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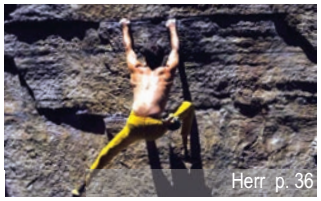
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Editorial pages have VOICEYE codes for a new level of content access - *Enjoy*


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- To access the 58 Language Translator, press your phone's "Option" button, and select "Translate". To translate into another language, select the language button to the right, choose your language of preference, then hit the "Translate" button to the right of the selected language.





I just finished an MX class in Cali, picked up my new Husky, and am packing up to relocate back to the east coast, close to my parents!

Over the last several months, I have been traveling to different states for my MX schools, while I've also have been getting addicted to racing my new mountain bike (MTB). Wow! What a thrill it is to race downhill! I just love it.

My adventures continued recently when I went with my friend, Lindsey, to Mt. Bachelor in Oregon, where we camped for a week. I felt nervous because I'm not a huge outdoors kind of person, but it was such a blast!

I guess I only ever went through Oregon on my way to races in the past, and never really had a chance to visit and take in how beautiful the state is. During our trip, I got to kayak and fish and ride my MTB. They even had a course near the campground, which was a fun place to ride.

Funny story: We were trying to buy some wood at the camp store, but the rangers seemed kind of scary. We felt nervous to talk to them, so I was trying to search on my phone for information on buying wood, when one of the rangers said, "Hey are you Ashley Fiolek the motocross racer?" Talk about a small world! After that they chatted us up, and we realized they weren't so scary after all!



During our trip, we went to my manager Miki's house and hung out there, too. It was nice to find the time to catch up.

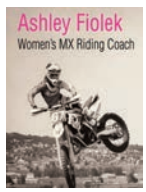


Back from Oregon, we headed out again to Park City, UT, for some downhill riding/racing. I had such a huge smiley face as my adrenaline got pumping. I jumped on my MTB and raced around the track, which was absolutely amazing and totally reminded me of the thrills I get on my dirt bike!

Soon I'll be heading up to Canada for another two-day school, I'm really looking forward to it because Mom is coming to interpret for me, and we always have crazy, fun adventures together! Plus Canada is so beautiful. It's nice to be outside there teaching my classes!

Girls-only events. ■ ABILITY

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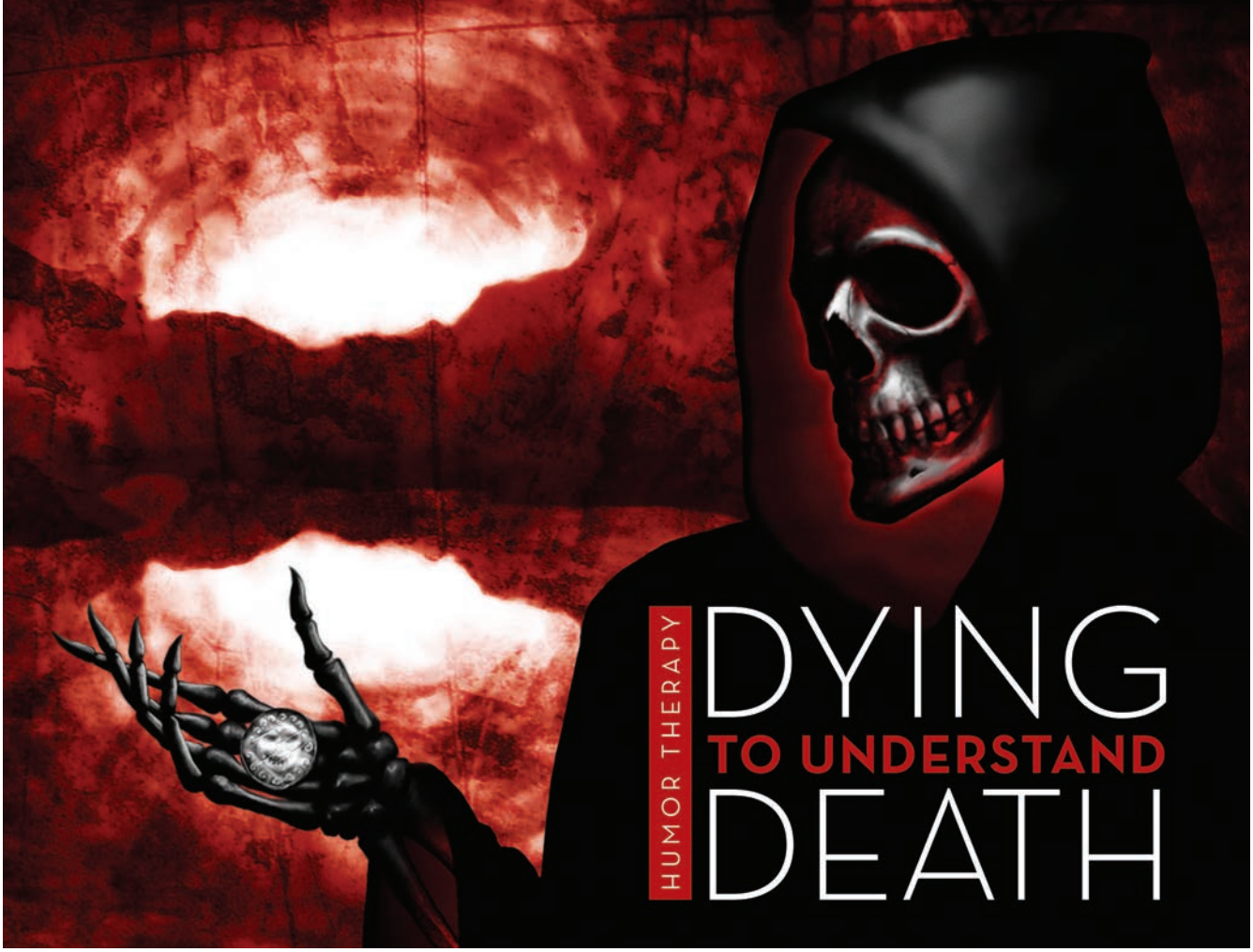
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I just recently found out from my doctor that I'm dying. He says that everyday I'm getting closer to death. He also thinks that I may not make it past ninety-two. He predicts that I'm probably going to die of old age. Wow, can you believe that? Now it's all I can think about. I never really thought that someday I'd be dead, but I guess everyone gets some challenges in this life. Right now, I have good days and bad ones. Yesterday my cat threw up on the carpet. I hope you never have to die. It's hell and I wouldn't wish it on anyone. But... my spirits are high and as God as my witness, I'm going to beat this thing called death.

Oh, who am I kidding? Death is inevitable. Let's face it, people pass on. Passing on makes it sound like you really weren't planning on staying long. It's like you just stopped by to pick up a few things like: some sins, guilt, headaches, a family, debt and maybe a six pack. Where's Jeff? Oh, he's gone. He was just passing by anyway. Shame he couldn't stay longer.

I'm afraid when I die I'll go through that tunnel and see the big bright light, and then come to find out it's a damn train coming at me. Then I have to come to terms with dying again. What if this is it? There's nothing after you die. You just stop existing. I'm going to be pissed. After all I put up with in this life and I get nothing? What about the people who were actually "good"? What a punch in the gut that would be to find out that you were good for nothing (Coincidentally, many have called me that before). To think that you could have been living high on the hog by lying, cheating, and stealing with no repercussions. If that's the case, I'm going to be doubly pissed.

What if there is an afterlife? That's a pretty long time. What's there to do for an eternity? Even if you binge watch every episode of every tv show, you're still going to have some more time to kill. One good thing is that you won't have that "I didn't have time excuse" to throw out. God asks, "Did you bake the angels those cookies?"

You shrug, "Yeah, I just didn't have time."

"What do you mean?" God huffs. "You've only had forever to do this."

Many have died and claimed to have gone to heaven and then returned back to earth, because they say, it wasn't their time yet. Maybe. But maybe, they didn't like you up there. You weren't "heaven" material. Perhaps you were like the nerdy guy who wasn't picked to be on anybody's dodge ball team. The near death accounts seem to have eerier similarities. They are pronounced dead. They leave their body. Float up through a tunnel. See a bright light. Chat with old relatives. Get the boot. And return back into their wretched bodies. More importantly, the event changes them. They turn their lives around, they become more spiritual and less

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concerned about material things. These turn out to be the best people to hit up for money.

Some people can't wait to die. They're like, I'm tired of this life, gimme something else. Maybe they're bored. If you think life is boring, you're wrong. You're boring. But, what if life after death is worse than life? Could you imagine? You've made it through a life of pain, misery, tragedy, bratty kids, drunk uncles, and friends borrowing money that never repay you; and then you die and you're like, "Wow, I'm glad that ordeal is over with." You go to some big room in the sky and the curator welcomes you, and then he/she sits you down next to Kim Kardashian and says, "Why don't you all talk amongst yourselves. I'll be back in, say, six hundred years." You'll be begging to go back to your miserable life.

The good, or bad, thing is that medical science has made a lot of in roads to keep us all around a little longer. People have exchanged unhealthy habits, like smoking, to stuffing their faces with junk food. We've learned diabetes trumps lung cancer any day. The question is, do we really want to hang around this world any more than we have to? The poor elderly people are thrown into the old folk's home, only to be visited once in a blue moon by their selfish kids who are just trying to get their ungrateful hands on that checkbook, or to make sure that their names are still in the will. Take me now, Lord!

It's difficult to have a loved one depart. Last month I went to a funeral. It was very upsetting. They told me it was going to be open casket and, stupid me thought they said open bar. Talk about grieving. I was in mourning all morning in search of a Mimosa.

One thing I don't want to do is drag out my death. When it's time to go, let's just get in the car and go. I don't want to be lying in a hospital bed for months groping a morphine pump, however enticing it may sound. To me pain, well, it's a pain. Plus, I don't want strangers having to change my diapers. That's my babysitter's job. Yes, I wish to go quickly, but not too fast. I would at least like time to pack. The dilemma will be, do I bring short sleeves or long?

Statistics show that dying is the leading cause of death. No matter how you slice and dice a cadaver, the bottom line is we all have to go at some point. You never have to worry about getting dying right; there will always be another chance for success. It's crazy that dying is a part of life. Woody Allen once said that he's not afraid of dying, he just doesn't want to be there when it's happening.

Well, let's just hope I had a good run. Hope this article lifted your spirits. Remember, dying is easy, comedy is hard. Let me know your thoughts. I'm dying to know. ■ ABILITY



by Jeff Charlebois



Yesterday as I was standing in line at the grocery store, I couldn't help but notice all the gum on both sides of the checkout aisle. This, while the person ahead of me piled more and more groceries on the conveyor belt. (I never knew a shopping cart could hold so many items!)

Instead of becoming frustrated that I'd gotten in the wrong line, I focused on all the colorful varieties of gum on both sides of me. This also kept me from getting engrossed in Kardashian-related tabloid headlines.

A visual scan revealed at least 30 different kinds of gum, if not more. That's when it occurred to me: Gum is big business because legions of people are passionate about chewing it!

For most of us, our adoration starts when we're kids, and is probably an extension of our pacifier, which we were completely attached to when, one day, Mommy and Daddy took it away and hid it forever.

Unlike hard candy, however, gum had a lot more rules associated with it:

- We were never to swallow it because it did not digest like regular food, and someday we would bankrupt our family with an expensive surgery to remove the huge wad of gum blocking our small intestine.
- We could not chew gum in school
- We could not chew gum in bed
- We were not to stick it underneath our desk
- We could not throw it out a car window
- We could not chew it in church
- We were not to use it to hang posters
- We were not to crack it
- We were not to chew the whole pack at once

These straitjacket-like rules seemed endless, and yet we still loved our gum! I personally loved Bazooka bubble gum the most because—in addition to blowing awesome bubbles—I got a comic-strip wrapper featuring the adventures of Bazooka Joe, along with my fortune at the bottom!

These days we have sugar-free gums, gums that whiten our teeth, and gums that freshen our breath. I mean, why do we even need a toothbrush or mouthwash or even a trip to the dentist for a cleaning? Apparently all we have to do is chew the right stuff!

I will be sticking with gum forever. Fortunately for us billions of gum lovers, the surgeon general hasn't come out with a warning that chewing it is hazardous to our health. In fact, many give up the deadly habit of smoking by switching to gum instead. See what I mean about the pacifier theory? We always have to have something in our mouths! (Get your mind out of the gutter; I made no reference to that. You went there yourself!)

In any case, as I scanned all the rows of gum at the checkout counter, I looked for my beloved Bazooka and determined that gum has something wise to impart to us:

One should only chew one piece at a time, and toss it once it becomes old and tasteless.

Don't live in the past by chewing old gum, and don't harbor it inside of you either.

Stick to your dreams, and never let anyone else burst your bubbles! ■ ABILITY



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by Geri Jewell



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THE GREAT TANGSHAN EARTHQUAKE

part 1

In 1976, a powerful earthquake struck Tangshan in northeastern China, nearly destroying the entire city and taking the lives of 240,000. At the time, international experts estimated those wounded who became paraplegics would not live beyond 15 years. However, 40 years later, 817 out of 960 are still alive. Though they escaped the hand of death in the Great Tangshan Earthquake, they were unable to avoid the fate of most people who are paraplegics in China. After the disaster, they received urgent medical care and were sent to various parts of the country for treatment. After a few years, each returned and found a sense of home at Tangshan's Paraplegic Sanatorium, where they formed friendships and found love among those who had also suffered. Although they'd lost their homes in the rubble to establish new ones, these resilient citizens learned to survive and pursue happiness. They integrated into society through their rehabilitation villages and their newly established cities. Their fight against their destiny and their self-made Nirvana has served as inspirations and revelations to those around them. This article profiles a handful of the residents of Tangshan Rehabilitative Village and tells their remarkable stories of survival and triumph.

Forty Years in a Wheelchair

Li Dongmei was just 13 and in the seventh grade when she was wounded in the earthquake. She later moved to Tangshan's Paraplegic Sanatorium and Rehabilitation Village. Since then, Li has been a three-time gold medalist at the National Paralympic Games and has won a total of 42 awards overall at home and abroad.

Twenty-one-year-old Fu Pingsheng was in the Fengnan countryside, visiting relatives when the quake hit. Badly wounded, he was taken to Shijiazhuang city for treatment and rehabilitation. He was later part of the first group of individuals to be admitted to the Paraplegic Sanatorium in 1981, and later to the rehabilitation village. He started learning the Erhu, a two-stringed Chinese instrument, and later established a small band called "Light of Love" that performed at Zhongnanhai imperial garden. They continue to perform in public.

Han Zhongquan, a former village head of the Tangshan Rehabilitation Village, was 25 years old at the time of the earthquake. He and the first village head worked together to build and run the rehabilitation village.

In 2015, Qi Wei was elected as the fifth village head of Tangshan's Rehabilitation Village at the age of 49 years old. His responsibility was to coordinate the daily affairs of the village.

Lu Dechang, a police officer, was 25 years old at the time of the quake. The night before the natural disaster, he'd served as a security guard for foreign guests. He received treatment in Shenyang city after getting injured.



Artist Yao Cuiqin was 22 years old at the time of the earthquake. The army's arts soldiers transferred careers, so she switched to banking. In the 1980s, she returned to the arts and performed on stage while also launching literary works such as "Focus on the Bamboo, Listen to the Rain" and "Plum Blossom Snow Shower." She has been known as the Zhang Haidi of Tangshan, a Chinese writer and motivational speaker.

The Night He Escaped Death

The humidity made it difficult to fall asleep. In the late hours of the night, I imagined the western sky was still burning crimson. This is the deepest collective memory of the survivors of the Tangshan earthquake on July 28, 1976. Some witnessed a dense swarm of dragonflies turn black, others noticed the unusual water level, but what Fu Pingsheng remembered was the extraordinary fog that day. It enveloped the entire city. Before going to sleep that night, he heard the sound of rolling thunder from far off.

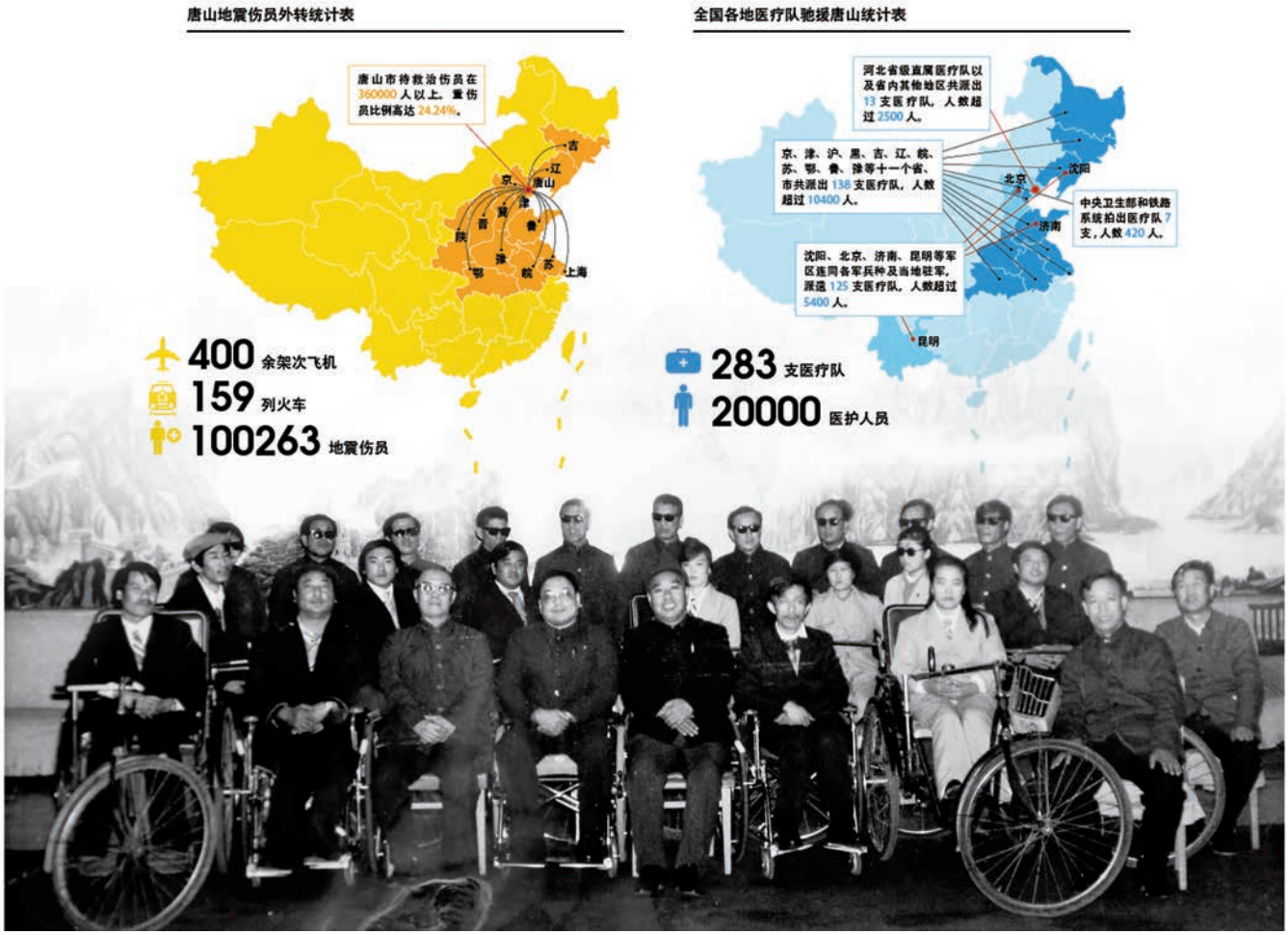
For a long time, people had talked about possible earthquakes. A lot of ordinary Tangshan families used indigenous methods such as turning a liquor bottle upside down as an early warning mechanism. But as time passed, people became less vigilant.

