

**ON COMPUTER-ASSISTED TOURNAMENT CHESS:
VIDEO-GAMING AS COMPETITION SPORTS, SCIENTIFIC EXPERIMENT
AND ARTISTIC PERFORMANCE**

Elements of organisational design

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Concept development report

Wienn Galerie der Forschung / Gallery of Research

Final version, July 2005

ABSTRACT OF THE PROJECT

Chess, which first Olympic appearance is scheduled for Pekin 2008, is the traditional exemplar of science love for sports. A perfect starting place, thus, to begin exploring, in an original manner, the two-ways relationship between competition in sports and competition in research: scientific knowledge applied to improve sporting performance and sports knowledge used to improve scientific performance.

Of all sports, chess has been the preferred object of academic research; moreover, the applied chess sciences (cognitive psychology, mathematical logic and computer science) have grown a wholly new sport discipline: *computer-assisted chess*.

Because of historical and cultural reasons, computer-assisted chess is the best choosing for the first chapter of a serially conceived **Gallery of Research** project on THE SPORTS OF TECHNO-SCIENCE AND THE TECHNO-SCIENCES OF SPORT, a series of “trips” or “artistic experiments” into the metaphysics of numerical things, the live experiences of *victory* and *defeat*, and their institutional forms (training exercises, performance tests, scoring systems, competition rules, ranking formulae, money prizes, etc.)

Four original features of the project stand up:

- 1/ Engineering *gender studies* into the *queen* puzzle in the history of chess.
- 2/ Special instrumentation of computer machinery for the revival of chess’ ancient archetypical symbolism.
- 3/ A strategic focus on chess referees practical legal work.
- 4/ Experimenting *camp* aesthetics as organisational designing tool uniquely suited for computer-assisted tournament chess.

I. DESIGN OPTIONS FOR A COMPUTER-ASSISTED CHESS TOURNAMENT

How to arrange a scientific experiment under the form of a sports competition? Or better even: *how to organise a sports match under the format of laboratory experiment?*¹

For one thing, tournament chess is a *literacy sport* (and a very curious one, indeed)² and, beyond a certain level of theoretical competence, master tournament chess is definitively a “library sport”. Chess training books are zillions, even monographs that teach how to play the very five or six first moves of a game, so-called “opening books” can be counted in the millions. The scholarly corpus of experimental psychology papers with a chess content is also a huge domain: from information processing and memory storage to visual perception as problem-solving or emotions-driven geometrical analysis. Computer science is the fastest growing chapter of the cosmic chess library: from heuristical search engines to chip design and software engineering, from artificial intelligence test to less philosophical commercial chess packages. Last but not least, the humanities: chess history, which is a well established department, and chess anthropology, already a little province of science studies and also of the sociology of sports.

The *Kasparov vs. Deep Blue* computer-assisted chess match organised by IBM in New York in 1997 immediately comes to mind as the very exemplar model for a project like this. Using it as a template for ours, we will offer here a series of strategic design options and choice organisational forms with the aim digging deeper into the mystery of “composite human-computer competition”.

¹ My interest in sports fair-competition rules as source for special experimental designs, started out of an study about football referees’ *in vivo* legal work as rendered by audio-visual recordings (cf. A. J. Izquierdo-Martín, “Árbitros de fútbol: ¿un *c. elegans* para la metodología de las ciencias sociales?”, *Empiria*, 2003, 6, 79-111); and also by a curious statement by former World Chess Championship Garry Kasparov (see below).

² See T. Wendling, *Ethnologie des joueurs d’échecs*, Paris, PUF, 2002, pp. 180ss, for a somehow hilarious catalogue of the most baroque legal problems faced by chartered chess referees when they try to enforce on players the “rules of the game” issued by the Chess International Federation, which simultaneously prescribe and ban paper writing and paper reading during a tournament chess game.

On Sunday 11th May, 1997, minutes after having being defeated by Deep Blue, a furious human chess super-genius howled a mortal threat against the machine. But it wasn't just the typical "Next time I'll kill it!"; no, it was a sort of paternal admonition with a subtle conditional clause in it: "Deep Blue must now enter into competition chess, playing under normal tournament conditions, so we can see if the machine is a wonder or if it is plagued by human weaknesses."³ Of course there was an international referee presiding over all games in the Kasparov vs. Deeper Blue match, so what did Kasparov really mean by "normal tournament conditions"? What are these: *normal tournament conditions*? Doesn't this smells as a real *wittgensteinian* question?

Yes indeed: in close parallel to his more systematic mathematical adventures, Viennese philosopher Ludwig Wittgenstein (1889-1951) used to remark on chess very frequently when it came to make salient a special obscure point about the existential conditions for successful rule-following behavior. Then he used to follow his argument exposing some imaginary experiment in a characteristic way: "It is naturally imaginable that in a tribe that doesn't know the game [of chess] two person would sit down before a chess board and execute the movements of a chess game; even with all accompanying mental phenomena. And if *we* would see that, we will say that they're playing chess. Now imagine a chess game translated by certain rules we are not used to associate with a game -say, a sequence of screams and kicks. And these two should now, instead of playing chess the familiar way we are used to, scream and kick; and do it just in a way that the whole process can be translated, using appropriate rules, into a game of chess. Would we be inclined to say that they are playing a game, and how would we justify this assertion?"⁴

Now, at the beginning of the XXIth Century scholarly questions about ancient philosophic-anthropological enigmas are no more specified as imaginary cases but mostly as deeply detailed accounts (written or audio-video graphic) of real occurrences. Wittgenstein imagined the scene of "two persons seated at a chess board and executing the moves of a chess game" in some detail. Could have he imagined the scene of two persons *and* two machines "seated at a chess board and executing the moves of a chess game"? *How* could he? For boys and girls used to the contemporary experience of

³ D. King, *Kasparov contra Deeper Blue*, Barcelona, Paidotribo, 1997, 147.

