5 c×d5 15 Bb6 Rd7 16 Rad1 Rb8 17 Bd4 Rc7 18 Bd3 Rb4 19 Bc3 Ra4 20 Ra1 Bb7 21 b3 Rg4 22 h3



Position after 22 h3

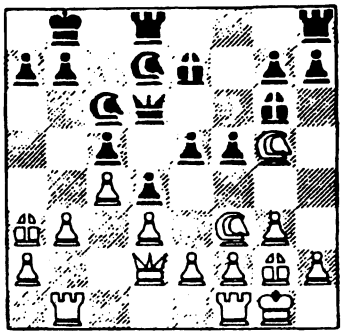
22 ... R×g2†!? 23 K×g2 R×c3 24 Rae1 a5 25 Kg3 Bg5 26 h4 Bh6 27 Rf3 Rc7 28 a4 d4 29 Be4 B×e4 30 R×e4 Be3



Position after 30 ... Be3

31 Rf×e3! d×e3 32 c4 Kf8 33 R×e3 Ke7 34 Kf4 f6 35 Rg3 Kf7 36 Rd3 Rc5 37 Rd7† Kg6 38 h5† K×h5 39 e×f6 g×f6 40 R×h7† Kg6 41 Rb7 Rh5 42 Ke4 Rh4† 43 Kd3 Rh3† 44 Kc2 Rh2† 45 Kc3 Rh3† 46 Kc2 Rh2† 47 Kc3 f5 48 Rb6 Kf6 49 Ra6 f4 50 R×a5 f3 51 Ra8 Kf7 52 Rd8 e5 53 Rd1 Ke6 54 c5 e4 55 c6 Rh8 56 c7 Rc8 57 Kd4 R×c7 58 K×e4 Rb7 59 K×f3 R×b3† 60 Ke4 Rb4† 61 Rd4 R×d4† 62 K×d4 ½–½ (This is Evans' only non-win in the tournament. Evans is now the highest rated player not to win against a computer in regular tournament play. A small antidote: Chess 4.9, in the final position, was searching so deep that it overflowed a table and got a CPU fault. If the draw had been refused, Chess 4.9 may not have been able to continue.)

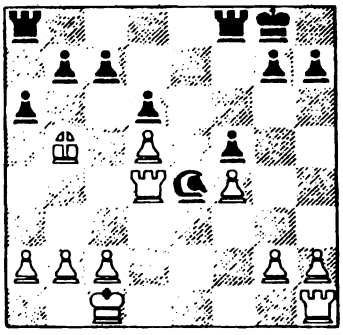
Sharon Evans (1490) — Duchess 1 Nf3 Nf6 2 b3 d5 3 Bb2 Bf5 4 g3 c5 5 Bg2 Nc6 6 O-O Qc7 7 d3 e5 8 Nbd2 O-O-O 9 c4 d4 10 Ng5 Bg6 11 Nge4 Nd7 12 Ba3 Be7 13 Nf3 Kb8 14 Qd2 f5 15 Neg5 Qd6 16 Rab1?



Position after 16 Rab1

16 ... e4 17 d×e4 f×e4 18 N×d4 N×d4 0–1

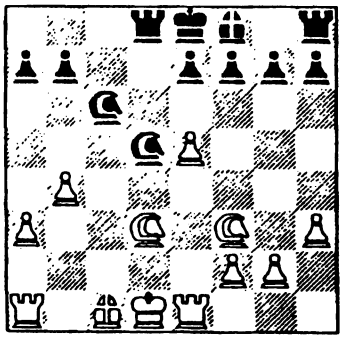
Belle — Steve Goldstein (1243) 1 e4 e5 2 Nf3 Nc6 3 d4 e×d4 4 N×d4 N×d4 5 Q×d4 d6 6 Nc3 Nf6 7 Bg5 Be7 8 O-O-O Be6 9 Qa4† Nd7 10 B×e7 Q×e7 11 Nd5 B×d5 12 e×d5 O-O 13 Bb5 Nc5 14 Qf4 Qe4 15 Q×e4 N×e4 16 Rd4 f5 17 f4 a6



