Memorial tribute to Arthur W. Melton (1906-1978)

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When a representative of the Governing Board of the Psychonomic Society asked me to give a memorial address in honor of Arthur Melton, I was, at first, reluctant—not that I did not wish to think of Art or to write my tribute to him. He was one of the psychologists I have respected most, and beyond that, he and his wife, Jerry, have been Carol's and my personal friends for more than 20 years. My reluctance arose only from my feeling that the Psychonomic Society includes many great psychologists in its membership, and, sad to say, some of them die each year. In a decade or so, we cannot honor even a very few of them by a memorial tribute—only one or two perhaps. Is any selection of that one or two justified? I thought about the matter, and the more I thought, the more I knew that, if any are to be so recognized, Art Melton is certainly one of these.

The form of this paper is almost exactly that of the talk given at the 1979 Psychonomic Society meetings. Originally, no plans were made to publish the address, but the reactions of many who heard it raised the question of publication. Those who had known Art seemed to feel that our observations (Carol's and mine) were faithful to him, and those who had not known him reacted in a way well expressed

after the address by a relatively young but well established physiological psychologist. "All graduate students in psychology," he said, "should have been required to attend." He was stating succinctly a reaction many others seemed to have: Art's life represents a model *par excellence* of the serious psychologist who is both a research scientist and a teacher, and who is dedicated to his discipline and completely convinced that it can and should make solid contributions to society at large. Psychonomic Society editors shared this view: hence, this publication.

Melton's contributions to what we are today come in many forms; they are tremendously wide in scope, and, at the same time, unshakable. Basic, of course, is his dedication to psychology as a science and to its maintenance as a science. There is his own pure research and consequent theoretical formulations. There is his constant emphasis upon the application of proven findings to various practical concerns. There is his active support of organizations that further psychology as a science (the Psychonomic Society and certain aspects of the American Psychological Association) and his tolerant but steady efforts to improve those organizations. His contribution to communication between psychologists and to the dissemination of psychological information is vast indeed, achieved both through his conscientious, exacting editorship of journals and through his participation in publication boards. Because Art did so many other publicly oriented things, it is sometimes neglected that he was an outstanding teacher and educator of graduate students and that, wherever he hung his academic hat (Michigan, Missouri, Ohio State), he became deeply involved in standards of education and improvement of areas and departments.

I shall present a brief chronology of Arthur Melton's career, and I shall attempt to describe more fully the contributions I have just mentioned briefly, but first, before these, I want to speak to you of Art as a person and of the amazing, unique, personal characteristics that enabled him to do the things he did and to leave us so very much of value. I want to make this tribute more than a detailed summary of Art's scientific writings. If I possibly can, I want to show something of the pattern of his life, along with a broad picture of his tremendous contributions to our discipline.

This paper was an address given at the meeting of the Psychonomic Society, Phoenix, Arizona, November 1979. In the preparation of this tribute to Arthur Melton, I have been assisted by many people. From the time I first learned that I was to have the honor of giving it, I have talked about Art to a great many individuals. Further, I wrote to a number of persons who had known him at different places and at different times in his career. I want to thank those who have helped me. Their observations and impressions are sprinkled liberally through this paper and can be clearly recognized. There were letters from Ben Underwood, Al Riley, Lloyd Humphries, Bob Bjork, and others; there was a most helpful paper from Jim Greeno, with sections by Bob Daniel, Frank Geldard, Bill McKeachie, and Jim himself. The conversations, by telephone and in person, are too many to list here. They were both a pleasure and a sorrow, for they were filled with sadness, fond memories, and affection for Art. They have been of inestimable value to me in trying to present both the specifics and the spirit of the man. Throughout, I have shared the writing with my wife, Carol Wickens, who loved and appreciated Art and knew of his work nearly as much as I. If two people could give an address, we should have presented this one together, but for purposes of the talk, only the first-person singular was used; it is nevertheless a coauthored paper.

The Personal

What are the personal characteristics of which I wish to speak? I've talked or written to a great many people about Art in the last few months, and, as I have, those personal qualities of his have become more and more awesome to me.