At the time of the earthquake, 21-year-old Fu Pingsheng was a school graduate in the Fengnan group near Tangshan. He went home to visit relatives that day. He did not find out until after the disaster that the graduate house had collapsed during the quake. The earthquake hit at 3:42 am, while most of Tangshan's residents slept. The vast majority of people were unprepared. The strength and power of the earthquake was equal to the size of 400 atomic bombs in Hiroshima; it tore apart the ground beneath Tangshan. The violent shaking caused houses to collapse in just moments. Heavy bricks from rooftops fell on Fu Pingsheng's back.

His older brother climbed out of the ruins and searched for him. Fu Pingsheng could hear his brother calling his name. He responded as best as he could, but found he could not respond any further because he could not find his legs. "In reality," he says, "my legs were still attached to my body, but I couldn't feel them." After being pulled out, he was laid on a door plank. He lost control of all bodily functions. "I was not comatose, I was conscious, and I was not hit in the head. The injury was all in my waist, but nobody realized the nerves were damaged. I simply could not worry about it." When recollecting this experience, he often repeated this sentence.

He lay in bed for four days, and his dad sat beside him. "I wanted to turn and look, but sadly, I couldn't even move. I'm unable to even express the heartache of that period," he explains.

Thirteen-year-old Li Dongmei lived in a one-story



bungalow built by the department of public housing. That night, she stumbled into bed after completing her homework. After being shaken awake by the early morning quake, the former savvy gymnast jumped from the bed to the floor. “I would not exist today if I had not jumped down,” she says.

But the moment she ran to the door, the doorframe and four heavy, prefabricated slabs came crashing down. Everything in front of her went black, and she lost consciousness. It seemed that a voice told her to, “go to sleep, go to sleep,” but the sound of footsteps and shouting from the outside pulled her back to reality. She yelled for help. It was her father and her father’s colleague who pulled her out from under the rubble.

“If it were not for the support of the door frame, I would have been trapped inside,” she says. But she still suffered multiple thoracic and lumbar spine fractures. When she was carried out, the skin on her forehead had all peeled off and her eyes were droopy. These scars are still visible today.

She was placed in a tent and fell in and out of consciousness. When she awoke, she was so thirsty that her throat felt like it was burning up. Beside her she recalled hearing one nurse tell another nurse, “This kid will not survive much longer.” The other nurse said, “Give her some water. She will be able to survive,”

Before rescue crews arrived from other areas, people started digging through the rubble with their bare hands; death and hopelessness permeated the air. Heavy rain and aftershocks continued to pummel the devastated city. When there were not enough tents to go around, many of the wounded that were unable to move were placed under tables to be shielded from the rain.

According to reporter Chai Jing’s written records, the survivor Yao Cuiqin also became a paraplegic due to the earthquake. Her experiences were similar: She lay on the floor as it rained outside. She was extremely thirsty, so she opened her mouth to have the rainwater quench her thirst, and then her hand brushed across her numb legs. She thought she was dead and kept moving her hand up to feel her legs. What she felt, instead, was her body. Her legs were broken. To the people of Tangshan, this became known as a “1/3 dead, 1/3 injured, and 1/3 alive” catastrophe. It left 3,817 survivors paraplegics.

Rescue Efforts On The Way

The earthquake turned the railroad tracks into fried dough twists. On July 30th of that year, the new Chinese People’s Liberation Army soldiers finally pushed through the traffic and entered the city. The large number of medical personnel from the other areas also rushed in. Tens of thousands of injured individuals were waiting for treatment of paralysis, fractures and extrusion injuries. Due to the hot, damp weather, maggots started growing

in the wounds of those who were unable to receive treatment. Shanghai's medical rescue team delivered ten thousand pain relievers and a thousand catheters. Everything was used up in one night.

On the fifth day after the earthquake, Fu Pingsheng's long awaited helicopter finally arrived. He was flown to the city of Shijiazhuang in northern China. For those who could not wait any longer for the new hospitals to be built in the disaster area, the wounded were put on trains and airplanes and sent to various parts of the country to receive treatment. Statistics show the earthquake left 100,263 wounded who were sent out to the following eleven provinces for treatment: Jilin Province, Liaoning Province, Shanxi Province, Henan Province, Hubei Province, Jiangsu Province, Anhui Province, Shandong Province, Zhejiang Province, and Shanghai.

The trains transporting Tangshan's wounded made stops all over the country. Nurses from the various hospitals started administering treatments to the wounded. Initially, those with spinal cord injuries did not understand their situation. They thought they had fractures, and hence, would be able to walk and work after surgery. They still could not quite wrap their heads around their situation, even when the medical staff labeled them as being in critical condition.

In his book, *The First Responder: Handwritten Notes From An Emergency Doctor*, medical expert Li Zonghao recalled the Tangshan emergency rescue efforts. "Due to the lack of manpower and technical expertise, many injured people could've been spared from the fate of paraplegia if there had not been errors in the handling and transferring process."

Among the wounded was Zhang Shenglan. She once was a nurse for a patient who had been a critically-ill paraplegic. On her fifth day after returning to Tangshan to get married, the earthquake hit. People carried her out a window and took her to the hospital; no protective measures were taken while transporting her. The turbulent truck ride was 80 kilometers. Meanwhile, the doctor who was treating her mistakenly thought she had a dislocated cervical vertebrae and hurriedly carried out a traction relocation technique. She was in such severe pain she fainted. Her paraplegia could have been avoided.

Han Zhongquan, once a former head of the Tangshan Rehabilitation Village, sustained 16 wounds on his body. His head had swelled to the size of a large watermelon. He remembers when he was transported onto the train, "We were passed through windows on wooden door planks because the doorframes of the trains were too narrow." All the seats and walkways in the train cars were filled with wounded individuals.

The biggest challenge for a paraplegic is often bedsores. Han Zhongquan was sent to a city in Henan Province called Hebi. He was on the train from July 28th to August 3rd. He barely moved during the ride and lay in a supine position. His hip section had swollen to 37 centimeters long, and he had bedsores 20 centimeters wide. Later, he had to endure a skin graft, and two of his legs were partially amputated.

Li Dongmei, who was in critical condition, was originally supposed to receive treatment in Zhengzhou, Henan. She vaguely remembers herself being on a tractor, and then being jolted around on a train, but because of internal bleeding and vomiting blood, she was urgently pulled off the train in the middle of Xingtai.

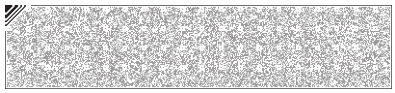
At that time, the city of Xingtai had not been assigned as a rescue site, but there were still medical personnel in the station ready to meet the wounded. Li Dongmei, who had lost a lot of blood, was pulled out the window of the train, put into an ambulance and driven directly to the hospital.

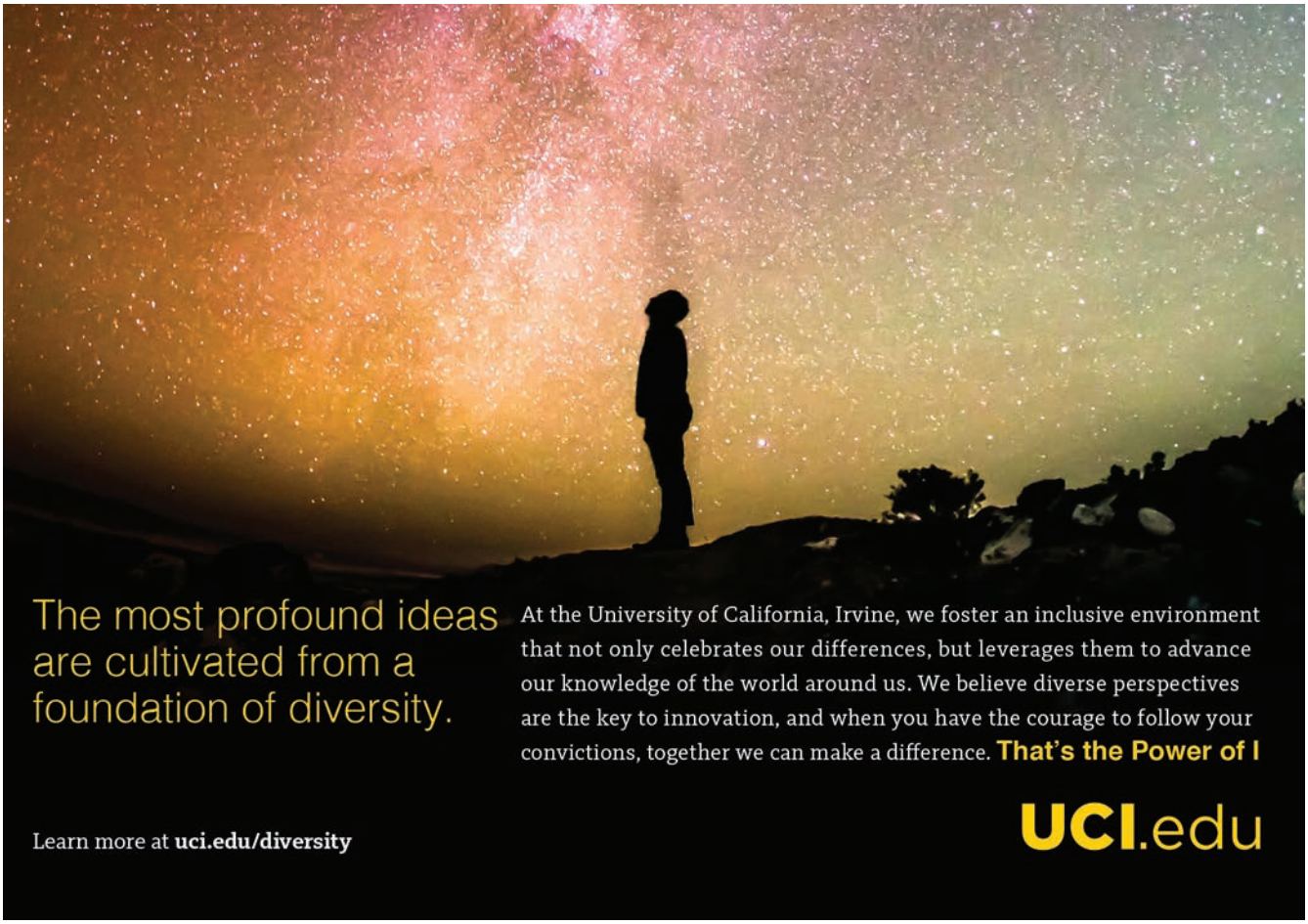
Many of the wounded and the local medical staff who took care of them forged a strong bond. Li Lixia, who was sent to the Central Hospital of Hangzhong city, was among the most critically injured. Most of her body was covered in bedsores. The surface of her wounds needed to be cleaned daily to prevent infections. Her sustained high fever would not subside. Even using a hand-held thermometer, her body temperature could easily reach 104 degrees Fahrenheit.
Her injuries were so severe they gave her "one week life-expectancy at tops; even final photos were taken," but her attending doctors and nurses did not give up or slack on the treatment. They still meticulously and cautiously attended to her wounds, even staying in the hospital in order to watch her closely. Eventually, they pulled her out of the road to death. They personally sent her back to Tangshan after the recovery treatment was completed. Li Lixia and her family would remain forever grateful to the staff and have maintained a long-term relationship with them.

Hulu Island in Liaoning Province is another main location that received wounded patients. Three months into her pregnancy at the time, Qi Guirong was heavily injured and was expected to be a critical paraplegic. She was transported to the local Bohai Shipyard Worker's Hospital for treatment. She had severe blood loss and was urgently in need of a blood transfusion. Thanks to the 3000 ml of blood donated by more than a dozen workers, who spent three consecutive days working to get blood to bring her back to health. After recovery, Qi Guirong went to Hulu Island twice to "go the thousand miles to look for family." She went there for the 20th and 40th anniversaries of the Tangshan earthquake. She visited staff and showed gratitude to those who worked so hard to save her so many years ago.

The Years of Recovery in a Foreign Land

"The doctors told my father they had already given their





best efforts and it would be up to me to see if I wanted to wake up, " Li Dongmei recalls. Three months later she was completely awake. Her mother and sister were killed in the earthquake, but her brother was also sent to Xingtai for treatment. She heard the words "severe paralysis" for the first time from the doctors.

Before her injuries, her physical exercise performance had been outstanding. She broke the Tangshan Elementary long jump score three times. She had an admiration for soldiers at a young age. Her goal was to grow up and become a "female sports soldier" and bring glory to the country.

"My first words after opening my eyes three months into my stay in the hospital were, 'When can I go to school?'" recalls Li Dongmei. "At the time, what I desired most was to be able to walk." The doctors told her it was thanks to her athleticism that she was alive. If it were anyone else, they would not be. If she took good care, she would be able to go to school soon.

Foreign experts at the time claimed the patients who were paraplegics would not live more than 15 years. On the one hand, some were skeptical of this prediction. On the other hand, perhaps in order give a sense relief to the wounded, many medical personnel used well-intentioned white lies to comfort them. They told patients their "neurological recovery would be very slow and not to worry." Patients were told they would recover in 30 years at the latest, or perhaps they would recover suddenly.

Young Li Dongmei believed "all sicknesses could be cured. It was just a matter of time." Coincidentally, there was a movie called *Female Diving Team*. The main actress was also a paraplegic, but recovered at the end and was even able to participate in competitions. The story inspired Li Dongmei who was convinced she too would recover.

However, she slowly learned about the reality of her situation from fellow patients, friends and family members. But she still believed that since she was young, she would at least be able to walk with crutches. Hence, she set up a strict rehabilitation plan for herself: waking up at 5 a.m. and using her walker from noon until evening.

Not all individuals who are paralyzed can emerge from the trauma of an earthquake in such a short time. They feel that they have suddenly lost everything during their best and most successful years: health, family, love and career. This is a huge blow that has brought many patients to the brink of collapse both mentally and physically.

The initial emotional state of those who are paraplegics is sadness and fear. Many people refused to go out,



Gao Qingfen holds a newspaper with a photo of President Xi Jinping visiting survivors.

afraid of the strange stares from people on the street. They were even more afraid of hearing, "Poor little fellow, I feel sorry for you." They even chose to close themselves off and commit suicide.

A patient who was a former, successful entrepreneur was transported to a hospital in Shijiazhuang city. After learning he'd lost his wife and child and that his wheelchair would be his life-long partner, he tried pulling out his infusion needle on several occasions, berating the doctors who tried to save him.

Another wounded patient, a young woman, was unable to accept the fact that she was paralyzed. When her room caught on fire, she did not make a sound. "It'd be better to burn to death," she said.

Moreover, another wounded woman attempted a hunger strike to end her life. She was being treated at Sanmenxia Municipal People's Hospital in Henan Province. Later, the local party secretary personally came to the hospital to persuade her to eat and encouraged her to live her life.

To those who have a grim outlook on their destiny, finding sustenance and resolve is a very important matter. To Fu Pingsheng, his sustenance was music. He was in treatment for three years and eight months at the Fourth Hospital of Shijiazhuang. "I thought I was not going to be able to play anymore," he said. "As soon as I was able to sit up, I started to practice."
Musically gifted as a child, he had been admitted to the Kunming, Yunnan Troupe to be an arts-and-culture soldier when he was 14 or 15 years old. "The notification letter had already arrived at my home, but because I was still young, my parents did not let me go." He once made his own Erhu by hand. When he was little, he would hug the family's Red brand radio as he listened to the songs they played. Just by listening, he was able to distinguish the voices and levels. Without a jukebox or tape recorder, he relied solely on the radio and learned many of the songs by ear.

Although to many the Erhu has a whining sound, for Fu Pingsheng, it made those painful nightmares of the quake fainter. He has wholeheartedly invested himself in his music. "Once I start playing, I don't have to think about anything else." Many of the injured in that same hospital listened to his music in order to overcome the initial emotions of the first few months of recovery.

Unlike the Hospital's Sanatorium

In the summer of 1980, those wounded were systematically and gradually transferred back to their local Tangshan region to carry out the remainder of their treatment and recovery. Since the quake, Tangshan city has built multiple public paraplegic recovery centers. Among the largest is Tangshan Paraplegic Recovery Center. It is a center funded by the government, which contributed more than $250,000 toward its completion. The 106 staff members who were trained in other medical treatment systems and institutions were urgently transferred to the new center. In May 1981, the first group of paraplegic patients was hospitalized in this brand-new home.

At the time, the nursing home was only one level. Another level was later built. In Li Dongmei's memory, the nursing center initially planted a lot of grapes and persimmon trees, which added to the grounds already

lush vegetation. Outside, the wards were also equipped with rehabilitory features such as a sunroom with three walls facing the light.

The recovery center was huge and devoid of the typical bustling and beeping sounds of a hospital. In fact, the only traces of a hospital environment were the nurses, clothed in white, which would come and go.

The recovery center's overall medical procedures have been very effective. The rate of bedsore cure is above 97 percent, and the incidence of complications greatly reduced. Today, 40 years later, out of the 3,817 survivors who are paraplegics from the Tangshan quake, 960 are alive. There are 44 paraplegic patients today who still enjoy free treatment at this recovery center. They have long overturned the prediction that those who are paraplegic will not survive for more than 15 years.

The recovery center's longest living individual was a woman named Zhao Kuiying, who lived to be 94 years old. Before she died, she expressed endless gratitude to the nurses who took care of them. Whenever she felt ill, all the people in the paraplegic recovery center would donate money for her care. She took out a notebook before she passed away. Inside it, she had recorded a list of people who donated money to her and the amounts. She asked the nurses to use whatever remains of her savings to reimburse these people: "Reimburse double the amount to those who gave $1.50 and $3.00," she said.

Searching for a New Direction

So many of the critically wounded required timely feeding, help with drinking water, having their bodies turned over, going to the bathroom, and tending to their treatments during recovery. There were also so many different kinds of mental conditions that needed to be constantly monitored, along with observation and psychological counseling. It was a task that required great patience and skills.

The individuals who became paraplegic expressed feeling more sensitive, vulnerable, and lonely, especially during the holidays. And many feeling more anxious about their future.

The recovery center places particular emphasis on psychological counseling, and this is precisely what was the most overlooked and least developed during the initial treatment of the earthquake victims. The medical staff increased the number of rounds to patient rooms and would often chat with patients. This not only increased the level of trust and understanding, but the medical staff was also able to grasp the emotional condition of each injured individual.

At 13, Li Dongmei was the youngest patient who was a paraplegic. Perhaps because she was so young or because of her cheerful nature she was known in the recovery center as the "happy seed." She would sit in her wheelchair and go all over. Everyone affectionately called her the "corridor singer."

In times of feeling low, like when she was diagnosed with an extremely painful case of appendicitis, the medical staff comforted her by saying: "You have overcome a big earthquake, and you can definitely overcome this." She says: "I felt that I was lucky compared to all the victims who didn't survive the earthquake. Because of this, I would be strong and continue to live well." ■

by Qu Hui and Bai Fan

Part 2 in following issue…

This story is part of a series of articles published as an exclusive editorial exchange between *China Press for People with Disabilities & Spring Breeze* and *ABILITY Magazine*.

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K. Lisa Yang and Hock E. Tan
Institute on Employment and Disability

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lifecycle



Having an unpredictable disease like multiple sclerosis (MS) helps me separate out and concentrate on the things in life that are really important to me. I understand the disease is unpredictable and, at any moment, I could be dealing with a completely new physical or cognitive symptom. I also appreciate how lucky I am to have been diagnosed at a time when the advances in treatment options have been growing by one or two a year. We now have 13 medications to slow down the disease's progression. Although I worry less about my MS now than I did when I was first diagnosed, I still try to make every day count. Chronic illness or not, life reminds us of how little control we have over the future and teaches us to cherish each moment we are alive. The world as we know it can change forever in a nanosecond.

