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Remembering Rein Arndt, 1929–2020

Reinhard Richard Arndt died on 1 January 2020 at the age of 90, and 23 years after his retirement from his presidency of the Foundation for Research Development in 1996. A detailed account of Arndt's professional career is given in Christopher Vaughan's book *A Biography of the Academic Rating System in South Africa* (National Research Foundation; 2015). This collage of personal tributes and reminiscences commemorate the passing of a remarkable man who played a significant role in the development of science in South Africa.

On 1 January 2020, the Arndt family lost a husband, doting father and grandfather, who was immensely proud of his daughters and grandchildren. South Africa lost an intellectual giant, a visionary and maverick who could be both intimidating and inspiring in equal measure, a philosopher who was stimulated by works written by English, Afrikaans and German thinkers, but sadly one who was not necessarily given fitting recognition for his transformational achievements, even though his very nature would have rendered him embarrassed by any such recognitions. Like many other young people that Rein seemed to continuously attract to himself, I lost an inspirational mentor who transformed my life, offered me the world to conquer and became a lifelong friend.

These words were part of a poignant eulogy delivered by Dr Khotso Mokhele at a service to commemorate the life of Dr Reinhard Arndt, held at the Lutheran Church in Stellenbosch on 14 January 2020. Talking about the depth of their friendship, Mokhele said: 'I was the son he never had.'

Mokhele, who succeeded Arndt as President of the Foundation for Research Development (FRD, now the National Research Foundation/NRF), presented a moving account of their joint professional and personal journeys, and a captivating glimpse at the people and imperatives that shaped South African science history. He explained how Arndt's visionary thinking changed the research funding landscape and helped to make South African science internationally competitive. Mokhele also paid tribute to Arndt's determination to advance the careers of black academics and historically black research institutions, and outlined how Arndt brought the former technikons into the research fold and built bridges between research and industry.

Read Mokhele's full eulogy [here](#).

Rein Arndt – The exceptional mentor, by Marina Joubert

Early in my career, I was privileged to work closely with Dr Rein Arndt for about 7 years – a period that marked a special and exciting time in the history of science in our country. I joined the CSIR in 1990, months before the FRD became an autonomous science funding agency. As the inaugural President of the independent FRD, Dr Arndt spearheaded a wide array of new initiatives that would shape the South African research landscape for years to come and earned him a reputation as one of the outstanding science visionaries of South Africa.

Rein was instrumental in the development of the unique system for the peer evaluation and rating of researchers in South Africa. This system, designed to recognise and reward exceptional and promising researchers, remains in use 30 years later at the NRF. The core idea of this peer review system was to identify excellent researchers, based on their recent track record, and then to support them to reach even greater heights in future. He carried this philosophy through to his core staff members. He challenged us to deliver and he provided us with the resources we needed to do so. I was encouraged and empowered by his favourite bit of advice: 'Rather ask forgiveness than permission!' His example and unwavering commitment to excellence undoubtedly inspired his team to work hard and to give our absolute best. Amongst us we joked that one could tell Rein was on leave when he came to work without a tie.

In my experience, Rein was one of the first science strategists in South Africa to recognise the importance of closer dialogue between science and society. He supported the notion of public communication of science enthusiastically, long before its value was recognised in mainstream science policy. Under his leadership, the FRD started the process of proactive communication about the research funded through its grants, reaching out to the mass media and many different sectors of society. Driven by his passion for inspiring future scientists, we organised a series of unforgettable 'Prestige Lecture Days' at which promising learners and students could engage with global science leaders and Nobel laureates.

His mentorship and our friendship continued for many years after his retirement. I cherish the memories of our conversations in his study at his Pretoria home, and later in Stellenbosch. It was immensely enriching to draw inspiration from his razor-sharp intellect and extensive knowledge of not only science, but also history, politics, philosophy and the arts. As the grandson of German missionaries on both sides, Dr Arndt knew this part of South African history in detail, and told fascinating stories about the roles of German missionaries, his own grandfathers included, during times of war and depression in the country.

His legacy will live on in the lives and careers of many scientists who were inspired and supported through his passion for young scientific talent and leaders in the scientific world.

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Rein Arndt – The man, by Helgard Raubenheimer

The formal career of Rein Arndt has been sketched skilfully and in detail by others. Here I would like to pay tribute to Rein Arndt, the man and scientist, as experienced by myself, a younger colleague at Rand Afrikaans University or RAU (now University of Johannesburg), and whose path subsequently often crossed that of Arndt's.

