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Promoting systems, space and designs for People
Season's Greetings to all readers of this journal. An interesting and busy year has nearly ended as we look forward to the celebration of Christmas with family and friends. Replete with festive fare and goodwill it will then be time to make New Year resolutions which are usually idealistic and well-intended—and moreover—even seem possible at the time. Why do we persist with this annual self-delusion about good intentions? Probably because we need to be eternally optimistic even while harbouring pessimistic self-knowledge of past failures! That is the blessing of celebrating the New Year ... new hope for the future. Without that annual renewal of hope it would be an even sadder world of discord that we confront daily in world news. The idea that ethics have core values to govern the codes of practice for all our endeavours is still valid for individuals, societies and nations. As individuals, there are limited opportunities to make a difference on the world scene but we must continue to 'think globally and act locally'.

The month-long triennial CybErg Conference from 15 September–15 October was a great experience as people around the world meet in cyberspace to share and discuss ideas about a broad spectrum of ergonomics issues. This was the fourth such meeting and the number of participants has grown at each succeeding conference, yet represents a very small sector of the world-wide ergonomics community. There were some familiar names in attendance although there was a limited but valued representation of European and North American colleagues. This did not hinder the quality of discussion ... even when some more adventurous thinkers invited us to step outside the comfort zone of musculo-skeletal dysfunction. However it must be admitted that the winning paper on children's use of computers attracted the longest trail of commentary. In time the general ergonomics community will come to appreciate the benefit of this type of conference interaction. It invites greater depth of questioning about a wider spread of topics than is possible for an individual to encompass in large multi-session face-to-face conferences. Perhaps, in future, IEA will be surprised to find that real intellectual effort occurs within special project groups/sub-committees and at CybErg ... social networking and tourism will increasingly dominate the land conference for those who can afford the time and money to attend a predominantly northern hemisphere event.

A great many ergonomists will be saddened by the news that Åsa Kilbom has died after many years of struggle to overcome a series of strokes. She was well-known in the international ergonomics community and greatly appreciated in her home country of Sweden. Åsa was a much valued teacher in Sydney in the days when WorkSafe Australia was a viable organization and she and Maurice Oxenburgh continued to commute between Sweden and Australia until her death. Åsa's Memorial Service was held on Monday 21 November at Räcksta Krematorium, Stockholm and followed by a reception at Ängby Slott. Maurice advised that rather than sending flowers, the family thought that it would be Åsa's wish that a donation be given to Médecins Sans Frontières. Encouraging members to share intellectual endeavours is never an easy task. People may be shy or self-conscious about valuing their possible contribution and therefore be hesitant to join the fray. Fear of failure is a potent deterrent to exposing one's ideas to public review. An honest humanity should make us all aware that we need to support each other's endeavours and offer constructive, not destructive, criticism if we are to advance our knowledge base. The HFESA can provide graded stepping stones to this advance via its local professional development meetings, state and national conferences and various publications. We now have a number of tertiary institutions where some of our members are employed in either ergonomics and human factors or allied disciplines. We need to encourage their students to use HFESA facilities to develop their own, and our own, competence.

How many people noticed that there was no September 2005 edition of Ergonomics Australia? It seems to have passed unawares. The reason being that there was a dearth of publishable material ... too few people respect publication deadlines for submission of material although these are recorded in every issue of the journal. Quite apart from the limited content available there were no papers waiting in the wings for final editing after the review process. Surely Australian ergonomists have not abandoned the field to a few faithful authors who recognise the importance of publishing in a national as well as an international journal? If we have no local intellectual rigor then we might as well shut down as a vibrant national society! Fortunately, some members of the international ergonomics community are interested in being published in Ergonomics Australia and thus reaching an even wider audience via its electronic version: EAOL. In spite of the present local malaise, the editor acknowledges and thanks those whose support and contributions have never flagged.

Andrew Thatcher, the CybErg Conference Convenor has given permission to approach selected authors for approval to publish their conference papers in Ergonomics Australia. The first such paper comes from Russia and should strike a chord with many readers. So, to celebrate the last edition in 2005 we have an excellent variety of material: an article from Russia; columns from the President and General Secretary of HFESA, plus our most reliable IEA Delegate; one response to a July article, and a new topic in Forum; plus letters, news, and conference updates.
The year 2005 began with an international effort to assist the countries affected by the Boxing Day Tsunami. Forensic skills that were enhanced while coping with this geographical tragedy were in further demand throughout the year as suicide bombers became an indiscriminate threat in supposedly peaceful communities rather than acknowledged war zones. The implications of human vulnerability had begun to have wider impact following the events of September 2001, and have escalated later in Bali and London. Slowly people have begun to recognise that these atrocities were not just the acts of foreign extremists. These terrorists were mainly well-educated and home-grown dissidents ... so how can these developments be explained? This question will bedevil governments and all thinking persons for a long time to come. A recent Channel 4 documentary shown on TV explored opposite interpretations of these events. To the non-Islamic world, and indeed many/most Muslims, these events were seen as acts of terrorism by suicide bombers. The interviews with families and friends of the bombers from the Middle East, Africa, Asia and Europe demonstrated a very different opinion. Most of the latter group were convinced that these deaths were not suicide (condemned by their religion) but acts of glorious martyrdom in a justified crusade for worldwide territorial dominion by their particular fundamentalist theocracy. Whole communities now extol these martyrs and willingly encourage more to seek this guaranteed means of an express route to heavenly bliss.

Just as the mid-twentieth century guerrilla warfare was so hard to combat, this new pattern will not be resolved easily. Ergonomists, many of whom are concerned with systems and macroergonomics, have participated in risk management for security and emergency planning and assisted with resolving human conflicts in working environments. This involvement began in areas of design and engineering, workplace occupational health, safety and ergonomics; it later extended to military defence systems; and has already progressed to other areas and issues of political safety and security. Mailroom security represents only the tip of this new development in ergonomics. This journal should play a key role in the intellectual debate of issues that concern us as ethical human beings and as involved ergonomists who think beyond the square of mechanized processes, to the fundamentals of human interaction in a functioning community.

May 2006 see the growth of Australian ergonomics rhetoric—and publication of the outcomes of this thought and action. Remember 1 February is the deadline for publication in March edition of Ergonomics Australia and it would be grand to start 2006 with a timely edition. Good thinking and good writing ... and a Happy New Year.

Shann Gibbs PhD
Editor
In a furrier’s window, Sweden:
FUR COATS MADE FOR LADIES FROM THEIR OWN SKIN.

On the box of a Chinese clockwork toy, Hong Kong:
GUARANTEED TO WORK THROUGHOUT ITS USEFUL LIFE.

In an airline ticket office, Copenhagen:
WE TAKE YOUR BAGS AND SEND THEM IN ALL DIRECTIONS.

Even in English speaking countries:
In a city restaurant:
OPEN SEVEN DAYS A WEEK AND WEEKENDS.

A sign on an automatic restroom hand dryer:
DO NOT ACTIVATE WITH WET HANDS.

In a cemetery:
PERSONS ARE PROHIBITED FROM PICKING FLOWERS FROM ANY BUT THEIR OWN GRAVES.

On an adult education poster:
ARE YOU AN ADULT THAT CANNOT READ? IF SO, WE CAN HELP.

