

**As the Presidents See It ...****The Halfway Mark****Harry Leamy, 1983 MRS President**

In writing this retrospective, I find myself unable to limit my remarks to the year 1983. Not only has my personal record of events in that year been long since discarded but, as Russ Chianelli pointed out in his remarks, the MRS presidential experience is a protracted one. In my case, I can only refer to an MRS-intense period of roughly five years, during one of which I happened to hold the office of president. From this vantage point, around a decade later, I find myself struck by how much our Society has changed and by how little it has changed. Let me explain.

In 1983, MRS was animated by a rebellious spirit that was fueled in many of us by the absence of a proper forum for the discussion of our work. The disciplinary societies had no scheduled sessions that attracted the people with whom we wished to converse, and the recognition we sought for our own achievement from our educational cohorts was typically not forthcoming. At that time, only the Gordon Research Conferences represented the sort of gathering we sought. The desire for intellectual intercourse had led originally to the *creation* of MRS, a story best left to earlier presidents to tell. The *spirit* of the society just a decade ago, however, was still one of rebellion and power. MRS was, in 1983, very much an adolescent society. It possessed no institutional infrastructure and only one annual meeting, and was entirely a volunteer organization; workers were motivated by the opportunity to do things in a different and better way than was being done elsewhere.

The concept that all symposia should be topical, for example, was crystallized in 1983. Previously, they had been topical simply because the Society hadn't the support organization to do it any other way. Leaving all decision-making in the hands of individual symposium organizers was a necessity whose intrinsic power really manifested itself as the Boston meeting became increasingly spirited, and as it addressed a wider range of topics. At this juncture, I confess that Rustum Roy had probably *always* known that this was the best way to ensure technical vitality. Rusty was among the early MRS leaders who believed strongly in the "loose federation

of interests" structure that is still visible today. Indeed, 1983 was the year in which a great debate over the wisdom of securing permanent staff for the Society was taken up seriously, with Rusty in the opposition. The institutionalizers prevailed, of course, and the Society was able to rise to new levels of capability with staff support. What has remained the same is the constant renewal that is still afforded by our practice of decentralized decision making regarding topics, formats, and agendas. This is, in my opinion, MRS's most important contribution to its membership.

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The *MRS Bulletin* in 1983 was still being composed and edited in my den with the help of Tim Middleton, a great writer and my brother-in-law. Having some years earlier accepted the task of producing a newsletter for the Society, I engaged Tim on the basis of friendship to

help me. We produced copy from my memory, scraps of paper, and E-mail from colleagues. This scenario continued until, at the end of 1984, a real magazine with articles of technical interest finally emerged. Many people contributed to the ongoing job of creating a community among materials researchers via the *Bulletin*. The need for such a vehicle was seen most clearly by Elton Kaufmann, who took responsibility for its assembly when I flagged. Today, the *Bulletin* is quite professionally produced, but serves the same function: to bring the materials community together via a voice that is uniquely its own.

In 1983, anyone who wanted to work on MRS projects was welcome to do so. Work was plentiful. Ideas were also plentiful. Indeed, MRS attracted people with ideas for "experiments" in scientific communication and education: Symposium X, Short Courses, the Spring Meeting, a European MRS, and Government Interactions all were being proposed at this time. Eventually, each was implemented because someone simply assumed responsibility and did the job. The MRS's Woody Award is testimony to the value placed on performance. Named for the indefatigable Woody White, who served as president of the Society following my term, it honors those who assume responsibility, and acknowledges the value that we place on work for our profession. This willingness to work is the hallmark of MRS. It was present from the beginning, assured the Society's growth, and remains the Society's unifying characteristic today.

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## MRS—Past and Future

### Clyde Northrup, 1982 MRS President

The Materials Research Society has grown in size and scope since 1982 because of (1) inspired scientists and engineers who want to solve real materials problems, and (2) their enthusiasm about receiving help, even from sources outside their traditional disciplines. This combination has given the Society its singular personality and created "lively" discussions at MRS meetings, particular-

ly among people with differing jargons. In at least one symposium, it was rumored there was a call for a "Sergeant at Arms" at future meetings to maintain decorum and protect the attendees!