Although I am always traveling across the country from speaking gig to speaking gig, it had been a while since my wife and I had a real vacation. In fact ten years had passed since we spent a full week together away from home. In 2006, Elin and I took a two-wheeled trip to Nova Scotia, Canada, for our honeymoon. We had an awesome time, and we always talked about returning someday.

We finally did it! We blocked off ten days in August, and it didn't take long for us to get excited about our route. The first day we rode 400 miles to Saint John, New Brunswick, and the next morning we took a ferry across the Bay of Fundy to Digby, Nova Scotia. Our anniversary trip had to stop in the beautiful port of Pictou, where we had an amazing meal and witnessed bald eagles and an insane sunrise.

Baddeck and Meat Cove were also on our short list of places we wanted to revisit. The Cabot Trail traces the coastline around Cape Breton Island and has incredible quiet views of the Atlantic. We rode miles and miles of undeveloped rural roads and visited the Buddhist monks at Gampo Abbey.

Our trip also had a second purpose. My wife had been researching her ancestry, and we planned the route around some libraries and courthouses, looking for information about her great and great-great grandparents. On the second day of our trip, we actually found information leading us to her ancestors' gravesite. It was kind of like a treasure hunt, but without the digging, of course!

We also decided to visit Nova Scotia because we wanted to stay close to home. My dad was in the midst of a declining struggle with cancer, and we suspected his days were numbered. My parents live in Rhode Island, and I had visited my dad the day before we left for Canada, riding 100 miles to his house with a shower bench recommended by his occupational therapist,







Elin and Paul



strapped across my bike. I stayed for a few hours, hooked up a shower wand, and held my dad's hand while he struggled with his oxygen tubes yet was still filled with hope and a strong will to live. It was hard seeing him so weak and worn out.

My mom, who had been caring for him for nine months had ignored her own health and was now in severe pain from a ruptured disc in her back. It was so hard to believe just a year earlier they were both in reasonably good health. I was reminded of how quickly life's circumstances can change and how important it is not to waste a single moment. Before I left, I kissed my father on his forehead, told him how much I loved him and how proud I was to be his son. It was the last time I would see my dad.

Elin and I got the call on the sixth night of our trip, after riding all day. My dad had been back to the hospital a few days earlier, having had trouble breathing again. His lungs were filled with fluid, and they attempted to drain them that afternoon. As my mom put it, "All hell broke loose," as they were doing the procedure. They had to intubate him as his lungs had stopped working on their own, followed by other organs.

When my dad first got sick, he asked his doctors not to tell him how bad his cancer was but just to try everything they could to save him. We were told for the first time in nine months that he had stage four lung cancer, and it was time to say good-bye. The doctors had done all they could. My entire family—five brothers and sisters, their spouses and kids—were all there with my mom and didn't want to take him off life support without me there. I knew it would be an entire day before I could make it, and I did not want to prolong his suffering or the entire family's, so I told them not to wait for me. It would be selfish of me, and I explained I had said good-bye just days earlier.

"I'm ok with it and besides," I said, "Dad already told me I was his favorite."

Although we cut our trip a couple of days short by riding 850 miles straight home the following day to be with family, our vacation was awesome. We really enjoyed spending time together and vowed to take a real vacation together every single year no matter what. You don't need to be diagnosed with an incurable, progressive disease to realize the cycle of life continues speeding by and tomorrows are not going be there forever. Try to take time out of each day to love and to live. ■ ABILITY

In memory of Deacon Robert W. Pelland
May 9, 1940 - August 5, 2016

by Longhaulpaul
Chasing The Cure

JAY RUDERMAN

building a foundation for social justice

Jay Ruderman is president of the Ruderman Family Foundation, which focuses on the inclusion of people with disabilities worldwide and educating Israeli leaders on the American Jewish community. Recent he spoke with *ABILITY*'s Chet Cooper and Lia Martirosyan about his philanthropy across a range of initiatives.

Chet Cooper: How did the Ruderman Family Foundation, get started?

Jay Ruderman: The family got together and said, "Since we're fairly wealthy, we'd like to give back to society." We've been evolving ever since in terms of how we run the organization and our focus. We chose the area of disability, and one of our first major investments was in Jewish day schools in Boston to make them more inclusive. For us, it was an issue of fairness. I mean, why are some children denied access to Jewish day schools and others accepted? That didn't seem very fair. So we put a lot of funding in that and have been engaged in that area for about a dozen years.

We've been in operation for about 15 years now and stay in contact with a lot of people to get different ideas. If it has to do with television or the media, we have a person who does our communications and advocacy. If it's something related to employment, then it's a different person. We have 20 people who work for the foundation, and they all do something a little different. It depends on what it is.

Lia Martirosyan: What did you do before the foundation?

Ruderman: I'd done a lot of different things. I'd been an assistant district attorney; I'd been in politics. But in 2008 when I took over running the foundation, I decided to let go of everything else that wasn't focused on disability inclusion. Disability rights is a civil rights issue and a human rights issue. We don't take proposals from people, instead we try to determine the programs we think show good practice in terms of inclusion. More recently, we've gotten involved in advocacy. We've also become very active in speaking out.


IN
2015
RUDERMAN
INCLUSION
SUMMIT



Jay and Shira Ruderman with their children





Morton Ruderman 1936 - 2011

Cooper: Where did the money come from? A corporation? Real estate?

Ruderman: My dad founded a medical-technology company called Meditech, and then moved away from that and spent most of his career in real estate. He was successful in different ventures. As a family, we're actively involved in our philanthropy; we're not just in the check-writing business.

Cooper: That's good. It seems like you're going into different areas, different types of disabilities. You have a dynamic foundation that's making a difference.

Ruderman: We're trying. We want to move the needle. I'll tell you, the deeper I get involved, the more I feel like the world is so big and complex. People think with social media, it's easier to reach people, but people sometimes just feel bombarded. We're trying to do more networking in the disability community. I think the more we work together, the more members of Congress, the administration, the media, etc., have to pay attention to us. If we're all in our different silos though, we're not as effective. Our foundation is doing our part to add value.

My nephew was diagnosed with autism. His diagnosis brought the issue closer to home for our family. Then my dad developed a disease called alpha 1-antitrypsin, which gradually reduced his lung capacity. He became more and more disabled, which was also so personal for our family.

Martirosyan: All families are affected in some way or another.

Ruderman: When I do public speaking, I ask the audience, "Who has a family member, a neighbor, a friend with some form of disability?" Every single hand goes up. We're all connected. One of our grantees in Israel is an organization call Access Israel. The guy who runs it is a former helicopter pilot who was injured in an accident. He says that people with disabilities is a group that some day we all will join. We don't think of it that way, but it's true.

As people live longer, disability becomes more of an issue. And there seems to be more children born with a disability. I don't know if it's true, or if we're just better at diagnosing certain disabilities than in the past.

Cooper: A lot of people don't identify the word "disability" with a certain health condition or situation because it's perceived as a negative that means completely nonfunctioning. It's sometimes a challenge to get acknowledgement, even from people who are awakened to the fact that they, or a family member, have a disability in terms of what the Americans with Disabilities Act (ADA) Amendment Act says.

Ruderman: I'll tell you one thing: our foundation

doesn't define "disability" for a reason. One is because the disability community is extremely fractured on the subject. About 20 percent of the population has some form of disability. Yet when we started getting involved in advocacy and pulled together some of the leading disability organizations in Washington, they were focused on a particular disability: a learning disability, autism or a physical disability. But they didn't seem to see themselves as being connected to each other.

Cooper: We're quite aware of that. One of the things we've been trying to do with the magazine over the past 20-some years is bring everyone under one voice, which I think is so important. The fact that they miss that is frustrating.

I'm curious. With your background in law, did you have any connection to the ADA or accessibility prior to taking over the foundation?

Ruderman: Not really. My background is in criminal law, although since getting involved I've gotten to know more about the ADA. We have a council of advisors whom we turn to when we have questions. One of them, Tony Coelho, used to be majority whip in the House and was one of the authors of the ADA. We recognized Tom Harkin, former senator, with an award we give every year in my dad's memory. We got to know him a little bit. So I've gotten to know people who were pretty instrumental in the ADA.

Recently, we released a white paper on Hollywood and disability, which revealed 95 percent of the characters shown with a disability on television are played by able-bodied actors. We did that with Danny Woodburn, who is an actor and an activist. The issue came up of how to define disability, because we'd never defined it. So we went back to the council, and they said, "Use the definition given by the ADA. It's the broadest definition. It incorporates everything." It was a difficult exercise for us because there were things we just didn't think about and had never focused on. But when you're looking at characters, and you're looking at their disabilities, then you have to think about it.

Martirosyan: I got called in to an audition for Google for people of all sorts of shapes and sizes and abilities. It's interesting that they're branching out—

Ruderman: That's great. I know Google has put an emphasis on trying to do something on this issue. Congratulations.

Martirosyan: Thank you.

Cooper: Do you know diversity agent Gail Williamson?

Ruderman: Yes. We did a white paper on television. We do white papers to target traditional media and social media to get a discussion going. Now we're doing a follow-up event with different studio heads and actors; Gail's going to moderate it at an upcoming event in Los Angeles. We'd be happy to have you involved. Our philosophy is not to recreate the wheel. We're trying to work with disability marketing strategist Tari Hartman Squire, director Jenni Gold and, of course, Gail. We've connected with people from the Annenberg School for Communication and Journalism at USC. There are many different people involved. And then the actors' union, SAG-AFTRA, has a committee on disability, and they've connected with us. We're trying to pull in different people who've been active in the past. Danny Woodburn and actor Robert David Hall have been involved with the union for a while.

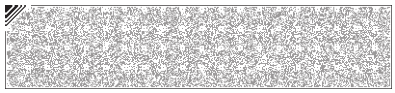
Cooper: Robert has probably been the most active of the actors. More recently, Danny has become very active. Allen Rucker had been involved too; he's a writer and author of The Best Seat in the House *about waking up one morning paralyzed for life. If you're able to bring the key players in, they can make decisions and create awareness around disability issues beyond what currently exists.*

We featured Danny Woodburn. Almost everybody you mentioned, Tony Coelho, when he was running the American Association of People with Disabilities, Gail Williamson, and actor Robert David Hall have been featured in the magazine. Senator Harkin wrote a column for us for probably 10 years before he retired, and Allen Rucker wrote for us regularly, as well.

Ruderman: We get the magazine, and I usually go through it. But I'm going to make an effort to go through it more thoroughly now.

Cooper: Let's talk more about the work you're doing and the organizations you grant. How much do you fund a year?

Ruderman: We fund around $10 million a year. We have three different offices: one in Israel, one in Boston and one in New York. The advocacy work we do we tend to do in-house. Funding in Israel is nationwide. There's a partnership with the government. While Israel has a majority of Jews, it's also Muslim and Christian. In the US, we started out in Boston, mainly in the Jewish area, and then started funding nationally to what we felt were influential Jewish organizations. But we're evolving further and getting more involved with some organizations that are not in the Jewish community, like we recently got involved with the Boys and Girls Club in the Boston neighborhood of Dorchester. The project's aim is to bring the police and young people with disabilities together, so police are more familiar with them, and they are more familiar with the police. Hopefully we can avoid some of the tragedies where someone with a disability gets killed by a police officer because of a misunderstanding, which we've seen almost on a weekly basis around the country.





Jay and *ABILITY Magazine*'s long time friends: (L - R) Marlee Matlin, Danny Woodburn, Congressman Langevin, Senator Harkin & Professor Michael Stein

Cooper: That's so important. Supporting initiatives like these have tended to suffer because of a lack of funding. Also, what you're doing in Hollywood is a great approach to raising visibility, which helps change attitudes in society.

Ruderman: Popular culture does a lot to shape attitudes. You can't compare different communities to each other, but in my lifetime the gay and lesbian community has become much more mainstream in society. I would venture to say it's in part because people began to feel more comfortable when they saw that group on TV.

In a *Washington Post* article on disability and Hollywood, we came out very strongly against the movie *Me Before You* because the lead character had a disability, but was played by an able-bodied actor. After that we got a call from a reporter from the *LA Times* who had just done a big spread on diversity in Hollywood and talked about the hundred people with whom Hollywood should engage to become more diverse: black, Asian, and Hispanic actors and producers, but no one with a disability. After publishing his story, he called us up and said, "I think I left something out here." So we started to talk to him. People are starting to realize that the disability community has been disenfranchised and deserves to have its rights recognized, which I see as a positive trend. I don't think it'll be a quick process, but I see more attention being given to it.

Cooper: Being in this arena for 27 years, we see a tick upward, but it's still an amazingly slow grind. It's different than other civil rights issues and other minorities. A different type of fear base. It's disenfranchised, as you mentioned. There isn't one voice that helps push though; you might be one of those key players who breaks the mold and gets things moving.

Ruderman: As the years go on, I've become connected with more and more activists, foundations and organizations; it's not difficult to get to know a lot of key players in the community because there are not many of them. We're sending out a letter with our brochure to 400 foundations that focus on social justice and poverty. I do see some changes coming about, and yet when I run into people who know me, they'll say: "Oh, you help people with disabilities," I say, "Not really, we're trying to foster more inclusion."

I often meet parents who have started groups because of an issue related to their child. Sometimes they're not the most inclusive. I've always told people, "Listen, it's not my job to judge you. I don't judge my brother and how he tries to raise his child. But I do think society needs to have more options for inclusion."

Martirosyan: How did you choose the 400 foundations?

Ruderman: Someone gave us a list that said, "These





foundations are major foundations that focus on social justice and poverty," and we started to reach out to them. I am becoming connected with more; I've done some work to try to pull together foundations that focus on the issue of disability. We tend to speak to each other. We don't all do the same thing. Some of us don't do any capital campaigns; we won't fund any buildings or projects like that. And yet there are other foundations that do. We focus on advocacy, while other foundations don't want to get into that. There's a saying that once you know one foundation, you know one foundation. I think that's true.

Sometimes I'll hear from people in the funding world who say, "We don't do disability." I'm like, "That doesn't make any sense. You're going to ignore 20 percent of the population?" It's all about educating people. Throughout history people with disabilities have been institutionalized and segregated, which tends to make you think that it's a group in need of charity. It's not about charity, it's about empowerment.

Martirosyan: Good point.

Ruderman: One that's not often well understood.

Cooper: Do you know Jean Judes of Beit Issie Shapiro?

Ruderman: Oh, yeah, sure, we work with them. Someone you probably have also come across is Michael Stein, the professor who runs the Harvard Law School Project on Disability.

Cooper: Sure.

Ruderman: He does a lot of consulting in different countries.

Cooper: We met him in Israel. I think the last time I talked to Michael, Jean had invited us to an event. Matter of fact, when it comes to Israel, we've done a lot of different things. We've done an editorial with some great science that's coming out of Israel. It's amazing how small the country is, and how much incredible technology they do that connects to disabilities.

Ruderman: It's a pretty entrepreneurial place. I was talking to someone about ReWalk. Have you heard of them?

Cooper: Yes, we were there. Lia was going to try their exoskeleton, but it was too heavy for her. Do you know about the shoes for children with cerebral palsy (CP), using chaos theory to retrain their gait?

Ruderman: I'm not familiar with that.

Cooper: It was created by Dr. Simona bar-Haim who's been working in this arena for years. Children who have a problem with their walking because of a disability—



Jay and Paralympic athlete Pascale Bercovitch

usually CP—put on these high-tech shoes, which help reprogram their mind, and the children start walking in a more consistent pattern. It's absolutely amazing.

Ruderman: Wow! We've been behind an incubator in Israel where people come and learn how to be an entrepreneur and advance their ideas. We'll be doing a white paper on self-driving cars, which could be transformative in terms of disability and mobility.

Cooper: Do you know Amnon Shashua? He owns MobileEye. He would have been part of that group with the self-driving cars. They're right in the forefront. They took that technology and created OrCam - a device you put on your eye glass frame and it recognizes objects for people with low vision. We held a panel at the UN Convention on the Rights of People with Disabilities (CRPD) and invited OrCam and Sesame Enable.

Ruderman: We might have funded part of that panel. Sesame Enable is one of the companies that started in our incubator; they're probably our most successful model. There are some great advances in technology.

Cooper: That incubator in Israel—are you thinking of doing anything like that in the States?

Ruderman: We haven't done that yet. I'm open to these ideas. We have some new staff and we're training them to get them onboard. I think that we could look at that. The organization we work with in Israel operates worldwide. It could be interesting. We did this thing in Tel Aviv called TOM.

Martirosyan: We know them.

Ruderman: And we were thinking of bringing it here. We do a summit in Boston. We did one in 2016 and had 550 people. The next one will be in 2017; we're aiming a little bit higher for this one. It's a networking summit on the issue of disability inclusion. Maybe we would do it in conjunction with that.

Cooper: That would be fun. We just started partnering with Hackaday. They have a $150,000 prize to come up with innovative creations that make life easier for people with disabilities. It's the idea of using technologies as a fun way to direct engineers and designers to help others move better, see better, live better.

Martirosyan: Were you communicating with Oded Ben-Dov of Sesame Enable?

Ruderman: Yeah, I don't know him personally, but I'm familiar with their work.

Cooper: Lia drinks with them often.

(*laughter*)

Just kidding. But they were on our panel. Have you gone to the CRPD?

Ruderman: I haven't. My wife was invited to the one Jean attended. We did some funding there. We have four little kids, so it's hard for us to attend everything.

Cooper: We'll probably hold another one next year. If you would like to be on the panel, we would definitely be happy to have you.