⁴ L. Wittgenstein, *Philosophische Untersuchungen*, §200.

playing chess against a software opponent installed in his home PC, the later scene could hardly be deemed “imaginary”. Moreover, the later is precisely the very one situation which practical constituents Gary Kasparov wanted to be subjected to a different order of details, i.e. “normal tournament conditions”. Again: What are *these*? There’s a whole of a lot, in fact an infinite amount of mundane practical things that need to be settled before, during and after a game for it being a “normal tournament chess game”. For example: a most evident questions to be asked by a chess grandmaster who is going to play a round against a computer program: what *kind* of person can communicate moves in and out to and from the machine: the software engineer in chief? an international chess referee? the opponent herself?

Thus, an unintended consequence of the anger of Kasparov has been the discovery of a gap in the literary corpus on chess computing: nowhere to find a detailed account of the ordinary work that needs to be done to produce competition between a man and a machine or between two men and two machines as a normal, fair *chess game*.

Here is a condensend menu-tree of organisational design variants for computer-assisted chess tournament that could be hosted by the **Galerie der Forschung**:

1/ Chess variants:

- Orthodox chess
- Fischer random chess (see II.1. below)
- Another variety of spectacular experimental chess (eg. Blitz-four, Double-blind, Double-simultaneous, etc.)
- Total Queen Chess!?! (see II.2. below)
 - Time rules:
 - blitz (5 min each player)
 - active (20min)
 - Tournament (2h+1h guillotine)
 - 24h games, 24hx7days games, etc.

2/ Type and number of players:

- Open
- Club players only
- Master players only

- Grandmasters
- Kids
- Females
- Heterosexual/Homosexual marriages/couples
- Parent vs. child
- Only *in situ* participants
- *In situ* and on line, etc.

3/ Competitive structure (matching & selection):

- Swiss
 - Number of rounds
- Round-robin
- Swiss or round-robin plus astrological parameters?! (see II.3. below)
- Tie-break systems:
 - Butzchold
 - Progress
 - Berger, etc.

4/ Hardware:

- PC
- Macintosh
- Laptop, Palm, etc.

5/ Software:

- One and the same software package for all
- A limited number of alternative software options
- Any computer (PC or Mac) chess software package
- Any software package

6/ Internet:

- Unrestricted broadband connection
- Restricted broadband connection, etc.

7/ Refereeing and other rule enforcement tasks:

- Referees
 - Number (one per game, etc.)
 - Type: professional or amateur, FIDE or national, principal and assistants, etc.
- Other officiating staff
 - Organizing Committee,
 - Expert Advisors Committee,
 - Laymen jurors (see next point below)

8/ Non refereeing judgemental procedural arrangements (“beauty contests”; see below II.4.)

- Voting schemes
- Voting technologies

9/ Financial Economics of tournament gaming:

- Prizes:
 - Money prizes
 - Arithmetic rules (number of prizes, total amount of prizes as X% of incoming fees, etc.)⁵
 - Corporate sponsors to finance extra-size money prizes?
 - Prizes in kind
 - Computers? Travels? Jobs?
- Externalization of organisational tasks to Austrian Federation or Wien clubs?

⁵ For some interesting economic “habits” implicit in prize awarding practices observed in the *milieu* of French tournament chess, see Wendling, *Ethnologie des joueurs d'échecs*, op. cit., 141-143.

II. CHESS VARIANTS THAT COULD BE USED FOR THE EVENT

II. 1. *Fischer Random Chess*: a recognized and increasingly popular chess variant

Fischer Random Chess is a recognized variant of orthodox chess developed by former US Chess World Champion Bobby Fischer consisting in the randomization of the initial positions of pieces in the first rank of each side with the aim to depreciate the value of players' memoristic knowledge (i.e. their ability to reproduce by memory a long book of hundred "tested" opening variants), thus rewarding creativity over theory. It is also known as *FR chess*, *FullChess*, or *Chess 960*, out of its 960 different starting positions, that is, the orthodox chess initial position plus the other 959 different combinatorial possibilities for the starting position in the first rank. (See the information on <http://www.chessvariants.org/diffsetup.dir/fischer.html>).

The design of new experimental chess variants should include modifications in many other parameters apart from the starting position: number of pieces, different pieces, different moves for known pieces, time parameters, hardware, software and Internet parameters, etc.

II. 2. *Total Queen Chess* (aka *Queer Chess*): an experimental post-modern social-science chess variant

You could give check mate also to the queen. That is, the game is over not only when the king is dead but also when the queen is. Modern chess, born from the introduction of the figure of the "powerful queen" (occupying the initial position originally occupied by the *fers* or *visier*, which could only move to diagonal squares and advance one step at a time, and later on by the *queened fers*) has been called "queen chess" (*el ajedrez de la dama*).⁶ This, say, cultural studies or post-modern variant could be called

⁶ Cf. G. Westerveld, *La Reina Isabel la Católica: su reflejo en la Dama Poderosa de Valencia, cuna del ajedrez moderno y origen del juego de Damas*, Valencia, Servicio de Publicaciones de la Generalitat Valenciana, 2004.

