

CALL SIGNS

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About the USN★AEP Society

As military transformation continues to affect today's and tomorrow's Department of Defense and the Navy Medical Service Corps, the need to promote the role of Aerospace Experimental Psychologists as leaders and innovators in aerospace psychology continues.

Naval Aerospace Experimental Psychologists offer a unique combination of education, knowledge, skills, and experiences that will excel in the emerging joint and coalition environment.

The U.S. Naval Aerospace Experimental Psychologist's Society (USNAEPS) is an organization intent on:

- Advancing the operational effectiveness and safety of Naval aviation fleet operators, maintainers, and programs through increases in knowledge base, utilization of tools and practices of aviation psychology.
- Fostering professional development of its members and enhancing the practice of Aerospace Experimental Psychology within the Navy.
- Strengthening professional relationships within the community.

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WELCOME

USNAEPS Executive Committee

Welcome to the very first issue of Call Signs, the official newsletter of the United States Naval Aerospace Experimental Psychology Society! In keeping with the Society's goal of fostering and enhancing the practice of Aerospace Experimental Psychology within the Navy, Call Signs provides Society members with community relevant news, career and professional development opportunities of note, and updates on Society events and activities.

This inaugural year has been a year of firsts for our Society, and as we look towards the Society's second year it is fitting to review some of these including:

- Society Membership exceeded the 30 member mark, representing a blend of Active, Reserve and Retired AEPs
- The Society unveiled its Website, complete with password-protected "Members Only" sections – if you haven't checked it out recently please do so, and don't forget to bookmark it (<http://www.navy-aep.com/USNAEPS.html>)
- The Society established 3 annual awards to recognize individual members who have made outstanding contributions to Aerospace Experimental Psychology
- The Society was invited to host the Annual Navy Luncheon at the 81st Annual Scientific Meeting of the Aerospace Medical Association this May, 2010
- The Society designed its Plaque of Appreciation to be awarded to those individuals outside the Society who have played a critical role in supporting the Aerospace Experimental Psychology community – the most recent recipient was our outgoing detailer, CDR Duane Eggert.

The Society's outlook for the second year is even more exciting, as we plan to expand our membership drive to include professionals beyond the

immediate Naval Aerospace Experimental Psychology community, extend the capabilities of our Website, and establish the Society's "Ship's Store" where members will be able to purchase Society related products.

As you read through this issue, we hope you will feel as much a sense of ownership as the Newsletter team does. Many of the photos sprinkled throughout this issue, and much of the information contained in the various articles, were provided by you, our members. As we begin to plan for subsequent issues, we encourage each and every one of you to share with us your ideas and materials for inclusion. Remember, this is YOUR newsletter and we want it to be as tailored to YOUR needs as possible. Please feel free to email your suggestions directly to our newsletter editor, LT Pete Walker (peter.b.walker@navy.mil).

In addition to providing additional professional resources, the Society continues to recognize the importance of the community's Specialty Leader. All members are encouraged to continue working with the AEP Specialty Leader to best support development opportunities for the active duty corps of AEPs, supporting the communication of the Naval AEP program across professional academic communities to foster recruitment and information dissemination, as well as the maintenance of a broad support network of former and retired AEPS and interested technical professionals.

Finally, a special note of thanks to those individuals who went above and beyond, providing the time and energy to make this first issue a reality: LT Pete Walker, the Newsletter Editor; Dr. Sae Schatz and Ms. Joy Martinez, Graphic Consultants; and, LCDR Henry Phillips, AEP Assistant Specialty Leader.

Meet the AEP Specialty Leader

In February 2009, CDR Dylan Schmorow was named Specialty Leader for the Aerospace Experimental Psychology community, relieving CAPT John K. Schmidt, who served in that capacity from 2004 to 2009.

Originally commissioned as an Army Reserve Officer, CAPT Schmidt earned a Ph.D. in Human Factors Psychology from the University of Houston. Later transferring to the Navy, he served in a series of billets in systems acquisition and operational safety. He currently serves as Director, Human Systems Department (AIR 4.6), Research & Engineering Group, Naval Air Systems Command, NAS Patuxent River, MD. As a recognized expert in human factors and organizational psychology, CAPT Schmidt served as an investigator on the Columbia Accident Investigation Board and has provided invited addresses at DOD, NASA, FAA, and NTSB forums.



CAPT (Sel) Schmorow earned his doctorate in Experimental Psychology in 1993 and was commissioned in the Navy that same year, earning his wings in 1994. He currently serves in the Office of the Director, Defense Research and Engineering in the Research Directorate as the BioSystems Associate Director for Human Systems. In addition to responsibility for Science and Technology Programs in the Human Systems Technology area, he is the Program Director for the Office of the Secretary of

Defense Human, Social, Culture and Behavioral Modeling research and development program, focused on providing DoD and the US Government with the ability to understand and effectively operate in the human, social, and cultural terrains inherent to non-conventional warfare missions.



