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Commitment Propensity, Organizational Commitment, and Voluntary Turnover: A Longitudinal Study of Organizational Entry Processes

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This study investigated the effect of commitment propensity (a summary concept comprising personal characteristics and experiences that individuals bring to the organization) on the development of subsequent organizational commitment and voluntary turnover. In a field setting where situational influences on attitudes and behaviors were very strong, commitment propensity, measured prior to the individual's entry into the organization, predicted subsequent organizational commitment, measured at five points in time after entry. Moreover, initial commitment, measured at time of entry, predicted voluntary turnover across a 4-year period. The implications for theory and practice are discussed.

The process of organizational entry and the corresponding experiences of newcomers in the work environment are subjects of increasing theoretical and empirical concern (e.g., Jones, 1983, 1986). During this period, individuals are believed to form, or fail to form, a basic attachment to the organization (Mowday, Porter, & Steers, 1982). Recently, research examining these entry processess has been criticized for its *overemphasis* on situational variables and its *underemphasis* on personal characteristics and experiences that might affect or mitigate the situation's impact (Jones, 1983; Schneider, 1983). Most theory and research in this area focus on how organizations process newcomers by creating experiences or envi-

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ronments that transmit important beliefs, values, and norms (VanMaanen & Schein, 1979). Jones (1983), Schneider (1983), and Chatman (1989) argue, however, that individuals enter organizations with a set of personal characteristics and prior experiences that can affect their subsequent adaptation to the work environment. Although recognizing situational factors as important, they suggest that greater research attention be focused on the personal characteristics and experiences that individuals bring to the organization during the entry process.

The present study investigated the role of personal characteristics and experiences during the process of organizational entry. More specifically, this study examined the impact of commitment propensity on the newcomer's initial and later organizational commitment. Commitment propensity is a summary concept proposed by Mowday et al. (1982) to integrate several of the personal characteristics and experiences that individuals bring to the organization. The effects of these initial and subsequent attitudes on later voluntary turnover and a possible explanation for these effects were also examined.

Although few empirical studies have examined the role of personal characteristics and experiences during the entry process, the available evidence suggests that this role has value in predicting the newcomer's reaction to the organization. In one test, VanMaanen (1975) reported that police cadets with prior military experience had higher work motivation, organizational commitment, and job satisfaction at time of entry than those without such experience. Among US Marine Corps recruits, Youngblood, Mobley, and Meglino (1983) found that job satisfaction and employment retention during initial training and enlistment were predicted by education and mental qualifications. Stumpf and Hartman (1984) reported that the amount of information MBA graduates possessed about jobs, organizations, and occupations prior to organizational entry was related to work motivation and realistic expectations after entry. Building upon his own conceptual arguments, Jones (1986) found that individuals with low self-efficacy responded to the organization's formal socialization practices through greater acceptance of existing task and role requirements than those with high self-efficacy. Furthermore, the available, though limited, evidence suggests that job attitudes at time of entry can influence later turnover. Porter, Crampon and Smith (1976), for example, found that commitment measured on the newcomer's first day in the organization predicted turnover up to six months later. O'Reilly and Caldwell (1981) reported similar results as well.

Taken together, these studies indicate that the personal characteristics that individuals bring to the organization influence initial job attitudes that, in turn, can influence subsequent attitudes and behaviors. Nonetheless, much remains to be learned about these entry processes.

Commitment Propensity

Because individuals enter organizations with a wide variety of personal characteristics and experiences, it is unclear which personal characteristics and experiences potentially influence subsequent adaptation and attachment to the organization. As a result, Mowday et al. (1982) proposed the concept of commitment propensity to integrate several variables theorized as relevant to the entry process.

More formally, commitment propensity was defined as the aggregation of specific personal characteristics and experiences, which individuals bring to the organizations, such that a stable attachment to the organization more likely develops. Much like anticipatory socialization (Van Maanan, 1975), commitment propensity was proposed as a summary concept that integrates personal characteristics, expectations about the organization, and choice factors in selecting the organization. Unlike anticipatory socialization, which focuses on occupations, commitment propensity focuses on the organization. In particular, commitment propensity was hypothesized to predict, positively, subsequent organizational commitment (Mowday et al., 1982).

In the first published study on commitment propensity, Pierce and Dunham (1987) identified 13 personal characteristics and job expectations that significantly correlated to commitment propensity, which, in turn, predicted subsequent organizational commitment; organizational commitment, however, did not predict later turnover. Though suggestive, their results were somewhat difficult to interpret because commitment propensity and actual organization commitment were measured with essentially the same instrument. Whereas actual commitment was measured with the widely used Organizational Commitment Questionnaire (OCQ; Mowday, Steers & Porter, 1979), commitment propensity was measured with OCQ items that had the verbs rewritten to reference a future inclination rather than a current state. Although acknowledging a possible problem with common method variance, Pierce and Dunham (1987) argued, nonetheless, that their results justified future research that refined the propensity construct, included more independent measures of commitment propensity and actual organizational commitment, and adopted longitudinal, as opposed to simple predictive, designs. The present study attempts to attain these goals.

