Before "Baby Shark" made the Hot 100, "Silly Symphonies" were all the rage

By Jackie Mansky *Smithsonian Magazine*

March 12, 2020

Thank a South Korean educational content brand for producing, possibly, the most-listened-to, version of the earworm "Baby Shark."

It was a little over a decade ago when "Baby Shark" teased its true potential. That's when a video of the song went viral in Germany.

That turned out to be small potatoes compared to the Pinkfong remix. The brand behind the sensation has produced tens of thousands of children's videos. This includes multiple variations on "Baby Shark." One of these versions went supernova after it was published to YouTube. That was in 2016. In it, the Seoul-based company laid a K-pop beat underneath the vocals. They plucked two cherub-cheeked children to do the hand motions of the lyrics for the video.

Pinkfong's "Baby Shark" mania hit and had the Ellen Degenereses and James Cordens of the world subjecting us to the #babysharkchallenge. While this was happening, Bob Cunningham, attempted to pin down just what made the Pinkfong song so very listenable. Cunningham is an educator and senior adviser for the nonprofit consortium Understood.org.

He described the formula to the Associated Press, saying it had a "catchy rhythm," "silly sounds," and "colorful and cute animation." It is reminiscent of what gave rise to the first iteration of children's hits.

Children's music has been part of the music industry since the get-go. "Ever since there has been a music business, there has been a children's music

business," explained Simon Frith in his collection of essays Taking Pop Music Seriously. Frith is a professor of music.

Thomas Edison debuted the phonograph in 1877. Just 11 years later, an unknown employee of the Edison company recorded "Twinkle, Twinkle Little Star" for the company's short-lived talking doll venture. That recording was found in the desk of an assistant in the 1960s. It earned the nursery rhyme the distinction of being the earliest-known children's recording and the earliest-known commercial recording. It might even be "the first recording to be made by someone who was paid to perform for a sound recording," according to the Library of Congress.

"Baby Shark" stands in the shoes of Walt Disney's Silly Symphonies. These also matched music to animation to great success using catchy rhythms, silly sounds, colorful (when the technology allowed), and sometimes cute, always eye-catching, animation.

Unlike "Baby Shark," this "musical novelty" series of short films released from 1929 to 1939 achieved critical success. That was in addition to popular success. The Sillies did so by marrying clever animation with a range of music. That music encompassed "classical melodies, traditional folk tunes, operatic themes-and popular songs." That's what film scholar J.B. Kaufman explains in Animation World Magazine.

Silly Symphonies came just at the right moment. In the 1920s and '30s, composers and graphic artists were exploring the frontiers of animation. "What all these experimenters shared was a common interest in, indeed a fascination for" finding the "rhythm" between sight and sound on screen. That's according to music scholar Jon Newsom writing for the Quarterly Journal of the Library of Congress.

That balancing act was a big deal at Disney HQ. The studio's exacting synchronization of music and animated movement began to be referred to within the industry as "mickey mousing."

Theater organist and orchestra leader Carl W. Stalling was a big part of how that came to be. He engineered a way to allow his musicians to hear what was happening in an animated sequence through an ingenious "click track." Stalling was also the one who convinced Disney to let him score the Sillys before they were animated. This began with the very first mini-musical, "The Skeleton Dance" (1929).

The alchemy of the music inspiring the animation was groundbreaking. Stalling famously used whatever music he thought fit the bill for his work.

The true "going viral" moment for Sillies came with the debut of "The Three Little Pigs" at New York's Radio City Music Hall on May 27, 1933.

"It received a sensational public response as it was shown in neighborhood theaters, becoming the most phenomenal short cartoon of its time," writes classic cartoon researcher Devon Baxter.

Disney had imagined the cartoon as a light, humorous operetta, explains Baxter. The dialogue was sung in rhythm by the pigs, who bob and sway hypnotically as they work against their foil, the Big Bad Wolf. The cheery cartoon is immensely watchable. For Americans weathering the Great Depression, its happy-go-lucky tone was just what children-and adults-needed.

Ann Ronell of Tin Pan Alley fame had previously collaborated with Disney. She worked with composer Frank Churchill on "Who's Afraid of the Big Bad Wolf," and their result was pieced together throughout the cartoon.

