Air Mobility Liaison Officer Promotions: Perception and Reality

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Our Airmen should continue to serve in joint positions, both on the staff and operationally, and capitalize on joint experiences, education and training. Our culture must value those who serve in these joint positions. We then must promote what we value and invest in Total Force Airmen who are joint warfighters.

—USAF Chief of Staff Gen David L. Goldfein,
"CSAF Letter to Airmen," 13 October 2016

Introduction

General Goldfein's second letter to Airmen addressed the "important, timely, and worthy" issue of strengthening and addressing joint development of Airmen. Currently, air mobility liaison officer (AMLO) assignments present an opportunity for Mobility Air Forces (MAF) officers to "purposefully and systematically gain proficiency in joint warfare." Every rated officer in MAF does not need to be an AMLO, and there are many good reasons why a pilot or navigator may not want to volunteer for an AMLO assignment. However, the perception that an AMLO assignment negatively affects an officer's promotion opportunity likely prevents many officers from volunteering for an AMLO assignment. This article will provide a brief history of the AMLO program and explores the perception that an AMLO assignment negatively affects an officer's career advancement and determines if that perception is true.

AMLO History

Modern-day AMLOs can trace their origins back to the Vietnam War. The early stages of the Vietnam conflict saw a marked increase in airlift demand from the Army, with a corresponding need for close coordination.[1] While the USAF was able to meet much of this surge, the Army expressed dissatisfaction with the Air Force's ability to meet the Army's requests for rapid airlift. In mid-1966, Maj Gen (then Lt Col) Thomas M. Sadler proposed a solution to this problem. He recommended the Air Force experiment with temporarily assigning 30 airlift officers (mostly C-130 pilots) to various Army brigades and divisions on the ground in Vietnam. The original tasking for these men was to "be staff officers within the ground force unit, capable of planning and managing tactical air movements and resupply operations."[2] This experiment proved successful, and by mid-1967 the tactical airlift liaison officer (TALO) was a permanent billet assigned to Tactical Air Command (TAC) and located within Army divisions. Almost immediately, these men received praise from the Air Staff on the resultant decrease in rapid airlift response times and greater use of the preplanned airlift processes.[3]

After Vietnam, TALOs moved from TAC to Military Airlift Command (MAC). Here, TALO duties were expanded to include surveying drop zones, controlling airdrop operations, assisting with landing zone operations, joint training coordination, and exercise assistance. While under MAC, TALOs participated in many significant military events, including Operations Just Cause and Desert Storm. In 1992, after MAC was deactivated and Air Mobility Command (AMC) stood up, US Transportation Command agreed to establish a parallel program to support the US Marine Corps (USMC). In 2003, the TALO program merged with the AMC liaison officer program to become the new AMLO program, and AMC began allowing pilots and navigators with tanker backgrounds, including females, to serve as AMLOs.[4]

Since then, AMLOs have distinguished themselves in numerous conflicts including Operations Iraqi Freedom, Enduring Freedom, Inherent Resolve, and Freedom's Sentinel. AMLOs have also been active in a variety of humanitarian operations, including the Hurricane Katrina response, Operation Unified Response (the American response to the earthquake in Haiti and Operation United Assistance), and the US

Ebola response. In June 2015, the 621st Mobility Support Operations Squadron (MSOS) was activated under the 621st Contingency Response Wing.[5] This new squadron holds 49 billets for the AMC AMLOs embedded with 20 Army and USMC commands around the globe. While the majority of the Air Force's 63 AMLOs now fall under the 621st MSOS, an additional 8 AMLO billets fall under air support operations groups and squadrons in Pacific Air Forces and US Air Forces in Europe, and 6 additional AMLOs are stationed at nonoperational commands.

Problem Statement

Despite AMLO history and recent advancements within the community, a problem remains with real and perceived career progression issues regarding AMLOs. AMC's Deputy Chief of Staff for Manpower, Personnel and Services (AMC/A1) started tracking the promotion rates of prior AMLOs with the 2009 promotion boards. From 2009–2015, individuals who had previously served as AMLOs were promoted at a rate below their MAF peers.[6] According to AMC numbers, individuals who were AMLOs—or had previously served as AMLOs—had selection rates to lieutenant colonel below 52 percent (27 of 52 were selected for promotion). The promotion rates to major were similarly low for AMLOs. According to AMC, individuals with AMLO experience had a 73 percent promotion rate to major. This article seeks to investigate these low AMLO promotion rates, the perceptions that accompany them, and how much impact an AMLO assignment actually has on an officer's chances for promotion. To this end, two research questions must be answered: (1) Is there a perception in the MAF that an AMLO assignment will negatively affect career advancement? (2) Does having an AMLO assignment in your record affect your promotion opportunity?

To answer the first question, all 49 operational support squadron (OSS) commanders were surveyed within Eighteenth Air Force. This is an appropriate sample group because these commanders represent all major weapons systems in the MAF, have proximity to line flyers, possess influence in the assignment decisions of MAF captains and majors, and are required to mentor line aviators. If there are perceptions about the AMLO community in the MAF, it will be known by, if not originate from, these squadron commanders. These individuals were asked various questions about the AMLO career field using a combination of open responses, responses utilizing the Likert scale, and responses requiring rank-ordering.[7] The goal was to select questions designed to uncover any bias against recommending an officer to pursue an AMLO assignment. As such, Air Force Institute of Technology (AFIT) professors, senior Air Force leaders, current squadron commanders and various MAF instructor and evaluator pilots were all consulted during the question formulation of this survey. AFIT professors were consulted to ensure the survey met the academic standards required for this research. Senior Air Force leaders were consulted to ensure that the survey covered all of the issues surrounding AMLO assignments, and that the questions were at the appropriate level for squadron commanders. Finally, current squadron commanders (outside of Eighteenth AF) were

consulted to determine how the survey could be improved, and to ensure that the list of potential assignments was complete.