Components of Commitment Propensity

Mowday et al. (1982) proposed three components to commitment propensity. The first component consists of personal characteristics. In particular, newcomers who enter with a stronger desire for an organizational career and more familiarity with the organization's core values should develop stronger subsequent organizational commitment than those who enter with lower levels of such personal characteristics. Less effort, for example, is required to socialize newcomers who already desire such a career and are familiar with the organization's core values than those who do not (Van Maanen & Schein, 1979). Further, personal characteristics such as self-efficacy and self-confidence should also affect the newcomer's reactions. Newcomers with higher self-efficacy, for instance, may respond more positively to the challenges of an environment that offers the opportunities for accomplishment than those with lower self-efficacy (Jones, 1983). The second component consists of expectations. Based on research involving met expectations (Wanous & Colella, 1989), the expectations that newcomers bring to the organization should also serve as a frame of reference in evaluating their new experiences. Newcomers who enter with more positive expectations should interpret their subsequent experiences as consistent with their prior beliefs (e.g., more favorably), particularly when the early experiences present ambiguous stimuli that

are not easily evaluated with objective criteria. Finally, the third component consists of organizational choice factors. Based on research involving behavioral commitment (Salancik, 1977), the decision to enter one organization over another also influences newcomers' subsequent attitudes and reactions. In particular, job choices characterized by explicitness, irrevocability, publicness, and volition are more committing than choices not so characterized.

Aggregation

Mowday et al. (1982) intended for commitment propensity to integrate these specific personal characteristics into a summary concept. Because individuals are complex combinations of their personal characteristics and experiences, disentangling their separate effects is conceptually difficult (e.g., Arvey, Bouchard, Segal & Abraham, 1989). A summary measure of these personal characteristics and experiences produces an integrative concept that, by design, is broader in scope than an individual trait but narrower than anticipatory socialization. As mentioned, anticipatory socialization focuses on occupations; commitment propensity, in contrast, focuses on the organization. As measured in commitment propensity, for example, expectations focus on organizational tasks and roles, and choice variables focus on the selection of one organization over another.

Temporal Nature

Mowday et al. (1982) invoked a specific temporal sequence to distinguish between commitment propensity and organizational commitment. In particular, commitment propensity is theorized to develop *prior* to organizational entry and to yield a greater likelihood that actual commitment develops *after* entry. Whether interest is theoretical or applied (e.g., influencing subsequent commitment), a major reason to study commitment propensity is because actual commitment cannot theoretically *exist* prior to organizational entry (Mowday et al., 1982: 27) and, therefore, cannot be meaningfully measured prior to entry. As a result, Mowday et al. invoked commitment propensity as an integrative, summary concept that reflects the likelihood of becoming committed. In other words, commitment propensity develops prior to organizational entry; its primary effects occur during organizational entry; and actual organizational commitment results as its main, though not sole, outcome. One goal of this research is to address Pierce and Dunham's (1987) call for more rigorous validation of the commitment propensity concept.

Commitment propensity and anticipatory socialization are similar but distinctive concepts. For example, both concepts reflect, in varying degrees, an individual's readiness to enter an organization and serve to integrate sets of variables, only some of which are shared. Beyond these similarities, anticipatory socialization is a broader concept than commitment propensity. Van Maanen (1975) discussed anticipatory socialization as the degree to which an individual was prepared to occupy organizational positions prior to entry. Preparation for entry was defined by characteristics ranging from knowledge of organizationally relevant skills to goal integration. Moreover, anticipatory socialization derives from processes ranging from early childhood experiences to the development of the self

concept. Further, anticipatory socialization is conceptualized at the sociological level of occupations. In contrast, commitment propensity focuses on a particular organization and indicates the likelihood that a stable attachment to the organization subsequently develops. Moreover, the inclusion of concepts like self-efficacy and expectations focuses more on specific roles and tasks within a particular organization. Further, commitment propensity is conceptualized at the psychological level of the individual within an organization. In sum, anticipatory socialization predicts broader adjustment to, and success in, an occupational role; commitment propensity predicts a more narrow affective reaction to a specific organization.

Commitment propensity provides greater conceptual coherence to the constellation of personal characteristics and experiences that individuals bring to the organization. Commitment propensity is predicted to precede organizational commitment. In turn, organizational commitment precedes voluntary turnover (Lee & Mitchell, 1991; Mowday, Koberg, & McArthur, 1984; Mowday et al., 1982). These arguments suggest the following hypotheses.

Hypothesis 1: Commitment propensity, measured prior to entry into the organization but following the decision to join, is positively related to initial (e.g., first day) and subsequent organizational commitment.

Hypothesis 2: Initial commitment is positively related to subsequent organizational commitment.

Hypothesis 3: Initial and subsequent organizational commitment are negatively related to later voluntary turnover.

The Process of Commitment Propensity and Environmental Influences

Two related perceptual processess may help to elucidate the relationships among commitment propensity, organizational commitment, and environmental influences. First, individuals with higher commitment propensity may selectively attend to different stimuli in the environment than those with lower commitment propensity. If organizational environments present far more stimuli than can be cognitively processed, newcomers may selectively perceive different parts of the environment (Neisser, 1976). Given that all organizational environments have both positive and negative features, the extent to which individuals focus their attention on either the positive or negative aspects can have important implications for subsequent attitudes. For instance, individuals with higher commitment propensity should pay more attention to positive aspects of the environment and less attention to negative features than those with lower commitment propensity. Second, commitment propensity may also operate through the sense-making process (Louis, 1980). That is, identical events can hold different meaning to individuals depending on their frame of reference toward the organization (cf., Smith, Kendall, & Hulin, 1969). Although the same environmental stimuli may be perceived by newcomers, their interpretations may vary systematically with their commitment propensity. Individuals with higher commitment propensity may interpret the same events more favorably than those with lower commitment propensity.

