LEFT SEAT COMMAND OR LEADERSHIP? FLIGHT

LEADERSHIP TRAINING AND RESEARCH AT

NORTH CENTRAL AIRLINES

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It's refreshing to be with a working group that is talking about the how and what form resource management training should take rather than debating the issue of whether or not it should take place. Although we at North Central have recognized the need for flight leadership training for some time, we found it a really difficult subject around which to write a definitive program. Initially we thought we could do it ourselves, but it soon became apparent that the job was more difficult than we had originally thought.

First we were hampered by the absence of either good resource material or a good reliable data base. Soon we were seeking someone from the outside who could provide the insights and perspective we lacked. At about the same time, and this is going back about 2 years, our company had engaged Mr. Michael Garvey, management consultant, to provide training for all management people at North Central.

The program conducted for our management personnel had as its foundation the Blake and Muton managerial grid along with its rather substantial data base. For those of you not familiar with the grid it allows you to measure your own style, and it provides you with a quantitative management language against which you can measure any number of management behaviors. Although the Blake and Muton management grid had not been previously utilized for flight crews, we felt that the similarities between good corporate and good cockpit management made this instrument a reasonable choice. And an additional plus to this concept is that it provides our pilots with a management language that is common within our company. Mike Garvey agreed to help us put together a program to help captains improve their flight management skills.

Since we intended to spend quite a sum of money on the project, it was necessary to secure approval from our president, Bud Sweet. In writing the rationale for our project we not only spoke to the issue of air safety, but we also argued that a captain exercises at least some control over an enormous amount of operational money, and, therefore, should be afforded some management training in order to better manage these resources. This was probably the clincher along with the air safety argument, and our project was approved.

With financing ensured we started preparing our first seminar. Since Mike would be doing the bulk of the program, and since we did need to define some of the differences between business and cockpit management, we set up a

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program designed to familiarize Mike with as many aspects of a pilot's life as possible. In the process Mike rode endless hours of jump seat time and he interviewed many, many pilots, both captains and copilots. He also interviewed flight attendants, mechanics, station agents, dispatchers, tower and ACT people, and, I'm not sure, but I think even some FAA people.

When Mike felt confident that he had a good feel for the captain's role, we put the finishing touches on our first product, and invited a mix of 20 check pilots and ALPA representatives to attend. We chose these people for our first program because we wanted the very best and most constructive criticism we could get. It's worthy to note here that through this entire effort the ALPA group in our airline has been most helpful, even to the point of supplying some of the manpower necessary for our success.

Our first program was a 2-day affair, and, as we have at the end of each seminar, we asked the participants to fill out an anonymous critique form. Further, we asked that within 30 days they write an unsigned letter telling us what was right and what was wrong about the program.

Now, we all know how difficult it is to get a pilot to take pen in hand, but the response to the request was tremendous. Out of 20 participants we received 15 follow-up letters, many of them typewritten pages running three or four pages in length. They contained both praise and constructive criticism. All but one thought the course should be continued and even expanded. There was one criticism that did have kind of a common thread in many of the letters, and that was that we hadn't been prescriptive enough for specific situations.

In our subsequent seminars we expanded to a very full 3-day program, with the third day spent at the air route traffic control center, and then we went back into the classroom for a session that we have dubbed situation analysis.

To date we have conducted four seminars for a total of about 80 pilots. The response has been good to all four programs, but we still have requests for more prescriptive solutions. We hope in the future to satisfy these requests in a couple of ways. First, we are planning a home study course for upgrading captains. That will cover regulations, dispatch requirements, alternate weather requirements and the like. Additionally, we are designing an initial line assignment syllabus, which is designed to reinforce the home study program, and, also to expose the new captain to a more organized line check.

We want to follow this with our restructured command seminar. Notice that I have changed from flight leadership seminars to command seminar.

A poet of some renown once asked what's in a name, and I was amused and interested in Bob Helmreich's story about the Merchant Marine captains who resented being called shipboard managers. This struck a familiar chord because our early efforts bore the title Flight Leadership Seminar. There

was a vague feeling among the participants that this somehow undercut their command, so our more recent program was called Command Seminar. The pilots seemed to like this better. We don't pretend to have all the answers, indeed we don't have all the questions. But we are trying, and we are improving, and I think that's what counts.

I have given you a quick overview of our efforts. Now I'd like to turn it over to Mike Garvey for his usual fine job of explaining the details of both this program and some of the research programs which we have on the horizon.