Shann Gibbs

Letters

1. Vale — Lesley HOGG
15 June 1940 – 27 June 2005

Les had a distinguished career in the Royal Australian Navy serving on HMAS Sydney, HMAS Derwent and HMAS Anzac. During his career he was posted to naval bases at HMAS Waterhen, HMAS Harmon and HMAS Cerebus. Les retired from the Navy in 1985 and joined the University of Canberra where he was involved in occupational health and safety until his retirement in 2004. Les was well respected in safety circles and he was a dependable source of information. He was always very generous in sharing his resources. I don’t recall ever leaving his office without a book under my arm and the better for his wise counsel.

Les worked tirelessly for HFESA after joining the Society in the early 1980s. He served on the conference committee in 1996, was ACT Branch Secretary many, many times and he served as Federal Secretary 2002–2004. Les’ contribution to the Society and his devotion to the preparation of full and complete Board and Executive meeting Minutes was nothing short of outstanding and Les set the bar for all those who follow.

Les had been struggling with his health for some time and on 27th June he lost his battle, collapsing at home. Les passed away on his way to the hospital and could not be revived.

Les is survived by his wife Judy, two sons and a daughter; and their families.

Les will be sadly missed by us all. Farewell to a dear colleague.

Margaret Head
Immediate Past President

2. Reply to July editorial
Hi Shann

Re your editorial in the July issue of Ergonomics Australia I would like to say that I agree 100% with your statement “There is a real risk of harm being inflicted through the ignorance of people who do not know what they do not know.” The examples you describe are particularly worrying because of the real risk of injury or death as a result, but we would all know of less serious examples where risk of injury is much less but remediation can be costly. The clash between ergonomics principles and styling/fashion in office design is one example that comes to mind. I am reminded of the comment (but I can’t recall the author): “There is nothing so terrifying as the sight of ignorance in action.” As a consultant I have found by
bitter experience that one has (a) to be exceedingly careful not to step outside one’s area of expertise, and (b) not to let your client know that you think he is too ignorant for words and does not know enough about what’s going on in his workplace to be able to tell you where his problems lie.

During my working life I have spent a number of years in academia, lecturing in physiology, anatomy, and ergonomics, and one of my aims has been to ensure that my students know the limits of their knowledge, so that they won’t rush in where more knowledgeable angels fear to tread. This is important, too, when delivering short courses on ergonomics to managers or safety reps—they need to know enough to know when they don’t know enough and need to go for help!

I have only once been asked to provide an expert report in a workplace injury case on a ‘no win, no fee’ basis. I was amazed by this approach which is totally opposed to the concept of the expert witness as an impartial expert whose duty is to assist the court. My response was a very blunt refusal to be involved, but I wonder if this is a common practice on the part of personal injury lawyers in some jurisdictions?

And as for being asked to tender for a project, my fondest memory is of reminding a potential client that he was not buying toilet paper or pencils, but expertise. I never heard from him again, I wonder why?

Best regards
Ian Gibson

3. HFESA Award – “Ergonomically Friendly Prize”, Melbourne Fringe Festival 2005

Firstly, one of my colleagues, Rick Hodgson participated in the evaluation of over 70 entrants to select the winner of this prize. The winning student, Lambi Chan, came from Swinburne University. She had designed a very simple item of outdoor furniture which had many inviting aspects for both children and adults to use in a relaxed recreational environment.

As you would image, there were many eccentric objects which were more examples of art and creation than of functional items. For example, there was a settee manufactured totally from wire coat hangers. There was also a huge chair with a backrest shaped in the design of a crucifix together with bolts through the cross arms.

Rick thoroughly enjoyed the job of judging and the winner was a popular choice amongst the organisers and other participants.

I also had the opportunity to make a formal presentation during a seminar to the designers and architects on the application of ergonomics in design. It was interesting to note the interest that this created—particularly amongst a group of young industrial designers in the audience.

It was a delight for our company to provide the sponsorship of $1,000 towards the festival and to assist in promoting the HFESA through this prize. The organisers have indicated that next year they will include the promotion of ergonomics in all of their marketing materials, on the condition that we continue our sponsorship! At this stage, we would be happy to do this if the HFESA Board was again willing to have the name associated with this prize.

Yours sincerely,

David C Caple
Director
David Caple & Associates Pty Ltd
President’s Column

By the time you read this, the Executive should have completed the unusual step of relocating the Federal Secretariat temporarily to Sydney and into the offices of our Treasurer, Louise Whitby & Associates. This unfortunate “hiccup” was forced upon us by the resignation of our recently hired Secretariat, Jane Thompson, who, due to other commitments, was unable to continue in her role. We bid Jane farewell and wish her the very best for her future elsewhere.

At this stage, the move should not affect the Society’s functioning in any significant way. We have put in place all re-direction arrangements for telephones, fax, email and post. Consequently, your interaction with the HFESA should remain relatively unaffected. It is notable that this came at a time when attention is usually devoted to completing our Society’s audit and membership renewals and preparing papers and reports for the AGM to be held at the Annual Conference.

The rapid interim arrangements which had to be taken in relation to these duties, as well as decommissioning our Canberra office (which we maintain for time being) and re-location would not have been possible without the vastly effective, thorough, time-consuming and complaint-free efforts of Rebecca Mitchell and Louise Whitby. The HFESA membership owes them a great debt of thanks for ensuring an almost ripple-free continuity and transition in a situation which could well have been much more disruptive for the Society. Given these demands, we trust that you will have patience with any small difficulties or delays that might be experienced over the next few months.

Discussion of our future Secretariat arrangements will, of course, now be an additional important item at the Board meeting in November preceding the Conference.

Notwithstanding these difficulties, I’m very pleased to report that we are progressing well with several of the initiatives which are aimed at strengthening the HFESA’s infrastructure as a prelude to securing greater growth, professionalism and recognition throughout industry, government and the community.

We have appointed an ICT manager – or as she prefers, an iManager – in Rebecca Huntington. Rebecca will be recognised by many as the webmaster for the CHISIG website. She will now perform the overall ICT management function for the HFESA as a whole and will commence with the preliminary “architectural” modifications necessary to support a number of proposed improvements to our website and IT facilities, including on-line membership and other payment options, members-only area, database integration, members’ direct access to personal contact details for updating, expanded availability of on-line information and publications, and so on.

Other projects underway include:
- conduct of a membership survey;
- development of an information and communications technology (ICT) strategy;
- implementation of a process for developing HFESA policy and position statements on HFE-relevant issues (see Rebecca’s article in this edition);
- development of an integrated strategic and business plan (this is distinct from our strategic plan per se and will aim to support it by, among other things, providing processes for the strategic allocation of reserve funds); and
- development of a framework for professional practice in the human factors and ergonomics (HFE) professions.

The latter initiative has arisen from the ongoing and, to date, largely unresolved discussions and debate about the nature of professional HFE practice, including questions such as “who is a ‘professional’ member?” and “how does one get there?”.

Added to this background are the twin facts that the HFESA (formerly, ESA) Competencies, first published circa 1998, are overdue for review, and that few, if any, educational institutions or individuals appear to be using them in any systematic way to either develop HFE education or assess one’s professional competence, respectively.

The proposed framework will aim to set out pathways into, and within, the HFE professions and provide the basis for a clear relationship between the educational and experiential opportunities available to potential HFE professionals and the competencies required for certification in HFE at a professional level.

Clearly, these issues also have implications for our membership structure and the nature (and naming) of our professional members. During the course of this project, we will be actively seeking input from various academic, professional, industry and government stakeholders.

As always, thanks are due to the General Secretary, the Treasurer and the Board for their efforts and support which have enabled us to make progress with these initiatives. On their behalf, I also thank you – our membership – for making the efforts worthwhile. We all look forward to seeing you in Canberra in November.

