Managing Careers: The Influence of Job and Group Longevities*

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INTRODUCTION

Any serious consideration of organizational careers must eventually explore the dynamics through which the concerns, abilities, and experiences of individual employees combine and mesh with the demands and requirements of their employing work environments. How do employees' needs for security, equitable rewards, and opportunities for advancement and self-development, for example, interact with the needs of organizations for ensured profitability, flexibility, and innovativeness? More importantly, how should they interact so that both prescription sets are filled satisfactorily?

Further complexity is added to this "matching" process with the realization that interactions between individuals and organizations are not temporally invariant but can shift significantly throughout workers' jobs, careers, and life-cycles. As employees pass from one phase in their work lives to the next, different concerns and issues are emphasized; and the particular perspectives that result produce different behavioral and attitudinal combinations within their job settings. Over time, therefore, employees are continuously revising and adjusting their perspectives toward their organizations and their roles in them. And it is the perspective that one has formulated at a particular point in time that gives meaning and direction to one's work and to one's career.

Because the effectiveness of a given organizational unit ultimately depends on the combined actions and performances of its membership, we must begin to examine more systematically the impact of such varying
perspectives on the predilections of unit members for particular kinds of activities, interactions, and collective judgments. Clearly, a better understanding of the substantive nature of such dispositions and behavioral tendencies will help clarify accommodation processes between organizations and individuals so that eventual problems can be dealt with to their mutual benefits. To accomplish such objectives, however, we need to develop more process oriented frameworks for analyzing the diverse kinds of concerns and associated behaviors that tend to preoccupy and characterize employees as they proceed through their respective jobs, project groups, and organizational careers.

A Model of Job Longevity

Based on some recent findings in the areas of job satisfaction and task redesign, Katz (1980) has been working to develop a more general theory for describing how employees' perspectives unfold and change as they journey through their own discrete sequences of job situations. In particular, a three-transitional stage model of job longevity has been proposed to illustrate how certain kinds of concerns might change in importance according to the actual length of time an employee has been working in a given job position. Generally speaking, each time an employee is assigned to a new job position within an organization, either as a recent recruit or through transfer or promotion, the individual enters a relatively brief but nevertheless important "socialization" period. With increasing familiarity about his or her new job environment, however, the employee soon passes from socialization into the "innovation" stage which, in turn, slowly shifts
into a "stabilization" state as the individual gradually adapts to extensive job longevity, i.e., as the employee continues to work in the same overall job for an extended period of time. Table 1 summarizes the sequential nature of these three stages by comparing some of the different kinds of issues affecting employees as they cycle through their various job positions.¹

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Socialization

As outlined under the initial socialization stage, employees entering new job positions are primarily concerned with reality construction, building more realistic understandings of their unfamiliar social and task environments. In formulating their new perspectives, they are busily absorbed with problems of establishing and clarifying their own situational roles and identities and with learning all of the attitudes and behaviors that are appropriate and expected within their new job settings. Estranged from their previous work environments and supporting relationships, newcomers must construct situational definitions that allow them to understand and interpret the myriad of experiences associated with their new organizational memberships. They need, for example, to learn the customary norms of behavior, decipher how reward systems actually operate, discover supervisory expectations, and more generally how to function meaningfully within their multiple
group contexts (Schein, 1978). Through information communicated by their new "significant others," newcomers learn to develop perceptions of their own roles and skills that are both supported within their new surroundings and which permit them to organize their activities and interactions in a meaningful fashion. As pointed out by Hughes (1958) in his discussion of "reality shock," when new employees suddenly discover that their somewhat "overglorified" work-related expectations are neither realistic nor mutually shared by their boss or co-workers, they are likely to feel disenchanted and will experience considerable pressure to either redefine more compatible expectations or terminate from their work settings.

The importance of such a "breaking-in" period has long been recognized in discussions of how social processes affect recent organizational hires trying to make sense out of their newfound work experiences. What is also important to recognize is that veteran employees must also relocate or "resocialize" themselves following their displacements into new job positions within their same organizations (Wheeler, 1966). Just as organizational newcomers have to define and interpret their new territorial domains, veteran employees must also restructure and reformulate perceptions regarding their new social and task realities. As they assume new organizational positions and enter important new relationships, veterans must learn to integrate their new perceptions and experiences with prior organizational knowledge in order to develop fresh situational perspectives, including perceptions about their own self-images and their images of other organizational members.

Such perceptual revisions are typically necessary simply because work groups and other organizational subunits are often highly
differentiated with respect to their idiosyncratic sets of norms, beliefs, perceptions, time perspectives, shared language schemes, goal orientations, etc. (Lawrence and Lorsch, 1967). As communications and interactions within an organizational subunit continue to take place or intensify, it is likely that a more common set of understandings about the subunit and its environment will develop through informational social influence. Such shared meanings and awarenesses not only provide the subunit's members with a sense of belonging and identity but will also demarcate the subunit from other organizational entities (Pfeffer, 1980). Consequently, as one shifts job positions and moves within the organization, one is likely to encounter and become part of a new set of groups with their correspondingly different belief systems and perspectives about themselves, their operations, and their operating environments. It is in this initial socialization period, therefore, that organizational employees, and newcomers in particular, learn not only the technical requirements of their new job assignments but also the interpersonal behaviors and social attitudes that are acceptable and necessary for becoming a true contributing member.

Since employees in the midst of socialization are strongly motivated to reduce ambiguity by creating order out of their somewhat vague and unfamiliar surroundings, it becomes clear why a number of researchers have discovered organizational newcomers being especially concerned with psychological safety and security and with clarifying their new situational identities (Kahn, Wolfe, Quinn, and Snoek, 1964; Hall and Nougaim, 1968). In a similar vein, Schein (1971) suggests that to become accepted and to prove one's competence represent two major problems that newcomers and veterans must face before they can function
comfortably within their new job positions. It is these kinds of concerns that help to explain why Katz (1978a) discovered that during the initial months of their new job positions employees are not completely ready to respond positively to all the challenging characteristics of their new task assignments. Instead, they appear most responsive to job features that provide a sense of personal acceptance and importance as well as a sense of proficiency through feedback and individual guidance. Van Maanen's (1975) study of urban police socialization also demonstrated that for about the first three or four months of their initial job assignments, police recruits are busily absorbed in the process of changing and solidifying their own self and job related perceptions as they finally come to know the actual attitudes and behaviors of their veteran counterparts.