(Mike Garvey)

You're going to get perilously few details in the approximately 10 or 15 minutes remaining to give them to you. I thought what I'd do is provide as much information as I could to you about what we cover with the captains, how we go about it, and give you my observations about the results.

Generally, you have gotten feedback from Gramer that we do get very good evaluations, but I'd like to give you my observations about what seems to go smoothly and where the sticking points remain.

First, I'm going to give you an overview of the management grid concept. Those of you who have been exposed to it before can bear with me, and those of you who haven't may want to take some notes. Then I'd like to discuss how we apply that concept in our work with captains. And that will also tie back into some of the data-gathering results of interviewing the work groups who work with the captains: first officers, flight attendants, and so on.

And then I'd like to go back through the rest of the outline we have laid out here (table 1) and touch on how we approached the areas of communications.

Later on in the second day we switch over to some departmental representative presentations and discussions.

I'd like to now start with the grid (fig. 1). Blake and Muton were social psychologists with the University of Texas who studied the management literature about the best ways to manage versus the not so good ways to manage. They tried to organize that information into some kind of a system that would make it more sensible and more easily usable by the management audience. They reduced the study of management to two overall dimensions.

One dimension was the concern for production or output, that a manager might have. They decided this concern was not something that would be either all present or all absent. It can be represented on some kind of a scale, and they applied the numbers of 1 through 9 to represent that scale. Nine, in this case, would represent a manager's maximum concern, a very high concern, for output. One, would represent the absolute minimum concern that

a manager could have for getting the job done. By the way, let's consider output and production concerns in a very broad way. It could be amount of information, quality of information, quality of decisions, solutions to problems, or it could be manufacturing care.

The other dimension they focused on was the dimension of concern for people. This was not people in the sense of passengers, for example; this was people in the sense of employees; or those resources that are available to us to accomplish whatever output it is that we need to obtain.

Once again they put this on a scale from low to high, 1 to 9, such that, when they completed this grid, they wound up with 9 × 9 or 81 different ways in which a manager can combine his or her concern for output and for people. Each one of these different ways represents a different style or different approach to dealing with people to accomplish results.

Rather than focusing on 81 styles, they focused on the five major styles. The first one was called 9-1, which represents a very output-oriented style, with minimum concern for people. An opposite sort of style is 1-9, minimum concern for output, associated with a maximum concern for people. The style somewhere in the middle is called 5-5 which represents a moderate concern for output counterbalanced by an equally moderate concern for people. So he maintains some kind of a balance with people who are his resources for getting things accomplished.

There is also a style called 1-1 which is kind of a do-nothing style of management. Blake and Muton describe this as an impoverished style of management with only minimum concern for output and people. There's more of that than you might imagine.

We usually start out in a class situation with the captains laughing and joking about how ridiculous that is. After looking at some of the behaviors of 1-1 they say, "Oh yes. There are some people who give you a cold vacant stare," which may mean, "My God, it's me."

The last style that they focus on is a style called 9-9, maximum concern for output and at the same time maximum concern for people involved in helping to get that output. These different styles represent different categories of behaviors.

You could label this style of behavior (9-1) as autocratic. You could label this style (1-9) a real nice guy, country club approach. Treat people nice and production will take care of itself.

This style (5-5) on the other hand, is represented by an awful lot of compromise. There is nothing wrong with compromise per se, but in this style we're talking about a disproportionate amount of compromise. Acceptable, perhaps, only mediocre results; just something to waffle through the situation.

And, of course, here (1-1), as I've already indicated, an appropriate label might be "Impoverished Management."

Of course, here (9-9) the label that we'd apply probably is team manager. Not always in team meetings, but trying to manage the resources for the most output and the best quality output possible, yet keep the resources motivated and part of the total team effort.

Now, in using this concept with the captains we go through a bit more detailed explanation than I just gave you. They also have a number of pre-reading articles and other pieces, as much as we could find in the literature. Then we quickly shift from the management grid concept per se and into its application to captains.

We begin with the style 9-1 and I ask the captains to help me build a profile of the kinds of behaviors they would expect from a 9-1 captain. They have no trouble at all in doing this.

And after we build a behavior profile of 9-1, we switch to 1-9, and once again I ask the captains to describe the kinds of behaviors they would expect. Once again, no real difficulty in building up dozens and dozens of descriptions of the kinds of behaviors that these styles of captains would use in interacting with members of the crew.

