Editorial

Change, Challenges, and Core Values

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In the last issue, Trevor Ogden (2012) provided us his reflections on the accomplishments, progress, and challenges of the Annals of Occupational Hygiene under his leadership since 1997. Few would dispute that Trevor’s contributions to the journal have been many: maintaining a commitment to high quality scholarship, seeing the journal through the advent of online publication processes and Internet access, increasing connection to the international community of authors, readers and research subjects, and responding to the increasing financial pressures on academic publishing. For that, we are grateful to Trevor for his leadership. And I, in particular, am grateful to Trevor for leaving me with a well-respected and smoothly functioning journal, and an organization to support it. Nevertheless, the changes and challenges confronting us as a profession, as a research community, and as a traditional academic journal are many. I plan to continue to keep the Annals in the forefront of the science of occupational hygiene.

Those of us involved in occupational hygiene, either as a practitioner, researcher, teacher or as a student of the science, are aware that the field is rapidly changing. Advances in data processing and statistical methods have transformed the models used in decision making and estimation, and the explosion of technologies for personal data collection and tracking holds potential for revolutionizing exposure assessment. Advances in measurement technologies that measure multiple analytes at lower levels of detection, in real time with increasingly miniature instruments continue to develop, allowing for increasingly specific personal exposure metrics. And the integration of biologically-based parameters into exposure measures increasingly informs our understanding of what aspects of exposure are most relevant. In all of these areas, occupational hygiene science offers the promise of more effective preventive policies and practices. However, many other factors are challenging our ability to accomplish our goals.

The scope of industrial hygiene practice is necessarily broadening to address innovations in production technologies and processes, more diverse and global workforces, and alternative forms of work organization. Funding for occupational health research is more and more restricted, while academics are pressured to produce more publications. Full-time residential programs are shrinking, and distance, online and part-time instruction is becoming commonplace. Given these myriad changes and challenges, I reflect here on some of the ways that the Annals can continue developing as an active, vibrant, and relevant journal for occupational hygiene.

The Annals needs to broaden its scope in order to address the increasingly complex world that occupational hygienists confront, while maintaining its core strengths in measurement and control of workplace exposures. For instance, strain due to ergonomic stressors is typical of the issues addressed by many occupational hygienists. The risk of acute injury has not been a common subject for Annals articles, but as it is amenable to a hygienic approach—that is, measurement or control of ‘exposure’ to conditions associated with risk of injury—thus, studies addressing injuries would be well within the Annals’ scope.

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of interest. While psychosocial stress is outside our discipline’s typical comfort zone, it clearly represents a workplace factor associated with poor health outcomes, and so may also fit our mission.

Further, the Annals has traditionally addressed technical aspects of measurement and control of workplace risks, whereas practicing occupational hygienists recognize that major impediments to controlling risks can be organizational, behavioral, and economic. Studies that address exposures and controls within this framework should be found within the pages of the Annals. In particular, intervention studies that are able to demonstrate not only the technical feasibility of controlling an exposure but also its realization in the workplace have a high value to both scholars and practitioners.

Traditional occupational hygiene was developed in the context of fixed worksites and production lines with a hierarchical management structure, significant levels of invested capital, and a workforce that would largely remain in the same job for many years or a lifetime. The typical workplace today is very different. Rapidly changing technology and processes, a shift toward short-term employment in multiple jobs and industries, and the increasing use of contract or contingent labor, have changed the nature of work and as a result, the attendant occupational risks and methods of their management. Economic globalization has profoundly affected the work environment, shifting manufacturing from developed to developing economies. Migrant workers are dominant in many sectors of the economy across the globe, significantly changing the social environment within the workplace. The Annals can play a significant role in recognizing these new forms of work and supporting research that incorporates these new dimensions of work and health.

