Beyond Pill-Billies:

TikTok's visual framing responsibility of the Appalachian opioid crisis

By Cory L. Higgs

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Abstract

This paper aims to develop the growing body of visual framing research by addressing the framing of responsibility through a visual lens, expanding upon the Levels of Visual Framing (Rodriguez & Dimitrova, 2011), allowing for the allocation of responsibility presented in visuals. Additionally, it provides a new way to view episodic and thematic frames, and said frames within the context of social media, specifically TikTok. Further, it explores the user-attributed causes for the ongoing Appalachian opioid crisis and how the users and people of Appalachia are viewed within the social media landscape of TikTok.

Keywords: TikTok, framing theory, visual framing, Appalachia, opioid crisis

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Lastly, I dedicate this research to the people of Appalachia. May you continue to move mountains.

"Truly, I tell you, if you have faith as small as a mustard seed, you can say to this mountain, 'Move from here to there,' and it will move. Nothing will be impossible for you."
- Matthew 17:20-21.

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Introduction

Framing in the broader world refers to the accentuation of an image by placing it in a physical frame (Merriam-Webster, n.d.). Un-ironically, in the realm of mass media communication, framing theory does just that… by instigating a process that involves promoting the salience of an issue by establishing it above all others, thereby influencing how it is interpreted by the consumer (Cacciatore et al., 2016; Entman, 1993; Ferree et al., 2002; Goffman, 1974). However, the research on framing theory has predominantly focused on framing text, often ignoring the framing of visuals and their connections with textual information (Bell, 2001; Brantner et al., 2011).

While there is a surplus of framing research, there is still a call from scholars to conduct more research to be inclusive of visual framing, since visuals can enhance or negate messages in an associated text and are more easily recalled (Messaris & Abraham, 2001; Rodgers & Thorson, 2000). According to Coleman (2010), "visual framing provides an important new direction for theory building and future research" (p. 233). The lack of visual framing research may be attributed to issues researchers encounter when conducting visual framing research, due to a lack of conceptual and methodical consistency (Rodriguez & Dimitrova, 2011).

Social media have grown exponentially and challenged the traditional media to become the leader of the new media landscape (Praprotnik, 2016). New mediums like TikTok showcase the best visual and textual communication by allowing individuals to create, share, and upload short-video content to a self-learning artificial-intelligence algorithm (Apple App Store, 2021; Bursztynsky, 2021; Montag et al., 2021). As a result, TikTok is now an industry giant with other applications and networks imitating and adopting many of its most popular features (Nast, 2020). TikTok provides the ideal setting to explore new means of framing, as it serves as a medium in

which visuals and text are coupled through video, descriptions, and user-generated comments (Chen et al., 2019; Yang et al., 2019).

Just as many framing studies fail to address visuals, research conducted on the Appalachia region also fails to examine the role of visual frames in the formation of regional representations. The visually appealing and comical picture of the ragged hillbilly is often misconstrued in traditional media for a good laugh or scare (Bell, 1997; DeKeseredy et al., 2014).

The misrepresentation of Appalachian people, which is often amplified by the way the media covers the hotbed of opioid abuse in the region, has resulted in derogatory terms such as Pill-Billie and Hillbilly Heroin (Koback, 2012; U.S. Drug Enforcement Administration [DEA], n.d.). As a result, there have been a few studies that have examined the framing of these issues with a preferred focus on textual framing within traditional media (Comer, 2006; Tunnell, 2004), but there is a gap in extant research that examines the role that visuals play in the framing of the opioid crisis, especially within Appalachia.

This paper aims to develop the growing body of visual framing research by addressing the visual framing of responsibility. Specifically, to explore visual and textual frames on TikTok through directed content analysis and visual analysis to find the allocation of responsibility and attribution of the ongoing opioid crisis in the Appalachian region. Further, it looks to find new means and interpretations of framing theory, expanding understanding of framing within the scope of social media, like TikTok.

In the Beginning, God Created Heaven, Earth… and Appalachia

"We live in a world of many Appalachias. These are places of extravagant natural wealth and enduring poverty, places where the raw consequences of unsustainable economic practices

predicated on human and environmental exploitation are unusually stark" (Fisher & Smith 2012, p. 1).

Approximately 270 million years ago, the predecessors to the North American and African tectonic plates collided and a shallow sea rich with millions of years of organic matter was thrusted upward, forming one of the oldest mountain ranges on Earth, millennia later named the Appalachians. Because of the shallow sea, the Appalachian region had built up organic matter that would later become coal and other ores driving industry some millions of years later (Clark, 2001; U.S. Energy Information Administration [EIA], 2020a).

Today, Appalachia is a 205,000 square-mile region in the eastern United States, spanning from southern New York State to northern Mississippi. The region includes 13 states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. Forty-two percent of Appalachia is rural compared with the 20% national average, with the region being home to approximately 25 million Americans (Thomas, 2019; West Virginia University & Center for Regional Economic Competitiveness [CREC], 2015).

A Brief History

While the region is now synonymous with coal and mineral extraction, most of its history was not centered around it. The area was settled several thousand years ago by migrating groups from Asia. Eventually, these nomadic people would spread across North and South America, forming confederations, tribes, and nations. Larger groups associated with the Cherokee and Iroquois confederacy remained largely isolated within the Appalachian region until the early 18th century, with the influx of pioneers of primarily Scottish, Irish, and German descent seeking asylum from religious and political institutions of the old world (Drake, 2001; Shackelford &

Weinberg, 1988). These Europeans brought a level of distrust in authority and organized religion, seeking neutrality in the conflicts of early America (Kephart, 1922; Shackelford & Weinberg, 1988).

The American revolutionary war brought today's Appalachia to fruition, as the young nation saw a surge in immigration and land acts that gave settlers interest in settling the frontier. Around the 1770s, native cultures significantly declined from war and pestilence brought by the Europeans and were quickly outnumbered on the Appalachian frontier (Dolan, 2003; Drake, 2001). The region was then *forgotten* within the newly formed United States until industrialization and wartime in the 19th century fueled economies and created a need for natural resources to feed the burgeoning nation's ambitions. With a focal point on the forgotten region, *Color Writers*, the sensational storytellers of the time, wrote of the wild, dangerous, nostalgic, and somewhat backward people who lived there. These writers drove attention and interest in the region, and the colorful outsider perspective forged lasting stereotypes (Drake, 2001; Plein, 2009; Tudiver, 1984).

Industry, Economy, and Environment

Industry came to Appalachia searching for its fossil fuel deposits when the world's first commercial oil well was drilled in Titusville, Pennsylvania, pushing Appalachia to be the world's top oil producer in the early 20th century. However, the region's coal would be the most influential fossil fuel extracted in the 20th and 21st centuries (Tudiver, 1984). The expansion of railroads and population growth sparked a demand for a readily available fuel to be used in nation building. Further, the industrial boom of steel, glass, and other products in Pennsylvania placed even more demand on Appalachian coal (Zipper et al., 2020).

As the strategic importance of coal and other natural resources was realized in the region, writers of the late 19th and early 20th centuries began writing of the isolated communities of Appalachia that often found themselves exploited by developers seeking mineral rights, driving a myth that the region and its people were *backward* as they had not developed a large industry around resource extraction (Eller, 1999; Tudiver, 1984). According to Stump and Lofaso (2018), "this overarching Appalachian myth conceptualizes Appalachia as an isolated region both demographically homogenized and culturally backward. Consequently, Appalachia has been essentialized as an '*other America*' that is not just different from but also lesser than the broader United States" (p. 823).

The exploitation of the region created a mono-economy, where the extraction of natural resources has designated the region and its people as a sacrifice *zone*, allowing plundering of the region's resources while damaging and limiting local economies (Butler, 2009; Fox, 1999; Morrone & Buckley, 2011; Mullins, 2017). The backward myth of Appalachia allows for systemic devastation of social, political, environmental, and economic systems all while sustaining the fossil-fuel hegemony of the region (Lewis, 2013). The exploitation and myths have obscured the need for societal and legal change within the region because fossil-fuel companies work behind the law, and somewhat function as the law within the region (M'Gonigle & Takeda, 2013).

Coal - The Sacrifice and Pollution

West Virginia and Pennsylvania produce the most coal in Appalachia, and around 26 percent of all U.S. coal is mined within Appalachia (EIA, 2020b). Coal is the most carbon-intensive fossil fuel used in energy, surpassing natural gas, propane, gasoline, and diesel (EIA, 2021). The coal extraction process is either done by deep mining, where underground mining is

completed through shafts in the Earth, or strip mining, where soil layers are removed to reach the coal beneath. Mountaintop removal is a strip-mining process in which mountains are dynamited to reach coal; this may level the land, making it barren and polluting groundwater. Mountaintop removal and surface mines are cheaper than deep coal mining, ergo its popularity, representing two-thirds of U.S. coal production (EIA, 2020c).

Approximately 65,000 pollution sites have been identified in rural regions by the Environmental Protection Agency (Hendryx et al., 2010). The West Virginia Rural Health Research Center found that rural areas accounted for high pollution points comparable to more populated areas. Pollution points in rural areas are often caused by heavy industrial and commercial activity, coal mining, human development, and resource transport. The study also found that air, water, and ground pollution was higher on the east coast of the United States, within the Appalachian region (Hendryx et al., 2010, p. 10-13). Consequently, citizens in some of the most rural areas are exposed to high industrial pollutants.

There is a correlation between the coal extraction industry and increased risk of health issues, including increased cancer risks from the environmental pollution caused by coal mining (Hendryx & Ahern, 2008; Hendryx et al., 2008). Apart from the environmental pollution risks to health, the socioeconomic disadvantages seen in the Appalachian region also contribute to its mortality rates. Appalachia's coal mining regions see higher unemployment and poverty rates linked with higher mortality rates and poor health (Hendryx & Ahern, 2009).

The *pollution haven* hypothesis states that dirty industry and high polluting activities concentrate in poorer developing countries and regions with weak and less stringent environmental policies (Levinson & Taylor, 2004). While the highly debated theory encapsulates broader themes, one facet suggests that regions with less environmental regulation and

development are the perfect places for pollution havens (Gray & Shadbegian, 1998; Mani & Wheeler, 1998). The circumstances in Appalachia can be applied to this theory as its various states rely on high-pollution industries that silence advocacy efforts, which in turn, results in more negative consequences for the environment and its people (Morrone & Buckley, 2011).

Coal towns formed around mines, where the coal company would own houses, infrastructure, and general stores. This arrangement led to the narrow profit margins of coal extraction being subsidized by the return of the coal town citizens as they spent their earnings within the infrastructure owned by the coal company. Further, this allowed for political and economic control over the coal miners and towns (Batteau, 1990; Gaventa, 1978). Coal's influential nature is seen in Kentucky's governor role, where the position was strictly filled by coal company owners and associates from 1888 to 1924. While this trend may have changed, the coal industry still has a strong pull and dominating influence in the region's politics (Corbin, 1981; Lears, 2019).

Poverty in Appalachia

The poverty in Appalachia has persisted and is multigenerational, where Appalachian families have remained poorer for longer than those in urban settings. Urban centers serve as temporary stopping points for immigrants, new families, and students, allowing for the climbing of social ladders as means increase. However, the Appalachian generational establishment in one area, leaves individuals isolated, making socioeconomic class change difficult (Adams & Duncan, 1992; Arcury & Porter, 1985). Resource extraction is supported by state policy and regulation, where low taxation and little reinvestment by industry in the region leave Appalachia's local government *impoverished* (Tudiver, 1984).

The Appalachian Regional Commission (ARC) report, which discussed nearly five decades of investment and development, found that the Appalachian region had made significant improvements since the 1960s when extreme poverty defined the region (ARC, 2021). From 1960 to 2012, the poverty rate of the region was cut in half; however, the region still falls far behind the national average and is designated as a *region apart* from the rest of the United States in terms of poverty, infrastructure, health, and unemployment (ARC, 2021; West Virginia University & CREC, 2015).

One of many popular theories for Appalachian poverty emphasizes insider and outsider relationships. In this theory, the insider is exploited and silenced, often for their resources, so government and industry may operate without regard to the region and people (Billings, 2016; Fisher & Smith, 2016). However, it is noted that this approach is becoming archaic as it serves to explain poverty and the economic standing but limits the region's ability to reinvent itself (Smith & Fisher, 2016). This can be seen in the aforementioned sacrifice zones, pollution, exploitation, and industry overreach. Appalachia is treated as an internal colony of the United States raided for its natural resources at the expense of its environment and people's livelihood.

Sarnoff (2003) attributed the popularity of the culture of poverty to the failures of government and policymakers, who failed to incorporate rural regions in anti-poverty policy. Others echo this sentiment, attributing poverty to the failures of corrupt local elites who hoard resources and jobs or government representatives who fail from disinterest or lack of power to acquire anti-poverty resources (Duncan, 1999; Haddix, 2000). Juxtaposed to this is the *culture of poverty*, which implies that the poor are lazy, ignorant, and inept at adapting to society. As Blee and Billings (1986) stated, "culture of poverty portrays a society trapped in its cultural apparatus--barred from the class mobility of industrial capitalism by a cyclical reproduction of antiquated

cultural traits" (p. 451). This stance is controversial, using misinformed stereotypes or misinterpreted culture to explain poverty, leading to victim-blaming and creating damaging stereotypes (Lewis & Billings, 1997). The infamous book *Hillbilly Elegy* pays homage to cultural poverty theory as Vance (2016) described Appalachian culture as something that encourages social decay. Vance's story sees urbanization or leaving Appalachia as the only way to circumvent its culture of poverty and addiction (Collum, 2021; Vance, 2016).

