

SCIENCE COMMUNICATION AND THE ADVANTAGES OF  
THE CONTEXTUAL MODEL IN DOCUMENTARIES

by

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## ABSTRACT

Documentaries can be an effective method for informing the public on agricultural trends and policies. Incorporating the contextual model of science communication into these films is one way to improve public awareness and to explain the complexities of sustainable agricultural practices. A comparison of *Food Inc.* and the "Dan Barber" episode of *Chef's Table* demonstrates how a reliance on the deficit model inhibits the propagation of knowledge about sustainable agriculture. This critique also highlights how a character-based story can function as an educational tool to teach audiences about the value of regenerative food production practices by emotionally connecting with the protagonist.

## INTRODUCTION

Since the early 2000s, popular documentaries have been advocating for sweeping changes to the food production system in the United States. These films employ a wide range of storytelling techniques, but they all share the common goal of examining the flaws in current agricultural practices and the effects these shortcomings have on the viewer's health and on the health of the environment (Kuxhausen 13). Food-related documentaries such as *Food Inc.* and *Chef's Table* illuminate how industrial agriculture's use of chemical inputs wreak havoc on ecosystems, offering organic agricultural practices as a solution to combating climate change, soil deterioration, and mono-crop proliferation.

Moreover, policies that dictate contemporary agricultural practices continue to be explored and disseminated through science communication, which receives “significant attention from policymakers, research institutions, practitioners and scholars” (Bubela et al. 514). According to Burns et al. in “Science Communication: A Contemporary Definition,” there are two approaches to communicating scientific knowledge (189-190). The first is the deficit model, characterized by the transferring of information from scientists to the general public; the second is the contextual model, which promotes a two-way flow of information from the public to the experts (Burns et al. 189-190). With this understanding, *Food Inc.*, which exemplifies the deficit model, and the *Chef's Table* episode entitled “Dan Barber,” which utilizes the contextual model, can be examined. After close evaluation, *Chef's Table's* character-based approach—founded in the contextual model—results in broader audience awareness, propagating information on the

industrial food system's need to transition to regenerative practices, leading to a better understanding of complex farming concepts. This analysis will be applied to "High and Dry", a film about a woman who owns and operates an organic farm in Havre, Montana, pointing to the financial implications for farmers in the United States.

Although *Chef's Table* is part of a docuseries, each episode contains the architecture of a feature film. Centering around one protagonist, each unique episode stands alone as a separate portrait. "Dan Barber," from season one episode two of *Chef's Table*, and *Food Inc.*, showcase the need to transform the chemical-based agricultural system of the United States to a regenerative one. Therefore, it is reasonable to compare and to contrast the message, the execution, and the advertisement of these documentaries.

## FOOD DOCUMENTARIES AND THE MODELS OF SCIENCE COMMUNICATION

Burns et al. define science communication as “the use of appropriate skills, media, activities, and dialogue to produce one or more of the following personal responses to science: awareness, enjoyment, interest, opinion-forming, and understanding” (Burns et al. 183). Food documentaries, in this case, serve as examples of science communication between agricultural experts and the public. Ultimately, effective science communication would influence policy, guide agricultural practice, and shape public understanding of agricultural science (Bubela et al. 514). *Food, Inc.*, one of the first food-centered advocacy films, and the episode “Dan Barber” from the Netflix docuseries *Chef’s Table* both demonstrate how documentaries can be used to educate the public on agricultural science and to promote sustainable food systems.

Each documentary points to the advantages of organic agriculture—carbon sequestration, lessening the need for pesticides, the freshness of food—but does so using different approaches to science communication. *Food Inc.* exemplifies the deficit model of science communication through its assumption of “ignorance at the root of the audiences’ opposition” (Bubela et al. 515). The deficit model approach to science communication assumes the lay public to have “inadequate knowledge, and science having all the required knowledge” (Burns et al. 189). Burns et al. highlight how low levels of science understanding abound in society, despite the general public maintaining high levels of interest in science topics. As a result of this knowledge gap, the scientific

community needed to improve science literacy by filling this void. Consequently, the deficit model became a public standard for science communication (Burns et al. 189).