Max Hely  
President, HFESA  
October 2005
General Secretary’s Column

HFESA policies and position statements

Occasions arise when the HFESA as a professional association or the HFESA President or Branch Chairs on behalf of the HFESA are asked to comment on current and topical issues. Currently, the HFESA does not have any policies or position statements on human factors and ergonomics-related areas.

Accepted at the May 2005 Board meeting was a process for the development of HFESA policy and position statements. The objectives of the policy and position statements and the development process is described below:

1 Objectives of HFESA position statements and policies

1.1 The main aim of the Human Factors and Ergonomics Society (HFESA) is to advance the science of human factors and ergonomics in Australia by promoting research and education in human factors and ergonomics and the application of its principles.

1.2 The position statements and policies of the HFESA specify the position of the HFESA regarding a particular issue and provide a framework for advocacy. All position statements and policies of the HFESA are evidence-informed and are supported by HFESA members.

1.3 HFESA position statement and policy development is coordinated by the HFESA Federal Executive in conjunction with the HFESA's Federal Board.

1.4 An HFESA policy statement is a straightforward statement or declaration of HFESA policy on a particular issue or issues. Policy statements are short and concise and do not include background information or discussion relative to the policy.

1.5 An HFESA position statement is a view that the HFESA has regarding a particular issue. A position paper contains background information to provide a complete understanding of the issues involved and the rationale behind the position(s) set forth.

2 Development of HFESA position statements and policies

2.1 All HFESA members are invited to develop new position statements and policies and amend existing position statements and policies. Position statement and policy proposers are advised to consult as widely as possible prior to submitting draft position statements or policies. Guidelines outlining the format for position statements and policies are specified in Section 3 and the process by which position statements and policies are provided for comment and ratified are described in Sections 2.3 and 4.

2.2 Position statement and policy proposers should consider:

- is the position statement or policy concerned with significant issues related to human factors and ergonomics?
- does it draw on the most current and reliable information?
- is it consistent with other HFESA position statements or policies?
- is the proposed position actionable and will it lead to discernible outcomes?
- will the proposed position be relevant for a period of time?

2.3 The HFESA position statement and policy development cycle is as follows:

- position statement and policy proposals may be submitted at any time during the year to the HFESA Federal Executive;
- any position statement and policy proposals that the Board selects will then be reviewed by the HFESA Federal Board and may be referred to other members with particular expertise for comment;
- comments on draft position statements and policies will be forwarded to the author(s) for incorporation into a revised draft, prior to publication in the HFESA national newsletter and Ergonomics Australia;
- draft position statements and policies will be published in the HFESA national newsletter and Ergonomics Australia with at least two months opportunity for comment by members;
• comments on draft position statements and policies will be forwarded to the author(s) for incorporation. The Federal Executive in consultation with the Federal Board will assess the need for additional input or discussion of draft position statements or policies;

• draft position statements and policies are then revised and finalised for approval by the HFESA Board;

• draft position statements and policies become formally endorsed HFESA position statements and policies when accepted by the Board; and

• policies and position statements are reported to the membership through its usual communication channels and reported to Annual General Meeting (AGM) of the Society.

3 Guidelines for the structure of HFESA position statements

3.1 Title: All position statements should have a brief, informative title.

3.2 Format: Position statements should be succinct and no more than two pages in length including references.

3.3 There may be up to four sets of clauses within a position statement and a list of references. These are the background; and where appropriate, the particular issues of note, the actions the HFESA supports, and a list of resolutions with respect to what the HFESA undertakes to do.

3.4 The background should outline why the topic is an important human factors and ergonomics issue and cover definitions. Data that shows the magnitude of the issue in Australia and comparisons with data from overseas (if relevant) should be included.

3.5 The particular issues of note should include key points/issues of note in the area.

3.6 The actions the HFESA supports should include information on actions/initiatives being undertaken in the area to address the issue that the HFESA supports.

3.7 Where appropriate, the list of resolutions should indicate what the HFESA will do to advance the position statement, including key actions that the HFESA will undertake as opportunities arise.

3.8 References should be cited and should be the minimum needed to support the key assertions in the background. They should be in the Vancouver referencing style.

3.9 The preferred position statement or policy format can be viewed on the HFESA website.

4 Ratification process of HFESA position statements and policies

4.1 HFESA position statements and policies are reported to the AGM, following a period of consultation and discussion amongst the membership. See Section 2.3 for further detail regarding the position statement and policy development process.

4.2 At the AGM an agenda item should be included regarding HFESA position statements and policies.

5 Review process for HFESA position statements and policies

5.1 All HFESA position statements and policies should be reviewed and updated at least within three years of adoption. The HFESA Federal Board may elect to have a position statement or policy rolled over for an additional year where further position statement or policy development work is required.

5.2 The Federal Secretariat shall maintain a program for position statement or policy renewal and will advised which position statements or policies are due for renewal in the coming year at the AGM.

5.3 Where a position statement or policy is due for renewal and has not been revised or advised to be rolled over for an additional year, the position statement or policy will be archived, no longer endorsed by the HFESA, and removed from the HFESA website.

6 Quality assurance process for HFESA position statement and policy development

6.1 HFESA position statements and policies are subject to consultation and quality assurance processes prior to their adoption by the Board. See Section 2.3 for further detail regarding the position statement or policy development process.

6.2 As the HFESA’s profile increases as an advocacy organisation for human factors and ergonomics in Australia, any HFESA position statements or policies are subject to quality assurance prior to the position statement or policy’s publication either in hardcopy format or on the HFESA website.

6.3 A final checking process shall be undertaken to supplement existing approaches to quality assurance. The Federal Executive will ascertain which position statements or policies require further checking prior to publication and this is likely to be based on:
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Email: specialty.seating@backcentre.com.au
• extent of prior debate;
• extent of changes made to the position statement or policy during the development process; and
• likelihood of controversy.

6.4 Members of the Federal Board should be used as a starting point to identify relevant individuals, preferably HFESA members, who are likely to know the literature and be able to advise on correctness, currency and balance in the references used in the position statement or policy.

6.5 It is not expected that the process described in Sections 6.3 and 6.4 will apply for the majority of HFESA position statements or policies.

7 Position statement and policy dissemination

7.1 The HFESA position statements or policies are published on the HFESA website as a reference for members, governments, practitioners, community representatives, policymakers, researchers, and other interested parties.

7.2 Following their adoption, the Secretariat with advice from the Federal Executive, should strategically forward the position statements or policies to relevant governments and organisations and use them for subsequent media releases, press releases, press statements, budget submissions, policy submissions and other avenues for policy advocacy.

The first draft position statement on the conduct of research is available below for comment by the HFESA membership. All comments should be sent to Rebecca Mitchell (r.mitchell@unsw.edu.au or fax 02 9385 6040) by 30 January 2006.

Conduct of Research Position Statement

1. Background

1.1 Many members of the HFESA are involved in conducting research in areas related to human factors and ergonomics.

1.2 The IEA has developed a statement on the conduct of research by IEA members. The HFESA has adapted these standards for the conduct of research by HFESA members in Australia.1

2. Particular issues of note:

2.1 In Australia, the National Health and Medical Research Council (NHMRC) has produced guidelines on the ethical conduct of research.

2.2 Most Australian Universities and related organisations conducting research also have particular guidelines on the ethical conduct of research.