To investigate the influence of commitment propensity on the newcomer's perceptions of the environment thoroughly, a wide range of perceptual measures that reflect various environmental influences would be needed. Unfortunately, organizational constraints precluded a full examination of newcomers' perceptions. However, measures of the perceived utility of organizational and task feedback were available to provide a limited test of these relationships. Because the task in the present organization was relatively constant and because the organization made a concerted effort to structure feedback in a consistent manner, the utility of organizational and task feedback may represent relatively constant environmental influences that vary minimally across newcomers. Systematic variance in the *perceived* utility of organizational and task feedback, then, may reflect the influence of the individual's characteristics, including commitment propensity, rather than the influence of the environment in which the perceputal processes take place. More specifically, individuals with high commitment propensity should perceive the environment as more favorable than individuals with low commitment propensity.

Hypothesis 4a: Commitment propensity is positively related to the perceived utility of organizational and task feedback.

Hypothesis 4b: Organizational commitment is both positively predictive of and predicted by the perceived utility of organizational and task feedback.

Method

Site and Design

The present study was a 4-year longitudinal investigation among new cadets who entered the United States Air Force Academy in 1982 and graduated in 1986. Although similar in many respects to other 4-year colleges, the Academy has the unique mission of training future US Air Force career officers. With a selection ratio of about 20%, all cadets survived a rigorous selection process. They also entered an environment that is competitive, physically and mentally challenging, and unrelenting. Beginning in the summer prior to the first academic year, newcomers spend 6 weeks in basic cadet training (i.e., boot camp). During the first academic year, the most salient feature of cadet life is the extensive and unrelenting demands placed on their time to fulfill academic, military, and extracurricular responsibilities. Activities are scheduled from very early morning until late at night.

The Academy provided a particularly useful research site to investigate commitment propensity and commitment processes. First, the institution's top administrators believe that cadets are unlikely to survive and become USAF officers unless they are strongly committed to the Academy and US Air Force. To the extent that newcomers arrive with higher commitment propensity, cadet socialization becomes easier. Thus, commitment propensity has practical, as well as theoretical, importance within the context of the Academy. Second, the Academy's stringent selection procedures constrained the variance in the cadets' personal charac-

teristics. As such, empirical relationships between personal characteristics and subsequent attitudes should be more difficult to identify and, therefore, robust. Third, the strong pressures, norms, and regulations inherent in the Academy's environment should further weaken the influence of personal characteristics, also rendering the relationships between attitudes and behavior more difficult to identify empirically. Research suggests that the relationship between personal chararcteristics and behavior is likely minimized in those situations that provide compelling cues for appropriate behavior (i.e., a "strong" situation; Monson, Hesley, & Chernick, 1982). Finally, the strong environmental influences at the Academy were generally constant across cadets. Although not every cadet had the same experiences, the Academy made every effort to insure the uniformity of cadet experience. The likelihood that individual reactions were confounded by different experiences cannot be eliminated but were minimized.

To minimize the demands on the cadet's time, the Academy's administrators selected a subgroup of cadets (n=840) from the entering class (n=1,494) to serve as the study's sample. (The remaining cadets participated in a different study that did not involve the present researchers.) Questionnaires were administered to the sample six times over 18 months. At each administration, the surveys were identical. Data collection for the present study began with a questionnaire that was mailed to the pre-matriculated cadets during the spring semester of their senior year in high school (T_1). At this point, cadets had decided to enter the Academy but had not yet formally enrolled. This survey was returned to the Academy's Office of Institutional Research via US mail. The second questionnaire was administered to the cadets within several days after their arrival at the Academy to begin Basic Cadet Training (BCT; T_2), and the third questionnaire was administered at the end of BCT (T_3). The second and all subsequent surveys were administered directly to groups of cadets and immediately collected by personnel from the Office of Institutional Research. The fourth, fifth, and sixth questionnaires were administered during the late fall semester (November; T_4), late spring semester (April; T_5), and the summer after the freshman year (T_6), respectively. Items that measured commitment propensity and subsequent organizational commitment apppeared on all six administrations of the surveys; items that measured the utility of feedback appeared on the surveys administered at the end of BCT (T_3), fall semester (T_4), and spring semester (T_5). Turnover data, which included the reason for any cadet's departure from the Academy, were monitored for the entire 4 years that the cadets attended the institution and were obtained from official Academy records.

Because participation was voluntary and the questionnaires competed with many other demands on the cadet's time, each cadet did not complete all six surveys. In fact, a rather large number of cadets missed at least one questionnaire, thus limiting our ability to conduct a truly longitudinal study. Sample sizes varied across the six time periods and ranged from a low of 385 (T_4) to a high of 762 (T_6; see Table 1). The loss of data is an inherent problem in longitudinal, multiple-survey turnover studies. Some data are lost because of cadet attrition during the course of the study. Additional data are lost because participants typically miss one or more surveys. Complicating matters further, most turnover occurs within 2

years after entry in most organizations, including the Academy. As a result, the loss of participants can restrict analyzable variance, and the timing of the lost participants can introduce a potentially serious "survivor" bias into the analyzable data. For the analyses, missing data were deleted pairwise, as opposed to listwise, in order to maximize analyzable variance and to minimize survivor bias.

