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Scientific bibliography, acknowledgements and thanks

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My early work on biophysical aspects of plant physiology and membrane transport benefited much by collaboration with my colleague Benzion Ginzburg. Together we developed ideas and models for the physical and chemical processes responsible for specific binding and transport of ions. I developed further these ideas in my PhD research in Oxford on specific binding of Rb^+ ions by *Chlorella* cells, which was completed in 1960. I developed an original method that allowed me to measure quantitatively very small amounts of specific ion binding by the cells. The binding and competition functions strongly suggested that specific binding of Rb^+ is determined by the radius of the unhydrated ion, independent of the charge or the hydrated radius.

However, I was always more interested in the functioning and evolution of whole, complex biological processes and systems in natural environments. I also realized the power of theoretical and mathematical modelling methods for analysing and understanding such processes. The analysis of complex systems with computer simulations (then recently developed) also seemed to me a very promising approach for the analysis of complex and interacting processes in varying environments, for which there are no effective analytical mathematical methods.

So, in 1964, I started a completely new direction in my research interests and activities. With the help and advice of Professor Y. Bar-Hillel, I got a research associate position with Heinz von Foerster in the Biological Computers Laboratory at the University of Illinois. Heinz helped me to define the basic problems and processes of the optimal use of information in uncertain environments. This work led to my papers on modelling evolution in varying and uncertain environments.

I have been most fortunate for the opportunity and privilege to collaborate over the years with a large number of excellent scientists on a wide range of important topics in evolutionary ecology. I have learned much by these collaborations and I am greatly indebted to all of my co-authors. They contributed important new insights, perspectives and approaches, and the use of powerful modelling and analytical methods. But there are some people who contributed to new developments in my research although I have not written with them, and there are others whose long association with me I must draw special attention to.

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