Halpern Memorial: Comments by John Bercaw

- I was a postdoctoral fellow with Jack for about 18 months in early 70's.
- I had never met Jack before arriving in Chicago. I noticed that his routine was to make the rounds of the lab about every month, stopping by asking how things are going. The first time I said that things were going great! We looked at each other for a while, then Jack moved on… I realized that I was supposed to have said much more. Next time I was waiting for him; he spent an amazing hour with me discussing my results and where to take the project. It was then that I realized that Jack was a giant intellect. I regularly knocked on his door to discuss my project. Jack always enthusiastically welcomed of my intrusions. Lorene (RIP), Jack's long time admin, always encouraged me to go on in. Over time I noticed that most of the other group members (mostly from Europe and Asia) were intimidated by Jack and were hesitant to approach him; their loss. Jack and I built a scholarly and personal friendship during my year and a half in his group. He was a genuine teacher to me, showing me how to question how chemical reactions occur and how to study their mechanisms.
- -Jack was as excitable about chemistry as anyone I have known. About 20 years after I left Chicago for Caltech, I recall attending the 8th International Symposium on Homogeneous Catalysis in Amsterdam. There was a session on asymmetric catalytic hydrogenation of olefins at which Jack and Bill Knowles from Monsanto spoke. Jack spoke before Bill. I was seated a few rows back from Jack (seated in the first row as always) during Bill's lecture. Bill was explaining his theory of how the phenyl rings of the chiral phosphine ligand on rhodium interacted with that of the prochiral substrate to encourage formation of the observed predominant diastereomeric complex, and thus produced the major chiral hydrogenation product. I watched with great interest as Jack grew more and more upset with Bill's lecture; his temperature was obvious as his bald spot on the back of his grew redder and redder. At the end of Bill's lecture Jack's hand immediate shot up- he excitedly challenged Bill's assertions

because they were completely at odds with the evidence Jack had just presented in his lecture: the *minor* diastereomer reacts much much faster than the major one, and furthermore the minor (not major) diastereomer produced the observed chirality for the product. I don't think that Bill fully comprehended Jack's comments. Nonetheless, it was Bill, not Jack, who shared the Nobel Prize for Chemistry for Asymmetric Catalysis. Jack taught us all some of the most important general lessons about homogeneous catalysis…kinetics must be investigated in order to fully understand the mechanisms of chemical reactions.

- I owe Jack a great debt of gratitude for being so supportive of me in my career. Jack's support was crucial because he was widely known to be a tough critic, and his recommendations were always candid and completely heartfelt. Thank you, Jack.