The deficit approach, however, does not adequately meet the needs to raise science understanding amongst the general population (Bubela et al. 515). This model of science communication does not suffice because it does not account for the complexities of human judgments and learning, which involves a mixture of both internal and external inputs. People typically give higher weight to preexisting ideological beliefs, emotion, and intuitive knowledge when forming scientific understanding (Bubela et al. 515).

Conversely, the Dan Barber episode of *Chef's Table* layers the personal life story of a chef with the science of sustainable agricultural systems. Exemplifying the contextual model, the filmic elements used stimulate the audience's understanding by recognizing science's social influence. This episode invites the audience into the world of professional cooking and farming, intertwining relevant science topics with an emotional character portrait. The contextual model of science communication “implies an active public: it requires a rhetoric reconstruction in which public understanding is the joint creation of scientific and local knowledge... In this model, communication is not solely cognitive; ethical and political concerns are always relevant” (Burns et al. 190). Effective science communication seeks to personally and emotionally engage the public in order for them to then apply their intuitive as well as local knowledge to solve problems and, ultimately, progress.

*FOOD INC.* AND THE DEFICIT MODEL OF SCIENCE COMMUNICATION

In “Cooking Class: The Rise of the ‘Foodie’ and the Role of Mass Media,”

Kathleen Collins elaborates on how the cultural interest in food has expanded to include ideas about environmental impacts and a movement towards informational programming:

Food interest has broadened in ways that were hinted at in the 1960s and the 1970s but now receive more extensive attention. Thus, it seems that what might be required in the current day, as evidenced by the alarming rise in obesity and diet-related illness in the U.S. as well as increased attention to environmental crises, is the development of programs to address these issues... (2008,233) (13).

It is in this world of concern and quest for transparency that *Food Inc.* was born. Kim Severson, who reports on the nation's food culture for the New York Times, states that “*Food Inc.* is part of a new generation of food films that drip with politics, not sauces. It is the eat-your-peas cinema that could make viewers not want to eat anything at all (2009).” For example, *Food Inc.* contrasts pictures of idealized farmers in the United States with scenes from an industrial food system by juxtaposing marketing images of pleasant agricultural landscapes on product labels with gruesome shots of animal processing facilities (Murray and Heumann 69-91). Through this comparison, the film illustrates the move from traditional farming to fast food, beginning in the 1950s, illuminating its problematic consequences (Kuxhausen 13).

*Food Inc.* explores the business of mass-produced food in the United States. Robert Kenner, the director of *Food Inc.*, gives its audience a firsthand account of how food is grown, harvested, and mass-produced by documenting different types of large-

scale industrial farms. Arguing that the fantasy of pastoral livelihoods disguises the problematic systems of modern American farming, Kenner builds a convincing case using graphic images and participatory interviews with both farmers and food experts (Kuxhausen 13).

In this way, *Food Inc.* falls in line with traditional science communication efforts, promoting the idea that “if members of the public only understood the scientific facts, they would more likely see issues as experts do” (Bubela et al. 515). Kenner’s reliance on the deficit approach to science communication is evident through the use of an impersonal narrator. The narrator becomes an omnipresent tour guide through the horrors of large-scale agriculture, but he does little to evoke a personal connection with himself and the audience; instead, he divulges information, attempting to fill the knowledge deficit. The narrator speaks to the audience, and the audience is supposed to acquire the necessary knowledge to make “better” decisions. At the start of the film, the narrator tells viewers, “because if you knew, you might not want to eat it.” *Food Inc.* “lifts the veil” to expose industrial food production processes in the hopes of “filling the deficit” of information the general public can access.

This deficit approach to science communication fails to account for the other factors that may influence an individual’s understanding of science, such as theology, culture, and socioeconomic background. In fact, judgments are more strongly impacted by trust, ideology, intuition and social identity (Bubela et al. 515). Issues arise in the deficit approach to science communication when audiences do not engage with or connect to materials due to their previous life experiences. In general, people tend to seek

out media sources that confirm their preexisting beliefs (Bubela et al. 515). They bring a lifetime of ideas to the conversation around science and rely heavily on emotional connections to form identities and opinions. Communicators fail to get their message across when they do not recognize their audience's previous life experience and intuitive knowledge while formulating science media.

