Laughing Together, Alone: How the Laugh Track and the Laff Box Shaped TV Viewing

A highly social species, human beings naturally gravitate toward shared experiences, and laughter may be the most universal of these. According to Professor Robert Provine, author of *Laughter: A Scientific Investigation*, laughing together "bonds us through humor and play" and reinforces a sense of belonging. In the United States and other developed nations, television has helped to establish what is—or is supposed to be—funny. For more than sixty years, millions of viewers have laughed along with primetime situational comedies or "sitcoms," Saturday morning cartoons, and variety shows like *The Tonight Show* and *Saturday Night Live.*

Few Americans realize, though, how much our experience of television owes to the development of the "laugh track" by Charles Roland Douglass in the early 1950s. Typically, a comedy's laugh track is recorded during filming of the show and then edited before the show airs. Laugh tracks can take several different forms: they may simply enhance the reactions of a live studio audience, or they may be used to change the reaction the audience seems to be having to a scene. In some cases, a laugh track even takes the place of an audience.

Also known as "canned laughter," laugh tracks have been both admired and reviled from their very beginning, and TV producers' tendency to use them has waxed and waned. Bill Kelley, a Dartmouth College psychology professor who has studied the brain's response to humor, notes that "when done well . . . [laugh tracks] can give people pointers about what's funny and help them along. But when done poorly . . . you notice a laugh track and it seems unnatural and out of place." In every decade since the 1950s, some shows with laugh tracks have succeeded while others have been highly criticized for the laugh track's poor quality. Still other shows have refused to use a laugh track and have failed. A select few have aired without laugh tracks and have achieved success anyway. Overall, formal and informal studies indicate that laugh tracks on TV comedies serve a valuable purpose: to provide a communal experience that encourages us to laugh.

Of course, this type of communal experience used to happen in public spaces. Prior to the early 1900s, Americans who could afford to pay for entertainment attended live performances in theaters, clubs, and other concert halls. The introduction of commercial radio broadcasting in the 1920s and television broadcasting in the 1950s changed the way Americans tended to use their leisure time—they began to seek entertainment opportunities in the privacy of their own homes rather than in public venues. This transition from local live performances to national broadcasts was not without challenges, though. Early radio shows struggled to replicate the communal aspects of live entertainment. One method that produced positive results was broadcasting the show from a studio containing a live audience. Listeners at home relied upon the reactions of the studio audience members to authenticate their experience and to reinforce the idea that the performance was worth their time and attention.

Why would hearing an audience laugh improve the appeal of a radio broadcast? The answer may lie in the social nature of laughter. As Professor Provine's research shows, "However happy we may feel, laughter is a signal we send to others and it virtually disappears when we lack an audience . . . We laugh 30 times as much when we're with other people than we do when we're alone." In other words, humans rarely laugh when they're alone—even if they see or hear something funny.

In the early years of television, shows that were not broadcast live were recorded using only one camera, which was set up between the stage and the studio audience. Microphones were hung above the stage and also above the audience, to capture people's reactions to the performance. Sound was recorded separately from video, creating a soundtrack unique to each episode. Then, during post-

production, the show's broadcast engineers mixed the sound from both microphones with music and special effects to create a cohesive soundtrack. Live studio audience reactions were unpredictable, though, in both sound quality and the nature of people's reactions. It was not uncommon for an audience's laughter, cheering, jeering, or gasps to be too loud, or to last too long, or to drown out the dialogue occurring on stage. In many instances, the audience would fail to react as a show's producers expected.

The difficult job of broadcast engineers was to even out the show's sound, especially audience reactions like laughter. In the early 1950s, one CBS broadcast engineer, Charles Douglass, developed his own process for moderating unpredictable audience reactions during post-production. Douglass's process, called "sweetening," used actual recordings of reactions by a studio audience to add laughter, cheers, or gasps where the engineers felt these reactions were appropriate. Douglass also removed or clipped overly loud or long laugh segments. Sweetening resolved any sound quality issues and also provided a soundtrack that better matched what was happening on stage.

For several years, Douglass sweetened CBS shows one by one, gradually honing his craft. He collected laughs, hoots, giggles, gasps, and other audience reactions to use in other shows. In the beginning, Douglass' minor edits and additions did not significantly alter the sound recorded live by the studio microphones. However, show producers began to see the value in improving upon audience reactions to make a show feel more funny when it aired on television. They wanted to add bigger laughs, longer laughs, and more laughs, regardless of a studio audience's reaction. The laugh track soon became a controversial issue in TV comedy production, with critics of the process questioning how much producers were attempting to manipulate the home viewing audience.