His previous assignments include the Naval Air Warfare Center Aircraft Division, where he deployed on the USS Dwight D. Eisenhower in support of “Deny Flight” and “Provide Promise” Operations in the former Yugoslavia, as well as the Naval Postgraduate School, where he served as both an Assistant Professor and the John G. Jenkins Postdoctoral Fellow. He was later assigned as Chief Scientist at the Naval Research Laboratory, where he was selected as a Program Manager at Defense Advance Research Projects Agency (DARPA). Prior to his current assignment, he served as the Executive Assistant to the Chief of Naval Research, where he coordinated actions between the Office of Naval Research (ONR) and tenant commands, the Secretary of the Navy, and the Chief of Naval Operations, as well as intergovernmental agencies and international S&T organizations. From 1999 through 2008 he concurrently served as an ONR Program Officer, successfully transitioning numerous operational capability prototypes to Navy and Marine Corps acquisition programs.

Thanks To Our Outgoing Assistant Specialty Leader!



CDR Schmorrow presents a plaque in recognition of outgoing AEP ASL LCDR Cohn at the DoD HFE TAG in Key West, Florida.

On November 9, 2009 at the 62nd meeting of the DoD Human Factor Engineering Technical Advisory Group in Key West, Florida, LCDR Joseph Cohn was presented a plaque as outgoing AEP Assistant Specialty Leader (ASL) by CDR Dylan Schmorrow, AEP Specialty Leader. LCDR Cohn had served as ASL since November 2006 and has

been relieved by LCDR Henry Phillips. His outstanding service to the AEP and MSC communities continues to set a standard which other junior members of his community should strive to reach. LCDR Cohn is currently assigned to the Defense Advanced Research Projects Agency (DARPA).

Introducing the New Assistant Specialty Leader

On 22 September 2009, 00MSC named LCDR Henry Phillips as incoming AEP Assistant Specialty Leader, relieving LCDR Joseph Cohn, who served as ASL since November 2006. LCDR Phillips holds a doctorate in Industrial/Organizational Psychology from the University of Houston, and was winged as AEP #119 on 25 January 2002. He currently serves as the Operational Psychology Department Head at the Naval Aerospace Medical Institute (NAMI) Detachment of the Naval Operational Medicine Institute (NOMI) in Pensacola FL,

where he leads a 5-year project completely overhauling the content of the Naval services' Aviation Selection Test Battery (ASTB), the instrument used to select naval aviators. Prior to this, he served as a policy advisor to the Chief of Naval Air Training in Corpus Christi TX from April 2005 to June 2008.

LCDR Phillips puts a heavy emphasis on recruiting top talent for AEP accessions, and is responsible for more than half of the community's applicant contacts over the past twelve months. His

contribution also helped ensure the community filled its accession quotas not only for FY09, but also for FY10 within the first quarter of the fiscal year. He was also the chief architect, creative consultant, and content author for the three AEP conference booths designed in 2009.

One area of LCDR Phillips' expertise which has proven critically valuable for the AEP community is his deep knowledge of the set of instructions governing Conditional Aviation Career Incentive Pay (Conditional ACIP; AKA flight pay) eligibility and entitlement. He assisted PERS-435 with system requirements and as Subject Matter Expert for their Flight Pay Tracking application built by Navy Personnel Research, Selection, and Training (NPRST) in Millington TN. He has two publications on the subject as well.

His vision for the community includes improved visibility for career management, helping junior and mid-grade AEPs make the right decisions to remain viable for promotion and competitive assignments. As LCDR Phillips notes, it is all too easy for scientists with specialized educational backgrounds to devote too many years to work in a single niche or comfort zone. LCDR Phillips points to diversity of experience as one of the cornerstones of a successful career, along with continuing education.

He also serves as Vice President and Plank Owner of the U.S. Naval Aerospace Experimental Psychology Society.



Welcome our Newest Student AEP Accessions

The AEP Specialty Leader is pleased to announce our two newest accessions, filling our accession quota for FY10: LTs Jennifer Johnson and Brennan Cox.

LT Johnson began her career as a USMC officer in 1994, and was winged as a UH-1N Huey pilot in 2000. During her 16 years of combined active and reserve time in the USMC, she earned a Masters of Aeronautical Science, Human Factors and System Safety Degree with distinction from Embry Riddle Aeronautical University in 2004, and Level III Life Cycle Logistics Certification from Defense Acquisition University in 2007.

LT Johnson, then a USMC Major, was commissioned on November 9, 2009 in a “Demotion” ceremony at the Pentagon where she was awarded the Meritorious Service Medal. She is currently assigned to the Biometrics Task Force in Arlington VA, where she is completing her Student AEP Practicum. She will report to Aviation Safety Officer School on February 17, 2010, and join Aeromedical Officer Class 2010-3 on March 29, 2010.

LT Cox was commissioned in Atlanta on December 19th, 2009. He is defending his dissertation in January 2010 at Auburn University, where he is completing his doctorate in Industrial/Organizational Psychology. He has orders to report to Officer Development School in Newport, RI on January 30th, after which he will report to Pensacola for Aeromedical Officer Class 2011-1. LT Cox was recruited at the annual meeting of the Society for Industrial and Organizational Psychology in April 2009 in New Orleans, where he was rated the top candidate among 12 interviewees.



LT Jennifer Johnson receives her commission during a ceremony in Arlington, Virginia.



LT Brennan Cox receives his commission during a ceremony in Atlanta, Georgia.