*Food Inc.*'s argument, although well-articulated, connotes an assumption about their viewers: education—and not location or finances—is the only deficit needing to be filled in order for the general American public to choose healthier food. In the article, “Good Food, Good Intentions: Where Pro-sustainability Arguments Get Stale in U.S. Food,” Ryanne Pilgeram and Russell Meeuf elaborate on the assumptions filmmakers made about their audiences:

If only consumers were educated about real conditions, real power relations, and real consequences of the industrial food system, then they would choose to purchase more sustainably produced foods. But this approaches sustainable agriculture from a problematic starting point: it assumes the primacy of the individual consumer in the food system and assumes that education is the only barrier to accessing sustainable foods (rather than material barriers, such as poverty). Then in their pursuit to persuade consumers by “lifting the veil,” the documentaries fail to recognize that they create their own veils, obscuring crucial questions and concerns about the sustainable food system to promote “good” food (106).

*Food Inc.* creates a narrative not necessarily attainable for citizens of all socioeconomic backgrounds. Since premiums for organic, high-quality food are more expensive, it is hard for someone in a low-income bracket to imagine themselves paying more for these ingredients, which makes it more difficult for these individuals to empathize with the narrator's ideal agricultural world.

The filmmakers oversimplify the intricacies of organic farming from both an environmental perspective and a financial perspective, misrepresenting the monumental problems facing farmers, ones that the consumer market cannot single-handedly fix. The film only spent time with one organic farmer, Joe Salatin, whose farm seems significantly smaller than the other corporate facilities featured. Salatin walks viewers through his sustainable, regenerative operation, noting its adherence to natural systems and aversion from inputs like pesticides, feed, manure removal, and chlorine. The final product highlights a seemingly more humane and sanitary ecosystem than those of corporate entities. The film leads one to believe in organic systems as a solution. However, the film does not account for the financial hardship Salatin faces nor any of the other factors such as climate change, risk management, soil health, and short-term brand contracts, which negate profitability even on a sustainably run farm. More time spent with this potential hero would have paved the way for a more comprehensive explanation of organic farming at scale.

Moreover, the film's reliance on its topical structure, where the characters support the overall argument, ultimately creates a one-way lecture. The politics surrounding the food industrial complex and the film's argument overshadow the personal stories depicted in the film. By failing to encourage viewers to connect with the characters personally, *Food Inc.* falls prey to the failings of the deficit model of science communication. The lack of a main character leaves viewers disengaged and wanting more from those profiled. The film jumps from agrarian landscapes depicting the farmers and their daily life, to research facilities and large industrial processing sites. Even

though the film spends some time developing farmers as characters, it does not allow enough time to turn them into central protagonists. The abundance of interviews and characters removes the audience's emotional connection to a specific individual and, in turn, removes the connection to their own life experience. Overall, *Food Inc.* does little else to promote the understanding of agricultural practices for viewers who are removed from this world by valuing the argument for a regenerative food system over the personal stories depicted in the film.

*Food Inc.* essentially ignores opinion-forming elements—ideology, religion, politics, and social identity—in its structure and character development. *Food Inc.* then alienates potential viewers, and therefore their potential science understanding, by highly politicizing the film and not accounting for their foundational beliefs (Bubela et al. 515). Even though *Food Inc.* won several awards and gained prestige as a piece of evocative investigative journalism, it ultimately failed to influence the general public. *Food Inc.*'s categorization as an advocate for food change limits the film's reach and educational potential for audiences. The results of its impact show that people already inclined to participate in criticisms around food production went to see the film, and it did little to engage with broad audiences who typically do not seek out this type of political discourse (Blakley et al. 6).

The film was advertised as investigative journalism with articles commenting on how Kenner “exposed truths” and “uncovered” the myths in the mass production of food. Participant Media, the same producers of films like *An Inconvenient Truth*, advertised *Food Inc.* as “an exposé of ‘the highly mechanized underbelly’ of the seemingly benign

food people eat every day.” Leading up to *Food Inc.*’s release, The Atlantic published an article by Corby Kummer titled “Yes, You Have To See *Food Inc.*,” stating that “There hasn’t been a film this important about American food production, and probably not about industrialized food anywhere (2013).” Even the trailer declares, “You’ll never look at food the same way again (*Food Inc.* 2009).”