Measures

Commitment propensity. Commitment propensity was defined as the sum of its three components, namely, personal characteristics, expectations, and organizational choice factors (Mowday et al., 1982). These components were operationalized by items written for the present study. (All nonstandard items are listed in the Appendix.) First, personal characteristics were measured with four sets of items: (a) eight items assessed *desire for an Air Force career*; (b) two items indexed *familiarity with the military*; (c) seven items assessed *self-efficacy*; and (d) three items indexed *self-confidence*. Second, expectations were measured with three items. Third, organizational choice factors were measured with two sets of items: (a) five items assessed *volition of choice* and (b) six items indexed *sacrifice in choice.* The response formats for these items were either a five-or seven-point agree-disagree scale.

Because commitment propensity was proposed as an integrative, summary concept (Mowday et al., 1982), the items were standardized and averaged into a composite measure of commitment propensity. The alpha reliability was .80 at T_1 (spring semester of the senior year in high school) and .78 at T_2 (end of basic cadet training). The test-retest reliability from T_1 to T_2 was .68. Two issues about this measure are worth noting. First, commitment propensity was conceptualized as most meaningful prior to organizational entry, and organizational commitment was conceptualized as not meaningful prior to entry. Thus, measurement of both constructs at T_1 and T_2 may seem curious. Both constructs were measured at T_1 and T_2 in order to minimize the number of survey forms handled by the Office of Institutional Research, which photocopied and administered the surveys to cadets. The inclusion of items for both constructs at T_1 and T_2 lessened the likelihood of clerical and handling errors. However, only commitment propensity from T_1 and organizational commitment from T_2 were included in the analysis. Second, averaged composite scores ignore a potential to increase empirical prediction through the differential weighting of component variables. Thus, our operationalization may result in lost statistical power. In our judgment, however, adherence to the underlying conceptual arguments and more conservative tests of hypotheses are preferrable to any potential gain in statistical power that may result from dissaggregation.

Organizational commitment. The Organizational Commitment Questionnaire was adapted to measure commitment to the US Air Force Academy. Of the original 15 items 12 were used in the present study. Three items were deleted because they were judged more relevant to an employment situation rather than the Academy setting. To facilitate subsequent exposition, the term "initial commitment" referred to the OCQ scores at T_2 only. The alpha reliabilities from the six

survey administrations of the OCQ were .84 at T_1, .96 at T2, .88 at T_3, .89 at T_4, .89 at T_5, and .88 at T_6.

Utility of feedback. Four items, measuring the *perceived utility of organizational feedback*, were administered at the end of BCT (T_3; alpha = .81), and during the fall (T_4; alpha = .79) and spring (T_5; alpha = .83) semesters. These items asked respondents to rate the utility of organizational feedback on a seven-point scale anchored by 1-completely useless and 7-completely useful. The *perceived utility of task feedback* was measured by three items that were administered at end of BCT (T_3; alpha = .70) and by four items that were administered during the fall (T_4; alpha = .91) and spring (T_5; alpha = .85) semesters. The additional item was added to assess a new task that began subsequent to BCT; namely, being a student. These items used the same format as the organizational feedback questions and asked respondents to rate the utility of "information I receive from performing my cadet duties" as a means of learning how well they were performing in their military duties and academic responsibilities. All items on the perceived utility of feedback were written for the present study. (See Appendix.)

Voluntary turnover. Data on the retention or departure of each cadet were collected from the official records of the USAFA. Resignations could generally be made during the first 2 years without significant cost to the cadet. After the start of the third year, however, mandatory military service as an active duty enlisted person in the Air Force could be imposed upon those cadets who resigned. Academy records differentiated between voluntary and involuntary resignation. Of the 1,494 cadets who entered during the summer of 1982 as the Class of 1986, 970 remained and were commissioned as officers in the Air Force after 4 years; 380 voluntarily resigned and 144 were asked to leave during the 4 years of the present study.

Analysis

Two sets of analyses were conducted. First, linear relationships and mean differences among the study's variables were analyzed with the traditional techniques of product moment correlations and *t*-tests. Second, the dynamic and nonlinear relationship between initial commitment and the probability of turnover, as it occurred across time, was analyzed with survival analysis (Morita, Lee & Mowday, 1989). As mentioned, several situational factors lead to conservative tests of the study's hypotheses. Also, common problems with missing data in longitudinal turnover studies restrict analyzable variance and introduce a survivor bias. Under these conditions, the study's analytical methods should be as statistically powerful and efficient as possible. Survival analysis was thought to be more appropriate than the traditional techniques for two reasons. First, whereas both survival and traditional analyses assess *whether* turnover occurred, survival analysis further assesses *when* turnover occurred. As a result, any survivor bias in the data is minimized. Second, survival analysis includes data that would normally be designated as missing in traditional analyses. As such, the amount of analyzable data is maxmized. In order to facilitate interpretability, however, traditional and survival analyses are reported.