We then do a very interesting thing, I think. We switch from the behaviors themselves to trying to explore what might be the consequences, the reactions on the part of different work groups, first officers, flight attendants, controllers, and so on. Once we can reasonably agree on what the normal reactions might be, we focus on what might be some of the potential consequences of these reactions along four different dimensions.

One of these is the motivation of other persons affected by this stype of management. The next is economic considerations, that is, total Republic Airlines success. The third is passenger service, the quality of passenger service. And, of course, the fourth is flight safety.

I'd like to show you the format that we use with the captains (fig. 2). Based on our prior discussion of the grid, we ask them to identify the typical behaviors of each style of captain. Then, focusing on different work groups at different points in time, for example, the first officer, we focus on what might be the typical first officer's reaction to these kinds of captains' behaviors. Once the typical reactions are developed, we explore some of the potential consequences associated with these reactions. The captains did a very good job as a total group. As you might believe, there were differences between the group members, but they did a very good job in laying out the behaviors, reactions, and potential consequences.

Here are some examples of typical behaviors of a 9-1 captain toward a first officer: Authoritarian, dictatorial — commands without first officer

input, perhaps even at all — no delegation of authority — may do all takeoffs and landings himself or herself — minimal communication, and the communication that is used is very one-way — over-reacts in a very punitive way to mistakes that might be made — very picky about the kinds of decisions and choices that the first officer would make when he's flying the leg.

The typical reactions that you might expect from first officers, also, as these captains related it: first officer would normally become defensive, clam up — become intimidated — avoid confronting the captain or clarifying information with the captain — would have fear of failure, high tension, and so on.

Some of the potential consequences are obvious: more mistakes — more violations — safety would be compromised — passenger service would tend to go down — may be a little stronger ego commitment to a wrong decision than a captain should have. For example: flying through rough weather without turning around because he had made that decision initially.

One of the things that is kind of interesting is that many first officers spend a lot of time trying to get out of certain captain's block of time. There is a lot of fatigue for a first officer working with this kind of a captain, and a much higher experience of stress.

Now, let's contrast those kinds of behaviors and potential conse- quences to the kinds of responses we got when we looked at other styles of management. The captains, after the first one or two workshops, took the five major styles of the grid and shortened up the process for us. They said, "We're very concerned about the 9-1 style, very concerned about the 9-9 style, but we already have a phrase in our industry that fits some combina- tion of 1-9, 1-1, and 5-5, and for us it's complacency, the complacent captain."

So from that point forward we began to lump those three styles together and it saved us some time in the workshops.

The kinds of behaviors they would expect from a complacent captain: in subtle ways to allow the first officer to begin to run the flight — allow him to initiate the routine procedures — exhibit a lot of behaviors to gain approval — accepts "spit-outs" from the system; pretty much "What- ever the system says, that's it" — allows the system itself to support and carry them rather than manage the system — very hesitant to get into a disagreement with anyone — kind of allows the flight to run itself with minimum captain involvement.

Typical reactions of a first officer: probably a tendency for the first officer to try to take over the flight — certainly would hold the captain in less esteem — might also be sloppy themselves, have no real reason to maintain competency and professionalism — probably less pre-planning — there might be a lot of confusion around the area of communications and authority relationships, questions of who's really in charge and so on.

Let me just quickly run through some of the behaviors the captains would expect of a 9-9 captain: the 9-9 captain in behaving toward a first officer would more often seek input on operational problems and feedback on his own problem solving and decisions — would listen more to the first officer — would teach and coach the first officer — would learn from mistakes — would help the first officer learn from mistakes — would be constructively critical — would absolutely demand quality performance — would be very assertive, etc.

Reactions of the first officer to these kinds of behaviors, as you might guess: very motivated — for the most part, very supportive of the captain's decisions — probably provide better quality work — better flight planning — more attention to detail — more alert — feel more challenged — quicker to intervene with the captain to clarify misunderstood data, etc.

Very positive potential consequences in terms of flight safety, motivation, passenger service, and so on.

So we use these kinds of descriptions of behaviors, reactions, and potential consequences to get across to the captains the effects of different approaches to managing the leadership situation and to dealing with problems in the cockpit and between the cockpit and the cabin crew. It usually goes very well.

We then make a rather abrupt shift from applications of management style to communications. We teach communications to the captains by using a learning simulation. This is not to be confused with what you usually call a simulation within your industry. It is a communications exercise which takes about an hour for the captains to go through. Then we spend about an hour analyzing what took place during that exercise in terms of good and poor communications practices.