Stereotypes of Appalachia

Wheeler and Petty (2001) defined stereotypes as a cognitive action that increases the ability to categorize individuals to select social groups. Stereotypes are stigma and generalizations, usually of minority groups, used to make quick cognitive judgments. Minority groups are heavily stereotyped with ethnicity, socioeconomic status, gender, and affection orientation, among other attributes, influencing stereotyping judgments (Devine, 1989; Schneider, 2005).

Shapiro (1978) said that the sensationalist Color Writers *discovered* Appalachia after the Civil War and established an *otherness*, demarking the region as separate from the rest of the nation. A color writer of the 19 century, Harney (1883) and his work *A Strange Land and a Peculiar People* had significant implications in forging the stereotypes now prevalent in the region. In his writing, Harney described a sensational story of Kentuckians where he described them as ignorant and backward. "The natives of this region are characterized by marked peculiarities of the anatomical frame," said Harney (1883, p. 431); he noted how Appalachian speech was peculiar and improper, suggesting himself and other outsiders were distinct from the Appalachians.

Following the American Civil War, Color Writers like Harney (1883) gained popularity for sensationalized stories and visuals. These authors are credited with forging some of Appalachia's first and most lasting stereotypes of its people (Shapiro, 1978; Williamson, 1995). *Hillbilly* became the de facto term for rural mountain dwellers. The first time the word *hillbilly* appeared in print was in 1900 in the *New York Journal*, where a hillbilly was defined as someone who "lives in the hills, has no means to speak of, dresses as he can, talks as he pleases, drinks whisky when he gets it, and fires his revolver as the fancy takes him" (Williamson, 1995, p. 37). In subsequent years, similar depictions were published in other states where hillbilly became synonymous with the region. The hillbilly persona of today emerged in 1926 with the film *Rainbow Riley,* which depicts its Appalachian subjects as dirty, dumb, and dangerous (Haskell, 2006).

Media portrayals of rural America leave consumers with an artificial reality where depictions such as *Here Comes Honey Boo-Boo* and *Duck Dynasty* represent an entire culture based upon the entertainment value of ignorance, crudeness, and violence (Miller, 2013). Popular depictions see Appalachians through the lens of horror, where the people are depicted as inbred, cannibalistic, predatory, and overtly dangerous. The horror depiction leads to a vital distinction between rural and urban as abnormal versus normal (Bell, 1997; DeKeseredy et al., 2014). Other popular depictions, referred to as *poverty porn*, showcase poverty, poor living conditions, and hard times as personal inadequacies, inability, or unworthiness of the hillbilly, because it is profitable and captivating to do so (McCarroll, 2021; Phelps, 2016; Rennels, 2015; Tudiver, 1984). In an analysis of news framing of Appalachia, Comer (2006) found that non-Appalachian newspapers reported predominately on economics and poverty-related issues in the region and framed issues negatively using stereotypes.

Cunninham (2010) suggested that the stereotypes demote Appalachia to promote mainstream America, more directly to protect the White American ideal from the Appalachian trope. Showcasing the hierarchal need to distinguish between rural and urban, rural drug users are referred to as White trash, with meth being related to ruralness, despite its popularity among non-rural demographics. Anti-drug campaigns showcase *meth mouth*, ergo placing ruralness and meth use together (Linnemann & Wall, 2013).

Similarly, Oxycontin is referred to as *Hillbilly Heroin* despite its prevalent use outside the region (DEA, n.d.). Tunnell (2004) reviewed data sets of newspapers and magazines that used the term Hillbilly Heroin while describing Oxycontin abuse or opioid-related crime; they found that approximately 125 outlets used Hillbilly Heroin in their depictions from 2001 to 2004. The exasperated mediated images of opioid abusers show that the "Appalachian image is one of a wild-eyed, moonshine (or today OxyContin)-crazed, shotgun-toting, toothless, white male straight from the set of deliverance" (Tunnell, 2004, p. 141).

Stereotypes establish Appalachia as a region separated from the United States and devalue the region and its people, allowing for the destruction of the land and people with little national concern (Fraley, 2007; Scott, 2010; Young, 2018). Perdue (2021) argued that the stereotypes of Appalachia were created and maintained by media, depicting the people of the region as deviant, ignorant, and inferior; "such stereotypes have been weaponized by elites" to justify the abuses of Appalachia (p. 15).

The Appalachian Pill-Billy

•RQ1: What societal factors are blamed for the opioid epidemic within TikTok videos?

Opioids in Appalachia

The Appalachian region is a hotbed for illicit drugs and prescription drug abuse, so much so that "very few families in central Appalachia have not been directly touched with the tragedy of addiction" (Koback, 2012, p. 199). Tyler Childress (2015) showed how ingrained the use of opioids is within Appalachia in his ballad, "Nose to the Grindstone," where he somberly stated, "There's hurt you can cause time alone cannot heal. Keep your nose on the grindstone and out of the pills."

According to data collected by the Centers for Disease Control and Prevention (CDC, 2021), the Appalachian region has a high density of opioid-related overdose deaths, with Tennessee, Kentucky, Ohio, Pennsylvania, West Virginia, Maryland, North Carolina, and South Carolina accounting for seven spots of the 21 high death by opioid overdose states.

Opioids refer to a larger family of drugs whose purpose is the treatment of pain (Bujedo et al., 2012). Appalachia is labeled a high-intensity drug trafficking area, where historically the opioid, Oxycodone, is one of the most popular drugs abused by the population (DEA, n.d.; U.S. Department of Justice, 2021; U.S. General Accounting Office, 2003). A popular Oxycodone drug, OxyContin, has been one of the more prominently referenced prescription opioids in Appalachia since its introduction by Purdue Pharma in 1996. Alone, Oxycontin, soon after its release, saw reports of abuse and saw a substantial increase in abuse within rural areas, especially in Appalachia (Koback, 2012; U.S. General Accounting Office, 2003). The DEA refers to Oxycodone drugs as controlled prescription drugs (CPDs). CPDs include opioids like OxyContin, depressants like Xanax, stimulants like Adderall, and anabolic steroids such as Oxendine (DEA, 2020). The DEA National Drug Threat Assessment (2020) also reported that some states have seen a decrease in CPD abuse; however, other states, mainly those within

Appalachia and rural New England, continue to have the highest CPD overdose deaths in the nation.

The highest opioid overdose death rates belong to rural states such as West Virginia, Kentucky, Tennessee, Ohio, Louisiana, New Mexico, Utah, Nevada, and Oklahoma (CDC, 2020; Okie, 2010). The General Accounting Office found that reports of opioid abuse rose in 1999 following the controversial launch of OxyContin by Perdue Pharma in 1996. Reports of abuse first appeared in rural areas, most notably within the Appalachian region in Kentucky, Ohio, Pennsylvania, Virginia, and West Virginia (U.S. General Accounting Office, 2003). The FDA approved OxyContin, and the federal government classified it as a schedule II-controlled substance, a classification for substances with medicinal value that pose a high risk of abuse and severe psychological and/or physical dependence. Schedule II drugs have the highest potential for abuse of any controlled drug (Comprehensive Drug Abuse Prevention and Control Act, 1970; U.S. General Accounting Office, 2003).

The Appalachia High-Intensity Drug Trafficking Area Task Force shows that prescription opioid pain pills remained the largest drug abused in Appalachia and ranked as one of the DEA's top concerns; it is continually forecasted that controlled prescription drugs like opioids will be a continued threat within the United States, noting the regions within Appalachia being heavily impacted along with other rural locations (DEA, 2020; National Drug Intelligence Center, 2011).

Addicted Appalachia

Appalachia's socioeconomic status is argued to be one of the predominant factors in its high drug and opioid abuse rates. Systemic poverty, unemployment, poor education, lack of insurance, and limited access to medical services create environments where drug abuse is commonplace (Spiller et al., 2009). Appalachia's history of systemic poverty has created a

culture of bootleg production of products to supply revenue in times of unemployment or hardship (Peine & Schafft, 2012). However, the moonshine culture has been replaced by meth-lab, pill-mill, and marijuana fields, as illicit drugs are the bootleg product of choice (Cooper, 2014; Stone, 2016).

Additionally, the industry within the region contributes to drug abuse as the hazardous and physically demanding industries concentrated in the central region, increased injury rates, and the region's limited access to medical services allows for the wide availability and abuse of pain relievers (Steele, 2015; Zhang et al., 2008). In the 1990s, pharmaceutical companies lobbied for looser opioid prescription regulation, established new treatment standards for pain, and claimed that opioids were less addictive than previously believed (Buchman et al., 2017; Manchikanti et al., 2012.). The new opioid regulations and marketing allowed pharmaceutical companies to take advantage of the effects of the hazardous industry and marketed products to local physicians as a solution to Appalachia's pain management issue (Achenbach et al., 2019; Kobak, 2012).

Ruralness may also play a role in the region's addiction. According to the Housing Assistance Council (2013), Appalachia's population is majority rural, and rural residents have less access to medical services and addiction support than urban residents (Caldwell et al., 2016; Hendryx, 2008; Reschovsky & Staiti, 2005).

Opiates in the News

•RQ2: What attributes are associated with Appalachian opioid abusers within TikTok videos?

A common way of covering the opioid crisis is by focusing on individuals. Through crime and overdose reporting, with a focus on the individuals and a lack of societal factors weighing into the coverage, the coverage highlights stereotypes and stigmatizes individuals

where they fail to separate stereotype from synthesizing the issue (Anglin, 2016; McGinty et al., 2019; Russell et al., 2019). While the issue has gained salience following the substantial overdoses in the region, as Anglin (2016) noted, much of the reporting and mention of the opioid crisis included stereotypes, or as Russell et al. (2019) found, reporting of the issue was done in a way in which inspired stereotyping. Anglin (2016) stated that popular stereotypes shape how reports and people think of Appalachia, even in regard to opioids: "their erasure of social heterogeneity, neglect of political-economic context, and disregard for health inequities" provides an incomplete account of the issue at hand, and instead lets stereotypes guide what is told (p. 141).

The widespread coverage of opioid abuse, according to Stellin (2018), exploits users, showing them at their worst. Often, the range of opioid abusers lacks a broader look, focusing on the individual going through recovery or relapsing. When more comprehensive coverage is done, it covers failing resources and issues with recovery, stigmatizing opioid abusers (Stellin, 2018).

Netherland and Hansen (2016) discussed a *blameless etiology* found in stories of White opioid abusers, where their drug use and origin were discussed, juxtaposed to coverage of people of color where such backstories were missing, stereotyping opioids as a predominantly White person impacting drug. While not discussing opioids, Peterson et al. (2019) found that coverage of meth users framed the meth crisis as a White issue. When other races were involved in the coverage, there was a distinguishing element to notate them as the other, not involved with the White trash narrative found in coverage. This takes the focus away from public health and places a higher interest in legal matters, shifting focus away from recovery to the effects and characteristics of the drug and the individuals involved, seeking narratives to dehumanize or vilify users (Peterson et al., 2019). "In the end, these strategies scapegoat non-White others and

pit rural versus urban Whites in a society that is as divided as never before," because of the vilification or [de]humanizing of one depending on how they fell into a Whiteness category; media had a role in shaping how a rural meth user vs. urban meth user vs. meth user of color is perceived in media coverage (Peterson et al., 2019, p. 1181).

Framing Theory

Emphasis and Equivalency Framing

In recent years, framing theory's growth has been built upon the two foundations of psychology (Domke et al., 1998; Kahneman & Tversky, 1984) and sociology (Gamson & Modigliani, 1994 Goffman, 1974), each with varying applications. Framing is one of the most popular research areas and can be viewed from many perspectives and serve a multitude of definitions and approaches (Borah, 2011; Chong & Druckman, 2007; Vreese, 2005). As a result, framing theory's multifaceted and creative freedom confuses the central premises of framing, and many believe it lacks theoretical and empirical consistency (Borah, 2011; Entman, 1993; Hertog & McLeod, 2001; Scheufele, 1999). However, using precise definitions and terminology to differentiate between equivalence and emphasis and subsequent branches of the theory can offer many meaningful contributions, despite the arduous task for researchers to define frames (Cacciatore et al., 2016).

Of the two origins of framing comes two definitions, equivalency and emphasis framing. Emphasis framing, which emerges from the sociological camp, suggests that a frame is "a central organizing idea or storyline that provides meaning to an unfolding strip of events, weaving a connection among them" (Gamson & Modigliani, 1994, p. 376). Meanwhile, equivalency framing relies on "subtle alterations in the statement or presentation of judgment and choice problems" (Iyengar, 1991, p. 11). Equivalency framing is a psychology-rooted approach to

framing where the term refers to logically equivalent yet differing communications that cause varying outcomes for receivers (Druckman, 2001). Within equivalency framing, equal communication is often presented in terms of positive or negative interpretations, used to measure how the framing of communication in this manner may impact choice (Levin et al., 1998). A highly cited study by Tversky and Kahneman (1981) showcased how the presentation of equivalent information in negative and positive terms greatly influenced how respondents process risk and decisions (Kahneman & Tversky, 1984; Tversky & Kahneman, 1981).

Emphasis framing is a sociological-rooted approach to framing where a frame constitutes the presentation of select information over other information. Emphasis framings focus on the individual's interpretation and salience of one frame over another (Cacciatore et al., 2016). Additionally, framing is the sense-making of the world through frames; the interpretive scheme is used to classify and define communication and promote a particular viewpoint (Entman, 1993; Ferree et al., 2002; Goffman, 1974).