Table 1
Means, Standard Deviations, Sample Sizes and Correlations[a]

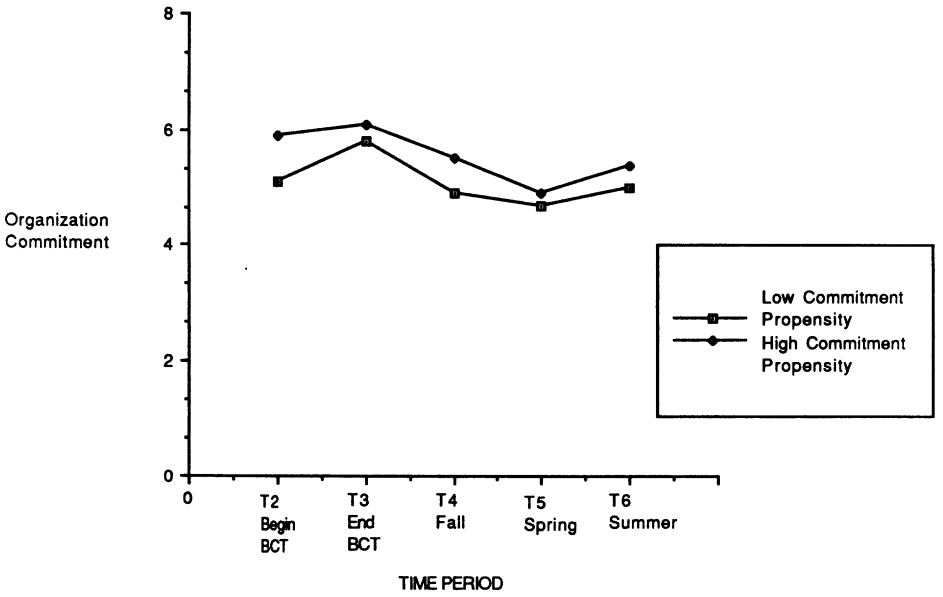
	$\bar{X}$	*SD*	*n*	CP	OC_1	OC_2	OC_3	OC_4	OC_5	OC_6	OF_3	TF_3	OF_4	TF_4	OF_5	TF_5	T
CP	.00	.32	552	(.80)	.49***	.37***	.27***	.19**	.13	.19***	.22***	.17**	.05	.09	.17*	.18**	-.06[b]
OC_1	6.24	.61	552		(.84)	.50***	.36***	.24**	.29***	.29***	.21***	.13*	.10	.15*	.29***	.23***	-.04
OC_2	5.56	.87	710			(.96)	.55***	.57***	.33***	.40***	.22***	.33***	.26***	.39***	.21***	.32***	-.20***
OC_3	5.75	.89	721				(.88)	.52***	.38***	.45***	.31***	.40***	.21***	.36***	.24***	.31***	-.11**
OC_4	4.96	1.01	385					(.89)	.46***	.56***	.20***	.25***	.31***	.42***	.36***	.40***	-.22***
OC_5	4.65	1.10	453						(.89)	.61***	.05	.23***	.17*	.25**	.51***	.50***	-.11*
OC_6	5.13	.97	762							(.88)	.10*	.19***	.33***	.31***	.35***	.35***	-.15***
OF_3	5.12	1.03	724								(.81)	.39***	.42***	.28***	.34***	.21***	.01
TF_3	5.67	.82	724									(.70)	.17**	.31***	.15***	.27***	-.01
OF_4	4.16	1.22	387										(.79)	.43***	.47***	.22**	-.07
TF_4	5.13	1.10	387											(.91)	.25**	-.44***	-.08[b]
OF_5	3.64	1.36	485												(.83)	.54***	.06[b]
TF_5	4.83	1.27	485													(.85)	-.10*

[a]Coefficient alpha is reported in the diagonal. CP: Commitment Propensity; OC: Organizational Commitment; OF: Perceived Utility of Organizational Feedback; TF: Perceived Utility of Task Feedback; T: Voluntary Turnover. [b]$p \leq .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Results

The means, standard deviations, alpha reliabilities, and intercorrelations for the study's variables at each time period are presented in Table 1, along with samples sizes at each survey administration. The means in Table 1 suggest that cadet commitment increased during BCT (M=5.56 at T_2; M=5.75 at T_3); for most cadets, BCT appears to have been a positive experience. After BCT, however, organizational commitment dropped consistently until the end of the academic year (M=4.93 at T_4 ; 4.64 at T_5), when it began to climb again (M=5.13 at T_6). All differences between mean commitment levels for adjacent time periods were statistically significant ($p<.05$).

Figure 1.
The Organizational Commitment for Cadets with High and Low Commitment Propensity



Hypothesis 1: Commitment propensity. As hypothesized, commitment propensity, measured at T_1, positively correlated to initial commitment, which was measured at T_2 ($r=.37$, $p<.05$). Also as hypothesized, commitment propensity positively correlated to subsequent organizational commitment ($r=.27$, $p<.05$ at T_3; $r=.19$, $p<.05$ at T_4; $r=.13$, $p<.06$ at T_5; $r=.19$, $p<.05$ at T_6). As a secondary analysis, the cadets were classified as having high or low commitment propensity based on median split of scores at T_1. As shown in Figure 1, a similar pattern for the mean levels of organizational commitment emerged across time for those with high and low commitment propensity, suggesting that both groups responded to the environment in very similar ways. Further, with the exception at T_5, those cadets who had low commitment propensity prior to entry also had significantly lower organizational commitment than those with high commitment propensity ($t=4.31$, $p<.05$ at T_2; $t=3.57$, $p<.05$ at T_3; $t=1.89$, $p<.05$ at T_4; $t=1.08$, *ns* at T_5;

t=2.39, p<.05 at T_6). When taken together, these results suggest that those cadets who entered the Academy with higher commitment propensity developed and maintained stronger subsequent organizational commitment than those who entered with lower commitment propensity.