Position after 17 ... a6

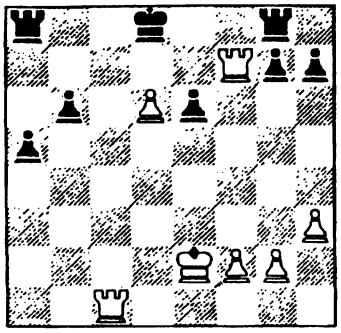
18 Bd7? Nc5 19 Be6† N×e6 20 d×e6 Rae8 21 Re1 Rf6 22 Rb4 b5 23 e7 Rf7 24 a4 Rf×e7 25 R×e7 R×e7 26 a×b5 a×b5 27 R×b5 g6 28 Kd2 Kf7 29 c4 Re4 30 Kd3 Ke7 31 g3 Re1 32 c5 Rh1 33 Rb7 Kd7 34 c×d6 K×d6 35 Kd4 R×h2 36 Ke3 h6 37 Rb8 g5 38 Rd8† Ke7 39 Rd5 g×f4† 40 g×f4 R×b2 41 R×f5 Rb6 42 Re5† Re6 43 Kd4 R×e5 44 K×e5 h5 45 Kf5 c5 46 Kg6 Kf8 47 Kf5 h4 48 Kg4 c4 0–1

Steve Matthaey (1076) — Chaos 1 e4 c5 2 c3 Nf6 3 e5 Nd5 4 d4 c×d4 5 c×d4 d6 6 Nf3 Nc6 7 Nc3 d×e5 8 d×e5 Ndb4 9 a3 Q×d1† 10 K×d1 Na6 11 b4 Nc7 12 h3 Be6 13 Bd3 Nd5 14 Ne4 Bf5 15 Nc5 B×d3 16 N×d3 Rd8 17 Re1



Position after 17 Re1

17 ... Nd×b4! 18 a×b4 N×b4 19 Ke2 N×d3 20 Rd1 N×c1† 21 Rd×c1 a6 22 Rc7 Rb8 23 Nd4 Rg8? 24 Nb3 e6 25 Na5 b6 26 Nb7 Ra8 27 Nd6† Kd8 28 R×f7 B×d6 29 e×d6 a5 30 Rc1

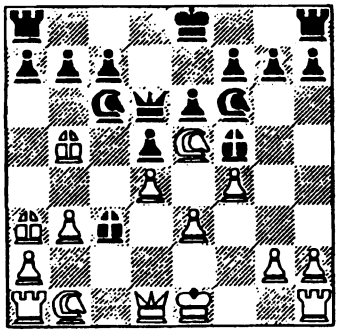


Position after 30 Rc1

(Black accepts a draw offer even though he thinks he's ahead a pawn. This is due to an erroneous draw-value setting at the beginning of the game. It was probably fortunate because the probable continuation is 30 ... Rc8 31 Rcc7 R×c7 32 R×c7 with the threat of 33 Ra7!) ½–½

Round 3

Tim Hall (1962) — Chess 4.9 1 f4 d5 2 b3 Nf6 3 Bb2 Nc6 4 e3 Bf5 5 Nf3 e6 6 Bb5 Bc5 7 Ne5 Qd6 8 d4 Bb4† 9 c3 Ba5 10 Ba3 B×c3†



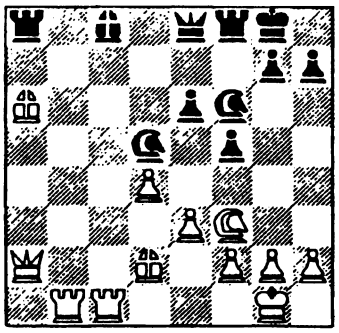
Position after 10 ... B×c3†

11 Kf1? (Better is 11 N×c3 Q×a3 12 N×c6 a6 13 Ba4 b5 14 N×b5 a×b5 15 B×b5 O-O 16 O-O) 11 ... Bb4 12 N×c6 B×a3 13 Na5† c6 14 N×b7 Qd7 15 N×a3 c×b5 16 Nc5 Qc6 17 Rc1 O-O 18 h3 b4 19 Nc2 Ne4 20 Qe1 N×c5 21 d×c5 Qa6† 22 Kg1 Q×a2 23 Nd4 Be4 24 Rh2 Qa5 25 Nc6 Qa6 26 Ne7† Kh8 27 c6 Rfe8 28 Q×b4 Qd3 29 Rc3? Qd2 30 Rc4 Q×e3† 31 Kh1 d×c4 0–1

