

In the loving memory of
Greg Hjorth



14th June 1963 - 13th January 2011



Tributes to Greg Hjorth

Intractable, in a strong sense: memories of Greg Hjorth.

Somewhere in Greg's house, among its rusting woks, its half-finished proofs scrawled on envelopes, and its felt-covered cat scratch tree, there must be a picture of him, aged seventy or eighty, a picture of his old soul.

There must be a picture like that, because for the last ten years, Greg seemed to be getting younger. Everytime I saw him, in Melbourne or Los Angeles or elsewhere, he seemed leaner, more tanned, more ready for an all-nighter.

The work kept him young, mathematics so rarefied that he once remarked that it was 'twenty years since he'd seen a number'. The justly deserved professional success, from the Sacks Prize to last year's Tarski lectures was another factor, though to say he was modest about his achievements would be to commit a category error — it simply never occurred to him to mention them. The only time I saw him excited about an accolade was when a fellow Australian won the Fields Medal, the maths Nobel.

Mathematicians are well-known as people who study basic functions without being able to perform them. Greg, by contrast, was always multimodal.

He was already famous when I met him in 1985, the already-retired chess champion who'd played Kasparov, but had taken his own later advice that if 'if you're not in the top 100 by 21, get out'.

Now he was doing maths, living on air, barrelling around town in a four dollar beige raincoat, paying his way by hustling chess games at ten dollars a pop in a room above a snooker hall.

At all other times he studied — working harder than anyone I've ever met, pushing a wardrobe across his bedroom's one window to block out the light, and fine-tuning his concentration with Nick Cave and Black Sabbath, emerging every twelve hours to cook tofu. As you do. This continued for months on end. He married a lesbian to qualify for student assistance. As you do. Avoided drugs until he was 25 and past Einstein-level genius age — at which point he inhaled a garbage bag of nitrous oxide. As you do. As we did.

Such reminiscences could run until nightfall. They involve a thousand thousand conversations about philosophy, maths, chess, politics, logic, women, music, cats and more. They were conducted over many years, over endless bottles of Stone's green ginger wine, bought first for value, more recently for nostalgia, booze so cheap and sweet even teenage girls wouldn't touch it. Nor us, at that point. Later, as he tackled a series of logic problems many judged insurmountable, he found a number of women who were pretty much the opposite. Those are stories for another time.

To say I learnt a lot from Greg that, and other, years would be to put the proposition in non-commensurable terms... or something. A dimension of my selfhood is simply bound up with his and defined by it, and I hope his was to some degree by mine. Had I not met him I would think different things, be other and lesser than I am, the basic axiom of friendship.

And quite aside from the pleasure of propping up a bar with him, was to take in the commitment he had to what lay beyond the ethereal realms of set theory to which he had devoted his life. That was the idea of truth, of a commitment to it, a fidelity to it. It was of a piece with his refusal to consent to the suffering of animals, and the veganism that resulted from it — which was simple, unostentatious and absolute, because it derived from truth.

Such a path is not without cost. The maths he pursued was impossible to explain to other mathematicians, let alone the lay public. To trek to the heart of it was to enter an austere order. Though he was resolutely atheist, Greg's pursuit was more than a little monastic, though in his extracurricular activities he was anything but monkish.

Among the many achievements of that pursuit was a concept now known as ‘Hjorth’s theory of turbulence’. In recent years, Greg’s personal life had more than a little turbulence of his own.

Among the many sorrows of his passing, is the knowledge that he was beginning the process of change, addressing some of the things in his life that were leading him into contradiction.

I suspect that created a bit of turbulence for those around him too, but he had started on a journey to something more, and he was too smart not to realise that he’d been stupid about some things. He was so much older then, he was younger than that now — and I wish passionately that he had lived, so as to fully have that renewal.

Instead there is simply this void, this infinity. The conversations that will not be had, the ideas not discussed, the bars unvisited. For me, and I suspect for many here, the universe has lost a dimension with Greg gone. I give thanks for his life and friendship. His work is a complete set, but our losses are uncountable.

