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FROM THE TOP

On Tune-Ups, Small-Ball, and “The Vision Thing”

by William C. Howell
HFES President

It’s customary for newly installed HFES presidents to kick off their term in office with a *Bulletin* article outlining their “vision” or “agenda” for the year ahead. Not being one to flout tradition, I’ll give you mine, but don’t expect anything too cosmic. In the first place, I don’t pretend to be a “visionary,” and in the second, I know how short a year is. Even if I had some grand scheme for taking the Society to another level, it would never get off the ground before Dave Post showed up to pitch *bis*.

So instead of trying to come up with something dramatic, I spent my preinaugural year considering ways in which someone with my background might make a marginal contribution. Because that background is fairly heavy on organizational experience – in management, consulting, and teaching roles – but fairly light on the inner workings of HFES, I realized that job one was self-education.

Scoping Out the System

Now, one thing you learn very quickly in studying organizations is that no two are alike. So although some principles generalize broadly, many do not. The biggest mistake managers, consultants, or incoming presidents can make is dispensing ready-made nostrums in organizations they don’t know very well. Not wishing to commit that blunder, I’ve been doing more looking and listening than acting. From what I’ve seen so far, HFES faces no life-threatening problems and very few that could even be regarded as serious. But like all organizations, it does have areas that appear due for a tune-up. Let’s examine a few.

What about Growth in Membership?

One frequently cited problem is *growth* – specifically, the fact that there hasn’t been much lately. A common misconception is that growth equates to *health*: If you’re not growing, you’re dying, and big is always better. True, giants can do a lot of heavy lifting,

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INSIDE HFES

Human Factors and Patient Safety, Continued

Past HFES President David D. Woods testified September 11 in Washington, D.C., at the Quality Interagency Coordination Task Force (QuIC)’s first National Summit on Medical Errors and Patient Safety Research, where he underscored the critical role of human factors/ergonomics in preventing medical error. Woods was one of a diverse group of invited panelists from the research, practice, patient, and policymaking arenas who gathered to “review information needs of individuals involved in the process of reducing medical errors and improving patient safety.”

Future research on improving patient safety cannot proceed, Woods stressed, without consideration of the human factors issues

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2001 Membership Dues Renewal

Please watch your mailboxes for dues renewal invoices, scheduled for mailing later this month. Dues for 2001 must be received by the HFES central office by January 15, 2001, to ensure uninterrupted delivery of *Human Factors, Ergonomics in Design*, and the *HFES Bulletin*. The dues renewal packets include a publications order form and a directory update form (although you may submit changes through the on-line membership directory at <http://hfes.org>; see item below). Changes submitted through January 15, 2001, will be included in the 2001–2002 *HFES Directory and Yearbook*.

Update Your Member Record

Visit the HFES Online Membership Directory at <http://hfes.org> to review and update your member listing. Have your member ID number available (the five-digit number on the mailing label of this issue). You can also find current contact information for fellow HFES members.



involved in complex medical systems. Furthermore, human factors practitioners must actively participate in any work on this issue. Woods reported, "Summaries of lessons from human factors [are] packed with pointers to results that can save health care from reinventing the wheel" in solving the complex errors in the health care field. "From the past work in human factors, a simple standard emerges for judging success in research on error and safety." (For some recent human factors success stories, go to <http://hfes.org/news/menu.html>.)

"Our first recommendation," Woods stated, "is that the research program be built from the beginning as a substantive partnership between human performance specialties and health care specialties."

Emphasizing the unique perspective of human factors on medical error, Woods stated that errors that are documented in, among other things, the recent Institute of Medicine report, "To Err Is Human," are the domain of the cognitive, social, and behavioral sciences (of which human factors is a part), not of physiology, disease processes, or therapeutic interventions. "Where you are puzzled by erratic people, we see common patterns in problem solving and cooperative work."

Application of human factors research in other high-risk industries, such as nuclear power, "seems to be far too rare in medical devices and computer systems," Woods said. "We are concerned that the calls for more use of integrated computerized information systems to reduce error could introduce new and predictable forms of error unless there is a significant investment in user-centered design."

"The research program on patient safety must look ahead at the changes affecting safety in health care. The research base on human performance can help you forecast challenges to safety and develop the programs to anticipate needs."