In the late 1970s, Dick Schwoebel (Sandia National Laboratories) and I pondered the need for an unbiased forum where the Scientific Basis of Nuclear Waste Management (SBNWM)

could be discussed, a forum whose environment would attract the broad range of disciplines needed for a successful exchange of ideas. The data requirements for the topic ranged from improving systems specifications to understanding detailed materials behavior. We speculated that the cross-fertilization of topics would facilitate the development of new materials to meet system needs. We consulted with Greg McCarthy (now at North Dakota State University), and he agreed to seek MRS support for the first international symposium on SBNWM (1978). The response from the international technical community resulted in the symposium proceedings series becoming a best seller. In 1979, I followed Greg as the next symposium chair.

During this period, there was a critical mass of "empowered MRS members" who were "visionaries" and "doers." They looked at enormously complicated issues, were undaunted by the pitfalls before them, identified strategic paths to pursue, then enthusiastically volunteered to follow them through to fruition. All of the members of this core group have served in various MRS capacities, and you know them all as your symposia chairs, meeting chairs, officers and councilors of the Society. As you can probably tell, I have great admiration and affection for them all.

When approached by John Poate (Bell Labs) in 1980 and asked to serve as an officer of the Society, I enthusiastically agreed. Then I learned in more detail how the Society relied on "empowered members." I remember, for example, one dark night when I briefly totalled my personal assets as potential collateral for a loan to buffer the huge (at least for me) cash surges and demands experienced by the Society in its annual budget cycle. What a magnificent motivation for helping put the Society on a more formal business basis.

In 1981, I proposed a new organization-

al framework for MRS, and asked Harry Gatos (MIT) and Dick Schwoebel to draft a new constitution and bylaws to support it. In early 1982, the new constitution and bylaws were adopted, and we began to develop formal, long-range business plans. They included publishing an annual MRS calendar, a membership directory, and a new materials journal (initially through Elsevier, North Holland), prototyping a second MRS meeting per year (initially the MRS SNBWM meeting in Europe), expanding the symposium proceedings, and beginning the transition to a broadly elected Society. Another important business decision was to make participants at MRS meetings full members of the Society. In subsequent years, I've been asked by officers of other societies; "How were you able to overcome the elitist society membership mentality?" My first impulse is to say, "What? In MRS?" Regaining my composure, however, I cite the decision to confer full membership on meeting participants, adding, "It was the right thing to do, and would lead to a rapidly increased market share."

When I was asked to write this article, Betsy Fleischer (technical editor, *MRS Bulletin*) solicited my views about some of the unresolved issues in materials science and engineering. A strategic one is alluded to in the opening paragraph: materials jargon. How do materials researchers and developers learn what new materials are really needed? How are materials data gathered and shared to improve materials behavior? How are materials properties reliably selected for most applications? How are most decisions about materials made? The answer to each of these materials information management questions is, "Not very efficiently."

Since the early 1980s the ASTM E49

Views on MRS and materials research from former MRS presidents.

Committee—Computerization of Materials Data—has been laying the groundwork for gathering and sharing all types of materials data in computerized data bases. The process of critically examining the implications of our materials jargon is forcing a much clearer understanding of what we should measure and discuss. In the future, as excellent materials measurements are made and used in decision-making, this committee's guidelines will be used, and the improved efficiencies will touch all of us.

In the early 1980s, MRS "visionaries" looked at enormously complicated issues, were undaunted by the pitfalls before them, identified strategic paths to pursue, then enthusiastically volunteered to follow them through to fruition.

At the 1992 Fall MRS Meeting, the recipient of the Von Hippel Award, Michael E. Ashby, noted that a current boundary for progress in computerized materials development is adequate materials data on existing materials. Similarly, the February issue of the *MRS Bulletin* has an excellent synopsis on managing materials information. Stay tuned—this is getting interesting! Materials research is moving into the computer age!

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