Hypothesis 2: Organizational commitment. As hypothesized, initial commitment (T_2) positively correlated to subsequent organizational commitment (r=.55 at T_3; r=.57 at T_4; r=.33 at T_5; r=.40 at T_6; p<.05). The measures of organizational commitment also strongly correlated with one another across time (Table 1).

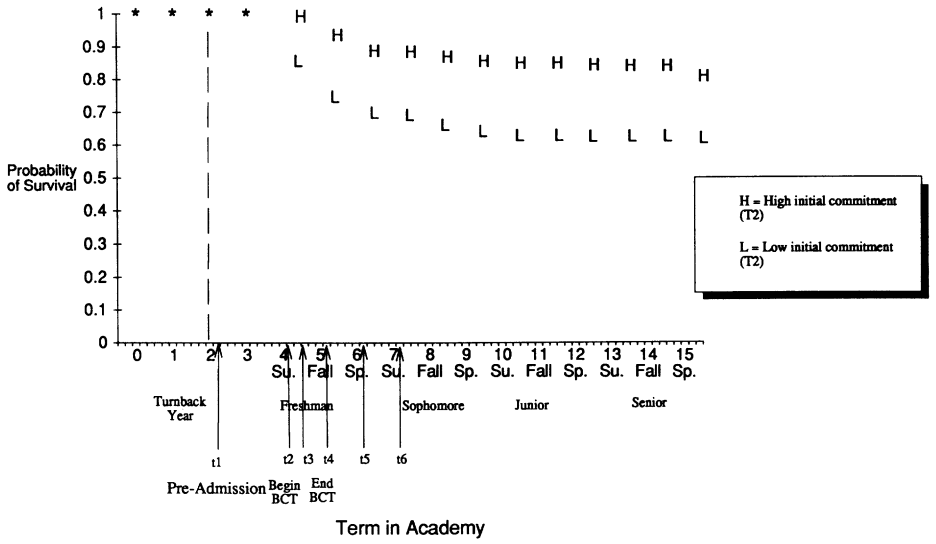
Hypothesis 3: Voluntary turnover. As hypothesized, initial and subsequent organizational commitment negatively correlated with voluntary turnover (r=-.20 at T_2; r=-.11 at T_3; r=-.22 at T_4; r=-.11 at T_5; r=-.15 at T_6; all p<.05). As a secondary analysis, t-tests compared the organizational commitment of eventual stayers and voluntary leavers across time. The organizational commitment of stayers was significantly higher than that of voluntary leavers across T_2 through T_6 (t=4.47 at T_2; t=2.57 at T_3; t=4.19 at T_4; t=1.98 at T_5; t=2.85 at T_6; all p<.05).

In order to estimate the negative relationship between initial commitment and voluntary turnover with greater statistical accuracy and efficiency than with correlations and t-tests, the survival analysis analog to regression was calculated. In agreement with traditional methods, the survival coefficient indicated a significant negative effect of initial commitment on voluntary turnover (b=-.42, Z= -5.47, p<.05), and the log likelihood function indicated a significant survival equation (likelihood=-1144.02, chi-squared=30.13, p<.05). Because survival coefficients are expressed as logarithmic functions, simple arithmetic conversions to a normal, base-ten metric are normally required before interpretation. Accordingly, the conversion to normal values produced .66, which means that, on average, those cadets who were one standard deviation above the mean on initial commitment had a turnover rate that was approximately *66% lower* than those individuals with average initial commitment. In sum, the survival coefficent demonstrated a substantial relationship between initial commitment and subsequent turnover.

Further information can be gleaned through a follow-up survival analysis, which is analogous to analysis of variance. Based on a median split of OCQ scores at T_2, cadets were classified as having high or low initial commitment. The probability of retention, or the survival function, was plotted and presented in Figure 2 for both the high and low initial commitment groups. Though the scores for initial commitment (T_2) were examined, the scores for organizational commitment at subsequent time periods produced virtually identical results. The use of the early commitment measure placed the relationship under a more stringent test because the strong military socialization practices promoting the Academy had not yet occurred.

The plot of survival functions depicted in Figure 2 suggested several points. First, both high and low initial commitment cadets had an equally high probability of retention at the *beginning* of BCT (T_2). Second, the survival functions for both groups began to decrease and diverge *during* the fall semester (T_4). These findings suggested that cadets indicating higher initial commitment to the Academy had a greater likelihood of returning from the semester break than

Figure 2.
The Probability of Retention for Cadets with High and Low Initial Commitment



cadets with lower initial commitment. Third, the probability of retention was visually, consistently, and significantly higher (chi-squared=18.6, $p<.05$) across time for those cadets who had higher, as opposed to lower, initial commitment. Those cadets with higher initial commitment had 78% probability of retention, whereas those with lower initial commitment had a 65% chance of retention.