We try to make this a personal learning experience for the captains. We cover a lot of learning areas, one-way and two-way communications, the effect of taking a public stance on a decision, and the difficulty of changing your mind and moving on to another position.

We continue with communications the next morning from the standpoint of the intergroup aspect of communications, cooperation, and relationships. We have an additional simulation we put the captains through, which focuses on the kinds of relationship difficulties that arise when members of different employee and occupational groups must interact for some joint purpose. As a result of the learning from this simulation, we analyze ways to improve effectiveness between captains and first officers, captains and flight attendants, captains and maintenance, and even captains and air-traffic controllers.

That afternoon we spend 2-3 hours touching briefly on motivation. One concept we present is called the self-fulfilling prophecy, or the Pygmalion effect.

We discuss with the captains how their expectations of the other people with whom they interact can, over a period of time, begin to build certain behavioral responses from the other person. These behaviors take on the form of fulfilling the captain's expectations — therefore, a self-fulfilling prophecy.

In other words, if I as a captain regard my first officer as a very competent, probably successful, very alert person, I treat him that way, I show those expectations. Some of the ways in which I behave in doing this I'm not even aware of; it's nonverbal communication. But I communicate those high expectations to the first officer, and I consequently, over time, begin to get that kind of behavior back in return.

Contrast that with regarding my first officer as very, very junior in all respects, probably not too competent, probably prone to failure and making mistakes. I communicate that, and, as you might expect, that's the kind of performance I receive from that first officer. Before this portion of the workshop ends we spend a considerable amount of time trying to put all that we have done up to that point in some kind of perspective. We go back to the grid concept and reinforce the 9-9 style. However, we try to get away from the mystique of saying that you have to change your whole style, that if you're a 9-1 captain you have to move completely to 9-9. That's quite a leap, and probably involves more change that most of us are capable of accomplishing.

So we try to get away from that. We try to get the captain to think of this grid framework and the related data as a perspective to use to improve his judgments and predictions about what kind of behavior is appropriate in a certain situation with first officers, flight attendants, and others. We try to get the captain to think in terms of adjusting behaviors, rather than getting too focused in on changing overall style.

Probably there are very few 9-9 managers in the world, and similarly very few 9-9 captains, although I think we have been blessed in having some in our classes.

Now I'd like to turn this back to Gramer to quickly discuss the remainder of the program. Then, before we break into questions and answers, we'll quickly describe the research project coming up.

(Capt. Foster)

There is one thing I'd like to just touch on briefly. An interesting output of the Blake and Muton research with regard to the managerial grid is that something like 65% or 70% of all of the managers in the major corporations in America fit the 5-5 style. It's interesting for us to try to see where the flight crews fit. Wherever they fit, we show them that they don't

have to stay in that style, that although that may be their basic management style, they can slip out of it if they recognize the situation, and manage in a better way.

After Mike does styles in perspective, a representative from Flight Control, perhaps the Director of Flight Control, comes in and speaks with the captains about various dispatch problems and dispatch requirements. That gets to be a kind of two-way program in which there's a good deal of give and take.

We also include Maintenance Control and the Flight Attendant group.

What we've tried to do is include the people with whom the captain interacts the most, discounting the first officer, of course. So that the captain gets a better feel for some of the problems that they have, and where they're coming from, and there is a good flow of ideas and interchange of ideas.

The third day is spent at the Minneapolis Air Route Traffic Control Center, that is, 4 hours of it are.

The traffic control people have worked out a real slick program for us; we are very happy with it. It actually starts at 7:30 A.M. and finishes at 12:00 P.M., and during this time we introduce them to basic air traffic control procedures.

You know how a pilot typically feels he could control traffic better than anyone else. Well, we manage to get the pilot into the ATC simulator, which has become quote popular, and we shoot a lot of problems to him. It gives the pilot a little perspective on the air traffic controller's problems. They will typically put North Central and another carrier neck and neck and, of course, the pilot in the controller position has no difficulty saying United do a 360 and North Central continue on.

But they find out that doesn't always work. Then the pilots move on to control positions on a one-to-one basis with traffic controllers. They plug into a sector and actually sit there and observe the controller work traffic, and discuss the problems attendant with working the traffic. It's been a very popular part of our seminar.

We return in the afternoon to the classroom once again and here again we try to address some of the previous criticism that we haven't spoken to, prescriptive means of solving problems. For this we have a session that is called situation analysis.