The Aviation Selection Test Battery-E (ASTB-E)

“Helping 10,000 people a year cry themselves to sleep”

by LCDR Henry Phillips & LT Pete Walker

Upon its inception in 1941, the AEP community's first task was the development of a personnel selection system for aviators. The result of that effort was the very first Aviation Selection Test Battery (ASTB), the primary tool used by the Navy, Marine Corps, and Coast Guard in making selection determinations for officer aviation program applicants. In its current form, the ASTB assesses individual aptitude in four areas: Reading Comprehension, Mathematical Skills, Mechanical Comprehension, and Spatial Apperception. In addition, the ASTB includes a measure of job knowledge, the Aviation and Nautical Information subtest.

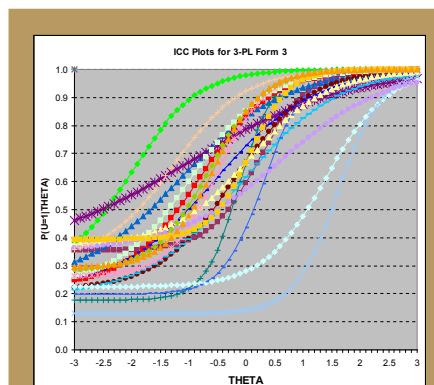
Numerous studies have demonstrated the validity of the ASTB for a number of important aviation training criteria such as academic performance in ground school and flight performance during flight training. Approximately 10,000 people per year take the ASTB in competing for fewer than 2,000 aviation training slots. It has been estimated that use of the ASTB saves the Navy and Marine Corps more than \$30 million annually in reduced training attrition costs.

The ASTB is, to this day, the only military aviation selection test that is available via the internet. The Automated Pilot Examination, or APEX, is an integrated client-server platform that creates a completely secure testing environment. At the onset of testing, the APEX platform restricts specific functioning of the computer (i.e., screen captures). While the APEX application can

be downloaded from a publicly accessible website, installation and authentication can only be completed via secure validation procedures. This battery has been revised three times since its inception, and is currently undergoing a fourth, initiated and managed entirely by members of the AEP community.

The fifth version of the battery, ASTB-E, is planned for release in the summer of 2010. ASTB-E will support a number of alternative computer-based testing approaches, including computer adaptive cognitive ability testing, fake-resistant personality assessment, a self-proctored biographical background interview, and psychomotor multi-tasking assessments. Inclusion of such a broad set of psychological constructs on a military assessment of this scope has never before been attempted. The broad range of skills assessed, as well as the computer-adaptive administration method being introduced, has already been shown to yield more reliable test scores and improved prediction of student flight school performance.

As the cost of aviation training continues to rise, the importance of reliable and valid selection instruments cannot be overstated. Aerospace Experimental Psychologists in the Operational Psychology Department at NAMI continue to play an integral role in selecting our future war fighters. Their hard work and expertise will help guarantee this new version of the ASTB continues to “help 10,000 people a year cry themselves to sleep.”



Computer adaptive tests (CATs) tailor items given to an examinee to that examinee's ability level.

DoD Human Factors Analysis & Classification System

DoD HFACS

by LT Pete Walker

In an attempt to develop a standardized investigative and reporting system for accident investigation, the Naval Safety Center, with the help of a number of key Aerospace Experimental Psychologists, has initiated the use of the Department of Defense Human Factors Analysis and Classification System (DoD HFACS). The HFACS system was modeled by analyzing hundreds of human causal factors from Safety Investigation Reports (SIRs) over the past two decades.

The HFACS model (see Figure 1) identifies four levels for which failure within an organization can occur and result in a mishap: 1) Unsafe Acts, 2) Preconditions for Unsafe Acts, 3) Unsafe Supervision, and 4) Organizational Influences. The layers within the HFACS model are used to model the original unsafe act that was committed by the operator and the preceding latent failures that produced a set of preconditions that allowed the unsafe act to occur.

Unsafe Acts - What Did the Person Do?

The lowest layer of the HFACS model, Unsafe Acts, is used to identify the activities that were performed by the individual at the time of the mishap. What did the person do, or fail to do to cause the mishap? The unsafe act performed by the operator may take the form of following the wrong set of emergency procedures or violating NATOPS. Regardless of the specific error, an Unsafe Act is indicated where the behavior of the individual directly contributed to the mishap.

Preconditions – Why Did the Person Do It?

At the second layer of the HFACS model, the mishap investigator must identify what precondi-

tions increased the likelihood of the individual performing the unsafe act. For example, complacency may affect an individual's decisions in the aircraft. Whatever the reason, such preconditions could clearly influence the individual's behavior.

Supervisory Factors – What Was the Command's Role in the Event?

After identifying the preconditions of the mishap, the next step is to determine the command's role in the event. Were there any persons in the command that knew about the aviator's preconditions and did not take any form of preventive action? Were there standard operating procedures that were either unclear or not enforced? In either case, some level of supervisory responsibility could be indicated.

Organization Factors – What Was the Role of Big Navy in the Event?

Finally, HFACS attempts to identify how organizational (e.g., NAVAIR, CNATRA, etc.) policies and/or procedures may have influenced the likelihood of the mishap. Perhaps an individual performed an incorrect set of emergency procedures because the training that he or she received was inadequate. In fact, maybe the training this individual should have received was cut due to budgetary issues. In these types of cases, the mishap investigator should attempt to identify the organization's whose policies increased the likelihood of a mishap.

