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Janet Z Burns jburns@gsu.edu

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Perceptions of Graduates and Their Supervisors Related to the Air and Space Basic Course

Marie F. Kraska
Auburn University

Terry R. Bentley
U.S. Air Force

Dewey (1907) noted that, "All that society has accomplished for itself is put through the agency of the school" (p. 19). Likewise, the societal need to train and educate members of the military has been recognized through the ages. Even the ancient Chinese warrior, general, and philosopher Sun Tzu realized as early as the Fourth Century B.C. that training, supplying, and leading warriors was a matter of vital importance to society (Griffith, 1987). This was a view also shared by the founding fathers, chief among them George Washington (Twohig, 1999). The U.S. Air Force (USAF) recently added a new professional military course to assist in preparing its leaders.

The Air and Space Basic Course (ASBC), headquartered at Maxwell Air Force Base, Alabama, is a new addition to the continuum of graduate-level professional military education afforded to officers and others affiliated with the USAF. The ASBC began its operation in response to a problem that was perceived by senior USAF leaders. Part of the problem was that USAF officers had strayed away from the fundamental principles of the value of airpower taught by early pioneers such as Billy Mitchell, Ira Eaker, Claire Chennault, and Haywood

Hansell (Newton, 1998). Therefore, senior Air Force leaders felt it necessary to provide all new officers and selected civilians with an overview of the fundamental principles of airpower theory.

Another pressing part of the problem was that some officers were tunnel visioned about their roles as officers, more "me-centered" than "we-centered." As Builder (1994) noted, "Some believe that the Air Force...is in trouble and needs to find and take corrective actions...Air Force people are increasingly favoring their own careers and interests over that of the Air Force mission or institution" (p. 20). That is to say, many USAF officers thought of themselves first in terms of their specific specialties, e.g., lawyer, doctor, pilot, engineer, etc., rather than thinking of themselves as airmen. Ask any Marine Corps member what he or she is and the response will resound loud and clear, "I am a Marine." Present the same question to an Air Force member and the typical response will be, "I'm a pilot, personnel officer, communications officer, or space operations officer" (Newton, 1998).

According to Newton (1998), this attitude was potentially detrimental to the inherent values and factors that tie the military together as a coherent force. Therefore, the ASBC was created as an airman's school so that officers across all specialties could have a common understanding of airmanship and how to be a leader in today's USAF to build a "we-centered" mindset.

The organizational mission of the ASBC is to inspire new USAF officers to comprehend their role as airmen, who understand and live by USAF core values, articulate and demonstrate USAF core competencies, and who dedicate themselves as members of the world's most respected air force. The aim of the ASBC is to achieve this organizational mission and gain the dedication of its graduates as military team members, thereby overcoming the perceived attitudinal problem of junior officers and civilian leaders being more "me-centered" than "we-centered." Furthermore, the ASBC stresses that completing the organizational mission enables students to fulfill their specific missions.

The curriculum content of the ASBC focuses on the influence of aerospace power at the operational level of war down to the individual officer. The curriculum centers on the needs of newly commissioned lieutenants and selected civilians. The course is four weeks in duration, includes more than 139 contact hours, and includes modules of study ranging from core competencies and aerospace power employment to operations planning. The approach emphasizes teamwork and how all career fields work together to create aerospace power, as well as how the USAF as a military branch fits with the country's other armed forces. The ASBC coursework is carried out in 42 to 44 small seminar teams, called flights, of 14 students each.

The ASBC curriculum emphasizes achievement through teamwork (McCain, 2002). The lessons taught in the ASBC program integrate the foundations of aerospace doctrine, the USAF core competencies, and the employment of aerospace power. The curriculum provides an environment for the students to analyze and improve group and individual skills through application exercises and simulations, seminars, lectures, and field activities. The core curriculum areas of the ASBC are (a) profession of arms, (b) leadership and management, (c) military studies, (d) communications, and (e) international studies.

The ASBC is open to newly commissioned officers with approximately one year or less total active federal commissioned service. In addition to active duty USAF personnel, a limited number of Air Force Reserve, Air National Guard, and Department of Defense civilians also attend the ASBC (McCain, 2002). During the 2002 academic year, eight ASBC classes were planned and conducted, with approximately 600 students per class (McCain).