Total queen chess, because it is intended to dwell deeper on the symbolic topic⁷ and practical (computation, competition & composition) issue of the legitimate or illegitimate operative powers given to the only female figure in the board, in the era of computer-assisted chess.⁸

All the other established rules of FIDE for playing orthodox chess would remain untouched, eg. there's no "queen castle", except for the proviso that when the queen is under check there follow the same rules applied when the king is.⁹ As for the "queened pawn" and the possibility this rule offers for having more than one queen on one's side, this would be easily manageable by *first* queen elimination being a sufficient condition for game over. Queening a pawn would thus be a gambler's opportunity but also, and at the same time, a risk. Beware of your queen(s) wonderful powers: they are also favourite targets for your rival's attack.

Here's, then, the beauty (or elegance, as scientists use to say) of this experimental chess variant: maximum playing change caused by minimal rules' change.

Of course *Total Queen Chess* should be computer-assisted chess. Now, for there would be no immediately marketable adapted computer software to help humans play this chess variant at Grand Master level, players should be very careful when using *Fritz*, et. al. as mechanical advisors to ascertain how to win their opponents at *Total Queen Chess*. Be all eyes for the amazing but dangerous powers of your Queen, you silicon boyies.

⁷ See an historical account and feminist discussion about this in M. Yalom, *Birth of the Chess Queen*, New York, HarperCollins, 2004.

⁸ For an unorthodox cyborg-feminist hermeneutics of contemporary computer-assisted chess see my unpublished manuscript, *Apocalypse Now en la Aldea Global (o no)* (UNED, Madrid, June 2004, http://www.uned.es/dpto-sociologia-I/IZQUIERDO/Izquierdo_Apocalypse Now.pdf). Apart from two curiously *queer* comments on "project work" and "proper names" made *en passant* by Deep Blue's chip engineer, Feng-Hsiung Hsu, in his interesting account of the Deep Blue vs. Kasparov story (*Behind Deep Blue: Building the Computer that Defeated the World Chess Champion*, Princeton, NJ, Princeton University Press, 2002), my writing on this special techno-anthropological topic was also inspired by some observations on the *Terminator* movie saga (*Judgement Day* and *Total Recall*) found in P. Edwards, *The Closed World. Computers and the Politics of Discourse in Cold War America* (Cambridge, MA, MIT Press, 1996). (Hence, the motto *Total Queen Chess*).

⁹ Thus, for example, simultaneous "double" check to the king and queen would be a necessarily mortal move.

II.3. Computer-Assisted Astrological Tournament Chess

It can be shown that computer-assisted tournament chess is a good terrain for astrological analysis. Due to similar mechanically amenable geometrical complexities, the practices of chess and astrology have been brutally shaken, almost revolutioned by the advent of the personal computer. In both cases this is not only true for substantive matters but also and specially for organisational ones. Thus computer-assisted astrological analysis could be an original tool in the hands of would-be organizers of computer-assisted chess tournaments: eg. you can pair players in several rounds based on chess force (ELO) *and* several fine astrological parameters (sign/rising affinity, sign/rising non-affinity and many finer others that professional astrologists could devise for you aided by computer calculations.) In any event, for contemporary post-analytical minds, the computer-assisted chess & computer-assisted astrology couple is no less intriguing as chess & astrology was for medieval proto-analytical minds.

II.4. On computing computational beauty

As we have chosen the Eurovision Song Contest (ESC) as a general, strategic organization design tool for the **Gallerie der Forschung** computer-assisted chess tournament event (see V below), the possibility is thus open for a *literal* transposition of judgemental rules used to decide a beauty contest to the logomaquic domain of chess. Beauty prizes are a most typical judgemental feature of ordinary chess tournaments: a restricted (jury of experts) or universal (all participants) voting mechanism (ballots) is commonly used to ascertain which is “the most beautiful game played at the tournament”. Systematic complexity of all sorts can be added to voting rules (individual or collective voters and objects of voting, anonymous, indirect, repeated, etc.) and technologies (loud voice, raised hand, piece of paper, electronic writting, etc.). But it is also remarkable that sistematically complex voting behavior (what the average opinion thinks the average opinion thinks, etc.), can have a systematic effect itself on the *what* of votes, the very substance of the *thing* being the subject of voting (the beauty of women, a law treaty or IBM stocks; see below footnote 8 on Keynes’ analytical model). So, *what* is “beautiful” chess playing? But what is a “beautiful” song, anyway? When a song by an Ukranian musical group is voted by thousand of people across Europe, you

can bet they've singed in english, it has a short and repetitive chorus line, strong rythm of electronic drums, the singer dances well, etc.

IV. BEING AN ART GALLERY OR SCIENCE CENTER YOURSELF? DON'T WORRY, SELL IT AS "JUST SPORTS" (& BE HAPPY)

In the film *Game Over* (see below Appendix 2) there's an important clue for Museum strategists. In the middle of the film there's the core narrative of Kasparov being suspicious of a human aid to Deep Blue during the second game of the 1997 Rematch. After losing that game Kasparov asked for the computer logs to check how computer logical calculus could have reached human-like chess concepts. Then the editors of the documentary make inserts of two interview fragments. First there is Yaser Seirawan, one of the live commentators of the game, saying something like "Gary said to the IBM people, come on guys, give me the logs, it's just an experiment..." Then appears Joel Benjamin, a chess grandmaster that worked for the IBM team in the improving of the evaluation function of Deep Blue, like justifying IBM's reject of Kasparov's request: "It was like if Kasparov said to Karpov: "Tomorrow I want you to write an essay about how did you evaluate the different variants you have play today against me..."

Moral: competition sport is not research. I mean: It is not *only* research. You can disguise competition as experimental research -this has been done already, many times, and not only by IBM but mainly by your average university researcher.¹⁰ But you can also do the inverse which, by the way, is not the same: disguise experimental research as "just normal sports competition". That is, sell it as a non-research related event: only weird sports playing in a museum as, you know, "a Museum event", "a techy art performance", etc.