To answer the second question, data on all mobility pilots or mobility navigators in the Air Force during 1995–2015 were analyzed. The data were first focused to only look at individuals who pinned on major during 1 June 2000–31 July 2008, and individuals who ascended to captain from 1 January 2000–31 December 2008. Determining exactly what variables to use was an important consideration for this research. AMC publishes a Force Development Ribbon Chart for its officers to complete to see what career milestones have been met. The milestones that are on this document include whether or not an individual has accomplished the following items: Squadron Officer College (SOC), flight commander, main weapons system instructor pilot, boarded programs, executive aide, intermediate developmental education (IDE), and staff. Because AMC uses this as a barometer to see how mobility officers are progressing throughout their careers, these data points should give a statistically significant answer to how influential an AMLO assignment is in mobility officer promotions. Also, Capt James W. Bruns and Capt Lawrence A. Eichhorn found that age and commissioning source were significant predictors of promotion for Air Force Officers, and these two variables were included in the analysis.[8] Finally, because both pilots and navigators can and have served as AMLOs, an Air Force Specialty Code was used a variable.

A logistic regression of nonperformance factors was used to determine how much each plays into whether or not an officer is selected for promotion. A logistic regression analysis should show whether or not an AMLO assignment makes it less likely for an individual to be promoted and how statistically significant an AMLO assignment really is in determining promotion outcomes.

Limitations of Research

Before discussing the results of this research, it is appropriate to mention some of the limitations of the data in this article. First, and significantly, individual performance data were not available for review. This information includes officer performance reports, promotion recommendation forms (PRF), and training reports (TRs). TRs reveal officer performance in formal training, including distinguished graduate (DG) status. While AMC/A1 lists performance as the most important factor in promotion selection, the data analyzed consisted entirely of nonperformance factors.

Second, the data did not include promotion board results. Whether or not an officer made lieutenant colonel was determined by whether or not an individual was a major at the time of his board to lieutenant colonel, and whether that officer appears as a lieutenant colonel at any time in the records. Potentially, officers could meet their lieutenant colonel promotion board, make lieutenant colonel but separate before pinning on. While this would represent a small number of officers, there is a potential that this could affect the overall results.

Third, this research does not account for when specifically in an officer's career he or she serves as an AMLO. For example, when looking at promotion to lieutenant colonel, the data simply reflect whether or not an individual had served as an

AMLO prior to their primary lieutenant colonel board. However, timing may be a factor. An officer who does an AMLO tour as a young captain certainly pays different opportunity costs than an officer who serves as an AMLO as a senior major. While exploring the correlation of timing and promotion may be useful for future research, it was not explored for this article.

Fourth, this article defines career progression in terms of selection for promotion, appreciating that this is only one measure of career progression. This definition was also made clear to surveyed members. However, not everyone defines career progression strictly in terms of promotion. Other measures of career progression include school-select status, below-the-zone selection, selection for squadron command, and promotion to colonel or general officer.

Finally, the data analyzed do not cover any time period past 2013, and as such, do not account for the recent drop off of AMLO promotion rates. Specifically, from 2013–2015, only 38 percent (11 of 29) AMLOs were selected for promotion to lieutenant colonel (see table 1).

Table 1. AMC promotion data (promotion to major 2009–2014)

	AMLO				MAF		AF	
	Maj		Lt Col		Maj	Lt Col	Maj	Lt Col
2009	6/9	66.7%	2/4	50.0%	91.8%	72.9%	93.7%	74.0%
2010	7/8	87.50%	3/4	75.0%	85.7%	73.4%	89.1%	73.7%
2011	4/5	80.0%	4/5	80.0%	88.7%	71.4%	89.3%	75.3%
2012	2/6	33.3%	7/10	70.0%	86.7%	76.4%	88.9%	75.4%
2013	n/a	n/a	4/10	40.0%	n/a	71.0%	n/a	74.4%
2014	6/6	100.0%	3/8	37.5%	92.2%	69.9%	91.8%	67.0%
2015	n/a	n/a	4/11	36.4%	n/a	66.4%	n/a	72.0%
AMLO totals	25/34	73.5%	27/52	51.9%				

(Source: Derived from data sent to the author from Air Mobility Command Deputy Chief of Staff for Manpower, Personnel and Services (AMC/A1KO) and information retrieved from the AMC Rated Officer Force Development Roadshow, a presentation prepared by AMC/A1KO.)

Literature Review

The USAF has unique considerations in its promotion process. Research suggests that nonperformance indicators can effectively predict promotion results in the Air Force.[9] Bruns and Eichorn performed a regression analysis on nonperformance data for individuals promoted within the Air Force and found that among their criteria, SOC DG status, graduating from a service academy, being a pilot, and completing professional military education (PME) in-residence as all being positive and significant indicators of future promotion. Because there is no formal guidance on how promotion boards in the Air Force are to consider nonperformance criteria and because what the service values is continually evolving, these specific criteria may not still be relevant today.