Sol Bourne was general manager of Irving Berlin Music, Inc. He believed he had a massive hit on his hands when he heard the song on screen. Subsequently, Irving Berlin Music negotiated to get Disney Studio's music rights.

Like "Baby Shark" moving from YouTube to a chart debut, "Who's Afraid of the Big Bad Wolf?" made a definitive statement on its own. TIME magazine declared it was one of the year's "catchiest songs," and more than 201,000 copies of sheet music for it was sold in the second half of 1933 alone.

Kaufman and film and media scholar Russell Merritt wrote a Silly Symphonies companion book. They said that before 1934 had even begun, "the song had been widely recorded and had set a new precedent by introducing the Disney studio into the world of popular music." Who knows- it possibly even threw the chum in the water for what was lurking deep below, a catchy family of sharks (Doo Doo Doo Doo Doo Doo).

CRITICAL THINKING QUESTION

What do you think makes the song "Baby Shark" so popular?

Write your answer in the lines below

Five false facts about the human body

By Ask Smithsonian *Smithsonian.com*

March 18, 2020

You asked us to debunk some "facts" about the human body. Let's science this!

So here are five popular myths that just are not true.

First, we have five senses, right? Wrong. Depending on how you define a sense, we actually have between 5 and 33 of them. Beyond the classics, we have a sense of balance and the ability to sense heat and time, along with all kinds of other cool spidey senses.

Second, what about the idea that giving kids sugar makes them bounce-off-the-walls hyperactive? Nope -- the evidence for that cause-and-effect link is surprisingly slim and it's apparently more of a self-fulfilling prophecy than fact.

Myth number three - we only use 10% of our brains. This one drives me insane because it's totally bogus. We use virtually every part of our brain and most of it is active almost all of the time.

Myth number four. Despite all the heavy lifting going on up there, it's totally false that we lose most of our body heat through our heads. The amount of heat we lose depends on how much skin surface area is exposed to the cold, so, yes, you'll lose more heat through a bald head than a gloved hand, but the opposite is just as true.

And finally, I know what your mom said, but trust me, I'm a scientist. It doesn't take 7 years to digest swallowed gum. The base element of gum is pretty much indigestible, but it'll still pass through our system within a week if not faster.

CRITICAL THINKING QUESTION

Why might people have thought that we lose most of our heat through our heads?

Write your answers on the lines below

Snow science: Crystal clues to climate change, watersheds

By Michael Hill *Associated Press*

January 02, 2020

Capturing snowflakes isn't as easy as sticking out your tongue.

At least not when you're trying to capture them for scientific study. This involves isolating the tiniest of crystals on a metal card printed with grid lines and quickly placing them under a microscope to be photographed.

"They are very tiny and they are close to the melting point," said Marco Tedesco of Columbia University. "So as soon as they fall, they will melt."

Tedesco recently led a team of three researchers who trudged through the snowy hills of New York's Catskill Mountains. They took cameras, brushes, shovels, a drone and a spectrometer with them. They collected the most fine-grained details about freshly fallen snowflakes. And they noted how snowflakes evolve once they settle to the ground.

That data could be used to provide clues to the changing climate and to validate the satellite models used for weather predictions. It could also provide additional information on the snow that falls into New York's City's upstate watershed, flows into reservoirs and fills the faucets of some 9 million people.

"We're talking about sub-millimeter objects," said Tedesco as he stood in shin-deep snow. "Once they get together, they have the power, really, to shape our planet."

This is the pilot stage of the "X-Snow" project. Organizers hope the project will involve dozens of volunteers collecting snowflake samples next winter. The specimens Tedesco spied under his microscope on a recent snowy day were varied. They displayed more rounded edges and irregularities than the classic crystalline forms - a characteristic of flakes formed up high in warmer air.

Pictures and video from the drone will be used to create a three-dimensional model of the snow's surface. Patrick Alexander is a postdoctoral researcher. He trudged though the snow with a wand attached to a backpack spectrometer. It measures how much sunlight the snow on the ground is reflecting which is a factor in determining how fast it will melt. Later, Alexander got down on his belly in the field to take infrared pictures of the snow's layers and its grain size.