First, let us list his utter devotion to psychology, to experimental psychology, to experimental methodology, and, of course, to the study of verbal behavior and memory. For Art, these preoccupations went way beyond the ordinary absorption of the ordinary academic in teaching and research. Art loved his family very, very, much, and he could relax and be a delightful social companion, but he still lived and breathed psychology. Actually, his outside interests were relatively few. He read the paper and he knew political developments and something about the sports scene, but he seldom read nonprofessional books or attended formal social events—at least, not in the periods I knew him best. But, wherever one was with him—walking across campus, standing at a party, or sitting in a restaurant—he talked (and listened to) psychology. To those of us who were also in the field, talking to Art about research and professional problems was a delightful, give-and-take, utterly rewarding experience. Listen to the words of a former graduate student and friend, who writes: "Art was one of the most wonderfully, charmingly serious men that I have ever met. He was convinced that experimental psychology, and human learning, in particular, were fascinating enterprises that deserved uninterrupted attention no matter how late the party went on or how many drinks the participants had had. I don't think I have ever met anyone who so effectively combined his zest for a party with his joy in the discussion of his science."

Of course, this intensity of interest is reflected in Melton's tremendous psychological contributions, but another marked personal characteristic is just as important to his psychological productivity. He *had* to do everything well. In earlier days, psychologists talked a lot about the superego (a term no longer in common use), and I believe it was the Marquises (Dorothy and Don) who accused Art of an over-zealous superego. Whatever the labels, those who knew him soon learned that he carried a set of very high work standards with him and that he could not abandon them, whether the task was designing research, preparing a lecture, planning a curriculum, organizing a military program, or, indeed, painting a kitchen wall. His standards were *self* standards, for he was one of the least competitive men I have ever known in the sense of building up competition with other individuals. Since he was so dedicated to psychology, and since he was never so satisfied as when he was doing something well—grinding along toward a perfection goal—his work ethic was not a

grim scene at all. He worked very hard, immersing himself in every important task that came along, but I'm sure he was enjoying himself. He didn't grouse or complain. And since he did not slack off ever, even in tasks that were not his specialty, he produced spectacular successes in unexpected fields and unusual activities, as we shall see.

But before this becomes too serious an account of noble deeds, let me tell you about Art at play. He worked a tremendous amount, and he might take psychology with him to all his relaxations, but he did play, too, and somehow, he and Jerry managed to turn every play occasion into a joyous, special one. I can't separate Art from Jerry here. Together, they made some sort of social magic, and I am sure that any of you who have experienced their hospitality know what I mean by that magic. Art *hated* formal social occasions, but he loved informal ones, parties with friends and one-on-one evenings of gentle congeniality. And so there were the poker parties, and the enchilada dinners, and the election parties, and, for us and a few graduate students of the OSU days, there were the ever-recurring picnics on the Olen-tangy—slow-flowing middlewestern river, with harmless snakes on the banks and tipping fireplaces. There was a great deal of food, a number of children running about, the inevitable rum, and Art and Jerry making the occasions memorable somehow, so that whenever we meet those lucky ones who also participated, we join in remembering.

In spite of his fine figure, Art was not particularly athletic. He confided to me once that he had flat feet and could not run. Perhaps it is just as well. All of that work energy, all of that drive for perfection—if it had been channeled into football or basketball at an early age, he might never have been a psychologist. What a dreadful thought!

Art brought something special to interpersonal relationships. He was always aware of his friends and his friends' activities, and he was deeply concerned when they were ill or in trouble. He was willing to take endless trouble himself to help someone he knew and respected. I would like to quote here from a tribute written by Lloyd Humphreys. It seems to represent the ultimate in decency, kindness, responsibility, courage—what you will. Let Lloyd go on:

"There is little that I can say that can add to Art's reputation as a scientist and administrator, but I can describe an incident which illuminates his character. In September of 1949 I was consulting at the Center [Air Force] and living in a BOQ on the base. My family had returned to Palo Alto after a summer in San Antonio so that the children could enter school. A letter from Air Force headquarters that had been rumored for some time finally came through suspending me on loyalty-security grounds. The letter informed me that I could prepare a written

defense to the charges and that I could request a hearing and call witnesses. I was also informed that I must leave the base immediately. Without any hesitation, Art and Jerry took me into their home for several weeks while waiting for the hearing. Art also was the most effective witness in my defense at the hearing. Art's job was on the line. If I had been found guilty and dismissed, he would have been next. He gambled on both me and the system. While I was confident concerning myself, I was not nearly as confident concerning the system. His action, however, converted what would otherwise have been a lonely, trying time into a much more secure waiting period. Contrary to the experience of others in my situation at the time, I was not shunned by friends and colleagues. I was able to prepare my written defense to the charges and to write to friends requesting affidavits in a supportive, friendly atmosphere. When I think of Art I shall certainly remember the scientist and the administrator, but my brightest, warmest memories will be of the friend who, at considerable risk, gave me support in time of need."

Art was appreciative of the successes of his friends, as well as concerned for their problems. He was a letter writer. How many of you have been warmed by notes of congratulation and informed reaction from Art about book publications or an article, or an honor, or simply a change of location? He wrote all of the letters that most of the rest of us only think about writing. A particular characteristic was his kindness and generosity to younger psychologists. He was always recognizing talent and excellence, developing it, and trying to create a niche especially appropriate for some find of his.

What didn't he like? Sloppy research, of course; that really offended him. And he could not stand flatterers or sycophants. One of the few really devastating names I have heard him use designated a person who had just been effusively complimenting Art upon matters the speaker could have known nothing about. Art himself was utterly honest. In his mild, rather rueful, fashion, he could criticize the work of a friend adversely as well as favorably—to the friend's everlasting advantage. He did not like artificiality in a person, and usually detected phroness early in a relationship.

Art was popularly supposed to be intolerant of certain psychological disciplines. I have heard it said he rejected clinical psychology, for example. I'm sure that wasn't true. He respected good research and organization, wherever it appeared. If he paid little attention to certain areas, it was because they just weren't his bag, or because he thought some of the research of the field could not come up to his standards. Art was also supposed to have been negative toward animal or comparative psychology. Again, that was

not his own particular interest, for I think he felt that animal work was far from his own preoccupation with verbal activities and farther from the human applications he admired, but he respected mightily the methods and the psychologists of the animal fields, and, when he was assembling individuals to work with him in the School of Aviation Medicine, he selected "two rat psychologists and a conditioned response man" (I quote).

One cannot leave the subject of Art's personal characteristics without remarking upon his physical appearance and his presence. He was a very, very handsome man, tall and well-built, and he was a very impressive man through his bearing and his manner. Although he had the most charming of smiles, his prevailing mien was serious, even stern. Although he spoke freely, he never chattered. He was, so many females tell me, sexy (although no philanderer). The female graduate students at Ohio State used to refer to him as "Professor Hormones." Art strikingly resembled the handsome leading man of the motion pictures, Melvyn Douglas. Melvyn Douglas plays character parts now, and very well too, but he was a good-looking young actor when Art was a good-looking young psychologist, and they grew old together. All through the years, people remarked upon the resemblance between the two, and they are still doing so. Looking like Douglas was part of Art's aura—a trivial matter perhaps, but one that had some impact, too.

The word "fortitude" is one for which there is no substitute: a strength of mind that allows one to endure pain or adversity with courage. During the last 20 years of his life, Art suffered one painful illness after another, and to all of them, right down to the very end, he brought an awesome fortitude. I saw him fairly often. He would tell me about what was wrong, and there were several different problems, but he did not complain, and he did not dwell upon what must have been terrible suffering. He would prefer to talk about psychology—and we did.

I've tried to tell you just a little about Art's personal characteristics, so, as I go on to chronology and the man's serious, forever-lasting contributions to psychology, you can see this particular kind of person doing the things that he did.

The Chronology

It is appropriate—yes, and also necessary—to present a chronology on an occasion such as this so that the sequence and pattern of a life can emerge clearly. I shall do so briefly before going into the specific categories of Melton's contributions to psychology. I wish I could start the chronology earlier. For my own sake, I'd like to know what Art was like in the first grade, in the fifth grade, or in high school,

and how, from those beginnings, he acquired the personal characteristics of which I have spoken. But Art—to me, at least—did not talk much about his early years. To labor a point, the subject of his early years wasn't concerned with either psychological research or professional affairs, so he neglected it. And so I begin, except for his date of birth, with his college years.