Organized in conjunction with the Agency for Healthcare Research and Quality (AHRQ), the summit featured speakers addressing the areas of consumers/purchasers, broad-based system

approaches, particular system issues, reporting issues and learning approaches, and state coalitions and public policy advocates. AHRQ has been charged with taking measures to improve patient safety. The summit, as well as the creation of a nongovernmental organization called the National Quality Forum, are intended to guide the AHRQ as it determines the measures it will take toward this aim. Information about QuIC and AHRQ is at www.quic.gov and www.abrq.gov.

Health Care Task Force

HFES recently established a task force to promote the importance of human factors/ergonomics research and application in improving patient safety. The Task Force on Health Care exists to develop and implement a plan for facilitating and supporting the application and development of human factors knowledge in the health care community. This involves three main goals:

- developing an HFES statement of capabilities in the human factors profession relevant to health care systems design, problems, and issues;
- developing an HFES statement of human factors research needs in the health care arena; and
- creating an implementation plan describing the steps and actions the Society needs to take in order to support and promote the application of human factors in the health care arena.

The task force was appointed by HFES President William C. Howell to consist of five members and two cochair. In addition, the work of the task force will be aided by a Task Force Advisory Committee drawn from HFES members involved in medical systems development, research, and practice. The Medical Systems and Rehabilitation Technical Group is recognized as the lead technical group pertinent to the Advisory Committee; it will also include members from a wide variety of HFES TGs and research areas.

A series of steps will be followed for the development of Society policy statements on health care to obtain input and comments on draft statements from the Council of Technical Groups, TGs, and the Advisory Committee. The final step will be submitting the draft policy statement to the HFES Executive Council for approval.

Following this effort, working with the Advisory Committee, the task force will develop the HFES Health Care Implementation Plan and distribute it to Executive Council for approval. The Implementation Plan is expected to be completed in February 2001.

Execution of the Implementation Plan may be undertaken by the Executive Council, the Health Care Task Force, the central office, the COTG, TGs, or the HFES Technical Advisory Group, as appropriate and specified in the plan. The Health Care Task Force will remain active in overseeing and monitoring execution of the plan and will report progress to Council semiannually. The Task Force on Health Care will be in effect until October 2003, unless reappointed by the HFES president.

Bulletin

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Upcoming Titles from HFES

Watch the *HFES Bulletin* in the coming months for news about four new books to be published by HFES in 2000–2001:

Macroergonomics: An Introduction to Work System Design by Hal W. Hendrick and Brian M. Kleiner. This new book in the HFES series “Issues in Human Factors and Ergonomics” covers development of the subdiscipline of macroergonomics; its theory and methods; sociotechnical analysis and design of work system structure; sociotechnical analysis and design of work system process; macroergonomics results with laboratory and case studies; future directions; and a glossary.

Readings in Training and Simulation: A 30-Year Perspective edited by Robert W. Swezey and Dee H. Andrews. This book samples three decades of theory and practice in individual and team training drawn from the Society’s journal, *Human Factors*, and annual meeting proceedings. Sections cover transfer of training, training methods, training devices and simulators, and application areas such as flight training, maintenance training, and training evaluation.

Human Factors and Automation: A Primer by Thomas B. Sheridan. Another in the series “Issues in Human Factors and Ergonomics,” this book provides background and examples of areas in which humans interact with automation; the design of human-automation systems; displays and decision aids; supervisory control; simulation, testing, and evaluation; technical and social issues reflected in the research; and appendixes, including sample problems and solutions.

New Trends in Collaborative Activities: Understanding System Dynamics in Complex Environments edited by Michael McNeese, Eduardo Salas, and Mica Endsley. This collection of original papers is the work product resulting from the first colloquium held at an HFES Annual Meeting. The book includes chapters on topics such as features of team coordination, team situational awareness, computer support for cooperative supervisory control, shared cognition, use of a knowledge elicitation approach, using collaborative task analysis as a basis for technical innovation in teams, decision-making studies in a simulated submarine, and coordination in a dynamic medical environment.

New Member Benefits

Use your HFES member ID number (which is found on your member ID card or the mailing label on your publications) to take advantage of these additional HFES member benefits:

15% discount on books and 20% off journals from Lawrence Erlbaum Associates. LEA offers a wide range of human factors/ergonomics titles in areas including transportation, cognition, performance, and HCI. Call 800/926-6579, order via e-mail at orders@erlbaum.com or journals@erlbaum.com, or visit the LEA Web site at <http://www.erlbaum.com>.

