



# AMERICAN SOCIETY OF SAFETY ENGINEERS NORTH FLORIDA CHAPTER

MAY 2018 NEWSLETTER

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## Cell Phone and Ludic Loops

With screen-time increasing, it's appropriate to ask some important questions

around the way screen addiction could impact all of us.

In 2014 application developer Kevin Holesh moved in with his fiancée. After a hard day at work they would settle down on their couch, smart phones in hand, and lose themselves for a while. Admittedly, I do this too.

Initially, this gave them a chance to unwind and drown in the entrancing joy of the screen's calming glow. However, it also took up precious time. Kevin soon realized that less and less of their spare time was being spent in productive leisure, or even doing something exciting. He realized that he was, like many of us, hooked on the screen.

After living in distraction for six months, Kevin came to the realization that he needed to do something about this situation. So he decided to

come up with a solution; he was going to design a mobile app to combat his addiction to the mobile phone.

When it was completed, he named the app *Moment*. *Moment* is a tracker of mobile phone use. It sits silently on your phone, discreetly tracking your phone use and totaling up the hours you've spent and the activities you've carried out on your device.

When he started tracking, Kevin found that he was using his phone for approximately 75 minutes every day. Now, he's limited that to just 45 minutes a day. His app is now available on both iOS and Android and comes with various paid-for features that can help you limit this neurological time-drain.

## Technological Addiction

In early 2017, Adam Alter, Associate Professor at New York University's Stern School of Business, released his book *Irresistible: The Rise of*



*Addictive Technology and the Business of Keeping Us Hooked.* His work was intended to expose the underlying psychological and behavioral triggers that have seen mobile phone use and on-screen time increase. On average, Americans presently spend 10 hours and 39 minutes each day across all screens, computer, phone, etc.

A couple of years ago Adam, like Kevin, realized that he was spending too much time on his phone and was looking for a way to cut back. He could see the impact it was having on his life and how much time was being eaten up by it. So, searching around one day, he found *Moment*.

Tracked across thousands of *Moment* users, a picture of our technological addiction, and its increased prevalence, begins to build up. Two years ago, the average time spent on mobile phones was 2 hours and 48 minutes. In 2017 this rose to 3 hours and 42 minutes. That's obviously a lot.

### **Good App, Bad App**

There is an upside though. Thankfully, all that disappearing free time isn't just used up fruitlessly spinning from one app to another, in most cases. Smart phones are incredibly useful. They help us navigate the world anew, reveal fresh perspectives, and they connect us and bind us, much like television did in its early days. Moreover, they bring new insights and information with a minimum of difficulty.

Case in point, Adam's research shows that we spend an average of 9 minutes per day on healthy, constructive apps that actually enrich our lives. However, he warns, 27 minutes per day are taken up on the types of damaging apps that cause fear, isolation and depression; certain social media and news sites are examples.

### **Ludic Loops and Stopping Cues**

The question remains then, if the outcome of spending so much time glued to mobile phones is likely to damage us,

then why do we spend so much time doing it?

Research was performed over a ten year period by Natasha Dow Schüll, a cultural anthropologist from MIT, into highly addictive Las Vegas slot machines. Her research brought to the surface the fact that people enjoyed the game despite the low chance of success and repetitive nature of the activity. In fact, Natasha discovered, heavy users were actually disappointed to win because it broke the repetitiveness of the game. She called the lulling, dream-like state of pleasure aroused by these types of games a 'ludic loop'. The loop in question being the pathway, littered with small rewards, that gently nudges you to pull a lever here, a button there, but always with the intent of keeping you playing.

Ms. Schüll eventually associated her ludic loop to popular smart phone games, such as Candy Crush. In an interview with NPR she characterizes the game in this way: "It's you and the



machine... there's no real character development or narrative arc. Kill the monster; kill the monster again; kill the monster again. You never know when you're going to get the reward [or] how much the reward will be. It's these little ludic loops."

We've probably all played these games at one time or another and found ourselves looking up at the clock to notice another thirty minutes have gone by. Personally, this works really well for me when riding the stationary bike in the morning; 30 minutes easily fly by. But it's not just games that utilize the ludic loop formula. The entire design paradigm of our mobile phones encompasses this exact type of thinking.

So what does all of this mean? From Adam Adler's point of view, he's concerned about the social impacts of this technological change. He worries that young people in particular may not be getting the right kind of face-to-face stimulus required for cultivating and retaining

meaningful relationships. He goes as far as to suggest that, in years hence, we might view it with the same kind of health risk as smoking, suggesting that it could eventually become a regulated resource. If it does, my stationary bike rides will seem a lot longer.

### ***Cardinus Newsletter***

Online Edition

April 2018

[Cardinus.com](http://Cardinus.com)

## **Workplace Chemicals can Cause Injuries to Hearing**

Just in case you were not aware, hearing impairment can be caused by exposure to noise, and in some cases, certain chemicals.

Additionally, the impairment from either of those two exposures can be worse if there is exposure to both.