Hypothesis 4: Utility of feedback. As hypothesized, commitment propensity (T_1) positively correlated to the perceptions that organizational and task feedback were useful ($r=.17$ and .22, respectively, $p<.05$), measured at T_3. Perceptions of the utility of organizational and task feedback at T_3, in turn, positively correlated to subsequent organizational commitment, measured at T^4 ($r=.20$ and .25, respectively, $p<.05$). Organizational commitment at T_4 positively correlated to the perceptions of organizational and task feedback utility ($r=.36$ and .40, respectively, $p<.05$), measured at T_5. Finally, perceptions of the utility of organizational and task feedback at T_5, in turn, positively correlated to subsequent organizational commitment, measured at T_6 ($r=.35$ and .35, respectively, $p<.05$).

Discussion

Following the research of Jones (1983, 1986), Schneider (1983), and Chatman (1989), the relationships among commitment propensity, organizational commitment, and voluntary turnover were examined. Due to the Academy's very strong selection and socialization practices, differences between cadets were attenuated, allowing a more conservative and rigorous test of the hypotheses. Moreover, the environmental influences in this study's setting were relatively homogeneous and compelling across all individuals. In essence, this unique setting allowed the "natural isolation" of environmental influences and provided the opportunity to ob-

serve the role of personal characteristics and experiences during the process of organizational entry.

As expected, the situational factors had a clear and powerful effect on the development of organizational commitment. The results indicated that the experience undergone by cadets during BCT and their first academic year affected their organizational commitment. The observed pattern of increasing and decreasing levels of organizational commitment suggested a strong situational effect on cadet attitudes; the pattern would be unlikely if personal characteristics alone were affecting cadet attitudes. Nonetheless, even in the face of strong environmental influences, the different levels of organizational commitment *between* cadets with high and low commitment propensity provided evidence for the effects of personal characteristics (Figure 1). Whereas the changing levels of organizational commitment across time suggested environmental influences, the consistent differences in the levels of organizational commitment between the cadets with high and low commitment propensity over time suggested personal influences.

Each of the study's hypotheses was empirically supported. To summarize, commitment propensity, measured prior to organizational entry, was positively related to initial and subsequent organizational commitment and to the perceived utility of organizational and task feedback. Initial commitment, in turn, was positively related to subsequent organizational commitment, the perceived utility of organizational and task feedback, and the probability of survival. The perceived utility of organizational and task feedback was also found to be both predicted by and predictive of organizational commitment.

These findings may offer some insight into the understanding of dispositional influences on commitment and turnover as well as the management of organizational entry processes. In particular, a possible process by which commitment propensity may affect later work attitudes and behaviors was examined. Individuals with high commitment propensity appear to view organizational and task feedback as more useful than individuals with low commitment propensity. Potentially, those individuals high in commitment propensity are predisposed to perceive and interpret their environments more favorably than those low in commitment propensity. Given the predictive relationship between feedback and subsequent commitment, commitment propensity may lead to more favorable reactions to environmental characteristics, like utility of feedback, and thereby enhance subsequent organizational commitment. Over time, a mutually reinforcing pattern may evolve that increases the likelihood of organizational retention.

Consistent with prior research, organizational commitment predicted voluntary turnover. Unlike previous research, however, the present study moved beyond a simple index of the linear relationship to a far richer description of the probabilities of retention across time. Whereas correlations describe static degrees of linear association, survival analysis documents the dynamic relationship between initial commitment and voluntary turnover. In the present study, the correlation coefficient between initial commitment and turnover indicated 4% of explained variance; in contrast, the survival coefficient between initial commitment and the probability of survival over time revealed a substantially larger effect. On average, for an increase of one standard deviation in initial commitment, the probabil-

ity of voluntary turnover decreased by approximately 66%. In addition to more statistical power and efficiency than correlations, survival functions also allow for a visual depiction of how initial commitment affected turnover over time (Figure 2).

We hasten to note that the research design and survival analysis allow only for inferences of association and not causation. Although a strong statistical association emerged between initial commitment and voluntary turnover, an increase in cadets' initial commitment will not necessarily guarantee a large reduction of voluntary turnover. Rather, to the extent the results are generalizable, knowledge of one's level of initial commitment may allow for the valid prediction of eventual staying or leaving. Although the sizeable effect of initial commitment on the probability of voluntary turnover may promise a useful predictive relationship, we urge caution. Before practical or applied decisions are based on our empirical results, longitudinal replication needs to occur.

The results of the present study also have implications for the management of organizational entry processes. The experience of organizational entry, for example, has been related to a variety of individual reactions (e.g., diminished self-worth; Feldman, 1976) and decreased job performance (VanMannen & Schein, 1979). As a result, a large prescriptive literature has emerged to help managers minimize these potential disruptions during organizational entry (e.g., Feldman, 1980). This prescriptive literature contains a tacit presumption that environmental forces exert a strong influence on employee attitudes and behaviors. The personal characteristics that individuals bring to the organization are often treated as much less important influences in shaping the newcomer's accommodation to the work environment. An implication of the present study is that managers and researchers might reassess the importance of personal characteristics during the organizational entry period. In particular, greater emphasis might be placed on valid personnel selection than on socialization of employees because an organization's socialization practices may be differentially effective with different kinds of people.