It is worth examining the current (2016) qualifications required for an officer to be considered for an AMLO tour. The AMLO career field is governed by Air Force Instruction 13-106, dated June 2013, which has not been updated to reflect the recent creation of an AMLO squadron. This publication states that the basic qualifications for an officer to be an AMLO are: the "ability to authoritatively represent the Air Force, explain mobility systems. . . and capabilities to their supported unit." Further, it stipulates that officers need only be "qualified mobility pilots or navigators with airlift and airdrop experience highly desired." Despite, or perhaps because of, the lack of explicit requirements, AMC has decided to recruit to a higher standard. The *AMC Rated Officer Force Development Roadshow* presentation (2015) lists the qualifications for AMLO as: major weapons system (MWS) instructor, a score higher than 90 on the Air Force Fitness Test, and appropriate level of PME completed. This presentation also references the Rated Staff Allocation Plan (RSAP). The FY 2015 RSAP dictates that ALOs/AMLOs will be filled to between 95 and 100 percent before any additional rated staffs are filled. This makes AMLO assignments "must-fill" billets, which puts additional pressure on squadron commanders, AMC and Air Force Personnel Center staffs to fill these positions, regardless of "volunteer" status.

Finally, it is appropriate to briefly discuss the method used to analyze the promotion data. Because promotion is a binary variable (an officer is either selected or not selected for promotion)—and many of the nonperformance variables that determine promotion are either binary or categorical—an ordinary Least Squares Model will not sufficiently describe its characteristics.[10] In this case, a Linear or Logistic Least Squares Regression Model is a more appropriate method of analysis. Logistic regression is appropriate for describing and testing hypotheses about the relationship between categorical outcome variables and categorical predictor variables.[11] The logistic regression is based on the concept of the "logit" function (the natural logarithm of the ratio of probabilities of Y happening to Y not happening). The logit introduces the logarithmic function to the variables, which ultimately gives researchers the ability to apply linear models to cases with nonlinear outcomes.
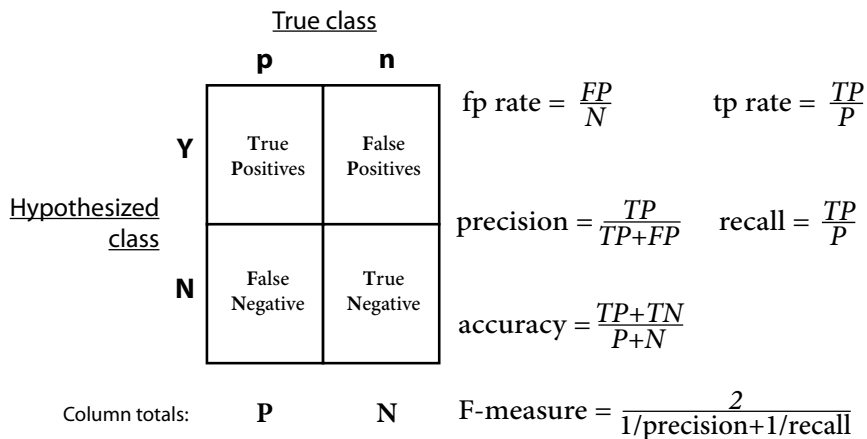
Chao–Ying, Joanne Peng and others further stated that researchers should address the following information when analyzing and presenting a logistic regression: an overall evaluation of the logistic model, statistical tests of individual predictors, goodness of fit statistics, and an assessment of the predicted probabilities. The whole-model test in the SAS Institute's *JMP 8 Statistics and Graphics Guide* provides an overall evaluation of the logistic model, determining if the change in the independent variables has a statistical effect on the dependent variable. The extent of this effect can be seen in the p-value, where a p-value less than .05 shows a statistically significant difference.

The statistical significance of individual regression coefficients is best tested using the Wald Chi-square Test.[12] In this test, each variable and the intercept are tested for significance, and then evaluated, using its p-value. The p-value represents the probability of getting, by chance alone, a Chi-squared value greater than the one observed.[13] For variables, they are held to be significant if the p-value is less than .05.

Goodness of fit can be evaluated by looking at the area under the receiver operating characteristics (ROC) curve. The ROC curve plots the probability of detecting a true signal versus a false signal for the entire range of data.[14] To express the curve

as a single, scalable value, researchers use the area under the curve (AUC).[15] The AUC is a number between 0 and 1.0, giving the analyst an idea of how well the model predicts an outcome (The closer to 1.0 the AUC is, the better the model is at prediction, with .7 being the minimum of the acceptable region).[16]

Finally, researchers can use a confusion matrix to evaluate how accurately the model predicts the actual outcome. The confusion matrix (see fig. 1) displays the results in four categories: true positives (results that the model predicted to be true that were actually true), false negatives (results that the model predicted would be false but were actually true, false positives (results that the model predicted would be true but were actually false), and true negatives (results that the model predicted would be false and were actually false). To determine the accuracy of the model, the sum of the true positives and true negatives are divided by the total number of samples.[17]

True class

	p	**n**	
Y	True Positives	False Positives	
N	False Negative	True Negative	

Hypothesized class

Column totals: **P** **N**

$$\text{fp rate} = \frac{FP}{N} \qquad \text{tp rate} = \frac{TP}{P}$$

$$\text{precision} = \frac{TP}{TP+FP} \qquad \text{recall} = \frac{TP}{P}$$

$$\text{accuracy} = \frac{TP+TN}{P+N}$$

$$\text{F-measure} = \frac{2}{1/\text{precision}+1/\text{recall}}$$

Figure 1. Confusion matrix and common performance metrics. (Source: Tom Fawcett, "An Introduction to ROC Analysis," Pattern Recognition Letters 27, no. 8 [2006]: 861–74, https://dl.acm.org/citation.cfm?id =1159475.)