Arthur Melton was born in Fayetteville, Arkansas, on August 13, 1906. His undergraduate education was at Washington University in St. Louis, where he made his first contact with John McGeoch, who was to influence and assist him a great deal throughout his career. After a BA degree in 1928, Art went on to graduate school at Yale in the field of experimental psychology. He obtained his PhD under the direction of E. S. Robinson in 1932. I know that his dissertation was something in verbal learning. He stayed on at Yale for 3 more years, participating in a project on museum behavior that was being conducted by Dr. Robinson. It was a stimulating time to be at Yale, for he had as fellow graduate students Ernest Hilgard, both the Marquises, Carlyle Jacobson, and many others who were to become important psychologists.

In 1935, Art went to the University of Missouri to succeed John McGeoch as chairman. Art was only 29 years old! According to Bob Daniel, Art's 6 years of chairmanship at Missouri were very productive ones. He revised curriculum, improved the position of psychology on the campus, and stimulated the entire staff to research and publish. He developed a rigorous master's program. And, as we shall see later, he did research himself, producing his first classic memory paper.

World War II came along, and Art was commissioned in the Army Air Force and was given the responsibility of developing psychomotor tests to measure aptitude for flying. This was the first surfacing of work that was to become a very great part of his later career and contribution to psychology.

Following the war, in 1946, Art came to Ohio State. He taught courses in human learning and in methodology, and he gave various seminars. As at Missouri, he immediately became involved in plans for improving organization and offerings in the department of psychology. He set up courses at Wright Field and began to work toward an eventual program in engineering psychology. Art did little research himself during the OSU period, but he had a number of active graduate students working on such subjects as mixed-list designs, massed vs. distributed learning, and other current problems. Although he was only at Ohio State for 3 years, he had a great impact upon the department and its students. In 1949, he was requested to organize, for

the Air Force, a psychological research unit, which eventually came to be called the Air Force Personnel Training and Research Center. To do this, he obtained a leave of absence from Ohio State, then another leave of absence. The position could not be held vacant indefinitely, and Art felt that he could not commit himself to return at a specific date, so eventually, he resigned.

I too had come to Ohio State in 1946 (from the University of Wisconsin). Art and I hit it off from the start, and he became a very important influence in my development. We talked psychology all day every day, and it was through Art's stimulation that I began my research on verbal behavior and memory, a field that has become one of my major ones. I did not abandon my former interests in animal and in classical conditioning, however, and I became to Art something of a two-headed calf—a situation that he humorously viewed askance.

In 1957, Art went to the University of Michigan, where he remained until retirement in 1973. Those were some of the happiest years of a happy life, barring the illnesses that began to beset him. Again, he began to organize, and he, along with Paul Fitts, created the Human Performance Center there. Much of what Melton accomplished during that period will appear in the succeeding sections on his contributions. One need only say here that they were active, productive years. One of his classical, theoretical papers appeared in 1963; he began his membership in the APA Publications Board in 1957, and this continued a major interest for the rest of his life. He had an active group of graduate students, and his courses were so well received that he became the first recipient of an award for outstanding graduate teaching.

The University of Texas came next. After retirement from Michigan, Art accepted a position at Texas, where he continued some teaching and intensified his work on publications. Much as he appreciated other places, a return to Texas was a bit of going home. He had lived there during the war years and for a later period, and he loved the place.

Art received practically every honor that can be bestowed upon a psychologist, doubly crowned, one might say, by election to the National Academy in 1969 and the APA Gold Medal Award in 1976. He was president of practically everything he could be president of, and the fact that he was nominated and appeared on the ballot for president of the APA for 18 years (I think), yet still did not become president, was no disgrace to Art but to APA. Art took this as a continuing joke.

