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# Inspired by a Nobel prizewinning father

**Brothers Jonathan and David Katz reflect on the work and influence of their father Bernard Katz, who was awarded the 1970 Nobel Prize—Mark Nicholls reports**

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Their memories are of a devoted father, and a scientist with high and uncompromising intellectual standards. Yet along with the long hours he worked, the travelling and lectures, brothers Jonathan and David Katz also reflect on 1970 Nobel laureate Sir Bernard Katz as a man with a sense of humour, a love of opera and a fine chess player.

Their childhood was one surrounded by science and renowned scientists; people such as their father's laboratory technician J.L. Parkinson ('Uncle Parky'); Alan Hodgkin, Andrew Huxley, and Jack Eccles—awarded the 1963 Nobel Prize for work on ion exchange and nerve membrane excitation—and Stephen Kuffler, Ricardo Miledi, Paul Fatt, and J.B.S. Haldane. Some were even visitors to the family home in North West London.

While David perhaps had the greater appetite for the scientific work, Jonathan remarked: 'I was aware, at an earlier age than most children, of the word "physiology", and roughly what it meant'.

## Refugee scientists

Their godparents were A.V. Hill and his wife Margaret, who had offered Bernard and Marguerite Katz lodgings at one stage. David said the reverence their father held for his mentor A.V. Hill was clear to them from an early stage.

'We knew Dad considered "AV" not only to have been a great scientist, but also of towering importance in the campaign to welcome refugee scientists from Germany before World War Two', he said. 'My understanding of what was then relatively recent European history increased in parallel with any appreciation of the science he pursued'.

Bernard was born in Leipzig in 1911 of Russian-Jewish origin but left Germany in February 1935 amid the dangers Hitler's Nazi regime was posing to Jews and 'found England to be a place of refuge'. Having lost his possessions, but survived, he was accepted as a PhD student by Professor Hill at University College London (UCL).

He later said Hill—already a Nobel laureate having won the 1922 prize for Physiology or Medicine for his discovery relating to the production of heat in the muscle—was the 'decisive influence' on his career.

It was in this environment that the two boys were raised.

## Medicine and languages

David was born in July 1947 when his parents were still lodging with the Hills but by the time Jonathan arrived in May 1950 the family had moved into their own small semi-detached house. The boys went to a local

preparatory school and then University College School in Hampstead where David specialized in sciences and Jonathan in languages.

'By then, I had moved into a science stream at my school and it was almost certainly around this time that I began to know a little more about what my father really did', said David. 'Any knowledge about my father's work on nerve trunk and then on synaptic transmission emerged gradually amidst haphazard childhood recollections like these'.

The brothers were also used to being taken into University College London at weekends when their father needed to keep an eye on the progress of an experiment.

David began his medical studies at UCL in 1965 and studied for a BSc in the Pharmacology Department and went on to become a family doctor, retiring in 2006.

Jonathan, a lecturer in Classics at Oxford University, initially imaged he too would follow a medical or scientific career, but by his early teens he was learning French and Latin, was picking up Russian following his father's visit there in 1962, and later concentrated on Latin, Greek, and Ancient History, as well as studying music.

'My intention was to take my undergraduate degree in Classics and also pursue a career as a professional musician', he added. 'Things turned out a bit differently, because while taking my Classics degree I developed a new interest in South Asia, especially Sanskrit. I eventually took my final degree in that subject too'.

## Nobel honour

Meanwhile, their father's career flourished and having succeeded Hill as Professor of Biophysics at UCL in 1952, Katz and his team worked to unlock the mysteries of how messages are mediated between nerve cells.

This led to the 1970 Nobel Prize in Physiology or Medicine for Bernard Katz, awarded jointly with Ulf von Euler and Julius Axelrod, for their discoveries concerning 'the humoral transmitters in the nerve terminals and the mechanisms for their storage, release and inactivation'.

The work, described by the Nobel committee as 'a fundamental step in neurophysiology and neuropharmacology', is also acknowledged as paving the way for the development of cardiovascular drugs.

Bernard was in California when he was informed of the Nobel Prize, but the brothers have vivid memories of that day.

'I was in my first undergraduate year at University, and the news was brought to me by a fellow student who had heard it announced on the radio', said Jonathan, who recalled his father commenting that he felt numerous other scientists and colleagues also merited the award.

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**Figure 1** Bernard Katz playing chess with his grandson Joseph in 1993.



**Figure 2** Collage shows: Bernard Katz; and a family photograph (from left): Jonathan, Bernard, David, Kalyani and Marian Katz.