The effectiveness of the ASBC is perceived to have a significant impact on the defense capability of the U.S. and the careers of graduates. Graduates normally assume duties in line

with the education they have just completed. Many are thrust into supervisory positions immediately after graduation, and all assume some nature of a leadership role as an airman. Consequently, it is critical that students enrolled in the ASBC receive an education that is well focused on postgraduation needs. It is essential that students receive quality content and instruction to ensure their success as leaders and airmen, as well as to ensure the viability of the American military.

Need for the Study

The ASBC solicits feedback from field commanders and supervisors; however, it does not currently use any type of graduate or supervisor evaluation system. The ASBC has no mechanism in place to guarantee feedback about how the course has or has not prepared its graduates to function as military leaders. Consequently, this study was needed in order to give timely feedback for effective changes that may help to improve the ASBC curriculum content for current and future students.

The Problem Statement

Wilber (1948) described industrial education as "education (that deals)...with the problems...resulting from the industrial and technological nature of society" (p. 2). The industrial and technological focus of the USAF encounters leadership situations that curriculum developers hope to address by focusing on intellectual processes. Zuga (1989) noted that intellectual processes can relate to working together, communicating effectively, and assuming leadership roles. Newkirk and Johnson (1948) asserted that teaching intellectual processes is a major goal for industrial education. To date, the USAF cannot assess whether or not it is meeting this goal because no permanent mechanism is in place that can gauge the extent to which the curriculum has prepared graduates of the ASBC for the intellectual process of leading airmen.

There are no research-based data from which to base judgments regarding the curriculum effectiveness, nor are there data on how to improve the ASBC curriculum. This lack of data served as the focal point for this study.

Purpose of the Study

The purpose of this study was to gather and utilize perceptual data from the graduates and their supervisors in order to investigate the effectiveness of the ASBC education on the intellectual processes of leading airmen, and if needed, recommend changes for improving the ASBC curriculum in order to enhance the graduates' preparedness for their postgraduate roles as airmen leaders.

Research Questions

This study addressed the following research questions.

1. How do graduates perceive the relevance and effectiveness of the ASBC curriculum content with regard to their job performance as airmen leaders?
2. How do supervisors of graduates perceive the relevance and effectiveness of the ASBC curriculum content with regard to their subordinates' job performance as airmen leaders?
3. To what extent is there a difference in the perceptions of graduates and their supervisors related to the relevance of the content in the ASBC program?
4. To what extent has the ASBC achieved its mission, thereby creating a more "we-centered" than "me-centered" graduate?

Methods and Procedures

The population of this study was comprised of 567 graduates from the ASBC class who were graduated March 29, 2002, and their respective supervisor (potentially up to 567 supervisors). Each supervisor included in this study was the immediate supervisory official of one or more of the graduates from the ASBC class.

Instrumentation

The researcher developed two nearly identical research instruments for this study. One instrument was specific to graduates, while the other was exclusive for the graduates' supervisors. Specifically, the graduates' survey included a question regarding their class standing (bottom third, middle third, or top third) upon graduation; since this did not apply to supervisors, this item did not appear on the supervisors' survey. Likewise, the supervisors' survey contained an item that requested total years of supervisory experience; this item did not appear on the graduates' survey. Also, items regarding course content were worded specifically for graduates on the graduates' instrument and for supervisors on the supervisors' instrument. Both instruments requested participants to respond to related items for each of the five core ASBC content areas in terms of assessing how important the area was in preparing graduates for their postgraduate positions as leaders of airmen in the United States military.

Each instrument included 51 total items: nine demographic items, one open-ended item, and 41 items on a Likert-type scale. Responses on 40 of the scaled items dealt specifically with curriculum content. Since the amount of instructional hours devoted to each area of core content varied, the number of items devoted to each core content area on the survey instruments also varied proportionally. Each of the five core areas (profession of arms, leadership and management, military studies, communications, and international studies) was represented by several items on the instruments.