15% discount on books and resources offered by John Wiley & Sons. Wiley offers a number of books in simulation,

accident investigation, manufacturing, and other HF/E topics. Call Wiley toll-free at 800/225-5945, extension 2463, and refer to promotion number 9-4383.

15% discount on books from Taylor & Francis. This publisher has served the HF/E community for more than 40 years with books and journals for researchers, practitioners, and students. As a member of a society affiliated with the International Ergonomics Association, you are entitled to the IEA discount on journals as well. Call 800/821-8312 or visit them at <http://www.taylorandfrancis.com>.

15% discount on selected titles from Academic Press. Nine HF/E books are offered. Order by phone - 800/321-5068; fax 800/874-6418; or e-mail ap@acad.com. Be sure to specify the following HFES member discount code: DM 54797.

20% discount on products from the Human Systems Information Analysis Center (HSIAC). Choose from software, human workload assessment tools like NASA-TLX and SWAT, observational data analysis tools like A.C.T. and MacSHAPA, reference materials like CDRL Maker and SPEC Maker, and publications in a number of categories, including cognition and decision making, control display design, and human performance. Call 937/255-3880 or visit the HSIAC Web site at <http://iac.dtic.mil/hsiacc/products>.

Discounts on car rental from Hertz and Alamo. Enclosed with your renewal confirmation and membership card are special HFES member coupons with details about how you can take advantage of your rental discount.

Strother Joins CESSE Board

HFES Executive Director Lynn Strother, CAE, has been elected to a three-year term on the Board of Directors of the Council of Engineering and Scientific Society Executives (CESSE). Strother, who has been a senior member of CESSE since 1990, will also serve as chair of the organization’s Membership Credentials Committee. CESSE is an organization of staff executives of approximately 150 engineering and scientific societies throughout the United States and Canada. Strother also serves on the Board of Governors of the American Association of Engineering Societies, the Board of Directors of the Southern California Society of Association Executives, and the Finance and Administration Advisory Council of the American Society of Association Executives. 

Placement is On-Line!

The HFES Placement Service is now on-line at the HFES Web site, <http://hfes.org>. The service, which is free to job seekers, is platform-independent and can be accessed 24 hours a day, 7 days a week.

Mitchell Grossberg, a member of the Human Factors and Ergonomics Society for more than 25 years, died in Fredricksburg, Virginia, on August 12, 2000, after a long illness. Mitch had several distinguished careers. After receiving his Ph.D. in experimental psychology from the City University of New York in 1967, he joined the Volpe National Transportation Systems Center in Cambridge, Massachusetts, as a research psychologist. In 1980 Mitch joined the Federal Aviation Administration (FAA) in Washington, D.C. He later relocated to the FAA Technical Center in Atlantic City, New Jersey, where he eventually became both a technical program manager and a special assistant to the division manager for human factors. Mitch returned to FAA headquarters in Washington, D.C., where he remained and worked almost to the end of his life as a senior human factors specialist. As a human factors scientist and researcher, Mitch had a keen interest in the role of automation in air traffic control – both in what automation can and cannot do to support human performance. For those who knew him, Mitch was a talented researcher and a wonderful human being.

– Kim M. Cardosi, Larry Cole, Glenn M. Hewitt, Earl S. Stein, and Donald O. Weitzman

From the Top (continued from page 1)

but they're not always the healthiest specimens around. Sometimes it's better just to cultivate them as friends rather than bulking up in an effort to emulate them. The Society has some big buddies in both the social science and engineering communities, and they've come in handy in recent public policy skirmishes. I'm all for strengthening these liaisons. But growing the Society is not a plausible alternative for this purpose, nor is it a cost-free end in itself.

The real membership question, in my view, is whether HFES is continuing to attract its fair share of those whom it considers representative of the field. If that pool is growing and the Society isn't, there's likely a problem. I don't see any strong evidence of it, although with all the societies out there competing for members, we obviously can't afford to neglect recruiting. On the other hand, if the pool we're drawing from is relatively stable, *forcing* growth – in essence, by redefining the pool – can create more problems than it solves. Of course, if we have reason to believe that the *legitimate* pool is itself smaller than it should be, we might focus on enlarging it, and one way to do that is by promoting the field. More on that in a moment.