By juxtaposing multiple frames against each other, issues become more salient. Nelson and Kinder (1996) found that when presenting the AIDs crisis in multiple frames emphasizing divergent points, respondents used said frames to interpret and find salience on the issue. Emphasis framing is used in most sociologic-based studies, in part, because of its flexible and multifaceted application along with the ability to manipulate frames (Matthes, 2009; Vliegenthart, 2012). Additionally, to preserve framing research and to create studies that lend to theoretical development, researchers must define the use of framing at every level within their study. This practice will provide tangible research as framing research continues to expand (Cacciatore et al., 2016).

Media and Individual Framing

Frames may be viewed through two lenses or schemes. A frame is the presentation of information, or a frame is the comprehension of information, often referred to as media/news frames and audience/individual frames (Scheufele, 1999). This follows popular framing definitions with both an element of media presentation and individual sense-making (Gamson & Modigliani, 1994; Reese, 2001). Friedland and Zhong (1996) suggested that frames work as "a mediating device, the bridge between these larger social and cultural realms and everyday understanding of social interactions" (p. 13).

Media frames are selective frames that present certain information over others, providing salience to a framed subject (De Vreese & Boomgaarden, 2006; Entman, 1993; Gitlin, 2003; Gross & Brewer, 2007; Haider-Markel & Joslyn, 2001). Frames provide direction by assigning importance (salience) to specific communication (Nelson & Oxley, 1999).

Haider-Markel and Joslyn (2001) demonstrated how the media's emphasis on a specific frame influences a person's frame and responses. For example, when the topic of oil drilling is presented over a media frame, the audience may see frames focusing on economic issues, energy issues, and environmental issues concerning the drilling for oil (Zaller & R, 1992). According to Entman (1993), framing involves "select[ing] some aspects of a perceived reality and mak[ing] them more salient in a communicating text" (p. 52). However, he warned that framing differs from agenda setting since it emphasizes salience of specific topics while agenda setting deals with the salience of issues. Framing deals with presenting a topic or topics, where agenda setting establishes the salience of said topics. Put simply, framing is concerned with *how* issues are raised or conveyed to the public (De Vreese, 2005).

If media frames are related to the presentation of information, then *individual frames* are the interpretation and discretion of information. Individual frames are frames used to navigate and make sense of one's environment cognitively and process information (Cappella & Jamieson, 1997; Entman, 1993; Reese, 2007; Scheufele, 2006; Van Gorp, 2007). Reese (2001) argued that frames are "organizing principles that are socially shared and persistent over time, that work symbolically to meaningfully structure the social world" (p. 5), adding that frames are a bridging concept between the relationship, individual, and media framing.

When presented with information, individuals will refer to presuppositions and cognition to interpret and understand an issue, and these predispositions can be influenced by education, ideology, and any other readily available cognition (Haider-Markel & Joslyn, 2001; Hiscox, 2006; Nelson, 2004; Nelson et al., 1997). Kempf and Thiel (2012), looking at the Israelite-Palestinian conflict, found that depending on one's previous experience and knowledge, one would build their frame according to their understanding of the media information presented.

Attributes and Responsibility

•RQ3: What percentage of TikToks concerning opioid abuse in Appalachia ascribe responsibility to the individual (episodic framing) versus the rate that ascribe responsibility to societal factors (thematic framing)?

Framing has been studied from diverse theoretical and analytical perspectives (Samsudin, 2019). Because framing may be applied across different forms of analysis and theoretical perspectives, it has been operationalized to suit specific needs (Borah, 2011; De Vreese, 2005; Hertog & McLeod, 2001; McLeod et al., 1994; Scheufele, 2006;). Researchers have developed framing strategies that fit in various contexts, such as public relations (Hallahan, 1999; Samsudin, 2019).

Attribute models are defined as the promoted or ignored characteristics of objects and people in the processing of information, resulting in often biased attributions (Ghanem, 1997; Levin et al., 1998; Wright & Luts, 1993). Attribution theory asks who should be blamed for an event, whether by self-preservation, experience, or instinct. People seek to blame circumstances by allocating blame to an individual or environmental factor. Attribution is the human process of explaining events and finding a player to blame (Lee & Robinson, 2000; Sillars, 1982).

An individual's understanding informs the attribution of responsibility; therefore, it does not always reflect the objective fact and is often distorted by the description or framing of the event. The framing of these events is often presented through media that assign attributions of responsibility (Hallahan,1999). Studies by Iyengar (Iyengar, 1991, 1992; Iyengar & Kinder, 1987) showcase how episodic frames dominate media stories and fail to use thematic frames simultaneously.

Hallahan (1999) argued that audiences are more interested in individuals and concreate events presented in episodic frames, resulting in fewer thematic frames. This framing process allows for the attribution process to feel absolved in the face of societal issues, as the overwhelming episodically framed media fulfills the instinct of the attribution process to find cause and blame.

Within Hallahan's model (1999), attributes characterize everyday objects, people, and situations; this is closely associated with second-level agenda setting. Research demonstrates how the media are effective in not only raising the salience of topics, issues, or objects but also in the creation of attributes related to a subject, mainly political candidates (Ghanem, 1997; McCombs & Ghanem, 2001/1998:McCombs & Shaw, 1993; Scheufele, 2009). Levin et al.

(1998) expressed that the characterized attributes would influence how individuals would evaluate situations:

Responsibility frames reflect the human need to attribute the cause of an event or issue, often categorizing them within personal (internal) or societal (external) causes (Iyengar, 1991; Iyengar, 1992; Iyengar & Kinder, 2010; Lee & Robinson, 2000). However, responsibility may be miscredited and distorted by the attributes presented (Arceneaux & Stein, 2006; Hallahan, 1999; Walster, 1966). The personalization of news has accentuated the ability to frame responsibility, and transmit frames effectively (Bas & Grabe, 2013; Entman, 2007).

Iyengar (1991) used episodic and thematic frames to explain the human need to place blame on a situation. Iyengar argued that episodic frames would present as to blame the individual, emphasizing the individual's attributes and responsibility for a given situation. Opposing thematic framing, as Iyengar argued, presents as to place blame on larger forces outside of the individual's control.

In the context of the ongoing American opioid crisis, episodic framing within news ignores much of the lost context and creates a cycle where the crisis cannot be solved. A majority of the coverage of the opioid crisis is framed in an episodic way (Eichenlaub & Nasher, 2021). By framing drug use (opioids and illicit substances) as an individual issue or story, Willis and Painter (2019) found that media tend to frame drug use in an episodic way more regularly than thematic frames. "The episodic nature of the crime is amplified here by the use of one person's name, highlighting that heroin and related criminal activities are an individual, not a collective, issue" (Willis & Painter, 2019, p. 665). While thematic frames can be found, they are drastically less common than the episodic frame; very little news coverage analyzed contains community

efforts or more extensive societal connections; instead, it focuses on the individual (Willis & Painter, 2019).

The concept of thematic and episodic framing is closely associated with placing responsibility. Episodic frames focus on an individual or a specific event; juxtaposed is thematic framing, where a broad look at the situation is covered from a societal perspective, not the induvial (Iyengar, 1991; Iyengar, 1992; Iyengar & Kinder, 1987). An example would be episodic frames covering the topic of unemployment by reporting on an individual experience. Thematic frames covering a topic like unemployment would look at national statistics, interviewing experts, and looking at the impacts of unemployment as a whole (Gross, 2008).

Gross (2008) found that episodic frames produce more emotional responses, whereas thematic frames produce more logical persuasive arguments. When examining the issue of poverty, Iyengar (1991) found that episodic frames saw poverty presented as individual responsibility; in contrast, thematic frames showed poverty in a broad context. Thus, he argued, "the thematic frame engenders a stronger sense of societal responsibility, whereas the episodic frame engenders a stronger sense of individual responsibility" (p. 35).

Episodic frames divert attention from societal responsibilities and instead place that attention on the individual and create a cycle where societal issues are made worse. They are continually presented as isolated episodic issues (Iyengar, 1991). Within mass media, it has been found that most media reporting uses episodic frames in coverage (Iyengar, 1991; Kostadinova & Dimitrova, 2012).

Visual Framing

Images/visuals have a high attraction value and often lend the first impression when a consumer looks at media; they are more readily remembered and recalled (Rodgers & Thorson,

2000). However, it should also be noted that most of the framing studies analyze text to define and locate frames, not visuals. Textual framing has been widely studied, while research into visual framing and its effects are less common, as is an apparent forming a connection to using both visual and textual frames in unison (Bell, 2001; Brantner et al., 2011). Coleman (2010) said, "Visual framing provides an important new direction for theory building and future research" (p. 233). However, it is not that researchers do not see the value of visual framing; there is a lack of research on identifying or how to define any visual framing (Rodriguez & Dimitrova, 2011).

Visual framing is defined as "the selection and visual accentuation of certain aspects of the perceived reality in a communicative context through the specific structuring and interpretation patterns and advises on appropriate action for a given situation" (Coleman, 2010, p. 237). A visual frame is the representation of elements and their relationships within an image, created by the intended or unintended framing and creation of said image (Coleman, 2010; Hansen & Machin, 2013). Rebich-Hespanha et al. (2015) claimed that the relationships framed within an image drive visual framing. The intended or unintended choices in presenting the image, camera angle, content of image, lighting, and editing create the visual frame to be analyzed (Coleman, 2010; Hansen & Machin, 2013; McComas & Shanahan, 1999).

Visual framing is a process and strategy of visual communication that emphasizes select interpretations of a frame and makes them salient, promoting select attributions within the visual (Brantner et al., 2011). Visuals are processed with minimal cognitive effort and great speed; therefore, they may be processed faster and without the same limitations of prior knowledge or linear reasoning associated with textual framing (Messaris & Abraham, 2001; Wedel & Pieters, 2008). Therefore, visual framing may negate the need for knowledge of a topic when framing because visuals lack the same context derived from frames founded in text. Frames based on

understanding text meet more cognitive resistance, allowing visual frames to be more easily processed (Messaris & Abraham, 2001). Images are easier for receivers to process because of the lightened cognitive load and prior knowledge, making them more effective for communication (Kress & Van Leeuwen, 2006; Wedel & Pieters, 2008).

The qualities that visuals utilize in communication allow for the enhancement and mitigation of the meaning found in a visual. Analogical, indexical, and lack of syntax are core qualities used in visual communication (Messaris & Abraham, 2001). Analogical qualities of visuals assume that words are socially constructed and are symbolic representations of what they are meant to represent. However, visuals and their meaning are derived by similarity and analogy from the individual's experiences. Instead, visuals look more similar to the natural phenomenon they represent than words (Messaris, 1994).

The second property is the indexicality of visuals, which means that a visual is interpreted as being more closely associated with the truth or reality of a situation than other means of communication (Peirce, 1991; Rodriguez & Dimitrova, 2011). The visual creates a first-hand account, whereas text is seen as a secondhand account. Peirce (1991) explained that the quality of photographs allowed for the capture of realism and that individuals processed realistic visuals as more closely associated with the truth, as it reflected reality.

The third property of visual frames is the lack of syntax. Images alone cannot correctly reflect reality, and complex ideas are not transferred as quickly as they would via text. Visual communication does not have the same syntax abilities as verbal or textual communication in sharing ideas and complex thoughts; because of this, the syntax may be missed in visuals. (Messaris & Abraham, 2001).

Visual frames also carry excess meaning and trigger reactions more quickly than text since they are less intrusive, lessening the cognitive load of the mind so that the viewer can make quicker assumptions (Bucher & Schumacher, 2006; Gibson & Zillmann, 2000). The additional meaning may be triggered based upon an individual's interpretation of shared meaning associated with a visual. Additionally, due to low cognitive load and quick reactions, individuals will accept a visual as closely related to reality with little questioning of the visual, thus having the potential to influence a corresponding textual frame (Ali & Mahmood, 2013; Brantner et al., 2011; Gibson & Zillmann, 2000; Griffin, 2004; Rodriguez & Dimitrova, 2011).

According to Ferguson (2001), there is evidence that when a conflict arises between textual and visual frames that the visual frame has a higher chance of being believed. Images are suitable devices to frame because they are "capable of not only obscuring issues but [also] of overwhelming facts" (Wischmann, 1987, p. 70). However, visuals should not be seen as in competition or superior to text, as they complement modes of communication, and the exclusion of one is to be seen as incomplete within research, and they should be used in conjunction (Coleman, 2010; Coleman & Banning, 2006). Images are always viewed as accurate as text because they cannot provide context and may be manipulated by one's preconceived ideas. Images may have difficulty explaining complex concepts beyond denotive meaning, such as cause and effect relationships (Rodriguez & Dimitrova, 2011).

Levels of Visual Framing

•RQ4: What are common ways that responsibility is framed visually in episodic and thematic TikTok videos?

•RQ5: What are common ways Appalachian opioid users' attributes are framed visually within TikTok videos?

Rodriguez and Dimitrova's (2011) model synthesized visual framing research and defined four tiers of visual framing and how to identify them at each level. The model proposed in the current study can be used with both media and individual framing. As each level progresses, it becomes more "sensitive to the assignment of meanings to visual depictions as a basis for the identification of frames" (Rodriguez & Dimitrova, 2011, p. 52).

