

## CHAPTER 20

### LEAVING THE LOOP

At a Warm Hearth Retirement Village holiday party in December 2001, one of my colleagues, the Reverend Al Payne, asked me how I felt about being “out of the loop.” My first reaction was one of indignation! I had just sent two manuscripts to scholarly journals, had over a dozen articles in press, and another dozen in review. I had recently agreed to be an editor of a new electronic journal, *Ethics in Science and Environmental Politics*, was on the editorial board of about a dozen other professional journals, was still active in reviewing reports for the National Research Council and the National Academy Press, and was still carrying out reviews for such organizations as the Third World Academy of Sciences, a variety of funding organizations, and the like. How in the world could anyone possibly consider that I was out of the loop? I had more activities of this sort than many faculty members have in the aggregate over an entire professional career.

But Al Payne was a gentle, compassionate man and would not have asked me the question without reasonable, sympathetic grounds for doing so. One response was to recall mentally my earlier involvement in “the loop,” which was quite different from that of other faculty members. Viewed in this context, my particular dissociation from the loop was substantial.

For some years, I had been giving international addresses by means of videotapes or other distance learning systems. Consequently, the part of the loop represented by personal, verbal presentations was over, and, although I had no regrets in making the decision, that part of my career was enjoyable and exciting up to the very end. On reflection, I believe terminating public speaking was a wise decision, despite my tremendous delight and zest from interacting with a live audience. I have fond memories of and enjoyed every minute of public speaking. Videotapes and other distance learning technologies are useful, but do not replace speaking in person.

Another aspect of the loop was keeping in touch with colleagues in other countries, many on the other side of the world, with whom I can communicate almost instantly by e-mail. Some of these colleagues have become good friends, even though it is unlikely we will ever meet. Electronics allows me to remain in this part of the loop longer than I could have when I depended primarily on the postal service and the telephone.

Teaching was not an important part of my professional career from 1948-1961 (although I did teach a 1-year, all-day Saturday class at Temple University). In 1961, teaching became a larger part of my career as a result of summers spent at Rocky Mountain Biological Laboratory in 1961-1963 and the University of Michigan Biological Station after that. In 1966, I joined the faculty at the University of Kansas, and teaching became an integral part of my position there. From 1966 until my retirement in June 1995, I taught at least three courses each year, sometimes more. At some colleges and universities, this number of classes is by no means even an average load; however, in a research university, this number is at least average. I always enjoyed teaching. However, I am definitely out of the teaching part of “the loop” and have fond memories of that part of my professional career.

I essentially gave up consulting in 1993 when I reluctantly decided I should no longer serve on the Environmental Advisory Committee of the Savannah River Site. I had worked on the river survey team of the Academy of Natural Sciences under the direction of Ruth Patrick on this site before the plant was actually constructed in the early 1950s and continued to do so through 1966. Much later, I became a member of the Environmental Advisory Committee. I watched with fascination the ecological recovery of this enormous tract when humans were removed from all but a few areas. Furthermore, I enjoyed serving with the very competent people on both the river survey team and later the committee, which was chaired by Ruth Patrick for almost all of my period of service. Despite my fascination with the ecological recovery and the enjoyment of interacting with competent colleagues, I simply did not have the energy to read through the mounds of material that were essential to informed judgment or advice. After my resignation from the Environmental Advisory Committee, I continued to do a modest level of consulting that could be carried out from

Blacksburg, but nothing more. Again, I enjoyed being in that part of the loop, not because of the money (although it was useful for some professional needs, such as purchasing reprints and the like), but because the consulting brought me into contact with some “real world” problems that I otherwise might not have encountered in such depth. If consulting for money constitutes a portion of “the loop,” I have definitely been out of the loop since 1993, except for occasional events. I do not miss being in the part of the loop represented by paid consulting. I no longer need the money it brought, although it was often helpful to my research program and professional career. The information that consulting brought can now be acquired from the Internet, from reprints and other documents sent to me by colleagues, and, most importantly, through professional service (unpaid consulting). No paid consulting came close to providing the information to which I was exposed as a two-term member of the Report Review Committee of the National Research Council and the National Academy Press. Furthermore, neither has any paid consulting come close to such activities as chairing the committee that produced the 1992 National Academy Press book *Restoration of Aquatic Ecosystems: Science, Technology, and Public Policy*—arguably the best publication with which I have been associated in my entire professional career.