Art was very loyal in his support of both the APA and the Psychonomic Society. He particularly enjoyed and respected the latter, but he thought that both organizations were necessary for psychologists, and

he remained a member of both. He felt that the Psychonomic Society could remain essentially a scientific organization, while APA could provide political-professional services to psychology.

Research

I know from what Art often said that he felt that his pure research contributions were less than they should have been. I haven't counted his publications, but I judge that the number is not large compared with that of many of our members—but the influence of some of his articles has been tremendous.

Of course, it is very clear why Melton did not have an enormous research output, and the reasons stem from the particular personality characteristics I have described. When he undertook any task, he was impelled to see it through to the end, persisting until he had obtained a personal, conceptual closure on the task. He would never submit research for publication simply to get another article into print. He demanded of his research that it answer a larger problem to the satisfaction of his own strong intellectual concern and conscience. In the first place, he would not begin a problem unless he was convinced that it was important in a broad way, and one whose solving would significantly advance our knowledge. Problems of this sort tend to be ones that lead to further questions that in turn must be answered if the larger issue is to be solved, and they, then, in their turn, lead to other questions that must be pursued. And even after the data were in, Art loved to pore over them, speculating about meanings and relationships and possible further work to follow. He was always aware of the possibility of random error in experimental data—of beta errors and alpha errors lurking around somewhere. Consequently, he was ready—even eager—to repeat and repeat again until he rooted out the little devils. With this approach and care, the quantity of his output could not be high, but the quality was superior and impeccable.

This careful and thoughtful analysis of data played a significant role in the conclusions reached in the Melton and Irwin paper (1940) and in the development of the two-factor theory of memory. This article is a classic, and one that has led to innumerable research projects by others. Although today there are different ways of interpreting his unlearning concept, the basic phenomena he reported are still with us, and the new interpretations can occur only because Art first pointed to the phenomenon that led to the later research.

Melton's 1963 AAAS address is another classic. In it, he presented a logical analysis of the potential psychological processes involved in memory. He called them: trace formation, trace storage, and trace retrieval. The concept of encoding and the concept of retrieval have been of dominant concern in

memory research since that time. The analysis of that paper now seems simple and almost obvious, but it clarified our thinking in area that was very fuzzy then, and it generated a great deal of research and theory that stimulated much of the research in STM. It was not typical of our thinking prior to that paper. I cite those two publications, that on the two-factor theory and the AAAS address, because of the great impact they have had upon workers in the field of memory. Few articles have had so great an influence.

While Art was at Michigan, he began to attack, at an empirical and theoretical level, the age-old question of spacing. Although progress was made toward a solution of the problems surrounding spacing effects, Art (I know from conversations) felt that there was still much more to do. Given a little more time, I am sure he would have published another classic, as definitive a delineation of that subject as could be done in these times.

Art's attitude toward research is yet another expression of his perfectionism and his concern that the ultimate product be strictly accurate. Fortunately for us, those qualities live on in the graduate students that he trained, many of whom are continuing to publish the same kinds of careful, important articles that Art would have approved.

Teaching

Art was a superb teacher, and beyond that, a superb educator in a broad sense. He was deeply respected and admired by the students who enrolled in his courses. Again, some of his high quality as a teacher rested upon those two basic attributes I have mentioned before: (1) his enthusiasm for psychology, along with his dedication to and belief in the scientific approach to the understanding of behavior, and (2) his compulsion to do every task well, to take no task lightly.

He really worked on his lectures, and, much as he knew, he never went to class without some preparation. His materials were presented in a carefully organized fashion. He didn't use notes, for he did not want his lectures to become stereotyped, but he always decided in advance his conceptual goals for the day. Once he was launched upon a topic, his knowledge of the literature was so vast that he could support his position by citing appropriate experiments. At the same time, he was always ready to question himself on his conclusions and to accept and react to intelligent questions from students. Thus his classes were stimulating intellectual exercises for his students and for himself. He had some pedagogical tricks—to which he freely confessed: the speculative knitting of the brow, a trip to the window, gazing out thoughtfully, then turning to the class with a considered answer. The latter gambit (and he said it was a gambit) particularly impressed students,

I remember. I'm sure, however, that it was what he said that really impressed them. Some students were afraid of him, not because he was hectoring or cruel in any way, but because he was so damned impressive personally, and because he had a trick of impaling them upon his serious gaze. Also, his immense reputation was passed along from year to year and inspired awe. Ben Underwood has written me of his year at Missouri with Art: "I was scared stiff for almost the entire year. I do not mean to say that I was scared of Melton necessarily, but I suspect I was. The other students led me to believe at once that he was God and who can avoid being scared of God?"