Guy Rundle





Greg Hjorth received his Ph.D. in 1993 at the University of California, Berkeley under the supervision of Professor Hugh Woodin. Already as a graduate student, he was recognized for his exceptional mathematical talent and his brilliant thesis was awarded the first Sacks Prize from the Association for Symbolic Logic (ASL), the main international professional association supporting research and critical studies in the discipline of logic. This prize is awarded yearly for the most outstanding doctoral dissertation in the field of mathematical logic worldwide.

After receiving his Ph.D., Greg Hjorth was a postdoc at the California Institute of Technology for two years and then he was appointed to the faculty of the department of mathematics at the University of California, Los Angeles (UCLA) in 1995, where he was Professor of Mathematics. Since 2006 he was also appointed to a prestigious ARC Australian Professorial Fellowship at the Department of Mathematics and Statistics at the University of Melbourne.

During the last 15 years or so, Greg Hjorth made a series of stunning and far-reaching contributions to mathematical logic and its applications to other fields of mathematics, in particular the theory of dynamical systems. These included the development of entirely new theories, such as what is now called Hjorth's theory of turbulence, which has had a major impact in contemporary work in set theory and its applications. He has also been known as a brilliant problem solver, having been able to achieve major breakthroughs in problems that were previously considered intractable, including his remarkable work on the famous topological Vaught Conjecture or one of his most recent results on the incomparability of treeable equivalence relations. His work constantly amazed his colleagues with its uncanny originality and technical wizardry.

Greg Hjorth's work in mathematical logic has been recognized by many honors, including a Sloan Foundation Fellowship in 1998, an invitation to the International Congress of Mathematicians in 1998, the Karp Prize of the ASL in 2003 (awarded every five years for a connected body of research, most of which has been completed in the time since the previous prize was given), and, just last year, the invitation to deliver one of the major lecture series in logic, the Alfred Tarski Lectures at UC Berkeley.

Greg Hjorth has been acknowledged for many years now as a world leader in the field of mathematical logic and its applications, where his work has made an enormous and lasting impact. His influence on his colleagues and students, both at a professional and personal level, has been immense and the outpouring of sympathy that I have seen over the last few days from many mathematicians across the globe attest to the great loss that we all feel at the passing of such a brilliant colleague and a most gentle, generous and caring man.

Professor Alekos Kechris, California Institute of Technology





Family and friends. Greg passed away last week but the memory of his integrity and humanity will stay with us.

I first knew Greg as a brilliant honours student in mathematics and philosophy at Melbourne University in the early 1980s. He was also one of Australia's most outstanding young chess talents, reaching the ranking of international master.

On a visit to Adelaide about five years ago, Greg and I met again. I was extremely impressed both by what he had achieved in an outstanding academic career, reaching full professor at UCLA before 40 and by his warmth and genuine interest in everyone he met.

Since Greg was keen to return to Australia, I encouraged him to apply for an Australian Professorial Fellowship to come to Melbourne. There are only a handful of these awarded each year, but Greg put in a typically superb application and was immediately successful.

Greg became part of the fabric of the department of mathematics and statistics. He rapidly built up a group of students and collaborators at Melbourne — who were attracted not only by his enthusiasm and fantastic talent, but also by his friendliness and approachability. Greg kept up contact with his colleagues at UCLA and supervised his remaining UCLA PhD students to completion, including Inessa Epstein, who was awarded the prestigious Sachs award for the best thesis in logic in 2008.

Greg was always quick to volunteer when there were extra tasks to be done. He taught very high standard honours and masters courses and was a key part of the team, which designed analysis courses for the Melbourne model. When difficult decisions had to be made by the Department, Greg always fully participated and had a highly intelligent and sensitive attitude towards the needs of others. He was a natural mentor to younger staff and students.

Australia has produced mathematicians of outstanding ability and Greg was amongst our very best. We were fortunate to have him as a colleague at the height of a brilliant career and he will be deeply missed by everyone who had the fortune to know him.

Professor Hyam Rubenstein, University of Melbourne



I first met Greg when I was in secondary school and I heard that Preshil Primary School had a young boy who was a bit of a chess wizard. Because both Preshil and my school, Era, were so called 'experimental' schools, there was a relationship between the two, with Era getting a lot of Preshil children whose parents wanted progression into a secondary school with a similar framework.

