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A memory of Vaughan Jones

Over the course of three and a half decades, Vaughan Jones has significantly influenced the course of my mathematical career. In this context, I now document some of the lesser-known interactions I had with him during the initial phase of our acquaintance.

In 1984, I was a senior undergraduate student at Tokyo with a keen interest in operator algebras. At that time, I had just started the study of the Brown-Douglas-Fillmore theory. It was during this period that a professor in topology introduced me to a preprint of the Jones polynomial. I found myself perplexed, unable to grasp the connection between operator algebras and knot theory. Following this encounter, my undergraduate advisor recommended me to pursue a Ph.D. in the U.S. However, my focus was primarily on noncommutative geometry at that occasion, and I possessed only limited knowledge of von Neumann algebras.

In September of 1984, I had the privilege of meeting Araki at Tokyo. He told me of Jones' rising prominence. Encouraged by this information, I wrote an airmail to Jones, inquiring whether he would consider supervising my Ph.D. studies. His gracious response indicated that, while he was obviously not engaged in noncommutative geometry, he suggested me to apply to either Berkeley or Stony Brook, as he intended to relocate to one of these institutions. I retain this handwritten airmail of his as a great keepsake today. Subsequently, I submitted applications to both Berkeley and Stony Brook, and was offered admission by both, but ultimately, I decided to enroll at UCLA, drawn partly by close acquaintance of my undergraduate advisor in Tokyo with Takesaki and partly due to my ignorance of subfactor theory.

In the fall of 1985, I commenced my doctoral studies at UCLA with Takesaki. Early in 1986, Berkeley hosted a joint Functional Analysis meeting with UCLA. It was during this event that I met Jones for the first time. His presentation left a great impression on me, characterized by his informal yet dynamic style. Throughout my Ph.D. studies, I had the privilege of seeing Jones at various places, including UCLA, Berkeley, Annapolis, Warick, Durham, and Stockholm. Concurrently, Popa joined the faculty at UCLA, and it was through the seminal index paper of Jones and related works that I began delving into the realm of subfactor theory. While I found this field to be exceptionally intriguing, my doctoral research at UCLA was still on one-parameter automorphism groups of the hyperfinite II_1 factor, and my grasp of subfactor theory remained limited yet.

Having obtained my Ph.D. in 1989, I returned to Tokyo to start an academic position. In 1990, Jones visited Japan before the International Congress of Mathematicians held in Kyoto. I vividly recall his attractive and exciting colloquium presentation at Tokyo, which gained an audience that filled the classroom to its full capacity. By then, it was widely understood within the Japanese mathematical community that he was going to receive a Fields Medal, though the formal announcement had not yet been made. Following this event, I attended a satellite conference on operator algebras in Nara and then participated in the ICM at Kyoto. On the morning of the opening ceremony at the ICM, I had the privilege of seeing Jones, who promptly showed me his newly acquired Fields Medal after that. A grand party in honor of his achievement was held in Kyoto, marked by moving speeches given by guests and the laureate himself.

Motivated by my intensive exposure to subfactor theory over the summer of 1990, I sought a Miller Fellow position at Berkeley in the fall of that year, and my application was successful. I commenced my term at Berkeley in the summer of 1991, dedicating myself to various aspects of subfactor theory. While my stay at Berkeley was limited to one year due to constraints in Tokyo, this period brought a profound influence on the trajectory of my career. Initially unskilled in mathematical physics, I acquired significant knowledge across various domains in this discipline, leaving an enduring impact on my research endeavors.

Jones consistently exhibited an attitude marked by warmth, affability, and kindness. Virtually all of my research has been enriched by his formidable influence. His passing has left an extreme void, and I continue to struggle with the realization that he is no longer among us. He will be sorely missed by all who had the privilege of knowing him.

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