Duchess — Brian Katz (1713) 1 e4 c5 2 Nc3 d6 3 g3 g6 4 d4 c×d4 5 Q×d4 Nf6 6 Nf3 a6 7 Nd5 Bg7 8 Qb6 N×d5 9 Q×d8† K×d8 10 e×d5 h6 11 c3 b5 12 Bg2 Bb7 13 Nh4 Nd7 14 O-O Bf6 15 a4 B×h4 16 g×h4 Nf6 17 a×b5 a×b5 18 R×a8† B×a8 19 Rd1 Kc7 20 Bf4 Nh5 21 Be3 Ng7 22 Bf1 Nf5 23 B×b5 N×e3 24 f×e3 Rb8 25 c4 Bb7 26 b4 Kb6 27 Kf2 Ra8 28 Bd7 f6 29 Rd4 Kc7 30 Be6 Ra2† 31 Kg3 Rc2 32 Rg4 g5 33 h×g5 h×g5 34 h4 g×h4† 35 R×h4 Bc8 36 B×c8 K×c8 37 Rf4 Kd7 38 Kf3 Kd8 39 b5 Kc7 40 Kg4 Rg2† 41 Kf5 Rg5† 42 Ke4 Re5† 43 Kd4 Kb6 44 Re4 Kc7 45 R×e5 d×e5† 46 Ke4 Kb6 47 Kf5 Kc5 48 Ke6 Kb6 49 K×e7 f5 50 d6 f4 51 d7 1–0

Ron Dittman (1655) — Belle 1 e4 e5 2 Bc4 Nf6 3 d3 c6 4 Nc3 d5 5 e×d5 c×d5 6 Bb3 Bb4 7 Bd2 d4 8 Nce2 B×d2† 9 Q×d2 Nc6 10 Nf3 Bg4 11 Ng5 O-O 12 O-O Qa5 13 Qe1 Qc5 14 a3 Rad8 15 f3 Bd7 16 Qd2 Qa5 17 Qe1 Q×e1 18 Ra×e1 Na5 19 Ba2 h6 20 Ne4 N×e4 21 f×e4 Be6 22 B×e6 f×e6 23 R×f8† K×f8 24 Rd1 Nc6 25 Kf2 Ke7 26 c4 Rf8† 27 Ke1 Kd6 28 b4 h5 29 Nc1 a5 30 c5† Kc7 31 b5 Ne7 32 a4 Ng6 33 g3 h4 34 Ke2 h×g3 35 h×g3 Rh8 36 Rf1 Rf8 37 R×f8 N×f8 38 Kf3 b6 39 c6 Nh7 40 Nb3 Kd8 41 Nd2 Ng5† 42 Kg4 Nf7 43 Nf3 Ke7 44 Ng5 Nd6 45 Kh5 Kf6 46 Nf3 Ne8 47 Nh2 Ke7 48 Nf3 Kf6 49 Ne1 Nc7 50 Nc2 Ke7 51 Kg6 Ne8 52 Na3 Nd6 53 K×g7 Ne8† 54 Kg6 Nd6 55 Kg5 Nf7† 56 Kg4 Nd6 1–0

Chaos — Gerard Kirzner (1562) 1 d4 d5 2 c4 c6 3 Nc3 Nf6 4 e3 e6 5 Nf3 Bb4 6 a3 B×c3† 7 b×c3 O-O 8 Bd3 Nbd7 9 Bd2 a6 10 O-O Qe7 11 c×d5 c×d5 12 c4 Qd8 13 c×d5 N×d5 14 Qc2 f5 15 Rab1 N7f6 16 Rfc1 b5 17 a4 b×a4 18 Q×a4 Bd7 19 Qa2 Qe8 20 B×a6 Bc8?

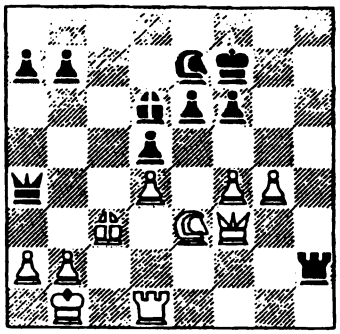


Position after 20 ... Bc8

21 R×c8! Q×c8 22 B×c8 R×a2 23 B×e6† Kh8 24 B×f5 Re8 25 Rb7 g6 26 Bb1 Ra1 27 h3 Ne4 28 Be1 Nec3 29 Bd3 Rd1 30 Bc4 Nf6 31 Kh2 Nce4 32 Be2 Rc1 33 Bd3 Rd1 34 Bb1 Rc8 35 g3 Rcc1 36 B×e4 N×e4 37 Re7 Nf6 38 Rf7 Ne4 39 Rf8† Kg7 40 Rf4 Nf6 41 Bb4? Nd5 42 Bf8† Kg8 43 Bh6 N×f4 44 B×f4 Rc2 45 Kg2 Ra2 46 e4 Rd3 47 e5 Raa3 48 Be3 Ra2 49 Bc1 Ra1 50 Bg5 Raa3 51 Ne1 Rd1 52 Nf3 Rdd3 53 Be3 ½–½

