



Overlooked is the Need to Tell the Public About Our Skills

In the classic nursery rhyme, the skills of the butcher, the baker and the candlestick-maker are clearly defined. Protecting life, limb and property are generally ignored, however, with the belief that most people avoid dangerous hazards and that accidents will not happen. There is a lack of understanding that a hazard is usually dormant until a change of circumstance occurs and the hazard becomes armed and able to cause harm. When a hazard produces harm in terms of death, injury or damage, it is often identified only as an “accident,” and the existence of a hazard is ignored.

An accident is considered a risk to the public; however, unknown to the public is the cardinal rule that the consequences of a hazard are always unknown and completely unpredictable. Most people assume that safe practices are nothing more than common sense and that design improvements are unnecessary. As machines become more of a substitute for manual labor, and automated machines eliminate operator control, hazards become almost invisible to the using public. Unfortunately, there is little published information concerning the general types of hazards that may make a machine unsafe. Public knowledge does not include the concept of how design safety can ensure safer machines and equipment that will reliably function without “accident” because hazards have been removed by design.

Other professions do better at informing the public of their specific expertise when compared to the emerging function of design-based safety. For example, the medical profession has an expansive diversity of practice and has been able to establish excellent informational communication with the public. Even with malpractice litigation, doctors — for the most part — have the trust of their patients because they are able to inform them in lay terms of the hazards of very complex ailments.

Unfortunately, system safety specialists generally talk only among themselves about their findings in a confusing litany of complex charts and unclear logic

that relies on speculative risk estimates for identifying hazards at the time of design. They do not communicate with the public on safer alternative designs. It is not enough to inform management of our safety engineering skills — we also need to inform the public about how we have made machines reliably safer by design. The unsung heroes of the history of design safety are often system safety specialists, who have been the experts that identify unsafe design and pinpoint alternate safer design in liability litigation. Our unique and highly diversified skills of hazard identification and alternate safer design need to be broadly publicized.

Because of our silence about design-based safety, a massive amount of misinformation is generated by the media, as well as the outspoken self-anointed authorities, that hampers public acceptance of safe design. This usually means that design-based safety is not revealed, and that workers continue to use practices that they have always relied upon.

For starters, design-based safety specialists need to submit articles to trade magazines that explain — in lay terms — how their expertise ensures user safety. Next, we need to invite journalists to the annual International System Safety Society Conference (ISSC) and acquaint them with our expertise and how it has made consumer industrial machines and military equipment safer. Also, our *Journal of System Safety* should sponsor public hearings about high-loss death, injury or damage occurrences and listen to public concerns and views. This presents an opportunity to address the role design can play in preventing catastrophic occurrences. There are many other ways of communicating in the *Journal of System Safety* to inform our members on how we can share the special skills employed in the practice of system safety with the public.

As system safety specialists, we should not hide our light under a basket. Overlooking the need to inform the public of our expertise and skills in design-based safety impedes the progress of our profession. ●