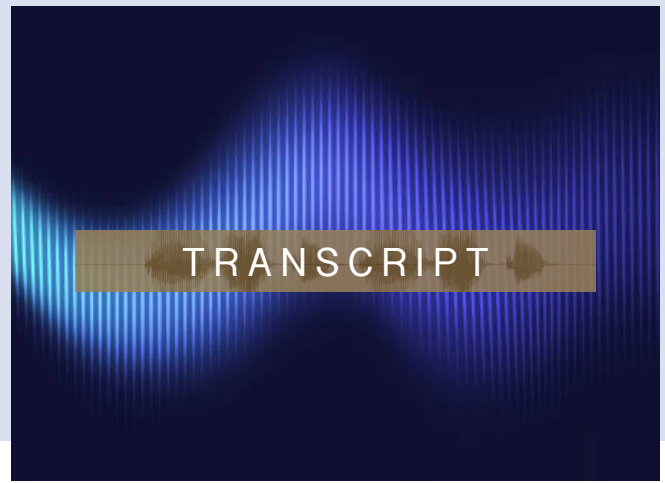


Social Trends in Speech and Voice

AUTHORS: VICTORIA MCKENNA, Ph.D., CCC-SLP
SAVANNAH SHANLEY, B.S.,
AND KATELYN REID, M.S., CCC-SLP



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00:00 —
00:41

Dr. Victoria McKenna, Ph.D., CCC-SLP: Welcome to Culturally Inclusive Education for the Speech Sciences. My name is Victoria McKenna and I am an assistant professor and the director of the Voice and Swallow Mechanics lab at University of Cincinnati. I am going to be discussing current trends in speech and voice in American culture. Later on in this presentation, Savannah Shanley, a graduate student in speech-language pathology, will interview Katelyn Reid, a current Speech pathologist at UC Health about her perspectives on social trends she sees in speech and voice and when and how she addresses them in the clinic.

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00:42 —
00:56

This educational module series is funded by the Advancing Academic Research Careers Award from the American Speech-Language-Hearing Association, also known as ASHA, and the College of Allied Health Sciences at the University of Cincinnati.

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00:57 —
01:24

I will begin this presentation with some background on social trends for speech and voice. I am going to focus on two trends today—glottal fry and upspeak— and discuss their physiological basis and presentations. Then I'll briefly review some perceptions and biases of these speaking patterns. During the second part of this lecture, you will hear an interview with a speech-language pathologist that describes what she sees clinically, whether or not vocal fry is bad for you, and how to help someone with vocal fry.

4

01:25 —
01:54

This module assumes prerequisite knowledge across three areas. First, it assumes a basic understanding of the anatomy and physiology of the speech and voice system. Second, it assumes some knowledge in the areas of acoustics and aerodynamics, namely understanding of pitch, loudness and resonance, as well as vocal fold vibration and airflow. And finally, it assumes some basic knowledge of English grammar, including understanding differences between questions and declarative sentence types.

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02:32

Sociocultural trends in speech and voice can depend on the geographic location, social status, or gender of the speaker. Today we are going to be talking about two common trends observed in American English—vocal fry and upspeak.

Vocal fry has many names, including glottal fry, glottalization, creaky voice, and pulsing voice. It is characterized by a low pitch and creaking or crackling noises. Upspeak, however, is characterized by a higher pitch than what is usually heard. Upspeak is also called uptalk, rising pitch, or rising intonation.

Dr. Victoria McKenna, Ph.D., CCC-SLP: Vocal fry is a naturally occurring phenomenon in American English. It is usually found at the end of a declarative sentence and indicates the end of a thought or idea. Here is an example of a sentence that ends in vocal fry. Let's listen.

Vocal Fry Speaker: I worked at my last job for 2 years.

Dr. Victoria McKenna, Ph.D., CCC-SLP: You can hear that her voice becomes lower and more aperiodic or gruff at the end of the sentence.

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02:33 —
03:49

It should also be noted that vocal fry is a phonemic marker in some languages. That means that the same word spoken with or without vocal fry would actually have a different meaning. Although that is not the case in American English, it is true for other languages like Danish.

Vocal fry has become more common over the past twenty years. It is now used throughout the entirety of a sentence. So, let's listen to another example of the same speaker using vocal fry at the middle and end of a sentence.

Vocal Fry Speaker: Peter will keep at the peak.

Dr. Victoria McKenna, Ph.D., CCC-SLP: Vocal fry was made popular through singers and TV personalities, most notably including Britney Spears, who sings often sings in vocal fry, as well as the popular TV series Keeping up with the Kardashians.