This is a program that Sherm Cornell and I have been doing, in which we outline a given problem, and then, taking these 20 captains who have had this exposure to some new ideas and concepts, we let them present their ideas on how they would solve the problem. We get some quite interesting interactions there.

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Then at the end we have the written evaluation, which is done in the anonymous form, followed by the letter. I think that pretty well covers it.

At this time we might throw it open for questions.

DISCUSSION

CAPT. PERKINSON, United Airlines: How long have you been using this technique at North Central?

CAPT. FOSTER: We started about 2 years ago. We've done a total of 4 seminars. We, like most people in the industry, are impeded by pilot shortages and the availability of people for the programs. So we have only been able to do 4 to date, or a total of 80 people. We do have authorization to continue. We plan to pick up with an improved format, and plan to make it an ongoing thing.

CAPT. TRAUB, United Airlines: You mentioned in the situation analysis session you present a problem. Could you give us an example of the type of problem?

CAPT. FOSTER: We might present a captain with a recalcitrant first officer, a first officer who isn't performing up to standards, something like that. Then we go around the room and let each one indicate how he thinks he might handle the situation. We might do that, we might have an ill passenger, any number of things.

DR. HELMREICH: I was just curious to hear a little bit about where you're going with the research and evaluations?

MR. GARVEY: I'll try to give you a couple of quick thoughts on that. Let me tell you about our motivation first. One of our constant concerns about our workshop is with the issue of data. We don't feel right now like we have an adequate data base of information to provide to these captains about their specific behaviors and, therefore, it makes it difficult to talk about understanding and changing those behaviors. We do it as best we can given a model like this, and it goes very well for what it is.

We would love to be able to provide the captains coming into our workshop with a profile of how he or she thinks, approaches situations, and behaves. Then we could give them better help in adjusting their behaviors.

The other concern we have about our workshop is that we are unable to do any kind of valid pre-post testing on just how much effect our workshop has. Does it help? Does it hurt? Does it do anything at all?

If we had an instrument that would fulfill the initial data need, and then could be readministered 3, 6, or 8 months later to give both the captain and us some feedback as to how that program affected that person, it would be very helpful to all concerned.

That led us to the research project. We have begun to formulate a research effort with a consulting organization in Plymouth, Michigan by the name of Human Synergistics. They have over 10 yrs of history in using their instrument with the general management population. They have developed norms on over 100,000 managers throughout the country. These profiles and norms are not based on psychological illness; instead they are based on psychological health. Specifically, these instruments measure the thinking patterns of these managers and how these patterns cause different behaviors. We'd like to use these instruments on a group of pilots and see if we couldn't develop norms that would be predictive of more effective and less effective captains. Of course, we also have to develop criteria for defining captain effectiveness.

We don't yet know if the instruments will work on the pilot group, as they have with the general management population. But we're hoping to answer that question with the research results. The current proposal is to work with a sample of 25 captains and 25 first officers from North Central, and an additional 25 captains and 25 first officers from Southern Airways.

If we wind up with a good set of profiles, the initial use of these data would be for the development of captains in our workshops. The individual data would go straight to the pilot and not to the company, thereby protecting the pilot's anonymity. Later it could be used as a selection tool as well.

CAPT. CRUMP, United Airlines: Were you going to make any attempt to select those captains and first officers for any quality or were you just going to take an overall....

MR. GARVEY: The initial attempt was planned to be random. The difficulty will be in coming to an agreement on the characteristics of an effective captain, the same issue we discussed a couple of times yesterday.

CAPT. CRUMP: I just wanted to comment that somewhere downstream you're going to have to evaluate what type of a performer he is on the airline in order to validate your testing.

MR. GARVEY: Oh, sure, that will have to happen as a companion issue.

MR. MANSFIELD: You say the continuing effort will still be a random choice?

MR. GARVEY: No, the continued effort would not. This is just initial research to see whether these instruments will be predictive of a

pilot's behavior or not, as they have been with managers. We may need a completely different instrument. We may just need to develop evaluation criteria. We don't know.

MR. MANSFIELD, American Airlines: Maybe I didn't state the question clearly. How will you choose the candidates that are going to participate in the future in this program?

MR. GARVEY: That's voluntary. At this point, we are encouraging captains to come in to the workshop. Pseudo volunteering? Gramer, I think you'd better field that.