Round 4

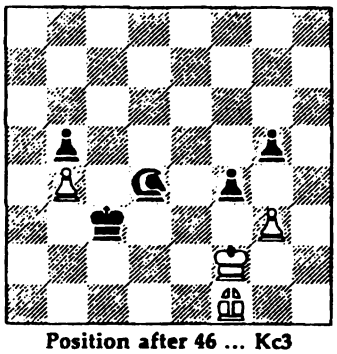
Paul Neuer (1983) — Chess 4.9 1 e4 Nc6 2 d4 d5 3 e5 f6 4 f4 Bf5 5 c3 e6 6 Ne2 Nge7 7 e×f6 g×f6 8 Ng3 Bg6 9 Bd3 B×d3 10 Q×d3 h5 11 Qe2 h4 12 Nh5 Kf7 13 g4 h×g3 14 h×g3 Nf5 15 Nd2 Bd6 16 Nf1 Ng7 17 Qf3 N×h5 18 R×h5 Ne7 19 Bd2 c5 20 O-O-O c×d4 21 c×d4 Qb6 22 Bc3 Rac8 23 R×h8 R×h8 24 Ne3 Qb5 25 g4 Qa4 26 Kb1 Rh2



Position after 26 ... Rh2

27 Rd2? R×d2 28 B×d2 Q×d4 29 Nf1 Bb4 30 B×b4 Q×b4 31 g5 Qe1† 32 Kć2 Nc6 33 Qh5† Ke7 34 g×f6† Kd6 35 f7 Qe4† 36 Kd1 Qb1† 37 Ke2 Q×b2† 38 Kf3 Ke7 39 Ne3 Qd2 40 f8(Q)† K×f8 41 Qh8† Ke7 42 Qg7† Kd6 43 Qf8† Kd7 44 Qf7† Ne7 45 f5 e×f5 46 N×f5 Qd3† 47 Ne3 d4 0–1

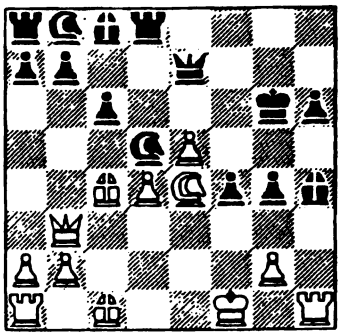
Duchess — Fred Olson (1968) 1 e4 c5 2 d4 c×d4 3 c3 d×c3 4 N×c3 Nc6 5 Nf3 d6 6 Bc4 e6 7 O-O Nf6 8 Qe2 Be7 9 Bg5 O-O 10 Rfd1 e5 11 Qc2 a6 12 Rac1 Be6 13 B×f6 B×f6 14 Nd5 Bg4 15 Be2 B×f3 16 N×f6† Q×f6 17 B×f3 Nd4 18 Qd3 Rac8 19 R×c8 R×c8 20 Bg4 Rc2 21 Rd2 R×d2 22 Q×d2 Qe7 23 Qc3 g6 24 Qc4 Kg7 25 Qc8 a5 26 a3 b5 27 b4 a×b4 28 a×b4 Qa7 29 Qc1 Qb7 30 Qb1 Qc6 31 h3 Qc2 32 Q×c2 N×c2 33 Be2 Nd4 34 Bd3 f5 35 f3 Kf6 36 h4 Ke6 37 Kf2 d5 38 e×d5† K×d5 39 Ke3 h6 40 g3 g5 41 h×g5 h×g5 42 Bf1 f4† 43 Kf2 e4 44 f×e4† K×e4 45 Bh3 Kd3 46 Bf1† Kc3