From the mid-1950s to the early 1970s, Douglass held a monopoly on canned laughter, at least for television comedies produced by the major studios. In general, the more complex, well-executed laugh tracks that resulted from sweetening significantly improved the experience of TV's viewing audience while also providing more freedom and flexibility for a show's producers. Uneven sound quality and ill-timed bursts of laughter or loud gasps from the audience became a thing of the past.

In 1953, Douglass developed the Laff Box, a machine to help him with the sweetening process. According to TV historian Ben Glenn II, Douglass built his Laff Box after spending hours of his own time reviewing tapes to find the exact live audience reactions he needed. He then "spliced together tapes into spools—essentially tape loops. There was a keyboard for this machine, and each key was connected to a separate tape loop. At the bottom was a pedal that would either increase the volume or fade it out." Douglass's Laff Box, which looked like a cross between an organ and a typewriter, quickly became a Hollywood legend. No one outside of Douglass's company knew exactly how the machine worked; in fact, for years, Douglass himself was the only person to operate the Laff Box, and his expertise was in high demand. As Glenn remembers, "Douglass's work was crisp and clean. It was a real craft. And the range of reactions that he was able to find was incredible." By 1970, as the laugh track became more and more attractive to TV studios, Douglass had trained several other engineers.

Throughout the history of television, popular prime-time entertainment offerings such as sitcoms, variety shows, and sketch comedy shows have helped create a shared sense of cultural identity among viewers. In the early decades of TV broadcasting, there were just a few networks; as a result, thousands of Americans simultaneously watched the same shows in the privacy of their own homes and then talked about them the next day in their offices, supermarkets, and backyards. Laugh tracks helped to

heighten the illusion of a shared viewing experience. Human behavior experts note that while real laughter is spontaneous and uncontrollable, it is also contagious. Professor Provine has theorized that one reason humans tend to laugh together is because the brain's laugh generator and laugh detector complete a neural circuit. In other words, hearing others laugh may activate the part of your brain that makes you laugh. Provine's theory suggests that the sweetening process and the use of laugh tracks helped ease the transition from live shows to broadcasts because viewers who laughed, cheered, or gasped along with a studio audience felt a sense of *neurological* satisfaction.

Most of the networks' most popular shows have used sweetening to bridge any gaps in audience reactions, including *The Odd Couple* (ABC, 1970-75), *Happy Days* (ABC, 1974-84), *Cheers* (NBC, 1982–93), and *Frasier* (NBC, 1993–2004). With very few exceptions, ratings demonstrated that home audiences were more receptive to programs with laugh tracks. Therefore, when producers would choose not to film in front of a live studio audience because of the cost, the complexity of a scene, or the use of special effects, Douglass or one of his protégés would create a custom laugh track using Douglass's vast collection of laugh sequences. The first American TV show to use a laugh track—the NBC sitcom, *The Hank McCune Show* (NBC, 1950-51)—was not filmed in front of a studio audience. Instead, Douglass created the entire laugh track himself from previously-recorded laughter. Although the series lasted only a few months, network executives took notice and began to consider the potential of canned laughter. TV historian Ben Glenn II recalls that "shortly after the show's debut, there was an article in *Variety* [magazine] noting that the show's canned laughter was a new innovation, and that its potential for providing a wide range of reactions was great."

By the 1960s, TV broadcasting had shifted away from live studio audiences, mostly due to space limitations and post-production requirements. To film *The Brady Bunch* (ABC, 1969-74), producers used multiple cameras and locations, which created a complicated soundstage that allowed a studio audience member to see only a small portion of the set at a time. As a result, any member of the live studio audience would miss not only key parts of each episode's story but also many of its jokes. Science fiction and fantasy shows presented a different kind of difficulty; they required the addition of significant visual and auditory special during post-production, just to make the show seem futuristic or fantastical. Douglass's prodigious editing talents and creativity were showcased on fantasy shows like *Bewitched* (ABC, 1964-72) and *The Munsters* (CBS, 1964-66), for which he created elaborate, well-executed laugh tracks. In recent years, shows like *How I Met Your Mother* (CBS, 2005-2014) have used the absence of a live studio audience to increase the number of scenes per episode and to film more complex scenes on location. In fact, each episode of *How I Met Your Mother* requires several days to film rather than the usual three-hour taping session older sitcoms filmed in front of a live studio audience.