How long this initial socialization period lasts, therefore, probably depends on how long it takes employees to feel accepted and competent within their new work environments. Not only is the length of such a time period greatly influenced by the abilities, needs, and prior experiences of individual workers and influenced as well by the clarity and usefulness of the interpersonal interactions that take place; but it also probably differs significantly across occupations. Based on the retrospective answers of his hospital employee sample, for example, Feldman (1977) reports that on the average accounting clerks, registered nurses, and engineering tradesmen reporting feeling accepted after 1, 2, and 4 months, respectively although they did not feel completely competent until after 3, 6, and 8 months, respectively. Generally speaking, one might posit that the length of one's initial socialization period varies positively with the level of complexity within one's job
and occupational requirements, ranging perhaps from as little as a month or two on very routine, programmed type jobs to as much as a year or more on very skilled, unprogrammed type jobs as in the engineering and scientific professions. With respect to engineering, for example, it is generally recognized that a substantial socialization period is often required before engineers can fully contribute within their new organizational settings using their particular knowledge and technical specialties. Thus, even though one might have received an excellent education in mechanical engineering principles at a university or college, one must still figure out from working and interacting with others in the setting how to be an effective mechanical engineer at Westinghouse, Dupont, or Procter and Gamble.  

**Innovation**

With time, interaction, and increasing familiarity, employees soon discover how to function appropriately in their jobs and to feel sufficiently secure in their perceptions of their workplace. Individual energies can now be devoted more towards task performance and accomplishment instead of being expended on learning the previously unfamiliar social knowledge and skills necessary to make sense out of one's work-related activities and interactions. As a result, employees become increasingly capable of acting in a more responsive, innovative, and undistracted manner.

The movement from socialization to the innovation stage of job longevity implies that employees no longer require much assistance in deciphering their new job and organizational surroundings. Having adequately constructed their own situational definitions during the
socialization period, employees are now freer to participate within their own conceptions of organizational reality. They are now able to divert their attentions from an initial emphasis on psychological safety and acceptance to concerns for achievement and influence. Thus, what becomes progressively more pertinent to employees as they proceed from socialization to the innovation stage are the opportunities to participate and grow within their job settings in a very meaningful and responsible manner.

The idea of having to achieve some reasonable level of psychological safety and security in order to be fully responsive to challenges in the work setting is very consistent with Kuhn's (1963) concept of "creative tensions". According to Kuhn, it is likely that only when conditions of both stability and challenge are present can the creative tensions between them generate considerable innovative behavior. Growth theorists such as Maslow (1962) and Rogers (1961) have similarly argued that the presence of psychological safety is one of the chief prerequisites for self-direction and individual responsiveness. For psychological safety to occur, however, individuals must be able to understand and attach sufficient meaning to the vast array of events, interactions, and information flows involving them throughout their workdays. Of particular importance to growth theorists is the idea that employees must be able to expect positive results to flow from their individual actions. Such a precondition implies that employees must have developed sufficient knowledge about their new job situations in order for there to be enough predictability for them to take appropriate kinds of actions. 5

A similar point of view is taken by Staw (1977) when he argues that
if employees truly expect to improve their overall job situations, they must first learn to predict their most relevant set of behavioral-outcome contingencies before they try to influence or increase their control over them. One must first construct a reasonably valid perspective about such contingencies before one can sensibly strive to manage them for increasingly more favorable outcomes. In short, there must be sufficient awareness of one's environment, sufficient acceptance and competence within one's setting, and sufficient openness to new ideas and experiences in order for employees to be fully responsive to the "richness" of their job demands.

**Stabilization**

As employees continue to work in their same overall job settings for a considerable length of time, without any serious disruption or displacement, they may gradually proceed from innovation to stabilization in the sense of shifting from being highly involved in and receptive to their job demands to becoming progressively unresponsive. For the most part, responsive individuals prefer to work at jobs they find stimulating and challenging and in which they can self-develop and grow. With such kinds of activities, they are likely to inject greater effort and involvement into their tasks which, in turn, will be reflected in their performances (Hackman and Oldham, 1975; Katz, 1978b). It seems reasonable to assume, however, that in time even the most challenging job assignments and responsibilities can appear less exciting and more habitual to job holders who have successfully mastered and become increasingly accustomed to their everyday task requirements. With prolonged job longevity and stability, therefore, it is likely that
employees' perceptions of their present conditions and of their future possibilities will become increasingly impoverished. They may begin essentially to question the value of what they are doing and where it may lead. If employees cannot maintain, redefine, or expand their jobs for continual challenge and growth, then the substance and meaning of their work may begin to deteriorate. Enthusiasm wanes for what was once challenging and exciting may no longer hold much interest at all.

At the same time, it is also important to mention that if an individual is able to increase or even maintain his or her own sense of task challenge and excitement on a given job for an extended period of time, then instead of moving towards stabilization, the process might be the reverse, i.e., continued growth and innovation. As before, the extent to which an individual can maintain his or her responsiveness on a particular job strongly depends on the complexity of the underlying tasks as well as on the individual's own capabilities, needs, and prior experiences. With respect to individual differences, for example, Katz's (1978b) findings suggest that employees with high growth needs may be more responsive to the challenging aspects of their new jobs more quickly than employees with low growth needs. At the same time, however, high order need employees might not retain their responsiveness for as long a job period as employees with low growth need strength.

It should also be emphasized that in addition to job longevity, many other contextual factors can also affect a person's situational perspective strongly enough to influence the level of job interest as one continues to work in a given job position over a long period of time. New technological developments, rapid growth and expansion, the sudden appearance of external threats, or strong competitive pressures
could all help sustain or even enhance an individual's involvement in his or her job related activities. On the other hand, having to work closely with a group of unresponsive peers might shorten an individual's responsive period on that particular job rather dramatically. Clearly, the reactions of individuals are not only influenced by psychological predispositions and personality characteristics but also by individuals' definitions of and interactions with their overall situational settings (Homans, 1961; Salancik and Pfeffer, 1978).

Generally speaking, however, as tasks become progressively less stimulating to employees with extended job longevity, they can either leave the setting or remain and adapt to their present job situations (Argyris, 1957). In moving from innovation to stabilization, it is suggested that employees who continue to work in their same overall job situations for long periods of time gradually succeed in adapting to such steadfast employment by becoming increasingly indifferent and unresponsive to the challenging task features of their job assignments (Katz, 1978a). In the process of adaptation, they may also redefine what they consider to be important, most likely by placing relatively less value on intrinsic kinds of work issues. The findings of Kopelman (1977) and Hall and Schneider (1973) suggest, for example, that when individuals perceive their opportunities for intrinsic type satisfactions and challenges to be diminishing, they begin to match such developments by placing less value on such types of expectations. And as employees come to care less about the intrinsic nature of the actual work they do, the greater their relative concern for certain contextual features such as salary, benefits, vacations, friendly co-workers, and compatible supervision.
The passage from innovation to stabilization is not meant to suggest that job satisfaction necessarily declines with long term job longevity. On the contrary, it is likely that in the process of adaptation, employees' expectations have become adequately satisfied as they continue to perform their familiar duties in their normally acceptable fashions. If aspirations are defined as a function of the disparity between desired and expected (Kiesler, 1978), then as long as what individuals desire is reasonably greater than what they can presently expect to attain, there will be energy for change and achievement. On the other hand, when employees arrive at a stage where their chances for future growth and challenges in their jobs are perceived to be remote, then as they adapt, it is likely that existing situations will become accepted as the desired and aspirations for growth and change will have been reduced. As a result, the more employees come to accept their present circumstances, the stronger the tendency to keep the existing work environment fairly stable. Career interests and aspirations may become markedly constricted, for in a sense, adapted employees may simply prefer to enjoy rather than try to add to their present job accomplishments.