Level 1: Denotative Systems

Level one, or denotive framing, is identified by enumerating visual elements shown, deriving meaning based on visual stimulation the viewer understands. The categorizations from this process constitute visual denotative frames (Rodriguez & Dimitrova, 2011).

Donative meaning is often referred to as dictionary meaning. Donative meaning is the actual thing being presented without the additional (connotative) meaning being used in describing something (Omar, 2012). In both English and Arabic, the word for dog refers to the four-legged mammal with a tail and a bark; this is the denotive meaning. However, the meaning associated with the dog, such as loyalty and companionship, is the connotative meaning and would not carry the same meaning across cultures as the denotive meaning (Yamamoto & Swan, 1989).

The first level relies on images' analogic and indexical attributes, meaning they are perceived as between actual reality and what is captured by a camera because images are deciphered as close to reality. It is easy to find frames within this level as it is a natural process; however, it is limited by a person's ability to recognize only what they know (Messaris & Abraham, 2001).

Level 2: Stylistic-Semiotic Systems

This level looks at the stylistic and technical representations made in images. This level also considers the stylistic conventions and technological transformations involved in representation. Within style, one may associate a close-up shot as intimate, and a further shot as less intimate or may include measuring the prominence of some object or person within images. Archer et al. (1983) looked at the number of times faces were represented in images instead of other body parts and found that focus on the face indicated higher intelligence. In contrast, a focus on the body showed attractiveness and less intelligence. Level two is marked by choices in how the subject may be positioned, naturally, purposefully, with respective themes (Bell, 2001; Hall & Hall, 1966). Visual modality results from the degree to which specific means of visual expression, color, representational detail, depth, and tonal shades enhance realism (Bell, 2001).

Level 3: Connotative Systems

At level three, frames are made by identifying an individual or object and its potential symbolic attachments (Rodriguez & Dimitrova, 2011). Frames are built by looking at the symbolism within an image and attributing it to abstract or figurative symbols (Leeuwen & Jewitt, 2001). Visual metaphors as frames also fall under the third level, representing an abstract concept through an image related to a concept (Lule, 2004). Refaie's (2003) analysis of political cartoons saw the idea of immigration symbolically framed as an assault on the native population by using cartoons showing ships full of immigrants plating their origin flags on the new country's soil.

Level 4: Ideological Representations

This level looks at underlying principles to identify frames as they notate an ideology behind an image. It draws together the symbols and stylistic features of an image into a coherent

interpretation that provides the "why" behind the representations being analyzed (Rodriguez & Dimitrova, 2011). Level four seeks to showcase how images are used as instruments of power that shape public consciousness and opinion (Andén-Papadopoulos, 2009). Images employed by news media play a significant role in assessing socio-political ideas presented in the news (Fahmy et al., 2006). Images interact with preconceived notions and shape future perceptions and judgments, as found in a study observing how images from the Vietnam War primed perceptions of the war at home (Domke et al., 2002).

Use of the fourth level can be seen in Gilen's (1996) analysis of news stories reporting on poverty, where the issue was reported as a predominantly Black issue, with approximately 60% of the news coverage showcasing Blacks, while Blacks accounted for approximately 30% of the poor in the United States. Gilen (1996) argued that this augmented poverty as a majority-Black issue, as news coverage framed it.

Visual-Textual Frames and Analysis

Because visual framing lacks the ability to frame some situations and issues objectively, it is challenging to identify frames without textual support (Rodriguez & Dimitrova, 2011). The layers of meaning in visuals shroud analysis, creating a pseudo-reality, where text is more objective and straightforward and may ground visuals (Faux & Kim, 2006). Text and visuals have a strong influence on one another. However, visuals tend to have a more substantial effect (Matthes, 2009). Therefore, text and images frame each other mutually, with text narrowing focus and images drawing attention to attributes within the text's frame (Messaris & Abraham, 2001). Parveen and Showkat (2020) stated that "the text remains consequential as it works in tandem with the visuals. Yet, they work together mutually, with one adding to the meaning of the other" (p. 19).

Visual frame analysis is a continuous sorting process of the events and issues covered, the images made, the stylistic choices, and media incorporation (Schwalbe, 2006). Some studies count the salient visual frames regarding an event or issue, the images used to represent a said event, and the image's prominence and placement (Bulla & Borah, 2006). Nurmis (2017) called for the study of visual framing using Rodriguez and Dimitrova's (2011) models, noting the model's flexibility for researchers looking at visual frames, prefacing its ability to lend meaning where textual framing analysis cannot.

TikTok

•RQ6: What percentage of TikTok video transcriptions support thematic or episodic framing of responsibility within the videos?

•RQ7: What percentage of TikTok video descriptions support the thematic or episodic responsibility framing within the videos?

•RQ8: Of episodic and thematic frames, how is (un)/supportive engagement distributed within their respective comments?

TikTok Explained

TikTok is a visual social media application that allows individuals to create, share, and upload short-video content to a self-learning artificial intelligence algorithm (Apple App Store, 2021; Bursztynsky, 2021; Montag et al., 2021). Known for its short videos, simple editing tools, and music-embedding, videos can last from a few seconds to several minutes and are engaged by commenting, liking, and sharing the video (Chen et al., 2019; Yang et al., 2019).

Douyin and its international version of TikTok have been downloaded approximately two billion times, making it one of the most downloaded apps of the decade (Chapple, 2020). Musically, the predecessor to TikTok launched in 2014 by a Chinese tech company and targeted

American markets. Following the success of Musically in American markets, Bytedance (a Chinese tech company) acquired Musically and relaunched the app as TikTok in 2017, merging the app with the preexisting Doyuin (Chen, 2019; Savic & Albury, 2019). TikTok and Douyin operate independently inside mainland China and abroad (Kaye et al., 2020; Sun et al., 2020).

TikTok and its sister app, Douyin, feature mainly user-generated content; however, there is some professionally generated content like advertisements and sponsored content (Kaye et al., 2020; Sun et al., 2020). Trends on TikTok function like trends in fashion or pop culture, relevant one day and gone the next. TikTok trends are marketed by using hashtags, challenges, dances, and sounds as a trend to gain attention others imitate and add a creative spin to the trend. This process grows trends and leads to subcultures on the app identified as some of the most popular trends to sub-genres of the app, as an example, Witch-Tok, Art-Tok, with approximate 30 billion views (Hirose, 2021).

Duets are a video editing and recording tool that "allow you to build on another user's video on TikTok by recording your video alongside the original" and allow for user interaction and collaboration across the platform (TikTok, 2019). Duets often trigger trends, allow for reactions, and many other means of interacting with others' content. Duets will appear to the left of the screen or be transposed on top of the original video it is duetting (Blackwood, 2021).

By utilizing trends and using a function like duets, some users are elevated to the status of influencers, where millions consume their content. Once users are upgraded to this status, they become candidates for brands to use for advertisements. Additionally, TikTok offers these users the option to capitalize on their views with the TikTok Creator Fund to keep these creators on the app and engagement high (TikTok Creator Fund, 2021; Tribe, 2021). Charli D'amelio (136.1 million followers) and Khaby Lame (132 million followers) are identified as the app's top

influencers as of February 2022 (Thompson-Powell, 2022). Corporate accounts advertising on the app engage in trends and use app influencers to sell products, seeing a greater return on investment than other social media as the app's popularity explodes (Martin, 2019; Nicas et al., 2019).

TikTok's "For You Page"

FYP is an acronym for "For You Page" and serves as the homepage for the TikTok app (Pellot, 2020). The FYP is not reliant on users following friends or influencers to populate the landing page, unlike Instagram and Facebook (Antonelli, 2020; Lua, 2021; Meta, 2021).

The TikTok FYP algorithm organizes videos based on user interaction, video content, and account settings. The algorithm tracks trends and hashtags engaged with, along with time and likes a user spends on a video; additionally, the app uses device data such as language settings to filter content (TikTok, 2020; Weekman, 2020). The algorithm will attempt to diversify and interrupt repetitive patterns by limiting the number of times a similar video is viewed in succession and will recommend videos outside of a user's usual content occasionally to "encourage [users] to explore experiences" (TikTok, 2020).

Ethical and Legal Concerns

The app is also notoriously accused of censorship, as it removes content to create a Chinese government-approved reality; popular topics censored include LGBTQ+ themes and government dissent (Fox, 2020; Hern, 2019; Jennings, 2019). *Washington Post* reporters Harwell and Romm (2019) reported that a search #hongkong on Twitter showcases the city-state's history of rioting. In contrast, a search on Chinese-owned TikTok (Douyin) yields a "politically convenient version of reality."

TikTok is also a potential national security risk to many governments. The Australian Strategic Policy Institute (Ryan et al., 2020) report found TikTok routinely used invasive iOS permissions to access additional user data outside of the app, including the potential harvesting of passwords and financial information. TikTok was deemed a threat to U.S. national security, based upon unlawful collecting of user data without allowing users to opt out (Poulsen & McMillan, 2020). In 2020, President Trump signed an executive order to ban TikTok in American app stores if the parent company, Bytedance, did not sell the app to an American-based company. This led to both the American and Chinese governments seeing the app as a threat to national security if acquired by the opposing government (Allyn, 2020; Ma, 2021; Nast, 2021).

Short-video Research

TikTok and its communication are seen as fleeting, childish, and silly, as many adopt reductionist views of the app, dismissing its communication as shallow and lacking depth (Odell, 2019; Roose, 2018). The application has been compared to a digital drug, shortening attention spans and allowing for immediate satisfaction from self-tailored content (Koetsier, 2020). Digital detoxing is a popular view toward social media communications; these views argue that social media communication is harmful, claiming they remove autonomy and cause addiction in society (Sutton, 2020; Syversen, 2020). While autonomy and privacy are top-down observations, TikTok users adopt a different perspective and use the app to satisfy communication needs, dismissing concerns and criticism (Ohlheiser, 2019).

Views of visual social media equate these apps as shallow and meaningless; media scholars argue that the communications brought about by seeing social media are new ways of self-identity and communication always present in society, and media like selfies are but

pathways of communication (Abidin, 2016; Humphreys, 2018; Tidenberg, 2018). Rettberg (2014) stated, “Most digital self-representation is closely connected to the tradition of the diary, which is written bit by bit over a period of time,” showing that fleeting selfies held great communication and identity value (p. 44).

Within ephemeral short-video communication, Rettberg (2017) saw how hand movements and gestures popular in Musically (now TikTok) videos established the tone and helped interpret video content much as the emoji did for text. She argued that as communication continued to leak into the visual-digital realm, the human need for establishing tone through gestures would adapt to these new media. Other research looks at the app’s ability to transfer information and influence political communication and public health messaging users. Research within this area supports that short-video media and digital communications are so embedded into everyday communication that they can educate and spread information more effectively than traditional means (Comp et al., 2020; Ostrovsky & Chen, 2020; Serrano et al., 2020).

Studies of short-video apps like Snapchat show how the ephemeral nature of these apps dictates communication style and discourse, allowing for differing forms of communication narrative compared to long-lived content-focused apps (Bayer et al., 2016, Ekman, 2015; Piwek & Joinson, 2016). Schellewald (2021) argued that TikTok is a communicative environment that creates a shared expression and platform-specific languages, allowing for meaningful self-expression, sense-making, and othering, as users generate an app-based reality.

A Tool of Influence

Most of the research on TikTok examines how it may fulfill the app’s mediatization role, where many argue that this form of media has the potential to influence and inform media consumers (Hayes et al., 2020; Li et al., 2021; Zhu et al., 2019). Showcasing the app’s influence,

Olvera et al. (2021) found signs of mass sociogenic illness (mass hysteria) as users engaged with content involving Tourettes, allowing for behaviors and emotions to spread quickly through the social network.

Researchers have found that the app plays a vital role for an individual seeking and engaging with information; and that the app's ephemeral nature is integral to its role in influencing, information sharing, and information seeking (Al-Maroof et al., 2021; Basch et al., 2020; Comp et al., 2020). Song et al. (2021) found that short-video apps like TikTok allow for communication affordances that influence the user's acquisition of health-related information, despite this not being the app's function. Apps like TikTok will enable users to be immersed in content and allows users the affordance to believe and continue seeking information from short video apps like TikTok. They argued that the affordance of the app would enable users to be influenced, engaged, and return when seeking information.

Inquiry

This study used a mixed-methods design where quantitative inquiry and analysis informed and guided qualitative inquiry and its analysis. A quantitative content analysis on several fronts reviewed the holistic framing and the framing of the transcription and description of videos. This analysis informed a qualitative visual analysis using the Levels of Visual Framing (Rodriguez & Dimitrova, 2011) coupled with a methodical design used to find context within visuals (Wozniak et al., 2015). Using quantitative analysis, the researcher explored qualitative elements further and made more substantial interpretations, such as finding the framing of responsibility visually within social media video content.

Research Questions

- RQ1: What societal factors are blamed for the opioid epidemic within TikTok videos?
- RQ2: What attributes are associated with Appalachian opioid abusers within TikTok videos?
- RQ3: What percentage of TikToks concerning opioid abuse in Appalachia ascribe responsibility to the individual (episodic framing) versus the rate that ascribe responsibility to societal factors (thematic framing)?
- RQ4: What are common ways that responsibility is framed visually in episodic and thematic TikTok videos?
- RQ5: What are common ways Appalachian opioid users' attributes are framed visually within TikTok videos?
- RQ6: What percentage of TikTok video transcriptions support thematic or episodic framing of responsibility within the videos?
- RQ7: What percentage of TikTok video descriptions support the thematic or episodic responsibility framing within the videos?
- RQ8: Of episodic and thematic frames, how is (un)supportive engagement distributed within their respective comments?