2.3 Australia has an ethical review system for research whereby each research project is reviewed by a human research ethics committee to determine if the proposed research adheres to general ethical principles (i.e., integrity, respect for persons, beneficence, and justice) and is hence considered to be ethically acceptable.2

3. Actions HFESA supports:

3.1 HFESA members complying with NHMRC guidelines for the conduct of ethical research involving human and/or animal subjects, in addition to complying with relevant university and/or other organisations’ conduct of research guidelines.

3.2 Collaboration between HFESA members on human factors and ergonomics-related research.

3.3 HFESA members ensuring the integrity and accuracy of the data recorded, analysis, results reported and conclusions drawn from the research before reporting to the general scientific community.
4. The HFESA resolves to:
4.1 Promote the adoption of ethics standards by members who are conducting research.
4.2 Raise awareness of research conducted by HFESA members through publication of HFESA members’ research in the peer-reviewed journal *Ergonomics Australia* and in HFESA conference proceedings.

5. References

Rebecca Mitchell
General Secretary, HFESA

**IEA Column**

IEA REPORT – JULY 2005

[Ed: The problem with publication deadlines is illustrated by this report: it deals with the IEA Council meeting in mid-July—held after compiling the June edition issued in July. As there was insufficient material for a September issue, this is the earliest the report could be published in EA.]

This report summarises the feedback to HFESA members following my attendance as their delegate to the IEA Council meeting in San Diego, USA on the 16th and 17th July 2005. Prior to this meeting I also attended the Executive Committee meeting in my capacity as the Chairman for the IEA Standing Committee on International Development. I also attended a Post Council Workshop on future directions of ergonomics as a science, and the implications for Federated Societies. This is developing as a major review during 2005/2006 leading towards the IEA Congress in Maastricht, The Netherlands in July next year.

At the commencement of the Council meetings, each of the Federated Societies provides a brief report on their current activities and challenges. HFESA members need to appreciate that they are part of a family of an estimated 18,000 ergonomists from 43 Federated Societies and networks across the world.

In San Diego, reports were provided from 19 of these including my report on behalf of Max Healy for the HFESA.

Some interesting trends that were evident in the reports included:-

(1) A significant amount of activity by Federated Societies in the “out reach” of ergonomics. These included media programs, Government lobbying, and professional development programs with targeted associations from other disciplines.

(2) A growing focus on the encouragement of students to join federated societies. It is noted that a number of societies do not charge any fees for students. They also provide them free registration at conferences in return for providing volunteer services in the preparation and conduct of the conference.

(3) Utilising major public news items to promote the relevance and contribution of ergonomics. For example, the Japan Society has been involved in the media discussions on the Osaka train crash where 106 passengers were recently killed. In the USA, the HFES was involved in the debate on the US Presidential election voting ticket design.
(4) It was noted in the report from Germany that significant funding cuts have occurred in the research and teaching of ergonomics. This is partially due to the perceived “diminishing relevance” of ergonomics within that country. However, it was noted that they have a very traditional perception of ergonomics relating to interface design and consequently the expectation that most of these research issues have been resolved. This raises the challenge that public and even academic perceptions of the diversity of the ergonomics domain may become an inhibitor to the future teaching and development of the science.

(5) The issues of certification of ergonomists to provide them professional credibility remains a major theme across many countries. For example, in the UK, the Ergonomics Society are moving towards obtaining “Royal Charter” status. This will provide an opportunity for external recognition of the certification process and they would anticipate a significant move of their general membership to apply for this status.

(6) There remains an ongoing interest and support for developing countries and ergonomics. For example, the French speaking countries (SELF) have been working closely with Tunisia and Algeria in supporting the teaching of ergonomics programs. As part of my ID Committee, we are also looking at a cooperative program of distance learning between a university in England and one in Portugal to translate a “distance learning” program on ergonomics. This would then be promoted within African countries such as Mozambique where no materials are currently provided in Portuguese.

(7) A major application area that was discussed frequently, related to ergonomics in the Health Care industry. A successful conference in Italy this year was frequently discussed. This was not only from a technical perspective, but also the multi-disciplinary discussions with a wide range of stakeholders from this industry.

(8) A number of governments have developed causes or accreditation requirements for “prevention experts”. These are generalist OH & S positions incorporating expertise in ergonomics. There has been strong pressure on ergonomic societies to recognise these government programs. However, as the training does not cover the full domain of ergonomics, this has been resisted. For example, this has been discussed in The Netherlands, as well as a number of European countries.

Reports were provided on each of the IEA standing committees. I am happy to provide a separate report on the numerous activities in the area of International Development. It has been a pleasure to Chair this committee over the last 2 years, and look forward to completion of a number of major initiatives in our final 12 months. The new IEA President will invite the Chair of all committees at the IEA Congress next year.

The Professional Standards and Education (PSE) committee has been involved in finalising the minimum specification for a Masters Degree in Ergonomics / Human Factors. A draft of this has been available for public consultation and workshops have been conducted by the IEA during 2005. The HFESA is represented by Robin Burgess-Limerick on this sub committee. Any person with an interest in the content of this program should liaise directly with Robin.

The Science, Technology and Practice Committee (STP) is now overseeing 18 technical committees on a wide cross section of the ergonomic domain areas. Each committee is currently involved in supporting the IEA congress in developing symposia and invited papers. It is expected that there will be around 1,000 papers presented at IEA 2006. The HFESA is normally represented at these Congresses every 3 years by 20-50 participants. I would encourage as many ergonomists who may be in a position to holiday and attend this Congress to review the website www.iea2006.org

The IEA is also developing a Compendium to be attached to the website. This will provide brief explanatory texts relating to the application of ergonomics from each of the 18 technical committee areas. The primary focus of this would be to provide basic information for non ergonomists who may be seeking advice via the website.

The EQUI committee is currently developing the processes and accreditation systems that would be used for companies to apply for recognition via the IEA. Specifically, this is to promote the application of the ergonomics process in the development of products, services and systems.

The IEA website is proposed to be revamped in 2005/2006. The IEA newsletter is to be suspended whilst a review of its cost effectiveness is undertaken. In the meantime, news for general dissemination can be provided directly to the IEA website webmaster. This website is www.iea.cc

Finally, 7 new IEA Fellows were announced this year. They will be recognized at the Congress at Masstricht. There were no Fellows from HFESA to be awarded.

If anyone would like to discuss this report in further details, I would look forward to hearing from you.

Regards and best wishes,

David C Caple
HFESA Delegate to the IEA
Forum


I agree with much of what Eric Wigglesworth had to say in his ‘Here’s to Health’ paper in the July issue of Ergonomics Australia, in particular his emphasis on separating the objectives of injury prevention and compensation for injury victims. It seems to me that the underlying purpose of having a tripartite body is not to arrive at the best solution to a problem, but to make the various interested parties feel they have not been left out. (These interested parties are usually referred to nowadays as stakeholders – this is a totally wrong use of the word since the stakeholder is somebody who is not involved or interested in the result of the contest, and can therefore be trusted to hold the wagers!) Problems therefore arise when there is a conflict of interest on the part of members appointed by a particular group, between the expectations of that group and the need to take an unbiased approach to a particular safety issue. The result tends to be a watered down compromise that does not adequately address the particular safety issues under consideration and does not fully satisfy any of the parties involved. If this is a frequent, rather than rare, occurrence then there is clearly a need to re-examine the purpose and function of the tripartite body. I think a similar situation has arisen at times, but not often, in the development of some Australian Standards, because of conflicting interests of the various bodies represented on the particular technical committee involved.

