

Letter from the Desk of David Challinor
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Whether a scientific organization is as large as the National Institutes of Health (NIH) or is a more modest independent research laboratory with only 10 to 20 scientists, there will always be an individual in charge. The styles of heads of research facilities vary as much as the character of the administering individuals. Nonetheless, certain styles can be characterized; this month's letter will consider some of the pleasures, costs and rewards of administering a scientific research endeavor—an activity in which I worked for more than 25 years with my mentor, the late S. Dillon Ripley, at Yale's Peabody Museum and subsequently at the Smithsonian Institution.

In the decade following my discharge from the U.S. Navy after WWII, I gained valuable business experience by working in a large cotton brokerage firm in Houston, followed by two years of growing this crop on my own 400-acre farm. After my marriage, my wife and I moved to Houston where I worked as a real estate salesman, house appraiser, mortgage solicitor, casualty insurance broker and eventually as a mortgage company officer. The experience acquired from these diverse activities was extremely valuable for administering science because as the person in charge I have had to "handle" people. By this I mean listening sympathetically to their concerns and trying to remedy or mitigate their problems. My experience working with people ranged from Mexican contract laborers to house buyers and eventually Smithsonian scientists.

As a late Ph.D. awardee (47 years old), I realized that I could never author sufficient science research papers to qualify for a teaching position, so I sought to exploit my talents and become a science administrator. Luckier than most of my peers at graduate school, I had a caring mentor, Dillon Ripley, for whom I initially worked part-time while completing my dissertation. Such a mentor was invaluable, because at the time he was director of Yale's Peabody Museum of Natural History. (As an aside, I learned recently that although one can be a mentor, the word "mentee" does not exist because mentor is derived from the wise counselor of that name, in whose guise Athena became the guardian and tutor of Telemachus, while his father Odysseus was away on his voyages.) Those who worked for Ripley, both at Yale and later at the Smithsonian (1960-1987), may remember his administrative style, which was to concentrate his energy on major policy issues which, once determined by him and his staff, were formalized and implemented by the Institution's assistant secretaries and bureau directors. Although I was occasionally at odds with aspects of his operating techniques and character, there is little argument that he put his own stamp on the Institution and its public perception, even to the degree that many still refer to his Secretarial tenure as the Smithsonian's golden years.

From Ripley I learned key elements that I consider essential for the successful leadership of any scientific operation, and all are based on such common sense practices

that they cannot, I believe, be effectively taught in an academic course. A successful administrator either has those qualities as part of his/her character or he/she does not. A critical example is in freely delegating authority. It takes considerable self-confidence to do so, but the rewards are worth the risk. Ripley was particularly generous in this aspect of his administrative style, and I look back with awe and satisfaction at the many times I stood in for him to represent the Institution at meetings, symposia, seminars, conferences, *et al.* When I spoke, it was on behalf of him and the Institution. When he was abroad, one of the Assistant Secretaries became Acting Secretary, a practice that continued until late in his tenure when the Smithsonian, for various reasons, became more hierarchical. To delegate such authority required him to have complete confidence in and loyalty by the designee. He taught me that the more authority one assigned, the better was the resulting performance. A worthy designee, rewarded by the trust and confidence shown by a superior, rises to the occasion. Inevitably, however, a designee will occasionally err—no one bats 1,000%—and the real test of a successful director is how rapidly he/she publicly acknowledges a mistake and takes full responsibility for whatever untoward incident occurred.

Ripley was very good about “taking the rap,” but he also took full credit for most of the favorable actions of his subordinates that brought honor and recognition to the Institution. This was his due, and I never begrudged him this habit because he inevitably followed up the successful event or incident with a short handwritten note of thanks to the person directly responsible. Even in this era of computer driven email, I feel strongly that the handwritten note carries with it a considerably greater expression of appreciation than does an ephemeral email. I acknowledge that my bias here is perhaps generational.

Another important administrative approach is to have an “open door policy.” I would make time to see anyone who made an appointment. This policy had an essential condition, however; whomever I saw in my office understood that I would notify his/her boss that I had met with their subordinate. I would not necessarily disclose the details of our conversation, but the idea was to avoid “the end run” whereby a subordinate might try to overturn a ruling of their immediate superior by appealing directly to a higher authority. Having been “end rounded” myself a few times, I had strong feelings about this practice.