I still continue work in the part of the loop that I consider professional service. I serve on the Panel, Court Appointed Scientific Experts, American Association for the Advancement of Science; am a Scientific Adviser to the Academy of Natural Sciences; review proposals and such for the Third World Academy of Sciences; evaluate the credentials of candidates for honorific positions; and review grant proposals and manuscripts submitted to professional journals. Another large amount of my time has been spent on the 15 professional journals for which I have served on either the editorial board or the advisory board. Some obligations take only a few hours per month, others considerably more.

Another important aspect must be considered when evaluating the degree to which any individual is “in the loop.” I have been privileged to know a number of “24-hour scientists,” among them Ruth Patrick, Paul Ehrlich, Peter Raven, E. O. Wilson, Dan Janzen, and G. Evelyn Hutchinson. I am definitely not one of these completely dedicated individuals, but I have always invested in considerably more time than most of my colleagues at the academic institutions where I have been employed. This expenditure of time began with my first research effort on the Conestoga River Basin where I worked until 1 or 2 am most mornings and through entire weekends. I did not feel impelled to work until those hours, but I wanted to match the performance of my experienced counterpart Dr. Mary Gojdics, the protozoologist on the other field team. Only relatively recently did I realize (as a result of correspondence with Thomas Dolan IV) that other crew members from that era were playing tennis, sightseeing, and so on during weekends. In short, I had personal standards for improvement that required long hours to achieve. However, I must confess to feelings of resentment after this initial stage when I found that many colleagues were spending far fewer hours than I was on their professional positions with relatively little difference in remuneration. We all appeared to be spending comparable amounts of time with our spouses and family, and the difference was in how much time my colleagues had for personal recreational activities that I did not. I also noticed that, regardless of how much time I spent on professional activities, Ruth Patrick almost always spent more. Furthermore, she did not appear to resent the fact that I put in less hours than she did. Finally, I realized that I had the same control over my time that the others did, I just chose to spend it differently. The second thing I learned during this period, mostly by observing scholars that I greatly admired, was that, if I wanted to do something well, I had to take the time to learn how to do it well. I had to pay a price, and I had to accept that paying the price was justified in terms of my personal gratification.

Arguably, being “in the loop” is one of the world’s best manifestations of delayed gratification. Unquestionably, becoming a well known author, acquiring an Olympic gold medal, becoming a Nobel Laureate, and the like are at least an order of magnitude more difficult and equally less likely to “pay off.” Some people become masters of “the loop” by a single conceptual breakthrough, such as Watson’s and Crick’s discovery of the double helix. Most of us, however, advance incrementally, some so slowly that the advancement is hardly apparent, even to the most

charitable observers. Obtaining the average PhD requires a long period of schooling with many hoops to jump through and “gatekeepers” to pass. Even after acquiring the PhD, one is generally only at the point where entering the loop is possible, but by no means certain. In fact, speaking of “THE LOOP” is inappropriate except in rare circumstances. In my own field of biology, many sub-disciplines exist; each with its own loop. The typical situation is that each particular loop is not aware of the degree to which others are masters of other loops, especially any outside their professional discipline. The accomplishments of these people, again with rare exceptions, who are masters of a particular loop, are unknown to the checkout people at the local supermarket, the automotive repair shop mechanics, bankers, and the like—they have their own loops.

So, the answer to the question “how do I feel about being out of the loop?” is that most people did not know what loop or loops I associated with, my mastery of the loops, or the degree to which I have left them. Most of the certificates, scrolls, and medals that hang on the walls of my den in Warm Hearth Village (daughter Karen hung them—their main function is to remind me not to stop taking risks; about once a month I also indulge in nostalgia) are viewed mostly by the cleaning woman who visits periodically to vacuum the carpet and dust the bookshelves. The reality is that I have striven hard to achieve some limited and temporary degree of success in a few of the almost infinite number of loops. During one’s lifetime, one’s awareness of the structure of the loop and the range of loops requires a painful, often almost paralyzing, effort that sometimes is interspersed with periods of feeling overwhelmed by the complexity of the few loops one thinks one can see clearly. However, unless one makes constant, temporarily painful efforts to acquire the necessary new information as the loops evolve, one will be ejected by “the loop,” sometimes without even being aware of its existence.