A somewhat similar situation has bedevilled the consumer products industry. My experience in industrial research many years ago with a large Anglo-Dutch multinational company was that some products, marketed following much product development and consumer testing, were really quite bland and generated little consumer loyalty (eagerly sought after by all companies). This was because the test program produced products that the fewest people disliked, but which nobody liked sufficiently well to stick with that product despite the blandishments of the competition. Eventually some bold executives decided to produce a product that some consumers hated but others would sell their grandmothers for! Thus guaranteeing a reliable proportion of the market, rather than trying to satisfy the whole market (a practical impossibility) and ending up with a smaller share.

I believe that this illustration can be applied to the health and safety area. Rather than abolish the tripartite nature of the national and state commissions, which would require a miracle, one way would be to require commissions to establish ad hoc expert panels to deal with issues referred to them by the commission and for the commission to be obliged to accept their recommendations. These panels would need to be given clear terms of reference, be adequately resourced and be given realistic time frames in which to carry out research and to produce the appropriate documentation in support of improving workplace health and safety.

Ian Gibson
August 2005

2. Some reflections on impending retirement

Subtitled: Why aren’t you a CPE yet or, if you are, who are you encouraging to that level?

The comments immediately following may be read as an apology for my imposing my recollections and my current thoughts on you, the unsuspecting reader. I hope that you will bear with me through this rambling introduction to the main theme of this reflection—Ergonomics as a profession and what we need to do to have it recognised as such.

Personally, I may not have made much of a mark on the profession, but Ergonomics has been good to and for me. While I am not in the class of such worthy representatives of Australian Ergonomics as Roger Hall, Margaret Bullock, David Caple, Barbara McPhee, Verna Blewett or Robyn Burgess-Limerick (to name but a few of the Australian Ergonomists who have world-wide reputations), I have over the years given conference papers or lectures or lead invited symposia or seminars in Wales, Sweden, Norway, China, the U.S., including Alaska, Indonesia and West New Guinea (or Irian Jaya).

However, since resigning from UNSW in 1991, and even prior to that not ever having really felt the pressure of the “publish or perish” paradigm, my contributions to the professional literature and research have been negligible, consisting of the occasional conference paper or invited symposium paper based more on my applied work than on formal research.

I like to think that that applied work, the bulk of which consists of over 7,000 “expert” reports dealing with occupational or public place injuries, has been rigorously scientific and has properly applied the principles and methods of ergonomics. It is certainly the case that over the last few years it has been much less common for my reports (and, I believe, those of other ergonomists), to be challenged because they were not prepared by an engineer or a medico. The field of Ergonomics has become increasingly recognised by the courts as one which can make a unique and a useful contribution to the understanding of causation and preventability in relation to injury-causing accidents.
Where I feel I have failed rather dismally is in the area of professional certification of ergonomists and, more generally, the impact (or lack of impact) that the Professional Affairs Board has had on the Society and on the recognition and acceptance of ergonomics in Australia. It depresses me that some of the Society’s outstanding ergonomists have chosen to refrain from seeking the Society’s certification. Perhaps they feel that they are already so well established in their own careers that they don’t need it. Perhaps, in a negative view of class differentiation, they feel that certification has produced a discriminatory category in the Society and do not want to endorse that discrimination. I believe that attitudes like these or indeed any attitude that results in a rejection of the role of CPE, reflect a failure to appreciate the true significance of this category of membership, both within the Society and by our potential client population at large. Let me explain:

For years, since my days as editor of the early form of Ergonomics Australia as it was in the late 80s (after Verna had made it such a popular and newsy national newsletter) I have been hammering the theme of professionalisation of the Society as a route to expanding public awareness of ergonomics and employment of ergonomists. One major step towards our being properly recognised as a profession, and a step we started some years ago but have yet to complete, is establishing that we have the power, and are seen to have the power, to endorse or “recognise” tertiary programmes as qualifying a graduate to become a member of the Society. Until that happens, and institutions can advertise their programmes as being “recognised” to qualify graduates for the relevant professional Society and their graduates as duly qualified professionals, ergonomists and ergonomics will continue to face the barrier of “but you’re not an ................., are you?” -read: “engineer, architect, medical doctor......” – i.e. not qualified in terms of being a member of a recognised and university endorsed profession.

The other major step, one which I see as being integral with the power to recognise academic courses as qualifying their graduates for membership, is the internal monitoring of professional performance by the Society and the setting of criteria by which a member’s standing in the Society may be confirmed. Coupled with this characteristic of the professionalism of any society is the acknowledgement by individual members that a professional association’s or society’s public image is influenced by the proportion of the association’s membership that has sought to obtain its endorsement as the most professionally competent or experienced members of that profession, set against the proportion who possess and have demonstrated the necessary competencies, but who do not feel that the society’s endorsement has any value or meaning for them.

In other words, a member of our Society who does possess the qualifications, competencies and experience to warrant professional certification but who refrains from seeking Society endorsement at that level is telling both the Society and the public at large that that endorsement by the Society has no value for them. By extension, that failure to seek certification may be interpreted as a tacit imputation that professional status within a society as weak as the HFESA adds nothing to the individual’s professional standing. Conversely, I suggest that there should be a simple and positive correlation between, on the one hand, the publicly (and privately) perceived professionalism of a society and the importance that members attach to gaining the status that reflects the Society’s endorsement of their competence/experience and, on the other hand, the individual member’s confidence in their own professionalism and the way it has been recognised.

Most certainly, over the last decade and a half or even longer, we have had a succession of notable and extremely competent ergonomists as the leaders of the Society. I am pleased to say that a majority of those leaders, since the establishment of the category of CPE at the end of the 1980s, have been professionally certified. It is particularly pleasing to me, and a clear endorsement of the comments I made in the preceding paragraphs about the importance of eminent ergonomists sharing their prestige with the Society, that some Fellows have added certification to their personal status. I see this as being of much more significance to the Society than to the members who have taken that noble professional step.

Even with the quality of the National Presidents, or, more recently, Federal Board Chairpersons and their competent and conscientious executive teams that we have had, supported until recently by efficient secretariats, we do not seem to have advanced greatly in professional standing and membership numbers. This is despite the fact that more students have undertaken graduate programs with large components of, if not entirely centered on, ergonomics. For nearing a decade now we have produced and reviewed and work shopped and updated Strategic Plans for the development and the promotion of the Society. Every one of these regularly revised Plans has had clear and worthwhile objectives and has allocated responsibilities to various bodies within the Society, most notably Branches or small working parties and in some instance the PAB, but what has actually eventuated? I leave that question with you.
If you have persevered in your reading to this stage of my reflections, you will be becoming convinced that I’m just a bellyaching old grump who is frustrated with his own failure to have advanced the Society and is reflecting that frustration on fellow members. It may be so. But let me finish with my recommendations for onward and upward movement of ergonomics and the HFESA:

1. As we would with any individual consultancy or programme that any of us undertakes personally in our professional vocation, whether for an employer, a client or a student we are supervising, give a Society-allocated task the attention and intensity that it warrants and persevere with it until completion. I fear that others are as guilty as I have been of accepting a Society’s task or obligation and then putting it on the back burner as more immediate demands absorb our time and energy until the task becomes so out of date that it is beyond redemption.

2. Turn to the latest version of the Strategic Plan and to the proposals and suggestions put forward by the current Federal Executive and see what, and how much, you can do personally (or with a small group of your own networked confreres) to advance some important aspect of that strategy or proposal. Don’t wait to be asked. Offer your knowledge and time.

3. Bear constantly in mind the thought: “Whatever I do to advance my own career in ergonomics should also benefit Ergonomics and the HFESA, and VICE VERSA!” i.e. Whatever you do as an ergonomist reflects as much on the profession of ergonomics and on the Society of which you are a member as it does on you yourself. Make sure all of those reflections are totally positive.

