

As people, we feel our moral obligation weaken with physical as well as emotional distance from individuals in need. For example, you're more likely to help someone dying of hunger at your feet than someone dying of hunger in another country. How does this human trait of morality dependent on distance shape our world?

Sheriff's Office Had Received About 20 Calls Regarding Suspect: The Latest on the Florida School Shooting

By [LISA MARIE SEGARRA](#), [KATIE REILLY](#), [ELI MEIXLER](#) and [JENNIFER CALFAS](#)

Updated: February 18, 2018 1:51 PM ET | Originally published: February 14, 2018

The suspect in the Florida high school shooting that killed 17 has confessed, police said Thursday.

[Nikolas Cruz](#), 19, told police he was responsible for the shooting and added that he hid extra ammunition in his backpack and shot students in the hallways and on school grounds, Broward County Sheriff Scott Israel said.

Israel also revealed Cruz's bizarre movements in the hour after he allegedly opened fire at [Marjory Stoneman Douglas High School](#), killing 17 and wounding others.

Cruz arrived at the school by taking an Uber car, took the rifle out of a case and began shooting in classrooms, Israel said. He then dropped the AR-15 assault rifle he used and his vest to blend in with students. Cruz then left the school and ran along with other students fleeing to blend in.

He then went to a Walmart, bought a drink in a Subway, left and then went to a McDonald's. After walking out of the McDonald's he was taken into police custody without incident.

The news comes after the FBI confirmed agents were warned five months ago about a YouTube comment that may have come from Cruz.



Parents wait for news after a reports of a shooting at Marjory Stoneman Douglas High School in Parkland, Fla., on Feb. 14, 2018.

Joel Auerbach—AP

“In 2017, the FBI received information about a comment made on a YouTube channel. The comment simply said, ‘I’m going to be a professional school shooter.’ No other information was included with that comment which would indicate a time, location or the true identity of the person who made the comment. The FBI conducted database reviews, checks, but was unable to further identify the person who actually made the comment,” FBI Special Agent Rob Lasky said during a press conference.

The username on the comment was “nikolas cruz.”

Broward County Sheriff Scott Israel also said that over the past few years his office had received about 20 calls for service regarding Cruz and his younger brother, and that each one would be “looked at and scrutinized.”

Cruz is charged with murdering 17 people at [Marjory Stoneman Douglas High School](#) in Parkland, Florida on Wednesday. He was arrested by authorities when he fled the scene.

The details of Cruz’s online comments came as former classmates, teachers and neighbors have said they long feared Cruz may have been capable of violence. Cruz, a former student at the school, was expelled last year for disciplinary reasons.

The Marjory Stoneman Douglas shooting is the 6th school shooting resulting in injuries this year. There have been 17 incidents of gunfire in schools this year, according to gun control group [Everytown USA](#). It is also the deadliest school shooting since the 2012 massacre at [Sandy Hook Elementary School](#) in Newtown, Connecticut, which claimed the lives of 20 children and six adults.

“This is a terrible day for Parkland, Broward County, the state of Florida and the United States,” Broward Sheriff Scott Israel said at a press conference Wednesday. “It’s just catastrophic. There really are no words.”

Videos and photos posted by students on social media [painted a gruesome picture](#) of the shooting, showing blood spilled on the floor of classrooms and bullet holes in the screens of laptops. [Text messages](#) shared between students and their family members shared on social media showed teenagers saying goodbye.

Authorities said the gunman used an AR-15 rifle, a semi-automatic weapon made for military use and seen in other mass shootings, including the 2016 Pulse nightclub massacre in Orlando. [Florida Sen. Bill Nelson told CNN](#) the suspect also wore a mask and carried smoke grenades during the attack.

“This is just pure evil,” Florida Governor Rick Scott [told reporters at a press conference](#) Wednesday evening, where he also pledged “whatever state resources are necessary” to law enforcement or “to help any family member who’s impacted.”

“How could this ever happen in this country? How could this happen in this state?” Scott said, adding that his “prayers are with everybody impacted.”

Florida Gov. Rick Scott said he will visit shooting victims at the hospital tonight.

"This is just absolutely pure evil. This state does not tolerate violence. We have law enforcement that will always show up to defend our safety." <http://cnn.it/2swc7fQ>

NEUROSCIENCE OF MUSIC – HOW MUSIC ENHANCES LEARNING THROUGH NEUROPLASTICITY

**NEUROSCIENCE NEWS
JULY 20, 2010**

Neuroscience research into the neuroscience of music shows that musicians' brains may be primed to distinguish meaningful sensory information from noise. This ability seems to enhance other cognitive abilities such as learning, language, memory and neuroplasticity of various brain areas.