This framing and marketing place *Food Inc.* in the advocacy realm of documentary filmmaking. The filmmakers’ undisguised perspective limits the film’s scope and viewership by carving out a niche audience. A study by the Media Impact Project gauged the disadvantages of the advocacy film, finding that “people who decide to see a social-issue documentary are highly “self-selected”—that is, the vast majority of the film’s viewers are probably biased toward the perspective of the film, and probably more likely than an average non-viewer to take the actions recommended in the film” (Blakley et al. 6).

The Media Impact Project concluded that 80% of surveyed viewers were interested in social change and, through the film, a majority of the audience learned about multifaceted topics like agribusiness policies, sustainable agriculture, and food safety (Blakley et al. 14). The film was not highly sought after by people whose “personal taste, ideology, media preferences, past behavior patterns, and demographics” were not already aligned with the through line of the film. The film’s progressive political alignment and promotion as an advocacy film moved *Food Inc.*’s message into an echo-chamber of like-minded individuals (Blakley et al. 17). Although monumental for its time and sound in its

overall arguments, *Food Inc.* does little other than preach to the choir, alienating and disengaging those with different belief systems.

Barbara Kowalczyk's scene is a refreshing deviation from the majority of *Food Inc.*'s deficit model and expert-interview structure. A food safety advocate, who lost her son to food contamination, delivers powerful testimony about the harmful effects of deregulation and the USDA's inability to shut down contaminated food operations. For this portion of the film, Kenner decided not to include a formal interview, instead opting to highlight Barbara's mundane travels with an observational, or fly-on-the-wall style, and layer it with Barbara's narration. This stylistic choice diverges from the overall deficit communication tactics by giving the audience space to become emotionally invested. We see this woman, wearing regular clothes, on the subway, talking to lawmakers, pouring a glass of wine, and lugging her suitcase around Washington D.C. Barbara's voice never speaks directly to us through a formal interview, but instead she takes the viewer on a journey. In this scenario, the audience is not an empty vessel in need of knowledge, but rather a witness to Barbara's story. This emotional tie creates a foundation for the understanding of complex agricultural legislation. As an audience, we are invested in the outcome of Barbara's story because we can see ourselves in Barbara. This scene is an exception to Kenner's dependence on the deficit model of science communication, presenting viewers with an alternative to traditional science storytelling.

“DAN BARBER” FROM *CHEF’S TABLE* AND  
THE CONTEXTUAL MODEL OF SCIENCE COMMUNICATION

*Chef’s Table*, one of the most popular shows on Netflix, uses engaging interviews from highlighted chefs and food culture experts, telling the story of the chefs’ private and public lives. With a focus on high-production-value, fluidity, discursive and dialogic storylines, the docuseries, *Chef’s Table*, takes a character-based contextual science communication approach, portraying an award-winning chef in each episode (Daniel Binns 61). The episode highlighting the chef Dan Barber shows the public a contextual model of communicating agriculture science, through the lens of relatable restaurant experience and the relentless hard work of becoming a chef.

Contrasting with the deficit model, the contextual model illustrates communication as a back and forth between science and the general public (Burns et al. 190). On *Chef’s Table*, the producers of the “Dan Barber” episode do not assume the audience only needs to be educated like empty vessels, waiting to be filled with proper knowledge. Instead, the filmmakers structure the intimate story of Dan Barber, emphasizing both his achievements and struggles as a chef, drawing upon universal emotional ties. Dan Barber’s passion for cooking translates into the human experience of determination, where the hero overcomes tremendous obstacles. Furthermore, Barber details why his food tastes better, giving audiences a point of reference to center the complexity of sustainable production practices, by relating to the average person’s experience with food. *Chef’s Table’s* easy access from the streaming service, Netflix,

coupled with the show's marketing as entertainment—rather than advocacy—creates an inviting venue for cross-demographic appeal.

To create this inviting venue for audiences, the interviews were done with a great deal of empathy, allowing the subject, Dan Barber, to tell his own story without intervention. These interviews with Barber, his friends, family, and food critics, expose the intimate realities of Barber's life as a chef, farmer, and father. The use of highly personal interviews evoke empathy for the featured chefs, and the audience is immediately on their side, rooting for their success.