Methodology

Collection/Hashtags

An initial search was conducted to determine hashtags used in locating relevant videos. The initial search was focused on identifying words associated with the Appalachian region and

opioid abuse used in user-generated content on TikTok. The keywords in this study were searched using hashtags; however, the TikTok search algorithm includes all searchable text within the provided description and matches a searched keyword to both hashtags and text within the video's description.

In an attempt to ensure the Appalachian region was the focus of the user generated TikTok content, the researcher used the hashtag #Appalachia to find other phrases, terms, and signifiers used to pinpoint the region. The initial search rendered Appalachian state names, the most common signifier used in connection to the region. As an example**,** common hashtags that could be used to note the region are #Appalachia, #Kentucky, #Ohio, #Tennessee, and #WestVirginia. These hashtags appear more frequently and are listed as Central Appalachian regions. Northern and southern Appalachian regions were excluded from the search as they yielded little content and failed to relate to the Appalachian element of this study. This included states such as New York or Mississippi; both have Appalachian territory; however, they are not seen as *true* Appalachian states. These other regions may not have as strong of an Appalachian connection as central regions because of cultural differences between sub-regions (Lohmann, 1990).

To signify substance abuse, the researcher used the hashtag #opioid; the nature of TikTok's algorithm includes any variation of the hashtag (e.g., #opiodcrisis, #opiodCrisis, #opioidAbuse, etc.). Therefore, the researcher reviewed hashtags associated with the search term #opiod and used additional hashtags found in the initial search, such as #addiction, #drugs, #pills, and #abuse, to further signify the opiate crisis. The nature of this study is to address the framing of responsibility regarding the Appalachian opioid crisis; therefore, hashtags that

signified regions exterior from Appalachia or used the hashtag #opioid in a context that does not include a predetermined signifier were not used or pursued.

The researcher used a selection of three hashtags found in the initial search to select videos that were analyzed: one hashtag notating region, one notating opioids, and one notating the nature of the opioid issue. The hashtags were used to propagate the search feature on TikTok. The more hashtags used, the less optimal TikTok's search feature becomes. The researcher used a combination of three hashtags to improve the sample and optimize search results (Table 1).

Table 1

Hashtag Combinations

Combination	Location	Opioid Use	Opioid
1	#Appalachia	#Abuse	#Opiod
2	#Appalachia	#Addiction	#Opiod
3	#Appalachia	#Drugs	#Opiod
4	#Appalachia	#Pills	#Opiod
5	#Hillbilly	#Abuse	#Opiod
6	#Hillbilly	#Addiction	#Opiod
7	#Hillbilly	#Drugs	#Opiod
8	#Hillbilly	#Pills	#Opiod
9	#Kentucky	#Abuse	#Opiod
10	#Kentucky	#Addiction	#Opiod
11	#Kentucky	#Drugs	#Opiod
12	#Kentucky	#Pills	#Opiod
13	#Ohio	#Abuse	#Opiod
14	#Ohio	#Addiction	#Opiod
15	#Ohio	#Drugs	#Opiod
16	#Ohio	#Pills	#Opiod
17	#Tennessee	#Abuse	#Opiod
18	#Tennessee	#Addiction	#Opiod
19	#Tennessee	#Drugs	#Opiod
20	#Tennessee	#Pills	#Opiod
21	#WestVirginia	#Abuse	#Opiod
22	#WestVirginia	#Addiction	#Opiod
23	#WestVirginia	#Drugs	#Opiod
24	#WestVirginia	#Pills	#Opiod

Sampling Methods

Systematic sampling was used to gather videos for analysis. Four videos were gathered per combination of hashtags (see Table 1), resulting in 96 total videos. Selecting video via systematic sampling allowed the researcher to scroll 10 rows of search results between selected videos, approximately 20 videos. This allowed the researcher to circumvent TikTok's algorithm that may promote certain users and their content over others; this also allows the researcher to view deeper into the app's content. Videos were considered and selected if they included some variation of the searched hashtags, notating location/subject, or opioids. If a video could not be found meeting the criteria after scrolling 10 rows, the researcher reviewed the videos in immediate succession until one was found, then began the systematic process again.

To collect the videos, the researcher saved the video to a hard drive for analysis, as videos may be deleted or privated on TikTok. Video descriptions were copied and pasted into Word documents with a corresponding reference number so that they were matched with the correct video during analysis. Video comments were collected in a similar way by copying and pasting the text into an Excel document and assigning a reference number to a corresponding video.

A total of 200 comments were systematically selected for analysis. The researcher used a randomizer, KuTools, a Microsoft Excel plug-in, to systematically sample comment data sets that exceeded the 200-comment threshold. When the threshold was exceeded, all comments were placed in an Excel file and the Excel plug-in was used to systematically select 200 comments. If there were less than 200 comments, the researcher collected all comments. This method was chosen because some videos may have a surplus of comments, and sampling based on percentages, algorithm, or random sampling significantly limits and complicates the number of

comments to be selected for videos with few comments or results in too large of a sample when faced with massive amounts of comments. The number 200 was chosen as it allows for enough sample without greatly exceeding the potential number of comments to be found; again because of TikTok's algorithm, some videos may have few to no comments while others have thousands.

Content Analysis

Research question three was answered by performing a quantitative content analysis of each video as a whole, allowing for a holistic approach, digesting the video in its complete intended form. By using a direct content analysis, the researcher may further develop a preexisting theory and find new themes and categories emergent in the analysis (Hsieh & Shannon, 2005). To negate the potential bias and non-congruence with the study, the researcher also coded for *neutral* and *both* categories, alongside the frames. The researcher examined each video *holistically*, determining whether the overarching frames presented were 1) *episodic*, a personal allocation of responsibility, 2) *thematic*, a societal allocation of responsibility, 3) *both*, an individual and societal allocation of responsibility), or 4) *neutral*, no allocation of responsibility. Responsibility within this study is related to framing of individual or societal blame for the Appalachian opioid crisis. The researcher used a content analysis of each video as a whole to determine if the video was episodic, thematic, both, or neutral. The analysis looked for codes associated with episodic and thematic frames as Iyengar (1990, 1991) described.

Research questions six and seven were answered by a content analysis of the text of the transcripts and descriptions, respectively. For question six, the researcher used a computer-assisted transcription software (Trint and NVivo) to transcribe videos. The researcher then cleaned the transcriptions by reviewing the computer transcription manually. The cleaning process involved checking if the automatic transcription had transcribed the audio correctly and

correcting any incorrect transcription using a verbatim transcription design. The researcher used auto-generated transcriptions to reduce data collection time.

When background noise or music-beds interfered with transcription, the researcher transcribed the video manually. The collected data was stored within a Microsoft Word file for analysis. After cleaning the transcriptions, the researcher performed the content analysis of the transcriptions for each video to determine if the video was episodic, thematic, both, or neutral.

Within research question seven, the researcher performed a content analysis of the descriptions generated by the content creator of each video. The collected data was stored within a Microsoft Word file for analysis. The analysis was conducted to determine the allocation of responsibility (episodic, thematic, both, or neutral) for the opioid crisis, as noted by the content creator in their description.

The results of the quantitative content analysis were then used to inform questions six and seven and the analysis of visual framing, in finding context. Other researchers have similarly used a quantitative content analysis of text to support subsequent qualitative/visual analysis, so that context could be found. Visuals are believed to lack the ability to convey complexities such as responsibility without textual context. So, by using a quantitative content analysis of the text to inform subsequent inquiry, this researcher found *context* in the qualitative visual analysis (DiFrancesco & Young, 2011; Wozniak et al., 2015).

Comment Analysis

Research question eight looked at user-generated comments responding to the videos analyzed within this study, to measure the percentages of supportive and unsupportive engagement from the comments. Comments were collected by the researcher and placed within a Microsoft Excel file for analysis with a corresponding tag number to the video they originated.

The researcher then coded each comment *Supportive, Unsupportive, Both,* or *Neutral.* *Unsupportive* comments are any comment that did not support the video's episodic or thematic framing. *Supportive* comments are any comments that supported the video's responsibility frames. *Both* comments are any comments that are both in support and not in support of the videos framing. Lastly, *neutral* comments are any comments that neither support or unsupportive or are illegible.

The researcher conducted a quantitative content analysis of the top 200 comments per video. The researcher then determined the rate of supportive, unsupportive, both, and neutral comments for each responsibility frame presented in each video analyzed.

Intercoder Reliability

Intercoder reliability was used to ensure reliability and consistency when analyzing the data. Cohen's Kappa was used to measure intercoder reliability. The researcher created a sample data set used to train the second coder on the process of using the code sheet and concepts associated with the research. This training set consisted of five randomly selected videos from the FYP (For You Page) on TikTok. After training, the second coder then reviewed just over 10% of the data set (10 videos). According to Landis and Koch (1977), a Kappa value of zero or less was *poor* and a measure of one was *perfect* agreement, with several benchmarks of agreement existing on a continuum. Cohen's Kappa (Landis & Koch, 1977) was used to measure intercoder reliability between two coders, while considering the accidental/random chance of agreement.

The intercoder reliability test used found high levels of agreeance in analyzed data. In testing the reliability of coding videos by holistic means, by transcription, and by description, the researcher found high levels of reliability and consistency between coders. The holistically

framed variable had a Kappa of ∞.831 (almost perfect agreement); the transcription variable had a Kappa of ∞1.0 (Perfect agreement); the description variable had a Kappa of ∞.833 (almost perfect agreement). This was done to test the validity and consistency of the two coders for research questions three, six, and seven.

Additionally, in testing the agreeance of coding comments as *supportive, unsupportive, neutral,* or *both* of the videos' framing (see research question eight), the researcher found a Kappa of ∞.752 (substantial agreement) based on a total of 1,016 comments analyzed in the intercoder reliability measures.

Visual Frame Analysis

As mentioned above, a quantitative content analysis was used to measure the frequency of episodic and thematic framing (Iyengar, 1990, 1991) within the analyzed TikTok videos. The content analysis was used to find responsibility framed within a video, the researcher analyzed the description and transcriptions through a directed content analysis, and these results were then used to inform *context* in subsequent inquiry, as visuals cannot provide such context (DiFrancesco & Young, 2011). A qualitative and grounded theory approach was undertaken to explore coding visual frames to support or undermine findings in research questions three, six, and seven.

Question four was measured by analysis of the frequency of codes found in visually framing responsibility. Codes were determined by using Rodriguez and Dimitrova's (2011) Levels of Visual Framing, where the first three levels address (L1) denotative elements, (L2) stylistic choices, and (L3) connotative elements (see Table 2).

While the first two levels of visual framing described by Rodriguez and Dimitrova (2011) allow for the identification of themes based on 1) denotative meaning and 2) stylistic features,

level three - connotative meaning has proven difficult for researchers to find visual frames to support, without textual assistance (Messaris & Abraham, 2001). To analyze level three of visual framing, the researcher adopted Wozniak et al.'s (2015) approach, a multimodal method of implementing the *denotive meaning* to assist in visual analysis, by using a denotive analysis to allocate the literal signifiers within a video and assign them *connotative meaning* (see Table 2).

Table 2

Levels of Visual Framing & Analysis Process

Level	Definition	Process
L1 Denotative Systems	Dictionary meaning, literal signifiers (Messaris & Abraham, 2001; Omar,2012)	Coder identifies the denotive meaning within the video. Noting what is shown.
L2 Stylistic-Semiotic Systems	Stylistic/ technical representations, pictorial expression (Bell, 2001)	Coder will note stylistic choices of shot and angle in the videos formatting (see Table 3).
L3 Connotative.	Symbolic meaning of denotative signifiers, representing concepts through symbolism (Leeuwen & Jewitt, 2001; Wozniak et al., 2015)	Coder will use context found in the quantitative content analysis of questions 3,6,7, to determine connotative meaning found in the denotative signifiers.

The quantitative content analysis conducted for research questions three, six, and seven was used in a multimodal approach using both visual and textual analysis to determine the connotative meaning that level three of visual framing addresses. Visuals are reliant upon the

text for context, and the text is reliant upon the visual, hence the need for both textual and visual analysis to fortify a sturdy data set and find frames and themes within data (Hannigan, 1995; Wozniak et al., 2015). The researcher used the context found in quantitative analysis, finding allocations of blame and then accompanied them with denotive signifiers and stylistic choices to support the connotative analysis of visuals, since visuals cannot place responsibility without textual context. The researcher used the denotive meaning, stylistic choices, and the context informed by the quantitative content analysis to make informed decisions in finding level three of connotative meaning of the visuals. Stylistic choices were further employed as connotative meaning was more elusive; angle and shot type were helpful in distinguishing context and intent within a video. While the style choices may not prove extreme relevance in every video, their analysis proved crucial in interpreting context for more elusive connotative meaning (see Table 3).

Table 3

Visual Framing - Level Two: Stylistic-Semiotic Systems

Style Choice	Definition	Evaluation
Long Shot	Wide, encompassing; spatial relationships w/ viewer	Subject very related to surroundings larger systems
Close-Up Shot	Intimate, magnified; Personal relationship w/ viewer	Subject independent & focused.
Medium Shot	Encompassing, yet intimate; spatial, relationship w/ viewer	Subject and environment in a more balanced view
High Angle	Diminutive view, above subject	Viewer sees subject as less powerful
Low Angle	More Significant view; below subject; elevated	Viewer sees subject as more powerful

Neutral Angle	Horizontal view, neutral with subject; equals	Viewer sees subject as equal

(Bowen, 2018; Mademlis et al., 2019)

This was case by case, with some videos needing the review of each of the tools above to find meaning. In contrast, other videos were blunter in connotative meaning, requiring less intensive use of the tools above. Again, both the denotive and stylistic choices were used with the context of responsibility found in the prior analysis to conclude a connotative meaning.