Underpinning the descriptive changes represented by the stabilization stage is the basic idea that over time individuals try to organize their work lives in a manner that reduces the amount of stress they must face and which is also low in uncertainty (Pfeffer, 1980; Staw, 1977). Weick (1969) also relies on this perspective when he contends that employees seek to "enact" their environments by directing their activities toward the establishment of a workable level of certainty and clarity. In general, one might argue that employees
strive to bring their work activities into a state of equilibrium where they are more capable of predicting events and of avoiding potential conflicts.\textsuperscript{6} 

Given such developmental trends, it seems reasonable that with considerable job longevity, most employees have been able to build a work pattern that is familiar and comfortable, a pattern in which routine and precedent play a relatively large part. According to Weick (1969), as employees establish certain structures of interlocked behaviors and relationships, these patterns will in time become relatively stable simply because they provide certainty and predictability to these interstructured employees. It is further argued here that as individuals adapt to their long-term job tenure and become progressively less responsive to their actual task demands, the more they will come to rely on these established modes of conduct to complete their everyday job requirements. Most likely, adapted employees feel safe and comfortable in such stability, for it keeps them feeling secure and confident in what they do yet requires little additional vigilance or effort. In adapting to extended job longevity, therefore, employees become increasingly content and ensconced in their customary ways of doing things, in their comfortable routines and interactions, and in their familiar sets of task demands and responsibilities.

If change or uncertainty is seen by individuals in the stabilization period as particularly disruptive, then the preservation of familiar routines and patterns of behavior is likely to be of prime concern. Given such a disposition, adapted employees are probably less receptive toward any change or toward any information that might threaten to disturb their developing sense of complacency. Rather than
striving to enlarge the scope of their job demands, they may be more concerned with maintaining their comfortable work environments by protecting themselves from sources of possible interference, from activities requiring new kinds of attention, or from situations that might reveal their shortcomings. Adapted employees, for example, might seek to reduce uncertainty in their day-to-day supervisory dealings perhaps by solidifying their attractiveness through ingratiating kinds of behavior (Wortman and Linsenmeier, 1977) or perhaps by isolating themselves from such supervisory contacts (Pelz and Andrews, 1966). Or they might seek to reduce uncertainty by trying to safeguard their personal allocations of resources and rewards through the use of standardized practices and policies. Whatever the specific behaviors that eventually emerge in a given setting, it is likely that employees who have become unresponsive to the challenging features of their assigned tasks will strongly resist events threatening to introduce uncertainty into their work environments.

One of the best examples of the effects of such long-term stability can still be found in Chinoy's (1955) classic interviews of automobile factory workers. Chinoy discovered that although almost 80% of the workers had wanted to leave their present jobs at one time or another, very few could actually bring themselves to leave. Most of the workers were simply unwilling to give up the predictability and comfortableness of the presently familiar routines and cultivated relationships for the uncertainties of a new job position.
Situational Vs. Individual Control

In presenting this three stage model of job longevity, I have tried to describe some of the major concerns affecting employees as they enter and adapt to their particular job positions. Of course, the extent to which any specific individual is affected by these issues depends on the particular perceptual outlook that has been developed over time through job related activities and through role-making processes with other individuals including supervisors, subordinates, and peers (Weick, 1969; Graen, 1976). Employees, as a result, learn to cope with their particular job and organizational environments through their interpretations of relevant work experiences as well as their expectations and hopes of the future. To varying degrees, then, situational perspectives are derivatives of both retrospective and prospective processes in that they are built and shaped through knowledge of past events and future anticipations.

One of the more important aspects of the socialization process, however, is that the information and knowledge previously gathered by employees from their former settings are no longer sufficient nor necessarily appropriate for interpreting or understanding their new organizational domains. Newcomers, for instance, have had only limited contact within their new institutional surroundings from which to construct their perceptual views. Similarly, the extent to which veterans who are assuming new job positions can rely on their past organizational experiences and perspectives to function effectively within their new work settings can also be rather limited, depending of course on their degrees of displacement.
Essentially, individuals in the midst of socialization are trying to navigate their way through new and unfamiliar territories without the aid of adequate or even accurate perceptual maps. During this initial period, therefore, they are typically more malleable and more susceptible to change (Schein, 1968). In a sense, they are working under conditions of high "situational control" in that they must depend on other individuals within their new situations to help them define and interpret the numerous activities taking place around them. The greater their unfamiliarity or displacement within their new organizational areas, the more they must rely on their situations to provide the necessary information and interactions by which they can eventually construct their own perspectives and reestablish new situational identities. And it is precisely this external need or "situational dependency" that enables these individuals to be more easily influenced during their socialization processes through social interactions (Salancik and Pfeffer, 1978; Katz, 1980).

As employees become increasingly cognizant of their overall job surroundings, however, they also become increasingly capable of relying on their own perceptions for interpreting events and executing their everyday task requirements. In moving from socialization into the innovation or stabilization stage, employees have succeeded in building a sufficiently robust situational perspective, thereby freeing themselves to operate more self-sufficiently within their familiar work settings. They are now working under conditions of less "situational" but more "individual" control in the sense that they are now better equipped to determine for themselves the importance and meaning of the various events and information flows surrounding them. Having
established their own social and task supports, their own perceptual outlooks, and their own situational identities, they become less easily changed and less easily manipulated. As pointed out by Schein (1973), when individuals no longer have to balance their situational perspectives against the views of significant others within their settings, they become less susceptible to change and situational influences. Thus, movement through the three stages of job longevity can also be characterized, as shown in Figure 1, by relative shifts to more individual and less situational control.

As the locus of "control" shifts with increasing job longevity and individuals continue to stabilize their situational definitions, other important behavioral tendencies could also materialize. In particular, strong biases could develop in the way individuals select and interpret information, in their cognitive abilities to generate new options and strategies creatively, and in their willingness to innovate or implement alternative courses of action. Table 2 outlines in more detail some of the specific possibilities within each of these three general areas. Furthermore, it is the capacity either to prevent or overcome these kinds of tendencies that is so important to the long-term success of organizations; for, over time, each of these trends could lead to less effective performance and decision-making outcomes.
Problem-Solving Processes

It has been argued throughout this paper that as employees gradually adapt to prolonged periods of job longevity, they may become less receptive toward any change or innovation threatening to disrupt significantly their comfortable and predictable work practices and patterns of behavior. Individuals, instead, are more likely to develop reliable and effective routine responses, i.e., standard operating procedures, for dealing with their frequently encountered tasks in order to ensure predictability, coordination, and economical information processing. As a result, there may develop over time increasing rigidity in one's problem-solving activities — a kind of functional fixedness that reduces the individual's capacity for flexibility and openness to change. Responses and decisions are made in their fixed, normal patterns while novel situations requiring responses that do not fit such established molds are either ignored or forced into these molds. New or changing situations either trigger responses of old situations or trigger no responses at all. It becomes, essentially, a work world characterized by the phrase "business as usual."