One of my own students just a few years ago said that he was still a little frightened when Art came into the room; the student is highly successful and must be 50 years old by now! Of course, this was really unnecessary. Art expected a lot from students, since his own standards were so high, but he was not personally harsh. There is no question that his physically commanding presence and his handsomeness, of which I have already written, added to Melton's impact as a teacher, but the fundamental respect and even adoration he generated occurred for reasons far beyond that presence.

Since Art was both a serious researcher and a teacher, he mixed content with methodology, showing how the former could be blurred by some flaw or obscurely correlated variable in the latter. He was fascinated by the subject of methodology, and, I believe, developed methodology courses in various universities. The one at OSU was immensely popular and valuable to students and is memorable today.

For Melton, the responsibility of having graduate students did not stop when they obtained their degrees. Of course, he wanted them to earn their wings and fly off on their own, but they always knew that they could indeed come home again and receive support from him. One former student has written that "if students were loyal to him, he was also loyal to his students," and another that Art continued to support him in a variety of ways long after he received his PhD.

Before I leave the subject of Art's actual teaching, I would like to quote from some comments about him that Bob Bjork has sent me. Melton and Bjork were, of course, colleagues at Michigan. The incident Bob related demonstrates in a different way some of the qualities I have described. I quote:

"Art Melton also retained a remarkable objectivity. One incident is etched in my mind in that respect. Towards the end of his career at Michigan, Art was trying to decide when he should retire. If he was going to work for an additional year or two, he wanted to make sure that he was still performing up to his own high standards. Consistent with his own hardheaded objectivity, he decided that he should

carry out certain tests on himself. One thing he decided was a necessary condition for judging himself still worthy of a faculty slot was the ability to teach the large undergraduate learning and memory course as well as he had in the past. He came into my office and asked me if I would help him judge his performance during the upcoming term, in which he had volunteered to teach that course. I was shocked. No one other than Art even considered the possibility that Art Melton had come to teach in less than exemplary style, and who was I to evaluate Art Melton's performance. He insisted, however, so I went through the whole process. He went over his course outline to make sure that it was complete and up-to-date. I attended several of his lectures (he demanded that I choose them at random, without notifying him that I would be there). And at the end of the course we sat down in his office and went over his student evaluations one by one. The whole experience had a huge effect on me. I was occasionally embarrassed, but Art was so cold-minded and analytical that we might have been evaluating the performance of a total stranger. He ended up reassured that he had passed that test. I ended up feeling that my own section of the undergraduate learning and memory course was superficial from an intellectual and scholarship standpoint. The whole incident amazes me to this day, and the memory of Art is all the more dear to me because of that incident."

When I began this topic, I said that Art was not only a fine teacher but a fine educator in a broad sense. For him, teaching was not simply a face-to-face meeting with students in the classroom or the laboratory, but a total educational program within our discipline. Wherever Art went in academia, he involved himself in the affairs of his department and the improvement of its offerings. At Missouri, he established new courses and began a master's program. When Art and I came to Ohio State in 1946, the department was involved in a controversy over a core program for the undergraduate major in psychology. One side had it that there should be such a minimal but broad core program, and the other, that the major be tailor-made by the advisor to meet the student's needs, as the saying goes. Both Art and I supported the core concept, but a clever parliamentarian on the other side managed to keep the department from voting on the issue in meeting after meeting. Art was much concerned about the matter, would drop in at our house in the evening after another nonballot, and, sitting down with a bottle of rum, would go over the day's events before shifting to the inevitable topic of human learning and memory. The core issue ended up as a compromise: the required core for the majors in Arts and Sciences and the tailored program for those in Education. Art took the partial defeat gracefully and entered with zest

into the teaching of one of the strictly undergraduate courses in the program, as did I. So, even then, when he could devote all of his time to graduate education, he was concerned with the broader problems of education as a whole. For him, psychology was a field much worth knowing for all—graduates and undergraduates.