As the Navy transitions from its legacy accident investigation and data analysis tool to the more user-friendly HFACS it remains to be seen what, if

any, growing pains will exist. However, one thing that is certain is that the adoption of HFACS as a reporting and investigation tool reflects the realization by fleet aviators that the most effective tool for combating human error is to first recognize its impact. HFACS identifies the ‘holes’ in an organization’s defense against human error by providing a standardized structure and easy-to-use methodology.

The development of HFACS has been the product of countless hours of research and data analysis by Aviation Experimental Psychologists and safety experts from around the fleet. As this system continues to develop and mature, we as AEPs must continue to assist the fleet to tailor this system to ensure that HFACS continues to serve its purpose – the reduction of mishap rates across the board.

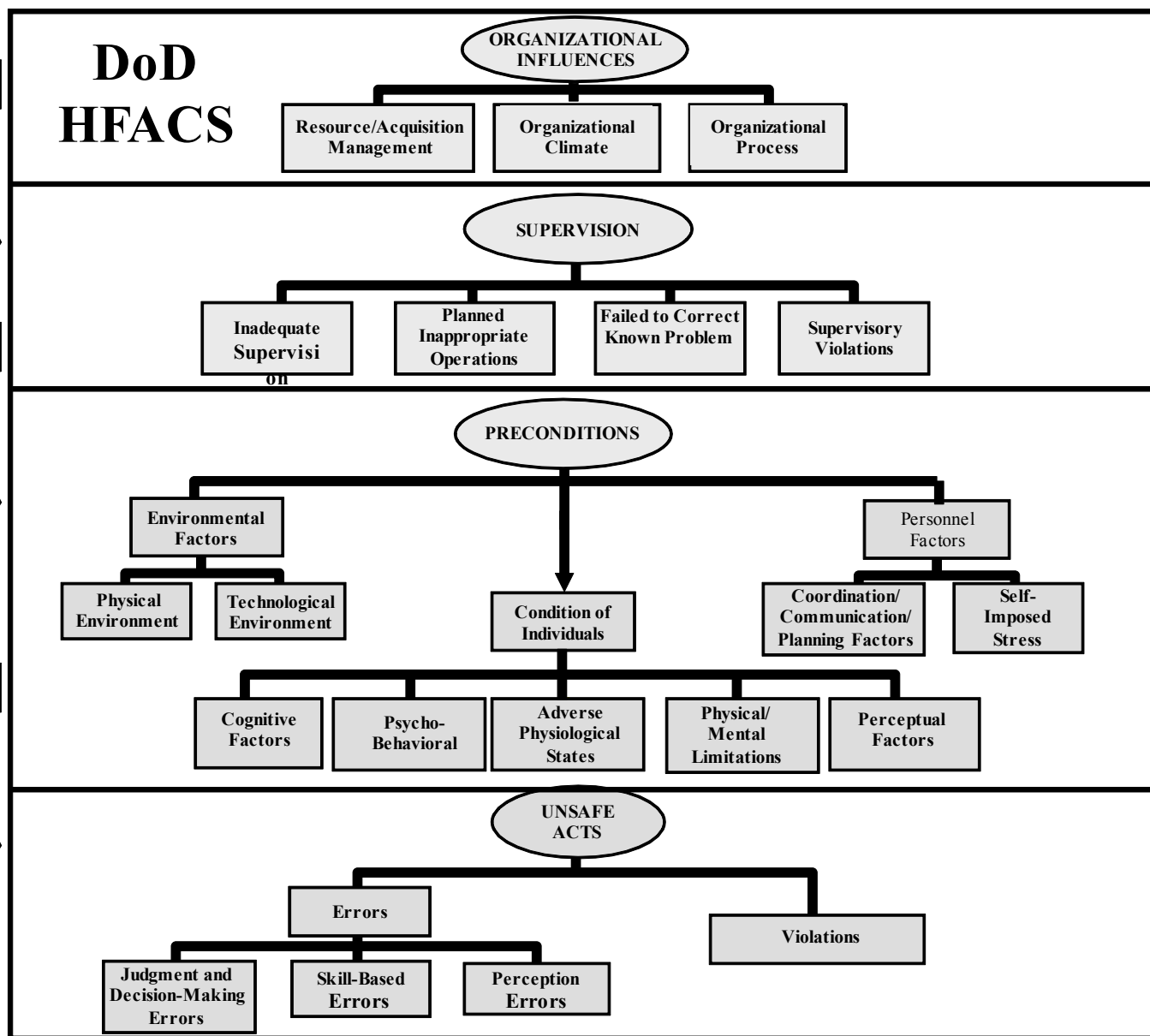


Figure 1 The Department of Defense Human Factors Analysis and Classification System

AEPs Take Home Innovation Award at AMSUS

As has been the trend over the past few years, AEPs continued to be a significant presence at this year's 17th Annual Association of Medical Service Corps Officers of the Navy (AMSCON) Poster Session, part of the 115th Annual Meeting of the Association of Military Surgeons of the United States (AMSUS) held in St. Louis MO in November 2009. AEP research accounted for nearly 10% of the total posters presented, representing cutting-edge research currently conducted at and/or supported by the Naval Research Lab, the Naval Operational Medicine Institute, Naval Aeromedical Research Laboratory and the Defense Advanced Research Projects Agency. Examples of topics presented by AEPs include:

- **Combat Stress Inoculation: Enabling Resilience Through Neuroscience**
LCDR Joseph Cohn; LT Marcus Taylor; LT Greg Gibson; LT Antonio Anglero; Tracey Wheeler, PhD
- **Neurotechnologies for Operational Applications**
Chris Berka; Robin Johnson, PhD; Giby Raphael, PhD; LCDR Joseph Cohn
- **The Operational Stress and Resilience Program**
LT Marcus Taylor; CDR Barry Adams; Richard Arnold, PhD; Jeff Phillips, PhD; Edward Trautman, PhD; Jill Bennet; Benedict Fern; Heather Halbert; Jasmine Khosravi
- **Relationships Between Resilience and Immune Function in a Military Cohort**
LT Marcus Taylor; CDR Barry Adams; Richard Arnold, PhD; Jeff Phillips, PhD; Edward Trautman, PhD; Jill Bennet; Benedict Fern; Heather Halbert; Jasmine Khosravi

AEPs also took home the AMSCON award for Best in Innovation, presented by RDML Mittleman, for the poster, "Neurotechnology Challenges and Opportunities for Rapidly Detecting Traumatic Brain Injury in the Field," presented by LCDR Joseph Cohn; LT Marcus Taylor; LT Gregory Gibson; LT Antonio Anglero; and Dr. Tracey Wheeler.



LT Anglero and LCDR Cohn discussing a poster with a conference attendee at the AMSCON poster session in St. Louis, Missouri.

Development of AEP Conference Booths

by LCDR Henry Phillips

In 2002, then-LCDR Dylan Schmorow ordered the design and construction of a conference booth highlighting the capabilities and focus of the AEP community. This booth, displayed at numerous scientific conferences over the last six years, has been cited by several recent years' accessions as the means by which they learned about the Navy's AEP program. In 2009, this booth received a major facelift. In addition, two additional booths were designed (one placing special emphasis on specific projects delivered to the fleet and the other focusing on AEP core capabilities) with the help of graphics design firm Strategic Analysis, Inc. Initial concept design work for all three booths was done by LCDR Henry Phillips, with conceptual refinement by an AEP focus group at the community's annual meeting in June 2009 in Orlando FL.

The booths provide basic information about the AEP community, the nature of the work we do, the types of projects we work on, and the specific billets we occupy. A series of posters were also designed to accompany the booths, highlighting AEP selection criteria, AEP training, the locations of all 27 current AEP billets, and the U.S. Navy Aerospace Experimental Psychology Society, respectively. The booths were all designed with different target audiences in mind, from general academic audiences unacquainted with the DoD to military decision-makers who might not be aware of the community's capabilities and availability for research or programmatic support.

The construction of the booths were completed during the second half of 2009. Already, the booths have been used to highlight the contributions of our community at several national and international conferences including:

- Annual Meeting of U.S. Naval Aerospace Experimental Psychologists, Orlando Florida.
- Department of Defense Human Factors Engineering Technica Advisory Group (TAG) in Key West, Florida
- Society for Industrial and Organizational Psychology (SIOP) in New Orleans, Louisiana
- Association of Military Surgeons of the United States (AMSUS) in St. Louis, Missouri



Pictured above are AEPs LT Greg Gibson, LT Tony Anglero, and LCDR Joseph Cohn at the AMSUS conference in November with the AEP Core Discipline booths.



A graphic depiction of the Project Emphasis Booth (design work by Strategic Analysis, Inc.). Reprinted with permission.

Perspectives:

From Fore ...

LT Brian Johnson

Recently, I had the opportunity to interview CAPT (Ret.) Mike Lilienthal. Although CAPT Lilienthal and I had not met previously, I was aware of his reputation. “Grow where you are planted” and “Shine your shoes” are just two of his trademark recommendations to junior officers. The Captain reinforced the idea that the reason he offers these so often is for their brevity: These convey to young officers the importance of being able to present ideas in a clear and concise manner. Programs and ideas that are successful will be understandable during a 30-second conversation or in a one-page paper.

We began our conversation with a discussion on how I could distinguish myself as an AEP. CAPT Lilienthal encouraged me to continue my professional growth (e.g., publications, editing, and learning new technical skills), but he also challenged me to experience everything the Navy has to offer.

Our conversation then shifted toward his experiences as an AEP and changes that he has seen in the Navy and within our community during his years of service. CAPT Lilienthal’s favorite tour as a junior officer was NAS Point Mugu. As a junior Lieutenant, CAPT Lilienthal volunteered to be the hostage negotiator for the Base SWAT team. Ultimately, his responsibilities included the OIC of the SWAT team which included a group of 75 sailors.

Regarding our AEP community, I asked CAPT Lilienthal what were some of the major changes



LT Johnson at his Winging Ceremony on January 30th 2009 in Pensacola, Florida.

that he has seen during his career. He stated that new AEPs are coming in with greater skills, which reflect an increased respect for our military and the effectiveness of our community’s mentorship and recruiting program.

Our conversation provided me a brief glimpse into the history of our community and I appreciate CAPT Lilienthal’s willingness to share his own sea stories. I would encourage every new AEP to follow CAPT Lilienthal’s counsel and to seek out senior AEPs for mentorship (and don’t forget to “Shine your shoes!”).