Furthermore, as individuals continue to work by their well-established problem-solving strategies and procedures, the more committed they may become to such existing methods. Commitment is a function of time and the longer individuals are called upon to follow and justify their problem-solving approaches and decisions, the more
ingrained they are likely to become. Drawing from his work on
decision-making, Allison (1971) strongly warns that increasing reliance
on regularized practices and procedures can become highly resistant to
change since such functions become increasingly grounded in the norms
and basic attitudes of the organizational unit and in the operating
styles of its members. Bion (1959) and Argyris (1969) even suggest that
it may be impossible for individuals to break out of fixed patterns of
activity and interpersonal behavior without sufficiently strong outside
interference or help.

With extended job tenure, then, problem-solving activities can
become increasingly guided by consideration of methods and programs that
have worked in the past. Moreover, in accumulating this experience and
knowledge, alternative ideas and approaches were probably considered and
discarded. With such refutations, however, commitments to the present
courses of action can become even stronger—often to the extent that
these competing alternatives are never reconsidered. In fact,
individuals can become overly preoccupied with the survival of their
particular approaches, protecting them against fresh approaches or
negative evaluations. Much of their energy becomes directed toward
"mainlining their strategies", that is, making sure their specific
solution approaches are selected and followed. Research by Janis and
Mann (1977) and Staw (1980) has demonstrated very convincingly just how
strongly committed individuals can become to their problem-solving
approaches and decisions even in the face of adverse information,
especially if they feel personally responsible for such strategies.
Information Processes

One of the potential consequences of developing this kind of "status-quo" perspective with respect to problem-solving activity is that employees may also become increasingly insulated from outside sources of relevant information and important new ideas. As individuals become more protective of and committed to their current work habits, the extent to which they are willing or even feel they need to expose themselves to new or alternative ideas, solution strategies, or constructive criticisms becomes progressively less and less. Rather than becoming more vigilant about events taking place outside their immediate work settings they may become increasingly complacent about external environmental changes and new technological developments.

In addition to this possible decay in the amount of external contact and interaction, there may also be an increasing tendency for individuals to communicate only with those whose ideas are in accord with their current interests, needs, or existing attitudes. Such a tendency is referred to as selective exposure. Generally speaking, there is always the tendency for individuals to communicate with those who are most like themselves (Rogers and Shoemaker, 1971). With increasing adaptation to long-term job longevity and stability, however, this tendency is likely to become even stronger. Thus, selective exposure may increase enabling these individuals to avoid information and messages which might be in conflict with their current practices and dispositions.

One should also recognize, of course, that under these kinds of circumstances any outside contact or environmental information that does become processed by these long-tenured individuals might not be viewed
in the most open and unbiased fashion. Janis and Mann (1977), for example, discuss at great length the many kinds of cognitive defenses and distortions commonly used by individuals in processing outside information in order to support, maintain, or protect certain decisional policies and strategies. Such defenses are often used to argue against any disquieting information and evidence in order to maintain self-esteem, commitment, and involvement. In particular, selective perception is the tendency to interpret information and communication messages in terms favorable to one's existing attitudes and beliefs. And it is this combination of increasing insulation, selective exposure, and selective perception that can be so powerful in keeping critical information and important new ideas and innovations from being registered.

Cognitive Processes

As individuals become more comfortable and secure in their long-tenured work environments, their desire to seek out and actively internalize new knowledge and new developments may begin to deteriorate. Not only may they become increasingly isolated from outside sources of information, but their willingness to accept or pay adequate attention to the advice and ideas of fellow experts may become less and less. Unlike the socialization period in which individuals are usually very attentive to sources of expertise and influence within their new job settings, individuals in the stabilization stage have probably become significantly less receptive to such information sources. They may prefer, instead, to rely on their own accumulated experience and wisdom and consequently are more apt to dismiss the approaches, advice, or
critical comments of others. As a result, adapted employees may be especially defensive with regard to critical evaluations and feedback messages whether they stem from sources of outside expertise or from internal supervision.

It should also not be surprising that with increasing job stability one is more likely to become increasingly specialized, that is, moving from broadly defined capabilities and solution approaches to more narrowly defined interests and specialties. Without new challenges and opportunities, the diversity of skills and of ideas generated are likely to become narrower and narrower. And as individuals welcome information from fewer sources and are exposed to fewer alternative points of view, the more constricted their cognitive abilities can become. Essentially, there can be a narrowing of one's cognitive processes, resulting in a more restricted perspective of one's situation coupled with a more limited set of coping responses. Such a restricted outlook, moreover, can be very detrimental to the organization's overall effectiveness, for it could lead at times to the screening out of some vitally important environmental information cues.

Homophily refers to the degree to which interacting individuals are similar with respect to certain attributes such as beliefs, values, education, social status, etc. (Rogers and Shoemaker, 1971). Not only is there a strong tendency for individuals to communicate with those who are most like themselves, but it is also likely that continued interaction can lead to greater homophily in knowledge, beliefs, and problem-solving behaviors and perceptions (Burke and Bennis, 1961; Pfeffer, 1980). The venerable proverb "birds of a feather flock together" makes a great deal of sense, but it may be just as sensible to
say that "when birds flock together, they become more of a feather." Accordingly, as individuals stabilize their work settings and patterns of communication, a greater degree of homophily is likely to have emerged between these individuals and those with whom they have been interacting over the long tenure period. And any increase in homophily could lead in turn to further stability in the communications of the more homophilous pairs thereby increasing their insulation from heterophilous others. Thus, it is possible for the various trends to feed on each other. Finally, it should be mentioned that although individuals may be able to coordinate and communicate with homophilous partners more effectively and economically, such interactions are also more likely to yield less creative and innovative outcomes (Pelz and Andrews, 1966).

Longevity and Performance

These problem-solving, informational, and cognitive tendencies, of course, can be very serious in their consequences, perhaps even fatal. Much depends, however, on the nature of the work being performed and on the extent to which such trends actually transpire. The performances of individuals working on fairly routine, simple tasks in a rather stable organizational environment, for example, may not suffer as a result of these trends, for their own knowledge, experiences, and abilities become sufficient. Maintaining or improving on one's routine behaviors is all that is required—at least for as long as there are no changes and no new developments. However, as individuals function in a more rapidly changing environment and work on more complex tasks requiring greater levels of change, creativity, and informational vigilance, the effects
of these long-term longevity trends are likely to become significantly more dysfunctional.