Constant Comparative Analysis

The researcher used qualitative open coding and axial coding to analyze the data (Corbin & Strauss, 1990). By using open coding, the researcher used a grounded theory approach to allow for concepts to emerge within the analysis. Question one and two were answered by a first pass of the data in an open coding fashion, locating discreet elements and coding them. Then is axial coding, where the researcher made several other passes of the codes and noted similarities, merged codes, and found relationships between codes to develop categories and themes further to organize the codes.

Open coding is a descriptive process that fractures data by noting all potential themes or distinctions within a data set. Open coding is the first step in the constant comparative method known for its descriptive nature. The second step, axial coding, restructures the fractured data in several passes, constructing overarching themes, concepts, and theories. The axial step is used for theory building and is more conceptual and abstract than open coding (Simmons, 2017; Strauss & Corbin, 2008; Strauss, 1987).

The researcher passed through the entire data set within this study using the constant comparative methods, making descriptive open coding themes. Next, the researcher reviewed the open codes several times and reorganized them into more conceptual holistic themes. For example, the theme of corruption presented itself in many facets, from political, industrial, pharmaceutical, and individual; with axial coding, the researcher was able to cluster the themes based on their likeness and assign the concept of corruption.

Methodology Review

Within this study, the quantitative content analysis and its results yielded data and context to inform the qualitative elements. The researcher measured the rates of responsibility framing within TikTok videos and the support of episodic and thematic responsibility framing. After this analysis, the researcher used the findings to inform *context,* a required element in visual framing, and analyzed the visual elements using multimodal method to decipher the levels of visual framing, allowing the researcher to find visual responsibility frames.

The researcher also found common themes associated with allocating responsibility, both visually and textually. Further, the analysis found how attributes are presented in the framing of the context of the Appalachian opioid crisis, both textually and visually.

The aforementioned methods were used to find out how Appalachian opioid abusers are framed both visually and textually, how they are represented, and how responsibility is viewed through the lens of TikTok.

Results

Framing and Support

Holistic

The holistic approach to identifying frames (episodic, thematic, both, and neutral) found that the majority of videos were framed either episodic or thematically. Episodically framed videos accounted for 48.4% of the sample, 31.6% were thematic, 15.8% were framed as both episodic and thematic, and 4.2% were framed as neutral (Table 4).

Table 4

Framing - Holistic

Frame Type	Frequency	Percent
Episodic	46	48.4
Thematic	30	31.6
Both	15	15.8
Neutral	4	4.2

Transcriptions and Descriptions

When reviewing the framing found within the transcription of the videos as episodic, thematic, both, and neutral, the researcher discovered a larger portion of neutral frames appearing in the analysis of the transcription's frames. The researcher found that 40% of transcriptions were framed episodically, 28.4% were framed thematically, 7.4% were framed as both, and 24.2% were framed as neutral (Table 5).

Table 5

Framing - Transcription

Frame Type	Frequency	Percent
Episodic	38	40
Thematic	27	28.4
Both	7	7.4
Neutral	23	24.2

Analysis of the framing in episodic, thematic, both, and neutral frames within the video description found episodic, thematic, and neutral to be the most popular frames. Episodic description frames accounted for 45.3%, thematic was 29.5%, both frames were 5.3%, and neutral frames represented 20% of descriptions framed (Table 6).

Table 6

Framing - Description

Frame Type	Frequency	Percent
Episodic	43	45.3
Thematic	28	29.5
Both	5	5.3
Neutral	19	20

Crosstabs

A crosstabulation between the holistic framing of a video and its transcription framing found that the transcription largely supported the holistic framing of the video. The researcher understood the crosstab findings as supporting the holistic framing of the video. No videos were holistically framed episodical and had thematic transcription and vice versa (Table 7).

Table 7

Crosstab - Holistic & Transcription

	Transcription			
Holistic	Episodic	Thematic	Both	Neutral
Episodic	33	0	0	13
Thematic	0	26	0	4
Both	5	1	7	2
Neutral	0	0	0	4

A crosstabulation between the holistic framing and the framing of the video description found that the holistic frame was also largely supported by the corresponding description frame. However, there are outliers that fell under each description's potential frame. Interestingly, the descriptions as compared to the transcription had some spill over into other categories. A video may be framed episodically and have a thematic description and vice versa, though it is rare. (Table 8).

Table 8

Crosstab - Holistic & Description

Holistic	Description			
	Episodic	Thematic	Both	Neutral
Episodic	32	3	3	8
Thematic	6	18	1	5
Both	4	7	1	3
Neutral	1	0	0	3

Support of Video Framing

The researcher found that the majority of comments were supportive of the framing of the video, with 84.96% (4,017 comments) supportive and 15.04% (711 comments) unsupportive. This percentage was found by removing the total number of neither and both comment variables.

Further, most videos had a higher total of supportive of the framing comments than unsupportive, neither, and both. Within this section, supportive comment refers to comments that supported the framing presented in the analyzed videos. To showcase the level of supportive comments, the researcher calculated the percentage of supportive comments per video of the total amount of comments. Then the percentages were organized in increments of 10%, with the highest level of supportive comments accounting for 90%-100% of total comments and the lowest level of supportive comments at 0%-9.9%.

The comment support of the framing of the video was primarily supportive, with 46 videos (48.42% of all videos) having 90%-100% of comments falling under the support of the video framing; 17 videos (17.89% of all videos) had 80%-89% of comments falling under the

support of the videos framing. The trend tapered off, decreasing to two videos with 0%-9.9% of comments falling under the support of the video framing.

Visual Framing Results

As defined in the methodology, the quantitative coding and analysis were used to inform the qualitative analysis of Rodriguez and Dimitrova's (2011) Levels of Visual Framing. Because visuals alone cannot convey specific meaning and lack context (Messaris & Abraham, 2001), the researcher allowed the previous analysis results to inform context within the levels of visual framing. The context was utilized in analyzing the third level of visual framing, connotative meaning, where symbolic and interpretive meaning would be applied. The researcher reviewed if the video was coded episodically, thematically, both, or neutral to use context. This allowed the researcher to then make a decision on the connotative meaning in the visual frames provided.

For example, a thematic frame found within the quantitative coding may alert the researcher to view imagery in more thematic tones, whereas an episodic coding may inform the visual understanding. Additionally, themes such as corruption are born from the context provided by thematic codes; video 91 has the theme of corruption and community, derived from the idea that thematic codes relate issues to larger societal implications. Should the video have been framed episodically, more emphasis may have been given to other factors in the video, resulting in different visual frames.

Other examples are case by case; one may understand how humor is used to diminish and cope (episodic) or to inform and draw attention (thematic). Without context, a video such as this would be coded under a coverall humor code because visually, there is little to distinguish them; however, their intent, meaning, and connotative meaning are only revealed once the context is given.

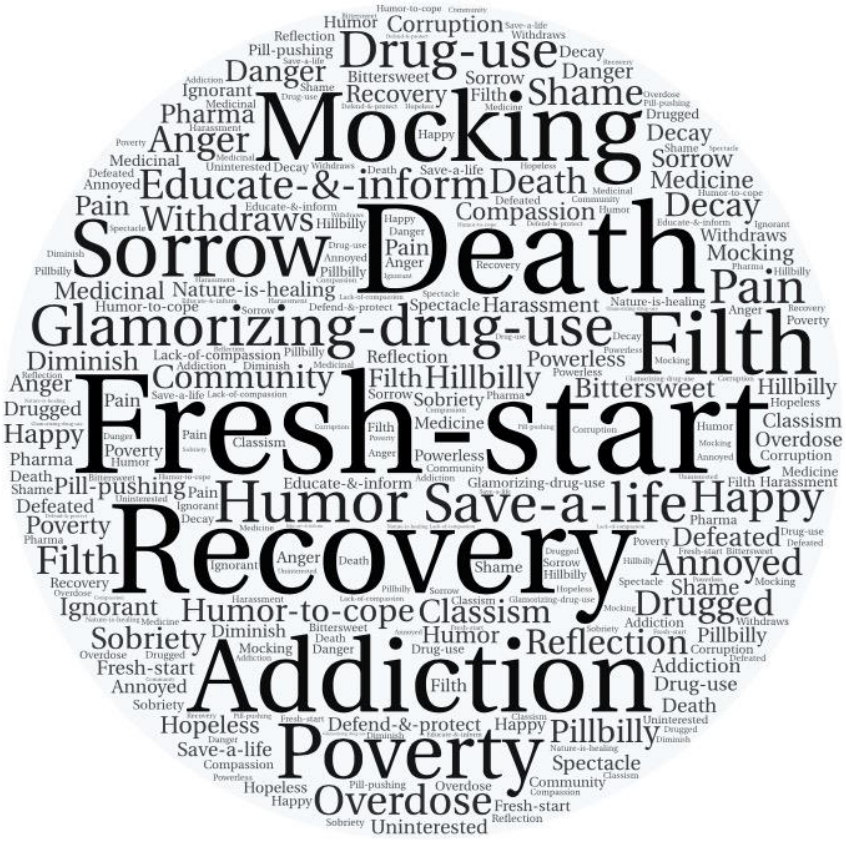
By allowing the denotive and stylistic levels of visual framing to couple with the context found in the content analysis of framing responsibility in research questions three, six, seven, and eight, the researcher was able to construct connotative meaning for the visuals in videos that otherwise would have been impossible to distinguish.

Themes Found in Visual Framing

The visuals in the *episodic* camp had, as expected, personalized words and reflections of the individual. The most common theme was *recovery*, a *fresh start*, and *saving a life*. Further related to the individual, *death* was a prominent theme found in episodic visuals, along with *addiction*, *poverty*, *mockery*, and *filth*. *Humor to cope* was another popular theme where an individual's situation was diminished and made light of by some humorous means (Figure 1).

Figure 1

Episodic Word Map



A screenshot from video 48 showcases a woman's pipeline from addiction to recovery, where she shows herself in darkness and then moves to the light and nature in recovery. Here she provides resources and encouragement for others grappling with addiction. The text overlay reads, "I am spiritually FREE," and then she goes on to show that such achievements are possible for anyone struggling with opioid addiction (Figure 2).

Figure 2

Screenshot 48 - Recovery Theme (Episodic)

Thematic visuals, as expected, presented themes of large societal causes for opioid abuse. The most common theme was *education and informing*, where issues were presented as a combatant to an individual's responsibility for the crisis. The second most prevalent theme was

corruption; within this theme, we see *wealth is unchecked power*, *greed*, and *legal issues*; this theme is broad but includes any mentions of external power or a lack of accountability attributing to the crisis. *Community* and *protection* presented further themes of making sure others didn't harm or slander the Appalachian region or the ongoing crisis in terms of self-responsibility. *Nature is healing* and *industry is decay* presents a pipeline to recovery where the crisis was seemingly cured by removing industry and industrial oppression/obstacles and returning to nature. Lastly, the popular frame of *pill-pushing* and *pharma* is a very prominent and recurring theme; much of this theme sees big pharmaceuticals as evil and denounces the pushing of pills on Appalachian communities (Figure 3).

Figure 3

Thematic Word Map

Showcasing corruption, a screenshot from video two shows members of the Sackler family almost peering down and smiling and smizing at the camera. At the same time, the text above them reads, “Did you know that the Slacker family built its 14 billion fortune selling Oxycontin. A drug that kills more than Heroin and Cocaine combined, and their drug is FDA approved.” This video represents the overall corruption theme, touching on big pharma and government corruption (Figure 4).

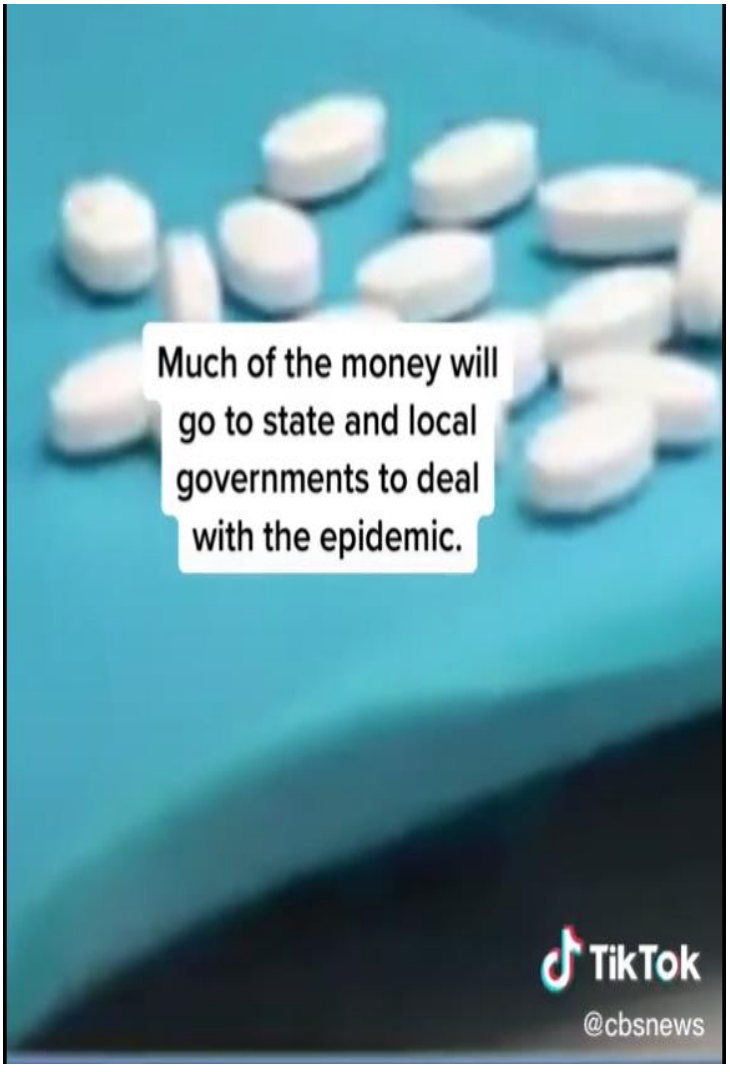
Figure 4

Screenshot 2 - Corruption Theme (Thematic)

Video three represented the informing theme; this video was produced by CBS for TikTok, and while it is professionally produced, it has the same element of informing. In these videos, a person will present statistics, quotes, and other information as to why/how the opioid crisis is in effect. Neutral presenters and calm presentations usually accompany these videos; they can be more personal, filmed on the phone in an informal place, or produced professionally with B-roll and other elements. However, they serve the same function of informing of a societal force impacting the opioid crisis (Figure 5).