Those ubiquitous wires connecting listeners to you-name-the-sounds from invisible MP3 players, whether of Bach, Miles Davis or, more likely today, Lady Gaga, only hint at music's effect on the soul throughout the ages.

Now a data-driven review by Northwestern University researchers that will be published July 20 in *Nature Reviews Neuroscience* pulls together converging research from the scientific literature linking musical training to learning that spills over to skills including language, speech, memory, attention and even vocal emotion. The science covered comes from labs all over the world, from scientists of varying scientific philosophies, using a wide range of research methods.

The explosion of research in recent years focusing on the effects of music training on the nervous system, including the studies in the review, have strong implications for education, said Nina Kraus, lead author of the *Nature* perspective, the Hugh Knowles Professor of Communication Sciences and Neurobiology and director of Northwestern's Auditory Neuroscience Laboratory.

Scientists use the term neuroplasticity to describe the brain's ability to adapt and change as a result of training and experience over the course of a person's life. The studies covered in the Northwestern review offer a model of neuroplasticity, Kraus said. The research strongly suggests that the neural connections made during musical training also prime the brain for other aspects of human communication.

An active engagement with musical sounds not only enhances neuroplasticity, she said, but also enables the nervous system to provide the stable scaffolding of meaningful patterns so important to learning.

"The brain is unable to process all of the available sensory information from second to second, and thus must selectively enhance what is relevant," Kraus said. Playing an instrument primes the brain to choose what is relevant in a complex process that may involve reading or remembering a score, timing issues and coordination with other musicians.

"A musician's brain selectively enhances information-bearing elements in sound," Kraus said. "In a beautiful interrelationship between sensory and cognitive processes, the nervous system makes associations between complex sounds and what they mean." The efficient sound-to-meaning connections are important not only for music but for other aspects of communication, she said.

The *Nature* article reviews literature showing, for example, that musicians are more successful than non-musicians in learning to incorporate sound patterns for a new

language into words. Children who are musically trained show stronger neural activation to pitch changes in speech and have a better vocabulary and reading ability than children who did not receive music training.

And musicians trained to hear sounds embedded in a rich network of melodies and harmonies are primed to understand speech in a noisy background. They exhibit both enhanced cognitive and sensory abilities that give them a distinct advantage for processing speech in challenging listening environments compared with non-musicians. Children with learning disorders are particularly vulnerable to the deleterious effects of background noise, according to the article. “Music training seems to strengthen the same neural processes that often are deficient in individuals with developmental dyslexia or who have difficulty hearing speech in noise.”

Currently what is known about the benefits of music training on sensory processing beyond that involved in musical performance is largely derived from studying those who are fortunate enough to afford such training, Kraus said.

The research review, the Northwestern researchers conclude, argues for serious investing of resources in music training in schools accompanied with rigorous examinations of the effects of such instruction on listening, learning, memory, attention and literacy skills.

“The effect of music training suggests that, akin to physical exercise and its impact on body fitness, music is a resource that tones the brain for auditory fitness and thus requires society to re-examine the role of music in shaping individual development, ” the researchers conclude.

“Music training for the development of auditory skills,” by Nina Kraus and Bharath Chandrasekaran, will be published July 20 in the journal *Nature Reviews Neuroscience*.

Contact: Pat Vaughan Tremmel

Source: [Northwestern University](#)

Don't You Wonder, Sometimes?

by Tracy K. Smith

1.

After dark, stars glisten like ice, and the distance they span
Hides something elemental. Not God, exactly. More like
Some thin-hipped glittering Bowie-being—a Starman
Or cosmic ace hovering, swaying, aching to make us see.
And what would we do, you and I, if we could know for sure

That someone was there squinting through the dust,
Saying nothing is lost, that everything lives on waiting only
To be wanted back badly enough? Would you go then,
Even for a few nights, into that other life where you
And that first she loved, blind to the future once, and happy?

Would I put on my coat and return to the kitchen where my
Mother and father sit waiting, dinner keeping warm on the stove?
Bowie will never die. Nothing will come for him in his sleep
Or charging through his veins. And he'll never grow old,
Just like the woman you lost, who will always be dark-haired

And flush-faced, running toward an electronic screen
That clocks the minutes, the miles left to go. Just like the life
In which I'm forever a child looking out my window at the night sky
Thinking one day I'll touch the world with bare hands
Even if it burns.

2.

He leaves no tracks. Slips past, quick as a cat. That's Bowie
For you: the Pope of Pop, coy as Christ. Like a play
Within a play, he's trademarked twice. The hours

Plink past like water from a window A/C. We sweat it out,
Teach ourselves to wait. Silently, lazily, collapse happens.
But not for Bowie. He cocks his head, grins that wicked grin.