It is my opinion that, even if you define the **Gallerie der Forschung** mainly as a Science Center and only vicariously as a contemporary art Gallery, selling a computer-

¹⁰ Two well known exemplars of non-chess "experimental" computer tournaments: the University of Michigan's Prisoners' Dilemma Computerized Tournament of 1971 (see R. Axelrod, *The Evolution of Complexity*, New York, Basic Books, 1984, chapter 2 for organizational information and Appendix A for the detailed scores and classifications) and the Santa Fe Institute Double Auction Computer Tournament of 1993 (see J. Rust, J. Miller and R. Palmer, "Characterizing Effective Trading Strategies. Insights from a Computerized Double Action Tournament", *Journal of Economic Dynamics and Control*, 18, 1994, pp. 61-96). Of course, the scientific and academic organizers of these two tournaments could contend that competition is only a secondary aspect of experimental designs. Maybe of other designs, but not in *just these two*, it could be replied.

assisted chess tournament as, let me call it this way, *museum's sports*, would be more adequate than to sell it as *museum's science*. The reason for this is that, I think -or at least I feel it- that, for real scientists, museum's techno-science -and all techno-science at all- is not real science, true science. Museums and techno-scientists are mostly interested in doing things that are competitive, thus "spectacular" -spectacular art and science and the spectacle of art and science. They are increasingly oriented to entertainment and show business¹¹, not to real, real boring, astronomically slow, astronomically small (in terms both of practitioners and audiences, though not of resources), purely self-criticizing, thus uncriticizing, so radically non-competitive and, for all these reasons, ever financially disastrous *scholarly speculation* (call it scientific research) and *scholarly instruction* (call it higher education).

So give'm what they want and a half more: a new, original variety of sports competition that would really and practically make transparent to the unsuspected visitor the wonders of her lay thinking engine, the most powerful calculative body that you can imagine (the one you got!). "I just came to visit this place... and suddenly I found myself trapped in a tournament, asking the referee about my rival's possible illegal use of internet voice connection, and getting angry about my machine's low performance under *blitz* conditions", or "I came here to play some amusing computer games just for entertainment... now I'm ranked the 140th, began the 210th, and waiting for the next games to slightly but constantly improve my numbers", etc. The *Neue Wienn Kommputer Schachspiel Caffé*, equipped with some, say, twenty to forty specially designed video-game arcades for two players in opposite positions, could open its doors at the Gallerie der Forschung's Nova Structura, say, each thursday evening from 18 to 23h. Chess players of all condition, professional and amateur, male and female, would be invited to enjoy there the perverse pleasures of experimenting deep variants on their favourite game in a techy-glamourous dark-suburban atmosphere made of glowing screens, erratic red-light beams, aethereal anthems and volcanic drinks.

(Once this is said, although, and to comply, of course, with established science and art museums practices, you can always arrange some wall exhibitions, star

¹¹ "What if you were told, you museum curator, that your job pertains to the world of the show business?" (G.D. Adams and D. Boatright, "The Selling of the Museum, 1986", *Museum News*, April 1986, p. 16, quoted in N. Kotler and P. Kotler, *Museum strategy and marketing*, San Francisco, CA, Jossey-Bass Publishers, 1998, p. 84 (of the Spanish edition).

conferences, round tables, expert panels, press conferences, project presentations and the like, and put it here and there, in parallel or contiguous sessions all along the competition term.)

V. SCENOGRAPHY AND SCENERY

From a fast, three-level Google search using the keywords “museum”, “science” and “chess” one learns that chess, science and museums is mostly a children topic marketed to a children public. The problem is serious here: being a Sci centre, how to market a thing like computer-assisted chess to an adult public? Nobody knows, just try it. A preliminary strategic justification for the “how” of trying it is that so-called LAN parties, big video-games tournament festivals, have been already hosted by Science Museums. Yes: packaged into LAN parties, video-games tournament have already demonstrated their capacity as *transition forms* marking the passage from child science museum products to young and adult (all-ages) science centers events. The thing complicates a bit when you now consider a second factor: *gender*. The well-known kids’ smelling of chess events at science museums is also partly produced as a specific *gender effect* on the age structure of leisure-time choices –as they grow to teenage, boys become progressively less interested in playing games seriously and more in chasing the girls. So it’d be attractive to *teenagirls*, and thus to young couples, and then to adult couples and old marriages, I would like to propose a Eurovision Song Contest-like scenery as the natural environment for the **Wienn Gallerie der Forschung First Computer-assisted Total Queen Chess Tournament**.

During the past 10 years the cumulated literary corpus of international scholarly journal papers has witnessed the emergence of the (in)famous Eurovision Song Contest (ESC) as a candidate *c. elegans*, i.e. standardized omni relevant experimental specimen, for the large-scale interdisciplinary scientific study of large-as-life *video* gaming competition. The science of ESC is thus natural and social, structural and cultural, computational and hermeneutical, political and technological, positivist and activist, efficiency-seeking and oriented towards diversity.¹²

¹² See G. Yair, “Unite Unite Europe: The political and cultural structures of Europe as reflected in the Eurovision Song Contest”, *Social Networks*, 17, 1995, 147-61; G. Yair and D. Maman, “The persistent structure of hegemony in the Eurovision Song Contest”, *Acta Sociologica*, 39 (3), 1996, 309-325; P. Le Guern, “From National Pride to Global Kitsch: the Eurovision Song Contest”, *Web Journal of French Media Studies*, 3 (1), 2000; D. Lemish, “My Kind of Campfire”: The Eurovision Song Contest and Israeli Gay Men”, *Popular Communication*, 2(1), 2004, 41-63; M. Haan, S. Dijkstra and P. Dijkstra, “Expert Judgment Versus Public Opinion – Evidence from the Eurovision Song Contest”, *Journal of Cultural Economics*, 29 (1), 2005, 59-78; D. Fenn, O. Suleman, J. Efsthion and J. Johnson, “How does Europe Make Its Mind Up? Connections, cliques and compatibility between countries in the Eurovision Song Contest”, *arXiv:physics/0505071* v.1, 10 May 2005.

