The Right Attitude for the Program Manager

by Douglas R. Broome

The NASA experience shows that one can follow all the procedures, rules, suggestions, etc., discussed in a management handbook and still fail to meet program objectives. The practical fact is that there is no cookbook approach or procedure — no specific set of decision rules — that, even if rigorously followed, will ensure program success. The elements most critical to program success are instead found within the individuals serving as the program manager or program scientists. Success does not derive primarily from "what" is done, but rather by the "how" and "why" in the accomplishment. Success, therefore, lies in the individual's personal commitment to leadership and management excellence. It is this commitment that is the key to effectiveness in these positions.

The question of what characteristics and attributes comprise the excellent manager or leader, regardless of the field of endeavor, evokes much emotion and endless opinion; it is the subject of literally hundreds of books. Participation in this debate is not the purpose here. Rather, our primary purpose is to present and briefly discuss the specific characteristics and attributes that the leadership of the Astrophysics Division desires in its program managers and program scientists. We should describe those characteristics and attributes which, when coupled with the appropriate use and application of the methodologies, procedures, aids, and suggestions presented in a handbook, can be expected to maximize the probability of successful accomplishment of the objectives of any program that may be assigned to them.

At first glance, the following discussion and list of attributes may seem to imply that the excellent science program manager, flight program manager, or program scientist must be superhuman. Although outstanding performance is expected, perfection at all times in all things is not really achievable. Instead, what is expected is that degree of perfection necessary at the time to effectively resolve the issues at hand, as they are encountered, without the need to resort to excuses.

Are You "In" or "Ahead of" the Crowd?

It is an unfortunate fact that many people live out their lives within a set of limitations or constraints of their own creation, constraints that unnecessarily but seriously limit their accomplishments in all aspects of life. In one frame of reference, they live "... within their own nine dots;" in another, they "... live lives of quiet desperation." Others, meanwhile, seem intuitively or instinctively to pursue their life goals with a predisposition towards accomplishment and achievement that assures their success at almost anything they try. These latter people seem to possess an attitude, sense or psychology of victory that the former do not. History demonstrates that it is from this latter group that the most successful leaders derive. And it is from this latter group that the Astrophysics Division seeks its science and flight program managers and program scientists.

Should the reader be considering (or holding) a position as a science program manager, flight program manager, or program scientist in this

Division, and after reading this find that he or she is comfortable with the views presented, then the working environment will probably be a friendly, comfortable one. Should the reader find some major disagreement or lack of "gut level" comfort with its content, then his or her talents would probably be better used elsewhere, and his or her mental peace and career potential better served in some other organization.

As a rule, NASA normally has only a handful of major flight programs under way at any given time. These few programs, though, involve a significant portion of the agency's resources and comprise the essence of its reason for existence. The program manager or program scientist positions for these programs are thus coveted. They are positions of high prestige and high visibility; they are also positions that demand measures of commitment, devotion, responsiveness, responsibility, flexibility, courage, leadership, management, and technical skill well above that demanded of most other positions in the agency. Finally, they are positions that involve unusually high levels of pressure, "heat" and career risk. Though the pay is excellent for the government service, the pay cannot be (and normally is not) the reason one serves in either of them. The incumbents must instead derive their primary personal and career satisfaction from the successful attainment of difficult goals in a complex environment by using the best combinations of people, time, dollars, facilities, and interpersonal relationships.

"Trying" Is Not Good Enough

Because of the importance of these flight programs to NASA's mission, the fundamental mindset of the successful program manager or scientist must be on the achievement of excellence, and the most basic personal standard of performance must be the achievement of success. Only to have tried must be considered by the individual to be unacceptable performance. "I tried" cannot be enough for the success-oriented program manager or program scientist. "I sent them a memo," "I wrote a memo for the record," "I left them a message" — this whole approach to satisfaction of their assigned program responsibilities is inacceptable. Instead, the standard must be set on real accomplishment — on having achieved action, met performance, or caused movement, not in having "tried" to. In this line of work, points are not given for second rate or second place performance; there is no second place in program management — only success or failure. The understanding and acceptance of this fact is the key to management excellence!