Position after 46 ... Kc3

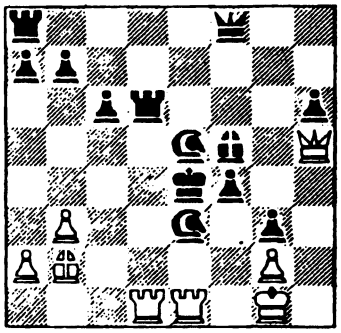
47 B×b5! f3 48 Ba6 g4 49 Bc8 ½–½

John Shoosmith (1705) — Belle 1 e4 e5 2 f4 e×f4 3 Nf3 d5 4 e5? g5 5 h4 g4 6 Ng5 h6 7 N×f7 K×f7 8 d4 Be7 9 Be2 B×h4† 10 Kf1 Qg5 11 c4 Ne7 12 c×d5 N×d5 13 Qb3 Rd8 14 Bc4 c6 15 Nc3 Kg6 16 Ne4 Qe7!?



Position after 16 ... Qe7

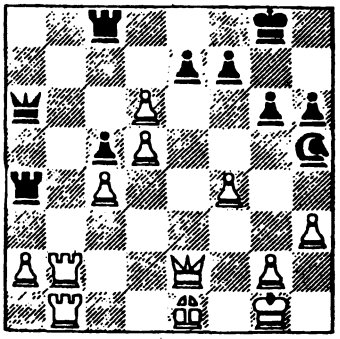
17 Nd6? R×d6! 18 Bd3† Kh5 19 Qc2 Re6 20 Bf5 Qf8 21 Qf2 Kg5 22 Q×h4† K×f5 23 Qh5† Ke4 24 Kf2 g3† 25 Ke2 K×d4 26 Rd1† Ke4 27 Re1 Nd7 28 Kf1† Ne3† 29 Kg1 N×e5 30 b3 Rg6 31 Bb2 Bf5 32 Rad1 Rd6



Position after 32 ... Rd6

33 B×e5 R×d1 34 Q×d1 K×e5 35 Qa1† Kd5 36 Rc1 Be4 37 Qc3 B×g2 38 Qa5† Kd6 39 Qc5† Kc7 40 Qe5† Qd6 41 Qg7† Kb6 42 Qc3 Re8 43 b4 f3 0–1

Chaos — Charles Aronowitz (1505) 1 d4 Nf6 2 c4 c5 3 d5 b5 4 c×b5 a6 5 e3 d6 6 Nc3 g6 7 Bc4 Nbd7 8 Nf3 Bg7 9 O-O Nb6 10 Be2 O-O 11 Ng5 h6 12 Nf3 Ng4 13 h3 Ne5 14 N×e5 B×e5 15 b×a6 B×a6 16 B×a6 R×a6 17 e4 Bg7 18 Qe2 Qa8 19 Rd1 Nd7 20 Qb5 Ne5 21 f4 Ra5 22 Qe2 Nd7 23 Rd2 Rc8 24 Rc2 Nb6 25 Bd2 Ra7 26 Rb1 B×c3 27 b×c3 Nd7 28 Be1 Ra4 29 Rcb2 Nf6 30 c4 Qa6 31 e5 Nh5 32 e×d6

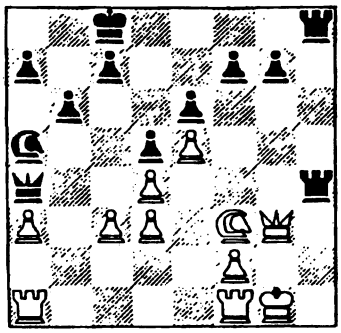


Position after 32 e×d6

32 ... N×f4?? 33 Q×e7 Q×c4 34 d7 Rca8 35 Rb8† R×b8 36 R×b8† Kg7 37 Qe5† 1–0

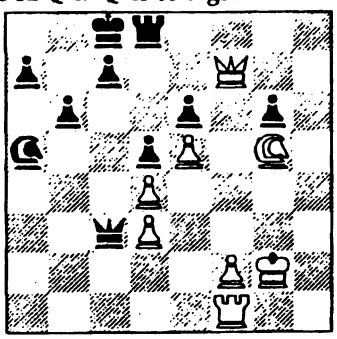
Round 5

Chess 4.9 — George Shrier (2152) 1 e4 e6 2 d4 d5 3 Nc3 Bb4 4 e5 b6 5 Qg4 Bf8 6 Nf3 Qd7 7 Bg5 Ne7 8 Bd3 Ba6 9 O-O Nf5 10 Rac1 Bb4 11 a3 B×c3 12 b×c3 B×d3 13 c×d3 Nc6 14 Qh5 h6 15 g4 Nfe7 16 Bd2 O-O-O 17 Qh4 Na5 18 Rce1 Ng6 19 Qg3 Qa4 20 h4 h5 21 Bg5 Rdg8 22 g×h5 R×h5 23 Nd2 Rgh8 24 Ra1 N×h4 25 B×h4 R×h4 26 Nf3