An alternative and most contemporary historical incarnation of that very computational monster of economic techno-science, the “Keynesian beauty contest”¹³, the ESC is also the epitome of *kitsch* aesthetics¹⁴ and *camp-queer* politics.¹⁵ If reflected through the camp-kitsch-queer mirror of the ESC, scenery and scenography would thus be key for our project: Shall we play Computer-assisted Total Queen Tournament Chess in the middle of a futuristic scenery made of laser beams, synthetic nature sounds and windows to the galaxy? great monumental pharaonic-like, perhaps? retro? art-decò? abstract-minimal? expressionist? audio-visual? hiper-digital? wood? steel? silk? plastic? cristal? white-light? dark-shadow? rainbow-colourful? Let’s put players in high places, hanging above spectators; or else let’s place spectators above players playing underground in jail-like cubicles with cristal ceilings. Give’em, players, spectators or both, special clothes (T-shirts, caps) and full costumes (red russian army, muslim student, christian warrior, orthodox jewish jeweller, chinese zen professor, robot replicant, apocalyptic monster, african noun, Eurojunior freak, *Blade Runner*, *Star Trek* or *Star Wars* character, etc.)

Because Computer-assisted Total Queen Tournament Chess can be thought of as a *transgender sport* (see II. 2. above) the broad aesthetics of the event should be consistent with the recieved imagery of *transgender worlds*, these dangerous moments of *total fun*. And we should have a team of professional scenographers to work out the fine details where the worldly meaning of this thesis could possible lie.

Hence, were it to leave music in the closet for a moment¹⁶, it is my opinion that the **Vienna Gallery of Research** project could profit at large by staging some seriously funny tournament experiments with this other emergent specimen of the radically *queer*

¹³ In *The General Theory of Money, Interest and Employment*, chapter 12, Keynes describes a model of the stock market as a beauty contest where efficient voting calculates the average general opinion about the average general opinion... about the most beautiful contestant. On the logical and computational paradoxes of the Keynesian beauty contest model of rational forecasting see J-P. Dupuy, “Common Knowledge and Common Sense”, *Theory and Decision*, 27(1), 1989, 37-62.

¹⁴ J.L. Ayllón et. al., *Eurovisión, un fenómeno paranormal*, Pinto (Madrid), Alfasur, 2004.

¹⁵ Lemish, “My Kind of Campfire”, op. cit.

¹⁶ Waiting perhaps for a musical intervention in the history of research about jokes and pranks, an opera featuring works by Aristotle, Freud and Harvey Sacks?

aesthetics of sporting techno-science and the techno-science of sports competition¹⁷:
Computer-Assisted Total Queen Tournament Chess.

¹⁷ See T. Butryn and M. Masucci, "It's Not About the Book. A Cyborg Counternarrative of Lance Armstrong", *Journal of Sport and Social Issues*, 2003, 27 (2), 124-144.

Appendix 1. Tournament sports and tournament computer games with specific observations about chess and computer games

What are "computer games"?

Hypothesis: while good, professional football players do not have to be good playing football computer games, professional chess players *do* well in computer-assisted chess games. Let's test some of it.

A virtual / real comparison between sports:

/ Chess vs. football

// *Fritz 8* (by ChessBase GMBH, 2004) vs. *Football Generation* (by Trecision, 2003)

/// [Chess / computer-assisted chess] vs. [real football / football computer games].

Video-taping my fingers on the keyboard and mouse while playing several games with *Fritz 8*, *Football Generation* and *Age of Empires*. Then compare the audio-visual details in this recording with those of video recordings of real tournament chess ("Carlitos' game") and real football (eg. "el gol de Rivaldo").

On the side of motor abilities, the fundamental physical skills of computer game players and professional football players are very different. While fine and fast finger touching (special patterns of keyword typing, mouse clicking) and small hand movement (joystick driving) synchronised with sight tracking of changing events in a 17" screen are qualifications required to beat the machine in computer-football, you can't play in a real football match if you are not able to use your legs (to begin with).

The later anthropomorphic differences do not hold in the case of chess against computer chess: the motor abilities required to play real chess (using your hand to move small wood pieces across a 50 x 50cm board) are comparatively very similar to those needed to play computer chess.

As for strategic skills (long term and short term memory storage, mental calculations and the like) it seems to me that there is no qualitative differences between the abstract cognitive exploits of high-level computer players (be they those who play computer-chess against the computer-chess numerical engine of *Fritz 8* or those who compete in computer-football with the computer-football numerical engine of *Football Generation*) and high-level professional sportmen (Garry Kasparov or Ronaldo).

What are LAN Parties?

Local Access Network Parties or LAN Parties are meetings in a huge space (conference room, gymnasium or parking at universities and museums) between thousand of young people to play computer games on the net using your own terminal and free broadband internet connections

A model event in Massive Computer (Video) Gaming: The "Campus Party" Co-organised by Futura Networks S.L. (a private corporation sited in Madrid specialized in virtual marketing and cultural leisure services) and the Principe Felipe Science Museum, at the City of Arts and Sciences, in Valencia (Spain), and sponsored by some of the world most prominent software development and Internet services corporations.