4. I must comment that the performance of a succession of Annual Conference Committees has, generally, epitomized the implementation of the three suggestions I have just made. Perhaps this is because conference committees do have quite clear cut objectives and deadlines or completion dates, and their final output is both anticipated by and fully observable by the membership at large and, to at least a certain extent, by consumers and prospective clients. Also, by its very nature, the mounting of a conference requires the voluntary participation of a substantial proportion of the membership, whose contributions will then be observed and evaluated by the membership. If only every other objective of our executive bodies and our strategic plans could be as coherently attacked, and handled with the same degree of persistence as the planning and running of annual conferences!

5. If you really do believe that ergonomics is the profession for you, but if you are not yet a CPE, do what you need to do to qualify and apply for that level of membership. The requirements are quite clearly spelled out in the latest Directory. The Society needs the strength and the public image of a large body of CPEs as much as each individual ergonomist needs the professional status conferred and confirmed by certification. If you are already a CPE, look for opportunities to encourage and perhaps mentor members whom you feel could and should aspire to that status. Finally, I venture to plead that if you are a senior ergonomist fully qualified for certification but have to date resisted invitations to apply, you reconsider your reasons for that resistance and reflect on the negative message the resistance of such senior and respected members as yourself is conveying to all those members whose movement into the CPE ranks should bring so much benefit, both to themselves and to the Society.

Well, so much for my soap-boxing exhortations. Being now in my seventies, I have that feeling that time is running out. Although I am resigning from the chairmanship and membership of the PAB I hope to retain my CPE status and remain peripherally involved with the HFESA and consultancy work, but with more of my time devoted to family, motorcycling, sailing, gardening/landscaping, fishing, caravanning, golf and reading. I wish the current executive all the best, despite the difficulties they are facing with secretariat upheavals at the time of my writing this, and I sincerely hope that their good intentions and plans for the betterment and development of the Society are fulfilled.

Neil (Grandpa) Adams.
1. HFESA Honours and Awards

Wendy Macdonald (Cumming Memorial Lecture and Medal)

Barbara McPhee (Society Medal)

Catherine Cook, Robin Burgess-Limerick and Sophia Papalia (Alan Welford Award)

Neil Adams (Fellow)


A national study related to manual handling in the health care industry has recently been completed and summarised in a report. The Design 4 Health National Manual Handling Campaign 2004 Report has been finalised and is ready to be disseminated to key stakeholders. It can be accessed by a link to the Queensland Workplace Health and Safety directory (see below).

It would be of interest to ergonomists here in WA and other states.

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Principal Scientific Officer/Inspector
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Worksafe WA
WestCentre 1260 Hay Street
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3. IEA 2006 to exceed expectations!

October 1st was the deadline for submission of abstracts. After a long period of receiving positive reactions and support for our plans, this day gave us the first concrete indication of the potential success of the 16th world congress on ergonomics. It was exciting to see the numbers grow from a somewhat disappointing number of 200 by September 26 to more than eleven hundred on Monday morning October 3rd. As ergonomists are also human, a considerable number came in during the following days. The final number is 1,371! And with the poster submission open until the 1st of January 15. We are very pleased to see that 15% of the abstracts have come from industrially developing countries. A large number came from Brazil. Ergonomists from South East Asia and Africa have been very active, too.

Europe is very well represented with almost 50% of all abstracts. Most of these come from EU countries. Unfortunately relatively few abstracts came from Eastern Europe. As may be expected, the single country with the most contributions is the US. The US and Canada together are responsible for 22%. Of course many come from East Asia (12%), with a remarkably large number from Taiwan. Australia and New Zealand have met our expectations with 4% of all abstracts.

We are happy with many proposals for interactive sessions. A special task force of experienced Dutch ergonomists will help the moderators of these sessions make the best of their plans.

In between most of the 1st draft full texts for the plenary papers were submitted. These are of a high level. All plenary speakers and their topics can be found at our web site, www.iea2006.org.

We also received many reactions from people indicating that they will be happy to attend this congress without the stress of an own presentation. It is indeed enjoyable to be able to focus only on consuming knowledge and on the interaction of experiences.

We are proud to announce with confidence that we expect to welcome a large group of enthusiastic participants. Thanks to our sponsors, we can provide excellent facilities for this meeting of a wide diversity of ergonomists. We very much look forward to welcoming you!

Ernst Koningsveld
Congress Chair
Ruud Pikaar
Program Chair
Paul Settels
Chair Finances and Facilities

4. Book for Review

Professor Swapan Kumar Adhikari, M.Sc., B.Ed., PhD has forwarded his book *The Role of Mathematics on Human Structure* for review in *Ergonomics Australia*. In the Preface he says that the book “aims at concretising physiology and anatomy in terms of mathematical expressions in general and geometrical deductions in particular. It also has an objective to facilitate modern treatment with mathematical precision.” It looks very interesting and the editor would be grateful if one of our members with a particular anatomical bent and advanced mathematical skills (for the many explanatory equations) would
contact her in early January with a view to reviewing the book by 1 February for the March 2006 edition of this journal.

5. NSW Workplace Safety Summit Communiqué

Christine Aiken attended this summit on behalf of the busy HFESA President, Max Hely, who was unable to attend. She forwarded an eight page hard copy of the resulting communiqué to the editor who offers a very brief outline here, as Christine did not have time to prepare a report for the current edition of the journal.

“Over two hundred and fifty people met at the 2005 NSW Workplace Safety Summit in Orange over 25 and 26 August 2005.” Politicians and public servants “chaired working groups consisting of union and employer representatives, and occupational health and safety experts. Each working group, representing nine separate industry sectors, developed strategies that addressed the major occupational health and safety issues in that industry.” The NSW Premier praised the workplace safety improvements that had occurred over the three years since the previous summit in 2002. Other speakers encouraged those present to maintain the rate of improvement and not become complaisant about injury rates. Dr Verna Blewett extolled the virtues of effective consultation and participative industry partnerships. “There were two plenary sessions and many delegates took the opportunity to address the whole summit on particular issues.”

The Working groups offered a summary of their activities in relation to:
- Construction;
- Consumer and Business Services and Private Education;
- Health and Community Services;
- Mining and Utilities; and
- Retail, Wholesale and Storage Industry.

“Delegates consistently called for tripartite commitment to education, working together, sharing ideas and solutions. Design was identified as an integral part of managing and minimising risk in all areas.”

Members of the HFESA and other concerned professionals will watch for practical outcomes from this summit.

Shann Gibbs
This paper was originally presented during the CybErg 2005 Conference and is re-printed here by kind permission of the author and the Conference Convenor, Andrew Thatcher.

Abstract
This paper concerns an ergonomics method application for solving human factors problems in a Moscow power company (Mosenergo). A social and technical systems analysis of the company has revealed the specific meaning of competent personnel as understood by management and staff. This has broad significance for the Russian power industry in general. The distinctive features of personnel tasks in the power industry were analyzed. Key problems and methods for their solution by the personnel department were determined. This will involve special techniques to train work skills that have a critical meaning for safe and reliable performance at all levels of the workforce. Additionally it will involve the psychological and emotional rehabilitation of personnel as well as periodic monitoring of organizational problems in sub-units of the company. An analysis of accident problems is presented to illustrate the necessary monitoring method in more detail.

Keywords
Tightly coupled system, work skills training, accident problem.