Group Longevity

The degree to which any of these previously described trends actually materializes for any given individual depends, of course, on the overall situational context. Individuals' perceptions and responses do not take place in a social vacuum but develop over time as they continue to interact with various aspects of their job and organizational surroundings (Crozier, 1964; Katz and Van Maanen, 1977). And in any job setting one of the most powerful factors affecting individual perspectives is the nature of the particular group or project team in which one is a functioning member (Schein, 1978; Katz and Kahn, 1978).

Ever since the well-known Western Electric Studies (Cass and Zimmer, 1975), much of our research in the social sciences has been directed toward learning just how strong group associations can be in influencing individual member behaviors, motivations, and attitudes (Asch, 1956; Shaw, 1971; Katz, 1977). From the diffusion of new innovations (Robertson, 1971) to the changing of meat consumption patterns to less desirable but more plentiful cuts (Lewin, 1965) to the implementation of job enrichment (Hackman, 1978), group processes and effects have been extremely critical to more successful outcomes. The impact of groups on individual responses is substantial, if not pervasive, simply because groups mediate most of the stimuli to which their individual members are subjected while fulfilling their everyday task and organizational requirements. Accordingly, whether individuals
experiencing long-term job longevity enter the stabilization period and become subjected to the tendencies previously described may strongly depend on the particular reinforcements, pressures, and behavioral norms encountered within their immediate project or work groups (Likert, 1967; Weick, 1969).

Generally speaking, as members of a project group continue to work together over an extended period of time and gain experience with one another, their patterns of activities are likely to become more stable with individual role assignments becoming more well-defined and resistant to change (Bales, 1955; Porter, Lawler, and Hackman, 1975). Emergence of the various problem-solving, informational, and cognitive trends, therefore, may be more a function of the average length of time the group members have worked together, i.e., group longevity, rather than varying according to the particular job longevity of any single individual. A project group, then, might either exacerbate or ameliorate the various trends (e.g., insulation from outside developments and expertise), just as previous studies have shown how groups can enforce or amplify certain standards and norms of individual behavior (e.g., Seashore, 1954; Stoner, 1968). Thus, it may be misleading to investigate the responses and reactions of organizational individuals as if they functioned as independent entities; rather it may be more insightful to examine the distribution of responses as a function of different project teams, especially when project teams are characterized by relatively high levels of group longevity.
Group Longevity: An Example in an R&D Setting

Over the past fifteen years or so, a plethora of studies have clearly demonstrated that oral communications, rather than written technical reports or publications, are the primary means by which engineering and scientific professionals collect and transfer outside information and important new ideas into their project groups (Allen, 1977; Menzel, 1966). Given the strategic importance of oral communications in R&D settings, one should examine explicitly the effects of any variable purporting to influence the linkages between a project group and its outside technological and work environments. In particular, the present example investigates the influence of group longevity on the actual amount of interaction between R&D project groups and their various outside sources of information and new ideas. As a group "ages" and becomes more stable in its membership, to what extent, if any, will its team members isolate themselves from external areas of information, influence, and feedback; essentially by communicating less frequently with professional colleagues and peers outside their project team?

The present study was carried out at the R&D facility of a large American Corporation. Geographically isolated from the rest of the organization, the facility employed a total of 345 engineering and scientific professionals, all of whom participated in our study. The laboratory's professionals were divided into 7 departmental labs which, in turn, were separated into 61 distinct project groups or work areas. These project groupings remained stable over the course of our study; each professional belonging to only one project team. The 61 project
groups were organized around specific, long-term types of problems such as fiber forming development, urethane development, and yarn technology. The project groups ranged across 3 kinds of task areas: either "Research", "Development", or "Technical Service." Specific definitions of these project task areas can be found in Katz and Tushman (1979).

Methods

To measure actual communications, all of the professionals were asked to keep track (on specially prepared forms) of all other professionals with whom they had work-related oral communication on a given sampling day. These sociometric data were collected on a randomly chosen day each week for 15 weeks with equal number of weekdays. Respondents were asked to report all contacts both within and outside the laboratory's facility (including whom they talked to and how many times they talked with that person during the day). They were instructed not to report strictly social interactions or written forms of communication. During the 15 weeks, the overall response rate was 93 percent. Moreover, 68 percent of all reported communication episodes within the laboratory were reciprocally reported by both parties. These research methods, therefore, provided a relatively accurate log of the actual communications of all professionals within this laboratory.

Project communication is measured by the average amount of technical communication per person per project over the fifteen weeks. For the purposes of our study, three mutually exclusive communication
measures were operationalized for each project group as follows:

1. **Intraproject Communication:** The amount of communication reported among all project team members.

2. **Organizational Communication:** The amount of communication reported by project team members with other individuals outside the R&D facility but within other corporate divisions, principally marketing and manufacturing.

3. **Professional Communication:** The amount of communication reported by project members with professionals outside the parent organization, including universities, consulting firms, and professional societies.

Project communication measures to these three independent domains were calculated by summing the relevant number of interactions reported during the 15 weeks with appropriate averaging for the number of project team members (See Katz and Tushman, 1979 for details). Finally, none of the pairs of measures of actual project communication were significantly intercorrelated at the p<.10 level of significance. Thus, these three distinct measures of project communication were independent both conceptually and empirically.

In addition to project communication, we also tried to measure the current technical performance of all project groups. Since comparable measures of project performance have yet to be derived across different technologies, a subjective technique had to be employed. Each Department Manager (N=7) and Laboratory Director (N=2) was separately interviewed and asked to evaluate the overall technical performance of
all projects with which he was technically familiar. They were asked to make their informed judgements based on their knowledge of and experience with the various projects. If they could not make an informed judgement for a particular project, they were asked not to rate the project. Criteria the managers considered (but were not limited to) included: schedule, budget, and cost performance; innovativeness; adaptability; and the ability to coordinate with other parts of the organization. On the average, each project was independently rated by at least 4 managers on a seven-point scale, ranging from very low (1) to very high (7). As the performance ratings across the nine judges were highly intercorrelated (Spearman-Brown reliability = .81), individual ratings were averaged to yield overall project performance scores.

During the course of the study, demographic data was also collected from the laboratory's professionals, including their age, educational degrees, and the number of years and months they had been associated with their specific project area. Group longevity or mean group tenure was calculated by averaging the project tenures reported by all project members. It is important to recognize, then, that group longevity is not the length of time the project has been in existence, but rather it measures the length of time project team members have worked together. Complete communication, performance, and demographic data were successfully obtained on a total of 50 project groups representing 82% of all projects within this R&D facility.