This point — that "trying," as opposed to succeeding, is not enough — is fundamental to the measurement of success in the Astrophysics Division both in the management of its flight programs and in the management of its science programs. If the Astrophysics science and flight program managers or program scientists accept this and operate accordingly, then their professional lives will be exhilarating and rewarding; they will certainly never be boring. On the other hand, failure in the ongoing, smaller things is not in itself a major problem. In fact, failure is one of the better motivators for "learning that lasts." It is the making of excuses that is unacceptable, for excuses are most often simply the lazy person's rationalizations for not having put out the extra 10 percent that is often necessary to ensure success in any endeavor.

Another major consideration for the prospective member of an Astrophysics program team is this: by virtue of the organizational structure, the science program manager, flight program managers, or program scientists in the Astrophysics Division normally command no one. Instead, they must convince other people to commit the resources of their organiza-

tions to the accomplishment of their objectives. To achieve this difficult task, the individuals concerned must exercise great skill in developing and using effective power; that is, in acquiring the voluntary alignment of the goals of the necessary external organizations and people with those of their programs. Again, results, not effort, are the basis upon which performance is measured.

What Part Does "Luck" Play?

One final topic to be considered is "luck." Coupled with the success-related attributes discussed below, one must also possess a large measure of intuitiveness, manifested in what is often referred to as luck. Many people believe that luck is a gift from the gods or an act of nature; others believe that it is a function of the positions of the stars and planets (seven of them, anyway) at birth. The management of this division believes that personal luck is largely a consequence of behavior; that is, luck is in essence "made" by the individual through his or her attitude, beliefs, and lifestyle. Regardless of the field of endeavor, the demonstration of "luck," as with the achievement of "excellence," seems to lie in the mindset of the individual and in what lies in his or her heart. Its mobilizing force seems therefore to originate in the attendant attitude and fundamental approach to life held by the individual. In effect, we are, or become, what we choose to be.

The Necessary Attributes

Specific attributes and characteristics that are desired in the excellent astrophysics science program manager, flight program manager, or scientist follow. While only the rarest of human beings will demonstrate all these attributes at all times, the effective manager or scientist will exhibit the right ones at the right times to solve the problems.

1. **Sense of duty.** Willingness to readily submerge ego to the greater needs of the program, the user community, the agency and the nation; a person to whom the phrase "Duty is the most sublime word in the English language" has real meaning.

2. **Personal integrity.** Possession of a system of ideals and standards consistent with a personal standard of morality beyond which one will not go or upon which one will not compromise; abhorrence of "situational morality."

3. **Maturity of judgment.** Wisdom to know when and when not to speak; to fight; to stand; to judge; to bend or break the "rules" or regulations; and to follow or violate the established chains of command, information flow, and authority.

4. **Moral courage.** Ability to determine when a stand must be taken, without compromise, for the good of the user community, the program, the agency, and one's personal code of honor and standard of conduct; ability to set pride aside and thereby avoid or abandon untenable, unreasonable, or irrational positions rather than exhibit destructive behavior or get into positions that conflict with personal values (see also "Loyalty," below); willingness to choose the unpopular position when convinced that that position is the "right" one.

5. **Mental and (occasionally) physical courage.** Coolness, calmness, steadiness "under fire" or in high-pressure situations.

6. **Enthusiasm.** Supportive of management goals and needs, especially for "quick-turnaround" actions or information transfer; positive in attitude; antithetical to negativism, yet maintaining appropriate objectiveness; antithetical to cynicism; pleasant, especially under stress.