Results and Analysis

The methodologies employed in analyzing the data revealed distinct answers to both research questions. The survey administered to 18th AF squadron commanders revealed a perception in the MAF that AMLOs do not enjoy the same career advancement opportunities as other mobility pilots and navigators. The analysis of the Air Force personnel data revealed that having an AMLO assignment in duty history is not a factor for individuals who are not promoted to either major or lieutenant colonel.

Survey Results

The individuals who responded to the squadron commander survey represented a broad cross-section of the MAF. Every major weapons system was represented, with 15 of the respondents being commanding officers within the airlift community (C-130, C-17, or C-5 aircraft), 12 commanding officers of the tanker community (KC-135 and KC-10 aircraft), and the remaining 3 members commanding operational support aircraft (OSA) (DV aircraft, including the C-21 and C-40) (see fig. 2). Interestingly, none of the respondents had previously been an AMLO or remotely piloted aircraft (RPA) pilot, but all other assignment types were represented by multiple individuals.
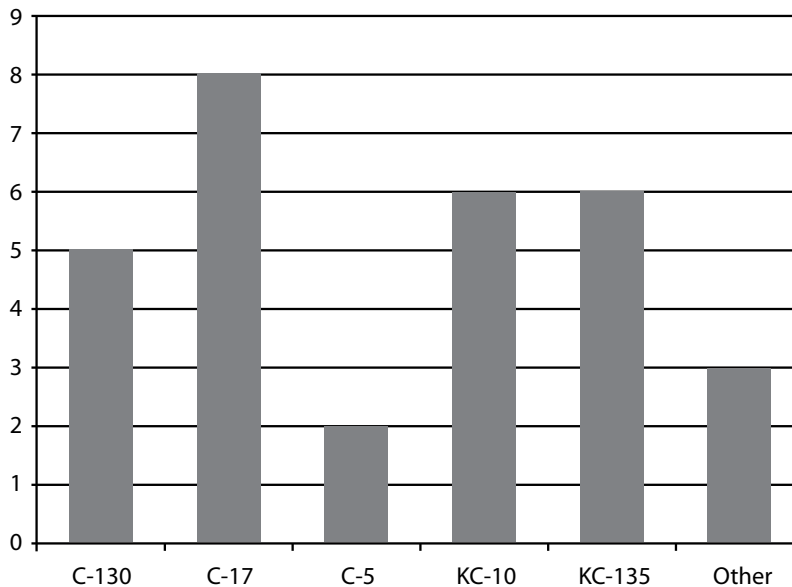

Figure 2. Primary aircraft of surveyed squadron commanders

Generally, respondents seemed to view AMLO assignments as valuable to the MAF. When asked to rank-order the different assignments generally open to MAF pilots and navigators at the captain and major level, the surveyed squadron commanders ranked AMLO as the sixth-best assignment for providing an officer with the best opportunity for professional development defined in the question as "deepen and/or broaden the individual's knowledge, skills, and abilities in the MAF and as an overall leader" (see fig. 3). Statistically, the possible responses divided themselves into three distinct categories. We can say with 90 percent confidence that respondents viewed AMLO, regional affairs specialist/political affairs specialist, Air Education and Training Command (AETC), and an additional operations assignment as better than OSA/VIP assignments and an RPA tour, but worse than the three Phoenix programs, USAF Weapons School Weapons Instructor Course (WIC), and a staff assignment, as these assignments relate to professional development.

## Ranking Assignments Based on Professional Development
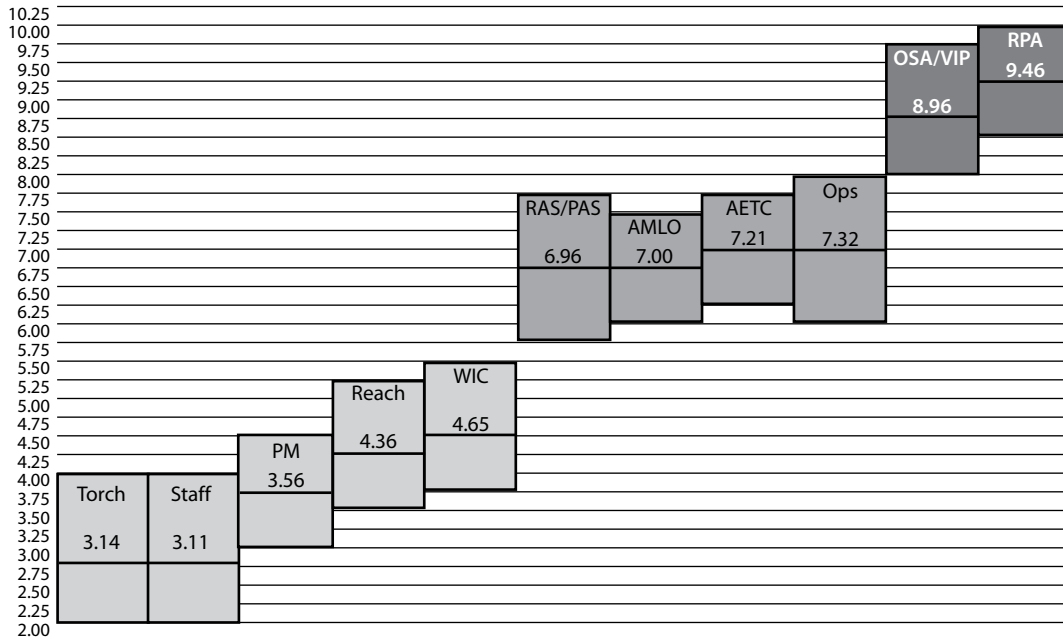
Figure 3. Ranking of assignments based on professional development

Further, 82 percent of respondents considered AMLO an effective use of rated officers, and only 10 percent of the respondents disagreed with the statement, "An AMLO assignment makes a mobility pilot/navigator a better officer and leader." These results show that MAF squadron commanders see value in the work that AMLOs do.