Art's dedication to the teaching of psychology went even farther than the local campus. Columbus is about 70 miles from Wright-Patterson Air Force Base, where there had been established the early beginnings of a human engineering program. Because of his World War II Army Aviation activities, Art was in contact with members of that laboratory. It was staffed chiefly by former military personnel who had worked in psychology but did not have graduate degrees. It was at Art's initiative that an extension graduate program in psychology was instituted at Wright-Patterson, and he and I became the first teachers of psychology there. Because of that program, many people now eminent in human factors obtained PhDs they might not have had an opportunity to earn.

And so we find Melton not only an inspiring teacher on a face-to-face classroom basis, but also an educator in a broader sense. He was both, because of his strong convictions about the worth of scientific psychology.

Editorial Activities

One of Art's major contributions to us has been his successful improvement of communications between psychologists: (1) through his editorship of the *Journal of Experimental Psychology* and (2) through his service to the APA publications committees and boards and his service to the Psychonomic Society in developing publication policy.

He was editor of the *Journal of Experimental Psychology* from 1951 until 1962, and, since I served as one of his associate editors through much of that time, I know this *JEP* period well. Art initiated the policy of short reports, which, at a time when there were not nearly so many journals available to would-be publishers, served a very useful purpose and made it possible to communicate more information without excessively increasing page cost. We do not now have short reports in any of the *JEP* sections, but they filled a need then.

All journal editors and associate editors work like hell, and Art worked harder than most. When he was living in San Antonio during the '50s, it was his regular practice to arise at 4:30 a.m. and put in several hours of exclusively journal work before taking up his other duties. I think it is probably true that he personally read every submission. He was a tough editor with a high rejection rate—but, of course, he would be. From all I have said before, you would

know that he exacted high standards, trying to demand an important idea, perfect design, and appropriate detailed analysis. After all, he was only asking the standards that he set for himself. And he wasn't just tough. He gave a great deal to authors, too. Not for him the uninformative check-lists that sometimes are the only editorial responses today. His letters of acceptance had pointed appreciative comments and detailed directions for revision, greater statistical analysis, and so on. His letters of rejection were not *ad hominem* sneers. He frequently outlined the reasons for rejection and went on to propose ways to correct a problem, redesign an experiment, or treat the data. At least once, he had the experience (that Dave Grant and I have also had) of a grateful author following directions, resubmitting, then offering him joint authorship after the paper had been accepted.

Both Grant and I (I was an associate editor with Dave, too) learned a tremendous amount from Art, and we tried to do, in editing, many of the things that he did. But Art brought something to journal editing that we did not. We wanted a good journal, of course, a channel of communication, but Art wanted the *JEP* to be PERFECT, archival eventually, a monument—and perhaps it is.

As you know from the chronology, from 1957 on, Melton held various publication offices with the American Psychological Association: a member of the Publications Board, then its chairman, and finally, Chief Editorial Advisor for APA. As ever, he took all this service very, very seriously, and, even when desperately ill, he made himself attend and contribute to a publications meeting that he felt to be very important. In all of these capacities, he sought always to improve the quality of all journals. Along with others, he was responsible for the division of the *Journal of Experimental Psychology* into its several subject-matter journals. One of his last tasks was preparing information for the reorganization of the *Journal of Personality and Social Psychology*. In his later years, he consistently worked for what he called archival articles, and he backed the current tendency to demand a group of experiments in an article rather than a single study, however significant. He was distressed when this system backfired—as it occasionally did.

