Change is the only constant

Ken Fivizzani
Naperville, Illinois
From the Greeks

“All things are in motion and nothing is at rest. . . You cannot go into the same [river] twice.”

Heraclitus (540?-480? B.C.)
As paraphrased by Socrates in Plato’s *Cratylus*.

“All is change; all yields its place and goes.”

Euripides (485?-406)
A couple of Benjamins

“Nothing is stable. Nothing absolute. All is fluid and changeable. There is an endless “becoming”.”

- Benjamin Cardozon (1870-1938)

“Change is constant.”

- Benjamin Disraeli (1804-1881)
Jack/Jill of all safety trades

• Strengthen network with other safety professionals in our own organization and with professional networks.
• “Doing more with less” may mean we have to learn new skills and areas of expertise. (e.g., radiation, biosafety, industrial hygiene, ergonomics.)
Challenges to chemical industry

- Continued outsourcing and off shoring.
- Chemical companies may become part of large conglomerates that have complex agendas.
- Increased collaboration with academia and governmental laboratories, especially for basic and feasibility of application research.
How far will REACH reach?

• GHS as the dominant chemical risk evaluation system?
• Testing new materials before commercialization.
Challenges for academic chemists

• Academia meets regulation and compliance.
• Budget restrictions at colleges and universities.
• Increase in number of adjunct faculty.
• Decrease in number of graduate students and postdoctoral fellows.
• Increased demand for safe laboratories!
Effect of on-line coursework

- Why chemistry labs are different; simulations are not always an appropriate replacement.
- Chemistry majors and non-majors.
- Earlier courses from other institutions.
- Upperclassmen with less prior lab experience.
New areas – new safety issues

• Nanomaterials and nanotechnology.
• Bioengineering and biomechanics.
• Monitoring: smaller, faster, and cheaper, trace contaminants, hazardous materials.
• PC to tablets and smart phones.
• Natural gas as main source of chemical production. (Bill Carroll)
Techno Safety

• What do you do with all the data you have?
• Privacy issues with employees.
• Interactive, cross-platform training presentations with integrated polling software.
• Change from compliance cop to become analyst, monitor, and asset manager.
Top 10 occupational safety and health trends in 2013

1. Providing basic occupational health services and dovetailing with the primary health care system in each country.

2. Coping with globalized competition which puts pressure on EHS protection to lower standards.

3. Emerging hazards of unknown consequence for which we don’t know what to do (e.g., nanotechnology).
4. Conventional hazards that are not satisfactorily controlled for which we know what should be done but don’t do it (e.g. silica).

5. The macroeconomic impact of occupational injuries, illness, disability, and incapacity.

More top 10

7. The aging workforce and demographic transition.

8. Income insecurity and microeconomic consequences of being injured at work.

9. Women in the workplace – especially in Muslim nations.

Conclusions

• Change is constant.
• We have to expand our areas of knowledge.
• All chemists have safety issues in their respective organizations as a result of changes in their worlds.
• We must learn to use the information that we can now access.