However, the survey results also indicate that squadron commanders feel that AMLO assignments do not benefit an officer's career progression. When asked to rank assignments in terms of which assignments make the officer more likely to be promoted to the next rank, the mean for AMLO assignments ranked 9 of 11. Again, the responses categorized into three groups. However, for this question, at the 90-percent confidence interval, it is now not possible to differentiate between AMLO and OSA/VIP and RPA assignments. The AMLO assignment dropped in relative value, revealing that respondents saw an AMLO assignment as having a greater benefit to professional development than to career progression (1.46 regression) (see fig. 4). Interestingly, all other assignment options stayed within .53 points except PM (1.10 improvement), Phoenix Torch (.9 improvement), and RAS/PAS (.68 improvement).

Further, when asked to respond to the statement that "an AMLO assignment hurts an officer's career development," only 20 percent disagreed (6 of 30 respondents) (see fig. 5). Finally, when asked how likely they were to recommend an AMLO assignment to a top performer in their unit (defined as the top one-third of his or her peer group), 66 percent (20 of 30 respondents) responded either "Not Likely" or "Would Not Recommend" (see fig. 6). The survey responses clearly show

that MAF squadron commanders perceive that an AMLO assignment is not good for an individual's career progression and promotion opportunities.

Ranking Assignments Based on Benefits to Career Progression
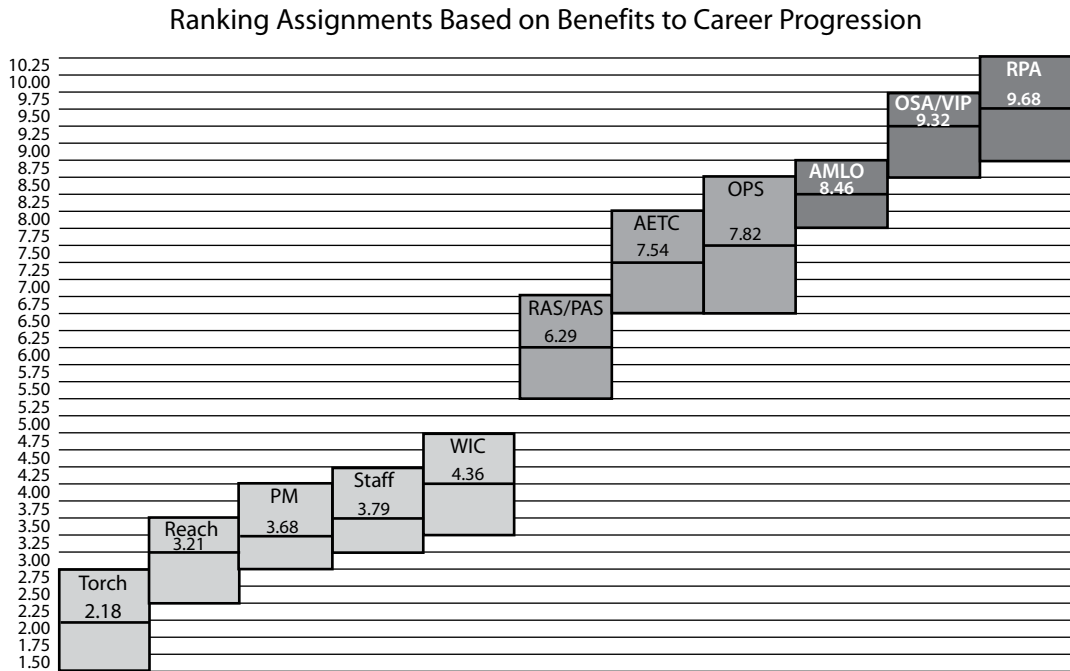
Figure 4. Ranking of assignments based on career progression
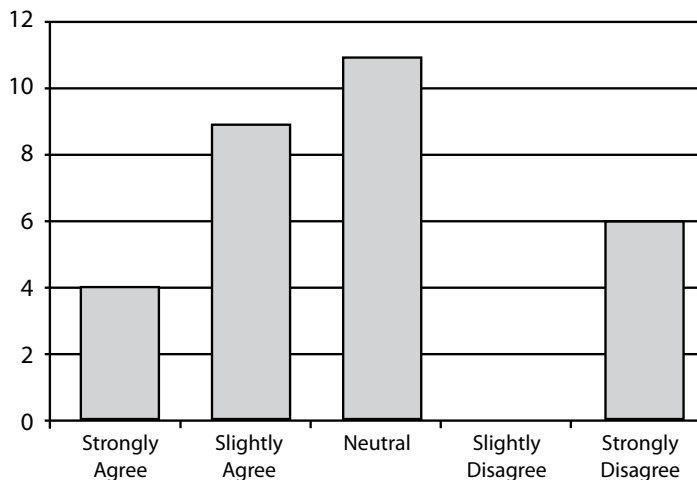
Figure 5. Squadron commanders' responses to the question, "Does an AMLO assignment hurt an officer's career development?"
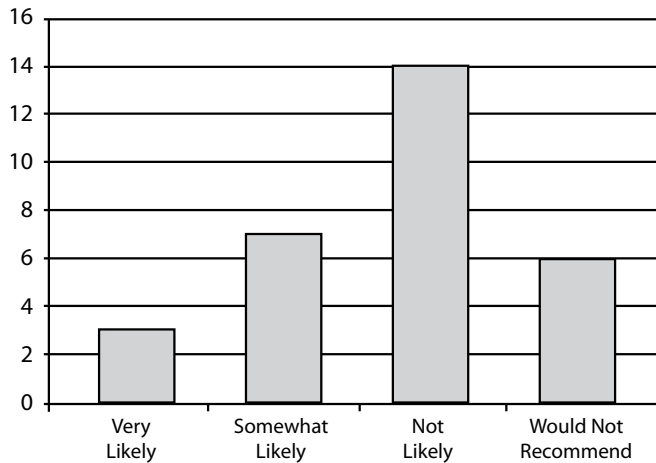
Figure 6. Squadron commanders' responses to the question, "How likely are you to recommend AMLO to a high-performing member of your squadron?"