Not every studio could afford to use Douglass's specialized sound editing services. By the mid-1970s, smaller studios as well as several large cartoon producers began to create their own makeshift laugh tracks. In 1971, the popular cartoon studio Hanna-Barbera, producer of *The Flintstones*, copied some laughs from Douglass's collection to create its own laugh track. At the time, its popular Saturday morning cartoon lineup included *The Pebbles and Bamm-Bamm Show* (CBS, 1971–72) and *The New Scooby-Doo Movies* (CBS, 1972–74). The cartoons removed the art and expertise behind the laugh track—and its subtlety—and simply repeated the same five laughs on a continuous loop throughout the show. In fact, every episode of many of Hanna-Barbera's shows include the exact same looping laugh track.

Meanwhile, other studios decided that more was better and asked Douglass to add more laughs, louder laughs, and fake laughs to their laugh tracks when jokes fell flat. When Douglass refused to fulfill their requests, several studios added their own laugh sequences to his finished product. The laugh tracks produced with these methods were obviously fake, and they irritated most viewers. As TV writer/producer Phil Rosenthal said, “I worked on shows in the past where the ‘sweetener’ was ladled on with a heavy hand, mainly because there were hardly any laughs from the living.” Home audiences generally noticed the awkward, disruptive laugh tracks, and the reputation of the sweetening process suffered as a result.

Writers, actors, show creators, producers, and the general public have often disagreed on when or if to use laugh tracks. Many studios and a majority of home viewers continue to believe that laugh tracks improve a show’s quality. In fact, television ratings systems have consistently demonstrated that comedies with laugh tracks perform better with home audiences than comedies without them. In 1965, CBS aired two versions of its new sitcom, *Hogan’s Heroes* (CBS, 1965-71), to test audiences, one with a laugh track and one without. The version without the laugh track received much lower ratings. Several later studies, including one published in *The Journal of Personality and Social Psychology* in 1974, demonstrated that viewers were more likely to laugh at shows containing canned laughter.

Critics of canned laughter argue that laugh tracks invariably sound fake or inauthentic; they consider comedy shows without laugh tracks to be more sophisticated because they assume people can decide for themselves what parts of a show deserve laughter. According to Karal Ann Marling, professor of American Studies at the University of Minnesota, "Most critics think that the laugh track is the worst thing that ever happened to the medium, because it treats the audience as though they were sheep who need to be told when something is funny." A few television writers and producers persuaded their network studios to reduce or eliminate the use of canned laughter. During the 1970s, the controversial sitcom *All in the Family* (CBS, 1971-1979) was recorded using a live studio audience with no laugh track and displayed a message to that effect as part of the credits. Since 2000, some of TV’s most successful and critically-acclaimed comedies deliberately did not include a laugh track. Shows like *Arrested Development* (Fox, 2003-2006; Netflix 2013), *The Office* (NBC, 2005-2013), and *Community* (NBC, 2010-2014; Yahoo! 2015) became successes in part because of viewers’ perceptions that the absence of a laugh track meant the jokes were more intellectual.

While critics of canned laughter make some good points, it is important to remember that the idea of “sweetening” or enhancing an audience’s reaction to a performance was not unique to television. Today, laptops with sophisticated software have replaced the original Laff Box; these programs provide a re-recording mixer that lets users combine up to 40 reactions at a time from a library of hundreds of real-life laughs, giggles, gasps, and jeers. For hundreds of years before the invention of TV, though, audiences laughed, gasped, cried, and jeered together with the encouragement of “plants” in the audience—people who were paid by producers to react enthusiastically at predetermined moments in the performance. Even then, producers understood that audiences tended to enjoy a performance more when they could hear the reactions of others.

Charles Douglass believed canned laughter to be just one "tool” for creating art—no more or less critical to a comedy’s success than music, sound effects, and dialogue. The television industry seemed to agree with him. In 1992, the Academy of Television Arts & Sciences recognized the contributions of Charles Douglass, his sweetening process, and his Laff Box with a Lifetime Achievement Emmy award. They wanted to acknowledge that when done properly and with skill, the sweetening process lives up to its

name, enhancing jokes that were already funny and evening out unpredictable sound quality, and that Douglass had contributed immeasurably to the progress of television as a medium. After all, the controversy surrounding the use of a laugh track probably contributed to some of most successful TV comedies of the 21st century, when writers and actors decided to improve their ability to elicit real laughter rather than relying on post-production sweetening to show viewers when and how to react.