As a result of his physical size, Arndt was an imposing figure, but he was also an impressive individual and an exceptional leader. Although he was not a natural orator, he was able to use his positive attitude to life and his unusual power of persuasion to convince others of his view. He was surprisingly engaging and a good listener, and this created confidence and self-confidence in younger people and students. He was never disparaging, but always searched for the positive on which to build. His strong sense of humour was contagious. Yet, his feet were squarely on the ground, leaving no time for daydreaming, pettiness or fretting about trivialities.

Disloyalty was unforgivable to Arndt. However, he was never revengeful, and never held a grudge. Arndt, who acted as a mentor to young staff members and students, often referred to his own role models: Flippie Groenewoud and Chris van der Merwe Brink (both organic chemists), the academic Gerrit Viljoen, and his father, the mathematician W.F.C. Arndt. And from his time at the ETH Zurich (formerly known as the Swiss Federal Institute of Technology), Arndt fostered the ideas of philosopher Carl Jung. He remained an active member of the Lutheran Church until his death.

Arndt was passionate about his subject, organic chemistry. At RAU he was in the laboratory daily at 07:00, white jacket and all. During his three sabbaticals, he insisted on working in the laboratory amongst the students. When at Cambridge, in 1978, this unusual behaviour met with the utter astonishment of his host, Stuart Warren, author of *Organic Synthesis: The Disconnection Approach* (Wiley; 1982). Rein's best work – on alkaloid extraction, characterisation and synthesis – was done in the 1960s and included a few highly cited articles in collaboration with Carl Djerassi of Stanford University. He continued to publish while he was at RAU and Stellenbosch.

When required, Arndt could act quickly and decisively. When laboratory manager at RAU, Hannes Bezuidenhout (at about 100 kg), suddenly collapsed from cyanide poisoning; Rein picked him up and carried him down the fire escape to the parking lot and took him to hospital. A life was almost certainly saved.

Chris Garbers' invitation to Arndt to become Vice-President of the CSIR paved the way for the establishment of a separate research foundation – the FRD, with Arndt as the first President. Arndt had big ideas and, as described elsewhere, he knew how to set them forth persuasively. The FRD, which led to the establishment of the NRF, was his greatest achievement and for it he was suitably honoured in various ways.

His family was very important and dear to Arndt. He instilled the same values and attitudes in his home as he did in his work. One of his daughters told my son: 'My dad says we can do everything better than any boy.'

Arndt loved sport. In his department at RAU, he arranged numerous friendly soccer matches in which he keenly participated, and he played squash until he was in his 70s.

Rein Arndt, the man, will be missed.

Rein Arndt – The man, by Roy Siegfried

Rein Arndt was big, bold and bluff. His bluster was exactly that, being without insult or personal malice. He knew how to get things done, and how to make the best out of things that did not go his way. Subtlety and nuance were not his forte.

I recall trying to explain the LBW (leg-before-wicket) rule to Rein, during the early phase of the FRD's evaluation and rating programme: the batter gets the benefit where there is doubt involved. Rein, not having grown up in a cricket culture, did not get it! Right is right and wrong is wrong. There was no in-between in Rein's thinking. His principles and integrity were rock solid. His sometimes bluntness and prejudice in applying his principles did not sit well with all, but he was never offensive. Indeed, he was a good listener and could be deeply introspective when sifting the counsel that he actively sought before making decisions.

Rein obtained an MBA in addition to his PhD in organic chemistry. He told me that the MBA course did not help him as an administrator of science. Moreover, Rein believed that the world of business was much easier than the world of science, in which competition can be brutally acute. According to Rein, one could default and fail in business and rise again without any stigma. In competitive science, however, integrity was all. Lose it and you fail for good.

Rein's mission in life was to raise the cost-effectiveness and the quality of scientific research in South African institutions of higher learning. It is beyond doubt that he succeeded in this mission admirably. While readily conceding his achievements, Rein's detractors point out that his success was not gained without certain selective losses to the overall science base in the country.

Be that as it may, Rein Arndt's positive legacy was built on a cultural revolution initiated and implemented by him. Central to its staying power is integrity – the kind of integrity and steely resolve that characterised Rein Arndt's life.



Photo: National Research Foundation Archives

Dr Rein Arndt during his time as President of the Foundation for Research Development.