

Professor's artificial crowd noise research more applicable now than ever

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Credit: Texas Tech University

Glenn Cummins wrote two papers on how TV might use artificial crowd noise during sports broadcasting years before the COVID-19 pandemic made it a reality.

A baseball player is at the plate. The pitcher is on the mound, waits for his sign, nods his head and throws a fastball. The batter, undeterred, hits the ball perfectly, sending it sailing toward the outfield and over the fence. A home run. The batter rounds the bases as the crowd roars in celebration. However, there's one exception: the stands are empty; the crowd is nowhere to be seen.

Since the COVID-19 pandemic shook the world earlier this year, sending millions of people into lockdown, the question of sports continuing (or beginning new seasons) remained unanswered. The safety of players and fans alike was the main concern. While the major professional sports leagues—the MLB, NHL, NBA and NFL—decided to begin their seasons, or some altered version thereof, most teams decided to leave fans out of the stands.

Without fans, how would broadcasters incorporate the energy and noise the crowd normally makes during games? The answer: artificial crowd noise. Glenn Cummins, an associate professor of journalism and creative media industries in Texas Tech University's College of Media & Communication, conducted two studies on television broadcasting using artificial crowd noise during live games, not once imagining it would come to fruition.

"I started my studies well before the pandemic," Cummins said. "It had nothing to do with COVID-19. It was just a series of studies I did a couple of years ago, mainly because I read some interesting literature that was obviously relevant to the world of sports and was shocked that no one else had done these particular studies yet. I was very opportunistic and recognized a gap in the literature and the chance to examine this. But yes, it's purely coincidental. I never dreamed the studies would become as relevant as they have since the pandemic became so widespread."

Artificial crowd noise research

Cummins said the genesis of his crowd-noise studies was when the Center for Communication Research at Texas Tech received a new research apparatus used in continuous response measurement or "dial testing." The device is a small, handheld dial that allows participants to continuously evaluate what they're seeing and hearing.

"I was familiar with some research that used that particular measurement approach to see how people responded to laugh tracks in sitcoms," he said. "The question is still how laugh tracks and laughter from an audience serves as a social cue that influences our response to what we're seeing and hearing."

That left Cummins wondering how artificial crowd noise being incorporated into a live sports event might impact the viewing experience and entertainment factor to fans watching from home.

"That was kind of the origin of where this came from, because I do study sports and, particularly, the production of broadcast sports," he said. "I was struck that no one had done this for a televised or radio broadcast of sports, where crowd noise is an essential bedrock of what you're seeing and hearing. I mean, it's always present, it's always there. Yet no one had looked from a scientific standpoint to see how that ever-present part of the broadcast influences our perception of competition as it unfolds. That was the basic question I wanted to answer."

Cummins started his first study with participants listening to radio broadcasts of Texas Tech soccer matches. Some participants were assigned games that had extra crowd noise filtered in while others listened to the original broadcast.

"Our intent was to simply see how much the use of crowd noise in a

sports broadcast influences someone's evaluation of what they're seeing or hearing and how exciting they think the game is as they're watching or listening to it," he said. "We manipulated some games slightly to enhance the crowd response, to add in some cheering and some extra yells and excitement at different points in the broadcast.

"Then, people used their handheld dials to evaluate how exciting the competition was. Sure enough, people followed those audio cues we embedded within the broadcast. As the crowd noise became more intense, they turned their dials to evaluate the competition as being more exciting. This was particularly true when the competition itself wasn't intrinsically exciting. You know, if it's a goal where someone scores, that's pretty exciting on its own and doesn't need to be enhanced. But what we found was the audio enhancement had a stronger, more potent effect when the competition itself was somewhat mundane."

For his second study, Cummins had participants listen to radio broadcasts as well as watch televised Olympic soccer matches. The results were the same.

"Once again, people followed those as oral cues," he said. "As the crowd noise became more intense, they registered the competition as being more exciting."

Real-world application

Since professional sports leagues decided to make their return to empty venues, save a few outliers in the NFL, broadcasters are using fake crowd noise to fill the void and bring some semblance of normalcy to games. However, the possibility that broadcasters could manipulate the crowd noise to favor one team, especially the home team, over another has been mentioned.

"I think that is a legitimate complaint," Cummins said. "One of the things that has been studied—not so much from a broadcast or media perspective, but from a sports performance perspective—is looking at crowd noise and how that influences home-field advantage. The crowd noise is obviously a big part of home-field advantage and why teams play better or harder when they've got their own fans cheering them. So, some of that's reflected in the NFL's stance in that the crowd noise is meant to reflect a little bit of that home-field advantage for the teams when they're on the field."

It's not just cheering teams in the NFL are hearing. The broadcasters also are incorporating boos after a "bad" play or call. And the players are hearing it, too.

"Within the NFL, they're actually pumping the crowd noise into the stadium, which is different from baseball and basketball," Cummins said. "But, with the NFL, they set a decibel limit as to what that can sound like to try and make it more natural, not just for the viewers at home but also more natural for the athletes who are down on the field."

Attention from media

Once the notion of sports coming back in the summer became a reality, and broadcasters began using fake crowd noise, Cummins and his research received plenty of media attention.

"I started receiving emails and phone calls to discuss my research in the summer when European soccer began," he said. "It truly caught me off guard when some of those initial inquiries came in. I did a radio show in London, and I spoke to a Dutch newspaper a few months ago. They asked some of those same questions about how, or if, it will influence the audience at home."

"One of the points I always make is that a lot of people talk about sports fans as being this big, monolithic group, like they're all the same. To me, that's the mischaracterization of people watching sports. Some people are much more analytical, and those may be the ones who are saying, 'Hey, this is fake, I don't like it, and you're ruining it,' whereas some people just want to get together with friends and family and have the Dallas Cowboys on the background. That's a different motive for consumption, and the [crowd noise](#) makes it feel more comfortable."

Back to the ballgame?

With the COVID-era of sports watching currently in progress, most people have to be at home for a game. Cummins doesn't think this means the end to in-person attendance, though.

"I think sports participation and spectatorship is an inherently social activity," he said. "We like to get together with friends and family, whether it's in our living room, whether it's a local sports bar or whether it's tailgating before a game and then heading into the stadium, we like to do this with others. I think, given the opportunity, the public can be quite ready to head back and return to some sense of normalcy whenever the time is right.

"There's obviously uncertainty about when that time will be right, but I the current social isolation and social distancing tactics we are all taking part in is taking its toll. It's making us recognize just how much we miss sports and how much we miss watching [sports](#) with each other."

Provided by Texas Tech University

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