The next event, the *Campus Party 2005*, will take place in Valencia from July 25th to July 31th 2005, in a giant (12.800 square meters) tent installed by the main artificial lake in the City of Arts and Sciences, near the Prince Felipe Science Museum (see <http://web5.campus-party.org>) The official web site for the Campus Party says it will register a new record of live participants in a LAN Party, with 5.500 expected inscriptions.

The computer games section of the event has three main sub-areas:

1) Strategy Area, with three main tournaments: *Counter Strike* (by Vivendi Universal Games), *Need for Speed 2* (by Electronic Arts) and *Warhammer 40.000 Dawn of war* (by THQ) (there will be also test competitions to demonstrate new released games (*World of Warcraft*, by Blizzard);

- 2) Sports Area, with other three main tournaments: *Pro Evolution Soccer 4* (by Konami), *Fifa 2005* (Electronic Arts) and *NBA Live 2005* (Electronic Arts) (there will also be duels between computer players and some famous professional football and basket players);
- and 3) Simulation: demonstrations of combat flight simulators and duels between computer players and real air force pilots (software used: *IL2 Sturmovik*, *Falcon*, *Flight Simulator 2004*, etc.)

What kind of computer game is “computer chess”?

Let’s compare computer chess gaming with so called “computer games of strategy”, that is computer games of strategy other than computer chess. Supposing that discipline-specific motor skills are more less equal¹⁸, then what is, in terms of strategic thinking, the difference between playing computer chess with *Fritz 8* (by ChessBase, 2004) and playing *Age of Empires (Gold Edition)* (by Microsoft Game Studios, 1998)?

I have video-taped my hands on the keyboard and mouse while playing games which each of the programs. The comparison between these recordings makes salient the following (preposterous) fact: mouse is the preferential hand-tool to play *Age of Empires* and *Fritz*.¹⁹

When looked at carefully on the screen, mouse movements across the mouse pad tell us very specific things about the content of both “computer games of strategy”, *Age of Empires* and *Fritz*:

1/ During the first quarter of the *Fritz* video, *clicks* on the mouse are done with a characteristically “short” tempo. A general formulaic account of how these short mouse clicks are accomplished by the hand-mouse complex in view on the screen, could begin, for example, by stating that they are clicked *while* hardly displacing the mouse two or three centimeters (thus doing what chess books call “advancing pawns and developing your pieces”).

2/ Then, during the middle and through the final part of the video the mouse “movement and clic” pattern changes visibly. Again summarily described, what we have here are relatively slower “uncertain” clicks, done *while* displacing the mouse through longer distances, laterally, diagonally and in a serpent-like manner, on the mouse pad. These movements (which account for their twin computer chess *moves*) are punctuated by long “searching” movements (or movement pauses) making no clic, thus no move: you are just extending your computer hand to reach to the province of the electronic board where the piece you want to move is; and of course you are supposed to be thinking for longer times. This hand-to-mouse behavior computationally tracks, that is, is the computer chess equivalent of “strategic combinations” (mostly done in the case at hand with bishops, tower and queen). And failed ones, most precisely.

3/ In the case of *Age of Empires*, cause you *should* make use of the two mouse buttons to play the game, the very position of the hand over the mouse is different from that adopted when playing *Fritz*. Then you have the soundtrack of the game (an obsessive ambient theme with machinic-mystery overtones). But then also, for the *trained eye*²⁰ the sharpness of the clicks in this game -the mouse seems to have predatory inclinations, just like those you attribute to the egyptian warriors of the game- is very salient when compared with the “gentle” rapid and slow mouse clicks in the *Fritz* video.

4/ Although the most spectacularly apparent phenomena when comparing the two videos is that, when and if you are not told that the two videos represent two different computer games (and the sound has been switched off), you are let to think by the images that the computer game played is the same in both cases. As I say you need to train your eye with

¹⁸ This is not exactly accurate for, eg., in the case of computer chess “special keyboard typing” skills are not required, while fast and harmonic touch-typing of small groups of key controls could be highly prized in the case of strategic computer games other than chess. On the other hand, repeated, long and minute visual inspection of static or very slowly changing details on the screen, which is very uncommon in the second case, is prototypical of computer chess.

¹⁹ While keyboard, or more exactly some arrays of keyboard keys are the needed tool to *manually* play *Football Generation*.

²⁰ For the purposes at hand, you can train your eye just repeating the alternative viewing of the two videos two or three times.

repeated viewing, but also *be* told about the reality of *Age of Empires* and *Fritz* backing up the “apparent” differences interpretively discovered and analytically formulated in this or any other comparative analysis of the moving images.

Equally, you can view, in a comparative mood, the video-tape of my hands “playing” *Football Generation* at the computer keyboard, and an additional tape of my hands writing an electronic document (about my feelings about the experience of being taped while writing a document on the computer) in/with *MS-Word 2000 pro* (a text processor software).

For those trained in the dactylographic method of writing with both hands, there’s no way to be mistaken: the writing use of the keyboard is apparent in the video (“This guy is writing”). Then, the *Football Generation* “writing at the keyboard” is, comparatively, very poor. But only in one dimension, because when you inspect carefully the typing of computer football, you appreciate, for example, the administration of differential pressure on the right-hand controlled keys (the cursor arrows) and a somehow richer use of the “one press / holding press” key movement pair than computer dactylography.²¹

When considered altogether, these four videos are offered here to try document what does it mean, in practice, to **play** with the computer and to **write** with the computer -I would also say to **work** with the computer. In fact, the very object of our research should now be apparent: some vulgar experiences of *machine-assisted human computation* .