'And although the Nobel Prize is widely thought of as a pinnacle of public recognition, my father felt equally rewarded by the Copley Medal of the Royal Society. But we were naturally all immensely proud and delighted.'

David was a second-year postgraduate student in the Pharmacology Department at UCL when Dr Ivor Gartside, a lecturer in the Physiology Department, ran into the research unit with the news.

By this time, Jonathan's thoughts were far from a career in science or medicine, while David—who remembers the ceremony in Sweden as an 'extraordinary experience'—was well along his own path towards a career in medicine.

## Relaxed moments

Later, the brothers recall more relaxed moments with their father.

'It was between school and University', said Jonathan, 'when I was living for a time in Germany and saw him one evening in a reunion with some pre-war friends, that I realised the true cultural base of his habits of speech and his, often ironic, attitudes. The experience that evening helped me to understand him more, and in some ways to engage with him in a more equal way later in life'.

Bernard's experience of living in Nazi Germany had made him 'constantly aware of the dangerous forces arising from declining economic

conditions', but Jonathan remembered how later he was 'very favourably impressed' by the young German students he met on his visits to his former home country.

While there was pressure on both boys to achieve, neither felt that was a result of Nobel Prize.

Jonathan, who continues to teach and writ about Latin, Greek, and Sanskrit languages and also performs as a pianist and harpsichordist, said: 'My father's influence on me has been such that no day passes without my wishing I could have asked his opinion about some subject or other—political, historical, linguistic or so many other things. The conciseness of expression, penetrating intellect, and above all perhaps ironic perceptiveness, are all things I have appreciated more and more as his physical presence recedes into the past'.

## Love of opera and chess

Jonathan and his wife Kalyani, who is a doctor specializing in psychiatry, have a son, Joseph, who works in corporate finance but would often play chess with his grandfather, who died in April 2003, aged 92.

David and his wife Marian have two daughters, Judith, a teacher, and Stephanie, a civil servant, and both remember their grandfather well. He affectionately recalls walking in the Lake District with his father in the 1960s, and also being introduced to opera and the works of Verdi and Wagner.

'Resting properly from his scientific work, he could be companionable', he added. 'I remember listening with him to broadcasts on Sunday afternoons of several Wagner operas. Dad would recline on his bed with a few sets of his work papers nearby, cat on chest, as he explained a few points during the intervals'.

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## Global Spotlights

# The Hellenic Journal of Cardiology: a 64-year voyage of discovery from the cradle of European civilization to the world

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Dimitris Tousoulis MD, PhD, of the Hippokration Hospital, in Athens, Greece is current Editor-in-Chief of the *Hellenic Journal of Cardiology* which has been publishing high-quality articles since 1957. The bi-monthly publication serves as the official voice of the Hellenic Society of Cardiology. It has an acceptance rate of ~20% and features a mixture of reviews, original articles, editorials, and correspondence relating to all clinical and basic science aspects of cardiology. The international edition was first published in 2002.

Former Editors-in-Chief Christodoulos Stefanadis MD, PhD, and Panos Vardas MD, PhD, both took the Journal forward during their tenure, and their efforts helped secure MEDLINE registration for the international edition. The Journal was subsequently indexed by PubMed and ScienceDirect, among others, and was also included in Journal Citation Reports<sup>TM</sup> (JCR) statistics.

When Tousoulis assumed the Editor-in-Chief role in 2015, he engaged the publisher Elsevier BV, aiming for a wholesale rejuvenation of the Journal. He says: 'This included the review process, the publication format and most importantly, the content and quality of published articles.' (Figure 1) Since then, he says, the dynamic international

Journal continues to attract an ever-growing number of articles from Europe, the USA, Canada, Asia, and all over the world in the form of original research articles and reviews, alongside a significant number of editorials and opinion papers from established and recognized scientists in cardiovascular medicine.

Since 2016, the Journal has achieved considerable growth in readership, with almost 43 000 downloads from the USA, 9000 from the UK, and even 6000 from Japan. Articles from the Journal have also gained considerable attention on social media platforms according to PlumX Metrics. More significantly, Tousoulis says, this has led to a dramatic rise in the Impact Factor (IF) of over 400%, from ~1.0 in 2015, to 4.047 in 2019, based on Clarivate Analytics. According to Cite Score Tracker, statistics for 2020 look potentially higher. The *Hellenic Journal of Cardiology* has also risen from 107th position in 2015 to 39th position in 2019 amongst cardiovascular journals.

As the mouthpiece of the Hellenic Society of Cardiology, the Journal represents and reflects the activity of one of the most active national societies in Europe, with 18 working groups, and two national and four regional annual congresses serving >3300 members from

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