The present study suggests two new research directions. First, research should be conducted in settings that allow for the examination of interactions between personal characteristics and the environment during the process of organizational entry. The present research setting provided both an opportunity and a constraint. The opportunity was afforded to conduct a stringent test on the effects of personal characteristics on cadet attitudes in a homogeneous and deterministic environment. Having demonstrated these effects in such a setting, future research should relax the constraint that this deterministic environment imposed and examine the influences of personal characteristics, situational factors, and their interactions during the process of organizational entry.

Second, research should move towards understanding the processes by which personal characteristics shape subsequent job attitudes and behaviors. As a start, the present study met some of Chatman's (1989) criteria by providing a longitudinal examination of the role of environmental perceptions (i.e., feedback utility) in the propensity-organizational commitment-turnover process. Whereas individuals who entered the organization with higher commitment propensity may have *positively* biased their interpretations, individuals who entered the organization

with lower commitment propensity may have *negatively* biased their interpretations of the environment. In conjunction with other research, the results of the present study also suggest that feedback may be a very useful explanatory construct in its own right (Ashford & Cummings, 1983). For example, personal characteristics may shape an individual's feedback-seeking behavior, and the acquisition or obstruction of this feedback, in turn, may shape subsequent job attitudes and behaviors (Ashford, 1986, 1988). Furthermore, commitment propensity was also suggested to affect the sense-making (i.e., interpretive) process with which newcomers engage. Personal characteristics such as commitment propensity may affect the frames of reference that individual's use to interpret their environments (Merton, 1968; Thomas, 1966). Future research might aim at understanding how such personal characteristics shape a newcomer's (or possibly a cohort of newcomers') frame of reference and the subsequent effects on work attitudes and behaviors (e.g., Walsh, Henderson, & Deighton, 1988). It may be that an overlap of these frames of reference provides the social integration that fosters organizational commitment.

The present study provides evidence that the personal characteristics and experiences that individuals bring to the organization help shape subsequent work attitudes and behaviors during organizational entry. Moreover, the present study begins to explain how these personal characteristics affect subsequent work attitudes and behaviors. The immediate challenge to researchers is to understand the *process* by which personal characteristics, situational factors, and their interaction shape job attitudes and behaviors during organizational entry.

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Appendix

Commitment Propensity

Individual Characteristics. Desire for an Air Force Career: (1) I have a strong desire to be an Air Force Officer. (2) I think I will enjoy participating in military ceremonies (such as marching and parades). (3) I regret my decision to go to the Air Force Academy. (4) I feel very committed to an Air Force career. (5) I am interested in an Air Force career but, if it doesn't work out, I will probably be just as happy doing something else. (6) An Air Force career is really the only career I can imagine for myself. (7) I can't imagine staying in the Air Force until retirement. (8) I see the Air Force as my life's work. *Familiarity with the Military:* (1) How much time did you live on military bases while you were growing up? (2) How much time did you spend around military people while you were growing up? *Self-Efficacy:* (1) Based on my ability and the amount of work I do, I think I will get high grades. (2) I expect to do well at the Academy. (3) I really have not failed at too many things I have tried to do. (4) I am never sure I can do something I have never tried to do. (5) I have always been able to do well in anything I have tried. (6) I expect to accomplish whatever I set out to do. (7) Anything I try I can usually do. *Self-Confidence:* (1) How confident do you feel that someday the

people you know will look up to you and respect you? (2) How confident are you that your success in the future job or career is assured? (3) In general, how confident do you feel about your abilities?

Expectations. (1) How much would you say you know about what it means to be an Air Force Cadet? (2) I have a good idea about what the Academy will be like. (3) I think I have a pretty good idea about what the Air Force is really like.

Choice in Selecting Organization. Volition: (1) I always carefully weigh costs and benefits when making decisions which affect my life. (2) I often make quick decisions which have a lot of implications for my life. (3) I never make major decisions quickly. (4) I am a somewhat impulsive person. (5) I am comfortable making major decisions according to "gut" feel. *Sacrifice:* (1) I turned down other college offers to enroll in the US Air Force Academy. (2) I did not pursue alternative opportunities outside of the Air Force Academy. (3) The US Air Force Academy was the only college that accepted me. (4) The US Air Force Academy was only one alternative from among many opportunities. (5) The US Air Force Academy was my only college choice. (6) When I chose the US Air Force Academy, I had many other opportunities.

Utility of Feedback

1. Please rate the following sources on how useful they are as a means for finding out how well you are doing in your *military activities:* (1) Formal reports from the Air Force Academy (organizational feedback). (2) Information I receive directly from performing my cadet duties (task feedback).

2. Please rate the following sources on how useful you feel each is as a means of finding out *your potential for success:* (1) Formal reports from the Air Force Academy (organizational feedback). (2) Information I receive directly from performing my cadet duties (task feedback).

3. How useful is your Military Performance Appraisal for finding out how well you are performing? (organizational feedback)

4. How useful is your formal US Air Force Academy feedback for determining your potential as a military officer? (organizational feedback)

5. Please rate the following sources on how useful each is as a means of finding out how well you are doing in your *academic* studies: Information I receive from doing my academic work (task feedback)

6. In general, how useful is simply paying attention to how well or poorly you perform a task itself and using this as feedback? (task feedback)