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Dr. Victoria McKenna, Ph.D., CCC-SLP (cont.): We can visualize some of the characteristics of vocal fry using voice analysis software. The image you see in front of you was captured using the Pentax Phonatory Aerodynamic System. It allows us to visualize different speech components at the same time. Pitch is in the top window in the blue, sound pressure level, which is how loud the speaker is, can be found in the second window in the green, and airflow, found in the bottom window in the red. Here we have a speaker saying an /a/ sound in their typical voice and then again in vocal fry. We can see clear differences between the two recordings. Vocal fry is characterized by a lower, inconsistent pitch. However, it seems to have similar loudness levels to that of a typical voice, but we can also see a reduced airflow in the red signal at the bottom.

8 04:46 —
05:42

Vocal fry also has aperiodic vibrational cycles. These can be observed in the variation of the pitch estimation on the previous slide and can also be visualized when using laryngeal stroboscopy. Here we have two video recordings of the larynx during phonation. Remember, the vocal folds should vibrate consistently during phonation, which we can see during typical speech on the left-hand side. Let's watch the video now. Now, let's observe the aperiodic or inconsistent vibration during vocal fry on the right.

9 05:43 —
6:31

Upspeak, or uptalk, is characterized by a rising pitch at the end of a declarative sentence. In American English, a rising pitch is usually observed during questions and not during statements. This means that rising intonation is a natural part of how we speak in English, but only in certain cases. Upspeak is a social trend that first became popular during the 1980s, from a movie called Valley Girl, and as such, is commonly called *valley girl speech*. It should be noted, however, just like fry is used in different languages around the world, rising intonation is common in other languages and dialects. For example, dialects of Australian English use rising intonation, and it is considered a norm in their culture.

10 06:32 —
07:22

Dr. Victoria McKenna Ph.D. CCC-SLP: Here we have an example of an acoustic waveform and spectrograms from the same speaker saying the same declarative statement. The blue tracking lines help us to observe pitch in these statements and is called a *pitch contour*. A rise in the line indicates a higher pitch and a fall in the line indicates a lower pitch. In the top example, her pitch falls to about 70 Hz at the end of the sentence. This is a low pitch. Let's listen to it.

Speaker: We eat eggs every Easter.

Dr. Victoria McKenna Ph.D. CCC-SLP: However, in the second sentence, you can see a rising intonation upwards of 430 Hz. This is a high pitch. Let's listen to this one.

Speaker: We eat eggs every Easter.

Dr. Victoria McKenna Ph.D. CCC-SLP: As you can hear, the second example sounds more like a question.

11 07:23 —
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Listeners make immediate assumptions and judgments about the speaker, not only based on what they say but also *how* they say it. Researchers have identified different assumptions made about speakers who use upspeak and vocal fry—some positive, but most negative.

First, upspeak is associated with characteristics of uncertainty, tentativeness, and a lack of knowledge. However, it is also associated with the positive characteristic of helpfulness. A study that examined the qualities of job applicants who spoke in vocal fry, found that they were perceived as less competent, less educated, less trustworthy, less attractive, and less hireable, with these perceptions being more exaggerated for female speakers compared to male speakers. Furthermore, females who speak in fry are perceived as being vain as well as apathetic and/or disinterested. Conversely, other research has shown that people actually prefer political candidates, both men and women, who have lower-pitched voices. This was associated with higher ratings of being stronger and more competent. It seems that vocal fry and upspeak may be more desirable for particular jobs or situations but sometimes can lead to immediate negative judgments and biases.

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Dr. Victoria McKenna, Ph.D., CCC-SLP (cont.): Next, we will listen to an interview with a speech-language pathologist to understand more about vocal fry and upspeak in the clinical setting.

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09:18

Savannah Shanley, B.S.: Hello everyone my name is Savannah Shanley and I'm here with Katelyn Reid, a speech-Language Pathologist from UC Health. Katelyn tell me a little bit about your background and your role at UC Health.

Katelyn Reid, M.S., CCC-SLP: I am a voice pathologist at UC, meaning I primarily treat patients who have problems with their voice. My background's actually in the performing arts, though. I started out as an Acting Major in college and fell in love with the vocal performance aspect of my training, then went on to get a graduate degree in speech pathology from there.

Savannah Shanley: So today we are interested in learning more about your experiences with specific social trends in speech and voice. Two that come in mind are glottal fry and upspeak. These two ways of talking have become more common over recent years. Is this something that you see in your clinic?