Perspectives:

...and Aft

CAPT (Ret.) Michael G. Lilienthal

For LT Brian Johnson, AEP#135, the decision to join the Navy, the Medical Service Corps, and our little tribe was an easy one. He had just completed his Masters at Kansas State University and met CDR Jim Patrey at the Human Factors and Ergonomics Society annual meeting. After completing his qualifying exams at Texas Tech University, Brian made the decision to contact CAPT Schmidt about the AEP program. Rather than waiting a year for Brian to graduate, CAPT Schmidt arranged for Brian to interview and conduct his initial flight physical in Pensacola. His initial interviews were with LCDR Fooshee and LTs Olsen and Walker. Through these interactions with our community, Brian was prepared for the expectations that come along with being a Naval Officer. Shortly thereafter, Brian began his training as a student Naval Aerospace Experimental Psychologist and expanded his team of mentors to include LT Jeff Grubb and LCDR Hank Phillips.

After graduating from NOMI, LT Johnson attended the five week School of Aviation Safety in Pensacola, the only AEP in a class of 64 students. He was immersed into a sea of acronyms, the language and shorthand of the aviation community, Navy and Marines. He was pushed into the deep end of the pool and took it as the opportunity to learn the language. Most O-3's in this course have 4+ years of experience in the Navy and aviation – Brian had a few months. Rather than give up, Brian did what pilots do when they get lost during flight – climb, confess, communicate and coordinate. He introduced himself to the Marine behind him in class and asked for help in explaining things to him during breaks. The Marine took Brian on and helped make the training another great experience.

At NAWC-AD, Brian has hit the ground running. He has already assisted in the analysis of data and designing experiments for the H60. In addition, Brian has been involved in the develop-



ment of the Wide Field of View NVG. Brian has also had the opportunity to work with the P-3 replacement aircraft engineers and may have the opportunity to collect in-flight vibration data to make recommendation on habitability for the P-8. He may also be allowed to be the human factors engineer for the F/A-18 software system update, a full two years before the planned release of the software to the fleet.

Brian and I had a great conversation together. At an all hands meeting a few years ago, retired AEP Mike Curran mentioned that the quality of recruits for our community has been far better then during his time. With Brian as an example, I agree that our specialty leaders continue to recommend increasingly better and better candidates to our small tribe. Our conversation also illustrates how mentorship has changed over the years. We are now seeing more O-3s take on a mentorship role - something that did not happen when I first drove onto NAS Pensacola in 1979.



The Development of the USNAEPS Logo

An Artist's Inspiration...

by LT Pete Walker



New logo for USNAEPS; developed by Tracy Dorsey

As editor for Call Signs, I recently had the opportunity to sit down with Tracy Dorsey, a graphic artist at Design Lab 443 and designer of the USNAEPS logo, to discuss with her the inspiration behind her artwork. In addition to being a very talented graphics artist, Tracey also happens to be the sister of the Society's Treasurer, Brent Olde. Tracy mentioned that her first obstacle in the design of the logo was understanding the USNAEPS mission. In addition, she investigated what other naval groups had been using for logos and wanted to try and improve upon those designs. Tracy felt many of the naval groups had been using logos that were busy and over done. She felt she really wanted the USNAEPS logo to have a clean, strong and focused identity to it.

Brent and Tracy discussed a number of different possibilities, but one thing became apparent early on – the logo should include a psi symbol. In addition, Tracey felt the logo should include some sort of airplane but she wanted to make it a bit more interesting by adding the wings of a bird. Finally, Tracey felt the logo should have a classic/vintage feel – so she included a star and banner to help achieve that feeling.

After numerous hours of revision, Tracey developed the final USNAEPS logo. The executive board received the finished product in July and approved the logo that same month. We hope you are as happy with the finished Logo as we are!

Inaugural USN AEP Society Meeting at AsMA 81

by LCDR Henry Phillips

The U.S. Naval Aerospace Experimental Psychology Society will hold its inaugural meeting at the 81st meeting of the Aerospace Medical Association in Phoenix AZ in May 2010. At that conference, the Society will also host the Navy Luncheon on Monday, May 10th at 12:00 in the Valley of the Sun Ballroom in the conference hotel, the Sheraton Phoenix Downtown.

The Distinguished Speaker at this event will be Commander Robert S. Kennedy, Ph.D. (Retired), who was winged as AEP #10 in 1959. The Navy Luncheon will also include community updates from Naval aeromedical officer communities including Naval Flight Surgery, Aerospace Physiology, Aerospace Optometry, and of course Aerospace Experimental Psychology. The USN AEP Society will also give out the following three awards at this Luncheon:

Leadership

The CAPT Michael G. Lilienthal Leadership Award is awarded in recognition of an individual who has significantly advanced the field of Aerospace Experimental Psychology through excellence in leadership over the past year. Award recipients have consistently demonstrated their ability to: motivate and inspire others; apply foresight and resourcefulness in anticipating and overcoming significant challenges; maintain strength of character in the face of adversity.

Excellence in Aviation Research

The CDR Robert S. Kennedy Award for Excellence in Aviation Research is awarded in recognition of an individual who has made significant and outstanding contributions to the field of aerospace psychology through original research over the past year. Award recipients have consistently demonstrated their ability to apply their scientific acumen to solving research challenges of critical importance to the Naval Aviation community. The results of their research have directly contributed to demonstrably more effective Selection, Training, Safety, and Human Performance technologies in the service of Naval Aviation.