Responses on the 40 scaled items that dealt with content ranged from "critical" information for job performance to "not necessary" for job performance. Responses on the scale for these items were listed as critical = 4, important = 3, useful = 2, and not necessary = 1. Therefore, the total score of each of these 40 items indicated the magnitude of respondents' perceptions of relevance of the curriculum item to preparing ASBC graduates for their duty assignment.

In addition to the content-related items, responses on one item rated the overall effectiveness of the ASBC in achieving its stated mission, building a "we-centered" mindset. The responses for this question were on a five-point Likert-type scale and ranged from "outstanding" to "unsatisfactory" in accomplishing the mission. Responses on the scale were listed as outstanding = 5, excellent = 4, satisfactory = 3, marginal = 2, and unsatisfactory = 1. Statements on the instruments were written in hypertext markup language (HTML) using Microsoft FrontPage software in order to allow electronic submission.

Both instruments included two identical open-ended items that requested suggestions for improvements to the ASBC curriculum content. As was the case with all other instrument items, the open-ended questions were written using Microsoft FrontPage software in order to allow electronic submission.

Data Collection Procedures

Each instrument was posted electronically to a webpage server so that respondents could access the page, complete the survey electronically, and submit the survey anonymously. When respondents accessed the survey instrument, completed the questionnaire, and submitted their responses, an e-mail containing the responses was generated that contained the survey. This message was sent from the webpage to the e-mail account of the researcher. Consequently, no response could be traced to a particular participant. Therefore, participation in the study was voluntary and anonymous. The response rate for ASBC graduates was 39.0%

($n = 221$), and the response rate for supervisors was 29.8% ($n = 169$).

Data Analysis Procedures

The mean score and standard deviation for each item were reported by group for ASBC graduates and supervisors. The t-test for independent samples was used to ascertain statistically significant differences in the perceptions of graduates and their immediate supervisor related to the relevance of each content area in the ASBC program in preparing graduates for their roles as airmen leaders.

Results

Perceptions Related to Content Relevance

The first research question was "How do graduates perceive the relevance and effectiveness of the ASBC curriculum content with regard to their job performance as airmen leaders?" The graduates' perceptions about the relevance of the curriculum content were assessed, based on their response to each of the 40 content-related survey items. This investigation was focused on the curriculum and instruction of military personnel and perceptions of former students and their supervisors regarding the relative effectiveness of the educational experience; however, the researchers recognize and appreciate the transferability of the research methodology to program assessment in the nonmilitary setting as well.

Each of the five core areas (profession of arms, leadership and management, military studies, communications, and international studies) was represented by these content-related survey items. The highest-rated content item was from the leadership and management area. The item "Have effective team building and problem solving skills" had a mean rating of 3.35 ($SD = 0.7743$). The lowest-rated item by the graduates was in the profession of arms area; "Understanding the five stages of the joint air operations plan" had a mean of 2.26 ($SD = 0.9881$).

The second research question was "How do supervisors of graduates perceive the relevance and effectiveness of the ASBC curriculum content with regard to their subordinates' job performance as airmen leaders?" The supervisors' perceptions about the relevance of the curriculum content were also assessed, based on their responses to each of the content-related survey items. The highest and lowest mean ratings were the same for the supervisors as they were for the ASBC graduates. The highest-rated content item for supervisors had a mean rating of 3.75 ($SD = 0.5208$), while the similar lowest-rated item by the supervisors had a mean of 2.14 ($SD = 1.036$).

Differences in Graduate and Supervisor Perceptions

The third research question was "To what extent is there a difference in the perceptions of graduates and their supervisors related to the relevance of the content in the ASBC program?" Data were tested using the t-test for independent samples to ascertain statistically significant differences in the perceptions of graduates and their immediate supervisor related to the relevance of each content area in the ASBC program in preparing graduates for their roles as airmen leaders. The perceptions about content areas were assessed in each instrument by 40 scaled items that addressed specific curriculum content.

An independent samples t-test was performed in order to test for and ascertain differences in perceptions of graduates and their supervisors related to the relevance of the profession of arms course content. Results revealed a statistically significant difference in perceptions of graduates and their supervisors. The mean score for the graduates was 2.73 ($SD = 0.6578$). The mean score for the supervisors was 2.95 ($SD = 0.6893$). As noted in Table 1, the two-

tailed t-test indicated that the difference in graduates and supervisors was statistically significant.