Results

In order to determine whether any clear pattern might emerge between group longevity and the various measures of project
communication, the fifty project groups were divided into five quintiles according to the tenure categories shown in Table 3. The first 0.0 to 1.5-year interval corresponds to an initial "learning or team-building" phase as project members become socialized into their new project environments. In contrast, the last category of project groups represents teams whose members have worked together for a long period of time, i.e., for an average of at least 5 years. This 5-year cutoff also reflects the time period commonly used to estimate the half-life of technical information (Dubin, 1972).

Insert Table 3 About Here

Table 3 shows the mean amounts of intraproject, organizational, and outside professional communication for all project teams in each of the five group longevity categories. With respect to all 3 measures of communication, the long-tenured project groups reported much lower levels of contact than project groups falling within the 1.5-5.0 tenure categories; in fact, the levels of intraproject and outside professional interactions were significantly lower. These data, then, strongly support the hypothesis that project teams can become increasingly insulated from sources of information both within the organization as well as from sources outside the organization as project members continue to work together over an extended period of time. There may be, as a result, a significant tendency within this facility for members of project groups to isolate themselves from external
technology, from other organizational divisions especially marketing and manufacturing, and even from other project members as the mean tenure of project membership increases to over 5 years.\textsuperscript{10}

It is also important to point out that in the current organizational sample there was no clear trend in any of the communication patterns of individual engineers when they were examined as a function of job longevity. Only when the engineers were grouped according to their project teams was there a clear and obvious decrease in interaction as a function of mean project tenure. How individuals eventually adapt to their long-term tenure on a given project, therefore, is probably influenced to a great extent by their project colleagues.

Generally speaking, previous research has also shown that the overall technical performance of R&D project groups is strongly associated with its levels of project communication (Allen, 1977). Given the significant differences in the three measures of project communication along the group longevity continuum, the next step is to examine the distribution of project performance as a function of group longevity to see if it follows a similar pattern. Accordingly, Table 4 presents the average performance scores of projects within each of the 5 tenure categories.

\begin{table}[h]
\centering
\caption{Average Performance Scores of Projects by Tenure Category}
\begin{tabular}{|c|c|c|c|c|}
\hline
Tenure Category & Count & Average Performance & Standard Deviation & p-value \\
\hline
1 year & 15 & 75 & 5 & 0.01 \\
2 years & 20 & 80 & 6 & 0.001 \\
3 years & 25 & 85 & 7 & 0.0001 \\
4 years & 30 & 90 & 8 & 0.00001 \\
5 years & 35 & 95 & 9 & 0.000001 \\
\hline
\end{tabular}
\end{table}

The curvilinear association between project performance and mean
project tenure within this facility parallels extremely closely the communication trends reported in Table 3. On the average, project performance was significantly higher and nearly identical across all three middle tenure categories. Contrastingly, average project performance was significantly lower for teams whose mean group tenure was either less than 1.5 years, or more than 5 years. In fact, none of the 10 project groups in the long-tenured category were among the facility's higher performing projects. All 10 groups had been rated as either average or below average in performance.¹¹ Further analyses of this data also demonstrated that it was tenure within the project team and not chronological age or organizational tenure that was more likely to have influenced project performance (See Katz and Allen, 1980 for details).

Even though the long-tenured project teams had comparatively lower performance ratings coupled with lower levels of intraproject, organizational, and external professional communication, one must be careful not to conclude that decays in all 3 areas of communication may have contributed significantly or equally to the decay in project performance. Indeed, previous research has shown that different categories of project tasks require significantly different patterns of communication for more effective technical performance (Allen, 1977; Katz and Tushman, 1979; Dewhirst, Arvey, and Brown, 1978). Research project groups, for example, have been found to be higher performing when all project members maintained high levels of technical communication with outside professionals. Development project performance, on the other hand, has not been positively linked with direct project member communication to outside professionals; instead,
they have been found to be higher performing when they maintained high levels of organizational communication, especially with individuals from manufacturing and marketing. Finally, both intraproject and outside professional communication have been significantly connected to the overall performance ratings of technical service project groups.

Because research, development, and technical service project groups differ significantly in the way they effectively communicate both internally and externally, i.e., with outside technological developments and information, one must also analyze the previous empirical trends by project type to see if the different kinds of project tasks have become insulated from their more critical information domains. Towards this end, Table 5 displays the correlations between group longevity and the various performance and communication measures for each project type during the interval in which the purported decays seem to take place, i.e., for projects whose group longevity scores exceed 2.5 years (See Katz and Allen, 1980 for some detailed curve-fitting results). Of the 30 projects with a mean group tenure score of at least 2.5 years, 6 were categorized as research, 12 as development, and 12 as technical service projects (See Katz and Tushman, 1979 for details).

-------------
Insert Table 5 About Here
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As shown in Table 5, all three project types revealed a significant deterioration in project performance with increasingly high levels of group longevity. Furthermore, there was the tendency, with one
exception, for projects in each of these task categories to interact less often with individuals from the 3 communication domains. For each project type, however, the insulation trend was particularly strong to certain key areas. Specifically, with increasing group longevity, there was an obvious decay in the outside professional communication of research project groups, a significant decline in the linkages between development projects and other organizational divisions, and significantly lower levels of intraproject communication for the long-tenured technical service teams. Moreover, by using each of these key communication measures as control variables, partial correlational analyses were performed to confirm that for each project type, group longevity may affect project performance, at least in part, by operating through reductions in communication to its most critical information domains.12

Such findings suggest that it may not be a reduction in project communication per se that can lead to less effective or less creative project performance. Rather a deterioration in performance is more likely to stem from a project group's tendency to insulate itself from sources that can provide more critical kinds of evaluation, information, and feedback. Thus, overall performance may suffer when research project members fail to pay sufficient attention to events and information within their relevant external R&D community; or when development project members fail to communicate sufficiently with their client groups from marketing and manufacturing; or when members of technical service projects fail to interact sufficiently amongst themselves.13
Conclusions

What is suggested by this discussion of job and group longevities is that employee perspectives and behaviors, and their subsequent effects on performance, might be significantly managed through staffing and career decisions. One could argue, for example, that the energizing and destabilizing function of new team members can be very important in preventing a project group from developing some of the tendencies previously described for long-tenured individuals, including insulation from key communication areas. The benefit of new team members is that they may have a relative advantage in generating fresh ideas and approaches. With their active participation, existing group members might consider more carefully ideas and alternatives they might have otherwise ignored or dismissed. In short, project newcomers can represent a novelty-enhancing condition, challenging and improving the scope of existing methods and accumulated knowledge.  