Ruderman: That'd be great. ■ ABILITY

rudermanfoundation.org



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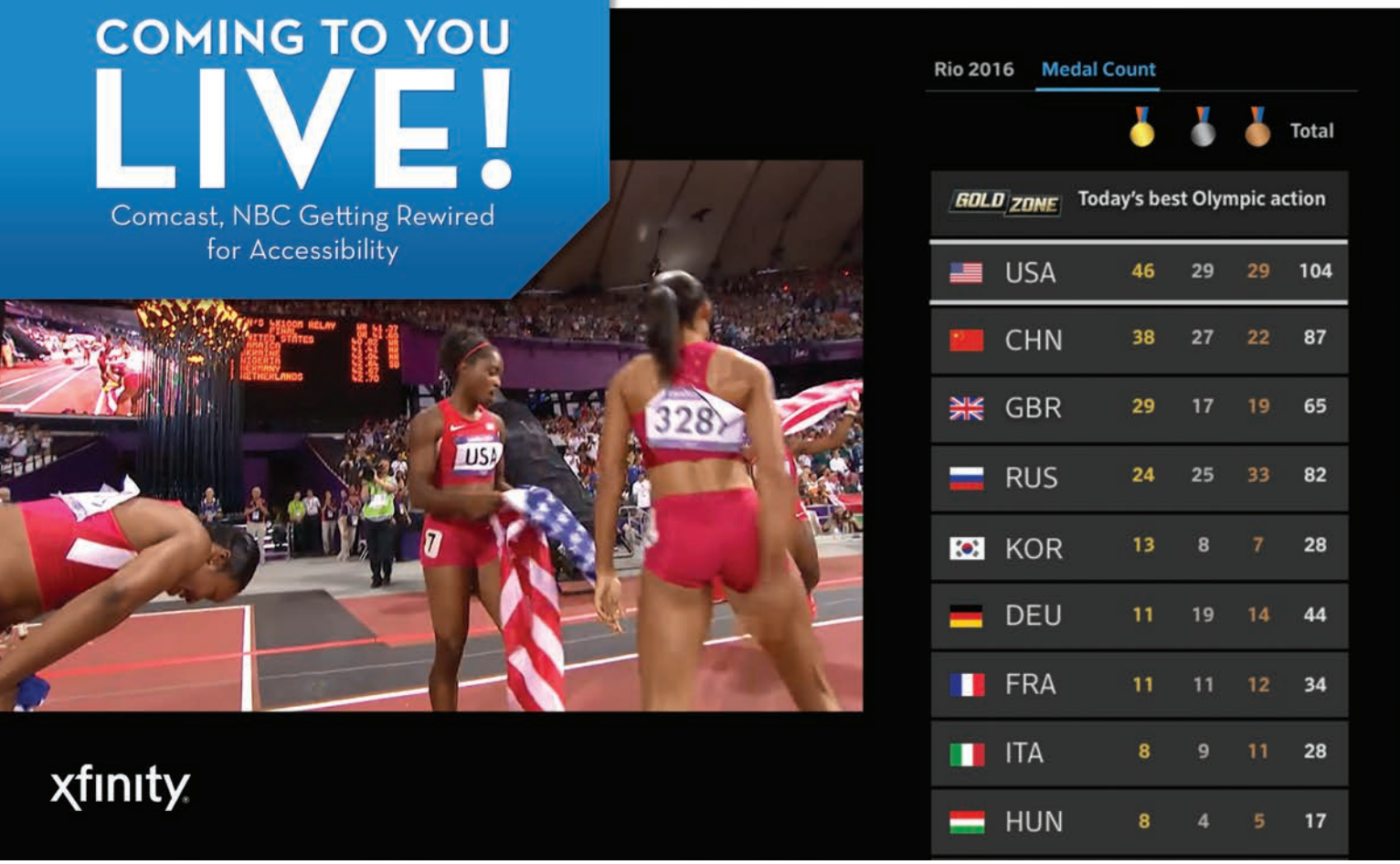
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In addition to its vast array of video, Internet and phone services, Comcast is the parent company of NBCUniversal, which includes Spanish-and English-language broadcast networks, 17 cable networks, a motion picture company and far more. The communication giant's Symphony marketing initiative promotes such programming as the Olympics and *The Wiz Live! ABILITY*'s Chet Cooper, along with audio descriptor Michelle Spitz, caught up with Comcast's Tom Wlodkowski to talk shop.

Chet Cooper: Tom, the last time we interviewed you, Comcast was moving forward with different accessibility components and features. Tell us about the latest innovations, including the live descriptive narrative.

Tom Wlodkowski: First and foremost, we're continuing our accessibility efforts, not only with X1, but across the web and mobile landscape with a cultural approach to development. We've starting to think more about home automation and seeking like-minded partners we can work with in the accessibility space.

The focus of some of our research is to understand where the value-added would be in home automation, and where gaps exist in serving people with disabilities. Voice is important to people with physical disabilities, so is being able to have true conversation in your home environment.

Cooper: What about accessibility for older adults?

Wlodkowski: We've been doing a lot of work in that space, trying to understand what's next, starting to take a look at the intersection of aging in place and the needs of older adults as it relates to accessibility. And we're always looking at accessibility for people with disabilities in general.

We made our first foray into live description with *The Wiz Live!*, which was a Broadway musical that aired on NBC in December of 2015. That was the first live, primetime entertainment in the US to air with video description. And of course we were back at it again this year by tackling the first US sports event to air with video description. We're trying to leverage the collaboration and strong working relationship to explore where the opportunities lie to advance accessibility. That's a big part of our purpose.

Cooper: I asked Michele Spitz to join us because she's one of the key players in the description-narrative space. She does it both as a business and as a philanthropist, donating a lot of her time and energy to make things as accessible as possible through her talents.

Wlodkowski: Great.

Cooper: Backtracking a minute here. The whole area of

smart homes, how to best create an environment that's good for people with disabilities and good for people who are aging in place, is very interesting. Many years ago, we partnered with Hewlett-Packard (HP) to create a smart home for a young man who had a spinal-cord injury and very little mobility. A power chair user, we got the home set up so he could navigate a lot of different things by voice command. This pre-dated most of the voice-command products currently on the market, so we had to come up with creative solutions tailored to him.

Some of these things are happening in a new way today, which is a great foundation for you guys to build upon.

Wlodkowski: It's about bringing in mass-market products and then trying to add innovation. Along those lines, we're working on a partnership that will be announced in the coming months. We haven't done the product-development piece of it yet, so I don't know quite what that will look like, but it's fair to say smart-home technology is something we're keenly interested in helping to move forward.

Cooper: Tell us about your role in the 2016 Olympics and any of the challenges Comcast had over the span of the games.

Wlodkowski: We participated as a result of our Comcast Symphony program, which looks for synergies across both sides of our company, whether it be the Comcast cable side, the NBCUniversal side or other business lines we have. We believe accessibility is an important piece of our strategy, and we're committed to it. As a result, we were able to get NBC interested in offering description live on the Olympics. For two weeks we had two describers, Norma Jean Wick and Jim Van Horne, in a studio at our NBC Sports Group facility in Stamford, CT. They described the four-hour, primetime show, which was broadcast nationwide on all NBC affiliates' Second Auditory Program (SAP) channel, where it was available as well as through our platforms on the cable side.

We also made the opening and closing ceremonies available with descriptions on demand for Xfinity customers, in addition to the rest of the programming. The prime-time show aired live and then was available on demand. In addition to the description, NBC did an unprecedented amount of closed captioning for the event online and everywhere else.

The feedback we've gotten on the description has been really positive. People are feeling, for the first time, that they understood some of the gymnastics routines. One person wrote that they didn't realize gymnasts used the whole floor for some of their routines. And in the diving competition, they didn't understand what some of the diving moves were, so they were described. I personally was watching the description of beach volleyball, where they said how they pounded the sand carried through that they were either really excited or really frustrated with a play. The audience could get a sense of that visual, which wouldn't come through in normal play-by-play commentary.

Michele Spitz: I know Diane Johnson and I know Descriptive Video Works. This was something they were so excited about doing. What's interesting is the blind or low-vision community I'm associated with was so excited to have this as an option. I did know a number of them were not aware of it, and I also wondered during this time frame how they were made aware. What was the platform through which it was announced?

Wlodkowski: There was an Associated Press (AP) story on it. We did book through community organizations like the American Council of the Blind. We did community outreach. Because it was our first time, I think we were a little bit nervous about how it would go, and what the reaction would be. You will probably see us even more vocal about it going forward. That said, I'm glad we led in this space, but we need others to do it too, so that there's more of an investment made by the description community.

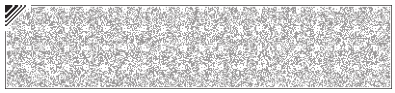
It's still in the early stages, and this Olympics gave us the opportunity to talk about our X1 set-top box and our platforms, and our talking guide that enabled people who are blind to navigate and watch the prime-time show on demand if they missed it the night before. They could independently navigate the menus to find it. They could independently turn on and off the secondary audio program channel, where the description is broadcast. They could read about the athletes and be more active participants in the Olympics.

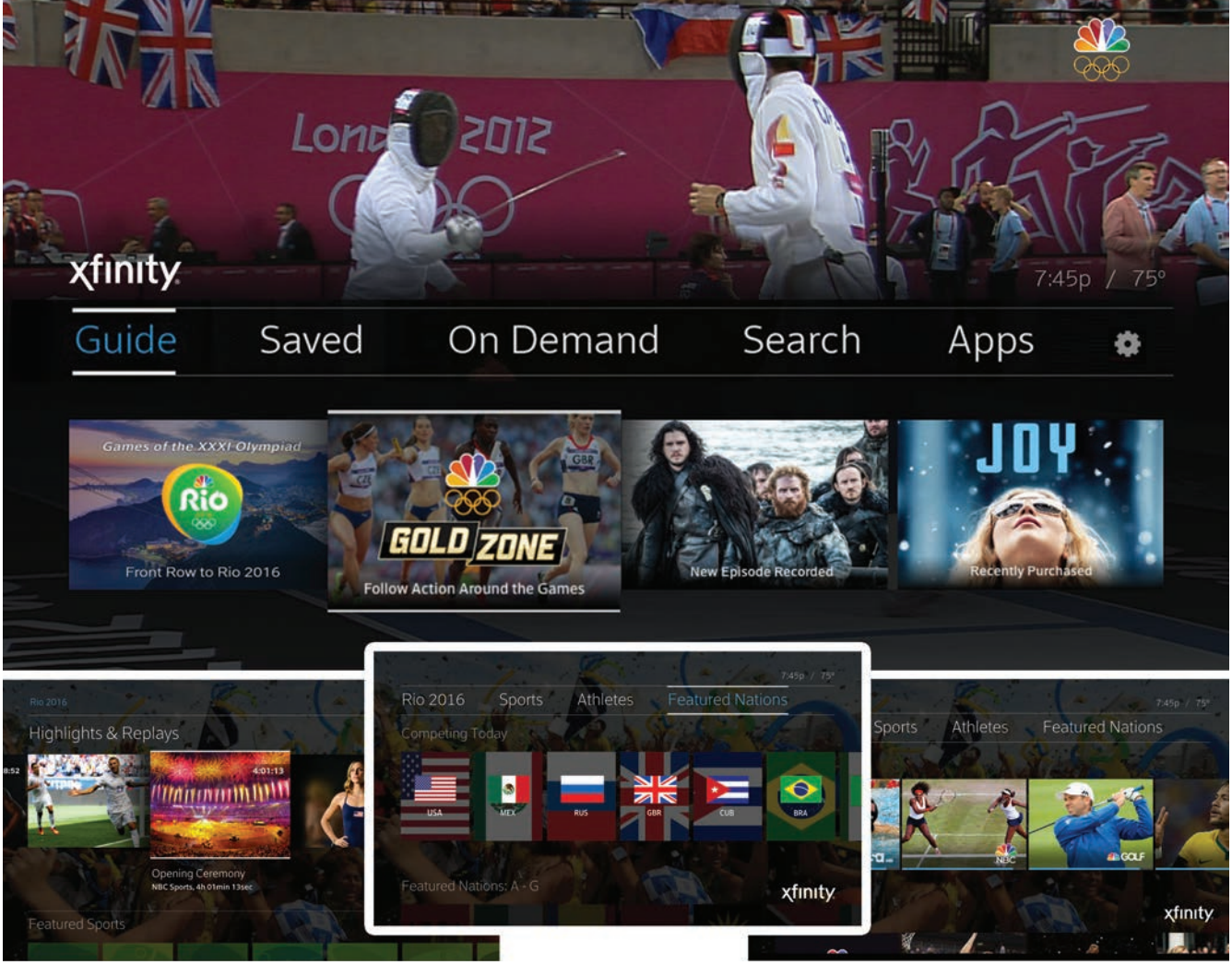
When we do these things, we're also trying to use the event, like the Olympics and descriptions, as an opportunity to educate the community. To your point about getting the word out, there are accessible set-top boxes you can get, in our case Xfinity and our X1 platform, that allow you to have independent control over what content you watch. We're always looking for an opportunity with these events. How can we position both sides of the company in a way to promote all of the different work that lots of people have put in to make accessibility a priority?

Cooper: What about the Paralympics?

Wlodkowski: We didn't have description there this year, to my knowledge. But NBC did have unprecedented coverage of the Paralympics. That's definitely something we'll look to do from a logistics standpoint down the road. We've got to find a way to balance both of these events that come right after one another, so we'll hopefully be able to do that at a future Paralympics.

Cooper: Michele would be great for that.





Spitz: I just finished the new documentary, The Beatles: Eight Days A Week*, which Ron Howard directed. I donated the description and narrated it. I do a lot of work. I'm very entrenched in this community and making things accessible. It's very interesting, if Comcast or whoever were to do the Paralympics in the future, that would be an incredible thing.*

I do think there was a gap in the public receiving this information. I forwarded the AP announcement, it was well received. Informing the public through a commercial or advertisement a week or two before the Olympics begin would be great.

What's happening as far as your partnership with forthcoming home automation? Is that tied into what's happening with the FCC (Federal Communications Commission) right now in terms of making things accessible to different communities with different disabilities? I know there's a big push around that now.

Wlodkowski: It's not directly tied to what the FCC is doing. I do co-chair the video programming subcommittee of the FCC facility advisory committee. We're involved in other subcommittees as well that have been set up by that advisory committee. And we have fairly frequent contact with folks who are there. But what I'm talking about with smart home isn't necessarily directly tied to any activity you might see coming out of the FCC.

Part of my role is to open up our products to the widest possible audience, which includes people with disabilities. We're in the middle of mid-year performance reviews, and if I were to look at my first half of the year, I would critique myself by saying I need to take on the challenge of shaping that next innovation space. What do we do with a mass-market product to make it work for people with disabilities?

I wish I had us positioned a little bit further along the path, but I think we're starting to come together now. We've got good ideas; we've got a really good project to rally around in the coming days, and we're starting to feel the momentum.

Cooper: Through this new experience, was there something different that stood out and that you found new about the Olympics? Were you able to be part of this for the whole two weeks?

Wlodkowski: I definitely was part of it for the whole two weeks, but I watched a greater portion of the programs with description in the second week. The first week I was taking care of issues as they came up, so I wasn't paying as close attention to the actual description. I wasn't relaxed and enjoying the show. But I certainly was the second week. For me, it was the reactions and the subtle visuals that I take for granted, but once you're told about them, they add meaning.

Michael Phelps hugging his mom or pointing to Boomer in the stands sleeping with headphones on. Those are the little details that if somebody were sitting next to me in the living room telling me, I'd be like, "Whatever." But the fact that I could get them on my own and have it told to me… I thought the description of athletes' reactions during an event was great, understanding that some of the dives are done with the diver's back to the pool—not facing it—that stood out for me.

We heard from one viewer of the descriptions that she learned for the first time swimmers start on starting blocks. She didn't quite have that information before. It's those subtle details that bring events to life. The closing primetime show, where they showed the torch burning, got you in that Olympic spirit. Otherwise you don't know it's there. I realize how much I miss or take for granted, because it's assumed the rest of the audience can see it, so they don't need to describe it.

Cooper: That's true.

Wlodkowski: It also shows us some things we need to think about. From live description, you do get some talk over the announcers. You can't really help that, even though they try to get the rhythm of every announcer and try to pick their pauses, it's impossible when you have just a split second to make the decision of whether you're going to open the mic and say something. That's a challenge.

It'd be interesting for the description community and the consumers to get together to talk through all the things we've learned and that perhaps we'll get another opportunity to do a second time around in a couple of years.

Spitz: I'm also curious whether your experiences with the Olympics and The Wiz Live! *made you to want to do more such programming. Are there other things that come to mind you would like to see happen based on that? Should it be in alignment with some of the discrepancies you're talking about refining?*

Wlodkowski: I'm technically on the cable side of the house and not the NBC side. I'm grateful I have friends and colleagues on the NBC side who are willing to champion events like this.

I have lots of ideas I think would be great. But I don't want to get too far in front of where we are. I think we've got to learn from this. I think there's work to do, as you said, to get the word out about what we're already doing. We tweeted about it. We did social media blasts. We did all sorts of things, but how do you get the message to your target audience? We're still in an early stage. We're probably where closed captioning was when it first started.

We're just now starting to build momentum around descriptions. So we'll see.

Spitz: Well, congratulations!

Wlodkowski: Thank you! I think what we do with description should be on equal footing with the work NBC did with closed captioning; it went well beyond what was legally mandated by the FCC.

Spitz: That's absolutely correct. I would be the happiest person on the planet if it ends up matching that level of awareness and implementation.

Wlodkowski: We'll see where this all goes. I think somebody's got to put a stake in the ground and try some things. We certainly have, and it's been announced *Hairspray* will be available with live description in December. So there will be another musical with live description.

We've just got to pick where we think we can pull something off pretty well, and then keep pushing the envelope. But it has to be done in a good, calculated way. I don't want us to bite off more than we can chew.

Cooper: Is there anyone on the NBC side you're working with directly who's also a champion on a corporate level beyond just case-by-case projects?

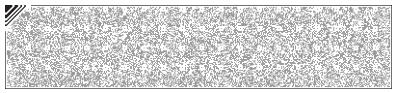
Wlodkowski: There are people who lead our Symphony effort who are champions. Gary Zenkel on the Olympic side is a huge champion of making this happen, and Maggie McLean Suniewick, who leads our Symphony program, was also instrumental. And the folks who were there day in and day out with the describers, along with our production support team, did a great job of making sure this went off without a hitch.

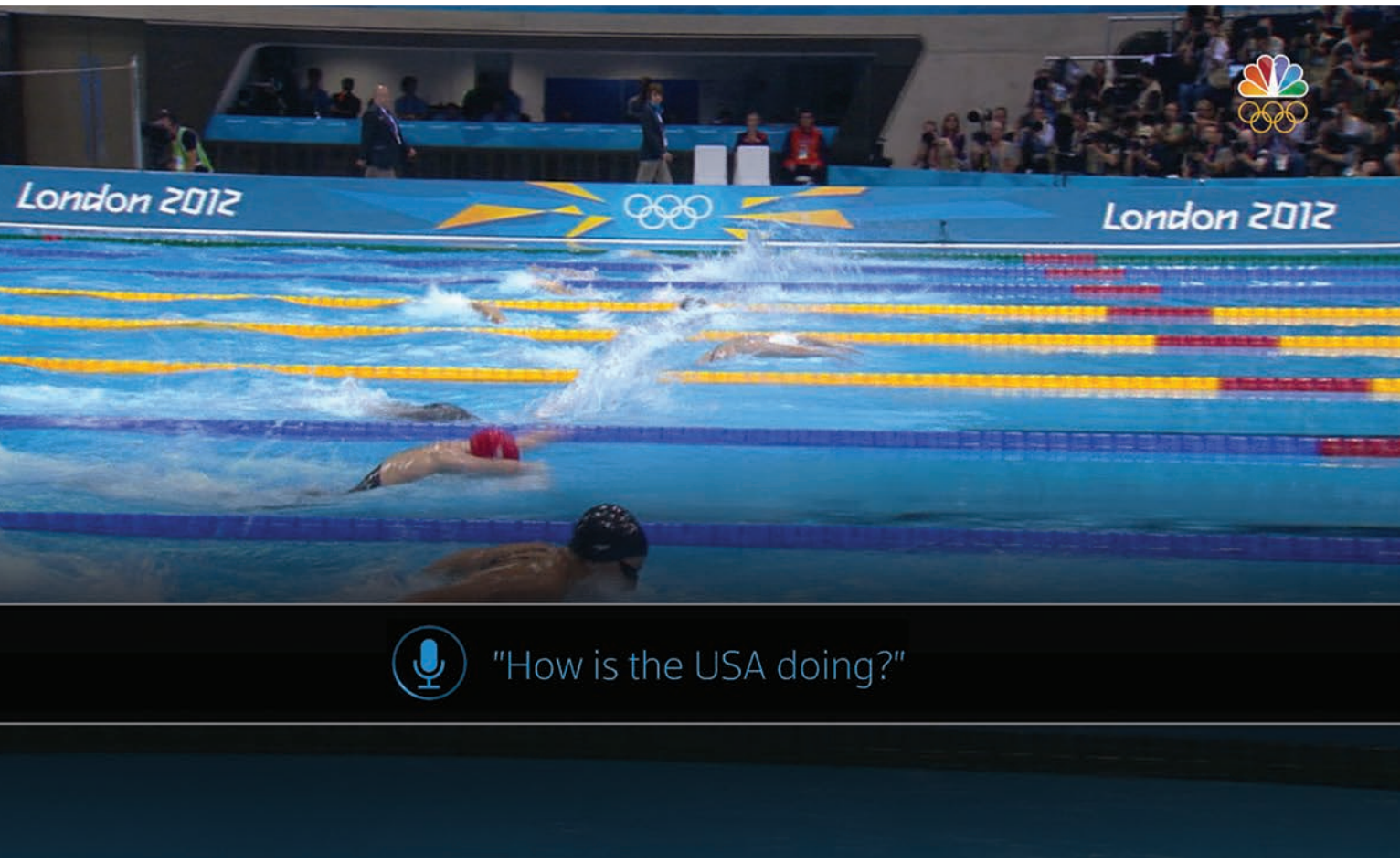
Description is not as easy to do as closed-captioning, not that that is easy. But from a logistics and production point of view, description is more complex to pull off. It's finding the right describer for the right type of show; the pool of live describers isn't as deep for television. I know it's done a lot more in theater. You want to have people who are comfortable. If I'm going to advocate an audio channel be dedicated and broadcast across the country, I really want to be confident that whoever is behind that microphone has had on-air experience. We just don't have a lot of that. A lot of description is prerecorded.