Position after 26 Nf3

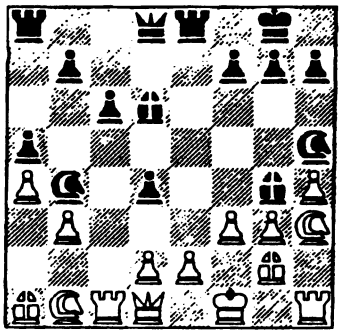
26 ... Rh1†? (26 ... R4h6 looks like a kill.) 27 Kg2 R×f1 28 R×f1 g6 29 Ng5 Rf8 30 Qf4 Q×a3 31 Nh7 Rd8 32 Q×f7 Q×c3 33 Ng5!?



Position after 33 Ng5

33 ... Q×d4 Chess 4.9's computer failed here. When it came up, there was only five minutes on the clock. The remainder of the game was played at blitz speed, but transmission delays were too great to complete the game.) 34 Q×c7† K×c7 35 N×e6† Kd7 36 N×d4 Nc6 37 e6†? Kd6 38 N×c6 K×c6 39 Ra1 a5 40 Kg3 Kd6 41 Rb1 Rb8 42 Re1 Ke7 White lost on time. **0-1**

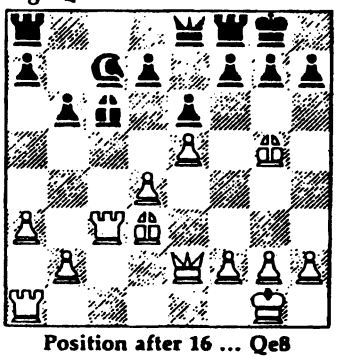
Zoltan Bartok (2109) — Duchess 1 c4 Nf6 2 Nc3 e6 3 g3 d5 4 c×d5 e×d5 5 Bg2 Be7 6 b3 O-O 7 h4 Re8 8 a4 a5 9 Bb2 Nc6 10 Rc1 Nb4 11 Kf1 c6 12 Nh3 Bd6 13 Ra1 d4 14 Nb1 Bg4 15 f3 Nh5



Position after 15 ... Nh5

16 e4 d×e3 17 d×e3 N×g3† 18 Kg1 Na2 19 Rc4 N×h1 20 Rd4 R×e3 21 Ng5 Ra7?? (This move is essentially random and was caused by a program bug. Almost any other move, especially 21 ... Qe8 is a kill. White was very lucky to play like this against a competent program and not be punished.) 22 B×h1 Qe7 23 Kf1 h6 24 R×d6 h×g5 25 Rd8† Kh7 26 f×g4 Nb4 27 Na3 R×b3 28 Qd4 Qf6† 29 Q×f6 g×f6 30 B×f6 Kg6 31 h×g5 Re3 32 Bd4? R×a3 33 Rg8† Kh7 34 Rg7† Kh8 35 Rg6† f6 36 R×f6? Kg8 37 B×a7 R×a4 38 Kf2 Kg7 39 Kg3 Ra2 40 Bd4 Rd2 41 Ba1 Kg8 42 Be4 Re2 43 Bg6 Re3† 44 Kf2 Ra3 45 Bd4 Ra2† 46 Kg3 Ra3† 47 Kh4 c5 48 B×c5 Rc3 49 Bd4 Rc6 50 Bf7† Kf8 51 Rf5 Ke7 52 g6 Rc8 53 g7 a4 54 g8(Q) R×g8 55 B×g8 Kd7 **1-0**

Belle — Douglas Bellizzi (2066) 1 e4 c5 2 c3 Nf6 3 e5 Nd5 4 d4 c×d4 5 c×d4 e6 6 a3 b6 7 Nf3 Bb7 8 Bd3 Na6 9 Bd2 Be7 10 O-O O-O 11 Qe2 Qc8 12 Nc3 Nac7 13 Rfc1 N×c3 14 R×c3 Bc6 15 Ng5 B×g5 16 B×g5 Qe8