The academic foundation of occupational hygiene, both teaching and research, is also rapidly changing. In the UK, graduate level training in occupational hygiene has largely collapsed in the past decade, with no full-time residential graduate degree-granting programs remaining. In the US, the primary support for graduate training in occupational hygiene (and other aspects of occupational health and safety), the Education and Research Centers (ERCs), is being threatened in the federal budget. Although the ERCs have not yet been cut from the budget, the threat of elimination has already curtailed applications to the programs and forced programs to begin planning for possible elimination or redefinition; in all cases, reducing the depth of training in occupational hygiene knowledge and skills. Such changes will reduce the number of occupational hygienists coming into the professional workforce and those who are prepared to contribute to the research agenda.

Funding for occupational health and safety research has been curtailed. The HSE in the UK now has only specifically targeted extramural research funds available, and UK researchers look to the European Union or elsewhere for research support. In the USA, NIOSH funded about ten million dollars per year in new major research (RO1) awards in 2007 and 2008, down to four million per year in 2011 and 2012 (NIOSH, 2012). No other federal institute provides research support for issues directly associated with health in the workplace.

Pressures on academic teaching are also increasing. Institutions are demanding that professors teach more high-enrollment courses, which inevitably means teaching courses with more breadth, and less specialty training in occupational hygiene and research techniques. In addition, pressures to succeed in academia are increasing with the number of publications, dollars of extramural support and service requirements ever higher. Of particular relevance to the Annals is the mounting pressure to publish in journals with high Journal Impact Factors (JIF), which reflect citations in the scientific literature, not true impact as we would define it. Given our small niche subject, the Annals has good reason to be proud of its JIF of 1.9 in 2011. However, the true impact of our scholarly publications is related to the provision of evidence-based practices that support the reduction of illness and injury. Metrics that better represent our true impact are needed, such as downloads of our articles that represent use by both research and professional practice communities. If the JIF were the only guide to publication, few junior faculty would be in a position to choose the Annals for publication of even their best work. Thus, while working toward maintaining our rank as a scholarly publication, our primary goal will continue to be provision of sound evidence that supports policies and practices that assess and reduce injury and illness in the workplace.

Nevertheless, the effectiveness and reputation of the Annals among scientists and policy-makers matters and is dependent on the quality of scholarship contained within its pages. Scientific scholarship involves, of course, clear aims and hypotheses, rigorous methodology, valid data and analyses, and appropriately drawn conclusions. In addition, it requires that these components of a study are presented concisely and precisely, using language that can be interpreted correctly by the users. Toward this end, the editorial board, assistant editors and I will be working closely with manuscript reviewers to
insure a thorough, effective and rapid review process that supports both a high level of scholarship and the needs and interests of our authors. The addition of a new Editorial Manager, Roz Phillips, will help insure responsiveness to authors and reviewers. We will welcome all submissions that address our core mission—characterization and control of exposures affecting health of working populations—but commit to conducting a rigorous peer review of each manuscript before accepting it for publication in the Annals.

Despite the changes that are affecting both the practice of occupational hygiene and the scholarship that underlies it, the guiding principles for subject matter that belongs in the Annals are contained succinctly within its name, ‘Annals of Occupational Hygiene’. *Occupational* puts clear boundaries around our interest in issues arising in the course of work or in the workplace. Even while the scope of practice has been extended beyond the ‘factory walls,’ the Annals has an important role in providing a focused attention to issues of work-related risks. *Hygiene* explicitly addresses the control of risk to health associated with exposure. Even with a widening definition of exposures beyond the traditional chemicals and aerosols to include injury risks, physical, organizational and psychosocial stresses, we can maintain our core values—that is, preventing work-related injury and illness. This is the goal of the Annals.

In the coming years, I am confident the Annals will continue to publish high quality scholarship on occupational hygiene, even while the field and the science on which it is based are continually evolving. Toward that end, I am soliciting a series of commentaries that will further discuss these changes and challenges in our field. I look forward to working with you—the community of occupational hygiene practitioners, scientists, and scholars in keeping the Annals relevant and forward thinking.

**REFERENCES**