1. System Analysis
The special meaning of human factors in the Russian power industry is determined by three main factors: the system; outdated equipment; and dangerous work.

1.1 Power plant: a tightly coupled system
The first problem is the absolute domination of collective work principles. The power plant staff actually functions as ‘one worker’ who then operates a great machine while the head, hands and organs of sense are located in different places (meaning in different people). It is a tightly coupled system (Perrow, 1984). Collective labour is extremely sensitive to, and dependent upon, reliable communication. Emergency conditions occur because of communication failure more often than from a discrete malfunction. Misunderstanding can cause technological failure, an emergency situation, an accident, and even loss of life.

There are different kinds of communication in power plant technologies: verbal instructions, operational communication, shift changing and others. While seeming simple items, all of them contain possible psychological problems (especially complicated when using the telephone).

The effectiveness of collective labour is extremely dependent on resolution of work conflicts, staff permanency, length of joint work and communication competence. All these factors influence the probability of misunderstandings. Even special relief workers (during vacancies, professional training days, etc.) reduce performance reliability to some degree. Staff stabilisation becomes a subjective reliability factor with a great psychological content. To improve efficiency in these areas it is necessary to involve psychologists.

1.2 Outdated equipment
The second specific problem for the Russian power industry is its high dependence on the output state of complicated and mostly outdated equipment. Machinery renewal has not being undertaken for at least 15 years. The equipment has been partly modernized on many occasions without any attention to standardized maintenance. Engineering modifications are unique in every case, so individual adaptation to specific equipment involves a subjective reliability factor. This determines whether correct and prompt decisions are taken in an emergency. Every new worker compromises reliability for some time. Staff permanency again shows itself to be the main reliability factor since there is no opportunity to get a proper replacement employee from the labour market in case of emergency. The labour market, as a bank of standard, accessible and mobile manpower, simply does not exist. Every worker is irreplaceable in a certain sense because he has unique maintenance experience. Thus reserve staffing and a reduction in employee turnover must be two major objectives for personnel management.

It can be seen that human factors are embedded in the technological process and become a factor in its reliability. The main feature of the domestic power industry is an extremely high consolidation of human and technical aspects of power production at every level. This creates a kind of technological centaur which needs constant adjustment of its related parts. Both aspects of this problem require psychological input.
1.3 Specifically dangerous labour
The third source of psychological problems is electric trauma danger. This kind of danger is hidden; it does not reveal itself. Such special conditions make exacting demands on a person’s psychological qualities and skills. Recruitment selection, job placement and effective self-control training really can reduce electric traumatism.

2. Human factors optimization
About 50 years ago the Moscow power company (Mosenergo) was the first to involve psychologists in the support of technological processes. Ten psychologists, including three PhDs, are working there now. The overall staff numbers presently involve more than 50,000 persons.

The activity of human factors professionals is diverse: as all levels of the labour force in power industry have different kinds of psychological problems. The work is not restricted to recruitment selection as in most other Russian power companies. The analysis mentioned above, and the nature of the labour market, makes it necessary to promote active training methods. The company has developed special techniques to train work skills that have a critical meaning for safe and reliable performance for all kinds of employees: repair personnel, executives, and managers. A self-control training program, operations communication program, time-management training, meeting management training (using video control techniques), and a work supervision training program for foremen are the main areas that receive attention.

Career planning is being developed as it seems to solve the reserve staffing problem. Emotional rehabilitation of people working in stressful conditions is another item of psychological work. Ten psychologists give psychological advice to every person who needs it — whether it concerns personal or operational problems. There is a coaching centre in Mosenergo that has published four special reports and offers an opportunity to access professional consultations for all human factors experts in the Russian power industry.

Ergonomics modernisation takes place only at one power plant, though the real needs are great deal more than this would imply.

Lastly, but not the least important kind of work is the periodic monitoring of organizational problems in sub-units of the company. An exhaustive questionnaire of about 200 items (Zhuravlyov et al., 1999) seeks information on all elements of the manufacturing process: job satisfaction, employee attitudes, potential vacancies, managerial competence, job commitment or job alienation and many others. Guidelines for administering this questionnaire, as well as how to handle statistical data have been completed recently but as yet have not been published.

3. Accident problem
Within the limits of a short paper it is only possible to examine one item as an illustration of the methods employed in this work. Industrial accident and safety behaviour problems offer the best means of demonstrating this endeavour.

In an overwhelming majority of cases, the cause of an accident in the Russian power industry can be traced to errors made by the accident victims themselves, or by other employees. However, a widely held view that an error is indicative of incompetence is superficial. It leads people in organizational hierarchies to systematically suppress mistakes and deny responsibility. Some organizational theorists focus on the properties of systems in order to understand error (for example Perrow, 1984, Zhuravlyov et al., 1999, Edmondson, 2004). Rather than trying to explain why individuals make slips, this approach examines the systems design. The crucial question according to Edmondson (2004) is: under what conditions does the ever-present potential for human errors exist?

For a long time the Russian power industry has resisted finding solutions for safety problems. There are dozens of victim fatalities from industrial accidents every year. The overwhelming majority of managers believe that a proper learning of safety rules is enough to escape an accident. They reduce accident causes to idiosyncrasies of individual behaviour. But the data obtained in a survey of one power plant maintenance shop show that the real picture is more complex and that such an opinion is a convenient way to avoid responsibility for their own incompetence as a manager. Answers to the crucial questions elucidating this situation are shown below in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Safety attitudes</th>
<th>yes</th>
<th>no</th>
<th>no answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a supervisor ever forced you to violate safety rules?</td>
<td>83</td>
<td>14</td>
<td>03</td>
</tr>
<tr>
<td>Are you sure that you keep safety rules every time?</td>
<td>33</td>
<td>71</td>
<td>06</td>
</tr>
</tbody>
</table>
These data reveal that the contradictory root of the problem lies with management in general. The managers in the power plant aim to hit two competing targets at the same time: to turn on the power and to assure personnel safety. This conflict can be traced throughout the hierarchy from top to bottom. The punishment for any violation of the rules becomes tougher after an accident occurs. Some time later the official order ‘to finish the repair at any price’ is made more and more often. ‘At any price’ means ‘you may break safety rules’. The management thus suggests some kind of optional safety rules — and its subordinates then choose for themselves what rules to break and when it is more convenient to do so.

It is well known that every contradiction provokes some kind of game — ‘if you do it, then so can I’! So finally the hidden rule becomes: ‘break but don’t get caught’. Eventually only this attitude prevails. Everyone shares such ‘wisdom’: believing that the smart man knows what rules to break but the fool is caught. That is the real safety rule. This attitude was revealed in interviews: ‘In an accident everybody will get to know that Johnson is the only fool in the shop’. He becomes the scapegoat. ‘To break and not to be caught’ becomes an engaging target and the game itself becomes a way to enrich deficient performance and to raise self-esteem. In reality, the supervisor is suggesting contradictory rules that force people to be sly but disciplined. This feature comes to be recognized as meritorious.

When something is permitted and prohibited at the same time the supervisors and workers play games with intricate rules such as ‘don’t say yes and no, don’t voice white and black’. Answers displayed in table 2 illustrate this state of affairs.

These data show that almost half of the respondents continue to disagree with the supervisor’s conclusion after an accident analysis has been closed. It means that a true analysis has not been done; the real picture remains hidden and a real problem solution is denied. Supervisors, at all levels of the hierarchy, negotiate the appointment of accident investigators on the basis of their knowledge of how to play the safety game of what not to reveal. This inevitably will exclude information about the real causes of an accident. In the event, top management is given a report that corrupts the true picture.