I decided years ago to take the responsibility for the reallocation of personal time to enter the loop, accepted the responsibility and effort needed to stay in the loop, accepted the “price” of entering new loops, and realized that my time in any loop was finite, although, with effort, the time could be extended and the departure could be gradual. Since what I did in the loop is unknown to most of the people I encounter, gratification must be primarily internal, just as is my responsibility for allocating personal time.

I wrote the following section at one of the darkest periods of my life. Jean’s Alzheimer’s was worsening; we had to leave our beloved woods and house on Bishop Road where we had spent the greatest percentage of our lives; we had too many books to fit into the townhouse so they went to our children and colleagues; and, shortly after our personal move, I learned that I would lose over half of my professional space at the university. As usual, I prepared for a “worst case scenario,” which would have been devastating personally and professionally. The following section originally expressed all my fears and how I would confront them. I have tried to retain the despair I felt while recounting what actually did happen.

In mid-January 2000, Joe Cowles, the Head of the Department of Biology at Virginia Polytechnic Institute and State University, indicated to me that departmental space problems might require that I vacate part or all of the space that I was utilizing for publication and professional service activities. Since Joe had been most supportive of my professional activities ever since becoming department head, I was confident that he would not have alerted me to this possibility unless space pressures were extreme. Some universities have not been funded adequately for at least a decade, and the pressures on space use are enormous. I was relieved that I was not responsible for making budget cutting and space allocation decisions because they would have been anguishing.

Helen Keller remarked that when life closes a door, it usually opens another, and it does not pay to stare too long at the closed door. In analyzing my own situation with regards to the loss of space, I found a book by Slaughter and Leslie (1999, p. 243) to be the most helpful: “because of the disparities among faculty, the concept of the university as a community of scholars will disintegrate further, and management will replace governance. Administrators will be most responsible to those elements of the institution which bring in increased revenues—academic capitalists and students.”

I planned on vacating the entire professional space occupied by both my editorial assistant Darla Donald and me as early as summer 2001. I was ultimately able to retain part of the space, the most essential area where all the manuscripts were stored and where Darla did her editorial work. Retaining this space meant that my writing could continue with relatively minor disruption. The partial loss of my office space, however, was a fatal blow to many of my professional service activities, including the American Association for the Advancement of Science panel already mentioned and being a science advisor to the Academy of Natural Sciences and the Third World Academy of Sciences. Professional service requires an enormous amount of space for books, grant proposals, and the like that are necessary for a particular, although often temporary, responsibility. My office, which I now visit intermittently, was my repository for the stacks of information that I moved as needed to my den at Warm Hearth Village. I have always enjoyed professional service, and I believe it contributes to the academic stature of any university.

John Tanton had regularly reminded me of the desirability of finishing this autobiography. However, I had too often let other people with more insistent voices divert me from the book itself. Additionally, I had been wondering how to end the book (now it ends with an epilogue). As a number of colleagues and former graduate students have remarked that, on the last day of my life, I will probably be writing my last manuscript while being carried into the emergency room of the local hospital. Perhaps this scenario will cause younger scientists to reflect on how they should terminate their professional careers in an incremental fashion if given the opportunity to do so.

My professional space originally contained my office, an editorial office where Darla did all the manuscript work, and a small office appended to the editorial area that housed all the financial records from nearly three decades for the University Center for Environmental and Hazardous Materials Studies, which I had been requested by the university to retain. As space diminished, contents of many file drawers were shredded and dumped into the recycling bin. Also in my office were the raw materials for already published articles, including references, which I typically kept for a significant period of time in case letters to the journal followed publication, etc. These materials were also helpful for books likely to have a second edition published. I had substantial files on persons capable of completing reviews in different categories; some of these sources of information dated back over half a century. I also had space for filing and working on draft reports from the National Research Council when I was a monitor and a variety of other activities requiring substantial space. Even with my planning for this event, both the timing and the short time for transition caught me by surprise. However, I had already decided on a plan to cope with significant loss of space, which involved giving up many professional activities. I had hoped to have an advance warning of three or four months so as to alert the organizations from which I would be resigning so that they would have time to find a replacement. Eventually, I retained only one area for my professional space, which enabled Darla to move to one room all the publication materials for the numerous articles in various stages of preparation and the two books that were at different stages of completion.