Table 1

Profession of Arms

			<i>M</i>	<i>SD</i>
Graduates (N=221)			2.73	.6578
Supervisors (N=169)			2.95	.6893
t-test for equality of means				
t	df	Significance (2-tailed)	<i>M</i> Difference	Std Error Difference
-3.145	388	.002	-.2159	.0686

An independent samples t-test was performed in order to test for and ascertain differences in perceptions of graduates and their supervisors related to the relevance of the leadership and management course content. Results revealed a statistically significant difference between perceptions of graduates and supervisors. The mean score for the graduates was 3.02 (SD = 0.5907), and the mean score for supervisors was 3.48 (SD = 0.4733). The two-tailed t-test indicated that the difference between graduates and supervisors was statistically significant (see Table 2).

Table 2

Leadership and Management

			<i>M</i>	<i>SD</i>
Graduates (N=221)			3.02	.5907
Supervisors (N=169)			3.48	.4733
t-test for equality of means				
t	df	Significance (2-tailed)	<i>M</i> Difference	Std Error Difference
-8.266	388	<.001	-.4587	.0554

An independent samples t-test was performed to test for and ascertain differences in perceptions of graduates and their supervisors related to the relevance of the military studies curriculum. Results revealed a statistically significant difference between perceptions of graduates and supervisors. The mean score for the graduates was 2.62 (SD = 0.8067), and the mean score for supervisors was 3.13 (SD = 0.7672). As shown in Table 3, the two-tailed t-test indicated that the difference in graduates and supervisors was statistically significant.

Table 3

Military Studies

	<i>M</i>	<i>SD</i>
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Graduates (N=221)	2.62	.8067		
Supervisors (N=169)	3.13	.7672		
t-test for equality of means				
t	df	Significance (2-tailed)	M Difference	Std Error Difference
-6.348	388	<.001	-.5128	.0807

An independent samples t-test was performed in order to test for and ascertain differences in the perceptions of graduates and their supervisors related to the relevance of the ASBC in communications. Results presented in Table 4 revealed no statistically significant difference between perceptions of graduates and supervisors. The mean score for the graduates was 2.99 (SD = 0.7111), and the mean score for the supervisors was 3.07 (SD = 0.8596). The two-tailed t test indicated that the difference in graduates and supervisors was not statistically significant.

An independent samples t-test was performed in order to test for and ascertain differences in perceptions of graduates and their supervisors related to the relevance of the international studies course content. Results revealed a statistically significant difference between perceptions of graduates and supervisors. The mean score for graduates was 2.83 (SD = 0.8652), and the mean score for supervisors was 3.20 (SD = 0.7605). As noted in Table 5, the two-tailed t-test indicated that the difference in graduates and supervisors was statistically significant.

Table 4

Communications

			<i>M</i>	SD
Graduates (N=221)			2.99	.7111
Supervisors (N=169)			3.07	.8596
t-test for equality of means				
t	df	Significance (2-tailed)	<i>M</i> Difference	Std Error Difference
-.953	388	.341	-.0777	.0795

Table 5

International Studies

	<i>M</i>	SD		
Graduates (N=221)	2.83	.8652		
Supervisors (N=169)	3.20	.7605		
t-test for equality of means				
t	df	Significance (2-tailed)	<i>M</i> Difference	Std Error Difference
-4.450	388	<.001	-.3739	.0840

Data analysis revealed no statistically significant difference in graduates' and supervisors' perceptions regarding the area of communications. A statistically significant difference was found in the other four areas of profession of arms, leadership and management, military studies, and international studies.

Achieving the Mission

One survey item rated the overall effectiveness of the ASBC in achieving its stated mission of building a "we-centered" mindset, thus providing data to address research question four. The mean score for all participants, graduates and supervisors combined, was 4.02 (SD = 0.8391). The responses were on a scale value as follows: outstanding = 5, excellent = 4, satisfactory = 3, marginal = 2, and unsatisfactory = 1. An independent samples t-test was performed in order to test for and ascertain differences in the perceptions of graduates and their supervisors related to the effectiveness of the ASBC at achieving its stated mission. Results revealed a statistically significant difference between perceptions of graduates and supervisors. The mean score for the graduates was 3.83 (SD = 0.8316), and the mean score for the supervisors was 4.25 (SD = 0.7927). The two-tailed t-test indicated that the difference in graduates and supervisors was statistically significant (see Table 6).

