

The Founding of TIMS

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As the first (1953-1954) president of TIMS, I can describe some of the events leading up to the founding of that organization as follows. I was first approached on the need for such a society by Mel Salvesson at the 1951 summer meeting of the Econometric Society held at the University of Michigan in Ann Arbor. Because the Operations Research Society of America was then being organized I questioned the need (or wisdom) of undertaking such a venture. Salvesson had in mind, however, a different version of a “management science” which was to be modeled more on the lines of “science-type” activities such as discovering and formulating “laws of behavior,” etc. I don’t recall further details of our discussion, but, in any event, nothing further was done at that time.

Meeting in Los Angeles, 1952

Salvesson, the real driver of the idea that such a society was needed, continued to try to promote it from his base on the faculty of the Business School in the University of California at Los Angeles. I only learned about his further activities in the summer of 1952 when Abe Charnes and I served as consultants to the Ramo-Wooldridge Corporation—a new science-based organization which was then being formed by Simon Ramo and Dean Wooldridge after their departure from the Hughes Aircraft Co.

Remark: As reported to me, the departure of Ramo and Wooldridge was due to a disagreement with Howard Hughes, the (absentee) owner of the Hughes Aircraft Co. Hughes, it seemed,

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wanted to maintain the firm as an aircraft manufacturer. This raised a major issue because Ramo and Wooldridge as vice presidents for manufacturing and research, respectively, had reoriented Hughes from a failing aircraft manufacturer to a highly successful electronics company and defense contractor. This reorientation was undertaken, at least in part, as a result of a “marketing survey” of the Federal Government (the first of several such surveys) conducted by George Kozmetsky--the then Controller of Hughes. This was the direction to which Ramo and Wooldridge directed their considerable knowledge and abilities as Ph.D. graduates of the California Institute of Technology. Much of the subsequent growth of the company then proved to be responsive to the “systems approaches” to weapons design and development that Ramo and Wooldridge also introduced. (All of this later came to full fruition after TRW, Inc., was formed with the acquisition of the Ramo-Wooldridge Corporation by the Thompson Products Company, an automobile parts manufacturer based in Cleveland.)

Charnes and I served as consultants to the Ramo-Wooldridge Corporation during the summer of 1952. This proved auspicious for progress in forming TIMS because Salveson used this as an occasion to call a meeting (held at UCLA) for a “committee” to consider the founding of a management science society. Attended by representatives from Hughes and Ramo Wooldridge, as well as UCLA, the meeting also included representatives from RAND. During the course of the meeting it became apparent that George Dantzig, one of the RAND representatives, had other things in mind besides forming such a society. In particular, Dantzig expressed his concern over what he regarded as a premature collection of some \$300 in “dues” which Salveson had already collected. In the process of collecting these dues, Salveson, it seemed, had used the names of “committee members” in a manner that implied their endorsement without first securing their permission. At Dantzig’s insistence this topic occupied the bulk of the meeting and nothing of any other consequence was accomplished.

Meeting in New York, 1953

Some time after we returned to Carnegie Institute of Technology (now Carnegie Mellon University) in Pittsburgh, Charnes and I both received calls from Merrill Flood to attend another meeting in New York at Columbia University (where Flood was located) which was to be held on December 1, 1953. This meeting, too, had been initiated at the urging of Salveson who asked me to serve as the meeting chairman. As organized by Flood and David Hertz (also at Columbia), with some 100 attendees, this meeting was much better attended than the one in Los Angeles. It was also better organized with formal reports from previously appointed committees. For instance, Ezra Glazer of the U.S. Bureau of the Budget (now the Office of Management and

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Budget) presented the favorable report of a committee to investigate the need and desirability of such a society. George Kozmetsky (Hughes Aircraft Co.) presented a report prepared by another committee on financial feasibility of such a society. A committee on organization design and charter preparation, chaired by Merrill Flood (Columbia University) and consisting of Mel Hurni (General Electric), Cuthbert Hurd (IBM) and Herbert A. Simon and myself (both from Carnegie Institute of Technology) presented a proposed charter which included a slate of offices for which nominations were also offered at this meeting. These offices and the persons elected to them (by acclamation) were as follows:

- Past President, Andrew Vazsonyi (Hughes Aircraft); President, William.W. Cooper (Carnegie Institute of Technology); President Elect, Merrill Flood (Columbia University).
- Vice President, Cuthbert Hurd (IBM); Vice President, Herbert A. Simon (Carnegie Institute of Technology); Vice President, Melvin Salveson (University of California at Los Angeles);
- Past Secretary, Ezra Glazer, (U.S. Budget Bureau); Secretary Treasurer, Geoge Kozmetsky (Hughes Aircraft); Associate Secretary, Alex Orden (U.S. Air Force).