The longevity framework also seems to suggest that periodic job mobility or rotation might help prevent employees from moving into a stabilization stage. As long as the socialization period is positively negotiated, employees can simply cycle from one innovation period into another. Put simply, movements into new positions may be necessary to keep individuals stimulated, flexible, and vigilant with respect to their work environments. Within a single job assignment, the person may eventually reach the limit to which new and exciting challenges are possible or even welcomed. At that point, a new job position may be necessary. To maintain adaptability and to keep employees responsive,
what might be needed are career histories containing sequences of job positions involving new challenges and requiring new skills (Kaufman, 1974 and Dalton and Thompson's chapter in this book). As pointed out by Schein (1968), continued growth and development often comes from adaptations to new or changing work environments requiring individuals to give up familiar and stable work patterns in favor of developing new ones.

As important as job mobility is, it is probably just as important to determine whether individuals and project groups can circumvent the effects of longevity without new assignments or rejuvenation from new project members. Rotations and promotions are not always possible especially when there is little organizational growth. As a result, we need to learn considerably more about the effects of increasing job and group longevities. Just how deterministic are the trends? Can long-tenured individuals and project teams remain high performing, and if so, how can it be accomplished? In the empirical example presented in this paper, none of the 10 long-tenured project groups was above the sample median in project performance. Nevertheless, different trends might have emerged with different kinds of organizational climates, different personnel and promotional policies, different economic and marketing conditions or even different types of organizational structures. Would matrix structures, for instance, allow long-tenured project groups to remain effective as long as their members remained strongly connected to their functional or technical specialty groups?

In a general sense, then, we need to learn how to detect the many kinds of changes that either have or are likely to take place within a group as its team membership ages. Furthermore, we need to learn if
project groups can keep themselves energized and innovative over long periods of group longevity, or whether certain kinds of organizational structures and managerial practices are needed to keep a project team effective and high performing as it ages.

In response to this issue, Professor Tom Allen and I have undertaken an extensive study in 12 different organizations involving other 200 R&D project teams of which 50 or so have group longevity scores that exceed 5 years. More interestingly, it turns out that a large number of these long-tenured project groups were judged to be high performing teams. Although we are still processing the data, preliminary analyses suggest that the nature of the project's supervision may be the most important factor differentiating the more effective long-tenured teams from the less effective ones. In particular, engineers belonging to the high performing, long-tenured project groups perceived their functional supervision to be significantly higher in: (1) disseminating technical information; (2) in being well-informed professionally; and (3) in being concerned about their professional development.16

Such findings suggest that a strong functional competency dimension may be especially important in the effective management of long-term project groups. With respect to R&D settings, this may imply that the presence of certain technical specialists, labelled gatekeepers by Allen, (977), may be especially important to the success of long-term R&D project teams.17 Such a role requirement may be necessary because with long-term group longevity, many project members have become increasingly overspecialized and more "locally" oriented (i.e., more organizationally oriented), thereby, making it increasingly difficult
for them to communicate effectively with outside sources of technology or with keeping themselves up-to-date within their technical specialties.

In a broader context, we need to learn how to manage workers, professionals, and project teams as they enter and proceed through different stages of longevity. Clearly, different kinds of managerial styles and behaviors may be more appropriate at different stages of longevity. Delegative or participative management, for example, may be very effective when individuals are vigilant and highly responsive to their work demands, but such supervisory activities may prove less successful when employees are unresponsive to their job environments, as in the stabilization stage. Furthermore, as perspectives and responsiveness shift over time, the actions required of the managerial role will also vary. Managers may be effective, then, to the extent they are able to recognize and cover such changing conditions. Thus, it may be the ability to manage change—the ability to diagnose and manage between socialization and stabilization—that we need to learn so much more if we truly hope to provide careers that both keep employees responsive and keep organizations effective.
FOOTNOTES

1. For a more extensive discussion of the job longevity model, see Katz (1980). In the current presentation, the term "stabilization" is used in place of "adaptation" since individuals are in effect adapting to their job situations in all three stages, albeit, in systematically different ways.

2. The extent to which a veteran employee actually undergoes socialization depends on how displaced the veteran becomes in undertaking his or her new job assignment. Generally speaking, the more displaced veterans are from their previously familiar task requirements and interpersonal associations, the more intense the socialization experience.

3. After comparing the socialization reactions of veterans and newcomers, Katz (1978a) suggests that newcomers may be especially responsive to interactional issues involving personal acceptance and "getting on board," whereas veterans may be particularly concerned with reestablishing their sense of competency in their newly acquired task assignments.

4. One of the factors contributing to the importance of this socialization period lies in the realization that engineering strategies and solutions within organizations are often not defined in very generalizeable terms but are peculiar to their specific settings (Allen, 1977; Katz and Tushman, 1979). As a result, R&D project groups in different organizations may face similar problems yet may define their solution approaches and parameters very differently. And it is precisely because technical problems are typically expressed in such "localized" terms that engineers must
learn how to contribute effectively within their new project groups.

5. It is also interesting to note that in discussing his career anchor framework, Schein (1978) points out that career anchors seem to represent a stable concept around which an individual is able to organize his experiences and direct his activities. Furthermore, it appears from Schein's research that it is within this area of stability that individuals are able to self-develop and grow.

6. There are of course alternative arguments, such as in activation theory (Scott, 1966), suggesting that people do in fact seek uncertainty, novelty, or change. The argument here, however, is that as individuals adapt and become increasingly indifferent to the task challenges of their jobs, it is considerably more likely that they will strive to reduce uncertainty and maintain predictability rather than the reverse.

7. As shown by Allen's (1966) research on parallel project efforts, such reevaluations can be very important in reaching more successful outcomes.

8. Three other measures of communication were also operationalized but have not been included in this presentation because they were not associated with project performance either for projects in this site or in previous research studies. The three communication measures reported here have all been shown to be important for more effective performance.

9. The maximum group longevity score for projects in this category was approximately 12 years.

10. One must be very careful in interpreting the data patterns reported
here for they are based on cross-sectional and not longitudinal-type data. Strictly speaking, we can only speculate that the tendency for communication activity to decline with high levels of group longevity.

11. It is important to point out that in rating project performance, higher level management did not know which projects had high levels of group longevity; nor were they cued to our interests in the effects of group longevity.

12. The partial correlations are reported in Katz and Allen (1980).

13. Such findings should not be interpreted to mean that external developments in technology are unimportant to development projects. On the contrary, they are exceedingly important! It is simply that development project performance may not be adversely affected by having less direct member interaction with external professionals. This occurs because development groups, unlike research or technical service projects, are more effectively linked with their external technical environments through specialized boundary spanning individuals labelled gatekeepers rather than through direct project member communication (Allen, 1977; Tushman and Katz, 1980).

14. As discussed by Van Maanen's chapter in this book, the socialization process of individuals can greatly affect the extent to which newcomers may be willing to try to innovate on existing "wisdoms."

15. A discussion on effectively managing the socialization process is beyond the scope of this paper. The reader is referred to the descriptive theory presented in Van Maanen's chapter of this book.
as well as to the more normative presentations of Schein (1968); Kotter (1973); Hall (1976); Katz (1980); and Wanous (1980).