"There are a lot of things that happen that we can't see with our eyes," said Tedesco, a snow and ice scientist at Columbia's Lamont-Doherty Earth Observatory. "When snow melts and re-freezes, the grains get bigger. And as the grains get bigger the snow absorbs more solar radiation."

Tedesco grew up in southern Italy near Naples and never even saw snow until he was 6 years old. But as a scientist, he has logged time studying ice sheets in Greenland and Antarctica and has studied snow hydrology in the Rockies and the Dolomites. He said snow in the Eastern U.S. has its own character. It tends to be moister than the powdery snow that falls in higher elevation in the West.

Tedesco hopes that a cadre of committed volunteers in the Catskills and the New York City area can take snowflake and snow depth samples next winter. Volunteers won't need an expensive backpack spectrometer, but he recommends a $17 magnifying lens that clips onto their phone, a ruler, a GPS application and a print-out version of the postcard-sized metal card Tedesco uses to examine fresh snowflakes.

Enlisting volunteers to take snowflake photos is novel and potentially useful, said Noah Molotch, director of The Center for Water, Earth Science and Technology

at the University of Colorado, Boulder. Molotch is not involved in the project. He said the pictures will give information about atmospheric conditions and could be useful in the study of climate change.

"Snowflakes are among the most beautiful things in nature," he said. "And the more we can do to document that and get people interested and excited about that, I think is great."

CRITICAL THINKING QUESTION

What is the relationship between snow and crystals?

Write your answers on the lines below

Software makes cyberbullies think twice

By Emily Matchar *Smithsonian Magazine*

October 10, 2019

In 2013, a then-13-year-old from suburban Chicago named Trisha Prabhu came home from school. She read a news story. It was about an 11-year-old girl who had committed suicide by jumping off her town's water tower. In the months before her death, the girl had been repeatedly cyberbullied.

"I was shocked, heart-broken and angry," says Prabhu. "I knew I had to do something to stop this from ever happening again."

So Prabhu came up with a cyber-solution for cyberbullying. She invented a software called ReThink. It scans social media messages for offensive content, and gives the writer a chance to reconsider whether he or she really wants to post. The program can be installed by parents on home computers or by teachers on school computers. It uses context-sensitive word screening to flag messages for content.

For Prabhu, ReThink is personal. She too had been cyberbullied in her younger years. She received nasty messages about her clothes.

"I'm what you'd call thick-skinned, so I just brushed it off and moved on," Prabhu says. "But after reading about this story, I realized that many adolescents were really affected by these offensive messages. Especially if the cyberbullying was repeated and targeted."

Cyberbullying is indeed a serious and growing problem. Research shows 43 percent of kids have experienced cyberbullying. Some 70 percent of students report seeing "frequent" online bullying. Bullying victims are up to nine times more likely to consider suicide.

ReThink works on the principle that the adolescent brain is like a "car with no brakes," Prabhu says. "It's all too well-known that adolescents make impulsive, rash decisions."

It has indeed been well-established that the prefrontal cortex-a region of the brain important for self-control and decision-making-doesn't fully develop until a person is about 25 years old. This is likely a major factor behind teenagers' sometimes irresponsible and risky decisions. Texting and driving, fighting, even simply neglecting homework in favor of hanging out with friends.

Prabhu has received numerous accolades for her work. She was a global finalist in the Google Science Fai. She was selected to exhibit at the White House

Science Fair and received a Global Anti-Bullying Hero award from Auburn University. There were also other honors.

Prabhu has long been fascinated by computer science. She first began learning to code at age 11 through a local technology education program for kids. Since developing ReThink, she has created a free ReThink app for smartphones. She's also rolled out a ReThink "ambassador" program for schools. Student representatives spread anti-cyberbullying messages to their classmates and students are invited to take an anti-cyberbullying pledge.

Prabhu has received multiple messages from people who know firsthand the trauma cyberbullying can cause. They come from parents whose children have committed suicide after repeated cyberbullying or police officers who deal with cyberbullying on a criminal level. They come from school counselors and administrators who struggle to help cyberbullied students. And then there are the victims themselves. One particularly memorable note Prabhu received was not from a teenager, but from an adult. She was a retired teacher who had been bullied for years by an adult adopted daughter. "Trisha," the woman wrote, "ReThink would not only help adolescents, it would help adults too."