I know Descriptive Video Works does a lot of live description in Canada, and I know there are great organizations doing work here in the US. So I think the description community needs to come together and help educate us in the cable and broadcast industries as to who is doing what, and what resources are out there with this type of capability so we can try to do more.

Spitz: Being on the descriptor side of things, that's fascinating to hear.

It's unique work, and it does take a certain repertoire,





whether it's for animated, more broadcast-oriented and so forth. There's a fine line as to where one fits in. I strongly believe if the community that does this work heard your input it would be invaluable to them. They could cultivate their talent and cater their training to exactly what you're talking about. And there would probably be a whole other category of describers who would then fall into that niche. I'm grateful to have this information.

Cooper: I agree. So Tom, are you all planning to go to CSUN (Technology and Persons with Disabilities Conference) this year?

Wlodkowski: I usually always look for a trip to San Diego in March. I promise to actually go to the event this time and not hang out on the beach. Just kidding!

(laughter)

Cooper: As I listen to this conversation, I know there's a larger group of people who would want to use or have access to this capability who will be attending CSUN. What if we talk with CSUN about a separate session, or maybe something larger that brings the players of different camps together, and see if we can't use that as a forum to further discuss what you've shared here?

With such a great audience that's international as well as local. If you'd like us to talk to CSUN, maybe the magazine could put something together.

Wlodkowski: That's a great idea. This is a discussion to be had between the description community and CSUN. If there's a panel you want to put together at CSUN and talk about the Olympics, or something like that, I'm sure we would be happy to participate. ■ ABILITY

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HUGH HERR
A BIONIC JOURNEY



Engineer and biophysicist Hugh Herr knows what it's like to lose a limb. He also knows how important it is to have reliable prosthetics that get you back in the game. A double amputee himself, Herr heads the Biomechatronics research group at the Massachusetts Institute of Technology (MIT) Media Lab, as well as his own forward-thinking enterprise, BionX, for researching prosthetic technology to help users reach new heights. *ABILITY*'s Chet Cooper and Lia Martirosyan recently caught up with the inventor.

Chet Cooper: Before we talk about your projects, can you talk about your experience mountain climbing in New Hampshire?

Hugh Herr: Sure. It was 1982. I set out with my climbing partner Jeff Batzer to climb Huntington's Ravine up a particular ice climb called Odell's Gully, which is about an 800-foot ice climb. We climbed up without incident. The weather got increasingly worse, and we made the mistake of going towards the summit from the top of the ice base. The conditions got worse and worse as we marched on, to the point where it was a complete whiteout with blizzard conditions. We were barely able to see. The thing about the summit region of Mount Washington, it can have areas that are flat and rolling. In those conditions, it's very difficult not to become disoriented, because it's not like you're on a face where you know what's up and what's down. You're on a flat surface. Every direction is the same in a white-out condition. And with wind speeds constantly changing direction, within a minute you have no idea where you are.

Cooper: Did you also lose your sense of balance?

Herr: We did later, when we had severe frostbite, and we no longer could feel our lower limbs. We weren't getting the proprioceptive feedback necessary to balance. So we descended into what's called the Great Gulf region of Mount Washington, which is the wilderness side of the mountain with the most heinous of bushwhacking. When we hit tree line, we realized that we were off-course, but we could not retrace our tracks because the wind speeds were so high near the summit of the mountain that one could not even stand. So we were forced to go down the Great Gulf.

The average depth of snow was to the waist, sometimes to the chest, so we had tremendous difficulty moving. We probably did a mile a day with about the effort it takes to run a marathon, because of the very deep snow. We went for nearly four days, and we got ourselves to within a few miles of a roadway but couldn't walk any more. Luckily, a person was out snowshoeing for the day and came across our snow cave and went to get help. We were rescued via helicopter.

Cooper: Did he survive?

Herr: Yes. We both had severe hypothermia, but we survived that. We also both had severe frostbite. As you know, I lost both of my legs below the knee. Jeff lost one leg below the knee and on his other leg he lost half of his foot. On his right hand, he lost a few fingers and fingertips.

Cooper: Has Jeff been able to take advantage of some of the devices that you've been working on and inventing?

Herr: Not yet, but I'm confident it'll happen in the future. In my company, BionX, we have the first power foot-ankle bionic limb in the world. We've now fit it to 1,200 people, half of them wounded US soldiers. However, we only have reimbursement for 15 percent of the US population. We have reimbursement for veterans and recently injured soldiers and persons who lose limbs in the workplace and have workman's compensation. Everyone else, we have great difficulty getting the limb paid for, but we hope in a year or two that will be solved, and then Jeff can certainly try the bionic limb.

We're also doing research on how a prosthesis attaches to the body mechanically, which is called the socket. We can now mathematically derive an optimal socket for comfort. That technology isn't out yet, but I hope to make it available to everyone in just a few years.

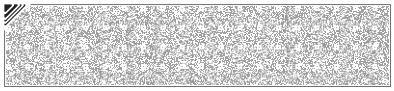
Cooper: The device then that is available, can you give a brief description of how that works for a person walking?

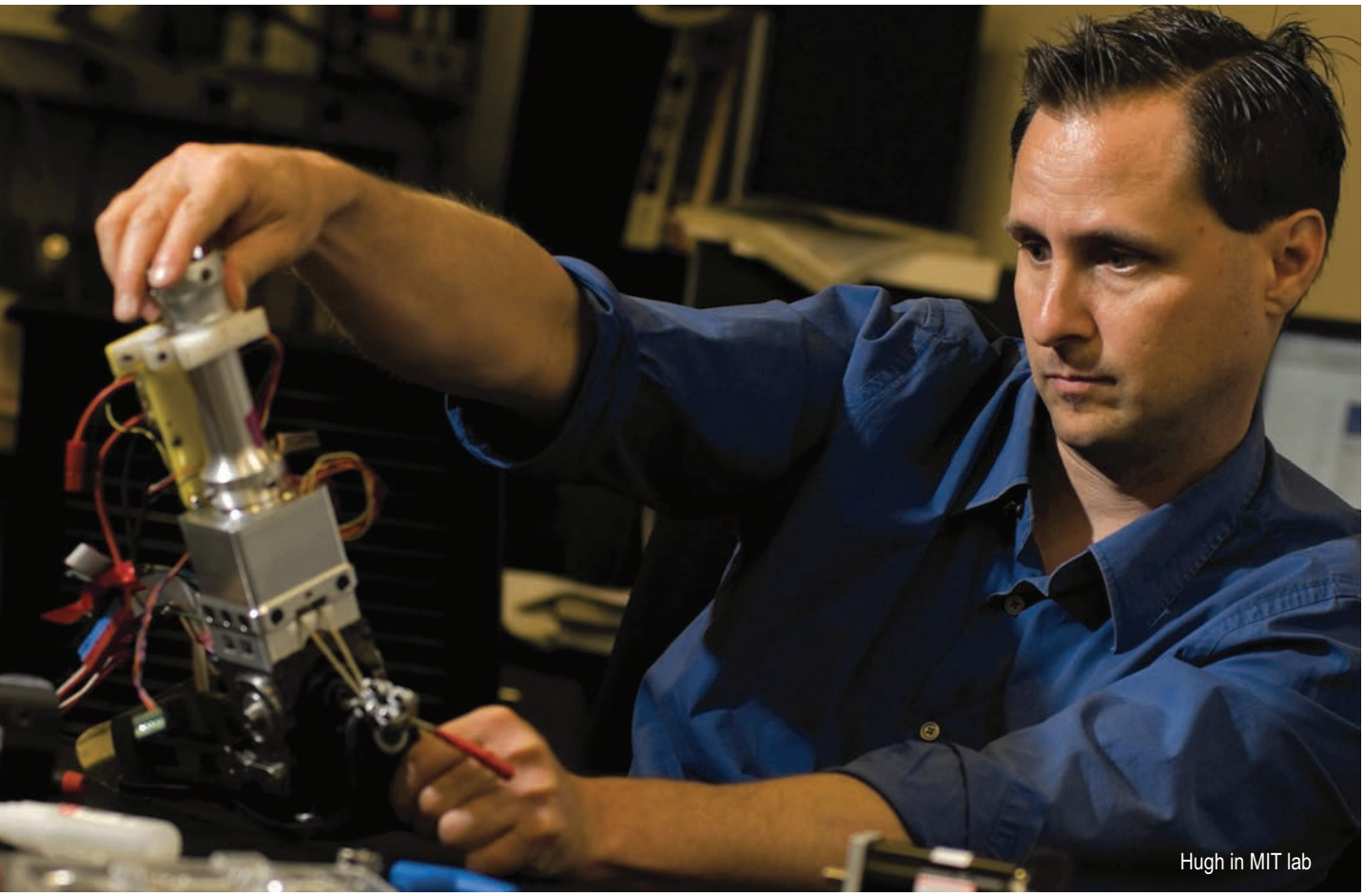
Herr: Sure. From my MIT lab, so far there have been two products produced commercially. One is a computer-controlled knee and the other is a foot-ankle device. With the foot-ankle device, each unit or foot ankle has three computers and 12 sensors. When it's powered, the ankle joint is actively actuated and controlled by the three computers. It emulates muscle function that once spanned the ankle joint, providing a person with natural stiffness and powers, enabling them to walk at normal speeds and at normal metabolic rates for the first time in history. That means that if you put a box around a human being and you only get to measure how fast they walk and how much energy they use when they walk, you can't tell whether the human being has bionic limbs or completely natural limbs. Which is pretty fun. It's progress.

Cooper: How do you connect it to the leg?

Herr: Most patients in the world have what's called a socket. It's a non-invasive mechanical attachment to the residual. It's basically a custom-made cup that you put the leg into and then if the socket is made properly, you can stand and walk with no pain. It's that interface that I mentioned earlier. We can now mathematically derive the shape and stiffness of that interface for optimal comfort, which is really, really exciting.

Cooper: So computers are picking up these different sensors?





Hugh in MIT lab

Herr: Right. And the synthetic sensors measure force, torque, position, speed, acceleration and temperature. All that gets fed into the computers, and the computers have to decide how the motor should be controlled.

Cooper: Why temperature?

Herr: Because if you're in Phoenix, Arizona, in July and you're mowing your lawn with a push mower, the motor will just overheat. So it protects itself from high temperatures. If it gets too hot, it'll start reducing its own power until it cools down.

Cooper: Until the patient or the person using it realizes that they need to take a break?

Herr: It's nothing wildly dramatic, but they'll notice a little bit. It's like a human stopping and taking a cold drink of water to cool down.

Cooper: I also read somewhere that you were dealing with drop foot. Is this technology used to deal with that condition?

Herr: Drop foot is a condition where a person has a biological leg, but the muscles that span the ankle in front of the leg or the anterior muscles are weak or paralyzed such that when they walk and they hit their heel—a heel strike—the forefoot slaps on the ground. We build what's called an orthosis, which is a fancy word for a brace that's motorized, where we can add in virtual muscles so the motor can be controlled in a way that the impaired biological limb plus the worn orthosis adds up to a normal dynamical response.

Cooper: So it's a similar computer process that you're using for the ankle?

Herr: Somewhat similar, yes. The difference is, in the orthosis, the biological limb is in the loop, in parallel, and in the prosthesis it's not in the loop. Let's say the person has some muscle function, but it's weak. In the prosthetic case, there's by definition no muscle function, so the motors have to do 100 percent. In orthosis, the motors may only have to do 50 percent because the biological muscle can do the other 50 percent.

Cooper: And when you're talking about the percentage of the muscle, you're talking about the muscle to raise the foot, or the lower leg itself that may be having a problem?

Herr: It's the muscle—if you lift your foot off the ground and move your toes towards the ceilings, it's those muscles that are weak in the case of drop foot. We have technology to treat weakness anywhere in the ankle. We can also treat the calf muscles, which are what you use when you point your toes.

Cooper: And that's on the market now, too?

Herr: Not yet. I'm working very hard to get that done. Hopefully, we'll have something in the market in three to five years. We're trying to raise money now. It's not about us not knowing what to do, it's just about getting the money and hiring the engineers and getting it done.

Cooper: So right now what you have is the idea? There isn't a prototype built yet?

Herr: Right. If you gave me $7 million, my team could get it launched in about 22 months. We're trying to find those dollars.

Cooper: The devices you're now using yourself, are they a combination of products that you've developed for your own use?

Herr: Very good question. Before about 2009, no part of my prosthesis did I design, simply because I never focused on my own needs in my inventing. I invented shoes and knees and crutches and all these things that I don't use. But we did this foot-ankle, and now I'm wearing it full-time. The part of my limb that I'm still using that my team didn't design is the socket interface that I mentioned. But that will change in about one month. In a month, every part of my limb will be something that my team developed, which is a lot of fun. It's really cool. Again, we're using mathematics to design the most comfortable fit, and then we're going to be 3D printing the interface out of titanium and polymers. We can make it really, really beautiful as well. It'll be fun.

Cooper: So part of the customization that you're seeing with the other products connects with 3D printing?

Herr: The vision is that in the future, every human will have a digital model of their body stored in computers. When someone needs a new shoe or a new bra or a new prosthesis or a new brace, s/he'll just fabricate it from the digital model themselves and then the device or article will be delivered to the home without even having to go to a retail store. The shoe, the bra, the brace, it'll be the person's apparel, the person's device, no one else's. It'll be exquisitely comfortable and functional. So this whole notion today where we have sizing to fit across humans is just utterly absurd. We're really asking, what does it scientifically mean when something's comfortable versus when something's not comfortable? What are the properties of something comfortable versus not comfortable?

If we can answer that, we can produce optimality using mathematics, really fast computers and digital models of humans. What is the optimal bra for a particular woman? Those are the questions we're asking. Just in persons with limb amputation alone, which is approaching 20 million people, all 20 million people are uncomfortable, sometimes in a lot of pain, with today's prostheses.

Cooper: What I'm picturing now is that those people who do the fitting, they will become maybe outlets to do the imagery for the individuals to store the data you're talking about?

Herr: Now we're using these multimillion-dollar imaging devices to collect the data to build the mathematical descriptions of the human body. But what I want to do is invent new devices where you can collect that data with small, inexpensive technology. And then I want to ultimately have those tools distributed globally, where everyone has access to them.

Cooper: So maybe partnering with another company to develop that capability?

Herr: [*pause*] Maybe, but it will probably be a new company. We're developing the technology right now.

It'll be about two years from now or so. In that future world, when a person needs a new artificial limb, let's say the left leg is amputated, not the right leg; the person can digitally map the residual limb, the left leg, and s/he can also digitally map the right leg that's intact, and all that data will go to a central fabrication facility with really fast computers. The whole limb will be designed, and if the person wants, it'll be perfectly symmetric with their biological leg and optimally comfortable. And the limb will be shipped in the mail. They'll be no need to visit a clinician to get the thing made. That's an outlandish vision that will take a while to develop, but that's where the world is going.

Cooper: And it'll be delivered by a drone?

Herr: [*laughs*] That's right!

Cooper: Will people go somewhere to do the mapping?

Herr: No. In the most audacious vision, the users have the mapping tools, and they map their own bodies.

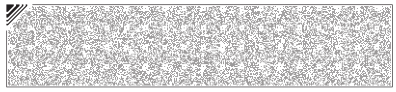
Cooper: So it's a one-off. Maybe it'd be something like a shared device that could be moved around. I just heard something on NPR this morning about the peer-to-peer expansion in Europe with cars, where you rent somebody else's car and drive it.

Herr: Maybe the device will be so affordable that a person can just own it. In the worst case, the person will have to go to a community center or something to get themselves mapped.

Cooper: Maps 'R Us. How big is your team? You've got a lot of projects you're working on.

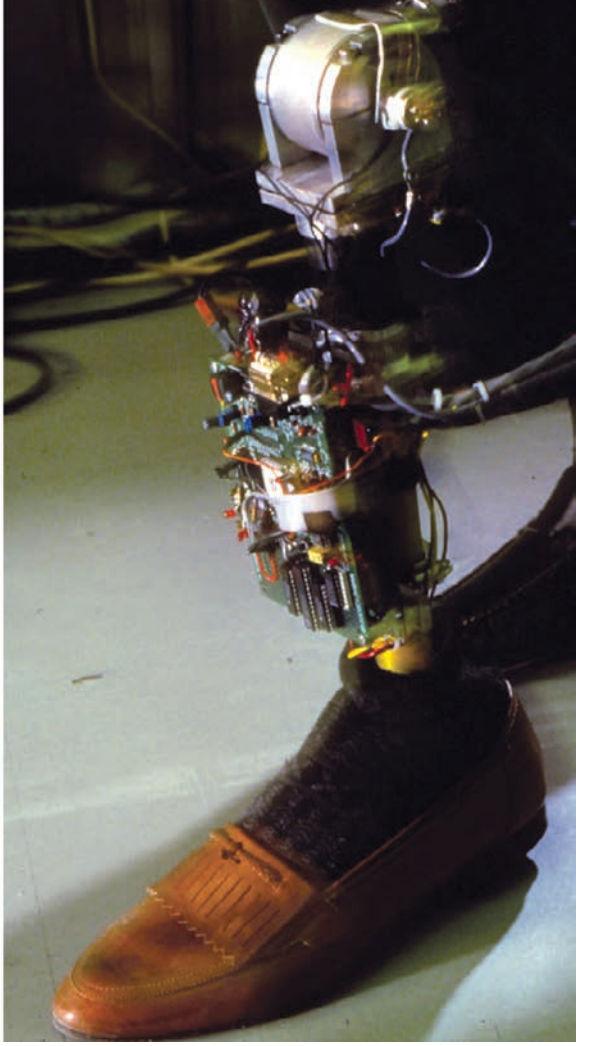
Herr: It's remarkably small. My MIT group is about 35 people, and my company is about 55 people.

Cooper: That's a lot of people for your company. Right now





Hugh dressed to repair during a photo shoot



you have your limitations because of financial reasons?

Herr: Yeah. We're not short of ideas. Finances completely determine what we can do and how quickly we can move.

Cooper: On a daily basis, do you go into the lab? What are most days like for you?

Herr: My busiest day in the lab is when I meet with every single student, and we talk about their project, their progress, and how to overcome difficulties. I try to do that on a weekly basis. It's hard guiding the ship and doing what I need to do to raise money.

Cooper: And on your free days, do you still do any climbing?

Herr: I've been trying to go to the gym just in my daily life here. The last time I climbed outside was in August. I went to the Italian Alps, to the Dolomiti, and did some climbing just north of Venice. I may be going to Jordan in April.

Cooper: Is there something to climb in Jordan?

Herr: Oh, yeah, it's remarkable.

Cooper: I guess there has to be something, because the Dead Sea is right there, and that's the lowest place on the planet.

Herr: They have very, very high cliffs.

Cooper: Now that I think about it, I remember driving up from the Dead Sea on the Jordanian side and driving up, up, up.