Promotion Results

The analysis of the promotion results demonstrated exactly what influence being an AMLO had on whether or not a mobility officer was promoted. The analysis focused first on how having previously been an AMLO influenced whether an officer was not promoted to the rank of major (see tables 2–4 and fig. 7), and then whether having been an AMLO affected promotion to lieutenant colonel (see tables 5–7 and fig. 8). Both sets of results are presented in accordance with established standards: a whole model test was used to evaluate the overall model, a Wald chi-square test was utilized to evaluate individual predictors, the area under the receiver operating characteristic (ROC) curve was used to evaluate the goodness of fit, and a confusion matrix was utilized to assess the prediction capabilities of the logistic regression analysis. For both sets of data, the dependent variable was nonselections for promotion (1 = not selected for promotion; 0 = selected for promotion), to see what factors significantly affect an officer's chances of being passed over (not selected for promotion).

Nonselection to Major Model

The data show that most aspects of the major model suggest a good fit; however, the goodness of the fit test fell below the satisfactory level. The whole-model test (see table 2) shows that the model provides a significant improvement over the intercept-only model ($p < .0001$). Also, the Wald Chi-square test reveals that there are a number of statistically significant factors that influence who is not promoted (see table 3). Further, the Wald Chi-square test shows with certainty that AMLO is not a statistically significant factor ($p = .9323$). An analysis of the confusion matrix (see table 4) reveals that the nonselection for major model has an accuracy rate of 80.6

percent (3196/3963) in predicting who was and was not promoted to major. However, when evaluating the model's goodness of fit, this model only covered 68 percent of the area under the ROC curve (see fig. 7), which is just below an acceptable level of discrimination (.7).[18] This is likely attributed to the fact that performance is such a large factor in determining promotion to major. For promotion, performance is reflected by Distinguished Graduate status, officer stratification among peers, and recommendation for promotion on the PRF. None of these data were available for review, and it would appear that this information would provide a more accurate determination of who would and would not be selected for promotion to major.

Table 2. Whole-model test for promotion to major

Model	-Loglikelihood	DF	Chi-square	Prob>Chi-sq
Difference	147.18	11	294.36	<.001*
Full	1821.13	n/a	n/a	n/a
Reduced	1968.31	n/a	n/a	n/a

Table 3. Parameter estimates for promotion to major

Term	Estimate Study	Error	Chi-square	Prob>Chi-sq
Intercept	-3.31	0.983	11.35	0.0008*
Instructor as captain	-0.19	0.117	2.60	0.1072
AMLO as captain	0.03	0.328	0.01	0.9323
Evaluator as captain	0.32	0.096	10.92	0.001*
WIC as captain	1.78	0.393	20.48	<.0001*
Flt/CC as captain	0.52	0.084	38.58	<.0001*
Executive as captain	0.76	0.096	62.15	<.0001*
Pilot	0.61	0.145	17.91	<.0001*
USAFA	0.05	0.157	0.12	0.7293
ROTC	0.27	0.142	3.55	0.0594
BDE[a] in-residence	1.22	0.129	89.00	<0001*
Age	0.08	0.028	7.55	0.006*

[a]BDE-basic developmental education
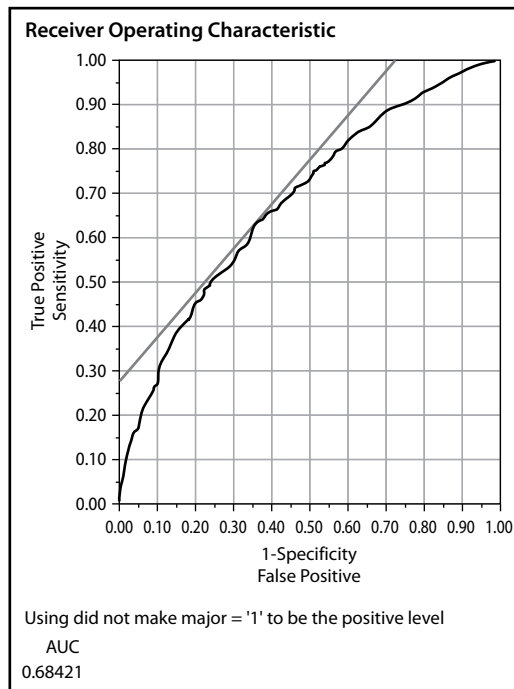
Figure 7. Area under the receiving operating characteristics for promotion to major

Table 4. Confusion matrix for promotion to major

	0	1
0	3132	49
1	718	64

Nonselection to Lieutenant Colonel Model

Next, the effect of an AMLO assignment on making lieutenant colonel was ana-lyzed (see tables 5–7 and fig. 8). Overall, this model showed encouraging results in all four of the standardized tests. The whole model test reveals a good fit for the model (p-value less than .0001). This model again shows that there are numerous variables that are statistically significant in determining promotion to lieutenant colonel, and that AMLO is not a statistically significant factor (p = .5322). This model covered 90 percent of the area under the ROC curve (see fig. 8), giving it a superior level of discrimination. Finally, the accuracy of this model is at 87.9 per-cent (1934/2200). These results seem to show that nonpromotion to lieutenant col-onel can be accurately predicted using the variables presented, and that the AMLO variable is not a statistically significant factor.