CAPT. FOSTER: The workshop has been full pay and credit; we haven't asked anybody to do it on a freebie basis. We are paying them flight pay loss, full expenses, hotel bills, the whole bit. We try to make it a prestigious thing, and we do pretty well assign the people to it. We've had a little grumbling by some of the participants, wondering why they were selected, and thinking that perhaps we had them in mind for some reason or other. And sometimes we did. But usually they went away saying, "Although I had some reservations and wondered why you selected me, I'm very happy that I came, and I got a lot out of it." We have had some really good feedback.

MR. FELL, FAA: Are there any plans for Republic to expand this into a recurrent type course or update type?

CAPT. FOSTER: No, not currently. Although it's obvious that a program of this kind is an ideal foundation, and that there should be something built upon it in an ongoing way, I think that something in the way of a full-mission simulation might be an ideal method of doing it in an ongoing way.

CAPT. TURLINGTON, Pan American: Are you at present just inviting captains to this program?

CAPT. FOSTER: For the most part, yes. We have taken some very senior first officers who have not yet flown as captain, but who are about to fly captain, and had them in the program. If there are no other questions, I'd like to express our appreciation for your attention; thanks again.

TABLE 1.- COMMON LEADERSHIP WORKSHOP OUTLINE

|	DAY 1	DAY 2	DAY 3
MORNING	• INTRODUCTION • MANAGEMENT STYLES LUNCH	• COMMUNICATIONS • MANAGEMENT STYLES IN PERSPECTIVE . LUNCH	• MINNEAPOLIS AIR ROUTE TRAFFIC CONTROL CENTER VISIT LUNCH
AFTERNOON	• CAPTAIN'S BEHAVIOR • CREW REACTIONS • POTENTIAL CONSEQUENCES	• MOTIVATION • DEPARTMENTAL PRESENTATIONS — MAINTENANCE CONTROL — FLIGHT ATTENDANTS — FLIGHT CONTROL	• SITUATION ANALYSIS • EVALUATION • ADJOURN
EVENING	DINNER • COMMUNICATIONS	• COCKTAILS AND DINNER	

HIGH

CONCERN
FOR
PEOPLE

LOW

LOW   CONCERN FOR OUTPUT   HIGH
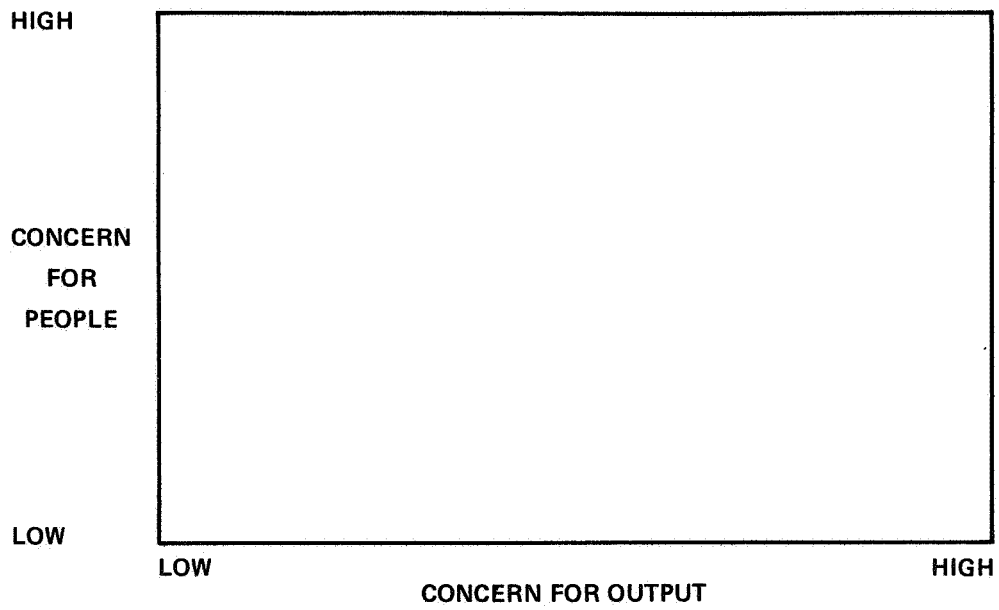
Figure 1.- Management grid.

_____ CAPTAIN

GROUP	CAPTAIN'S BEHAVIORS	REACTIONS	POTENTIAL CONSEQUENCES

Figure 2.- Reactions and consequences of different management styles.

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