A final observation on the diversity of computer chess commercial packages. I did install at my home PC three commercial computer chess software packages and toyed with them. These are:

Ajedrez Premium (by ChessBase GMBH, 2000)

FX Chess Plus (by Purple Software Ltd., 2002)

Fritz 8 (by ChessBase, 2004)

Playing chess against and playing *with* (i.e. toying with their menus and commands) these three programs it is possible to discover some things about the many ways of playing computer chess: e.g. you can play it (play computer chess against the computer) and *play* with it (play with the computer habilites programmed on the software).

Computer gaming and computer work: from competition to exam

Tournament chess and computer-assisted tournament chess: Chess tournaments as computer games tournaments: computer-assisted tournament chess.

Are offimatics software packages computer games? Is MS-Word a video-game?

Is there any special empirical meaning for the equation of computer writing to computer gaming?

Were we to organise a contest consisting in two hours for writing an essay on, say, the history of computer-assisted chess, with the aid of *MS-Word 2000* (by Microsoft), would we call it *an exam*?²²

²¹ Sorry to say that a video tape of any average kid player would show infinitely more subtle, harmonic and coordinated *Football Generation* typing on the keyboard. Almost as subtle, harmonic and coordinated, I guess, as my dactylographic abilities can appear to the dactylographically trained eyes.

²² Competitive mass examinations to select lower administrative staff for corporate and state bureaucracies usually take place in huge university pavilions. The start of simultaneous typing by hundred of speedy computer writers produces a machine race sound that is almost as unbearable for the human ear as that of engine roaring of car circuits. For detailed, comparative praxeological studies of piano playing, dactylography and video gaming see D. Sudnow, *Ways of the Hand: The Organisation of Improvised Conduct. A Rewritten Account* (Cambridge, MA, MIT Press, 2001); *Talk’s Body: A Meditation between two Keyboards* (New York, Knopf, 1979), and *Pilgrim in the Microworld: Eye, Mind and the Essence of Video Skill* (New York, Warner Books, 1983).

Appendix 2. Chess, computers, cameras and microphones. Fast survey on chess movies scenery

1/ *Innocent Moves (Searching for Bobby Fischer)*, by Steve Zaillian, 1993.

Movie type: Fiction.

Generic chess topics: Human chess without computers, child beating father, tournament chess.

Other generic relevant topics: Parent-children relationships, child sports as education obstacle or opportunity, father as professor-trainer, professor-trainer as father

Cinematically preferred chess objects: blitz, ending, (trivial) chess problems, chess clocks, the-final-game



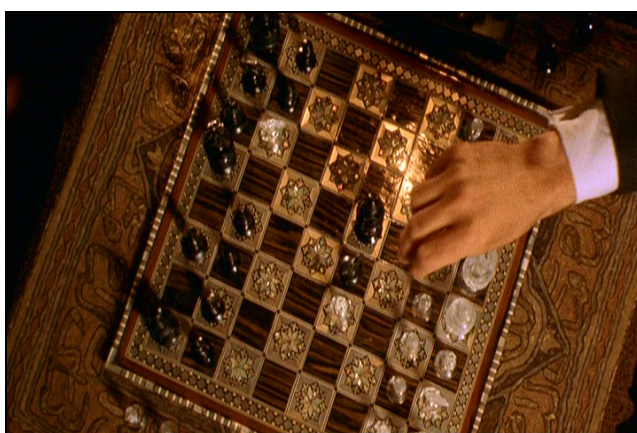
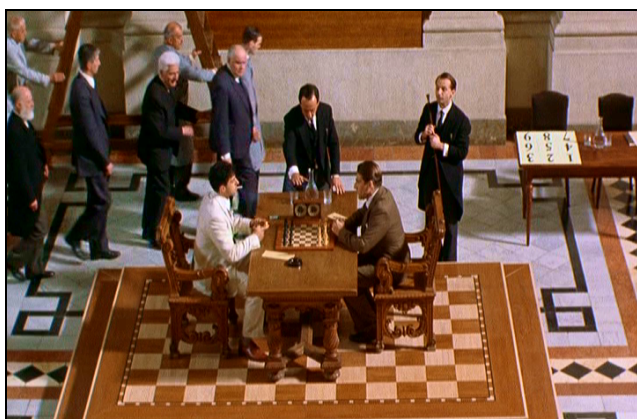
2/ *The Luzhin Defence*, by Marleen Gorris, 2000.

Movie type: Fiction.

Generic chess topics: child beating father, tournament chess, gender and chess

Other generic relevant topics: father as professor-trainer, professor-trainer as father, love?

Cinematically preferred chess objects: (trivial) endings, (trivial) end combination-sacrifice, chess pieces, chess clocks, chess officials, notation (word and paper), the-final-game, simultaneous chess, blind chess



3/ *Game Over. Kasparov and the Machine*, by Vikram Jayanti, 2003.

Movie type: Documentary.