Contributions to Applied Work in Psychology

I think it would come as a surprise to those who know Art only through his publications in the usual psychological journals or through his position as editor of the august *Journal of Experimental Psychology* to know that he participated extensively and enthusiastically in research of an applied nature. My brief accounting of his career indicates that he did

indeed become involved in such activities, and now I wish to show that there is no contradiction herein. Art's undergraduate degree was with John McGeoch, a PhD out of the functionalists of Chicago, and his doctorate was with E. S. Robinson of Yale, recently removed from Chicago to New Haven. The functionalists, unlike many of the structuralists, were never scornful of being earthy, and actually had some pride in being so, but along with that breadth of vision was a firm commitment to psychology as a science. Good research is good research, and it must always be good, or else it becomes divisive and corrupting. Both in the applied situation and in the ivory towers of academia, one can do excellent research as well as bad research.

All this leads directly to Art himself and what he believed in. Among his highest values, as I have pointed out before, were those of quality and integrity in research. Clearly, he revered scientific psychology and viewed it, not just as an academic activity, but as a means of solving problems for society.

Who, knowing Art's later career, would identify him with the monograph on "Problems of Installation in Museums of Art" (1935) from the Philadelphia Museum or "Education of Children in a Museum of Science" (1936) from the Buffalo Museum? Yet these were his—products of some of his years at Yale. They are remarkable monographs, bearing the unmistakable marks of the Melton integrity, and he prepared them with the same devotion that he brought to other work. I am told by a social psychologist that they are quoted to this day, and I know that Art still spoke of them with interest and enthusiasm many years after their publication.

Art devoted a number of years of his professional life to the development of psychological programs for the Air Force. This work began during World War II. At the end of the war, he returned to a university setting at Ohio State, but, after only a few years there, he left, at the request of the Air Force, to establish a very large program in which sound scientific methodology was applied to evaluate and to improve selection and training procedures in that organization. To this task, he again devoted intensity and high standards. He built up a large in-house staff of highly competent, trained psychologists, and he also obtained funds to contract research to psychologists in academic institutions. Neither the contract work nor the in-house program was narrow in its restrictions. As a consequence, Art's nurturing of the Air Force Personnel Training and Research Center (Af-Patrick, as it was called) contributed not only directly to the mission of the military, but to very basic information in psychological theory. Psychology's knowledge about motor skills and about the information processing system in general was tremendously increased. Art would have abhorred the notion of restricting intellectual inquiry to one

or another institution. To him, psychological research should not be divided into the pure and the applied, as was done by Titchener; the two were inextricably bound together, and the conceptual aim of each contributed to the other. The only basic requirements were imagination and careful, unbiased methodology.

Wherever Art went, he promoted the development of organizations permitting and promoting applied work, along with traditional. He continued his federal government contribution by creating the Human Resources Research Center. While he was at Ohio State, he encouraged the work at Wright Field, and, most important, he was responsible for picking out Paul Fitts and bringing him to Ohio State for the stated purpose of creating what was then called a human engineering laboratory, later a human performance center. Art received his call from the Air Force a few months before Paul arrived, but Fitts stayed on for 10 years to carry on the planned program, not a Melton replacement, but as a direct Melton heritage. Much of his fine work at that time was financed through Art by contracts with Af-Patrick.

At the University of Michigan, where Art went in 1957, he was responsible for starting the engineering laboratory of the Willow Run Research Laboratories of the university, and he, along with Paul Fitts, who in the meantime had joined him at Michigan, founded the Human Performance Center there. Art's personal belief that the general principles of human information processing have great practical significance became a guiding principle of the Michigan Human Performance Center, according to Jim Greeno. Certainly that institution, under his guidance and, later, with his heritage, has produced a broad spectrum of immeasurably valuable research.

Conclusion

How does one end a tribute? Just for the sake of validity, let me quote again from Bjork's comments: "I came to hold him up as the ideal colleague, against which all the rest of us are to be measured. His unswerving standards, his unflagging interest in the process and substance of experimental psychology, his extraordinary sense of the responsibility of the need to carry more than his share of any burden that needed carrying, his hardheaded objectivity, even toward himself, and the grace and charm he always afforded any visitor to his home or office" We are clearly writing about the same man.

I have had to leave out a great deal. There were a lot of stories and anecdotes, but, as several remarked, they just weren't suitable for use here. I wish we could have told more or made this more—well, archival, to fit the subject. But perhaps what we have written will recall something important to some of you, and let others who did not know Art realize what a difference he made to psychology and as a person.