Michael Sonis (1936-2016)

"I have a way to solve your problem," said the quiet scholar as I left the breakfast room in an hotel in Groningen during the European Regional Science Meetings in 1982. The day before, I had presented a paper exploring analytically important coefficients in input-output tables and said that I was seeking a more general solution to the problem of identification. We met subsequently over coffee and I arranged for Michael Sonis to spend a few days in Illinois the following year. The conversations were warm, productive and a sense of possible longer-term collaborations emerged. In 1986, Michael became the Fulbright and George A. Miller Visiting Professor at the University of Illinois; joining him as a Visiting Professor was Rodney Jensen from the University of Queensland, another regional input-output specialist. The daily meetings quickly stretched from cursory conversation over coffee to extensive interactions lasting all morning or afternoon. For some weeks, Guy West, also from Queensland, joined the group. One morning, Michael showed up unshaven and clearly sleep-deprived but with the basis of the formula that would become the foundation of the *field of influence* idea (*Economic Systems Research*, 1992). The collaboration continued, with Michael often visiting Illinois two or three times a year until the mid 2000s when Michael suffered a stroke and was unable to travel.

Michael was converted to regional science and input-output analysis during those early days. He started life as a mathematician, first in Odessa, then Leningrad and finally obtained his PhD in Moscow State University in 1967. He always commented about the final class he took there – in applied mathematics – and how it influenced him to consider ways of bringing his mathematical expertise to social science. He emigrated to Israel in 1970 and after a series of temporary positions was appointed an Associate Professor at Bar Ilan University in 1981. In 1987, he was made an Adjunct Professor at the University of Illinois; after the formation of the Regional Economics Applications Laboratory (REAL) in 1989, he was appointed as Research Professor with the word "Distinguished" added in 2001. He retired from Bar Ilan University in 2004 but retained his affiliation with the University of Illinois until his death.

Michael was fascinated with spatial economic structure; some of his early work focused on the central place systems of Christaller and Lösch. In later years, we even managed to write a paper merging these interests within a Miyazawa-style accounting system to capture both hierarchical and spatial interdependencies. It may seem self-serving to say that the times in Illinois were not only his most productive but among some of the most enjoyable of his academic life. He would alight from the non-stop flight from Tel Aviv to Chicago and before we were out of the airport en route to Urbana-Champaign Michael was eagerly describing some new ideas. We would stop for lunch and his only comment was "I would like some meat!" He was anxious to go into REAL and begin his exploration of progress by the students and visiting scholars. He would pull up a chair up next to each one in turn and say "What you do the last six months?" Sometimes these conversations would last several hours, always accompanied by coffee, lunch, or later in the day, a glass of beer or wine. Michael loved the personal and professional interaction in REAL - it also resonated with all the students who were there at the time. Within hours of receiving the announcement of his passing, the emails began arriving documenting Michael's contributions to their nascent careers. He never tired of these interactions – they energized him and he would always return to our shared office with a smile and a remark: "I think he/she really appreciate what I do for the research."

R | E | A | L REGIONAL ECONOMICS APPLICATIONS LABORATORY

Founded 1989

A cooperative venture between the University of Illinois and the Federal reserve Bank of Chicago focusing on the development and application of urban and regional economic models

This is to certify that

Professor Michael Sonis

has been appointed as Distinguished Research Professor in recognition of over a decade of valued collaboration with faculty and students at REAL. This collaboration has resulted in the publication of over fifty books, chapters and articles co-authored with members of REAL. He has brought new insights into the way economies function and has significantly enhanced the intellectual atmosphere in REAL.

Signed:

Urbana, Illinois, USA Geoffrey J.D. Hewings, Director

Date: January 2, 2002

Fifteen years ago, we started on what I now describe as our asymptotic book on new methods to examine hierarchical spatial structures focusing on input-output, social accounting and linear programming systems. Each visit to Illinois would bring the comment: "We must finish the book on this visit." Inevitably, we would work on a chapter and discover some new extensions or dimensions and the elaboration of these new ideas became the focus of our activities. One chapter led to 2 others (a healthy paper multiplier) and upon leaving, Michael would ask rhetorically, "Why we not finish the book this time?" The chapters embraced our joint work in structural decomposition, elaborations of Miyazawa's systems, multiplier product matrices, feedback loop analysis of single and multiple economies, elaborations of key sector analyses, industrial clusters, complication and network analysis, the temporal Leontief inverse, a reinterpretation of some Sraffa idea, socio-spatial non-linear relative dynamics and so much more. The collaboration extended to 3 edited books, 29 chapters and 43 journal articles, the last in 2012. It is amazing to think how a one-sentence exchange in 1982 generated a thirty-year collaboration!

If you have seen the movie "The Beautiful Mind" about the Nobel Laureate John Nash, you will recall the young mathematicians intensely competing with each other as though the space for ideas was finite and the occupation of part of that space potentially crowded-out other ideas. Michael grew up in this environment and although he learned to appreciate the more humane manner of debate in social science, the early formation never left him. I recall meetings where he would remark to me during a session, "Geoff, I can destroy this paper!" I would respond, "Michael, this is a young scholar making his first presentation; if you are going to make some

remarks, do so critically but positively with a smile." When the chair of the sessions asked for questions, Michael would rise "What you did was very interesting; I have some small suggestions for you to improve the paper..." and so he would elaborate. At the end of the session, the young presenter would always hurry over the Michael to thank him for his wonderful comments. Michael would turn to me, "He appreciated what I said." However, the story, with small modifications, would be repeated at successive conferences – he just could not escape fully from the zero-sum world.

Michael grew to embrace input-output systems as a complement to his work on spatial structure. When Philip Israilevich and I presented him with the idea for a new laboratory in social science focusing on analytical modeling of urban and regional systems, Michael was really enthusiastic. He liked the idea of an open environment to maximize interaction and exchange. He was a major contributor to the development and enhancement of the atmosphere that persists to this day. One final story; one morning while visiting at Illinois, he came into the office with a big smile. "Geoff, I find this amazing formula last night!" We discussed the formula and I responded: "But Michael, this formula has no economic interpretation." "So what," he replied, "it is very nice formula!"

Thank you, Michael, for your contributions to science (especially input-output analyses), for your care and devotion in the nurturing of many, many young scholars who graced the space of the Regional Economics Applications Laboratory and thank you to Alla and your family for allowing us to share so much of Michael's time. The love and affection is greater than you know. Michael, you were a REAL *mensch*, *Requiescat in pace*.

Below: Wreath presented at Michael's funeral (February 19, 2016) in Israel. Thank you to REAL alumnus Dr. Moshe Yanai for such a thoughtful tribute.