Damage to hearing from chemicals is called ototoxicity; the chemicals themselves are called ototoxicants.

Ototoxicity is a relatively unknown condition and OSHA is endeavoring to change that

fact with a recent Safety and Health Information [Bulletin](#).

"Research demonstrates exposure to certain chemicals, called ototoxicants, may cause hearing loss or balance problems, regardless of noise exposure," states OSHA.

"Substances including certain pesticides, solvents, and pharmaceuticals that contain ototoxicants can negatively affect how the ear functions, causing hearing loss, and/or affect balance. The risk of hearing loss is increased when workers are exposed to these chemicals while working around elevated noise levels. This combination often results in hearing loss that can be temporary or permanent, depending on the level of noise, the dose of the chemical, and the duration of the exposure."

The list of ototoxicants includes both well-known chemicals such as toluene, p-xylene, carbon monoxide, and mercury compounds, as well as lesser-known pharmaceuticals such as certain loop diuretics (cause increase in urine flow)



and antineoplastic agents (used for fighting cancer). The lengthy list of industries where ototoxicants are found include machinery, textile and apparel, chemical (including paint), plastics, and furniture manufacturing.

Certain Ototoxicants affect central portions of the auditory system, i.e., nerves or nuclei in the central nervous system, in the pathways to the brain, or in the brain itself. Given that the nervous system is impacted, the effects include both loss of hearing and loss of clarity. Specifically, these conditions may occur:

- speech discrimination dysfunction, which is the ability to hear voices separately from background noise
- compressed loudness, which is sound distortion
- frequency resolution, which is the inability to differentiate two sounds with similar frequency
- temporal resolution, which is the inability to detect time gaps between sounds
- and spatial resolution, which is the inability to localize sound.

According to OSHA, speech discrimination dysfunction can be particularly dangerous in noisy environments because workers may not be able to hear coworkers, environmental sounds, or warning signals.

### **Exposure Routes**

Measures to protect against ototoxicants can be significantly-more challenging than those to protect against noise. This is largely because exposure to ototoxicants can occur through multiple routes—*inhalation, ingestion, and skin absorption.* Additionally, the exposure threshold for ototoxicity varies for each chemical based on its compound family, properties, exposure route, exposure concentration and duration, synergy with noise, and noise exposure; and, an individual's personal risk factors also play a part. Moreover, the dose-response, lowest observed effect level (LOEL), and no observed effect level (NOEL) have been identified in animal experiments for only a few ototoxicants. And, many

chemicals are not identified as ototoxicants on their safety data sheets (SDSs).

### **Prevention**

The first step in preventing exposure to ototoxicants is to determine if they are in the workplace. As previously noted, SDSs may not specifically mention ototoxicity or ototoxicants; so, detecting their presence can be challenging.

When this is the case, information on the chemical's general toxicity, nephrotoxicity (toxic effects on the kidneys), and neurotoxicity (toxic effects on the central and/or peripheral nervous system) may provide clues about potential ototoxicity. "Most chemicals that are known to affect the auditory system are also neurotoxic and/or nephrotoxic," says OSHA.

Once the presence of an ototoxicant has been confirmed, the employer must provide employees with safety information and training on the dangers of the chemical as well as measures to be followed to keep exposure at



safe levels. Additionally, employers must assess and determine the appropriate personal protective equipment per OSHA standards.

Finally, employers that receive complaints from workers about hearing loss should investigate SDSs for ototoxicants and then take appropriate action.

#### ***EHS Daily Advisor***

Online Edition

March 29, 2018

[EHSDailyAdvisor.BLR.com](http://EHSDailyAdvisor.BLR.com)

### **Why it's Important to Focus on Remote Worker Safety Now**

Remote workers may not presently play a large role in your organization, but that may just change in the near future. Some studies predict that by the year 2020, nearly half of the country's workforce will operate remotely in some capacity.

Of course, the number of remote workers in your company will largely depend on your industry and job requirements. But even if you

don't foresee an expanding remote workforce, don't think you're completely immune to it. There's a growing demand among workers for more flexible hours and work arrangements, which has foreshadowed an equally growing flexibility of companies to offer such benefits.

Of Course, no one's forcing you to join these companies in their efforts, but not doing so could mean becoming unable to attract or retain top talent. This can be a huge problem for EHS leaders in that high turnover and low employee satisfaction affect the strength of the safety culture.

It therefore seems to be in your best interest to start preparing for a potential shift now. Getting your remote workforce involved in your company's safety culture should be as much of a priority as keeping your on-site team safe on the job.

Their productivity and performance can still be affected by off-site hazards, which impacts the company as

a whole. So, it's up to us to keep them engaged, even when we're not able to see them in person.

#### ***EHS Insight***

Online Edition

April 9, 2018

[EHSInsight.com](http://EHSInsight.com)

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## **OSHA NEWS**

### **OSHA Turns Its Attention to the "Focus Four" Hazards**

Every so often, the Occupational Safety and Health Administration will re-energize its Focus Four campaign. This national effort is intended to raise awareness of some of the most serious hazards in the construction industry.