What about Our Organizational Structure?

For an outfit our size, we have a hell of a lot of committees and other functional groups that, to the untrained eye, appear something short of a coherent system. For instance, we have “standing committees” that are mandated in the Bylaws, and “special” ones that are created by presidents and Executive Councils when the

urge strikes them. Some of the latter (e.g., membership diversity, membership strategic plan) bear a strong family resemblance to some of the former (e.g., membership admissions, sustaining membership) yet don't seem to show up at the same reunions.

One might think the primary difference is that one is *continuing* while the other is *time-limited*. But one would be wrong – unless, of course, duties like nominating Fellows, and doing accreditation reviews (currently assigned to special committees) are passing fads, while making awards and managing nominations (assigned to “continuing” ones), aren't. Furthermore, we have a historian who rattles around in a special committee all by himself, while our parliamentarian sits alone in a comfy “appointed office.” We've got some “task forces” that act like special or even standing committees, “technical groups” whose standing in the Society is the topic of continuing debate, and a bunch of “subcouncils” that strive valiantly to pull it all together. And so on – you get the picture.

Is there more rationality to this confusing structure than meets the eye? I posed that question to some “old heads” whose understanding of HFES far exceeds mine, and was told that the system evolved more through accretion than planning: a need arises, a group is formed, it broadens its scope, lays down roots, becomes part of the system. If the next pressing need doesn't quite fit anywhere, a new group is formed and the cycle repeats. Once formed, groups rarely go away. Eventually, things get to the point that even the old heads can't keep it all straight. Which is pretty much where we are now.

One of an incoming president's first jobs is making appointments, but I was a bit reluctant to do that until I understood what each unit does – and whether the current arrangement should be preserved in precisely its current form. Making appointments would, after all, constitute *de facto* endorsement of the existing structure. So I'm currently in the process of surveying (confidentially) all the current chairs regarding what their unit does and how well, what impediments it faces, and what might be done to improve it.

My intent is to propose a few modest structural changes to the Executive Council at its upcoming meeting, and depending on what further inquiry turns up, exploring additional moves toward streamlining the system. If we find that it's functioning at maximum efficiency *now*, the changes could be simply a matter of clarification; if not, perhaps some redesign is in order. Either way, I'm hoping that by the end of my term, the old heads (and new ones, for that matter) will be in a better position to justify what's in place than they were when I posed the question.

What about Strategic Planning?

Structure aside, every organization exists for a purpose. The more consensus there is on that purpose, and the more closely activities are tied to it, the more gets done and the happier everybody is. Enter *strategic planning*, one of the fattest cash cows in today's management consulting herd – but treated right, one with plenty of milk as well. HFES milked that cow a while back, and to my thinking, did it right. We now have a clearly articulated, well-publicized strategic plan that provides a focus and direction for HFES activities. At some point it should be reviewed to make sure that it still reflects a reasonable consensus and to confirm that we're still on track. But in my view, the time for a comprehensive review has not yet arrived. Unlike our structure, our strategic

plan is difficult to fault, and it has proven extremely useful to a succession of Executive Councils and presidents. And I'm no exception.

What about Our Public Image?

This brings me back to the business of pool enlargement and the final item in what, for want of a better term, we'll call my "agenda." Major objective D in the strategic plan calls for "promoting the discipline to the outside world." This is certainly an area in which we have room for improvement. Addressed effectively, it could well stimulate growth in the field and, over time, a larger pool from which to recruit potential members. With this goal in mind, I made *external relations* the focus of our latest Executive Council planning session, and a lot of good public relations ideas surfaced. But this topic has been examined many times before by various groups, including a 1980s task force chaired by Doug Harris that produced ideas galore and even a mini-strategic plan.

What seem to be lacking aren't good public relations *ideas*; rather, it's formal mechanisms for translating all this good thinking into realistically feasible *actions*. We need the capability to respond rapidly to PR opportunities that present themselves, for example,

as well as sensitive antennae to detect these opportunities in all the diverse settings where they may arise. Our diverse membership offers a lot of "early detection" potential if we could find a way to harness it, but also a serious obstacle to the "rapid response" requirement. Getting an HFES consensus on virtually any substantive issue of interest to the public is no mean feat, even with unlimited time. When the fuse is short, as it typically is, this becomes impossible. So we need at least two kinds of mechanisms: one to which the Society can feel comfortable delegating rapid response authority, and another for the more deliberate development of corporate positions on issues – often controversial ones – on which HF/E has a contribution to make.