7. **Loyalty (personal and organizational)** Wisdom to understand the innate personal and organizational destructiveness of gossip and disloyalty to one's management chain, supervisor, supervisees, or program objectives, with an ingrained commitment to avoid or discourage such destructive behavior (see "Moral courage," above).

8. **Quick-wittedness.** Ability to respond quickly and positively to unexpected or rapidly changing situations; "quick on your feet."

9. **A "can-do" attitude.** Ability to accept or act on valid management requests for action, however "far out," strange or unreasonable they may seem, in a positive, confidence-inspiring manner, particularly when reaction or response time is short.

10. **Proactive stance.** Possession of an inherent propensity for self-initiated action; a self-starter.

11. **A "nose for problems."** Ability, when all "appears" well, to sense or "feel" intuitively that something is amiss (see also the paragraph above concerning luck and intuition).

12. **Global thinking.** Ability to consider events, plans, alternatives, etc., in both the micro- and macro-view; that is, in planning or in anticipating future actions or possibilities, the ability to identify and assess the potential impacts on the program and initiate the appropriate actions; the ability to develop and maintain a model of the program's political operating environment, identifying both the supportive and the adversarial groups, organizations or institutions, or potential "stop" points or scenarios, or national moods, events or activities that could affect the program — pro or con — and develop appropriate plans or interventions to either minimize adverse impacts or to exploit favorable opportunities for the benefit of the program.

13. **Unwillingness to accept the status quo.** That is, never accepting out-of-hand that "this is the only way it can be done" or "it can't be done."

14. **Tenacity.** Indefatigability; grit; determination; stick-to-it-iveness; unwillingness to accept less than that which will accomplish the objective; willingness to persevere in the face of resistance or peer pressure until satisfied that the findings, conclusions, and corrective actions proposed or taken are in fact sound; appreciative of the difference between "real" action that achieves the desired results, and "apparent" action, represented by the writing of useless or ineffective memos or other such "CYA" documents.

15. **Creativity.** The ability to create order out of chaos; to look at a problem in light of the larger context of what is possible (that is, outside of the narrow focus of the specific details of the problem itself) and to develop unique or non-obvious, straightforward solutions that achieve the supposedly impossible for the overall good of the program.

16. **Innate curiosity/inquisitiveness.** An inherent attitude of "What's this all about?", "How does that work?", "Why do we have to accept that?", "Is that the only way?", "Is that really the right solution?", etc.; constantly looking for problems or alternatives as a normal way of doing business.

17. **Analytical.** Through appropriate "process" questions, ability to determine whether the findings, conclusions, and corrective actions proposed or taken are in fact sound; not intimidated by the assumed "expertness" of others, but instead driven to understand the logic of their recommendations or conclusions.

18. **Practical relevancy.** The ability to identify and isolate the "real" problem from the "apparent" problem; ability to rapidly cut

through the masses of data to get to the relevant information, to separate the "wheat from the chaff," to know when to look at the forest and when to look at the trees; ability to determine what is important to the solution of the real problem while maintaining a continuing sensitivity to any implications of this solution to program and agency objectives and operations.

19. **Open-mindedness.** Openness and willingness to listen to others; willingness, desire, and ability to continue learning; one who finds "not invented here" attitudes unacceptable.

How Do You Measure Up?

The degree to which existing or prospective-program managers or program scientists possess the characteristics and attributes discussed above cannot, of course, be measured objectively. Each person must, therefore, make a rigorously honest, objective self-assessment in terms of the discussions herein and answer the question: "For the position I desire, do I have 'the Right Stuff'?" Be thorough in your self-assessment. Your future perception of your personal and professional success, peace of mind, serenity and, in essence, your future happiness are at stake.

Excerpted from "An Introduction to Astrophysics Division Program Management: A Primer on Program Management Practices and Principles Used in the Astrophysics Division, Office of Space Science and Applications (OSSA), NASA" 2nd edition, October 1989. The document was prepared and updated at the request of Dr. C. Pellerin, Director of the Astrophysics Division.