One of the toughest jobs of any science administrator is firing people. Most people like to think of themselves as a good guy, but to the person being fired you are clearly a bad guy. There is no way around this dilemma, but the process can be ameliorated by trying to protect the ego of the person being dismissed. First, you have to assemble a strong case for your action and have the dismissal approved by your own superior. Secondly, you never summon the unfortunate person to your office for the bad news, but rather make an appointment to see him/her in their own quarters. Whenever possible, I sought to retain the person at the Smithsonian in another capacity. As the reader can imagine, the reactions to losing one’s position varied enormously. Some were angry and threatened legal action; others were clearly relieved and welcomed the chance to give up their administrative burdens and return to their labs. In most cases, you could predict these reactions and thus be reasonably prepared to handle them.

One great advantage of being an administrator at the Smithsonian under Ripley was that you did not have to spend energy protecting your turf. Among almost all my colleagues, I was unaware of anyone who wanted my job or my office space. With only one exception, we got along well with each other; destructive and insidious feelings of envy and jealousy among the principal administrators were refreshingly absent.

A relaxed work place is conducive to high productivity and my strong memory while working at the Castle (the Institution's central administration) is of the low tension ambiance that prevailed. Naturally there were times of intense activity to meet unexpected deadlines to assemble data to respond to Congressional inquiries, but such occasions seldom dominated our work days. The reason for this atmosphere was the implicit trust in each other held by those running the Institution. I know this attitude was certainly the norm among the science components of the Smithsonian and can only assume it was prevalent in all the other branches of the Institution.

Along with mutual trust, loyalty up and down the hierarchy is crucial in avoiding the plotting and scheming so prevalent in many large government agencies and corporations. Loyalty was thus expected and nurtured at all levels within the Institution. Disloyalty was rare and, during my tenure, arose only once and was promptly remedied.

A frequent question is how one gets to be an administrator. From my perspective, it is a combination of luck, competence and peer recognition. Having served on innumerable search committees for directorships of museums, zoos and research facilities, I look for candidates who get along well with their peers or, put more concretely, enjoy their respect. To achieve such recognition in the sciences generally requires the administrator to have a Ph.D. in the relevant field. There have been a few exceptions to this general rule, but they are rare. Having a Ph.D. generally begets confidence as evidence that the administrator is indeed a member of the company of scholars. Before directing a laboratory, therefore, it is useful to have worked in one to understand the characteristics needed to make it a successful enterprise. For example, most scientific or academic organizations seek to hire the best and brightest. Good staff attracts such candidates, but there is a cost to gaining a high status. The higher the percentage of top scientists, the greater the effort required to serve them. The administrator's principal job is to support and encourage maximum performance and thus to maintain and enhance the reputation of the facility. The director is also responsible for securing research funds, acquiring essential equipment, ensuring access to pre- and postdoctoral students and finally for adjudicating inter-bureau disputes.

What is the principal reward for being "house mother," public advocate, disciplinarian, performance evaluator, adjudicator, *et al.* to some 400 scientists, a large portion of whom are justifiably *prima donnas*? Thirty years of science administering has taught me that the reward is subtle but real. It derives essentially from being able to witness the completion of long-term goals.

The construction of the Smithsonian's multiple-mirror telescope on Arizona's Mt. Hopkins was one of my most satisfying administrative experiences. My first request for Congressional funding occurred in the early 1970's before Julia Butler Hanson's House subcommittee on Interior and Related Agencies (which included the Smithsonian). Almost a decade's work preceded that request, including design of the telescope, permission from the Forest Service to use the site, negotiation with the University of Arizona to prepare the mirror blanks* and to operate jointly the telescope, and on and on until "first light" was viewed through the completed instrument in 1979. Clearly, many individuals were involved in such a huge undertaking, but being present at both the conception and the completion of such a long-term effort was truly my reward. In my time, building the Air and Space Museum and hiring and working with Astronaut Mike Collins as director was an equivalent satisfactory experience.

In the final analysis, however, I must say that my Smithsonian career has been made memorable and satisfying by the people with whom I have worked—particularly those kindred souls whose insatiable curiosity drives them to seek answers in all corners of the world, from whatever sites they visit or colleagues they contact. Memorable also are the outstanding administrators with whom I have been privileged to work—Sam Hughes at the Smithsonian, Dean Henry Rosovsky at Harvard and Robert White, former Director of the National Oceanographic and Atmospheric Administration. We "Smithsonians" must remember that the beneficiaries of Smithson's bequest are not just the citizens of the U.S., but rather all men or, as we would say today, mankind. That is our incentive—to "increase knowledge" and disseminate research results globally.

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P.S. The topic for this letter was suggested by Professor David Duffy at the University of Hawaii, a friend and colleague from my time with the Charles Darwin Foundation for the Galapagos Islands.

* 72" diameter, hockey puck-shaped quartz/silica disks that are slumped over a mushroom cap-shaped mold. When the mold is heated, the glass disk slumps to fit the mold's parabola to make a concave lens. It is a complicated, time-consuming process that sometimes misfires.