I don't know exactly where we're going with this, but it's something I'm hoping we can finally get out of the talking stage and into an action mode. I've asked the Public Relations Committee to start working on it.

So that's about as far as my thinking and self-education have gotten me to date. As I warned you at the outset, I'm not a home-run hitter; small-ball is my game. But maybe a single here, a walk there, some stolen bases, and a sacrifice fly or two will score enough runs to make the year a success even without "the vision thing." ☒

CALLS FOR PAPERS

HCI International 2001

Abstracts are invited for the 9th International Conference on Human-Computer Interaction, to be held August 5–10, 2001, in New Orleans, Louisiana. Areas of interest include networking, Web design and use, cognitive ergonomics, and universal access. Deadline for submission is *November 5, 2000*. Contact Gavriel Salvendy, General Chair, HCI International 2001, School of Industrial Engineering, Purdue University, West Lafayette, IN 47907-1287; 765/494-5426, fax 765/494-0874; salvendy@ecn.purdue.edu, <http://hcie2001.engr.wisc.edu>.

Symposium on Smart Graphics

Submissions are invited for the International Symposium on Smart Graphics, to be held March 21–23, 2001, in Hawthorne, New York. Papers concerning principles, methods, and systems-based research, including cognitive theories, virtual reality, and mobile communications, are encouraged. Submissions are due *November 14, 2000*. Contact Patrick Olivier, Computer Science Dept., University of York, Heslington, York, YO10 5DD, UK; +44 1904 432781, fax +44 1904 432767; patrick@cs.york.ac.uk, <http://www.smartgraphics.org>.

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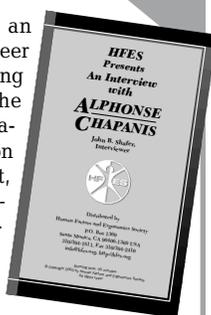
The Society for Information Display invites submissions for its international symposium, seminar and exhibition, to be held June 3–8, 2001, in San Jose, California. Papers are solicited in all aspects of avionics displays, monitor system design, high-fidelity medical displays, display interfaces, and others. Abstracts are due *December 1, 2000*. Contact Bill Klein, Palisades Institute for

Research Services, Inc., 411 Lafayette St., 2nd Floor, New York, NY 10003; 212/460-8090 x. 204, fax 212/460-5460; wklein@palisades.org, <http://www.sid.org>. ☒

New Video!

Human Factors Pioneer Alphonse Chapanis

HFES announces a new video featuring an interview with human factors/ergonomics pioneer Alphonse Chapanis. In addition to a broad-ranging discussion of Chapanis's work and interests, the video contains photos and illustrations from Chapanis's own collection. Topics include his contribution to the Johns Hopkins Systems Research Project, which led to publication of the text *Applied Experimental Psychology*, his work on the "touch-tone" configuration on Bell Labs telephones, and his teaching and consulting experiences. The video was produced by interviewer John Shafer.



Special offer: HFES is offering a discounted price when you purchase both the video and Chapanis's recently released autobiography, *The Chapanis Chronicles: 50 Years of Human Factors Research, Education and Design* (Aegean Publishing, retail \$34). One reviewer says the book is a "detailed and revealing personal account of the varied and extensive professional activities of a giant in our profession."

Video: 30 mins. VHS format (call HFES for other formats): \$30 for HFES members and members of IEA-affiliated societies, \$40 for nonmembers. Add \$7 shipping/handling (US), \$10 (non-US). **Book + video:** \$60 for members, \$70 for nonmembers. Add \$10 shipping/handling (US), \$15 (non-US). Add California sales tax for orders in California.

Send orders and payment by check (payable to Human Factors and Ergonomics Society), MasterCard, VISA, or American Express to:
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FLASH!

NEXT ISSUE: HFES 45th Annual Meeting Preliminary Call for Proposals. All proposals will be due March 19, 2001.

AVOID THE \$15 POSTAGE SURCHARGE — renew your membership by January 15, 2001.



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