Lia Martirosyan: Have you been to Armenia and climbed there?

Herr: I haven't. I've been to Israel. I've been to Serbia, but I didn't climb there. In Europe, I've mostly climbed in Italy. The Dolomites are my favorite mountain range in the world, so far.

Cooper: When you were in Israel, did you talk to any other scientists, like the people who are working on the robotic exoskeleton?

Herr: I did visit ReWalk years ago.

Cooper: We were just there a few months ago. I can't remember the doctor's name that heads up the project.

Herr: They've made a lot of progress.

Cooper: But it's heavy, the battery-powered equipment.

Herr: I know.

Cooper: They wouldn't even let Lia try it on. It just didn't fit with her. She's petite, and they wouldn't even allow her to try a demo to see what it's like; they were too concerned because of the weight of the apparatus. Tell me the most exciting thing that's happened recently in your work that you didn't expect to accomplish.

Herr: It's obvious. I'm excited about this new fitting technology, and our various neural projects are very exciting, trying to get information in and out of nerves. It has a lot of potential. We haven't translated yet to humans. I look forward to that.

We have a whole program on neural control. We're trying to communicate from the peripheral nervous system, from nerves and muscles, to an external limb, and then also take sensory information from the external limb and stimulate into the nervous system.

Cooper: How do you test for that? Do you work with animals?

Herr: Sometimes. As quickly as we're able, we try innovations on human users. That's the dominant point. Humans are able to give very good feedback. You can't tell with an animal what they feel.

Cooper: Or say, "Lift your back left leg, please." When you get to that point, do you need a physician to be working with you to connect the muscles?

Herr: As part of the Center for Extreme Bionics at MIT, I've brought in and teamed with world-class plastic surgeons. We're redefining the surgical procedure as to how limbs are amputated. It fundamentally hasn't changed for a very long time, since the Civil War. We're redefining what's done with the nerves and muscles and bones when a limb is amputated, to make it more conducive to a neural interface and a mechanical interface. So yes, surgical technique is very much part of the research.

Cooper: I never thought of it that way—that there has been such slow progression. I do know that when someone is in the right center somewhere in the world for amputation, doctors start to think about the prosthetic. Oftentimes, they're more involved in just saving a life than what's happening after the fact.

Herr: Also, amputation amongst many surgeons is considered a failure. It's like, "Oh, we didn't solve the natural limb. OK, cut it off." I want to change that so BionX is part of the menu of options for the clinician who rebuilds limbs, where they're not tissue-centric and simply ask the question, "What's the best thing to do for the patient to improve the quality of life?" That may be trying to repair tendons and ligaments or it may be amputating the limb and getting the person bionics. They put the poor human patient through multiple surgeries and years and years and years of agony and a sedentary lifestyle, and often the patient turns on the TV and they see me climbing or some other person sprinting or doing something incredible, and they ask the very natural question, "Why the hell am I lying in bed all the time with a limb that doesn't work?" And then they beg their medical team to just amputate the limb, and they finally succeed at convincing their doctors to do that, and they're up and going within six months. They're like, "I wasted years trying to quote-unquote save the biological limb."

Limb reconstructionists are thinking in that way, but many are still what I would call old-fashioned in their views. Somehow, even if the biological has some pathology and is non-functional in some way, it's always better than a synthetic one. In many cases now, it's simply not true, but we still have a bias towards the biological limb.

Cooper: We did an article about someone—he's now a model, I guess—who had that mindset to say, "This is just not working. Can you take the leg off?" It changed his life completely for the better.

Herr: Viktoria Modesta was born with a birth defect and had a limb that didn't work throughout her whole childhood. She finally convinced her doctors to amputate the limb, and now she's this crazy, rising pop star in the world. Google her name and check out her most recent music video. It's fantastic.

Cooper: You're saying that with the procedure, her voice got better?

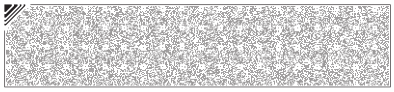
Herr: (*laughs*) Maybe. But seriously, she went from a young lady in high school and middle school, being very unpopular and made fun of, to an international star with a pronounced physicality in just a few years. It's a very interesting story.

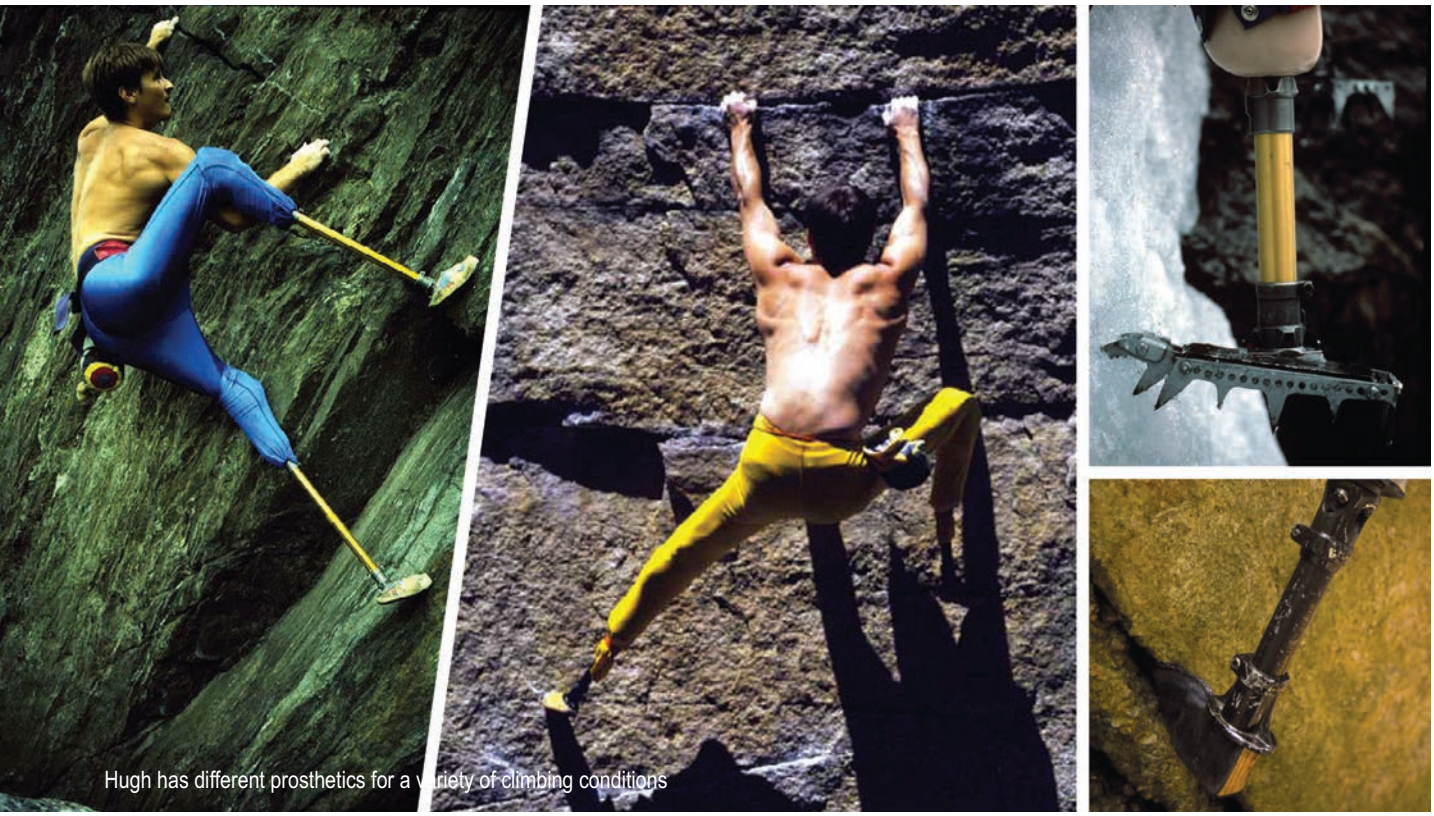
Cooper: What do you think about people racing with one-leg amputee versus dual-leg amputee? Is that an even race?

Herr: Oh, boy. [*pause*] My colleagues and I studied the biomechanics and physiology of running with those prostheses for about three years. Our conclusion was, we did not see any overall advantage to using such prosthesis for a sprinting performance.

Cooper: You didn't see a difference?

Herr: Oscar Pistorius and others who have used and are using the prosthesis, our results are that their physiology is the same. They use the same amount of energy, they fatigue at the same rate, but the mechanics of how they run is different than a person with biological limbs. In a biological human, when a human sprints, it changes its stiffness dramatically when the foot is in contact with





Hugh has different prosthetics for a variety of climbing conditions

the ground. A lot of that stiffness variation comes from the ankle. So if you replace the biological ankle with a dumb spring, you can't get that stiffness modulation that results in very, very high forces being generated on the ground, which is important for running fast.

So to exaggerate, a person who is running on these passive springs, it's like running on a soft mattress compared to a more rigid surface. That's an exaggeration. It's not that bad. But to kind of get your head around it, that's what it's like. Comparing two athletes with the same athleticism, we believe that a person with both legs amputated cannot generate as high forces on the ground as a person with biological limbs. So how people make it up is, they swing their limbs fast in the aerial phase of running. They get the leg ahead of them quickly. And perhaps they exploit the fact that the spring leg is lighter than the biological leg to do so. So there's kind of a disability when their foot's in contact with the ground, because they can't generate these high forces, and then they kind of make up for it by swinging their legs back and forth faster. That's kind of the hypothesis that we ended with.

If you watch films of Oscar Pistorius running, listen to his running. You'll notice that the frequency of foot strikes is very, very high. But he's running soft, like he's running on a mattress. And what's remarkable is that the energy he uses is the same as if he had biological limbs, and his rate of fatigue is the same. Physiologically, we could never see any difference. So there's these inane arguments that if you cut someone's legs off and put springs on them, then obviously they use less energy because they don't have to fuel the muscles, which is the most idiotic argument, especially for a Pistorius, because he got artificial limbs when he was one or two years old, and throughout his childhood he was running and trying to keep up with his brothers, so his entire physiology is adapted to the running ones. So his muscle mass around his hips is huge, because that's where his engine is, because he doesn't have natural ankles. His engine is his hip. That world of thinking that you cut off limbs and someone can run with less energy is naïve, because it doesn't comprehend that the physiology completely re-adapts because the limbs are amputated and you put two passive springs beneath the limbs.

Cooper: Interesting. Great question I had there! I didn't know you did that research.

Herr: Oh, yeah. Pistorius was banned from the Beijing Olympics. There was a law firm in New York City that took on his case pro bono. That law firm called me and asked if I would be an expert witness pro bono.

Cooper: And who would have known all that other stuff would have happened?

Herr: So for years we studied the problem. If you go to my web page at MIT, you can see lots of papers on the topic. And my colleague, Alena, at the University of Colorado at Boulder is still studying the problem. ■ ABILITY

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JON CRYER

GOODHEARTED THESPIAN

Born to a playwright and an actor, Jon Cryer's fate as a performer was sealed from birth. However, being an actor and in the eye of the public on a regular basis can be a lot of work. Watching Cryer take photo after photo with admiring fans, his smile never once faded. Try smiling for an hour straight and see how unforgiving your facial muscles become. Cryer didn't seemed phased by this at all, in fact, he wanted to make sure everyone received a fair share of his time.

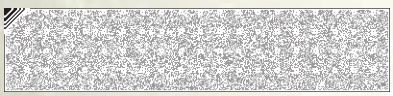
For years he's been making his children aware of inclusion by taking them to Shane's Inspiration in Griffith Park, a playground in LA for kids of all abilities, co-founded by Scott A. Williams of TV's *NCIS*. On this day, the organization was holding a Trail Run plus Walk & Roll event where Cryer was dubbed Grand Marshal.

After Cryer took the stage acknowledging the event and humorously thanked everyone for electing him Grand Marshal given his hard campaigning for the job, *ABILITY* chatted with him a bit.

We lived near the very first Shane's Inspiration playground, and I brought my son when he was about a year and a half.

Of course, he loved the park, and as any parent who's been to a playground knows, you've got time to kill. So I started reading the little placard outside. It said it's a playground for kids of all abilities. All of a sudden, it dawned on me that most playgrounds weren't, that most playgrounds didn't include kids who were fighting various issues. Honestly, I hadn't thought of playgrounds in those terms.

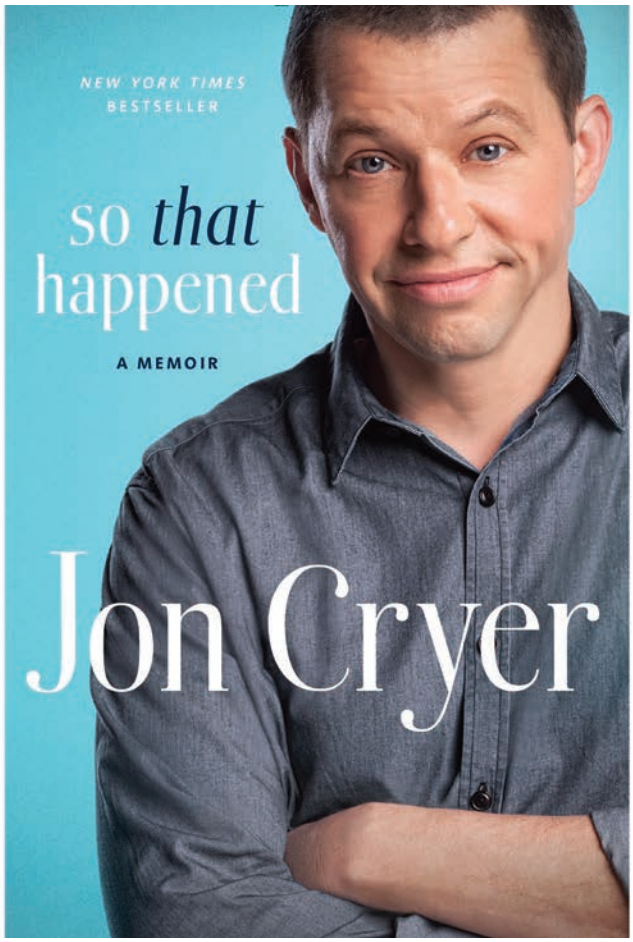
Cryer was quite stunned at the intention of this park. Sitting on two acres in Griffith Park, this playground is made accessible with its ultimate goal of inclusivity. And that was an "aha!" moment for him.







Cryer opposite Charlie Sheen (top), and Ashton Kutcher (bottom) from different seasons of *Two and a Half Men*



That touched me. Many years later, when I was working on NCIS, playing a character I really, really enjoyed, I got to meet Scott Williams, who wrote the episode. We got to talking about a million things, at one point he casually dropped the fact that he and his wife Catherine had founded Shane's Inspiration, and I was gobsmacked. I was so grateful to them.

Having an enormous admiration for what had been built, Cryer remembered the name of the park and soon recommended it to all of his friends.

First and foremost, it's a really fun park, and the influence of Shane's Inspiration has been felt literally worldwide in terms of how playgrounds are made and whom they're designed for.

It's amazing how much it has grown since I first took my son. Originally there was just one playground here in Griffith Park, and now they have them all over the world.

Shane's Inspiration parks have been built in many countries, and an announcement was just made regarding the construction of one in Moscow.

People the world over are realizing this is something that is needed, but people weren't thinking about this when they were building places for children.

Whether you fell in love with his role as "Duckie" in *Pretty in Pink* or his award-wining character of "Alan Harper" on *Two and a Half Men*, he's a dynamic performer with a career that began at a very young age. We were curious on how he felt about being asked questions he's probably answered over and over again. And then Jon gave us a little history of how he got into acting.

You don't become an actor hoping nobody will ever care about what you do.

(*laughter*)

You have to expect that to a certain extent people will be curious. That's fine.

I grew up in New York City, and both my parents were actors, so I was always around it. I was backstage at theaters on- and off-Broadway. My dad was in The Fantasticks*, which is a show that ran for, like, 30 years off-Broadway.*

I was born on a Friday night at 8:15—15 minutes after show time. And my mom is a playwright, so I grew up in that world. I knew pretty much, from when I was eight or nine years old, that this is what I wanted to do, just because it's so stupid, it's such a silly job. I kind of can't believe people get paid for it.



Grand Marshal Jon Cryer laying down the law

And I said, "Well, give me that job!"

But of course, many people do it and don't get paid. That was something I learned later. But at any rate, I went to a theater camp in upstate New York and was doing 18 musicals a summer.

It was one of those things where I never gave myself another option. I never really had anything to fall back on. It was this or nothing.

It's rare to meet performers that this is all they've done. Usually they've had different careers and had stepping-stones.

My first job was as an usher at a theater, and then I moved up to house manager, which meant I got to clean toilets.

And here's when we inserted a comment we couldn't pass up: If done well you can be flushed with success.

(*laughter*)

Exactly! That's my special skill. But I didn't give myself an alternative, and I also got incredibly lucky, because when I was about 17 or 18, there was a huge burst of teen movies, and lots of parts for people my age. You can't bank on that. But I just got lucky. So I started working when I was 18, got my first couple of jobs. My first gig was as Matthew Broderick's understudy in Brighton Beach Memoirs*; I lasted six weeks before they fired me.*

(*laughs*)

And then I did the Broadway show Torch Song Trilogy*, which took me to the Los Angeles production of the show, and once I was in LA I got jobs in movies, and the rest just happened.*

Cryer says he went to theater first, but always loved movies and feels he was a TV addict from the time I was seven years old. A New York native, he went back and forth to Los Angeles until a lovely addition was made to his life.

I'm a New Yorker, so you never stop being a New Yorker. But I was bicoastal until my son was born in 2000. I still had my apartment and still went back whenever I could. But interestingly, I never got as much work in New York as I did in LA. That's just where it happened to be.

People with disabilities are amongst the largest minority groups in any country, and social media platforms are allowing a venue for voices to be heard. With such a large and growing pool of incredible actors with disabilities in the industry, producers, directors, casting agents no longer have the excuse of not being able to tap into it.



SHANE'S INSPIRATION

Shane's Inspiration is a non-profit organization uniting children of all abilities through inclusive playgrounds.

In 1997, Shane Alexander Williams came into his parents' lives for a beautiful but brief moment. Born with spinal muscular atrophy, Shane passed away two weeks after his birth. Through their profound grief, Catherine Curry-Williams and Scott Williams began searching for a way to honor their son's life. They soon realized that Shane's disability would have prevented him from playing on a playground with other children. At that time, there were no truly accessible playgrounds in the Western United States.

So a year later, Catherine, Scott, and close friend Tiffany Harris, were rallying friends, family, and community leaders to build the very first Universally Accessible Playground in California. In 2000, they cut the ribbon on "Shane's Inspiration Playground" in LA's Griffith Park, beginning a wave of inclusive play that would change our city forever.

There are 56 playgrounds around the world and many more in development. If you would like to build a universally accessible and inclusive playground, the organization offers to be there from project development to the grand opening.

Unfortunately, Cryer's response to seeing actors with disabilities in the industry, is not all that rare.

Interestingly, little people have always been a part of show business as performers, but I've started to see them as crew members as well, which, obviously, is a welcome change. But no, that has been an issue generally, even when they're casting. They'll often cast somebody who doesn't have a disability to play somebody with a disability. And often it's out of producers either not knowing there's a community of performers with disabilities, or they assume there will be production issues that will make somebody who's dealing with, say, a wheelchair, difficult to get in and out of a location. But usually it's just ignorance. They're not aware.