Dan Barber, an advocate for sustainable food systems, uses his role as a chef to influence customers to value sustainable food production practices because his food tastes better. Working closely with farmers and plant breeders, the episode shows us how Dan utilizes a sustainable business model by supporting nearby businesses to create a local food system collectively. Barber's farm-to-table business model employs farms that use organic techniques, including crop rotations, cover crops, green manure, and animal waste as a natural fertilizer to increase soil nutrient content and fertility. Dan Barber lives what he preaches, by physically farming organically, sourcing from local food producers, and transforming his farmed high-quality ingredients into fine dining experiences showcasing how the food was grown. By actively growing, teaching, cooking, and designing regenerative food systems every day, Dan is an embodied messenger for the farm-to-table philosophy. Documenting Dan's life and work, the filmmakers produce entertaining content without overtly subjecting the audience to an educational experience.

The overall message of this episode of Chef's Table—advocating for sustainable farming practices—typifies the contextual model of science communication at its best by engaging with the audience's life experiences. *Chef's Table's* "Dan Barber" episode highlights Blue Hill Farms' sustainable practices and Barber's relentless efforts to perfect the farm-to-table experience. The episode artistically creates a portrait of Barber's life, career, and relationship to food. Audiences empathize with Dan's vulnerability and relate to the trials and tribulations of his life and career.

To help gain the audience's empathy, the filmmakers use shots of Dan's struggle to fill the void of his deceased mother through slow-motion cinematic visuals of Dan running, eliciting feelings of compassion in the audience. They use observational moments in the kitchen to poetically portray Dan's temper and perfectionism. Later in the episode, the filmmakers follow Dan to his previous illegal kitchen in Chinatown and stylize the scene with stylized lights and dark vignettes of the sidewalk location. Dan's failures both as a human and as a chef creates a complex and complete portrayal. His honesty and emotional awareness expose us to his flaws and forward-thinking ideas on sustainable food systems. The audience roots for Dan, relating to his determination. Most importantly, viewers become witnesses to his experiences.

Using Barber's personal story as a vehicle, the filmmakers trojan-horse information about regenerative farming practices into the story. In this episode, the chef explains why he values sourcing ingredients from Blue Hill Farm, the Barber's family farm. Blue Hill Farm symbiotically grows crops using natural animal manure fertilizer, circling nutrients back into the soil, ultimately culminating in better food flavors. In this

way, he stresses the importance, as a chef, to care about the environmental impact of his art form. Also, the stunning imagery of the farm and the produce juxtaposed against the equally beautiful finished plate leave viewers craving quality over quantity. Consumers finish this episode thinking about their last meal, where it came from, and what constituted its makeup. The environmental advocacy resonates via this emotional connection because the viewers are already invested in Dan's story. Viewers have an opportunity to gain an understanding of agricultural science because the filmmaker's storytelling technique emotionally engages the audience while encouraging viewers to draw parallels to their own life experiences.

Contrasted with *Food Inc.*, *Chef's Table* is most noted for its high-production value and in-depth personal documentary storytelling rather than its ability to "expose an industry" or "scare you with the truth." Dan Barber's episode centers around much of the same issues as *Food Inc.*, yet it is advertised and marketed as entertainment and not an advocacy documentary. With Netflix's easy access and a high volume of subscribers, *Chef's Table* invites a broad demographic of viewers to experience Barber's philosophies on sustainable agriculture, the mass production of food and its effects on flavor. David Gelb, creator and executive producer of the Emmy-nominated show, describes the episodes as a "food romance," where,

There is emotional context between the chefs and the food, between the audience and the food. It's different than showing a bunch of close-up shots of a delicious piece of chicken. We want you to know how much the chef toiled away at that chicken and what it meant to them. With that kind of context, the food is not only beautiful, it's meaningful (Lambe 2017).

The definite meaning in Barber's episode equates to *Food Inc.*'s central message of sustainability, health, and environmental concern surrounding the agricultural practices around food. The difference in its reception is the context by which people view each documentary. Unlike, *Food Inc.*, *Chef's Table* is advertised as a "study of passion told with equal verve and unquantifiable beauty," according to IndieWire (Traverse 2016).

Choosing to focus on Dan's passion, the filmmakers take a passive stance on controversy. More interested in life stories, politics were never directly brought into the discussion, where issues are referred to through the use of local knowledge, and the producers' ideas are not blatantly attempting to persuade the audience (Cunningham 8). *Chef's Table* documents food elites and then breaks them down into universal human stories, whereas *Food Inc.* focuses on rural people and showcases their stories for the educated elites.