Time never stops, but does it end? And how many lives
Before take-off, before we find ourselves
Beyond ourselves, all glam-glow, all twinkle and gold?

The future isn't what it used to be. Even Bowie thirsts
For something good and cold. Jets blink across the sky

Like migratory souls.

3.

Bowie is among us. Right here
In New York City. In a baseball cap
And expensive jeans. Ducking into
A deli. Flashing all those teeth
At the doorman on his way back up.
Or he's hailing a taxi on Lafayette
As the sky clouds over at dusk.
He's in no rush. Doesn't feel
The way you'd think he feels.
Doesn't strut or gloat. Tells jokes.

I've lived here all these years
And never seen him. Like not knowing
A comet from a shooting star.
But I'll bet he burns bright,
Dragging a tail of white-hot matter
The way some of us track tissue
Back from the toilet stall. He's got
The whole world under his foot,
And we are small alongside,
Though there are occasions

When a man his size can meet
Your eyes for just a blip of time
And send a thought like SHINE
SHINE SHINE SHINE SHINE
Straight to your mind. Bowie,
I want to believe you. Want to feel
Your will like the wind before rain.
The kind everything simply obeys,
Swept up in that hypnotic dance
As if something with the power to do so
Had looked its way and said:

Go ahead.

IHSFA State Discussion Artifact: Current Events



<https://www.youtube.com/watch?v=niiZNtqUMlk>

[PBS NewsHour](#)

Published on Feb 14, 2019

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What happens if you need a kidney transplant and don't know someone who is a biological match? A Nobel prize-winning economist has a solution: transplant chains. Donors agree to give to a stranger in exchange for a kidney for their loved one, but it has to start with someone willing to give without getting anything in return. Paul Solman has the story of two donors who volunteered to do just that.

The Importance of Art in Child Development

By Grace Hwang Lynch



In recent years, school curricula in the United States have shifted heavily toward common core subjects of reading and math, but what about the arts? Although some may regard art education as a luxury, simple creative activities are some of the building blocks of child development. Learning to create and appreciate visual aesthetics may be more important than ever to the development of the next generation of children as they grow up.

Developmental Benefits of Art

Motor Skills: Many of the motions involved in making art, such as holding a paintbrush or scribbling with a crayon, are essential to the growth of fine motor skills in young children. According to the National Institutes of Health, developmental milestones around age three should include drawing a circle and beginning to use safety scissors. Around age four, children may be able to draw a square and begin cutting straight lines with scissors. Many preschool programs emphasize the use of scissors because it develops the dexterity children will need for writing.

Language Development: For very young children, making art—or just talking about it—provides opportunities to learn words for colors, shapes and actions. When toddlers are as young as a year old, parents can do simple activities such as crumpling up paper and calling it a “ball.” By elementary school, students can use descriptive words to discuss their own creations or to talk about what feelings are elicited when they see different styles of artwork.

Decision Making: According to a report by Americans for the Arts, art education strengthens problem-solving and critical-thinking skills. The experience of making decisions and choices in the course of creating art carries over into other parts of life. “If they are exploring and thinking and experimenting and trying new ideas, then creativity has a chance to blossom,” says MaryAnn Kohl, an arts educator and author of numerous books about children’s art education.

Visual Learning: Drawing, sculpting with clay and threading beads on a string all develop visual-spatial skills, which are more important than ever. Even toddlers know how to operate a smart phone or tablet, which means that even before they can read, kids are taking in visual information. This information consists of cues that we get from pictures or three-dimensional objects from digital media, books and television.

“Parents need to be aware that children learn a lot more from graphic sources now than in the past,” says Dr. Kerry Freedman, Head of Art and Design Education at Northern Illinois University. “Children need to know more about the world than just what they can learn through text and numbers. Art education teaches students how to interpret, criticize, and use visual

information, and how to make choices based on it.” Knowledge about the visual arts, such as graphic symbolism, is especially important in helping kids become smart consumers and navigate a world filled with marketing logos.

Inventiveness: When kids are encouraged to express themselves and take risks in creating art, they develop a sense of innovation that will be important in their adult lives. “The kind of people society needs to make it move forward are thinking, inventive people who seek new ways and improvements, not people who can only follow directions,” says Kohl. “Art is a way to encourage the process and the experience of thinking and making things better!”

Cultural Awareness: As we live in an increasingly diverse society, the images of different groups in the media may also present mixed messages. “If a child is playing with a toy that suggests a racist or sexist meaning, part of that meaning develops because of the aesthetics of the toy—the color, shape, texture of the hair,” says Freedman. Teaching children to recognize the choices an artist or designer makes in portraying a subject helps kids understand the concept that what they see may be someone’s interpretation of reality.