**Table 5. Whole-model test for promotion to lieutenant colonel**

Model	-Loglikelihood	DF	Chi-square	Prob>Chi-sq
Difference	682.78	13	1365.57	<.0001*
Full	766.92	n/a	n/a	n/a
Reduced	1449.7	n/a	n/a	n/a

Table 6. Parameter estimates for promotion to lieutenant colonel

Term	Estimate	Study Error	Chi-square	Prob>Chi-sq
Intercept	11.52	1.47	61.19	<.0001*
Evaluator	0.64	0.136	22.15	<.0001*
WIC	0.15	0.295	0.25	0.6161
Instructor	0.52	0.332	2.44	0.1182
Pilot	0.35	0.198	3.17	0.0749
Staff	0.73	0.138	28.30	<.0001*
Flt/CC	0.15	0.131	1.35	0.2449
Exec	0.79	0.141	31.19	<.0001*
AMLO	0.24	0.377	0.39	0.5322
USAFA	-1.24	0.221	31.34	<.0001*
ROTC	-0.65	0.199	10.72	<.0001*
IDE completed	8.29	1.02	66.12	<.0001*
IDE in-residence	2.76	0.475	33.80	<.0001*
Age	-0.52	0.029	327.13	<.0001*

Table 7. Confusion matrix for promotion to lieutenant colonel

	0	1
0	1320	66
1	200	614
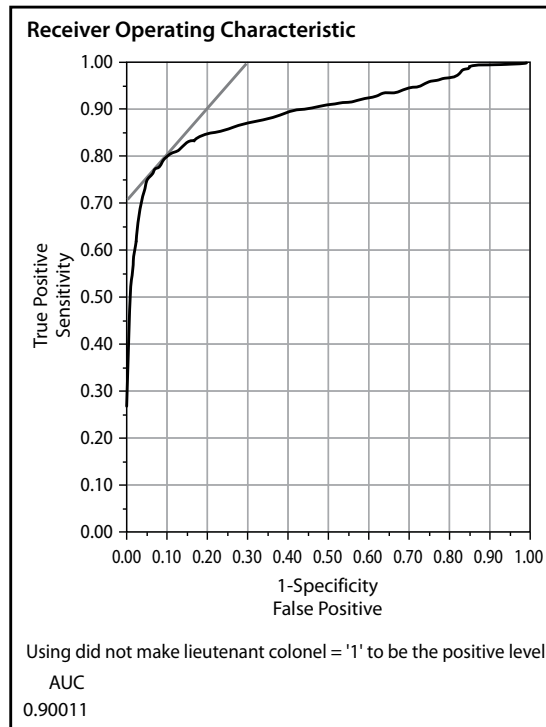
Figure 8. Area under the receiver operating characteristics for promotion to lieutenant colonel

Summary of Results

The survey data reviewed here clearly show that MAF squadron commanders see AMLO as an assignment with a negative impact to career progression relative to other assignment options. Only 20 percent (6 of 30) of squadron commanders slightly or strongly disagreed that an AMLO assignment hurt an officer's career development. Further, squadron commanders are unlikely to recommend AMLO assignments to their top performers. Clearly, there is a perception among MAF squadron commanders that an AMLO assignment is harmful to an officer's career. However, the promotion data analyzed do not support this perception. When promotion to major was analyzed, the data show that whether or not an officer had been an AMLO did not influence the likelihood that that individual was not promoted. Similarly, having been an AMLO did not influence whether or not officers were promoted to lieutenant colonel. This research collectively shows a perception among squadron commanders that an AMLO assignment hurts an officer's promotion potential, when in fact, the data show that having been an AMLO is not a statistically significant indicator of nonpromotion.

Recommendations for Action

Senior leaders have the opportunity to use this research to affect positive change. First, the mobility community should be educated that an AMLO assignment does not affect an officer's promotion potential. This information should be presented to all levels of MAF officers. First, sitting squadron commanders should receive this information to better mentor rated officers under their command. An excellent opportunity for this presentation would be the AMC Squadron Commanders Course. Also, junior MAF pilots and navigators who are potential AMLOs should receive this information. To simply show low promotion rates with no analysis drives a negative perception of the AMLO community. Education is the ideal way to eliminate the perception that having been an AMLO will make an officer less likely to be promoted.