Katelyn Reid, M.S., CCC-SLP: So as far as upspeak is concerned, I honestly don't see it very much. A good amount of my patients come in because talking is making them uncomfortable or their voice won't hold up in conversation. Upspeak is more of a tendency or a habit than a disorder. Oftentimes it comes up in—if it comes up in—therapy at all, it's because someone, maybe another professional that they work with, has told them that they do it. What's kind of interesting about upspeak though, and vocal fry as well when it occurs in the absence of a pathology, is that the speaker often has no idea that they're doing it. Social trends in voice typically start out as an unconscious way of trying to belong or fit in with a group. It can come down from celebrities, or icons sometimes, in wanting to emulate them. Like, Kim Kardashian definitely brought vocal fry to the forefront of trends again, you know, recently. But it can also just come from a friend you have that speaks or sounds a certain way, and just by hanging out with them a lot or wanting to be accepted by them, you pick up their mannerisms as well.

14 09:19 —
13:37

The reason upspeak and vocal fry most often get pointed out to someone professionally, is because they can have some unintended and potentially negative side effects for listeners. There was this study done on vocal fry not too long ago and it found that older listeners that heard voices with heavy amounts of vocal fry— they thought the people sounded less competent, less educated, less attractive, less trustworthy, and less desirable. Now that's, that's pretty harsh, but notice that I said that study was done with older listeners. Younger people tend to feel the opposite way about this tone of voice, and likely because their peers may have spoken this way. But as older generations are still often the ones hiring younger generations, this study has a bit of merit for the professional impact a person's voice might have on how they are perceived.

I honestly think that as time goes on vocal fry as a negative trait will become less of an issue, and the same for upspeak. When this first got isolated as a trend it was attached with the whole "valley girl" image, and I actually think that's less of a stereotype nowadays, that specific term and image are kind of becoming outdated. It's more commonly called "upspeak" now and the comments people tend to get about it are that people don't feel it's a way of speaking that sounds confident or assertive. It kind of sounds more uncertain. So fundamentally, it can sound that way because it is a rise intonation at the end of sentence that can make that statement sound like a question. So, if people are picking up on that pattern, it could make them feel those things about that person without even that person knowing.

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Katelyn Reid, M.S., CCC-SLP (cont.): Some people do use upspeak on purpose though, because they don't want to sound super demanding. They like the way it feels to speak in a more open-ended and leading way. I will say, without getting into it *too* much, there are really a lot of gender issues wrapped up in, like, both of these vocal habits. Men can absolutely have vocal fry too, but because many of them speak at a lower frequency naturally, you know it sounds less, it sticks out less when they do it than when a woman does. *So if a guy kind of, you know, has fry, it might be down there [demonstrates vocal fry].* Then if a woman is up here *then it kind of sticks out more [demonstrates vocal fry],* because you hear that change in the tone. It's often pointed out though, like it's just a female trend, and it, it really isn't.

With upspeak, men do it too, but I would say on this one, it's a little bit more prevalent in women because I think women were historically expected to be more deferential and less commanding in their speech, if they didn't want a negative label associated with their directness. But with women holding more positions of power now, people (most likely men, or women who've also been corrected on it, who have consciously fought to work against speaking that way themselves) are pointing out that it makes them sound all the ways I mentioned before, less confident, etc. Honestly, and very unfortunately, you could probably distill it down to finding ways to be hypercritical of women, especially professionally, but on a positive note as I said earlier, I do think both of these things are going to be less of an issue for people as generational shifts in power occur.

Savannah Shanley, B.S.: Like you were talking about there are negative stereotypes of people that have glottal fry or upspeak. Has anyone ever come to you specifically wanting help with vocal fry? I know you said that you do see a lot of it, but what are your thoughts on that, and if it's an actual concern.

Katelyn Reid, M.S., CCC-SLP: I am a voice pathologist at UC, meaning I primarily treat patients who have problems with their voice. My background's actually in the performing arts, though. I started out as an Acting Major in college and fell in love with the vocal performance aspect of my training, then went on to get a graduate degree in speech pathology from there.