Table 6

Mission Effectiveness

		<i>M</i>	SD	
Graduates (N=221)		3.834	.8316	
Supervisors (N=169)		4.25	.7927	
t-test for equality of means				
t	df	Significance (2-tailed)	<i>M</i> Difference	Std Error Difference
-4.940	388	<.001	-.4114	.0832

Discussion

A statistically significant difference was found between the ASBC graduates and their supervisors regarding their perceptions of content relevance in four of the five core content areas. There was no statistically significant difference found between graduates and supervisor in the ASBC content area of communications. Also, a significant difference was found between the graduates and their supervisors regarding their perceptions of the overall effectiveness of the ASBC in achieving its stated mission.

Communications

No statistically significant difference existed between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of communications. The communications portion of the curriculum focused on speaking, listening, writing, research, nonverbal signals, small-group and organizational dynamics, networking, cross-cultural dialogue, media relations, and the impact of technology.

Both graduates and their supervisors perceived this area as equally relevant in preparing graduates for their roles as airmen leaders after completion of the ASBC. This finding suggested that both graduates and their supervisors recognized that new graduates must rely on their ability to communicate effectively, especially in writing, immediately upon

graduation from the ASBC and the assumption of their roles as airmen leaders at their first duty assignment after graduation.

Profession of Arms

A statistically significant difference was found between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of profession of arms. Supervisors perceived this area of curriculum as more relevant to the roles of the graduates as airmen leaders than did the graduates. Perhaps the statistically significant difference may be attributed to the years of experience supervisors had in making day-to-day decisions relative to the military mission of the USAF. This finding suggested that since supervisors typically have had several years of experience in training for, supporting, or performing military duties, they perceived instruction related to the profession of arms as an important and relevant part of the ASBC curriculum content. In contrast to perceptions of the supervisors, this finding suggested that graduates, who have had little or no experience at training for, supporting, or performing military operations, had not yet come to realize the high degree of relevance that the profession of arms had or will have to their roles as airmen leaders at their first duty assignment after graduation.

Leadership and Management

A statistically significant difference was found between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of leadership and management. The leadership and management curriculum focused on the professional, organizational, and interpersonal aspects of influencing and directing people and other resources to carry out the mission successfully.

Supervisors perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did graduates. This finding suggested that since supervisors typically have had several years of experience serving in leadership and management positions, they perceived instruction related to leadership and management as an important and relevant part of the ASBC curriculum content. In contrast to supervisors' perceptions, this finding suggested that graduates, who have had little experience at leading and managing others, had not yet realized the high degree of relevance that the leadership and management had or will have to their roles as airmen leaders.

Military Studies

A statistically significant difference existed between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of military studies. The military studies portion of the curriculum focused on military and airpower history, and frames military theory, doctrine, strategy, and civil-military relations through the lens of history.

Supervisors perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did graduates. Perhaps the statistically significant difference may be partially attributed to the fact that supervisors in the USAF have been continually reminded of how important military history is to the professional development of military leaders. Also, this finding suggested that since it is likely that supervisors have made decisions about current military operations while using historical examples and historically-grounded theory, doctrine, and strategy as a basis for their decisions, they perceived instruction related to the military studies as an important and relevant part of the ASBC curriculum. In contrast to supervisors' perceptions, this finding suggested that graduates, most of whom have not yet made decisions about how to conduct current military operations, have not yet had to reflect on historical examples as a basis for their decisions; therefore, these recent graduates had not yet come to realize the high degree of relevance that the military studies had or will have to their roles as airmen leaders at their first duty assignment after graduation.

International Studies

A statistically significant difference existed between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of international studies. The international studies curriculum focused on international relationships within the strategic environment; and it emphasizes the importance of nonmilitary instruments of power (diplomatic, economic, political, and informational) and their relationship to military factors and their effect on world security.