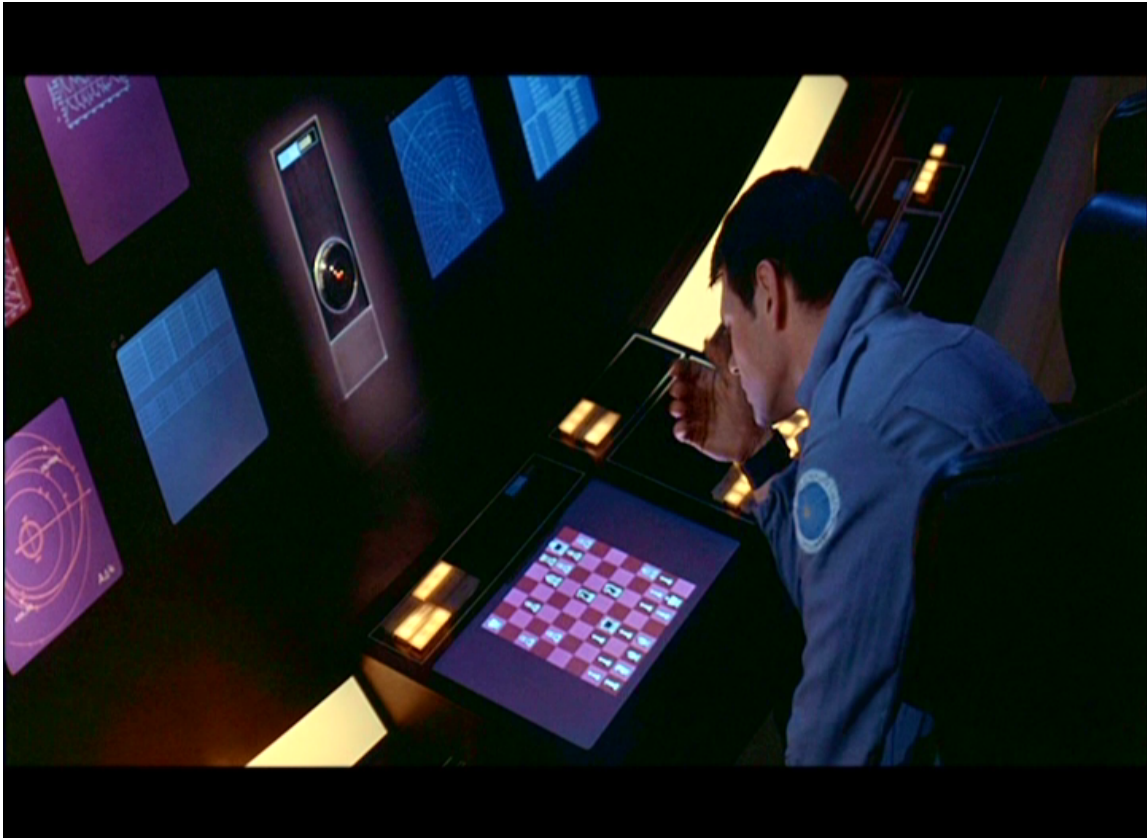
Generic chess topics: Computer assisted human chess, tournament chess.

Other generic relevant topics: The politics of corporation accountability for fraud compared with the politics of totalitarian state bureaucratic apparatuses; humor as the vehicle of fury about unfair intellectual competition (e.g. Kasparov bitter jokes in the press room scenes: "Maradona's the hand of god", etc.)

Cinematically preferred chess objects: blitz, critical moves, the face of the player and their psychological looks, chess automatons.



4/ The scene of the (not so spectacular) ending moves of a chess game (replica of Roesch-Schlage, Hamburg, 1913) between Bowman, one of the spaceship men, and the computer HAL 9000 in Stanley Kubrick's *2001, A Space Odyssey* (1967).



5/ The scene from Ridley Scott's *Blade Runner* (1982) in which Roy-Batti, the replicant, tells the genetic assistant designer J.F. Sebastian how to win (spectacularly) the ending of his chess game (Anderssen-Kieseritzky, London, 1851, know as The Immortal Game) against Batti's very father: it's "maker", the genetic engineer Eldon Tyrell.



Note I. Computers and replicants

Materials 4/ & 5/ could be fruitfully compared in terms of film aesthetics, or *scenery* to be more precise. On the one hand, it is very telling that Kubrick science-fiction chess scene is now (2005) seen as ancient (i.e. 1970-80) human-computer chess. If not the futurist voice interface (Hal processes the voice of Bowman and plays its own part in the conversation with too much ease for present parameters), the looking of the computer screen (bare chessboard with pieces, no added windows for analytical engines, variants tracking, etc.) has been at least outdated by contemporary chess computer interfaces.²³ But then *Blade Runner* is no less a science-fiction movie than *2001*, and the chess scene in this second film seems to be taking place in a very different historical-cultural environment. The chess ending here is played in an immemorial (though photographic, anyway) atmosphere of candle lights, warrior chess figures, clown costumes and royal beds. Thus it has something of an a temporal, archetypical or mythical-poetic look to it. No computer machines nor Turkish puppies can be seen to play chess against the engineer Tyrell, though there's this more disturbing mechanical being whispering the right moves to J.F.: a so-called "replicant", a genetically engineered synthetic human being which, apart from being handsome and athletic, plays chess at a genius level.

Note II. Child beats father

The theme of the defeat of the father by his own son at the kings' game appears repeatedly in chess books and chess movies (it appears in elements 1 and 3 of our little sample, and also in element 5 under the guise of "replicant beats maker"). Stories of child's victory over father at chess address in a particularly conspicuous form the obscure mysteries of mythology-inspired deep psychology: kingship relationships as the origin of culture, the violent nature of family love, hero's live quest starting trials, etc.

²³ M. Campbell, "An Enjoyable Game": How HAL Plays Chess", in D. G. Stork (ed.), *HAL's Legacy: 2001's Computer as a Dream and Reality*, Cambridge, MA, MIT Press, 1996, chapter 5, offers a detailed technological assessment exercise of this scene from the point of view of mid-1990s' frontier computer chess machinery engineering.