Remark: On advice from my wife, Ruth F. Cooper, who served as the attorney for TIMS, the charter was subsequently revised to meet the legal requirements for incorporation, first in Pennsylvania and later in California and George Kozmetsky (who subsequently left Hughes, to help found, first, Litton Industries, and then Teledyne, Inc.) also assisted in this effort.

Membership was not to be restricted (as was the case in ORSA). The society was to be open to all interested persons and it was to have an international orientation instead of a purely American orientation. The charter drafted by Flood's committee, succinctly set forth the society's objectives as "identifying, extending and unifying scientific knowledge that contributed to the understanding and practice of management." The Institute of Management Sciences (TIMS), as proposed by Salveson, was adopted as its name. Publication of a journal to be called *Management Science* was also to be undertaken and a schedule of international meetings was to be arranged as soon as possible.

On the more immediately practical side, some 60 or more of the attendees at this Columbia University meeting contributed their dues--at \$10 each--to augment the \$300 that Salveson had previously collected. Kozmetsky offered to have the commercial artists at Hughes design what turned out to be a very attractive cover for *Management Science*. (He also arranged to have the

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initial publication undertaken by Hughes, if necessary, in order to cover possible contingencies while we were negotiating with several potential publishers.) Mel Salvesson had solicited (and collected) several manuscripts to help provide a start toward publication of such a journal.

An Editor for Management Science:

When I returned from New York to Pittsburgh, I consulted with various persons who were active in Institute affairs. With help from Abe Charnes agreement was secured from C. West Churchman, then located in Cleveland at Case Institute of Technology (now Case-Western Reserve University), to serve as the first editor of *Management Science*. Charnes and I then took the manuscripts that had been collected by Salvesson to Cleveland where we met with Churchman to help get this journal started.

By the end of a day-long meeting, the three of us had completed a statement of editorial policy that pretty well guided the activities of *Management Science* throughout its formative years. Consistent with the objectives of TIMS this policy sought to make *Management Science* “eclectic” rather than “restrictive.” To quote from the policy statement: “Articles from any field (industrial engineering, econometrics, operations research, mathematics, statistics, psychology, sociology, political science, etc.) will be welcomed as long as the article furthers the aim of developing a unified science of management.” In part this policy was also chosen because it appealed to Churchman who, as a philosopher, had a very broad point of view that he could implement without compromising the standards we wanted to maintain. This kind of eclectic approach could also accommodate widely differing concepts and points of view. For instance, it could accommodate Salvesson’s view of a “science of management” which had its roots (I believe) in his background as an engineer. It could also accommodate the views of Abe Charnes who, as a mathematician, saw opportunities for developing new methodologies that could draw upon and contribute to mathematics as well as to management. Finally, it could also comprehend any of the several papers Salvesson had turned over to me for possible inclusion in such a journal.

Remark: A clear expression of Salvesson’s point of view may be found in “The Institute of Management Sciences. A Pre-History and Commentary on the Occasion of TIMS’ 40th Anniversary,” a paper delivered by Melvin E. Salvesson at the 1993 TIMS meetings in Chicago.

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Pittsburgh Meeting of TIMS, 1954

During the New York meeting, I had agreed to organize the first “international meeting of TIMS” for September or October of 1954 in Pittsburgh, where Carnegie Tech was located. Charnes, Churchman and I therefore agreed that this provided a good target date for release of the first published issue of *Management Science*. We realized that we could not achieve publication by that date if we used the normal refereeing process. The three of us therefore agreed to serve as referees and we divided the manuscripts on hand accordingly. We also agreed to try to round up or write additional papers for consideration. Charnes and I, for example, had been serving as consultants to Methods Engineering Council. A Pittsburgh based consulting firm, MEC was seeking to broaden its base from industrial engineering to other competences. In one assignment Charnes and I worked on a project to improve the scheduling of freight shipments for clients like the H.J. Heinz Company. For this assignment, we had developed a simple algorithm based on adaptations of linear programming that we referred to as the “stepping stone method” for transportation problems. Our presentations to management and staff at MEC had proved very successful so Charnes and I rewrote these presentations for an article that we sent to Churchman for consideration.

The refereeing and assembly of manuscripts completed, George Kozmetsky worked with Waverly Press to complete the printing and release of the first issue of *Management Science*.