In this light, advocacy films like *Food Inc.* are less successful in science engagement and understanding because general audiences find their tone off-putting. Therefore, the director's arguments never reach a broad array of people. So, by not classifying *Chef's Table* as an advocacy film, the filmmakers are able to potentially connect with a diverse demographic, primarily due to the show's easy accessibility online through the streaming platform, Netflix. Science communication efforts are plausibly more successful and could achieve more viewership through entertaining films that weave in messages and points of view, instead of highlighting controversies and alienating audiences. While the advocacy documentary style aims to change people's

minds, the personal portrait encourages a lifestyle by focusing on the emotional connection between the audience and the protagonist.

To conclude, the episode “Dan Barber” from *Chef’s Table* takes audiences on a journey through the trials and tribulations of Chef Dan Barber’s life. The filmmakers understand the emotional importance of storytelling and do not overload viewers with information, but rather allow them to participate in the science of sustainable agricultural science through a vulnerable life story. Barber represents the “everyman” and is not an “expert” telling us how to think and what decisions to make. Instead, he invites viewers into his world, offering knowledge on better farming practices. The marketing does not alienate viewers based on their political and social ideology, but instead invites everyone to watch, making the “Dan Barber” episode of *Chef’s Table*, an excellent example of the contextual model of science communication.

## “HIGH AND DRY”

My film, “High and Dry,” cinematically documents the daily life, science, and philosophy behind a woman who has dedicated her entire life and life’s savings to Vilicus Farms, an organic farm in Havre, Montana. Over twenty-six percent of the current property is a habitat for wildlife and pollinators, and their non-chemical-based approach to farming implements modern organic farming practices to achieve healthier soil. Their dedication to organic farming has proven effective, with a 3.2% increase in organic matter found in the soil each year; however, building a farming system that is harmonious with nature has come at a cost. “High and Dry” uses an intimate interview approach to explore the emotional struggle of living in such a remote part of the world and the many uncertainties that come with organic farming. This film seeks to understand the sacrifices and complexities behind the overly romanticized notion of the organic farm. “High and Dry” expresses Anna Jones-Crabtree’s personal experience while revealing the scientific processes at play on Vilicus Farms.

After researching and observing the methods of effective science communication, it is clear that the contextual model, focusing on empathetic characters, creates a more public understanding of scientific topics. “High and Dry” employs a highly personal narration with intimate shots of Anna working relentlessly on farming equipment, among stylistically portrayed shots of the various crops and pollinator habitats at Vilicus Farms. The contextual model of science communication calls for the collaborative creation of understanding by incorporating scientific and local knowledge, with the additional recognition that preexisting ideological beliefs are also relevant (Burns et al. 190). Her

local knowledge paired with her scientific explanations emulates “Dan Barber’s” episode on the show *Chef’s Table*.

To capture Crabtree’s intimate thoughts, I decided to use an informal interview approach, one more aligned with a podcast, where Crabtree’s interview was only recorded using audio, without the formality on-camera expert interview, as seen in *Food Inc.* Anna talks about the timely and vital topic of food production, highlighting both the immersive science and the psychology behind a woman who has dedicated her life to agriculture, in arguably one of the most challenging landscapes for farming. The audience becomes emotionally invested in her story and connects to the theme of resilience. The informal interview, evokes vulnerability from the subject and removes the farmer from a lecture pedestal. Viewers see Anna fixing large farming equipment, operating the business, and mentoring the next generation. As an expert, Anna sounds intelligent and well-versed in sustainable agricultural systems on a mass scale.

The choice to record Anna’s interview with no synched interview presented both challenges and positive effects. Not seeing Anna’s face while she narrates required much more additional footage. Logistically, it was both efficient and relevant to Anna’s story to capture as much as possible about the operations and day-to-day life at Vilicus Farms. Furthermore, using only audio equipment made Anna feel comfortable enough to tell the story of her farm and the struggles the farm faces financially. This interview style required the interviewer to engage with Anna conversationally, resulting in several fragmented sound bites and incomplete thoughts. Overall, the informal approach to the interview made Anna comfortable enough to be vulnerable and engage emotionally.