Figure 5

Screenshot 3 - Educate & Inform Theme (Thematic)



Visuals classified as *both* had a fair mix of the themes mentioned above. *Education and information* are prevalent, and so is the *recovery* pipeline. Themes like *Good Samaritans, compassion,* and *protection and defense* also relate to good deeds presented within the visual. *Overdose* and *death* are also very prevalent in this sect. The *both* category illustrated both thematic and episodic themes; we see mentions of corruption, pill-pushing, poverty, and recovery. However, the *both* category contains more similar themes to the thematic sect (Figure 6).

Figure 6

Both Word Map

Video 16 showcased the popular themes of *overdose*, *death*, *protection and defense*, and *compassion*. In the video, a young woman is seated on the ground in a graveyard facing a newly sat gravestone. The woman has a heartfelt conversation with the gravestone where she says that

she should have done more to protect the deceased friend and that she should have intervened. Elements within the description and transcription alerted the coder that the video had both episodic and thematic framing, where resources were provided as a countermeasure and blame was placed around the opioid crisis and societal factors. In contrast, the actual death was blamed on both the individual and the friend mourning their loss (Figure 7).

Figure 7

Screenshot 16 - Death Theme (Both)

Lastly, the *neutral* category does not have a word map due to the low number of themes and videos existing under its categorization. Medical themes are most prevalent with mentions of *alternative medicine* and big *pharma*. *Nature* and its potential to heal are also a present theme.

Societal Forces in the Appalachian Opioid Crisis

Corruption was the most common reoccurring theme in finding social forces to blame in the Appalachian opioid crisis, with sub-points related to pharmaceutical companies, politicians, and industry. Abuse by the wealthy in industry and pharmaceuticals were attributed to causing the opioid crisis. Additionally, government, law, and legal matters were seen as hindrances to justice and prolonging the opioid crisis. *Pharmaceuticals, industry,* and *politics* were all associated with some interpretation of corruption, whether it was the unaccountability of actions or turning a cheek for compensation.

Video 50 (see Figure 8) used humor to showcase *corruption* thematically. In the video, a man clothed in an orange jumpsuit suggests that he is a prisoner; he is accompanied by a mannequin dressed similarly. The man and his dummy sing a parody song about a corrupt pharma executive and how he and other corrupt politicians and businesspeople should be imprisoned for their crimes. The video shows the further themes of wealth and industry abuses while using a humorous tone to engage with users.

Further showcasing *corruption*, politicians such as Joe Manchin and Alexandria Ocasio-Cortez were associated with themes of corruption, in contrasting ways, with Ocasio-Cortez calling out corruption and Manchin partaking in said corruption; this perspective was determined via the levels of visual framing as described above. Johnson & Johnson and Perdue pharmaceutical were presented as both corrupt in their actions and failing to take accountability for their role in the opioid crisis. Industries like coal energy and general mining were associated

with corruption and oppression of the people.

In video 91 (see Figure 9), AOC and a representative from West Virginia further showcase the corruption theme in allocating the societal forces to blame in the crisis. They share that corruption has brought poverty and drug abuse to Appalachia. Here the two women are on a level field of view, and the representative tells of a young person who said that in West Virginia, one can't be poor and happy without being high at the same time. Then the representative says that this young person has described one of the core issues of the opioid crisis.

Figure 8

Screenshot 50 -

Humor & Corruption theme (Thematic)

Figure 9

Screenshot 91 -

Corruption Theme (Thematic)

Poverty and decay were often showcased alongside the opioid crisis; however, it was usually conjoined with a more significant societal issue such as corruption of industry, politics,

and pharmaceuticals. Poverty may also be shown as an individual cause of opioid abuse. Further, poverty and decay were presented due to the aforementioned factors or seen as an individual's poor life choices, not societal forces.

Attributes of the Appalachian Opioid User

Interestingly, there was very little *hillbilly* pandering, meaning a lack of curated hillbilly tropes was presented. Many of the videos depicted individuals indistinguishable from the non-Appalachians, and many other videos depicted ethnically diverse individuals contrasting the traditional poor White Appalachian stereotype. Very few videos depicted individuals as unkempt or dirty and ignorant, a common perception of Appalachian people. However, many showed their surroundings as ruins and abandoned buildings, alluding to the individuals living in poverty and decay.

Attributes of opioid users often reflected helplessness, self-accountability/realization, bragging/glamorizing opioid use, and recovered/recovery. A prevalent depiction is presented as fresh starts, showing one's past of opioids and then showing the new life. Others will show similar pictures of themselves or loved ones, and the helpless attribute is found, where the individual has died or isn't strong enough to pull through. Glamorizing and bragging about opioid use represents a small selection of videos analyzed. Still, in these videos, the subject boasts, makes light, and glamorizes the use of opioids and other drugs, toting about them like a badge of honor.

Attributes of those creating content present attitudes of compassion, seeking to educate/inform, defend users, and wanting to bring attention to issues. The main attributes found across all framing categories were that of informing and educating, where blame or cause was bypassed for the need to help those impacted, whether or not the issue was caused by their own

hand or larger issues. Other attributes were anger and annoyance; this was usually presented in the defense and inform theme or in the diminishing/humor theme where content creators were 1) defending opioid users or 2) diminishing or unsupportive of users. Lastly, the content creator's attributes were often associated with sadness and sorrow for a lost loved one or the situation.

Other attributes depicted by content creators were centered around the individual's ability to seek help and/or resources in combating addiction. Often, individuals were presented as weak and helpless, then finding recovery and becoming powerful and capable. Other notable attributes were sorrowful and defeated, where the individuals presented physical embodiments of sorrow and despair; defensive was another common attribute where the individual would become combative and protect others in their communication of the opioid crisis within Appalachia. There are no physical attributes that would distinguish these individuals from any other American from any other region.

Discussion

Stereotype and Societal Forces

The researcher had hypothesized that there would be a larger number of mocking and pandering to the hillbilly trope (i.e., resorting to calling the Appalachian people ignorant, dirty, wild, etc.); however, very little of this was found. Most of the representations of Appalachians were presented as indistinguishable from any other person. Attributes found and used were more centered around feeling helpless but being able to change or being strong enough for recovery. Opioid users mainly were portrayed as victims of addiction whose task was to fight the near hopeless battle of addiction and better themselves and others through recovery, serving as a warning and beacon of hope for others.

Social forces blamed for the opioid crisis were strongly related to corruption, whether at legal or government levels. The people were betrayed by representatives, the government, industry, and pharmaceuticals. These forces were also to blame for poverty within these regions. Formalities such as suits and ties, doctors' attire, and uniforms carried the theme of corruption, and those who fit this theme were usually portrayed in a negative light, whereas grassroots, casual dress, nature, and natural ascetics were presented as integral and honest. This leads the researcher to conclude that formality and manmade endeavors are seen as corruption and are outsiders within the region. Nature, casualness, and grassroots work is the only way to remedy the situation.

Beyond Responsibility and Blame

Thematic and episodic frames are often depicted at odds (Linnemann & Wall, 2013; McGinty et al., 2019; Netherland & Hansen, 2016; Scott, 2021). Episodic frames are often seen as the stigmatizing of drug users and criminals as they are presented in an episode of life, responsible and victim of their actions, and thematic frames take on the role of the larger societal picture where society is acknowledged in its role of an issue and takes the blame and the stigma away in its telling of the story. The core tenant of episodic and thematic framing is… *who is to blame?* And there seems to be an inclination in prior research to suggest that episodic frames are less helpful and more stigmatizing in portraying issues, especially drug abuse and its victims.

This study found that most videos analyzed for episodic and thematic frames (and those in between) appear to have a similar shared goal of bringing attention, resources, and understanding of the opioid epidemic not only in Appalachia but also in the nation. The majority of episodic frames, while attributing blame to an individual, aimed to bring attention, resources, and recovery to the Appalachian region and others who may share similar struggles. While

recovery may be attributed within each respective frame to societal factors or individuals, there is a lack of stigmatizing individuals; instead there is a prevalence to help them.

This study has found that episodic frames on TikTok do not simply blame an individual for an issue; it blames them… and then attempts to help them recover. The episodic frames presented in this study of the social media app TikTok show how episodic frames can be presented in a non-traditional way to uplift and benefit the community instead of stigmatizing it; of course, this calls for further study in effects research to see the actual effects of such framing that fosters an environment where others can begin steps toward recovery and not feeling stigmatized.

Music and Performance

A popular way to transfer information on TikTok is by song; many videos from all categories depict someone singing, dancing, and using an instrument to convey their message. The use of musical performance was used to promote nearly all categories from humor, corruption, recovery, glamorizing drug use, and informing. Music and performance was consistent across both thematic and episodic frames.

While many videos showcased country and folk music, a few utilized rap and R&B. Video 85 (see Figure 10) was a clip from a self-produced Appalachian rapper's music video "Red, White and American Blues" by David Morris. He played many roles within the video, from mailman to news anchor. Morris talks about the opioid crisis, corruption, poverty, and industry abuses, as well as glamorizing drug use:

> We don't glorify that shit 'round here, we get those people help. They sent three million pills to a small town in West Virginia. While American families mourn, these companies get richer. It's crooked pharma, it's pocketed politicians. Doctors writin' prescriptions,

enablin' addiction. It's the stigma attached to dependency. That people judge, but don't listen.

Figure 10

Screenshot 85 - Music as Expression (Both)

Other videos share similar core themes, and some talk more about a person's own responsibility or the glamorization of drug use. A popular song to cover when glamorizing drugs is "I Took a Pill in Ibiza" by Mike Posner. The song's lyrics read, "I took a pill in Ibiza. To show Avicii, I was cool. And when I finally got sober, I felt ten years older. But fuck it, it was something to do." They then transition to the iconic line, "you don't wanna be high like me."

The song also mentions the late musical Artist Avicii, who passed due to an overdose. Videos with this cover follow the recovery pipeline emphasizing the remorse and sadness behind the lyrics. In contrast, others use the song as an anthem to show how they don't care and play more into the glamorization of using pills. Interestingly, singing and performance express one's position on the matter. There are too many instances to mention where music and song were used in the framing, and the use of music/song was found across all the framing variables.

Frames on TikTok

While there were four potential categories for the sample to be coded, most videos fell in the episodic and thematic codes, with few falling under both and neutral. Episodic was the most prominent category, potentially related to the testimonial and recovery-focused and themed videos found in the qualitative analysis. A testimonial would place responsibility on the individual versus society for their current situation. The recovery themes are more easily accessible and replicable for content creators. It only requires a background in one's own story and an understanding of sobriety and recovery; thematic videos required more background research and knowledge on the content creator's behalf. The recovery-focused episodic videos bring a new perspective as they do allocate blame and responsibility to the individual, but they also attempt to secure resources and warning for others.

Support of the Frames

The majority of videos saw overwhelming support of their framing, with very few videos having less than 60% of their total comments being supportive. Many of the outliers here are data sets sampled with very few total comments. However, the few videos that did mock Appalachians/opioid users seemed to have a higher concentration of unsupportive comments, refuting the claims made in the video.

Visual Framing

Visual framing continues to be elusive; a limitation of this study is that there is still a dearth of research regarding visual framing and how to use Rodriguez and Dimitrova's (2011) Levels of Visual Framing beyond the first two levels. This study is limited by the researcher's own understanding of connotative meaning within videos and the nature of interpretation. Future research needs to further find ways to add connotative meaning to the third level of visual

framing. While this researcher's perspective used quantitative data to inform the connotative meaning, this was subjective based on the researcher's understanding of the topic. Should the researcher not understand the culture of the meaning, the context and interpretation may be lost. While this study starts the process of a more replicable way to inform connotative context, further research is needed to create a robust method of informing context for the levels of visual framing.

Limitations

This study is limited because of the general lack of understanding of visual framing; however, it does benefit and offers new avenues for further research. Additionally, while the levels of visual framing are detailed, they still lack much application within the field, especially the third and fourth levels.