Also, we don't have an infrastructure to create a community of performers with disabilities yet. It's changing, though. Spring Awakening *at the* Wallis Annenberg Center for the Performing Arts *with* Deaf West Theater*; they did a magnificent production and half the cast was deaf. It was an amazing piece of work.* Deaf West *is creating an infrastructure, but I think producers just aren't aware of it.*

KMR Talent Agency is currently the only agency with a diversity department that's specifically for actors and models with disabilities; their dedication in submitting and making noise about their clients isn't going unnoticed.

It's really awareness at this point. There's no lack of good will. People are, I'm sure, happy to do it. It was like the TV show Glee*, where they had a wonderful character who was disabled but wasn't played by an actor with a disability.*

Successful actors such as Danny Woodburn have been very outspoken in the media in raising awareness for the lack of actors with disabilities in the forefront of the industry. ABILITY Corps is creating the Actors with Disabilities Audition Fund to help with auditions and headshots. Actors are spending a lot of money and half the day getting to an audition, where there's about 20 more actors using wheelchairs showing up for the same small part—and then not getting it.

That happens sometimes. I've been to those auditions where you look around and say, "Oh, geez, there's so many of us! This is brutal!" Like I said, producers need to understand there are performers who are out there who are capable and willing to do it. The casting people are getting better at it, but again, it's a community that has to be built.

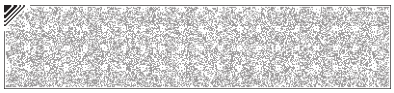
Seeing his passion towards what has and can be done, Cryer is ahead of the game than most when it comes to awareness and inclusivity. He and wife Lisa are active in other charitable efforts as well, such as the San Fernando Valley Rescue Mission.

It's for homeless families. It's a remarkable, remarkable place. Their old facility just burned down this year. Thankfully, they were in the midst of building a new facility, so they were able to ramp it up and get families in there. But they do amazing work. I used to do work with My Friend's Place, which is for homeless teenagers in Hollywood. They're remarkable.

Cryer feels he's still learning and that you come to awareness however you come to awareness. In the words of Duckie:

"Good Morning! Welcome to another day of higher education!" ■ ABILITY
(*Pretty in Pink*)

shanesinspiration.org
myfriendsplace.org





Debra Ruh

TAPPING INTO DISABILITY



In 1987 while working as a systems administrator and executive in the banking industry, Debra Ruh gave birth to a beautiful girl, Sara, who was perfect and happened to have Down syndrome. Ruh found the world had very low expectations for Sara. Later, Ruh was drawn to Virginia for both work and better educational opportunities for Sara, but found the expectations for her daughter, now a teenager, were still low. This proved to be a pivotal time for her life path.

As a technologist and businesswoman, Debra Ruh went on to create an award-winning technology company that employed talented persons with disabilities and provided tangible value for companies and their workforce.

ABILITY Magazine's Marge Plasmier sat down with Ruh, who is currently CEO of Ruh Global Communications, to talk about her new book, *Tapping Into Hidden Human Capital* and how companies who are not employing persons with disabilities are truly missing out and not meeting their full potential both in the workforce and in the marketplace.

Debra Ruh: So the experts started telling us how Sara wouldn't really ever add any value to employment, maybe she could bring shopping carts in from a Target or a Wal-Mart. I sat there thinking, "My daughter's 13 years old. She's going to be in school until she's 22. And that is the biggest-reach goal you have for this young lady, that she could bring shopping carts in from the mall? That's it?" It just woke me up to the employment issues involving people with disabilities.

I decided that I was going to make a difference. I quit my job in the banking industry and created a company called TecAccess. It was a technology firm focused at the time on building websites, but it was going to employ people with disabilities. I did it as a for-profit company because I wanted to prove a for-profit company could employ people with disabilities, especially severe disabilities, and thrive.

I realized pretty quickly that there were so many people doing web design, and it was hard to differentiate yourself. But around that time, there was a law that was being refreshed, Section 508 of the Rehabilitation Act of 1973. So I thought, "You know what would be really cool is if we could teach people to make the websites accessible to all of us."

Marge Plasmier: At what year was that?

Ruh: In 2001. I didn't know you had to code a certain way so that people with disabilities could have access to the information. So that's when I thought, "Wow! What a great idea!" And it just unfolded. I built the company to a multimillion-dollar business. Eighty percent of my team were technologists with disabilities.

It was all focused on mainly helping corporations, but we also had government and university clients, making sure their websites were accessible to people with disabilities. And who better to do it than the people who have those types of disabilities and who would know whether it's successful? At the time, very few of my competitors employed people with disabilities. I just kicked their butts. I did so well.

Plasmier: So in the early 2000s you already had a game plan. What value did people with disabilities bring to your company?

Ruh: They were such amazing employees. It was interesting because I also employed people, a smaller segment, who didn't have disabilities. But I found that the technologists with disabilities were more productive. They showed up more often than the people without disabilities, they whined less, they were very creative and innovative, and they were really my top performers.

And then I found that the more I involved them with my clients, the clients loved it. And so it became a huge differentiator for us. Our competition—we were just beating them terribly.

Plasmier: You talk about that a lot in your book. That was the big differentiator for your business?

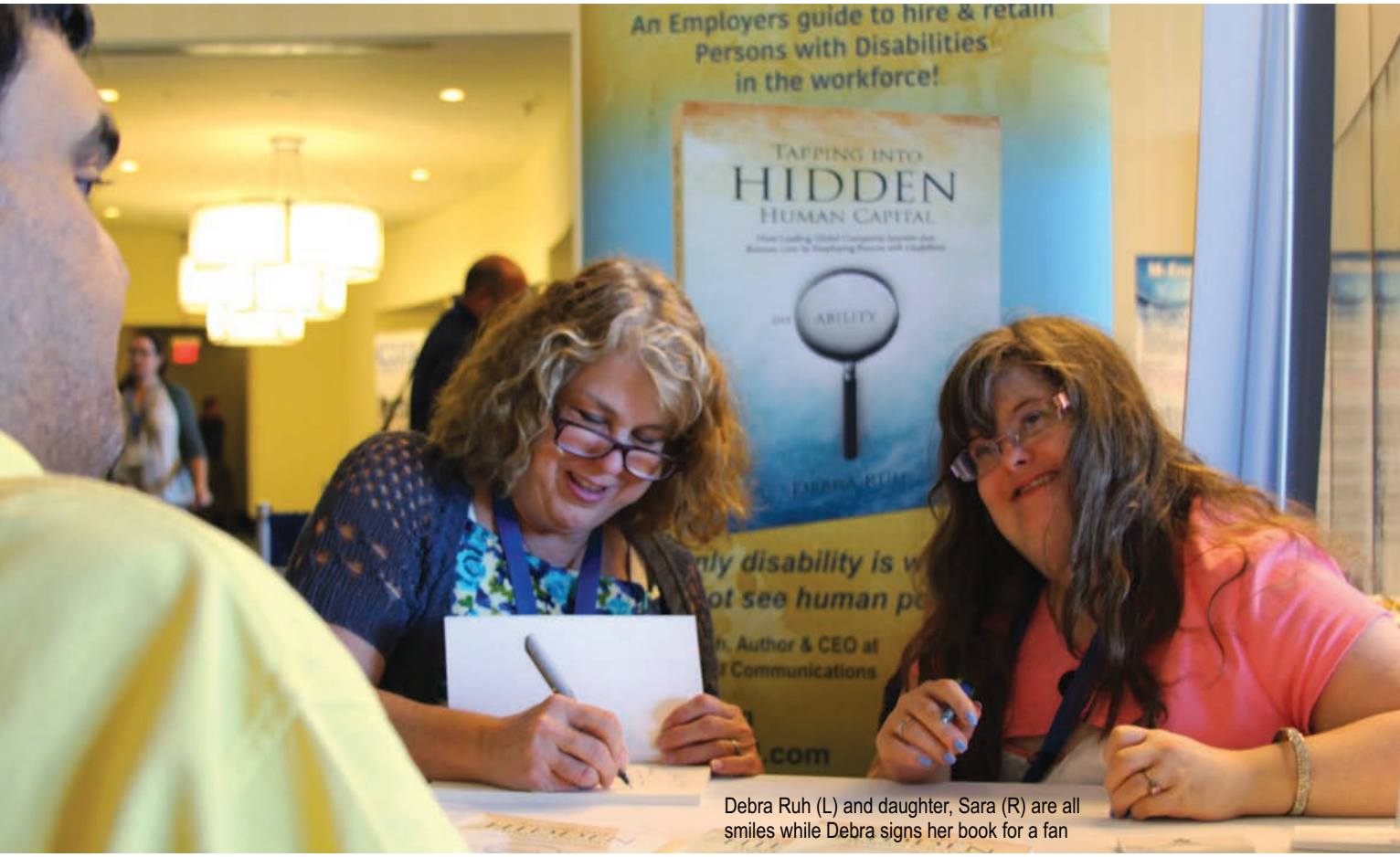
Ruh: Yeah, it was a huge differentiator. And I won so many awards. And I thought, "That is great for my ego, and my mom's proud of me for winning all these awards, but the only thing I'm doing differently is employing qualified technologists with disabilities." I hoped for a world some day that wouldn't think it was so unusual to employ talented people with disabilities who were qualified to do the jobs.

Plasmier: For the people who were working for your company who had disabilities, what did they bring to the table?

Ruh: What they brought to the table was a real understanding of accessibility. Because, at the time we were trying to figure out exactly what it meant to code a website, a mobile app or anything so that it's accessible to all of us. How can you do it in a way that works for people who are blind, deaf, aging, losing their mobility, etc.?

They brought creativity. "How do you make a website accessible to screen readers in a way that doesn't change the product?" That's what everybody was really concerned about at the time… creating something just in text. It was going to be boring, and the rest of the customers aren't going to like it. So we were able to show that's not true, and we were able to build real awareness about the value people with disabilities brought not only to my workforce but also to other people's workforce.

I remember saying, "I know that I'm going to be successful when my clients or others start stealing my employees



Debra Ruh (L) and daughter, Sara (R) are all smiles while Debra signs her book for a fan

from me." When it started happening, I wasn't happy. I was happy, but I wasn't happy because I was losing these really talented individuals.

Plasmier: I think I may have met one or two of them at the CSUN (Technology and Persons with Disabilities) Conference.

Ruh: Yeah, you probably did. They're top of the field. They're the best. And that is what should be happening. We should be creating really amazing jobs for these individuals who are so talented.

Plasmier: Your book, Tapping Into Hidden Human Capital*, was a very concise road map for companies. When I finished reading it, my initial thought was, "Why wouldn't people hire, incorporate or identify more people with disabilities in the workforce?"*

Ruh: And I love that comment, because that's what I tried to do. I wrote it for employers to demystify this issue and take away some of the misinformation.

Plasmier: Why don't employers hire people with disabilities?

Ruh: Companies are afraid that if their facilities aren't accessible, even after 26 years of the Americans with Disabilities Act (ADA), they're going to get sued. They're afraid that their websites and their intranet, internet and software systems are not accessible to assistive technology that a person might use. They're afraid the assistive technology might be really expensive. They're afraid that people with disabilities are going to be out sick more or they're going to say the wrong thing. Another thing employers are afraid of is that we're expecting them to hire somebody who's not qualified to do the job.

Plasmier: What do you say to a company that has these fears?

Ruh: First of all, I say, "I understand you have all these legitimate fears. Let me tell you why they're not true." Then I go point by point, and there's so much great data out there proving it's not true. And then where we are right now with employment, you do not have a choice if you're in the U.S. You have to employ people with disabilities in your workforce. If you're not, you're probably breaking a law or multiple laws. It's not, should you do it? You have to do it.

You probably already have people with disabilities working for you, by the way. It's about retention, too. And people who work for you are acquiring disabilities because we are in these fragile bodies. I don't mean that as a threat, but as we age and as we live our lives, quite a few of us acquire disabilities.

But any time you're broaching something new that you don't understand, instead of just jumping in, why don't you put a plan together? Understand what you have to do. You can say, 'Oh, yes, we're hiring people with disabilities,' but if your website is not accessible, if the career portion of your website is not accessible, if you don't know how to accommodate an individual with a visible disability or invisible disability, there are a lot of ways to get in trouble right now in the US with this. ADA lawsuits are up 63 percent from this time a year ago.

Plasmier: Lawsuits are up 63 percent from last year? Why do you think that is?

Ruh: We can do a bunch of lawyer jokes here, but part of the role that lawyers play in US society is pounding out our laws. We've had the ADA law on the books for 26 years, and many, many, many businesses are not accessible physically or technologically. And employers are not employing people with disabilities. I'd like employers to do it because they get innovative, creative, talented employees and because we have studies, which I've mentioned in the book, that prove customers want companies to do hire people with disabilities, and employees become more productive. If it takes a lawyer suing a company to do it, they have to include us in the workforce no matter what. Period. End of story. I don't want to hear your excuses any more. Sorry.

Plasmier: Get on your soapbox, by all means!

(*laughter*)

In comparison to the settlements these companies have to endure and legal fees, what is the cost of making a company accessible?

Ruh: It's really not very expensive at all. You can even make your company fully accessible without paying one penny outside. There's so much free information on the internet. WebAIM, for example, gives step-by-step instructions of everything a company needs to do, and there's WC3. You can join things like AXSChat that we run every Tuesday. We talk about it. You do have to update your policies and processes.

I can't talk about this topic of employment without talking about accessibility. If you have an individual who gets into a car accident or has a stroke, and they've been a great employee and have a lot of good intellectual data, you don't want to just kick them to the curb. You want to work with people.

Plasmier: That's the change of our humanity. We're aging, time passes and we acquire a disability?

Ruh: Right. And a lot of us keep disabilities quiet because we don't want somebody to look at us and judge us and decide we're less. A man, who was at the very top of a very large government agency, said, "Well, I have multiple sclerosis, but I haven't told anybody because if I tell them, they'll start thinking that I can't add any value. I think my peers will start thinking it's time for me to retire. They'll start pitying me."

About a year ago, I was diagnosed with ADHD, which made a lot of sense to me. I've struggled my whole life with depression, sometimes really bad depression. I believe I'm a better communicator because of the ADHD. I believe that because of the depression I'm more empathetic to others. I think that all of us have abilities and disabilities, and some of us, maybe we have more obvious disabilities than others, but it doesn't mean that we're broken and we can't add value.

I talk about Rosemary Musachio in my book, who's one of my team members. Since the box isn't made for her, she's always outside the box. She's always thinking so creatively and innovatively.

Plasmier: What about the value people with disabilities bring to that so-called bottom line? That's a big thing. It's a way to move the needle with these companies.

Ruh: And that's the language they understand.

Plasmier: What's the bottom line, the down-the-line benefit of having people with disabilities in your workforce?

Ruh: One of my favorite stories is about Canon. A few years ago Canon decided they wanted to be more environmentally friendly. So they hired a small team, about 20 people, with intellectual disabilities, outside Chicago in Naperville. They worked with a service provider to bring people in and taught them how to take broken cameras apart. They learned about all of the pieces, which piece was destroyed and needed to be sustainably thrown away, the right way, which pieces could be fixed, and which pieces were still good.

In that one location of about 7,000 employees, the overall productivity across the plant went up by 36 percent. The only thing that was different was the little group of individuals with disabilities who were working for Canon.

Plasmier: That was the only thing they changed?

Ruh: It was the only thing. And they started interviewing their employees. And the employees said, "I'm very proud to work for Canon. I like going to lunch with Joe, who has Down syndrome, or Donna, who has autism. It makes me proud to work for Canon and to be so socially evolved." When people are proud to work for a company, they're more productive.

The employer of choice has become more important than ever. It's become more important to be a socially responsible company. One way they can prove they're socially responsible is by employing a diverse workforce that





includes qualified people with disabilities and retaining people with disabilities

Plasmier: Not only is it social achievement, but what about the monetary benefit?

Ruh: When you make things accessible to individuals with disabilities, it becomes more usable for everybody, which improves the bottom line. Another bottom-line benefit: why would you build any technology that 20 percent of the population might not be able to use?

A good example is Comcast. They've made sure their machines—their DVRs and all of their equipment—are fully accessible to everybody. They have talking remotes, and the different machines will talk to you. The Comcast guy came and was explaining to my mom how to use it. My mom was getting really overwhelmed. He started talking to her about these talking features, where it would talk her through it. I got excited because I knew they had done that for their clients with disabilities, but it benefited older people as well. This man was so proud of this company. Employees need to feel proud about the companies they work for.

Plasmier: Kevin Bradley of The Boeing Company talked about how hiring people with disabilities is not only the right thing to do, it's the smart thing to do.

Ruh: It is. Why would you ever want to leave people out? If you have two equally qualified people with equal degrees and the same amount of past history, but one is in a wheelchair, I would pick the person in a wheelchair over the other candidate because the person in the wheelchair has had to work harder to get there.

Plasmier: Now we're talking about affirmative action.

Ruh: We are.

Plasmier: How is that happening? Is it happening?

Ruh: I see it, but I will tell you I'm not as much looking at it from that lens. There are a lot of people looking at it from that lens, such as our Department of Labor, our Equal Employment Opportunity Commission (EEOC), and vocational rehabilitation people. I'm always looking at it from the corporate lens.

Plasmier: Disability Rights activist Emily Ladau is one of your contributors.

Ruh: Oh, yes! She's a rock star.

Plasmier: She has very strong feelings about herself as a person with a disability and her value.

Ruh: Yeah, she says, 'Don't hire me because I'm a person with a disability. Hire me because I'm a rock star, and you'll be lucky to get me.'

Don't you want that employee? You do want that employee. If you do not recognize the value of employing people with disabilities, your competitors do. And be prepared to start failing, because you're going to fail. We're evolving with or without you. ■ ABILITY

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INCLUSION WORKS

On the Friday afternoon before Labor Day weekend, the streets of Washington, D.C., are barren except for a warm breeze blowing a few stragglers home for the three-day weekend. Parking is prolific, and normal congestion is reduced to a stray car passing by. Elvis has left the city, but the Department of Labor (DOL) is on the job. It is here that *ABILITY Magazine* speaks with Jennifer Sheehy, Deputy Assistant Secretary (DAS) of the Office of Disability Employment Policy (ODEP) about the challenges she faced as a job seeker with a disability, her active career in disability employment advocacy and education as well as the October celebration of National Disability Employment Awareness Month (NDEAM) and #InclusionWorks.

DAS Sheehy's journey began in St. Louis, MO, during the summer of 1994.

I was in business school. Before this time, I had been working for Marriott and Sheraton in food and beverage marketing. When I went to business school, it was to learn the business side of things and then go into corporate food and beverage or work for a company. During the summer, I was interning at Anheuser-Busch. I was at a pool party when I got pushed backward into the pool and ended up breaking my neck.

I spent a couple weeks in St. Louis, and then I was flown to the National Rehabilitation Hospital (NRH) here in DC because my family's here. I was an inpatient there for three months, relearning every single thing that you had to do with a spinal cord injury and trying to figure out what I could do with my limited mobility.

All of a sudden, I realized I was having to do more planning and goal-setting. I had to work so hard. I had to have incredible discipline and perseverance. It took me a year and a half to learn how to transfer from my wheelchair to my bed, back and forth, by myself. And then learn to drive again, go back to school and do all those things that I wanted to do before the injury.

At this point, DAS Sheehy was doing well in school. As she recalls, she was among the top in her class and president of the Graduate Marketing Association. Expectations were high, and she expected lots of job offers. DAS Sheehy thought, "Employers are going to see that I've been tested and that I went through this major challenge. Who wouldn't want someone like that?"

DAS Sheehy worked hard to finish up school, did more rehab to get back to work, and even worked for the National Organization for Disabilities (NOD). DAS Sheehy was ready for the job search.

I got a lot of first interviews based on my applications and résumé. I could tell that employers weren't so sure about

what to ask me and how I would do the work. And because I was so new to my injury, I wasn't sure how to anticipate those questions and address them or even figure out what to tell the employer to take disability out of the equation.