Examining the data above leads to the conclusion that managers suggest discordant targets for subordinates — to perform safely; and to meet deadlines at any price. This normative conflict shapes an attitude towards safety rules that equates to their being optional and not obligatory. This provokes a risky gamble. It is obvious that accidents are inevitable in such conditions. Undoubtedly such hidden accident causes should be recognized and be settled. Otherwise traumatism from the power production process will continue for ever.

4. Summary
Organizational systems tend to resist straightforward solutions to a problem. When only the superficial symptoms of a complex problem are considered, the underlying problems typically remain unresolved, and perhaps even exacerbated if the solution feeds into a vicious cycle. This is true whether it concerns errors of maintenance personnel in a power plant, or errors of drug administration in a hospital. (Edmondson, 2004). It means that strategies such as remedial education for physicians (who have written incorrect prescriptions in a hospital); and lessons about safety rules and tools for personnel at a power plant are not enough to overcome the problem.

<table>
<thead>
<tr>
<th>Table 2. Management safety performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
</tr>
<tr>
<td>Have there been situations when management was unfair in punishing you for violation of safety rules?</td>
</tr>
</tbody>
</table>

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Systemic approaches to problem solving can expand the scope of an analysis of errors and accidents beyond the details of the behaviour of one or several individuals.

The main feature to consider in devising a monitoring method of the organizational problems mentioned above is to define their mechanisms and put forward proper solutions — not merely to fix some aspect of a problem.

In conclusion, it is hoped that the current Russian power industry reforms will incorporate an understanding of human factors and that these techniques will be adopted widely.

References


About the Author
Irine Vasilieva is Senior Psychologist at the Moscow Power Company – Mosenergo, Russia. She received her PhD in Psychology from the Institute for Psychology, Russian Science Academy in 1984. For a long time she worked as a senior research worker and program director of applied inquiries in organizational psychology at Rostov University. Her research interests include work skills training development, organisation consulting and occupational safety.

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Conference Calendar
2006
6–9 March 2006
9th Annual Applied Ergonomics Conference 2006 Practitioners talking to practitioners ...Orlando, Florida, USA. Internet: www.appliedergo.org\conference\ 1–4 April 2006
The Ergonomics Society Annual Conference Cambridge UK. There will be a 3 days symposium on Inclusive Design in the Built Environment, a one day symposium on HCI, a one day session on Control Rooms and a full day on Oil, Gas and Chemical Industries. Plus many more papers, workshops and posters on all aspects of ergonomics. Email: s.hull@ergonomics.org.uk http://www.ergonomics.org.uk/events/AC2006/index.htm
11–12 May 2006
13th Conference of the new Zealand Ergonomics Society Marketing forr Ergonomist$. Christchurch, new Zealand Email: nzesconference2006@snap.net.nz
11–16 June 2006
ICOH–International Conference on Occupational Health Milan Italy. For more information as it comes to hand consult: ICOH website: www.icoh.org.sg
29 Jun–1 July 2006
XVI Congress of ISEK
The International Society of Electrophysiology and Kinesiology “From Research to Practice” Torino, Italy. Internet: www.isek2006.it
10 – 14 July 2006
IEA 16th Triennial Congress — Meeting Diversity in Ergonomics. MECC Congress Centre, Maastricht, The Netherlands. Conference Website: www.iea2006.org Contact: Ernst AP Koningsveld Congress Chairman. E: nvve@planet.nl Internet: www.iea2006.org

2007
21–24 May 2007
WWCS2007
Information for Contributors

Articles published in *Ergonomics Australia* are subject to peer review.

Editor

Dr Shirleyann M Gibbs  
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The deadline for issues in 2005:

- March edition: February 1
- June edition: May 1
- September edition: August 1
- December edition: November 1

Contributions

Contributions to *Ergonomics Australia* are always welcomed and encouraged. Articles are subject to peer review and members of a referee panel assist authors in achieving an optimal standard for publication. The activities, achievements, experiences, views and opinions of members are always of interest. These can be in the form of letters, notices, notes, reports, commentaries and articles.

Graphics (photos, illustrations, drawings, computer graphics etc) are particularly welcome and should be camera ready. Photos need not be black and white and negatives are not required. However it should be noted that ordinary digital photographs generally do not allow for good reproduction if only submitted electronically. It is preferable to include the digital photo in the text but to additionally provide an actual photograph which the publisher can scan with commercial quality equipment to produce a quality result.

The preferred form of submissions is via e-mail, either in the body of a message (short notices), or as an attachment (articles / letters). Files may also be mailed on floppy disc or CD. Microsoft Word, Corel WordPerfect or Adobe files are the preferred formats (the editor cannot transcribe Macintosh files that are not in IBM compatible format.) Handwritten or hard copy submissions will only be accepted in exceptional circumstances.

Any inquiries about contributions should be directed in the first instance to the Editor.

Information for Advertisers

Inquiries

All inquiries about advertising should be directed to the National Secretariat of the Society.

Contact

Ms Pauline Pertel  
T: 02 6295 5959  Fax: 02 6295 5946  
E-mail: secretariat@ergonomics.org.au  
Tuesday, Wednesday and Thursday 9.00am – 4.30pm

Size

The finished page size of the Newsletter is A4 (210mm x 297mm)

Printed column sizes are 165mm x 225mm (double) or 80mm x 225mm (single)

Advertising Copy

Must be camera ready and must arrive at the HFESA Federal Office by the Copy Deadline Submission Date for the Edition in question.

A professional advertising service is available for producing camera ready copy if required. For further inquiries regarding this service contact:

Mr Goro Jankulovski, Acute Concepts Pty Ltd  
Tel: 03 9381 9696  
Mobile: 0414 605 414  
E-mail: goro@acuteconcepts.com.au

Rates for Advertising

These rates are inclusive of GST

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Enclosures

Pre-printed enclosures (leaflets, brochures) etc are welcome for inclusion with the Journal.

Enclosures should be pre-folded to fit inside the finished Journal.
Rates for enclosures

Enclosure not requiring folding: $412.50
Enclosure requiring folding: $462.00

These rates may increase if the enclosure weighs more than the equivalent of 2 standard weight A4 pages. These rates are inclusive of GST.

640 copies should be sent to arrive at the ESA Federal Office by the Copy Deadline Submission Date for the Edition in question.

Address for mailing Advertising copy and/or enclosures

National Secretariat
The Ergonomics Society of Australia Inc.
Creeda Business Centre
281 Goyder Street
Narrabundah ACT 2604

Advertising copy and enclosure submission deadlines for 2005 are the same as for Contributions — 1st of month prior to publication

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Circulation

The Journal is published four times a year and is received by approximately 620 professionals Australia wide working in the areas of ergonomics, occupational health and safety, and design.

Ergonomics Australia On-Line (EAOL)

Advertising and sponsorship opportunities also exist in the electronic version of this journal (EAOL) which is managed by Dr Robin Burgess-Limerick at Department of Human Movement at Queensland University. It is downloaded by more than 100 Australian and International readers each week. To view EAOL: http://www.uq.edu.au or enter via the HFESA website.

Caveats

The views expressed in the Journal are those of the individual authors and contributors and are not necessarily those of the Society.

The HFESA Inc reserves the right to refuse any advertising inconsistent with the Aims and Objectives of the Society and Journal Editorial Policy.

The appearance of an advertisement in the Journal does not imply endorsement by the Society of the product and or service advertised.

The Society takes no responsibility for products or services advertised therein.

Editor

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