I organised a four game match with the diminutive champion, and after winning the first three games was stunned to be beaten in the fourth game. He could hardly see over the table at that age! I remember telling Greg that he had a lot of talent and should play tournament chess, and that Greg seemed quite surprised and interested. Needless to say I saw a lot more of Greg over the chessboard in the ensuing years!

I'll say a little about Greg's chess, as that is where our lives intersected, and it was important to him, as to nearly all serious tournament players. Greg was a chessplayer with a deep appreciation of the artistic side of the game and he played games of great beauty and subtlety. Interestingly he combined a strong competitive drive with quite a dreamy, dissociated demeanour at the board, almost as if he was playing in a mild trance sometimes.

Something Greg and I had in common as youngsters was a penchant for going barefooted, something that sometimes got us into trouble with tournament officials. In my nonsense poem, "Waverley versus Mars" I recall there was a verse about Greg which ended with the lines,who perched upon his chair, and wouldn't do his laces up, because his feet were bare. Greg had a refreshingly anti authoritarian streak which I have more than a suspicion caused him grief in the increasingly hierarchical environment of Melbourne University.

One night Greg and I were playing in an A grade interclub match but our Team Captain had forgotten to tell Greg he was rostered to play. In those days the time limit was 40 moves in 90 minutes, but if you weren't at the board within the first hour you lost on forfeit. With about 20 minutes left before forfeit our Captain rang Greg to see where he was, only to find Greg was already in his pyjamas! Amazingly Greg did a fast change, like Superman in a phone booth, jumped on a tram and arrived with literally less than a minute remaining before forfeit. With only 30 minutes remaining on his clock against his opponents hour and a half, Greg whipped out the swashbuckling Belgrade Gambit and achieved a crushing victory. That kind of charismatic performance, and his attacking style and exceptional results at a very

early age, helped to create a larger than life mythology around Greg in the chess scene that persists to this day.

Greg loved, and was well read in, philosophy. He also loved a good argument. I remember once driving to Canberra from Melbourne for the Doeberl Cup and shortly after we left, Greg and Darryl Johansen started arguing some philosophical point. I swear they were still arguing what seemed to be the same philosophical point when we arrived! I don't believe either has ever been defeated in an argument. Darryl was kind enough to be on the receiving end of Greg's 'immortal g-file game'. No doubt Darryl would be able to recall the origin of the saying, "Strong move, Gregory!" I can't remember where it came from.

Unfortunately (for Australian chess at least), Greg's genius for mathematics took him to the United States, where he carved out a distinguished academic career, earning the title of Professor at (I think) UCLA. His chess seems to have gone on the backburner for quite a while. He had already earned the title of International Master and was widely regarded as someone who would inevitably attain the Grandmaster title, but as often happens, other talents and interests intervened. For decades his old friends and sparring partners didn't hear much, though there was a frisson of excitement when he reappeared in a few tournaments in the United States, still playing at a high level. When George Bush junior was elected I received a one word email from Greg that said only, "Aaaaaaarrrrrrrrh!"

Then Greg came back to Australia and we had the great pleasure of becoming reacquainted. Greg admitted to me that when we were young chessboard rivals there were times he hated me, and we laughed about that. We had so much shared history, so we were both very happy to reconnect, and any past rivalries only added to the texture of our friendship. People who have grown up together and shared travel, triumphs, defeats and defining experiences like representing Australia at Olympiads, can find that the intervening years are trivial, and so it was with Greg. He was one of the few old friends from chess I was able to invite to my small wedding, but due to his travel plans it wasn't to be.

When I heard yesterday that Greg had died suddenly I was deeply shocked. Why do the brightest stars often go too early? My deepest sympathies go to his loved ones. Greg was a person of great complexity, with a great capacity for warmth and love. He would greet his friends, male and female, with a big hug and usually some

greeting like, “I’m so glad to see you”. He was an unforgettable person, with a diverse and eclectic group of friends. His brilliant mind, inquisitiveness, love of philosophy and humour will be missed by so many of us.

I’m not part of Greg’s family, who must be devastated, I’m just a friend and fellow chessplayer, yet I feel like a unique part of the jigsaw of my life has gone missing.

Rest in peace, Greg.

Guy West