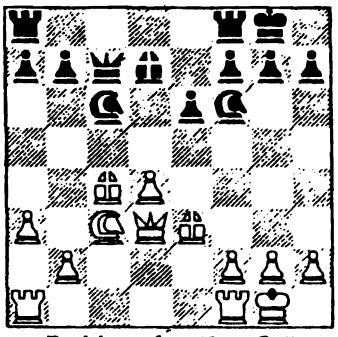


Position after 16 ... Qe8

17 Be4? (17 Bf6! and 17 B×h7†! are both forced mates.) 17 ... B×e4 18 Q×e4 Nd5 19 Rh3 f5 20 e×f6 Qg6 21 Q×g6 h×g6 22 f×g7 Rfc8 23 Bh6 Kh7 24 Re1 Nf6 25 d5? (Now White goes into extended horizon mode trying to forestall the inevitable fall of the pawn on g7.) 25 ... N×d5 26 f4 Nf6 27 Rd1 d5 28 Re1 Rc6 29 b4 b5 30 a4 a6 31 a×b5 a×b5 32 Kh1 Ng4 33 Bg5† K×g7 34 Kg1 Ra4 35 Be7 Nf6 36 Bc5 Kf7 37 Rh8 Ra2 38 Rb8 Ne4 39 R×b5 N×c5 40 b×c5 Rc2 41 Ra1 R2×c5 42 Ra7† Rc7 43 R×c5 R×a7 44 Kf2 Kf6 45 Rc2 Kf5 46 g3 g5 47 f×g5 K×g5 48 Re2 Kf5 49 Rd2 Rh7 50 h4 Rf7 51 Kg2 Rd7 52 Rf2† ½-½

David Burris (2056) — Chaos 1 d4 Nf6 2 c4 e6 3

Nc3 Bb4 4 e3 c5 5 Ne2 d5 6 a3 B×c3† 7 N×c3 c×d4 8 e×d4 d×c4 9 B×c4 Nc6 10 Be3 O-O 11 O-O Bd7 12 Qd3 Qc7



Position after 12 ... Qc7

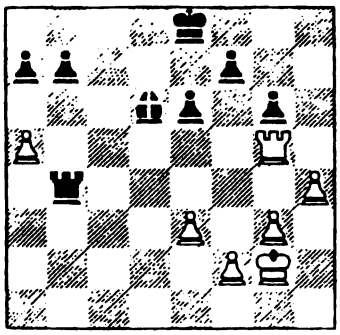
13 d5?? Ne5 14 Qd4 N×c4 15 Bf4 e5 16 d6 e×d4 17 d×c7 d×c3 18 b×c3 Nd5 19 Bg3 Rac8 20 Rfd1 Be6 21 h3 N×c7 22 Rab1 b6 23 a4 Nd5 24 Ra1 N×c3 25 Re1 Na5 26 Kh2 Rc4 27 Be5 N×a4 28 Red1 Nc6 29 Bg3 Nc3 30 Re1 Rc8 31 h4 Ne4 32 Re3 a5 33 h5 N×g3 34 R×g3 Rh4† 35 Kg1 Nd4 36 Re1 Ne2† 37 Kf1 Rc2 38 Rh3 R×h3 39 g4 Bd5 0-1

Round 6

Jose Espinosa (1896) — Chess 4.9 1 d4 d5 2 c4 d×c4 3 e3 e5 4 B×c4 e×d4 5 Q×d4 Q×d4 6 e×d4 Nc6 7 Bb5 Bd7 8 Nf3 a6 9 Ba4 Nf6 10 O-O Bd6 11 Nc3 O-O 12 Bg5 b5 13 B×f6 b×a4 14 Ne5 Be8 15 N×c6 B×c6 16 Be5 Rab8 17 Rab1 Rfe8 18 f4 Bd7 19 Rf2 f6 20 B×d6 c×d6 21 Rd2 a3 22 b4 Rbc8 23 Rb3 Re3 24 Nd1? (This is bad, but White has his problems. For example 24 Rc2 Re1† 25 Kf2 Rd1 26 R×a3 R×d4 27 g3 R×b4 28 R×a6 Rbc4 29 Ra3 d5!) 24 ... R×b3 25 a×b3 Bf5 26 Ne3 Bb1 27 Nc4 a2 28 R×a2 B×a2 29 N×d6 Rd8 30 Nf5 Kf8 31 Kf2 g6 32 Ke3 g×f5 33 Kd3 B×b3 34 Kc3 Bd5 35 g3 Rc8† 0-1