Improved Academic Performance: Studies show that there is a correlation between art and other achievement. A report by Americans for the Arts states that young people who participate regularly in the arts (three hours a day on three days each week through one full year) are four times more likely to be recognized for academic achievement, to participate in a math and science fair or to win an award for writing an essay or poem than children who do not participate.

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IHSFA State Discussion Artifact: History

<https://amhistory.si.edu/starspangledbanner/>



On September 14, 1814, U.S. soldiers at Baltimore's Fort M'Henry raised a huge American flag to celebrate a crucial victory over British forces during the War of 1812. The sight of those "broad stripes and bright stars" inspired Francis Scott Key to write a song that eventually became the United States national anthem. Key's words gave new significance to a national symbol and started a tradition through which generations of Americans have invested the flag with their own meanings and memories.

These genetic 'goggles' could help us engineer wildly resilient crops

Making up for a lack of genetic diversity.

By *Kat Eschner* February 7, 2019

Domesticated crops don't have enough genetic diversity to survive a plague. *DepositPhotos*



Stem rust. Crown rust. Wheat blast. Powdery mildew. These whimsically-named diseases and others like them have devastating impacts for farmers and the people who rely on their bounty. A new method for finding disease-resistance genes in the wild cousins of domesticated crops could improve our ability to fight back.

In the wild, interbreeding is one of the ways plants remain genetically diverse. Domesticated crops don't do this, so they have far less genetic diversity. If an illness can kill one of them, it likely can kill them all—so without diverse genes for disease resistance, domesticated plants like wheat and oats are vulnerable to contagion. As crops became domesticated, they also became genetically dissimilar from their wild relatives in ways that prevent the two from interbreeding. The biggest effect of this is food instability: whole crops can be quickly wiped out by diseases. In Bangladesh, for instance, wheat blast—a fungus endemic to South America—arrived in 2016 and has already done serious damage in a region of the world where the rate of people who are malnourished is high.

“The way we deal with that in most modern intensive cropping systems is to douse our crops with chemicals,” says lead study author Brande Wulff, a biotechnologist at the John Innes Centre in the United Kingdom. That's not good for the environment—and it's not always effective—but there aren't a lot of other options at present.

Agriculture researchers have been actively combating disease for a long time by interbreeding domestic crops, like wheat, with wild relatives, but it takes more than a decade to produce a commercially viable strain. This involves identifying disease-resistant aspects of the wild plants and trying to introduce those genes into the crop plant—a process that can take generations of breeding.

Wulff's team developed a new method to speed the process up using a technology called AgRenSeq. It's a tool that relies on a database of information about disease-resistant genes in wild plants to find analogous genes in other crops. It acts like “goggles” that allow researchers to look at the whole genome of a wild plant, says Wulff, and quickly isolate the genes they want to introduce into the domesticated crops.

“There was a lot of skepticism, so it was very gratifying to be able to show that it worked,” says Wulff. The paper they published shows that researchers were able to use AgRenSeq to quickly isolate four resistance genes in a wild relative of domesticated bread wheat. “Quickly” here is a relative term: they did the job in months, rather than the years it would have taken using traditional methods.

“This methodology really allows you to move the resistance much more efficiently,” says Allan Fritz, an agronomist from Kansas State University who was not involved in the study. Fritz’s lab works on wheat breeding. “We know that these wild relatives harbor important resistance genes,” he says. But the genomes of these plants are huge and full of non-relevant information like transposons, says Wulff. The new method gives researchers “tags to be able to pull [genetic information] out,” says Fritz.

Researchers can use that info to speed up the rate of traditional cross-breeding or even combine it with gene editing technologies like CRISPR to introduce resistance more quickly.

The technology is still in early stages, but it has the potential to become very important, according to Jo Deborah Heuschele, a plant physiologist at the University of Minnesota. “With global climate change, diseases are becoming even more of an issue,” she says. “They’re moving and changing much faster.” There are a host of reasons for this: warm temperatures support disease growth; hurricanes can help disease spread by bearing the infection to new places; drier climates can help pathogens stay alive longer.

Diseases are good at evolving quickly to take advantage of these factors—that’s what makes them so successful. Plants, on the other hand, take longer to adapt. Heuschele, who was not involved with the current study, works on outbreaks in oats, and she says her lab is already talking about potential ways to work with AgRenSeq.

In time, Wulff hopes, “we should be able to produce crops that would be immune to certain diseases.”

<https://www.popsci.com/crops-disease-resistant-genes?qm1OabpRIF16sZ6.03>