Within the analysis using the second level of visual framing, the researcher must note that the stylistic choices and their interpretation are limitations based on the researcher's understanding and the potential use of these stylistic choices to define the norm. While a high angle may relate to weakness, it may also be intended to reflect power; the stylistic choice is a highly subjective element.

Again, the study is limited by its exploration of topics on the frontlines of academic inquiry. TikTok and its algorithms are highly guarded and cloaked in mystery. A general lack of understanding of the algorithm is a limitation, as is all social media's fickle and ever-changing nature. Regarding data collection using hashtags, this is evident as a secret algorithm may promote or suppress hashtags without the researcher's knowledge.

While the limitations of this study are evident, they are greatly outweighed by the potential and groundbreaking strides into new areas of inquiry.

Conclusion

While this research is limited in its scale, it does break ground in new methodological areas of visual framing and its relation to responsibility framing. In a very general sense, it shows that within the sample of TikTok videos, the users framed content in new ways compared to more traditional content, allowing for different episodic and thematic interpretations.

Further, the methodological approach provides a springboard for future research into creating a more robust means of finding connotative context within visual framing. It further shows that in TikTok videos, visual framing is possible. Lastly, this project holds promise for the Appalachian people, so that they may no longer be America's scapegoat or laughingstock but instead a beacon of hope and recovery; not labeled by their hillbilly preconceptions but by their work and dedication to recovery and helping others. Perhaps we are truly beyond pill-billies.

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Appendix

Table 1

Hashtag Combinations

Combination	Location	Opioid Use	Opioid
1	#Appalachia	#Abuse	#Opiod
2	#Appalachia	#Addiction	#Opiod
3	#Appalachia	#Drugs	#Opiod
4	#Appalachia	#Pills	#Opiod
5	#Hillbilly	#Abuse	#Opiod
6	#Hillbilly	#Addiction	#Opiod
7	#Hillbilly	#Drugs	#Opiod
8	#Hillbilly	#Pills	#Opiod
9	#Kentucky	#Abuse	#Opiod
10	#Kentucky	#Addiction	#Opiod
11	#Kentucky	#Drugs	#Opiod
12	#Kentucky	#Pills	#Opiod
13	#Ohio	#Abuse	#Opiod
14	#Ohio	#Addiction	#Opiod
15	#Ohio	#Drugs	#Opiod
16	#Ohio	#Pills	#Opiod
17	#Tennessee	#Abuse	#Opiod
18	#Tennessee	#Addiction	#Opiod
19	#Tennessee	#Drugs	#Opiod
20	#Tennessee	#Pills	#Opiod
21	#WestVirginia	#Abuse	#Opiod
22	#WestVirginia	#Addiction	#Opiod
23	#WestVirginia	#Drugs	#Opiod
24	#WestVirginia	#Pills	#Opiod

Table 2

Levels of Visual Framing & Analysis Process

Level	Definition	Process

L1 Denotative Systems	Dictionary meaning, literal signifiers (Messaris & Abraham, 2001; Omar,2012)	Coder identifies the denotive meaning within the video. Noting what is shown.
L2 Stylistic-Semiotic Systems	Stylistic/ technical representations, pictorial expression (Bell, 2001)	Coder will note stylistic choices of shot and angle in the videos formatting (see Table 3).
L3 Connotative.	Symbolic meaning of denotative signifiers, representing concepts through symbolism (Leeuwen & Jewitt, 2001; Wozniak et al., 2015)	Coder will use context found in the quantitative content analysis of questions 3,6,7, to determine connotative meaning found in the denotative signifiers.

Table 3

Visual Framing - Level Two : Stylistic-Semiotic Systems

Style Choice	Definition	Evaluation
Long Shot	Wide, encompassing; spatial relationships w/ viewer	Subject very related to surroundings larger systems
Close-Up Shot	Intimate, magnified; Personal relationship w/ viewer	Subject independent & focused.
Medium Shot	Encompassing, yet intimate; spatial, relationship w/ viewer	Subject and environment in a more balanced view
High Angle	Diminutive view, above subject	Viewer sees subject as less powerful
Low Angle	More Significant view; below subject; elevated	Viewer sees subject as more powerful
Neutral Angle	Horizontal view, neutral with subject; equals	Viewer sees subject as equal

(Bowen, 2018; Mademlis et al., 2019)

Table 4

Framing - Holistic

Frame Type	Frequency	Percent
Episodic	46	48.4
Thematic	30	31.6
Both	15	15.8
Neutral	4	4.2

Table 5

Framing - Transcription

Frame Type	Frequency	Percent
Episodic	38	40
Thematic	27	28.4
Both	7	7.4
Neutral	23	24.2

Table 6

Framing - Description

Frame Type	Frequency	Percent
Episodic	43	45.3

Thematic	28	29.5
Both	5	5.3
Neutral	19	20

Table 7

Crosstab - Holistic & Transcription

	Transcription			
Holistic |	Episodic	Thematic	Both	Neutral
Episodic	33	0	0	13
Thematic	0	26	0	4
Both	5	1	7	2
Neutral	0	0	0	4

Table 8

Crosstab - Holistic & Description

	Description			
Holistic |	Episodic	Thematic	Both	Neutral
Episodic	32	3	3	8
Thematic	6	18	1	5
Both	4	7	1	3
Neutral	1	0	0	3

Figure 1

Episodic Word Map

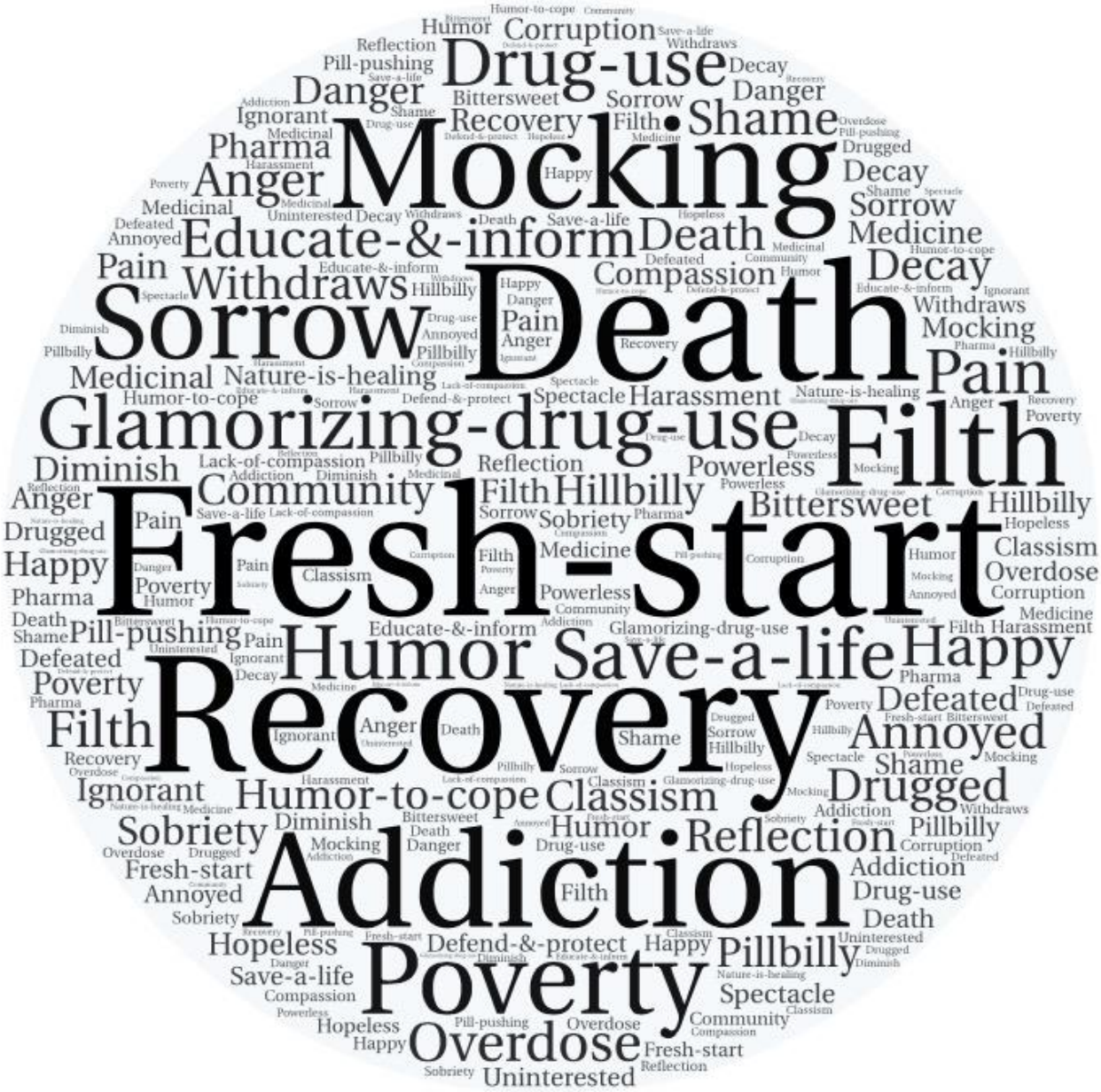

Figure 2

Screenshot 48 - Recovery Theme (Episodic)

Figure 3

Thematic Word Map

Figure 4

Screenshot 2 - Corruption Theme (Thematic)

Figure 5

Screenshot 3 - Educate & Inform Theme (Thematic)

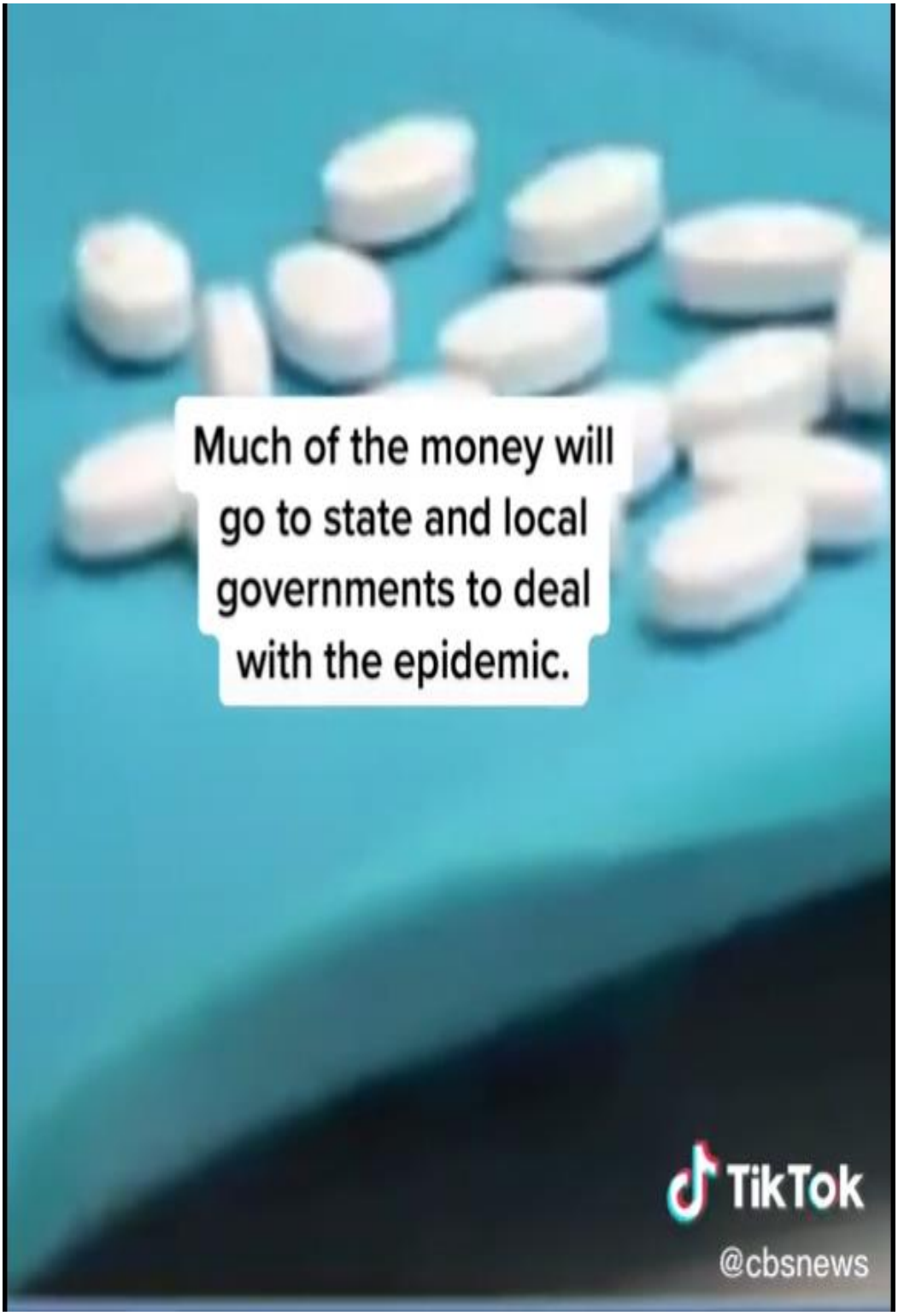

Figure 6

Both Word Map

Figure 7

Screenshot 16 - Death Theme (Both)

Figure 8

Screenshot 50 - Humor & Corruption theme (Thematic)

Figure 9

Screenshot 91 - Corruption Theme (Thematic)

Figure 10

Screenshot 85 - Music as Expression (Both)