Duchess — Bruce Jurin (1756) 1 e4 e5 2 Nf3 Nc6 3 Bb5 a6 4 Ba4 Nf6 5 O-O Be7 6 Qe2 b5 7 Bb3 d6 8 a4 Bg4 9 c3 Na5 10 Bc2 c6 11 b4 Nc4 12 a5 d5 13 e×d5 Q×d5 14 d3 B×f3 15 g×f3 Nd6 16 Re1 O-O 17 Q×e5 Q×f3 18 Qf4 Q×f4 19 B×f4 Nd5 20 Be5 Rfe8 21 Nd2 f6 22 Bg3 Nf5 23 Bb3 N×g3 24 h×g3 Kf8 25 Rac1 Bd6 26 R×e8† R×e8 27 Ne4 Be7 28 B×d5 c×d5 29 Nc5 Rc8 30 N×a6 Rc6 31 Nc5 B×c5 32 b×c5 R×c5 33 d4 Rc7 34 Rb1 Rb7 35 a6 Ra7 36 R×b5 R×a6 37 R×d5 Rc6 38 Rc5 R×c5 39 d×c5 Ke7 40 Kf1 Kd7 41 Ke2 Kc6 42 Kd3 K×c5 43 f4 f5 44 c4 h6 45 Kc3 g5 46 f×g5 h×g5 47 Kd3 ½-½

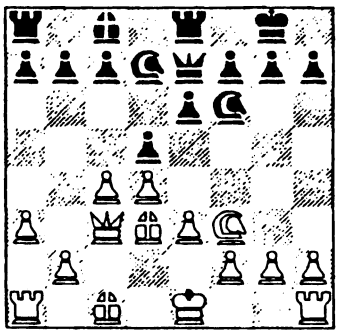
Darin Treadwell (1629) — Belle 1 Nf3 d5 2 c4 e6 3 b3 Nf6 4 Bb2 Be7 5 g3 O-O 6 Bg2 Nc6 7 d4 d×c4 8 b×c4 Bd7 9 O-O Na5 10 Qd3 c5 11 Nbd2 c×d4 12 N×d4 Rc8 13 Rac1 Nc6 14 N2f3 Qa5 15 a3 N×d4 16 N×d4 Qa6 17 Nf3 Bc6 18 Ng5 Rfd8 19 Qc2 B×g2 20 B×f6? B×f6 21 Q×h7† Kf8 22 K×g2 B×g5 23 e3 Bf6 24 Qe4 Rd2 25 c5 Bb2 26 Rb1 Qc6 27 Q×c6 R×c6 28 Rfd1 R×d1 29 R×d1 R×c5 30 Rd7 Rb5 31 a4 Rb4 32 a5 Ke8 33 Rc7 Be5 34 Rc5 Bd6 35 Rg5 g6 36 h4?



Position after 36 h4

36 ... Be7! 37 Re5 f6 38 R×e6 Kd7 0-1

Chaos — Jason Luchan (1625) 1 d4 e6 2 c4 Nf6 3 Nc3 Bb4 4 Qc2 d5 5 a3 B×c3† 6 Q×c3 O-O 7 e3 Nbd7 8 Nf3 Re8 9 Bd3 Qe7



Position after 9 ... Qe7

10 c×d5! e×d5 (10 ... N×d5 11 Qc2 N7f6 12 e4 Nb6 13 e5) 11 Q×c7 h6 12 Bd2 b6 13 O-O Qe6 14 Rac1 Re7 15 Qc6 Q×c6 16 R×c6 Re6 17 R×e6 f×e6 18 Rc1 Ne8 19 Bb5 Nd6 20 R×c8† N×c8 21 B×d7 Kf7 22 Ne5† Ke7 23 Bc6 Kd6 24 B×a8 a5 25 b4 Na7 26 b×a5 b5 27 a6 Kc7 28 Bb7 g5 29 Ba5† Kd6 30 Bb6 b4 31 a×b4 Nb5 32 Bc6 Nc3 33 Bd8 Ne2† 34 Kf1 Ng3† 35 h×g3 h5 36 b5 1-0

Synopsis

The computer team finished with a match score of 4 out of 6. and a game score of 15 out of 24. Chess 4.9 got 4 out of 6 points for a performance rating of 2168; Duchess 3/6 pf=1762; Belle 3/6 pf=1644; and Chaos got 5/6 for a pf of 1946.

Ken Thompson
Bell Labs
Murray Hill, New Jersey, USA