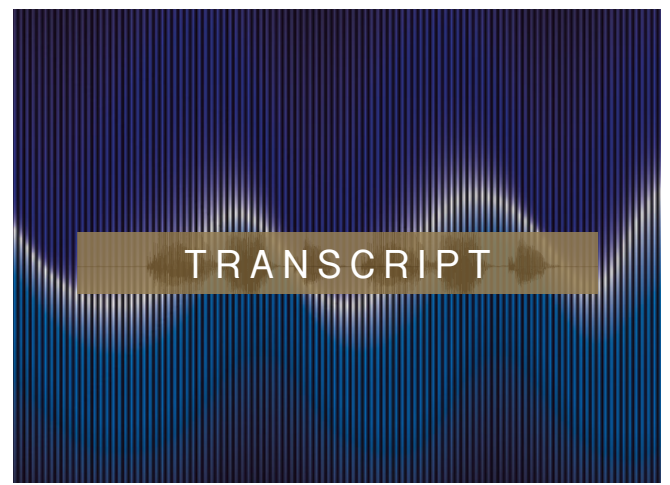
So vocal fry is not damaging physically. People used to think it was, but they've since proven that to be untrue. And nowadays people even use it on purpose as a singing exercise to help with learning to belt. They'll put people in fry to relax their muscles because fry is a very loose vocal fold posture, and then you can kind of "ahhhh" [demonstrates fry-to-belt]. It gets good closure there. I'll even use it in therapy as a tool to help people out of a breathy type of muscle tension. So, people who come in *kind of like this [demonstrates excessive tension]*. They're— they're tightening their vocal folds so much that they can't relax, and usually fry is a very polar opposite gesture, *to like this [demonstrates excessive tension], "uhhhhh" [demonstrates vocal fry]*. So, if you can get them to do that, now they've got their vocal folds together, *whereas this, they're like, not touching [demonstrates excessive tension]*. So, the act of doing vocal fry itself, like that, isn't really of a concern to anybody.

The places I find it can be an issue for someone is if they *speak in it habitually and then get into a position, like maybe in their job, where they're using their more voice heavily for longer durations or have to speak more loudly than they usually do*. Speaking in fry has the folds very *relaxed with very little airflow coming through in order for that "ahhhh," that popping sound to happen. [demonstrates vocal fry]*. So, it's kind of like driving your car in a very low gear. If you were to get onto the highway and need to speed up, but can't really shift out of that lower gear because you've been in it so long you've forgotten how to shift out of it, you could be in trouble. In a car you're going to get that like "rrrr", that revving that doesn't go anywhere and probably mess up your engine—I don't know a thing about cars, just to say that— but I imagine it probably isn't great for your engine, pushing that hard when it's in that low gear.

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Katelyn Reid, M.S., CCC-SLP (cont.): For your voice, if you have to speak for long durations and more loudly when you've gotten used to kind of driving down here with decreased breath support for voicing, it can make it really hard to do things in a way that won't feel, like, exhausting [demonstrates vocal fry]. So they'll be like "ah, I'm trying to get loud" but now they're really tight in their throat. So, if people speak in fry and are having these types of complaints with vocal fatigue or strain, I'll show them how to use their breath again for voicing and typically this helps. They can still speak in fry if they want (and some people do, it's, like, how they've always sounded and they prefer to sound that way). I've had people tell me they don't like the smoother voice because it doesn't sound like them, but at least now they know how to healthily shift gears when it's called for.

16 16:08 —
17:17

Savannah Shanley, B.S.: So, do you have people that go to you specifically wanting glottal fry or upspeak?

Katelyn Reid, M.S., CCC-SLP: Asking for it? No, no, not really. I think the sounds are, honestly, fairly easy to mimic, so if a person did want it in their voice, consciously or unconsciously, they probably wouldn't need my help for them to do it. But as an interesting side-bar though, in my acting degree when we were doing our voice over demos, we had to do some samples with fry purposefully in our voices because fry is seen as fairly normal to be present in parts of what people say. So, it's, like, the "average joe" noise. So, if you're in an ad, you know, commercial and you're going like "Ugh this mop really doesn't work for me. I need a new kind of cleaning tool." It can read as, like, too clean and too artificial. But if you go "Ugh this mop is really not working for me. I need a new kind of cleaning tool" [demonstrates intermittent vocal fry]. It suddenly rings more natural and people are like "Oh, that's me. I need that tool." So, if marketing's going to work, you want to sound like the people you're selling to. So, we actually had to put fry into our sound in order to do that. It's kind of interesting.

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19:48

Savannah Shanley: But now to nitty gritty, can you describe a technique of two that you might use as an SLP to help someone who has glottal fry?

