Recollections of Professor Manfred Heckl

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Abstract: Professor Manfred Heckl was my friend, colleague, teacher and mentor. It is hard to decide in which of these roles I appreciated him most. I enjoyed all of my encounters with Manfred, at BBN in Boston, in Munich, Cambridge, U.K., Washington D.C., Berlin, Lyon and Senlis in France, and yes, even in Israel. I remember when he called me one Saturday morning to inform me that his son Peter had been born at home. When I inquired about the health of mother (Anna Heckl) and son, he assured me everything was all right and casually mentioned that the doctor was on his way and would be there shortly. While traveling through the Berlin Corridor on the way from Lyon, France to Berlin, Manfred quietly pointed out to me that I should not jest with the guards at the border check points lest they take me seriously. I understood this warning better when I visited the Berlin Wall with Manfred a few days later. On a visit to Israel, he wandered alone, without fear, throughout the Old and New City of Jerusalem. Some of my childhood friends were shocked; they would not have dared. The day we went boating on the Cam, Manfred propelled the boat with a long pole that got stuck in the mud. To avoid falling in the water he was forced to climb the pole. We rescued him in the nick of time; his shoes were already laden with water. In a Munich Fasching, he and Anna appeared as farmers and we danced, drank and ate all night. Manfred and his family were a joy to be with and their friendship has made my life that much richer. In this session, however, I wish to concentrate on just one facet of Manfred. I benefited greatly from his teaching and mentoring skills and I wish to acknowledge these at this time.

THE TEACHER AND MENTOR

Manfred Heckl joined Bolt, Beranek and Newman (BBN) in 1959 soon after receiving his Doctorate from the Technical University of Berlin under Prof. L. Cremer. When I arrived at BBN in 1960, Manfred was already a star in the star-studded environment of BBN. In those days, you had to be outstanding to be an accepted BBNer. On my arrival at BBN I had just finished my Doctorate, but had a minimal background in Acoustics. I found myself surrounded, in addition to Manfred Heckl, by the likes of Ira Dyer, Edward Kerwin, Denis Noisieux, Preston Smith, Dick (R. H.) Lyon, Eric Ungar, etc., and later on by the likes of Shon Ffowcs-Williams, Jim Barger, etc. It became a matter of learning to swim with the best or finding oneself drowning alone. They were all able and willing to teach and guide my efforts to become proficient in acoustics. Whether these efforts bore fruit or not is not for me to say. Having had the best to teach me, I can testify, however, that none contributed more to my progress than Manfred. His mentoring was effective because it was understandable and properly expressed by meaningful examples and powerful analogies. He had a unique ability to explain the question and formulate the answer at the student’s level. He maintained that ability during his whole life. One needs merely to recall his brilliant key-note addresses and invited papers at the various Acoustical Societies’ Meetings and the International Congresses on Acoustics. The brilliance of his deliveries and the fundamental knowledge he had of Acoustics were present whenever you encountered Manfred, formally or informally, on his home turf and/or elsewhere. Although we became colleagues as well as friends, his mentoring never ceased, and much of what I know today I owe to that special man, Manfred. May I mention but a few examples.

- Statistical Energy Analysis (SEA)
  - The concept of the loss factor matrix and the role played by the loss factors and the coupling loss factors in that matrix.

- Structural Vibration And Radiation
  - The influence of fluid loading on the vibration and radiation of immersed structures.
  - The principle of supplementarity of damping and isolation—‘isolate the driven structure and “kill the vibration dead” before it spreads.
  - The radiation efficiency of a baffled plate below the critical frequency under a clamped boundary condition is twice that under a simply supported boundary condition.
  - The significance of the reverberant versus the direct radiation from a baffled plate.
• Propagation Of Sound In Rarefied Gases
  - The explanation of the phenomenon that the more rarefied the gas, the higher the speed and attenuation of sound propagation.

Professor Manfred Heckl had the ability and selflessness of communicating the joy of an emerging idea, notion or concept. You, on the receiving end, felt as if you had discovered it. Clearly, he enjoyed the process of teaching, not by command, but rather, by discovery. Undoubtedly, without reservation, the Acoustic Community has lost the best it had in the passing of Professor Manfred Heckl.