Remark: The articles in this first (October 1954) issue of *Management Science* were:

- (1) “Evolution of a Science of Managing in America” by Harold Smiddy and Lionel Naum.
- (2) “The Stepping Stone Method for Explaining Linear Programming Calculations in Transportation Problems” by A. Charnes and W.W. Cooper.
- (3) “On Bus Schedules” by J.D. Foulkes, W. Prager and W.H. Warner.
- (4) “Inventory Control Research: A Survey” by T. Whitin.
- (5) “The Use of Mathematics in Production and Inventory Theory” by A. Vazsonyi.
- (6) “Smooth Patterns of Production” by A.J. Hoffman and W. Jacobs.
- (7) “Remarks on Smooth Patterns of Production” by H. Antosiewicz and A.J. Hoffman.
- (8) Constitution and Bylaws of TIMS.

This was all accomplished in time for the initial meeting of TIMS where the appearance of this journal was enthusiastically received by the 200+ persons who were in attendance at the “Webster Hall Hotel” where these meetings were held on October 21-22, 1954. The journal contributed to the success of these meetings, and vice versa.

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Together, this meeting and the journal, served to demonstrate that TIMS was up and running. TIMS was a “going concern.” The journal was also well launched with the following editorial board, selected (largely) by Churchman with advice and help from Salveson, Flood and me.

Managing Editor

C. West Churchman, Case Institute of Technology

Editors

George Brown, International Telemetering Corp.

Abraham Charnes, Carnegie Institute of Technology

M.L. Hurni, General Electric Co.

Daniel Katz, University of Michigan

Jacob Marschak, University of Chicago

Business Manager

Alan O. Mann, SKF Industries

This board reflected the aims of the journal with a mix of disciplines from industry and academia that included statistics and engineering (Brown), mathematics and operations research (Charnes), social psychology and sociology (Katz), operations research and systems analyses (Hurni), economics and econometrics (Marschak), all coordinated by Churchman (philosophy, operations research and systems analysis) and administered by Mann (management).

As it turned out, the article on the stepping stone method by Charnes and myself served twin purposes. It attracted a considerable amount of favorable attention (including library and other subscriptions). It also helped to provide a concrete (and managerially appealing) example of some of the meanings that might be attached to the “management sciences.”

Another important development revolved around the opening article by Harold Smiddy and Lionel Naum. One of the set of papers collected by Salveson, this article by Smiddy and Naum discussed the evolution of a “science of managing,” starting with the history of industrial engineering in the U.S. Mel Hurni, who had attended the New York meeting, reported favorably

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on TIMS to Harold Smiddy who, as Vice President for Management, was Hurni's immediate superior at General Electric. Hurni was also able to persuade Smiddy to place an order for 10,000 copies of this first issue of *Management Science* and thus provide badly needed support for TIMS.

The article "On Bus Schedules" seems to have had no further effects but the "Inventory Control Research Survey" paper by Whitin provided a framework for subsequent research in Inventory Theory. Vazsonyi's article made available the results of work he had been doing to improve the (computer implemented) scheduling methods at Hughes Aircraft Co. It also brought into existence a fictitious mathematician named "Zepartzatt Gozinto" who gained considerable notoriety for his critique of the simplex method in linear programming. (See the commentary on p.398 of A. Charnes and W.W. Cooper, *Management Models and Industrial Applications of Linear Programming*, (New York, John Wiley, 1961.)) In their article on production smoothing, Hoffman and Jacobs provided a clear analytical formulation of an important class of problems and thus facilitated subsequent discussion and interchanges which are exemplified in the remarks by Antosiewicz and Hoffman in the above listing. Finally, the constitution (or charter) of TIMS, as commented on above, was included as a way to make the purposes of TIMS clear to potentially interested persons and organizations.

An important addition to these developments in the founding of TIMS also occurred at these meetings where I was approached by Harold Cauvet. A recent retiree from the General Foods Corporation, Harold was casting about for some new and worthwhile activity. During the interview I quickly discovered Harold's background and rich experience in finance and accounting. I therefore appointed him to the post of Business Manager of TIMS reporting directly to the President as well as to the Secretary Treasurer. With responsibility for the financial as well as administrative affairs of TIMS, Harold was able to start with TIMS "in the black" and keep it there for the several years he spent in administering the society's affairs and investing the society's funds. Much is owed to him, I think, for the orderly, efficient and successful way that he discharged these responsibilities.

Postscript

Unfortunately, many others who participated in these events are no longer with us. I am grateful to George Kozmetsky for comments and suggestions but I have otherwise had to rely

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mostly on my own recollections without being able to check with the many persons who played important roles in bringing TIMS into being. The brief compass of this writing, also unfortunately, did not allow me to identify these many others who contributed to the beginning of TIMS in innumerably important ways.