I immediately dictated a single letter of resignation to various professional organizations and described the loss of professional space, the short time (less than a month) that Darla and I had available to make the transition, and the rationale for resigning from much of the public service and professional service because of lack of working space. The situation was exacerbated, particularly for Darla, since we had a number of publication deadlines to meet. Much time for meeting these deadlines was lost to us. Not to be outdone, Murphy's Law was fully operative. During this chaotic time, I was placed on an antibiotic as a consequence of an infection from a tick bite. My spouse Jean began experiencing intermittent, severe chest pains and was admitted through the emergency room to the local hospital.

My time for the move and culling of files was limited even more. I knew I had no time to be selective in discarding my files, except to save a folder or two of early pictures from the Ruth Patrick river survey team era and other portions of my career. Professional files from 53 years were discarded, essentially without examination except for a glance at the headings and tabs, in every wastebasket in sight. The kinds of professional service I had been doing made some of these files

priceless since they contained names, competencies, experience, and the like. However, they were only useful in their entirety and saving a selective few would be the equivalent of saving only a few species in an ecosystem.

My professional books posed an even greater, heartbreaking problem. My office was filled floor to ceiling with books. I had extensive collections of both books and reprints on ecotoxicology and ecological restoration, a significant number of publications on freshwater protozoan and community structure, and a significant number on water chemistry, geology, and the like. My townhouse contained the books and reprints on sustainable use of the planet that I had been accumulating over the previous two decades. The decision was difficult, but abundantly clear! I kept the books on sustainable use of the planet and a few books on ecotoxicology and ecological restoration. I sent the remainder to people who would benefit from them. Without the extensive database on people and the extensive personal reprint and book library, I did not feel comfortable continuing in professional service at my previous level because I had always depended heavily on both the files and the publications for this work—I felt very insecure without them. I realized that giving up publishing would be totally devastating for me, so the space remaining was dedicated entirely to that purpose.

I was pained that half a century of accumulated literature and records of collegial relationships could disappear in a few weeks. The university aspires to become one of the 30 top-ranked universities in the United States, and it needed to use the resources available in ways that would enhance the possibility of achieving this goal. I continue the excitement of writing and publishing in professional journals on topics that interest me most with all the resources available to me (book royalties, small grants, and personal funds) to achieve this important goal. As a consequence, I will not voluntarily leave the part of the loop with which I am still engaged. However, if this part of the loop leaves me as far as the institution is concerned (unlikely in the short term), I will attempt to use other alternatives to continue.

I wonder about the progress of my career had this particular space not have been lost at this particular time. I did, of course, fulfill all obligations already incurred, such as acting as monitor on a National Research Council report. Very likely, I would have continued to respond positively to professional service requests as long as my health and other circumstances permitted. On the other hand, projects such as this autobiography always suffered because I had no particular deadline for completion and the professional service obligations all had deadlines. I realized I would have more time for my own publications, writing reviews of books published by others, and reading for pleasure—an enticing prospect, but one that I probably would not have sought had the loss of space not forced me to do so. I embraced the prospect and refused to let the change and loss depress me! I recently have read a wide variety of books on subjects from anthropology to wild minds, and I have indulged more fully my weakness for detective stories.

Often, institutional events outside of one's control force one into changes that, in the long run, prove more advantageous than continuing on the previous course. The primary question in such situations is "does the future look attractive?" and, in this case, the answer was a resounding affirmative!

#### Reference

Slaughter, S. and L. L. Leslie. 1999. *Academic Capitalism: Politics, Policies, and the Entrepreneurial University*. The Johns Hopkins University Press, Baltimore, MD.