Through observational approach, “High and Dry”, captures Crabtree’s local knowledge and emotionally captivates viewers. “High and Dry” demonstrates the cultivation of local knowledge, placed into a broader framework to bring about insight into agricultural science. By applying the observational method—being a “fly on the wall” to a personal conversation—“High and Dry” finds moments of honesty, using non-invasive cameras and no lighting equipment. “High and Dry” employs the “invisibility” of the observational mode to capture intimate moments, while simultaneously using informal interview techniques give Crabtree a chance to tell her own story.

Deviating from the traditional deficit model, “High and Dry” invites its subjects to share personal sentiments and life experiences. Bringing the viewer's education, politics, and ethical beliefs into the discussion, viewers are left to decide for themselves how they feel about food production practices. These approaches allow the experience of farming in an unstable climate to speak for itself, while the main character, Anna Jones-Crabtree, illustrates the challenges she faces—enabling the audience to relate to and draw their own conclusions about organic farming.

## CONCLUSION

Over the past two decades, documentaries about food production have increased in popularity. Streaming services like Netflix, with over 139 million subscribers, permit easy, universal access to documentaries and shows such as *Chef's Table*. Media about food and food production have always been sought after; “what is relatively new, however, is the cross-demographic reach of the subject’s popularity and the way information about food is transmitted” (Collins 5). The easy access to food-related information has led to more awareness and an interest in the origins of food.

Collins calls the intention to inform and educate audiences about their food, health, and overall well-being, “mallet-over-the-head” food television, where there is also a “voyeuristic opportunity” for producers to offer solutions to which the middle class should aspire (Collins 14). The intention to educate becomes problematic when the educator fails to recognize where their audience is coming from—their preexisting biases, ideologies, political opinions, and social identities. This approach to communicating agricultural science is referred to as the deficit model, where there is a one-way flow of information from scientists to the public. The deficit model approach does not address the ethical or personal beliefs present in its audience and how their concerns affect their scientific learning. Therefore, the deficit model limits the potential educational intentions of scientific knowledge to the educator. As a response, science communicators developed the contextual model of science communication, which emphasizes a “two-way” flow of dialogue from scientists to an “active” public. The concerns of the public are

acknowledged and brought into the conversation, progressing issues forward collaboratively (Burns et al. 190).

Documentary films like *Food Inc.* argue for sustainable food production practices through a topical approach, where the argument is reinforced through a series of expert and farmer interviews. The film focuses on the pervasive injustices of the industrial food complex and uses its characters as proof. The court-case style structure and lack of character development make it difficult for audiences to connect to a single protagonist. Moreover, the film's release as a piece of progressive food journalism alienated potential viewers who would not normally seek out this type of film. *Food Inc.* relies on the deficit model of science communication and does not seek to engage with the audience's emotional empathy, nor does it account for the viewers' preexisting ideologies.

Conversely, the episode, "Dan Barber," from the docuseries *Chef's Table*, resonates with audiences through an intimate portrait of Dan Barber, the chef. The filmmakers encourage viewers to see themselves in Dan through his vulnerability about the obstacles he overcame to flourish as a chef. People gravitate to *Chef's Table* because of its ability to showcase world-renowned chefs on universal themes of perseverance and determination. The success of the chefs is broken down into chapters of struggle, emotional turmoil, and the final accomplishment of their culinary goals despite the circumstances. Dan Barber's episode establishes a classic hero's journey, where the filmmakers humanize Barber, and audiences of diverse ideological backgrounds can see themselves in Dan's story. Dan's captivating story enables filmmakers to point to the advantages of regenerative food systems, by engaging with audiences who are less likely

to take an interest in the subject matter. Dan Barber's episode utilizes the contextual model of science communication to increase the public's knowledge of sustainable farming by focusing on a compelling human story and intertwining scientific ideas into that story.

Ultimately, the contextual model of science communication dictated the techniques utilized in the creation of "High and Dry". Anna Jones-Crabtree is established as the central character, or hero, divulging her personal and financial struggles as a first-generation farmer, creating a basis for audience connection. Her vulnerability connects with audiences. The observational moments capture the inner workings at Vilicus Farms and showcase the hard work and dedication of the Crabtree's and their staff. The local knowledge of the farmers comes through without impediment or manipulation. Viewers connect through the observation and reflection of Anna's life. Moreover, there is room for the audience to develop empathy and understanding because of Anna's open dialogue. Incorporating the contextual model of science communication, Anna develops into the hero the audience roots for and her passion for creating a world where sustainable food practices are the norm and not the exception.

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