To test how it works, I downloaded ReThink to my iPhone. I started to post "I hate you" to a Facebook wall. I had no intentions, of course, of actually posting it. A ReThink bubble popped up. "Let's change these words to make it positive," it suggested. "You're a fat," I began, and I was interrupted by "Don't say things that you may regret later!" ReThink has a high sensitivity for obscenities. I started a missive with a four-letter word. The ReThink bubble showed up to ask "Are these words really you?"

That said, the program did not catch everything. I was able to type "You're ugly and stupid" without getting a ReThink message. And somehow "nobody likes you, you idiot" also snuck through.

Though ReThink is clearly not yet a perfect tool for capturing all cyber cruelty, it does offer teens a second chance they tend to take it. According to research conducted with ReThink, teens change their mind about posting the hurtful messages 93 percent of the time.

Prabhu ultimately hopes to have ReThink installed for free on school computers and libraries across the country. And even around the world. She has plans to develop the program in multiple languages.

"I look forward to a day when we have conquered cyberbullying," she says.

CRITICAL THINKING QUESTION

How do you think schools could best use the ReThink software?

Write your answers on the lines below

Edgar Allan Poe invented the detective story

By Kat Eschner *Smithsonian.com*

May 15, 2019

Edgar Allan Poe introduced the world to C. Auguste Dupin, hitting on a winning formula.

Dupin was Sherlock Holmes before Sherlock Holmes. He a genius detective who first appeared in “The Murders in the Rue Morgue,” published in 1841. That story is the first locked-room mystery. Two women are dead. Only a bloody straight razor, two bags of gold coins and some tufts of hair are found in the room with

their bodies. As Holems might say, the game's afoot. However, Poe didn't give Dupin a nifty catchphrase.

The roots of the detective story go as far back as Shakespeare, according to historians Helena Markovi? and Biliana Oklop?i?. Poe’s tales of rational crime-solving created a genre. His stories, they write, mix crime with a detective narrative. It revolves around solving the puzzle of the “whodunit” and invites readers to try to solve the puzzle too.

The key figure in such a story is the detective. Poe’s detective also appears in “The Mystery of Marie Rogêt” and “The Purloined Letter.” They set the stage for that character. Dupin is a gentleman of leisure who has no need to work. Instead, he keeps himself occupied by using “analysis” to help the real police solve crimes. The real police are, of course, absolutely incompetent. This is like Inspector Lestrade and Scotland Yard are to Holmes.

Dupin smokes a meerschaum pipe. Like his literary descendant, he is generally eccentric. He’s also unnaturally smart and rational. He's a kind of superhero who uses powers of thinking to accomplish great feats of crime-solving. The story's narrator is his roommate who is literally following the detective around. But Dupin’s roommate is unlike John Watson. He remains a nameless “I” throughout the three stories. But he is equally everyday.

In the Dupin tales, Poe introduced a number of elements, like the friendly narrator, that would remain common to detective stories, write Markovi? and Oklop?i?.

“The elements Poe invented, such as the reclusive genius detective, his ‘ordinary’ helper, the impossible crime, the incompetent police force, the armchair detection, the locked room mystery, etc., have become firmly embedded in most mystery novels of today,” the historians write.

Even Arthur Conan Doyle, creator of Sherlock, had to acknowledge Poe's influence. "Where was the detective story until Poe breathed the breath of life into it?" he wrote.

Poe’s formula appealed in the nineteenth century because detective stories promised that reasoning could hold the answer to every question. At the same time, with spooky overtones, they appealed to nineteenth century readers' preoccupations with the occult.

The detective story, writes Ben MacIntyre for The Times of London, was particularly appealing because it promised that “intellect will triumph, the crook will be confounded by the rational sleuth, science will track down the malefactors and allow honest souls to sleep at night.”

At the same time, MacIntyre writes, nineteenth century anxieties about the Industrial Revolution and new ways of living supported the idea that evil was anonymous and everywhere. These two instincts—"faith in reason and mistrust of appearance"—are what made Victorians love detective stories. It is a love that endures today.

CRITICAL THINKING QUESTION

How might literature be different without the works of Edgar Allan Poe?

Write your answers on the lines below