From the Editor's Desk...

JSS Technical Editor
Clif Ericson

Habits

As editor of *Journal of System Safety*, I often do "extra-curricular" reading to keep up with events and technology. Recently, I read a book titled *The Power of Habit* by Charles Duhigg. The book is primarily about the power that habits hold over us, how to modify bad habits and how to create new, good habits. It was an interesting book, but what really caught my attention was one of the case studies described in its pages. This particular case study followed Paul O'Neill as he took over as CEO of Alcoa in 1987. He took the reins during a time of low profits and a poor accident record. But, as the new CEO, he did not make promises to lower costs, increase productivity and boost profits, as was expected. He stated that his goal was to make Alcoa the *safest* company in America — his objective was zero injuries. At that point, nearly everyone in the audience thought his selection as CEO was a mistake and many recommended selling their stock before the company fell into decline.

O'Neill believed that some habits have the power to start a chain reaction throughout a company. Safety was a *keystone* habit that influenced all other habits and processes in the company. His philosophy was that if Alcoa could bring its injury rates down, it would happen because managers and employees would have agreed to become part of something important — they would have devoted themselves to creating a *habit* of excellence. Safety would become an indicator in changing bad habits across the entire company.

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O'Neill was serious about safety, and the book explained many of the detailed steps he took to instill this new keystone habit. Within a year, company profits reached a record high. By the year 2000, when O'Neill retired, someone who had invested a million dollars in the company when O'Neill was hired would have earned another million in dividends.

For me, the moral of this story is that, as safety engineers, we must never give up or concede to degraded levels of safety. We need to vigorously continue to "sell" safety to management and use stories such as this to show that it really works. This is a great example of where safety had an even greater pay-off than saving lives.

The first technical paper in this issue, "*Exxon Valdez*: Human Error, Plain and Simple" by Arthur Barondes, notes that the effects of the 1989 disaster continue to be felt to this day. Not surprisingly, various interests seized on the catastrophe to support their causes or improve their lots. While it is now clear that the ship went aground purely as a consequence of human errors — there were no mechanical or electrical failures — the event has been used to justify changes that, while desirable, would not have prevented the *Exxon Valdez* from going aground, or the subsequent oil spill. These changes include, among other things, a variety of improved navigational aids, expanded Coast Guard monitoring capabilities, increased requirements for harbor pilots and required crew rest. In looking back, one might be led to believe that the ship went aground in a sea of red herrings. This paper reviews what *really* happened on that night, and the incontrovertible evidence that supports the idea that human errors — and a failed safety culture — were solely responsible for the disaster.

The second technical paper in this issue contains the results of the two-day Safety Case Workshop that was conducted in January 2013. The workshop, under the sponsorship of the SAE International G-48 System Safety Committee, generated international participa-

tion from industry, government and academia. The United States has typically used a process-based approach in managing system safety programs, but there is a current movement to use the evidence-based Safety Case approach to validate the safety of systems. At the conclusion of the workshop, participants reached the consensus view that the Safety Case approach has merits worthy of being accepted among the best worldwide system safety practices.

The third technical paper in this issue, "Technical Safety or System Safety? Why Names Matter" by Sergio Oliva and Ricardo Lopez, discusses a challenge the authors faced from a customer who opined that technical safety was different from the other "safeties," such as system safety, functional safety or operational safety.

In his "System Safety in Healthcare" column, Dev Raheja discusses "The Challenges of Sign-offs." As healthcare has become more specialized, more clinicians are involved in patient care, which often leads to more complex patient sign-offs as compared to years past. Erroneous sign-offs can contribute to gaps in patient care and hazards in patient safety, including medication errors, wrong-site surgeries and patient deaths. Clinical environments are dynamic and complex, presenting many challenges for effective communication among healthcare providers, patients and families. This article presents an overview of sign-offs and hazards, as well as suggestions for quality improvement initiatives and recommendations for potential remedies.

In his "TBD" column, Charles Hoes discusses the leak of MCHM (4-Methylcyclohexanemethanol) into the drinking water supply for the city of Charleston, West Virginia. As it turns out, there was actually more than MCHM in the leak, but since the company failed to notify the authorities about the additional chemical(s), they weren't included in the initial tests for water safety.

In his "Unintended Consequences" column, Terry Hardy discusses the lessons learned from an aluminum dust explosion that occurred at the Hayes Lemmerz International-Huntington, Inc. facility in Huntington, Indiana on October 29, 2003. And, in his "Design-Based Safety" column, Dave MacCollum discusses the concept of "Selling Safety."

Remember, if you wish to opine send me an email at journal@system-safety.org.

Until next time,
Clif

Mark Your Calendar

12th Probabilistic Safety Assessment and Management (PSAM) Conference
August 22-27, 2014
Sheraton Waikiki - Honolulu, Hawaii
http://www.psam12.org

Human Factors and Ergonomics Society (HFES) 2014 Annual Meeting
October 27-31, 2014
Hyatt Regency Chicago - Chicago, Illinois
https://www.hfes.org/

The 52nd Annual SAFE Symposium
November 3-5, 2014
Caribe Royale - Orlando, Florida
http://www.safeassociation.com/index.cfm/page/symposium-overview

Safety in Autonomous Systems
December 4, 2014
London, U.K.
http://www.safety-club.org.uk/e299

32nd International System Safety Training Symposium

August 4 - 8, 2014

Union Station DoubleTree Hotel
St. Louis, Missouri, USA

Check **http://www.system-safety.org** for upcoming details!

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