Katelyn Reid, M.S., CCC-SLP: Absolutely. So again, it's a low energy kind of sound so usually working on breath support and honestly the biggest one is getting the sound to be felt more in the mask of the face as opposed to rattling around in the throat. So, if you feel your sound more heavily vibrating in your throat, then that can be a sign that fry is occurring, but if you get your voice up into your face it will come out more smoothly. Most commonly we use a hum for this like, "hmmmm" because a lot of people naturally hum with good resonance. It's kind of hard to hum in a "hmmmm" [demonstrates a raspy voice] in a raspy way. So, then we work on moving from a single sound that's buzzing in the face to syllables, so you might start with that "mummm-mumumumumumum" and you work on feeling that buzz up front and keeping it there even when you're opening your mouth in the syllable so it doesn't go like "mummm-mumumumum" [demonstrates vocal fry] and fall back. Then you'll go to phrase like "my mom my mom my mom, my mom made me move" and often times, I'll start with all of these on one pitch like a chant because it lets people focus just on feeling the vibrations of the sound, which is that key bit that's different for them. Because again, if you're "my mom may move" [demonstrates vocal fry], very different from "my mom may move" nice and smooth.

We'll also use negative practice as well, going back and forth between their raspy voice and the buzzy voice so they can feel in their bodies what that shift is. Once that's pretty easy for them, I'll start to add inflection, like "my mom my mom my mom, my mom made me move" [demonstrates resonant voice with pitch variation]. So now they have that task of staying buzzy with a moving target that sounds a little bit more like talking. Then I help them feel out other buzzy sounds we speak like zzzhhh, and vvvv and wwww and thhhh, so that they can keep feeling their voice in their mouths as they talk, even when it's not like a Dr. Seuss "m"-laden sentence. That will help them stay up front, like "zany Mimi loves zoos" lots of buzz there that keeps them from going back here [demonstrates vocal fry].

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Katelyn Reid, M.S., CCC-SLP (cont.): I often tell people that to me it feels kind of a bit like slouching and sitting up. So, slouching feels easier to do at first. It's less effort. You, kind of, just relax. *Fry feels pretty low effort and relaxed [demonstrates vocal fry]*. But by the end of a day of doing it, it can actually kind of make your back sorer from slouching all day. So, sitting up straight requires a little bit of energy and thought to kind of track yourself and make sure you do it all day, but by the end of the day you're less likely to feel discomfort. So, it's that adjustment that's worth paying attention to. Just keeping that voice "hmmmmmm" locked up in your mouth, thinking more about speaking from your mouth, then thinking about *speaking from your throat [demonstrates vocal fry]*.

Savannah Shanley: When you were talking the valley girl voice and socio-cultural considerations with women and voice, I think about anchor women in the news. Have you ever worked with someone in the news who had to do like the deeper, more "professional" voice, or what's considered "professional?"

Katelyn Reid, M.S., CCC-SLP: I think I've worked with maybe one person in the past nine years who had that as a part of what she hoped to get out of therapy. It's definitely not a common request, and honestly, I prefer it that way. My ultimate hope is that everyone's authentic voice can have the same value, be it higher or lower than people might be used to hearing. People should speak where their voice is the most comfortable. For shorter and more petite people, that's likely to be a slightly higher pitch, just by the nature of the size of their vocal folds. Smaller instruments have higher fundamental frequencies. Having a higher voice shouldn't be something people are looked down on for. It's not theirs to control and it's kind of ridiculous to ask them to modify it on a daily basis, just to fit a societal norm. This is true for men as well. Actually, I've had a lot more men come to me with throat problems, pain with speaking, etc., that the fix for them was to raise their pitch because they'd been *driving it down low unconsciously in order to fit in [demonstrates forced low pitch]*. One guy had throat pain, like for 20 years and he'd seen over ten ENTs and had no relief from the pain until we figured out his speaking pitch was causing excess muscle tension. And, as soon as I helped him find his natural voice, which was a slight bit higher than he'd been speaking (and he was in sales so he was speaking a lot). When he got to his most resonant and comfortable speaking range, his pain went away. So, sometimes I get the request to help someone shift their voice, and I'll do my best to make sure they can speak in the way they want, and it's still the most comfortable and sustainable manner possible. But it's much more likely that it's something I help people *undo*, actually, in order to help them feel better.

Savannah Shanley: Is there anything else you would like to add about social trends in speech, voice, and communication.

Katelyn Reid, M.S., CCC-SLP: I mean just that it fluctuates. It truly is a trend. I think, when the younger generations become the older generations, it's not going to be an issue. For my part in the clinic, I'm just going to keep trying to help people find their most resonant, and comfortable, functional voices— whatever that may entail for them. Because usually, that's where people are the happiest.

Savannah Shanley: Yeah that's awesome, thank you Katelyn so much for being here.

20 22:14 —
22:22

Dr. Victoria McKenna Ph.D. CCC-SLP: Here is the list of resources used in today's presentation.

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22:30

Thank you for watching this presentation. Here is the list of authors with their contact information below.