Lifetime Achievement

The CAPT Paul R. Chatelier Award for Lifetime Achievement honors individuals who have significantly and uniquely shaped the field of Aerospace Experimental Psychology through scientific, analytic, managerial and leadership excellence over the course of their career. Award recipients have demonstrated a broadness of vision combined with force of character to achieve long ranging goals that have often run counter to common wisdom. The results of their dedication, persistence and foresight have led to paradigm shifting accomplishments that enable the Naval Aviation community to rapidly and effectively overcome current and emerging challenges and threats.

The winners of ten additional awards given out by the Society of U.S. Naval Flight Surgeons (SUS-NFS) and the Society of U.S. Naval Aerospace Physiologists (SUSNAP) will also be named.

Tickets for the Navy Luncheon are available for \$35 at conference registration. We have been told to expect the event to sell out very early. Look for our advertisement for the Navy Luncheon in the March issue of Aviation, Space, and Environmental Medicine. More information about the conference can be found at www.asma.org/meeting.

Following the luncheon at 2:00 PM, a community panel titled, “Aerospace Experimental Psychology: Supporting Naval Aviation into the 21st Century” will be held in the Alhambra Room. This panel will discuss cutting edge work in core areas such as Aviation Safety, Aviation Medicine, Aviation Training, Human Factors, Personnel Selection, and Cognitive Modeling, and will be hosted by CDR Dylan Schmorow, with panelists CAPT John Schmidt, CDR Jim Patrey, LCDR Joseph Cohn, LCDR Brent Olde, LCDR Henry Phillips, and LT Jeff Grubb.

The following evening, Tuesday May 11th at 6:00 PM, the USN AEP Society will hold its first meeting. The room for this meeting is still being finalized. Admission is not limited to active USNAEPS members; all who are interested in joining are welcome to attend. We look forward to seeing you there.

NOTE: Please go to our website (<http://www.navyaep.com/awards.html>) for detailed information on nomination criteria for each of the society’s awards. Deadline for nominations is 01 March 2010.



An AEP in the White House

by LCDR Henry Phillips

On November 18th, First Lady Michelle Obama hosted a Tea recognizing Women in the Military in the East Room of the White House. Invitees included 40 military servicewomen representing all of the services as well as women who had made significant accomplishments either while in the military or in a civilian capacity, including those involved with Veteran's Affairs or the Women in Military Service Memorial. Among the distinguished guests present were General Cartwright, Vice Chairman of the Joint Chiefs of Staff, the Joint Chiefs themselves, Senior Enlisted Advisors, and last but not least, the AEP Community's own LT Melissa Denihan, who was invited as one of the 40 servicewomen honored at the event.

The Tea began with speeches from Dr. Jill Biden, General Cartwright (both of whom are pictured here with LT Denihan), Janet Napolitano, and First Lady Michelle Obama discussing the contributions made by women in the military and thanking those present for their service.

After the formal speeches, informal discussions occurred at the tables. LT Denihan sat with Ms. Tammy Duckworth, Assistant Secretary of Public and Intergovernmental Affairs for the United States Department of Veterans Affairs, and also met the first female Master Chief of the U.S. Navy, the CNO, and current MCPON. In LT Denihan's own words, it was a once-in-a-lifetime experience, and truly inspiring. Ever modest, she stated, "I only hope that I can one day make as significant a contribution as the women I had the opportunity to have tea with that day."

You can view portions of the event online at: <http://www.whitehouse.gov/photos-and-video/video/first-lady-celebrates-women-military>. The tradition of White House Events Recognizing Women in the Military was begun by Eleanor Roosevelt, and was recently revived by Mrs. Obama.



LT Denihan with GEN James E. Cartwright, USMC, Vice-Chairman of the Joint Chiefs of Staff, in the White House's East Room.



LT Denihan with Dr. Jill Biden, wife of Vice President Joe Biden, in the White House's East Room.

Why AEPs Matter

by LCDR Henry Phillips

On 26 Dec, 1941, Dr. Alan Grinstead was designated an Aerospace Experimental Psychologist. He had been working on behalf of the Civil Aeronautics Administration on the “Pensacola Project” dedicated to research on optimal methods for the selection and training of pilots. The Navy officially adopted the Pensacola Project in April 1941, which ultimately gave birth to the AEP community. Since then, the number and types of missions executed and supported by the AEP community have grown dramatically. Today, it can be argued that the work we do falls into six broad categories, although the specific contents of the following list remain the subject of much debate:

- Human-Systems Integration
- Human Performance Modeling
- Aviation Training
- Personnel Selection
- Aviation Safety
- Systems Development and Acquisition

No matter how much our community’s specific areas of focus evolve over time, what has never changed is the fundamental link between AEPs as aviation scientists and the fleet communities that depend upon them.

Why do we need scientists? The Naval services have a great many scientists in their employ performing critical work developing new technologies, conducting bench level research, constructing plans for how best to use that research to support the warfighter, and in some cases serving as policy advisors to fleet leadership. What makes AEPs different from these other scientists is the AEP community’s focus on naval aviation.