It was an eye-opener to me—especially because I knew about the ADA (Americans with Disabilities Act). I assumed that everything had been changed and was accessible and that people knew what their obligations were. When I worked for Marriott in 1990, we had to make a lot of those changes. I was at the Sheraton Wardman Park (now Marriott) in downtown DC at the time, and it was so embarrassing to have to take guests who were in wheelchairs through the kitchens, the service elevators, and the exhibit halls to try to figure out a way to get into the ballroom from the front door. So I really thought the world would be all set up. That was not quite the case.

I recognized very quickly in conversations and in some of the things people said to me, even in a work or an interview context, were so inappropriate. It was like a constant learning or teaching. You had to use every opportunity as a teaching moment to raise expectations.

There was one interview where I was actually kissed on the top of the head after the interview. That doesn't happen very often. And there was another one where I thought I was doing OK. The woman said, "I just want you to know I know what you're going through because I have one of you at home." Those were the most blatantly obvious instances where you knew they weren't necessarily thinking about you working there, but just getting through the interview. And you still see it today, it's just not as frequent.

Barriers to private sector employment lead DAS Sheehy to use her talents in a new career path beginning with NOD and then, a few years later, to the Presidential Task Force on Employment of Adults with Disabilities. DAS Sheehy has held multiple roles of service furthering her mission to support people with disabilities. Her positions included Acting Director of the National Institute on Disability and Rehabilitation Research, acting Deputy Commissioner of the Rehabilitation Services Administration and Special Assistant to the Assistant Secretary of the Office of Special Education and Rehabilitative Services. She continues that mission today in working with companies, federal agencies and state governments for ODEP.

Inclusion is more than getting in the employer's door

Since the ADA was passed by Congress in 1990, the US has moved from providing access to facilities, services and opportunities to making sure the quality of services are the same. Today, DAS Sheehy sees that the country is much more about inclusion.

People with disabilities need to be able to know they are part of an organization where they have the same career advancement opportunities, training opportunities and networking in affinity groups or whatever it is that anyone else has. That's really what inclusion is.

I think many employers now want to hire people with disabilities for different reasons. Some people are still coming to the table because they think it's a good thing to do, but others have gotten it and think, "OK, we know there's talent out there that we might be leaving behind if our online job applications aren't accessible or if we're not seen as a disability-inclusive or friendly company."

As DAS Sheehy has indicated, employers turn to ODEP for assistance. They say, "Help us create an environment and a culture that says 'inclusion' from the time you look at our website, go in the door or start working and interacting with people."

To research corporate agendas on disability employment practices, ODEP worked with Wharton Business School, now Georgetown's McDonough School of Business. DAS Sheehy explained they identified three specific employer groups based on diversity and levels of inclusion of persons with disabilities.

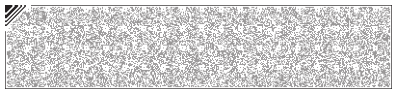
The first group is the choir. They get it. They're at the table for what we would say are all the right reasons. They want to make sure they're not discriminating and they're getting the best talent possible. These employers are competing with other companies to get that talent. They try to make sure their diversity agenda includes disability.

Then there are what we call the "inclusives," companies that value diversity, but they might not be thinking about disability. They know that diverse experiences and perspectives help to solve tough problems and reach a large community of customers.

Third, there's the group we call the "uninitiated." Maybe they aren't quite there on diversity. They haven't done it, not that they wouldn't do it. Disability is not what's on their front burner.

DAS Sheehy said most employers fall under the "inclusives" category and hire people with disabilities for mainly three reasons. The first reason is "It's a good thing to do." A CEO or senior executive may have a personal interest, such as a family member with a disability, or they may think it's a good thing for the community. Second, there are the federal contractors who want to meet Section 503 regulations of the Rehabilitation Act of 1973 and work toward the hiring goal of seven percent of persons with disabilities in their workforce. And third, there are companies, both large and small, who want the best and the brightest. They recognize the talent and want to be the company of choice for everybody.

The federal government is also one of ODEP's customers. Since President Obama's Executive Order in





Jennifer Sheehy having a conversation with long-time *ABILITY Magazine* columnist, Senator Harkin



2010 that called for federal agencies to hire 100,000 persons with disabilities, the federal government has met that goal as of fall of 2015.

Most federal agencies got the message, and they're doing a better job. We have a long, long, long way to go educating, especially hiring managers, but we see some good statistics and hiring trends. There are more people with disabilities in the federal government right now than I think in the 33 years that they may have been tracking it, and certainly they have hired a higher percentage of people with disabilities. About 19 percent of new hires have been people with disabilities in the federal government.

#InclusionWorks – National Disability Employment Awareness Month (NDEAM)

One of ODEP's many, and favorite, responsibilities is NDEAM. This year's theme, #InclusionWorks, shows just how far the DOL has come from commemorating the "National Employ the Physically Handicapped Week," which began in 1945. In 1962, "Physically" was dropped to include more people, and in 1988 it became known as the National Disability Employment Awareness Month. ODEP really got the party going when the office was created in 2001. They helped to bring the theme and more celebration to the month and showcase the talents of people with disabilities.

ODEP chose the hashtag theme #InclusionWorks because inclusion does work, and social media is where engagement happens. The hashtag (#) is used on social media sites, like Twitter and Facebook, to give a word or message importance. When a hashtag gets momentum, it starts trending and more people get involved. Everyone can join in the celebration and build awareness by posting ways #InclusionWorks is happening now. What to post? Images, messages, success stories with employment in small and large businesses or with local and federal governments—everywhere that inclusion of persons with disabilities is occurring. Be sure to use the hashtag, #InclusionWorks.

Employers are onboard with NDEAM and #InclusionWorks.

Companies are coming to us for the posters and materials they can include with their logo and for some of our great resources and speakers. We have a wonderful public service announcement that has aired more than 50,000 times on television stations and can be used at events or on a company's intranet or in any setting. A lot of these companies are holding events and already have affinity groups of employees with disabilities or allies of people with disabilities. And it's a fantastic thing to see. We would love to see it more widespread. We know a lot of this is going on without our knowledge—and that's great—but we'd love to know about it, too. #InclusionWorks

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NDEAM is only one (and the favorite) of ODEP's many responsibilities. On a local level, ODEP help ensure that 2500 job centers around the country are serving people with disabilities the same way they serve everyone else who comes looking for a job or help with placement with an employer, training, education or résumé help.

On the federal level, ODEP looks for ways to improve the policy of federal programs and services that benefit people with disabilities. ODEP provides technical assistance to Congress and works with states to adopt policies that work on a federal level. They also ensure that people with disabilities are included at the start of any discussion of labor policy.

And, of course, employers are an important element of ODEP's big responsibilities.

We've seen increased demand from employers to our Technical Assistance Center and Job Accommodation Network (JAN), which is a great resource that does one-on-one confidential phone calls or e-mail exchanges to answer questions about specific accommodations an employee or employer might have. JAN is logging 4,000 to 5,000 contacts per month from employers or employees for assistance.

What's next for DAS Sheehy?

She graciously and happily looks forward to turning over the reins to the new assistant secretary of ODEP after the new administration takes office.

I happen to be acting right now because our former assistant secretary, Kathy Martinez, became a senior vice president at Wells Fargo, which is exactly what ODEP tries to promote: people going into the private sector and not necessarily doing diversity and HR. Most jobs are not disability-related. So we want to see people with disabilities throughout an organization, but especially in those executive positions.

I'm the deputy assistant secretary, and that's kind of like the chief of operations for a company. I think that it's fun to do what I'm doing right now. I love the outreach, especially meeting people, going to conferences and talking to employers and people with disabilities and those who are interested in helping advance employment.

It's fun to work with someone who comes aboard, has different experiences and priorities because there are lots of ways to get to a goal. And we have a big goal, a big challenge, trying to improve employment for people with disabilities, and there are lots of ways to get there. ■ ABILITY

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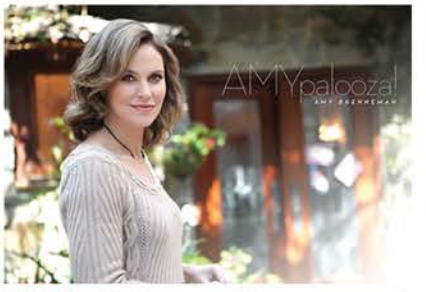
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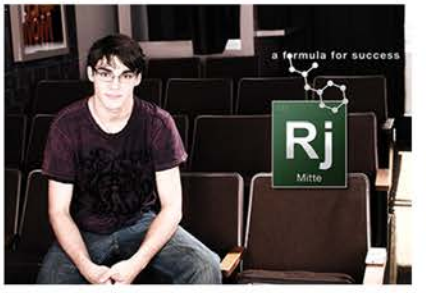




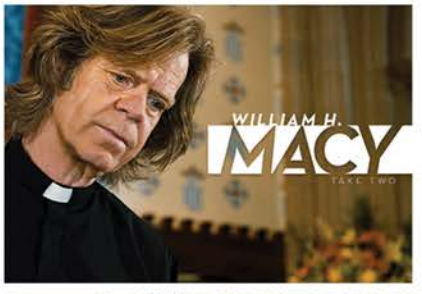
















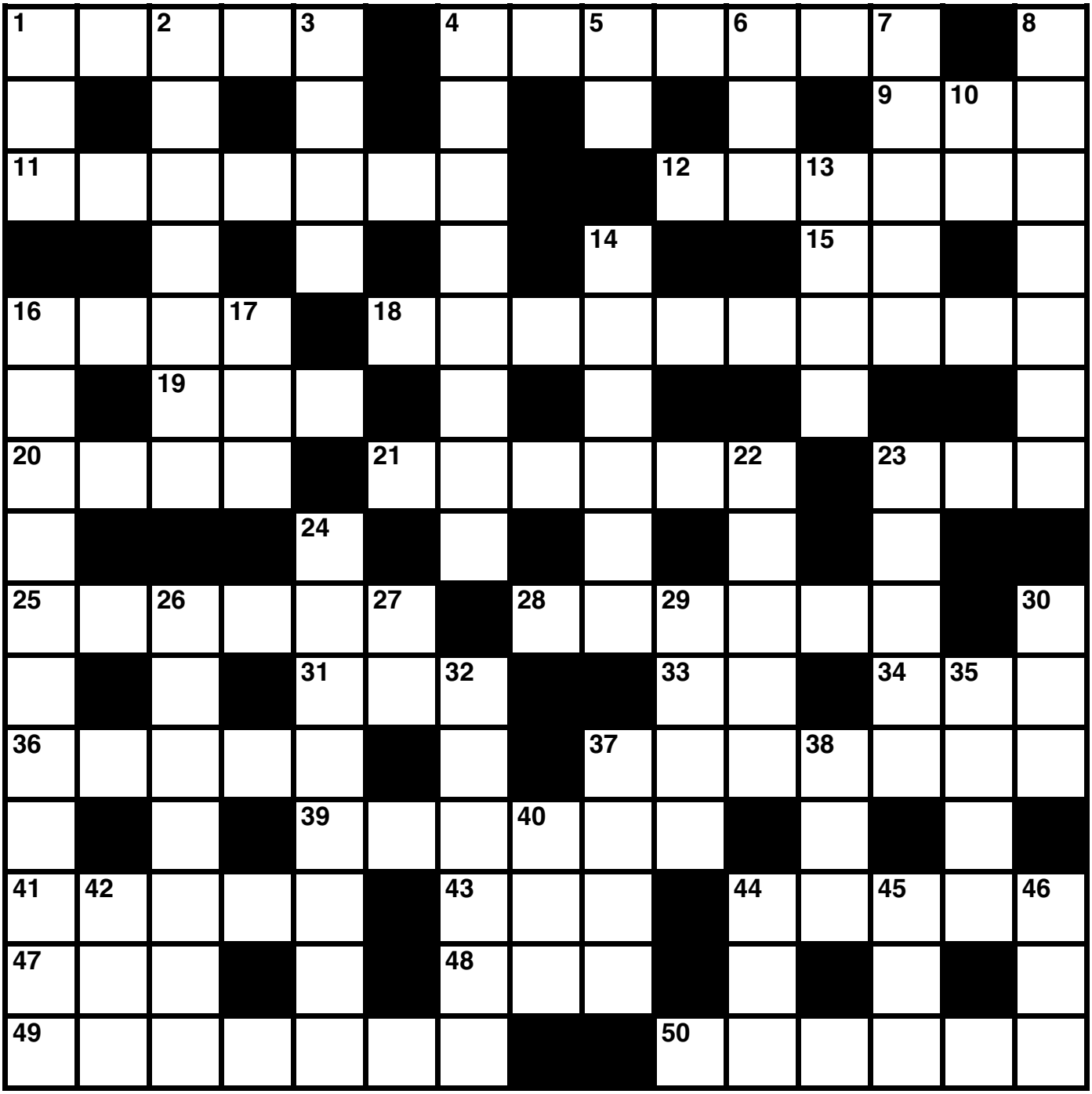




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ABILITY's



Crossword Puzzle



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ACROSS

1. "Supergirl" star starting a new charity website, Chyler ___
4. Co-founder of the "Thirst Project" bringing safe water to com munities where it doesn't exist, Seth ____
9. Clean air org.
11. Made a comeback
12. US soccer goalie who has continued to play well despite tourettes syndrome, Tim ____
15. 60 min.
16. Truncation survivor in China who walks on 2 arms who has opened his own grocery store, Shuilin ____
18. Charitable donations
19. Morning moisture
20. What an eskimo kisses with
21. "Lethal Weapon" actor who overcame dyslexia to make a successful acting career
23. "Here Comes the ___" Beatles
25. Inventor of the light bulb, who was deaf
28. World famous speaker and author who was deaf and blind
31. Big pooch
33. That is, for short
34. "Pulp Fiction" star, Thurman
36. Broadway revival, "The ____ Menagerie" which co-stars Madison Ferris who uses a wheelchair in real life
37. Israeli-American violinist, overcame polio to reach the top of his field, Itzhak _____
39. ___ all the boxes
41. "Stayin' ___" (disco hit)
43. Drums, collectively
44. "Misery" Oscar winner Bates
47. Tom Harkin was one for 30 years (abbr.)
48. Adaptable truck, for short
49. Answers the call, 2 words
50. Speech recognition technology

DOWN

1. Paper size, abbr.
2. Vacation spots
3. "Aquarius" musical
4. Australian author who had cerebral palsy from an early age and wrote her story in "Test of Love," Anne ____
5. Extra large clothing size
6. "Don't Bring Me Down" rock grp.
7. Discover
8. Sets to work energetically, 2 words
10. Press guy
13. Excite, as an appetite
14. Museum that was featured in "The Da Vinci Code"
16. Lead singer with Harold Melvin and the Bluenotes, who continued to release albums after he was paralyzed in a car accident, Teddy _____
17. "I didn't know that!"
22. Foot-long thing
23. Play lightly, as a guitar
24. Supports
26. Dream of the future
27. Sodium symbol
29. Served up a whopper
30. "Holy smokes!"
32. Give help to, 2 words
35. S.A.T. section
37. Singer Seeger
38. Grazing area
40. Frontiersman, Carson
42. Allow
44. Agency representing actors with disabilities
45. Harbor craft
46. Yang's counterpart

answers on page 62

Crossword Puzzle

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China's Largest Disability Publisher and Website



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文化季风
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Inclusion

JOIN THE GLOBAL DEBATE

Rehabilitation International World Congress is the inspirational global event promoting social inclusion and accessibility. It's a powerful opportunity for U.S. companies and organizations to meet with, exhibit to and influence the world's leading voices on disability.

Headquartered in New York, Rehabilitation International is a global network for the rights and inclusion of people with disabilities.

- Ensure your organzation's voice is heard internationally.
- Network with internationally renowned disability advocates, researchers, government agencies, policy makers and practitioners.
- Build partnerships with a range of international charities.
- Participate in workshops, gain knowledge and share best practice.



Held every four years, the 2016 event is being hosted by Shaw Trust at the Edinburgh International Conference Centre, Scotland.

More information: **riworldcongress.com**

Enquiries: **RIWorld.Congress@shaw-trust.org.uk**

ShawTrust Ability at work



STEPTEMBER 2016

You can make a difference.

This STEPtember, commit to taking 10,000 steps per day, or the equivalent in other physical activities, for your opportunity to create a Life Without Limits for people with cerebral palsy and other disabilities. Rally your team of up to 4 people and get moving, encouraging your friends, family, colleagues and community to support your efforts and raise funds for improved care, research and advocacy for people with disabilities.

Take the STEPtember challenge and inspire change, transform lives and achieve more than you ever thought possible.

Join the movement. Register now at:

STEPtember.us

f/unitedcerebralpalsy | /UCPnational

STEPTEMBER

UCP United Cerebral Palsy

Life without limits for people with disabilities.



Each year, the TASH Conference strengthens the disability field by connecting attendees to innovative information and resources, facilitating connections between stakeholders within the disability movement, and helping attendees reignite their passion for an inclusive world. This year's conference will feature 300+ presentations on the following topics:

- Advocacy
- Communication
- Community Living
- Diversity & Cultural Competency
- Employment
- Human Rights
- Inclusive Education
- Positive Behavior Supports
- Recreation & Leisure
- Self-Advocacy
- Transition

Register online and receive $5 off. Use code "abilitymag". Early-bird rates end on September 5th.

www.tash.org/conference2016



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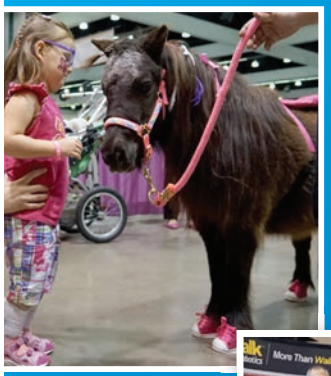
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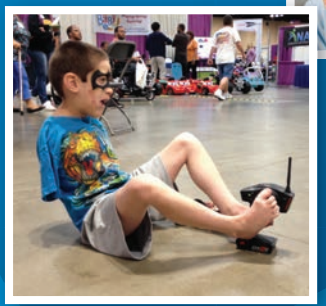












- Newest Technologies
- Life-enhancing Products
- Sports for All Abilities
- Informative Workshops
- Disability Services
- Essentials for Seniors
- Fun & Games for Kids
- Creative Adaptive Dance
- Devoted Service Animals

FREE ADMISSION

www.AbilitiesExpo.com

Register online for priority access

Boston Sept. 16-18, 2016	**Bay Area** Nov. 18-20, 2016	**DC Metro** Dec. 2-4, 2016	**Toronto** January 20-22, 2017
Los Angeles March 24-26, 2017	**New York Metro** May 5-7, 2017	**Chicago** June 23-25, 2017	**Houston** August 4-6, 2017



NAMI

The Nation's Voice on Mental Illness

www.nami.org

Almost every day,

NAMI—the National Alliance on Mental Illness—adds something new to its Web site. Whether it's the latest on science and research, opportunities for education and support, resources for recovery, or tools for advocacy, I turn to NAMI.org to keep me informed, inspired and involved.

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SESSION HIGHLIGHTS TO INCLUDE...

- Developing our 2017 public policy action plan
- Roundtable updating states on new HCBS developments
- Discussion on WIOA implementation and advocacy activities

SUMMIT DETAILS

Hotel Group Rate *(until December 23)*	$144/night + tax
Summit Registration	$299 per person

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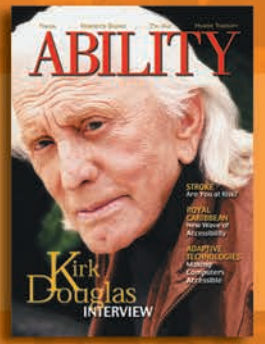
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