Thoughts about Science and Life, Gathered from the Career of Andrzej Wieckowski[1]

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Good morning, everyone.

It is with the greatest pleasure that I greet all of you, colleagues from science, many of you having been my friends for decades. The pleasure comes certainly from seeing you again, and in being among people who understand and love things like Fick's Law, (111) surfaces, and flame annealing. But the real root of today's pleasure is in having been invited to initiate this symposium by speaking in recognition of Andrzej Wieckowski.

We lament that he is unable to join us for the week, for we will miss seeing his relish for the friendship and the science. But the tremendous response to the call for papers is a clear indicator to Andrzej of the warm regard and respect held for him in the community.

All of us here salute you, Andrzej.

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As I was preparing this introduction, I naturally consulted the available biographical information about Andrzej. To my surprise, life seems to have begun for him in graduate school. Perhaps he was born at Warsaw University.

While I say that in jest, perhaps in the core of his identity as a scientist and as a citizen, indeed Andrzej was born at Warsaw University.

His CV declares that he attained a master's degree, a PhD, and a Doctor of Science degree at Warsaw University. After his PhD in 1973, he continued at the University through his habilitation, completing it and attaining the DSc in 1981.

The earliest paper on his list – about 300 publications back – is a joint article in *J. Electroanal. Chem.* with his teacher and mentor, Professor Jerzy Sobkowski: It is Sobkowski and Wieckowski, "A New Approach to the Radiometric Study of Methanol Adsorption on

[1] This text is downloadable at http://faulknerchem.com/speeches_presentations_and_writings/honoring_colleagues . It and other related items are components of the author's archival website (http://faulknerchem.com).

Platinum." This was in 1972. Andrzej has been interested for a long, long time in the interaction of small molecules with metal surfaces – and with reactivity at those surfaces.

Two years later, Sobkowski and Wieckowski published a paper on formic acid at platinum. Still later, in 1979, there is a paper in partnership with Piotr Zelenay on the electrochemical reactivity of CO_2 at rhodium. Both of these publications echo into Andrzej's future, as, indeed, does the body of his work at Warsaw University, leading through his PhD and his DSc. In all, there were about thirty publications, based principally on radiochemical and electrochemical investigations.

From 1983 to 1985, Andrzej worked as a visiting scientist in Art Hubbard's laboratory during the wonderfully exciting time when Hubbard and colleagues were mapping out for electrochemical systems the capabilities of then-new characterization methods of surface science. Andrzej was a principal contributor, and in that era, he acquired an entirely new experimental repertoire.

In the fall of 1985, Dr. Wieckowski became Professor Wieckowski at the University of Illinois. I am pleased to say that I was the department head who hired him, and I enjoyed his company as a colleague in the Department of Chemistry for years afterward.

Andrzej went on to gain a full professorship and to manifest a career of great achievement as he and his students continued to study structure and reactivity of small, important molecules at metal surfaces.

He drove the discovery and application of EC-NMR.

He was honored by this Society by election as a Fellow and with the David C. Grahame Award. There is no finer name than David Grahame's associated with interfacial structure in electrochemical systems.

The International Society of Electrochemistry also named Andrzej as a Fellow and presented him with its Jacques Tacussel Prize and, most notably, its Gold Medal.

The US Department of Energy presented him with the 1992 Prize for Outstanding Accomplishment in Materials Chemistry.

He has also been trusted by his colleagues as North American Editor of *Electrochim. Acta*.

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But Andrzej Wieckowski's life has not been entirely about science.

His family, including his wife Teresa and their daughter, Susan, have ever been central, and remain so. We salute them, too, for what they have enabled Andrzej to contribute to us.

And then there is the period from 1980 until 1983. It was a fateful time in Poland, with scenes and personalities that reverberated around the world.

In August 1980, the Solidarity Movement emerged from the Gdasnk shipyards and swept like a prairie fire across Poland, challenging the totalitarian policies of the government and calling for a freer, more open society. The world watched, stunned. Inside Poland, it must have been a time of turmoil, fear, excitement, and self-examination. A young polish chemist, Andrzej Wieckowski, stepped forward to take a highly visible leadership role for Solidarity at Warsaw University.

He had a lot to lose. He had a family, and he was within sight of his DSc. He was facing a totalitarian regime reinforced by a totalitarian superpower. Elsewhere in Central Europe, previous movements like Solidarity had ended with bloodshed and imprisonment.

In Poland, Solidarity was met by the imposition of martial law in 1981, but the movement did not fade. The young chemist risked much – maybe everything – in his decision to stand publicly, but he was able to contribute, to see important success, and then to go on with his scientific career in the United States.

In the end, after eight years, Solidarity could not be denied. The regime fell in 1989, and a democratic Poland rose successfully in Central Europe. Andrzej must draw great satisfaction from his part in this heroic story.

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In the title to this presentation, I promised some thoughts about science and life gathered from the career of Andrzej Wieckowski. My observations are conveyed with admiration, for Andrzej bet his life on his values – more than once, in my view.

Certainly he did that in Poland as he stood up for Solidarity.

I think he did it again – not literally the second time, but surely so, in professional terms – when he undertook his electrochemical- NMR work in the early 1990's. Those experiments were obviously going to be extraordinarily difficult. It was hard for me to see how he would ever be able to pull an interfacially significant signal out of the background. And I feared that he might ultimately run the risk of over-representation and derision. But he held to his strong standards of scientific performance, and he succeeded.

With his whole life, Andrzej has shown commitment to freedom, truth, and professional integrity. These are fundamental values of science. Every scientist is taught them. Andrzej has lived them wonderfully successfully, because he is also a focused man of extraordinary courage.

We are in an era in which scientists feel real pressures to compromise those values in particular: freedom, truth, integrity. Yet I believe that, in the end, we can sustain public support for science only by building and carefully guarding public trust, which rests on those three values more than any others. Let us use the great example of Andrzej Wieckowski to reinforce our own commitment and to buck up our courage.

As I review Andrzej's career, I also recall the joy he took from science and from collegial relationships extending over decades. Let me close with one of his own favorite expressions of delight when a colleague really understood the main point.

So, Andrzej, I just have one more word about what you have done with your career.

Bingo!