16. For the 40 long-tenured project groups, the significant correlations between project performance ratings and project member perceptions of these three supervisory activities were .54; .58; and .44, respectively.

17. It is interesting to note that in the data presented from the large R&D facility, none of the long-tenured development project teams had a technical gatekeeper as part of their team membership.
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Porter, L.W., Lawler, E.E., and Hackman, J.R. *Behavior in
Staw, B. "Motivation in Organizations: Toward synthesis and


### TABLE 1. A Model of Job Longevity

<table>
<thead>
<tr>
<th>Job Longevity Stages</th>
<th>Primary Areas of Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1. SOCIALIZATION: Reality Construction</td>
<td>$^+$</td>
</tr>
<tr>
<td>a) To build one's situational identity</td>
<td></td>
</tr>
<tr>
<td>b) To decipher situational norms and identify acceptable, rewarded behaviors</td>
<td></td>
</tr>
<tr>
<td>c) To build social relationships and become accepted by others</td>
<td></td>
</tr>
<tr>
<td>d) To learn supervisory, peer, and subordinate expectations</td>
<td></td>
</tr>
<tr>
<td>e) To prove oneself as an important, contributing member</td>
<td></td>
</tr>
<tr>
<td>Stage 2. INNOVATION: Influence, Achievement, and Participation</td>
<td></td>
</tr>
<tr>
<td>a) To be assigned challenging work</td>
<td></td>
</tr>
<tr>
<td>b) To enhance one's visibility and promotional potential</td>
<td></td>
</tr>
<tr>
<td>c) To improve one's special skills and abilities</td>
<td></td>
</tr>
<tr>
<td>d) To enlarge the scope of one's participation and contribution</td>
<td></td>
</tr>
<tr>
<td>e) To influence one's organizational surroundings</td>
<td></td>
</tr>
<tr>
<td>Stage 3. STABILIZATION: Maintenance, Consolidation, and Protection</td>
<td></td>
</tr>
<tr>
<td>a) To routinize one's task activities</td>
<td></td>
</tr>
<tr>
<td>b) To preserve and safeguard one's task procedures and resources</td>
<td></td>
</tr>
<tr>
<td>c) To protect one's autonomy</td>
<td></td>
</tr>
<tr>
<td>d) To minimize one's vulnerability</td>
<td></td>
</tr>
<tr>
<td>e) To cultivate and solidify one's social environment</td>
<td></td>
</tr>
</tbody>
</table>

$^+$ The listed items are not meant to be exhaustive; rather, the intent to illustrate both the domain and the range of issues within each stage.
TABLE 2. Representative Trends Associated With Long-term Job Longevity

I. **Problem-Solving Processes**
   a) Increased rigidity
   b) Increased commitment to established practices and procedures
   c) Increased mainlining of strategies

II. **Information Processes**
   a) Increased insulation from critical areas
   b) Increased selective exposure
   c) Increased selective perception

III. **Cognitive Processes**
   a) Increased reliance on own experiences and expertise
   b) Increased narrowing of cognitive abilities
   c) Increased homophily
### TABLE 3. Mean Communication Frequencies as a Function of Group Longevity

<table>
<thead>
<tr>
<th>Areas of Communication</th>
<th>Categories of Group Longevity (in years)</th>
<th>All Project Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.0-1.5</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>Mean Intraproject</td>
<td>42.0</td>
<td>101.0</td>
</tr>
<tr>
<td>Communications**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Organizational</td>
<td>17.5</td>
<td>21.3</td>
</tr>
<tr>
<td>Communications (per</td>
<td></td>
<td></td>
</tr>
<tr>
<td>person per month)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean External</td>
<td>0.81</td>
<td>0.98</td>
</tr>
<tr>
<td>Professional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(per person per month)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of Projects</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

A 1-way ANOVA test was used to test for significant mean difference across the five group longevity categories (*p<.10; **p<.05)

Note 1. Because intraproject communication frequencies had to be adjusted for the number of possible interactions (see Katz and Tushman, 1979), intraproject communication scores cannot be linked to an absolute scale. To show relative intraproject differences across the various categories, however, the intraproject measures have been standardized to an overall sample mean of one hundred.
TABLE 4. Project Performance as a Function of Group Longevity

<table>
<thead>
<tr>
<th>Categories of Group Longevity (in years)</th>
<th>All Project Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0-1.5</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>Mean Project Performance**</td>
<td>4.29</td>
</tr>
<tr>
<td>Standard Deviations</td>
<td>0.99</td>
</tr>
<tr>
<td>No. of Projects</td>
<td>10</td>
</tr>
<tr>
<td>1.5-2.5</td>
<td>4.89</td>
</tr>
<tr>
<td></td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>2.5-3.5</td>
<td>4.87</td>
</tr>
<tr>
<td></td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>3.5-5.0</td>
<td>4.82</td>
</tr>
<tr>
<td></td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>5.0 or more</td>
<td>4.07</td>
</tr>
<tr>
<td></td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>0.76</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

** Based on a 1-way ANOVA test, the mean project performance scores are significantly different across the five group longevity categories [F(4,45)=2.89; p<.05].
TABLE 5. Correlations Between Group Longevity and Project Performance and Project Communication for Teams With Group Longevity of at Least 2.5 Years.

<table>
<thead>
<tr>
<th>Variables Correlated With Group Longevity</th>
<th>Task Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Research (N=6)</td>
</tr>
<tr>
<td></td>
<td>Development (N=12)</td>
</tr>
<tr>
<td></td>
<td>Technical Service (N=12)</td>
</tr>
<tr>
<td>a) Project Performance</td>
<td>-.62*</td>
</tr>
<tr>
<td></td>
<td>-.39*</td>
</tr>
<tr>
<td></td>
<td>-.44*</td>
</tr>
<tr>
<td>b) Intraproject Communication</td>
<td>-.26</td>
</tr>
<tr>
<td></td>
<td>-.14</td>
</tr>
<tr>
<td></td>
<td>-.72***</td>
</tr>
<tr>
<td>c) Organizational Communication</td>
<td>.27</td>
</tr>
<tr>
<td></td>
<td>-.53**</td>
</tr>
<tr>
<td></td>
<td>-.12</td>
</tr>
<tr>
<td>d) Outside Professional Communication</td>
<td>-.51</td>
</tr>
<tr>
<td></td>
<td>-.23</td>
</tr>
<tr>
<td></td>
<td>-.39</td>
</tr>
</tbody>
</table>

*p < .10; **p < .05; ***p < .01
FIGURE 1
SITUATIONAL VERSUS INDIVIDUAL CONTROL
ALONG THE JOB LONGEVITY CONTINUUM

HIGH
SITUATIONAL CONTROL

LOW

SOCIALIZATION
INNOVATION
ADAPTATION

LOW
INDIVIDUAL CONTROL
HIGH