The Focus Four hazards are also sometimes known as the Fatal Four; this is because OSHA has identified them as the four leading causes of fatalities. The agency wants employers to fully recognize and understand those hazards, in order to prevent future incidents from occurring.



The four leading hazards in the construction industry are categorized by OSHA as:

1. Falls
2. Caught in or Between
3. Struck By
4. Electrocution

According to data drawn from the Bureau of Labor Statistics, the Fatal Four were responsible for 64 percent of all fatalities in the construction industry in 2016.

OSHA states that up to 90 percent of all fatalities from that same year could have been classified under the Fatal Four.

Falls accounted for 384 deaths (38.7%), followed by struck-by incidents at 93 deaths (9.4%), electrocution at 82 deaths (8.3%), and caught in incidents with 72 deaths (7.3%).

Relatedly, OSHA has some great resources for employers. They've put together training slides that can be presented to their employees on these specific hazards.

To give you a better understanding of the Focus Four hazards, here is a

summary of some of the common ways that workers are injured or killed by these hazards.

#### **Falls**

- Falls on the same level
- Falls from heights
- Unprotected sides, edges and holes
- Failure to wear and use personal fall arrest systems
- Failure to properly use personal fall arrest systems
- Slips and trips

#### **Struck By**

- Falling objects—rigging failure; loose or shifting materials; equipment tip over or malfunction; lack of overhead protection
- Vehicle and equipment strikes
- Struck by flying objects

#### **Caught In/Caught Between**

- Caught in or compressed by equipment or objects
- Trench/excavation collapse
- Rotating equipment
- Unguarded parts
- Collapsing structures or materials

#### **Electrocution**

- Contact with overhead power lines
- Contact with live circuits in panels
- Poorly maintained cords and tools

- Lack of AR and FR rated clothing
- Improper use of AR and FR rated clothing

#### ***EHS Insight***

Online Edition

April 16, 2018

[EHSInsight.com](http://EHSInsight.com)

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## **Worker's Memorial Day**

April 28 is Workers' Memorial Day, a time we remember and honor the men and women who have lost their lives on the job. April 28 is also the day that OSHA first opened its doors in 1971; this was after Congress passed the Occupational Safety and Health Act of 1970.

American workplaces have become much safer in the decades since the inception of the OSH Act; however one life lost is one too many. To drive home that fact, on Friday the 27<sup>th</sup> of April, the Northeast Florida Safety Council celebrated Workers' Memorial Day. The ceremony honored 14 people from the community who lost their lives at a



workplace last year. The ceremony featured a military honor guard with a bell being rung as the names of the workers who lost their lives were read. There was also a superb bagpipe tribute. Purple ribbons decorated 14 empty chairs representing the lost workers.

Mrs. Rochelle Hamm, widow of Frank Hamm who is one of the 33 crew members that perished aboard the tragic El Faro sinking, attended and shared a powerful statement. "The message was always clear. Let's not let this happen again. If we can educate everyone on the importance of safe work practices, then she feels she's making a difference," said Shana Harvey, with Northeast Florida Safety Council.

While we can't bring them back, by sharing their stories, the hope moving forward is to save lives.



Brian Sturtecky, OSHA Area Director



Reading of Names with Bell Ringing



Leo Hearn



Playing of the Bagpipes

[News4Jax.com](http://News4Jax.com)

[OSHA.gov/workersmemorialday](http://OSHA.gov/workersmemorialday)



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## Job Market Links

[ASSE](#)

[BCSP General Safety Jobs](#)

[BCSP Construction Safety Jobs](#)

[BCSP Industrial Hygiene Jobs](#)

[EHS Careers](#)

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## ASSE Chapter Links

Find us on the web at:

[ASSE NFL](#)

Find us on Facebook at:

[ASSE NFL](#)

## Local Chapter Officers and Chairs

### Elected Officers

- President - Steve Brown
- President Elect - Bob Dooley
- Secretary - Steve Wilson
- Treasurer - Yaniv Zagagi
- Delegate - Anne Rogers
- Delegate - Dave Bedsole

### Appointed Chairs

- Membership Chair - Eric Gray
- Program Chair - Tom Drygas
- Newsletter Chair – Bob Dooley
- Social Chair – Ben Yancy
- SPY Awards Chair – Ben Yancy
- Social Media Chair - Vernon Adams
- Past President - Dan Hemsall

## Local Chapter Information

The North Florida Chapter of the American Society of Safety Engineers was chartered in 1952 and currently has more than 165 members.

Professional meetings are held nine times per year in the Jacksonville area.

Meeting notices are distributed and RSVP's are returned by email. If you are a member of ASSE and are not receiving notices by email, please email the [secretary](#).

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## Local Chapter Meeting Schedule

### May

**Date:** May 16, 2018

**Time:** 11:30 Lunch/Networking  
12 Noon Tour

**Topic:** Facility Tour

**Location:** Bacardi Bottling Co.  
12200 N Main St, Jacksonville,  
FL 32218