This is a critical difference. As any aviator can assert, the jargon associated with aviation is extremely dense. The volume and complexity of

information aviation personnel must work with makes it extremely difficult for scientists unacquainted with aviation to solve or even understand their problems. The language of aviation is spoken in layers of acronyms. It is possible, of course, to team scientists without aviation backgrounds with aviators as subject-matter experts (SMEs), in the hopes that the SMEs can help the scientists understand enough about their specific platform to avoid critical errors or misunderstandings that could affect the final product. Sometimes this works.

But how likely would an expert trained purely in academia be to understand the relative demands placed on an aviator’s attention, physiology, and psychological state by the flight environment? Scientists or policy makers lacking the ability to understand aviators’ descriptions of what happens in the air during a mission are critically handicapped by their lack of knowledge when determining how to direct research or policy towards the fleet’s needs.

How does being on flight status improve this ability? Knowledge is not enough. Proficiency and credibility are also critical. In fleet support roles, for instance, a set of wings and the knowledge underlying them can make the fleet customer more willing to accept the advice of an AEP or take his or her questions seriously. Asking a hundred questions of an aviator may still yield relatively little useful information unless that aviator believes the questioner understands the answers and is willing to act upon them. In much the same way “squadron time” enables a flight surgeon to learn about problems or issues he or she might not otherwise observe, interaction with aviators helps the AEP understand their needs. This connection to the naval aviation community also helps combat the potential “us versus them” mentality that can exist between research agencies and their customers. It also serves to off-

set the ivory tower image some warfighters may have of scientific practitioners in general.

Why do AEPs need flight training? How then, does flight training itself improve the ability of an AEP to do his or her job? While knowledge of aviation is important, outside the aircraft, it is difficult for the layperson to understand how these systems are integrated by aviators, including demands on their attention, accessibility of controls, how they have to make decisions, as well as when, why, and where they make them. Laypeople often have a hard time understanding how the physiology of the flight environment affects the aviator. Operating in a hot, cramped space under g-loading in a dynamic environment impacts not only the level of cognitive functioning of which aviators are capable, but also the duration for which they can maintain it. Student AEPs need experience and perform these kinds of tasks in the flight environment before they can have any real sense of the roles they will ultimately assume.

To be effective, AEPs need this training, as well as regular reminders of what the flight environment is like, and they need to maintain a connection with the fleet aviator.

Why AEPs Matter. Today, some of the roles AEPs occupy include:

- Shaping the future of Navy Medicine's Research & Development Programs at the Office of the Undersecretary of Defense and the Bureau of Medicine and Surgery
- Funding basic and applied research at the Office of Naval Research
- Serving as Vice Commander and Science and Technology Director, respectively, at the Naval Air

Warfare Center, Aircraft Division, overseeing all aspects of aviation warfighter program support

- Serving as Military Director, Human Systems at NAVAIR, providing human systems program leadership
- Serving as Senior Scientific Advisor at the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury
- Serving as Biosystems Associate Director, Human Systems Research Directorate, in the Office of the Undersecretary of Defense for Science and Technology (OSD S&T)
- Conducting bench-level research on aviation survival, cognitive functioning, training requirements and structure, or selection requirements at the Naval Air Warfare Center, the Naval Aerospace Medical Research Laboratory, and the Naval Aerospace Medical Institute
- Conducting training on aviation safety for fleet leadership at the School of Aviation Safety and direct fleet-wide safety programs and conduct mishap investigations and analyses at the Naval Safety Center
- Occupying billets at the Chief of Naval Personnel N1 and Chief of Naval Air Training, where they serve a critical role as policy advisors to fleet leadership regarding questions of how emerging knowledge and programs can be best used to meet fleet requirements
- Serving as professors at the Naval Postgraduate School and the U.S. Air Force Academy.

As a community, we are tied into all layers of science, policy, and practice. We bridge two worlds, and what makes us able to do this are the wings we wear.





Calendar: Mark These Dates Down!

April 8-10, 2010

25th Annual Conference of the Society for Industrial and Organizational Psychology at the Hilton Atlanta Hotel in Atlanta, GA

May 9-13, 2010

81st Annual Meeting of the Aerospace Medical Association, May 9-13, 2010, at the Sheraton Phoenix Downtown Hotel in Phoenix, AZ

USNAEPS would like to proudly announce that it will be hosting the Navy Luncheon at the 81st Annual Meeting at AsMA. At the luncheon we will announce the winners of our inaugural awards, to include:

CDR Robert S. Kennedy Award for Excellence in Aviation Research

CAPT Michael G. Lilienthal Award for Outstanding Leadership

CAPT Paul R. Chatelier Award for Outstanding Lifetime Achievement

In addition, there will be a regular meeting of the USNAEPS one evening at the conference to provide an update on progress in the Society's development. This meeting will be open to all, including non-members.

The Executive Committee is very proud of the progress we have made as an organization over the past year and would like to welcome everyone to the event to discuss milestones. We look forward to seeing everyone then!

September 27-October 1, 2010

54th Annual Meeting of the Human Factors and Ergonomics Society, September 27-October 1, 2010, Grand Hyatt San Francisco, Embarcadero Center, San Francisco, California.

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We want to hear from you. Please send articles, photos, good news and other newsworthy items of interest to the address above or via email to the editor, peter.b.walker@navy.mil.