Supervisors perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did graduates. USAF supervisors adhere to the guiding principle that their senior civilian leadership will attempt to compel any potential adversary to act by using diplomatic, economic, political, and/or informational means before employing the last resort, military force. Also, this finding suggested that since it is likely that supervisors have had to consider how the military supports and integrates with diplomatic, economic, political, and informational interventions, they perceived instruction related to international studies as an important and relevant part of the ASBC curriculum content. In contrast to supervisors' perceptions, this finding suggested that graduates, most of whom have not yet made high-level decisions about how to conduct current military operations in light of how they may integrate with and support the other interventions, had not yet come to realize the high degree of relevance that the international studies had or will have to their roles as airmen leaders at their first duty assignment after graduation.

Achieving the Mission

A statistically significant difference existed between the ASBC graduates and their supervisors regarding perceptions of the overall effectiveness of the ASBC in achieving its stated mission. Supervisors perceived the ASBC as more effective at achieving its mission and thereby fostering a "we-centered" mindset than did the ASBC graduates. Perhaps the statistically significant difference may be attributed to the possibility that since the ASBC was instituted in 1998, supervisors have expected to see a much more "we-centered" attitude among the ASBC graduates they supervise than they previously expected to see among nongraduates and that supervisors were influenced to overrate the "we-centeredness", based on seeing only what they expected to see. Another possible explanation for the significant difference may be attributed to the possibility that supervisors genuinely saw a much more "we-centered" mindset among graduates than they experienced among nongraduates, whereas the graduates themselves underrated their own "we-centeredness" due to the lack of nongraduate peers to use as a baseline for comparison.

Recommendations

This research focused on assessment of professional military education by investigating the perceptions of graduates and their supervisors related to the relevance of the ASBC course content in preparing graduates to perform their roles as military leaders. The following recommendations are made, based on the research and its results.

The first recommendation is to employ graduate and supervisor questionnaires, such as the ones used in this study, as part of a permanent evaluation system in order to gain feedback for maintaining and improving the ASBC curriculum content for current and future students. The ASBC staff solicits feedback from field commanders and supervisors; however, they do not currently use any type of graduate and/or graduate supervisor evaluation system. Therefore, the ASBC has no mechanism in place to guarantee feedback about how the course curriculum content has or has not prepared its graduates to function as airmen leaders.

The second recommendation is to add instruction on how to write annual evaluations and other assessments, award packages, and/or corrective/disciplinary action documentation on

subordinates. Both graduates and supervisors recommended adding this instruction to the curriculum content. Since these newly commissioned officers and select civilians are destined to become leaders of airmen, it is critical that they possess the skills necessary to assess, commend, and/or correct their subordinates' performance.

The third recommendation is to conduct further study in order to identify redundant material presented in both officer commissioning programs and the ASBC. Graduates noted that some of the material taught in the ASBC was a repeat of the material taught in the commissioning programs. Although several graduates stated that this repetition was a waste of time and resources, further study is needed to identify each redundant item and to assess whether or not it is important to repeat some of the material in the ASBC that was already taught. It is important to note that an analysis of the data shows that both graduates and their supervisors perceived each area of the core curriculum to be relevant to the ASBC graduates' postgraduate roles as leaders of airmen. Therefore, it is recommended that the current course curriculum content be maintained without deleting any material from it until and unless further study yields ample reasoning that a specific item or area should not be taught as part of the ASBC. Also one should not preclude the possibility that some of the redundant material, if deletion is required, may need to be deleted from commissioning programs rather than from the ASBC.

The content of educational programs for military personnel often differs from that of educational programs for nonmilitary personnel. However, an investigation of the perceptions of graduates, employers, and instructors related to program effectiveness could yield valuable program planning information regardless of the nature and type of program being assessed. Therefore, it is recommended that this research methodology and procedures be utilized to assess program effectiveness of nonmilitary industrial and technical educational programs.

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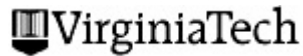
Kraska is Professor in the Department of Educational Foundations, Leadership, and Technology at Auburn University in Auburn, Alabama, and can be reached at kraskmf@auburn.edu. Bentley is Lieutenant Colonel in the U.S. Air Force.

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