However, education efforts by themselves are not enough. This research has shown that the lower promotion rates of AMLOs and former AMLOs are not because of the assignment. Mobility leaders should put policies in place to ensure that the officers selected for AMLO assignments are individuals who are most likely to succeed at the unique challenges of an AMLO assignment. This would include ensuring that potential AMLO candidates met minimum requirements (MWS instructor, worldwide deployable, no unfavorable personnel actions on record, eligible for a top-secret security clearance, excellent physical fitness scores, and PME completed, commensurate with rank), and that the MSOS commander was integral in the selection. There have been many successful AMLOs who were not selected for promotion to the next rank, and it would be unwise to base any criteria solely on increasing promotion rates. However, a list of requirements would present the AMLO squadron commander a point of departure and allow her or him to have a voice in the AMLO selection process. Giving the MSOS/CC a voice in AMLO selection based on a list of agreed-upon requirements would improve the community, since ostensibly that individual would know exactly what qualities would make for a good AMLO in the current operations tempo, and the requirements would increase the likelihood that future AMLOs are selected for promotion.

Finally, AMLO promotion rates would become a nonfactor if AMC began to offer incentives for individuals to become AMLOs. These incentives would offset, and eventually overcome, any negative perceptions of an AMLO assignment. Incentives available range from priority in follow-on assignment (including having AMLO outplacement reviewed by the MAF Developmental Team), to joint or staff credit, to raising the AMLO program to the level of other force development programs in AMC (Phoenix Reach, Phoenix Horizon, Phoenix Torch, and so forth). Each of these incentives comes with a trade-off, and it is valid to question if every program in AMC needs to be incentivized.

Conclusion

This article demonstrated that there is a perception that an AMLO assignment is detrimental to an officer's career progression, and that this perception is unsupported by data. The perception was uncovered through a survey of Eighteenth AF operational and OSS squadron commanders, asking them directly if they thought

AMLO assignments were detrimental to an officer's career progression, and indirectly by having them rank-order 11 assignments by how likely they were to advance an officer's career. The perception that AMLOs are promoted at a rate below their peers was shown to be false by examining the career advancement of mobility pilot and navigators of nine separate year groups. These data demonstrate that having previously served as an AMLO is not a statistically significant factor in predicting promotion, and that the lower AMLO promotion rates are because a number of individuals prone to not be promoted have served in AMLO positions.

General Goldfein expressed his desire that the Air Force should develop Airmen who can succeed in the joint environment, as this helps both the Air Force and the broader joint force. An AMLO assignment is one avenue that the MAF has to provide this development opportunity to its future leaders. An AMLO assignment immerses an officer with a sister service, often providing direct involvement with multiple joint task forces. However, partly because of a false perception, many officers either do not volunteer for these positions or are mentored to avoid them. MAF leadership should strive to correct this perception and continue to develop potential, current, and graduated AMLOs to ensure that future MAF leaders are "ready to provide the crucial airpower component and JTF leadership whenever and wherever needed."[19] ✪

Notes

1. R. L. Bowers, *Tactical Airlift: The United States Air Force in Southeast Asia* (Washington, DC: US Government Printing Office, 1982).

2. Ibid.

3. Ibid.

4. Air Mobility Command (AMC) historian, AMC 2003 History (Scott AFB, IL, 2003).

5. 1st Lt Jake Bailey, "New Chapter for AMC as AMLO Squadron Activates," US Air Force Expeditionary Center, 29 June 2015, http://www.expeditionarycenter.af.mil/News/Article-Display/Article/787939/new-chapter-for-amc-as-amlo-squadron-activates/.

6. Force Development Branch of the Personnel Division of the Directorate of Manpower Personnel and Services at Air Mobility Command emailed this information to the author in November 2015.

7. Rensis Likert, "A Technique for the Measurement of Attitudes," *Archives of Psychology* 140 (June 1932), https://legacy.voteview.com/pdf/Likert_1932.pdf.

8. Capt James W. Bruns, USAF, and Capt Lawrence A. Eichhorn, USAF, "A Comparison of Non-Performance Characteristics with United States Air Force Officer Promotions," (master's thesis, Air Force Institute of Technology, Wright–Patterson AFB:, 1993), http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA273967.

9. Bruns and Eichhorn, "Comparison of Non-Performance Characteristics."

10. Daryl Pregibon, "Logistic Regression Diagnostics," *The Annals of Statistics* 9, no. 4 (July 1981): 705–24, https://www.jstor.org/stable/2240841?seq=1#page_scan_tab_contents.

11. Chao-Ying Joanne Peng, Kuk Lida Lee, and Gary M. Intersoll, "An Introduction to Logistic Regression Analysis and Reporting," *The Journal of Educational Research* 96, no. 1 (September–October 2002): 3–14, https://www.jstor.org/stable/27542407.

12. Peng, Lee, and Intersoll, "Logistic Regression Analysis and Reporting," 3–14.

13. SAS Institute Inc., *JMP 8 Statistics and Graphics Guide*, vols.1 and 2, (Cary, NC: SAS Institute, Inc., 2008).

14. Tom Fawcett, "An Introduction to ROC Analysis," *Pattern Recognition Letters* 27, no. 8 (2006): 861–74, https://dl.acm.org/citation.cfm?id=1159475.

15. Fawcett, "Introduction to ROC Analysis," 861–74.

16. Ibid., and Jesse M. Pines, Christopher R. Carpenter, Ali S. Raja, and Jeremiah D. Schuur, *Evidence-Based Emergency Care: Diagnostic Testing and Clinical Decision Rules* (Hoboken, NJ: John Wiley & Sons, 2012).

17. Fawcett, "Introduction to ROC Analysis," 861–74.

18. Pines, Carpenter, Raja, and Schuur, *Evidence-Based Emergency Care*.

19. Gen David L. Goldfein, USAF, "CSAF Letter to Airmen," *Air Force News Service*, 13 October 2016), http://www.afsoc.af.mil/News/Article-Display/Article/972444/csaf-letter-to-airmen/.

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